

Climate Change Policies Review –
Discussion Paper submissions
2017 Review Branch
Department of the Environment and Energy
GPO Box 787
Canberra ACT 2601
Via email: climatechangereview@environment.gov.au

12 May 2017

Dear Sir/Madam,

Re: GBCA submission – Review of Australia’s climate change policies

The Green Building Council of Australia (GBCA) welcomes the Australian Government’s *Review of climate change policies* and is pleased to provide feedback and comment in the attached submission.

The GBCA, established in 2002, is an industry association committed to developing buildings, cities and communities that are productive, liveable, healthy, resilient and sustainable:

- We rate the sustainability of buildings and communities through Australia’s only national, voluntary, holistic rating system – Green Star.
- We educate industry and government practitioners and decision-makers and promote green building programs, technologies, design practices and operations.
- We advocate for the sustainable transformation of the built environment.

The GBCA represents 600-plus individual companies with a collective annual turnover of more than \$40 billion. Our membership reflects the diversity of Australian business with over 500 small-to-medium enterprises through to 75 companies with annual turnover of more than \$100 million and 24 companies now listed in the ASX200, with a combined market capitalisation of more than \$620 billion. Members include major developers, professional services firms, government departments and local councils, banks, superannuation funds, product manufacturers, retailers and suppliers.

The GBCA has five key policy priorities which advocate a coordinated approach to addressing climate change:

1. Achieving more productive, liveable, sustainable and healthy cities
2. Securing more resilient communities
3. Delivering a low carbon, high performing built environment
4. Raising standards through the National Construction Code
5. Facilitating sustainable utility infrastructure

The GBCA was pleased to respond to the recent Finkel review into the future security of the National Electricity Market. You can download our submission to the Finkel review [here](#). The review highlighted a number of critical challenges faced by Australia, in particular, ensuring there is a stable, reliable and secure energy market, reducing emissions and keeping prices down. The GBCA believes that there are considerable opportunities for the Australian Government (the Government) and industry to meet those challenges and Australia's built environment is well-positioned to play a significant role while delivering a range of benefits.

The GBCA has been working closely with all spheres of government since 2002. During that time, the GBCA and its members have provided consultation, comment and advocated for a range of climate policies. Most recently, the GBCA is pleased to be working collaboratively on the development of a new National Carbon Offset Standard (NCOS) for buildings and precincts. This is an excellent example of government and industry working together to foster innovation and move towards a carbon positive future.

This submission provides comment on existing climate change policies and outlines the ways in which the GBCA, its members and the wider property and construction industry can help to achieve Australia's emissions reduction targets, support low emissions innovations and deliver transformation across the industry.

As always, the GBCA welcomes opportunities for further collaboration and consultation. Please do not hesitate to contact me via email at Jonathan.Cartledge@gbca.org.au should you require any further information or to discuss any points raised in this submission.

Yours sincerely



Jonathan Cartledge
Head of Public Affairs



green building council australia

Review of Australia's climate change policies

Submission

May 2017

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ABOUT US



Established in 2002, the Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings, communities and cities. Our vision is to create healthy, resilient and positive places for people and the natural environment. Our purpose is to lead the sustainable transformation of Australia's built environment. To do this, we:

- Rate the sustainability of buildings and communities through Australia's only national, voluntary, holistic rating system -  **greenstar**
- Educate industry and government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations
- Advocate policies and programs that support our vision and purpose.

The GBCA represents over 675 members from across industry and including 43 local governments, 26 state government departments and land organisations, and 18 universities. With a collective turnover of more than \$40 billion and employing more than 50,000 staff, our industry membership reflects the diversity of Australian business with over 500 small-to-medium enterprises through to 75 companies with annual turnover of more than \$100 million.



There are over 1460 Green Star-rated projects across Australia:

- 30% of Australia's CBD office space is Green Star certified
- 5% of the workforce head to a green office each day
- 34,000 people live in Green Star-rated apartments
- 150,000 people are moving into Green Star communities – this is double the size of Toowoomba, Australia's 13th largest city
- 1.3 million people visit a Green Star-rated shopping centre each day
- Green Star certified buildings, on average: produce 62% fewer greenhouse gas emissions and use 66% less electricity than the average building; 51% less potable water than minimum industry requirements; and recycle 96% of their construction and demolition waste.

