

23 December 2011

Barriers to Effective Climate Change Adaptation
Productivity Commission
LB2 Collins Street East
MELBOURNE VIC 8003

Via email: climate-adaptation@pc.gov.au

Dear Sir/Madam,

**RE: BARRIERS TO EFFECTIVE CLIMATE CHANGE ADAPTATION
IN THE BUILT ENVIRONMENT**

Thank you for the opportunity to provide comment on the Productivity Commission issues Paper, Barriers to Effective Climate Change Adaptation. The Green Building Council of Australia (GBCA) is supportive of raising awareness and taking action on climate change adaptation.

About the Green Building Council of Australia

The GBCA is Australia's leading authority on green buildings and communities, established in 2002 to develop a sustainable property industry in Australia and drive the adoption of green building practices. The GBCA promotes green building programs, technologies, design practices and processes, and operates Australia's only national voluntary comprehensive environmental rating system for buildings - Green Star.

The GBCA has more than 900 member organisations, including government departments, which work together to support the Council and its activities. The GBCA is also a founding member of the World Green Building Council (WorldGBC), which was established to provide a federated 'union' of national green building councils with a common goal to support the sustainable transformation of the global property industry; there are now 89 such councils worldwide.

The Green Star rating tools

The built environment offers significant opportunities for carbon emissions reduction and climate change mitigation. While buildings are responsible for almost a quarter of Australia's total greenhouse gas emissions, the building sector also has the greatest potential to deliver emissions cuts, at the least cost, using technology available now. The current Green Star rating tools for buildings, as well as Green Star – Communities and Green Star – Performance which are under development, can assist climate change adaptation in the built environment in a number of ways.

Green Star is a voluntary tool that encourages, recognises and rewards best practice and innovation. The first Green Star rating tool was released in 2003 in response to market demand for a rating tool that would evaluate the environmental design and construction of buildings as well as establishing a common language for green buildings. There are currently nine Green Star rating tools which address a range of building types. More than 390 projects have achieved Green Star ratings, with a further 540 projects registered. The Green Star rating system is designed to take an holistic approach within each class and building sector, addressing nine categories in total: Management, Indoor Environment Quality (IEQ), Energy, Transport, Water, Materials, Land Use and Ecology, Emissions and Innovation.

Green Star rating tools play a significant role in climate change mitigation in the built environment by encouraging reduced consumption of resources. Each category in the Green Star rating tools sets high environmental benchmarks and Green Star-rated buildings rely less heavily on resources such as water, materials and energy. The 6 Star Green Star-certified (and thus recognising 'World Leadership') Szencorp building in Melbourne is a good example of how an environmental retrofit of an inefficient existing building can greatly reduce the consumption of energy and water, adapting it to current conditions. The almost 30-year-old building has reduced its energy use by 65 per cent compared with energy use prior to the retrofit, and it has reduced water consumption by 88 per cent compared with industry average standards. Please find a case study of the Szencorp building enclosed.

The GBCA is currently developing two rating tools that will build on the climate change mitigation and adaptation guidance currently available in the suite of Green Star rating tools. The Green Star – Communities and Green Star – Performance rating tools expand the focus beyond building attributes in order to meet a range of different challenges, including adaptation.

Green Star – Communities

In 2009, in consultation with industry and all levels of government, the GBCA commenced work on the development of a rating tool for sustainable development projects on a community scale. The first step in developing the Green Star – Communities rating tool was to develop a national framework consisting of five best practice principles:

1. Enhance liveability
2. Create opportunities for economic prosperity
3. Foster environmental responsibility
4. Embrace design excellence
5. Demonstrate visionary leadership and strong governance.

The GBCA is now working on Stage 2 of the Green Star – Communities project; establishing best practice benchmarks and developing credits. A set of draft credits has been developed and these are currently being tested on a number of projects across Australia. Pilot testing of the tool on a number of projects will commence in 2012. A summary of the draft credits is enclosed.

