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Committee Secretary
Senate Education, Employment and Workplace Relations Committee
Department of the Senate
PO Box 6100
Parliament House
CANBERRA ACT 2600

Inquiry into the Effects of Climate Change on Training and Employment Needs

Thank you for the opportunity to submit to this inquiry.

Who we are

The Green Building Council of Australia (GBCA) 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 700 organisations are members, including federal, state and local governments.

Committee's Terms of Reference

The terms of reference as they stand are quite broad but necessarily so at this time as the impacts of climate change on training and employment is very much still an emerging issue and more generalised terms of reference are appropriate given the issue is relatively new.

Implicit in those terms of reference however, should be related issues such as:

- Identifying the gaps in the skill base in this field;
- Identifying where there is need for further research and data in order to build an understanding of where Australia sits in terms of skills in this area;
- The role of Government not just in terms of being a provider of education and training directly, but also their role in encouraging and assisting the industry meet demand; and
- The role of non-government organisations in providing education and training in this field and how that can be supported.

Clearly there are a very wide range of issues that can and should be addressed under these terms of reference and the Green Building Council would be happy to expand on this submission for the Committee during its deliberations.

Approach to this Submission

Given the broad terms of reference and the very specific role and mission of the Green Building Council of Australia, the approach we have taken in this submission is to outline some of the skills and training

issues relevant to our industry and to also provide some detail as to how those issues are addressed through our education program.

The GBCA also is engaged by the Department of Innovation, Industry, Science and Research to support high performance building projects in China and India through the Asia Pacific Partnership and detail on that program will also be provided.

Education and Capacity in the Property Industry

There has been considerable improvement in the education of green principles and their application to buildings in recent years. The vast majority of property industry associations have either incorporated or made green building a central theme to their educational seminars, events and conferences. This has assisted the industry although more work needs to be done if we are to build more capacity and skills to meet emerging demand.

Industry education is a key activity of the Green Building Council of Australia and the number of people who have participated in the range of courses offered by the GBCA is around 10,200. 8,000 people alone have participated in our Green Star Accredited Professional (GSAP) course.

This demonstrates two things. Firstly it demonstrates the level of demand for knowledge and skills in this area which is only one section of many that fit under the broad climate change umbrella. It also demonstrates the value of organisations such as the GBCA in providing industry professionals with the necessary skills to adapt to one of the imperatives of climate change.

Some of the challenges the GBCA encounter in providing education and training include how to:

- convey a single coherent message in an environment where there seems to be a level of discord about what needs to be done and how;
- present Australian research in particular cost data where there is reluctance from the market to share this information;
- ensuring the information is up to date when the body of knowledge about sustainability and green buildings is changing fast and constantly being added to.

The challenge of the shortage of skills in the market and individuals who understand the level of commitment required and new thinking to achieve Green Star rated buildings and environmental sustainable design generally is still pervasive. This is particularly in the case of emerging green markets such as Queensland and Western Australia.

According to the Dusseldorf Skills Forum and the Australian Conservation Foundation, over 251,500 'green collar' jobs will be created in the property and construction industry alone by 2025, representing 45% of the total number of jobs to be created overall in the same period.

This reinforces the need for Australia's skill base to transform as a necessary element in addressing climate change and reducing greenhouse gasses. The report highlighted a range of measures that would assist in addressing this skills shortage:

- The independent statutory body, Skills Australia should lead a national program to identify and stimulate the green skills, knowledge and work needed for a low carbon economy, with special emphasis on the building and construction, transport, agriculture and food, energy and manufacturing sectors;
- By the end of 2010, at least 40,000 training opportunities in the Federal Government's Productivity Places program should be allocated to the development of green skills in priority areas, like renewable energies, environmental sustainability auditing and accounting, building

- and construction trades and planning, design, architecture and facility management professions, manufacturing, infrastructure and engineering, agriculture and food;
- With support, training and incentives should create 'green teams' to innovate and develop environmentally sustainable workplaces, products and services. This should include the development of a national green mentoring program to help small enterprises and sole traders make similar changes;
 - Allocation of immediate funds for sustainability training, skills and workplace programs, to be boosted from 2010 with a proportion of revenues from Australia's emissions trading scheme; and
 - Australia's universities, TAFE and training sectors should create 'green collar partnerships' to advance the workplace and industry skills, knowledge and innovations required for the transition to a low carbon economy.

Lack of Research

There is a lack of compiled local data which would provide the valuable evidence of cost and financial benefits for green building and climate change adaptation in Australia. There is also limited sharing of knowledge and experience about green building practices. Many in the industry are either reluctant to share their knowledge or no longer have the resources to collate the lessons learnt and benefits.

The majority of development projects are completed when the individuals that could contribute valuable information on the costs and benefits have moved onto a new project. As such the opportunity to capture knowledge and share it is a challenge for the property sector.

Professional Development

The construction sector in Australia continues to spend the least amount of any sector on professional development and life long learning. More professional education is required to improve industry knowledge and lack of skills in green building practices and technology.

The GBCA not only educates and trains a large number of professionals, but we also compile a great deal of educational resources onto its website and e-newsletter. The demand for these resources has grown substantially since 2006 with the website visited by over 1000 individuals daily (based on sessions as opposed to 'hits') and registrations for the newsletter sits at over 11,000.

In 2007, the Green Building Council in association with the Property Council of Australia, launched Green Cities, a conference and exhibition showcasing the latest green building thinking and innovation. In just one year, registrations grew from 900 to over 1300 in 2008, reflecting the rapidly growing interest in the sector and demand for knowledge.