Launched by the GBCA in 2003 as Australia's only national, voluntary and holistic rating system for sustainable buildings and communities, Green Star is an internationally recognised built environment rating system. The Green Star rating system has been developed by Australian industry and locally adapted to suit the Australian market. From individual buildings to neighbourhoods, precincts and entire communities, Green Star is transforming the way our built environment is designed, constructed and operated.

1. INTRODUCTION

As a signatory to the Paris Climate Agreement, Australia has committed to reaching zero net emissions by 2050. If Australia is to fulfil its commitments, there can be no delay in setting and implementing a policy roadmap to 2050 with a series of ambitious interim targets.

There are many opportunities to reduce emissions and improve energy productivity across the buildings sector and across the economy, and Australia is equipped to take strong leadership on climate action. Australian companies consistently top the Dow Jones Sustainability Index (DJSI), including GBCA members such as Lendlease, Stockland and The GPT Group.

The 2016 Global Real Estate Sustainability Benchmark (GRESB) - which assessed 759 real estate companies and funds (representing 66,000 assets and \$3.7 trillion in gross asset value) – ranked Australia the world's most sustainable real estate market for the sixth year in a row. GBCA members such as Stockland, DEXUS, ISPT and Lendlease are regularly ranked as sector leaders. Despite growing international competition, the average score of Australian companies and funds continues to increase, extending Australia's leadership position.

Organisations large and small, from across the economy, now consider a commitment to emissions reduction and climate change mitigation non-negotiable. Aside from the competitive, financial and social benefits to organisations in taking a proactive role in reducing emissions and improving sustainability, company directors also have a fiduciary responsibility to ensure that their organisations are well-positioned for the future. Many organisations now have a range of voluntary targets and measures in place so that they can demonstrate to shareholders, stakeholders and customers that they take the impacts of a changing climate, and the appropriate risk mitigation, seriously. While this is an area that has provided some opportunities for companies to differentiate themselves in the market and improve competitiveness, most would agree that it is critical that the Government determines an ambitious, coordinated and consistent set of climate change policies which will bring along laggards and provide more certainty for leaders.

2. GBCA LEADERSHIP

To assist the built environment and property and construction industry to play its part in achieving Australia's emission reduction targets and to keep global warming within 2 degrees, the GBCA recently released a discussion paper, *A carbon positive roadmap for the built environment*. The discussion paper sets the scene for a 1.5°C future, outlines potential priorities for the industry, and the roadmap for action, such as defining carbon neutral buildings and precincts.

It also endorses the following targets:

- All new buildings must be net zero by 2030
- All existing buildings must be net zero by 2050.

Our goal is to build a carbon positive future that is healthy, productive and resilient through cost-effective and achievable actions. To do this, we will be working with industry to achieve the following priorities:

1. Promote energy efficiency – driving quality design first, and efficient systems next.
2. Drive investment in resilient, renewable, energy infrastructure in Australia.
3. Increase markets for net zero carbon products, materials, and services.
4. Promote offsets for any remaining emissions.

We believe that this approach is a cost-effective pathway for buildings and portfolios, and will also achieve collective co-benefits for Australia in the transition to a net zero future. We believe the above priorities can support the following outcomes:

- Efficient, comfortable and healthy buildings running on renewable energy.
- A connected, resilient, renewable grid infrastructure and industry that will deliver energy, security, jobs, economic benefits and social transformation in cities and regional areas.
- Successful industries delivering net zero embodied energy materials, products and services.
- Enhanced outcomes from strategic offset investment.

The GBCA is undertaking work on its rating system, Green Star, to align it with these targets. Green Star is the only national, holistic, voluntary rating tool for buildings and communities. It recognises and rewards projects for delivering outcomes that go beyond minimum and standard practice. Green Star is regularly reviewed and updated to reflect continuous improvements in building practice, materials and performance, and to continually encourage, recognise and reward better outcomes for buildings and communities.

Over 1450 projects around Australia have achieved ratings under the Green Star rating system. This translates to 30% of the nation's office space, 35,000 people living in Green Star apartments and 1.2 million people visiting Green Star shopping centres each day. Green Star buildings emit 62 per cent fewer emissions, use 66 per cent less energy and 51 per cent less water than average Australian buildings¹ Our latest [research](#) analysing the costs and benefits of sustainable building shows that Green Star projects can be delivered for less than one per cent of the overall project budget.