The GBCA believes that communities and buildings should be designed to avoid or mitigate the risks of climate change from the start. The Green Star - Communities rating tool can help to facilitate adaptation to climate change early in planning processes, in an integrated manner which seeks to deal with the uncertainties that are inherent in any adaptation assessment. The tool includes draft credits, which, in combination, lead planners and developers through a process intended to provide clear guidance on how to plan, design and deliver communities that embed best practice climate change adaptation and resilience.

The draft credits within the tool are designed to establish and reflect best practice benchmarks for assessing and certifying sustainable communities; benchmarks which can be used to manage uncertainty in planning and assessment of truly sustainable human settlements.

Some of the credits in the tool directly address the impacts of climate change. The ***climate adaptation and resilience*** credit, for example, has the objective 'to encourage and recognise projects that can adapt and are resilient to the impacts of a changing climate and natural disasters.' In addition, the ***heat island reduction*** credit encourages and recognises projects that reduce the impacts of heat island effect.

Many other credits in the tool contribute to the objectives of adapting to climate change and building greater community resilience. These include credits for ***local food production, stormwater, transport, affordability, urban design, integrated infrastructure systems, site planning*** and ***sustainability education***. In addition, mitigation is addressed by the ***greenhouse gas emissions*** credit which encourages and recognises projects that minimise their greenhouse gas emissions.

More specifically, the ***climate adaptation and resilience*** credit requires planners and developers to develop a Climate Adaptation Plan in line with best practice risk and adaptation standards and utilising robust science sourced from credible and well-known sources (which includes CSIRO and State Governments). It acknowledges the need to take into consideration aspects of science which are evolving. In addition, this part of the tool requires the preparation of a Disaster or Emergency Preparedness Plan in line with appropriate guidelines and in consultation with relevant stakeholders.

Green Star – Performance

A significant step in the evolution of Green Star is the development of the Green Star – Performance tool. This tool is due to be released in 2012 and will allow buildings to assess their holistic operational performance. Currently, Green Star rating tools assess building attributes as the 'Design' and 'As Built' stages. Green Star – Performance will address the gap between 'Design' and 'As Built' certifications and a building's performance once in operation, as well as providing a tool for assessing the continued sustainability performance of existing buildings.

Measuring and monitoring the operational performance of a building will enable the building owners and occupants to better manage the effects of climate change. Climate change adaptation must be viewed as a continuous process. Green Star – Performance enables a building's operational performance to be measured and tracked, so then it can be managed and further adaptation undertaken when necessary.

Green Star – Performance allows building owners and occupants to take action to improve the performance of their building without necessarily needing to invest in upgrading the building which can help to address barriers such as lack of funds and split incentives.

Barriers and Incentives

Many of the barriers to climate change adaptation in the built environment are the same as the barriers that are being overcome in the shift towards a greener building industry. Lessons learnt by industry, government and organisations such as the GBCA will be useful in developing an approach to addressing these barriers to climate change adaptation.

Cost is often cited as one of the biggest barriers to building more sustainably. Indeed, a 2010 study conducted by Davis Langdon found that many people within the market held the belief that green buildings cost around 17% more than 'traditional' methods. However as we learn from each green building project, and as green building practices and technologies become more widespread, the cost of implementing them decreases. The perception that building more sustainably will cost more remains a barrier for some people, but there are now many projects that have achieved Green Star-ratings at, or close to, cost neutral. The Lilyfield and Redfern social housing developments undertaken by Housing NSW are two examples of projects that have achieved 5 Star Green Star certification (signifying Australian Excellence) on cost-neutral budgets. Please find case studies for both projects enclosed.

Lack of knowledge, information asymmetries and lack of skills are all barriers to climate change adaptation. There are a number of ways in which these barriers are being addressed in relation to green building by both industry and government. One example is the Queensland Government's Green Building Skills Fund which provides funding for trade apprentices and university students to attend training and partners with industry to deliver it. On behalf of the Queensland Government, the GBCA has delivered a large number of courses focusing on the fundamentals of green building practices to students across Queensland. The GBCA has a range of courses and education offerings in its 'Continuing Professional Development' program that provides industry professionals with opportunities to learn about a range of green building topics as well as specific courses for learning how to use Green Star.