The GBCA's principle course is the Green Star Accredited Professional Course or GSAP. The course is run over one full day in capital cities throughout Australia. This course focuses particularly on the content and application of Green Star rating tools and will also provide an introduction to the GBCA and an overview of the impact of buildings on the environment. The format consists of lectures, Q&A, case study and workshop. On completion of this course, students are encouraged to then book and sit the GSAP exam and become a Green Star Accredited Professional.

Course participants come from an increasingly diverse range of professions - academics, architects, contractors/builders, cost planners, engineers, facilities managers, general managers, interior designers, landscape architects, marketing managers, policy advisers, product manufacturers, project managers, quantity surveyors and lawyers.

GBCA also offers a range of other courses including an intensive Green Star Interiors Advanced Course, a Submissions Workshop designed to train industry professionals in how to produce a Green

Star submission and a Property Professionals course designed for property owners, leasing agents, property managers and facilities managers who wish to have an understanding of the Green Star rating tool.

In 2007, GBCA launched Faculty which is a body of industry professionals who have been selected to teach the Green Star Accredited Professional Course, Office Interiors Course and the Submissions Workshop. Faculty provides and promotes knowledge, materials, programs and resources that support:

- the development and implementation of Green Star rating tools;
- the members of the GBCA in their professional learning activities; and
- the mainstreaming of green building knowledge and practice in the property and manufacturing industries.

These and other initiatives represents the GBCA's collective effort to provide a skill base within the various arms of the property sector and to ensure that our aim to increase sustainability in Australia's built environment is supported by a sufficient number of highly trained and experienced professionals.

Ongoing development of the domestic skill base is a core function of the GBCA and is one we regard as integral to the broader success of Australia's efforts to address climate change.

Global Effort

As a member of a global organisation (World Green Building Council), the GBCA is continually engaged in knowledge sharing internationally, particularly with respect to the development of GBCs in other countries.

We actively assist in the establishment of GBCs in other nations including those on the pacific rim. Green Building Councils currently exist in:

- Canada;
- Japan;
- Brazil;
- India;
- Mexico;
- New Zealand;
- Taiwan;
- United Arab Emirates;
- United Kingdom;
- United States; and
- Germany.

Also, Green Building Councils are currently emerging in a number of other countries including:

- Argentina;
- Colombia;
- Poland;
- South Arica; and
- Vietnam

Clearly the push towards sustainability in our built environment is becoming a genuinely global effort and Australia is very much at the forefront of expanding the boundaries where GBCs exist.

Asia-Pacific Partnership

One of the ways in which the Green Building Council of Australia is assisting in ensuring our domestic knowledge base and experience is shared globally is through the Asia-Pacific Partnership (APP). The

APP is an agreement between the GBCA and the Department of Innovation, Industry, Science and Research to support high performance building projects in India and China and was signed in February 2008.

Key critical success factors include:

- The identification of strategies/roadmaps that could lead to significant sustainability improvements in India and China that particularly focus on emissions reductions;
- The development of relationships that are sustainable beyond the current agreement;
- The need to demonstrate in-kind support for the projects from Australian companies and host-country institutions including Australian State Government support;
- The creation of commercial opportunities for Australian companies; and
- Scoping of further activities that APP could fund.

A range of activities have already been completed under the APP banner including workshops, missions and site visits in India, China and here in Australia. These workshops provided a valuable opportunity for Australian companies to identify commercial opportunities and potential demonstration projects in India and China.

The workshops have been of particular value where Australian experience can be applied very directly to current Indian and Chinese projects. One such workshop, held in Nanjing, China focused on the Tangshan Anji Lake Hot Spring Eco-City Concept which is an 18.9 sq km site 30 minutes outside of Nanjing.

In this, Australian property professionals with considerable experience in sustainable development identified critical issues with the project and developed potential sustainability strategies. Promotion of capabilities for sustainable development of Australian companies to key individuals within the Nanjing project was a key outcome that could lead to commercial relationships as the project develops.

A range of activities will be conducted under the APP banner during SB08 - the World Sustainable Building Conference which will take place in Melbourne in September. SB08 is the pre-eminent global built environment sustainability conference and a very large international contingent will be attending.

APP is one of the more direct ways in which the Australian Government contributes to broadening the skill base in our region. The value of programs such as APP is that it places Australian expertise 'on the ground' in India and China and very directly contributes to the understanding of green building practices amongst the industry leaders in those countries.

Conclusion

Ensuring Australia has a skill base of sufficient size and expertise to meet the demands, both known and unknown, of the impending reality of climate change is a task that will require the efforts of not just our traditional educational and training institutions. Organisations such as the GBCA can and do play a vital role in providing skills and training, albeit in a particular field.

However, the capacity of the GBCA to provide education and training is clearly limited by resources and opportunities for the Government to support these efforts would be very welcome and would represent a sensible and effective investment on the part of Government.

This effort should not be underestimated as many professional organisations already provide training in various fields and the collective knowledge and experience of Australia's professional organisations and peak bodies represents a very considerable resource in the context of education and training of climate change professionals.



These organisations are also a valuable source of information through their networks and other relationships with their kindred organisations overseas. Many, like the GBCA, are members of global bodies that are wealth of information and data in key areas.

Programs such as the Asia-Pacific Partnership are of particular value because they have a very specific objective and involve Australian expertise engaging directly with their counterparts overseas on projects that are real and current. To be able to provide Australian advice on projects overseas directly to the people involved in the development is a tremendously beneficial use of limited resource. Again, the success of this program is limited only by the resources applied.

In short, the burden of meeting the challenge of providing an adequate skill base for 'climate change professionals' is one that should not be the sole responsibility of our traditional institutions to bear. While our universities, research and other training institutions have a very key role to play, so do other organisations that have been working to meet the climate change skills challenge for some years now.

It is vital that these organisations factor into the deliberations of the Committee when they consider the challenges of the national skill base in the uncertain context of climate change.

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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.