Using the carbon positive roadmap discussion paper, the GBCA is currently consulting with our members and the wider industry to finalise a roadmap for the built environment over the coming months. The GBCA looks forward to sharing the roadmap with the Department of Environment and Energy as part of the issues being considered in this Review.

¹ Value of Green Star: A decade of environmental benefits, GBCA, 2013.

3. LEVERAGING THE BUILT ENVIRONMENT

Since its inception in 2002, the GBCA has been driving and showcasing the potential of the built environment to deliver emissions reductions, while driving down costs and improving a range of social, environmental and health outcomes. The role of the built environment in an economy-wide approach to meeting Australia's emissions targets cannot be understated:

- Buildings currently account for almost 25 per cent of our national emissions
- Using existing technologies, buildings could contribute up to one tenth of our 2030 emissions target through energy efficiency measures and contribute more than a quarter of our 2030 emissions target with high levels of uptake of distributed energy.
- Buildings could contribute to meeting more than half of our energy productivity target.

The GBCA notes that improvements and adjustments to current climate policies are necessary to enable and encourage industry to fully deliver on the potential of the built environment. Please see comments below on the challenges and limitations of current policies, as well as recommendations for seizing the many opportunities that exist.

3.1 Low carbon, high performance

The GBCA is pleased to be a member of the Australian Sustainable Built Environment Council (ASBEC), the peak body for organisations committed to a sustainable built environment. ASBEC's members bring a united industry voice and a wealth of expertise to creating solutions to policy challenges. ASBEC's report, *Low Carbon, High Performance*, authored by ClimateWorks Australia, details the extent of the built environment's potential and makes 32 recommendations for this potential to be realised. These can be summarised into five key areas:

1. A national plan with supporting policy frameworks and governance arrangements, including long-term and interim targets, clear responsibility at a Ministerial level, coordination of action across different levels of government and different government departments and agencies and public reporting requirements
2. Mandatory minimum standards for buildings, equipment and appliances with a future trajectory aligned with the long-term goal of net zero emissions
3. Targeted incentives and programs to motivate and support higher performance in the short- to medium-term, including incentives, the use of government market power and targeted programs and support
4. Energy market reforms to ensure that the energy market supports roll-out of cost-effective energy efficiency and distributed energy improvements
5. A range of supporting data, information, training and education measures to enable informed consumer choice, and support innovation, commercialisation and deployment of new technologies and business models.

As well as making recommendations for new policies and initiatives to seize opportunities, *Low Carbon, High Performance* details ways in which current policies can be improved and enhanced, particularly in regard to the Emissions Reduction Fund (ERF), National Energy Productivity Plan (NEPP), raising minimum standards and distributed energy policy. These points are discussed further below. For more information about the recommendations in the *Low Carbon, High Performance* report, please see www.asbec.asn.au/publications.

Commonwealth Bank Place

Commonwealth Bank Place at Sydney's Darling Quarter, is an outstanding showcase – both domestically and internationally – for social, environmental and economic sustainability. Commonwealth Bank Place has achieved 6 Star Green Star World Leadership ratings for design, construction, interior fitout and performance. It scored 81 points out of a possible 100 in its Green Star – Performance assessment, confirming that Lendlease's design and construction intentions have translated into a building that is efficient in operation.

The building generates 50 per cent less greenhouse gas emissions than an average commercial office building and consumes 80 per cent less drinking water. This is equivalent to taking 680 cars off the road and saving 13 Olympic swimming pools of water each year.

Sustainability initiatives include a high-performance façade, energy-efficient lighting, heating, ventilation and air-conditioning, rainwater harvesting and re-use, as well as trigeneration and onsite blackwater treatment systems.

3.2 Raising minimum standards

Australia is fortunate to have a National Construction Code (NCC) which allows a consistent and nation-wide approach to construction regulation. While safety is the primary focus of the NCC, the opportunity to improve energy efficiency in buildings is invaluable.