While initiatives such as those described above are increasing the level of green skills, lack of knowledge and skills remains a barrier to green building and climate change adaptation. Industry and government must work together to encourage the uptake of green skills and to ensure that green skills and sustainability principles are integrated across all industry training and education curricula.

Split incentives, where the cost of retrofitting an existing building to make it more sustainable rests on the building owner but benefits, such as reduced energy and water costs, are received by the tenants, is often seen as a barrier to the uptake of green building and climate change adaptation measures. Government has a significant role to play in developing initiatives that can help to remove this barrier. The City of Melbourne has shown strong leadership in addressing this issue with the introduction of the 1200 Buildings program which allows building owners to undertake green upgrades to their buildings and recoup the costs from their tenants through a charge levied by the council through council rates. The NSW Government introduced legislation earlier this year that will allow this model, known as 'Environmental Upgrade Agreements' to be implemented by local governments in NSW. Initiatives known as 'energy-aligned leases' are being tested in the US.

Initiatives such as these will be powerful tools in addressing barriers to green building and climate change adaptation, but many more incentives, both financial and non-financial will be required as well as tools such as Green Star that encourage leadership from industry.

There are a number of other incentives that can be developed and implemented to encourage green building and climate change adaptation. Grants programs such as the Australian Government's recently closed Green Building Fund and tax incentives such as the Tax Breaks for Green Buildings program (due for implementation in July 2012) address barriers around the cost of undertaking green upgrades.

Non-financial incentives can include expediting planning approvals for developments that can demonstrate that they will achieve high environmental standards. The Queensland Government has implemented the 'Green Door' policy that will accelerate decisions for development proposals that are identified to be the most sustainable in Queensland. This policy aims to reduce the length of the planning approval process significantly for greener buildings and this will be a powerful incentive for developers to deliver the most sustainable projects possible.

The roles of government and industry

Industry has been leading the shift towards building greener, more sustainable buildings that consume fewer resources and have lower greenhouse gas emissions. Government regulation and incentives have contributed significantly to this shift, with initiatives such as the Commercial Building Disclosure program and the Tax Breaks for Green Buildings program as mentioned earlier. Building owners and tenants are now increasingly aware that implementing climate change mitigation and adaptation measures in their buildings, such as greater energy, materials and water efficiencies, often leads to higher values, better returns and lower operational costs and this has increased the demand for greener buildings.

The GBCA believes that industry and government will need to continue to work together to raise awareness of the need for climate change adaptation practices as well as increasing awareness of the benefits of creating a built environment that is more resilient to changes in temperatures and extreme weather events arising from climate change. As well as having a significant role to play in developing policies and incentives that encourage climate change adaptation, government also has a responsibility to lead by example. The GBCA advocates for all levels of government to commit to achieving environmental ratings for all buildings that they own, occupy or develop and there are significant opportunities for government to integrate sustainability measures with resilience and adaptation in their own buildings.

It is vital that a whole-of-government approach is taken to the challenge of climate change. All levels of government must be working together and with industry to get the best outcomes. The GBCA welcomes the opportunity to work with government to develop policies, incentives and tools that will encourage green building and climate change adaptation. The GBCA can also assist government in identifying opportunities for industry and government to work together. The Australian Sustainable Built Environment Council (ASBEC), of which the GBCA is a member, has recently commenced a project to develop a policy framework for climate change adaptation in the built environment. The framework aims to provide a basis for joint action between government and industry to take the necessary steps to create a built environment that is resilient to climate change.

Failure to adapt to climate change will have a major impact upon communities and the broader built environment. The GBCA believes that tackling climate change immediately will be easier and more cost-effective than delaying action indefinitely. We believe that an integrated approach to adaptation by industry and all levels of government will achieve the best outcomes. We look forward to continuing to work together with governments and other stakeholders to develop an effective approach to tackling climate change. We encourage you to consider the GBCA the primary green building resource and we would welcome the opportunity to provide further information or discussion on the points raised in this submission. Please do not hesitate to contact either of us if there is any further information we can provide.

Yours sincerely,

Robin Mellon

Executive Director – Advocacy and International