While energy efficient design and technology continues to improve – with many buildings in Australia now energy neutral or energy positive – the minimum standards prescribed in the NCC have not been updated since their introduction in 2010. The gap between minimum practice outlined in the NCC and best practice grows wider by the year. Lifting minimum standards for energy efficiency in the NCC will ensure that new buildings in Australia do not miss opportunities for emissions reduction, as well as creating opportunities to reduce running costs over the life of buildings.

The GBCA is supporting ASBEC in its work with the Australian Building Codes Board to increase stringency for commercial buildings in the 2019 update to the NCC. To ensure future updates to the NCC occur regularly, a trajectory should be established for future energy provisions in the NCC. A shared ultimate goal of net zero emissions for the NCC supported by a trajectory of planned updates over time will encourage innovation and regular upskilling of industry, and deliver more high performing buildings.

3.3 Capturing the mid-tier opportunity

In 2015, the GBCA led a project on behalf of Australian Government Department of Industry, Innovation and Science, with support Sustainability Victoria and City of Melbourne, to develop a pathway with a range of actions that aim to improve the performance of mid-tier commercial office buildings.

Mid-tier office buildings are generally under 10,000 square metres. They have diverse ownership profiles which means the business case for upgrades is highly dependent on the different building owners as well as tenants. Despite the challenges, the opportunities are significant. It is estimated that there could be as much as 64 million square metres of commercial office space in Australia. Whilst the top-tier premium and A-grade buildings make up around 12.7 million square metres, the rest of this space could be classified as mid-tier (around 52 million square metres).

Through the mid-tier pathway project, a range of actions and initiatives has been identified that would help to improve the energy efficiency of the mid-tier commercial buildings sector. These actions fall into the following categories:

1. **Develop a robust and trusted evidence base** through conducting further research into the size, location, grade and energy performance of buildings, ownership and tenant profiles, the potential benefit of successful policies and programs that can be adapted for the mid-tier, and identify best practice and gaps through the Building Retrofit Toolkit project.
2. **Build a compelling and quantified business case for energy efficiency upgrades** by compiling case studies and data sets, as well as information about building life cycle costs in relation to energy efficiency upgrades.
3. **Create a shift in awareness, knowledge and behaviour** by educating building owners and other stakeholders and service providers, and expanding building disclosure policies.
4. **Develop and identify tools to promote improved energy performance** such as a user review app for buildings, and raise awareness of existing tools such as Green Star, NABERS, Calculating Cool and the LEASA app.
5. **Establish representative bodies and networks** and leverage existing organisations to bring together key stakeholders to increase collaboration, innovation and exchange.
6. **Promote innovative financing mechanisms**, such as tax breaks, accelerated depreciation, rebates, Environment Upgrade Agreements and low interest loans, as well as creating ways for mid-tier buildings to access existing schemes such as the ERF and state-based white certificate schemes.

For more detailed information about the recommendations in *Mid-tier commercial office buildings in Australia – A national pathway to improving energy productivity*, please visit www.gbca.org.au

3.4 Facilitating sustainable utility infrastructure

Energy efficiency can reduce energy consumption in buildings by more than half by 2050, while fuel switching can eliminate most non-electric energy consumption. Remaining emissions from electricity consumption in buildings can be eliminated through the production of zero emissions electricity.

If Australia is to meet its international commitments to achieve zero net emissions, a transformation of the electricity supply sector will be required. This means that achieving zero emissions buildings is likely to involve a combination of distributed solar PV [...], as well as decarbonisation of grid-supplied electricity.²

It is widely acknowledged that Australia's complex utility market and regulatory environment imposes barriers to innovation and alternative utility infrastructure and supply. For example, the recent draft ruling by IPART on prices for wholesale water and sewerage services risks destroying a nascent and highly innovative water services industry in NSW. This is due to a blinkered regulatory focus that fails to account for broader social and environmental benefits associated with new technology and services. The GBCA advocates for the removal of market barriers to district-based utilities and calls for a fair tariff structure and value for distributed utility solutions.

The GBCA is proud to be working across industry to establish a stronger industry voice for district-based utilities representing energy, telecommunications and shared services alongside prosumers. The GBCA looks forward to engaging with all spheres of government on these issues to identify and realise opportunities for removing barriers and implementing innovative solutions.

Central Park

The Central Park development on the edge of Sydney's CBD is set to become one of Australia's largest developments powered by its own tri-generation energy plant, as well as hosting one of the biggest membrane bioreactor recycled water facilities in the world. This facility is realising the benefits of a precinct-scale approach to utilities, with more than 5,000 residents halving their usage of drinking water, while also saving money and valuable resources.

Central Park will also have its own low-carbon natural gas power plant to provide heating and cooling for the community. This system has the potential to reduce greenhouse gas emissions by up to 190,000 tonnes over the 25 years. While the opportunities to reduce resource use within the precinct are significant, efforts to export energy offsite to other buildings in the area to gain further efficiencies have been blocked by regulatory restrictions.

² ASBEC Low Carbon, High Performance, ClimateWorks Australia, 2016

4. FURTHER COMMENT ON CURRENT CLIMATE CHANGE POLICIES

4.1 Emissions Reduction Fund

The ERF is the centrepiece of the Government's suite of policies to reduce emissions and aims to target least-cost abatement opportunities. However, several barriers have prevented the buildings sector – where many low-cost opportunities exist – from accessing the scheme. Only four project contracts awarded under the ERF to date have used the commercial buildings method.

Barriers to entry include:

- A minimum bid size of 2000 tonnes CO₂-e average abatement per annum. This level of abatement is difficult to achieve for a single building, except for very large, energy-hungry facilities. To access this program, multiple buildings would likely need to be aggregated under one project.
- Given that a successful bid cannot be guaranteed, the uncertainty of the abatement price per tonne, and the high cost of preparing a bid, even building owners with large portfolios find the risk/cost versus return of this program unattractive. Aggregating buildings with multiple owners carries even higher risk.
- A requirement for multi-year contracts means that there is a risk that a building owner may be financially liable if savings do not eventuate.
- The structure of payment is also a barrier to many potential proponents of the ERF program. While credits might be calculated upfront, they will only be generated and paid as abatement is delivered. This will be a significant disadvantage to capital-constrained proponents and could undermine additionality objectives (only those with existing capital will proceed).

To harness the opportunities for low-cost abatement in the buildings sector, adjustments must be made to the ERF. These could include:

- reducing the minimum bid size for buildings
- allowing partial opt-outs for building owners if expected emissions savings are not delivered in a particular year
- allowing for upfront payment where units of emissions reduction can be guaranteed, e.g. lighting upgrades can provide a high degree of certainty of total abatement
- establishing separate auction streams for buildings to reduce uncertainty about the likely price.

4.2 National Energy Productivity Plan

The GBCA applauds the Government on the development of the NEPP. The NEPP details a range of complementary measures that will assist the Australian economy in increasing its energy productivity. The GBCA and broader property and construction industry look forward to working closely with Government to deliver on a range of initiatives outlined in the NEPP work plan. In particular:

- Expand commercial building ratings and disclosure
- Reduce barriers to financing
- Improve energy productivity in government
- Promote leading practice
- Emerging technologies in the electricity system
- Reform governance to keep pace with change
- Advance the National Construction Code

Many of the initiatives outlined in the NEPP work plan align with those identified in the *Low Carbon, High Performance* report and the GBCA encourages the Government to continue to consult closely with industry to ensure that programs and initiatives are designed to overcome existing barriers and take full advantage of opportunities.

4.3 National Carbon Offset Standard

The GBCA commends the Government on the National Carbon Offset Standard for Buildings and Precincts. We have appreciated the opportunity to have worked closely with the Department of Environment and Energy and the National Australian Built Environment Rating System (NABERS) on developing the Standard, providing clear definitions and voluntary standards for carbon neutrality or 'net zero' emissions for buildings and precincts. The GBCA supports the overarching vision and principles of the Standard and congratulates Government on its commitment to help place Australia on the trajectory towards a zero-carbon economy. Our submission in response to the draft Standard can be read [here](#). The Standard will provide invaluable guidance for industry as it works towards eliminating emissions from buildings and precincts and the GBCA looks forward to continuing a collaborative relationship with the Department as the Standard piloted and further reviewed in the months ahead.

4.4 Renewable Energy Target

As well as contributing to reduced emissions, the Renewable Energy Target (RET) has a positive impact on Australia's economy in a number of ways, including encouraging investment in renewable energy solutions, supporting jobs in the renewable energy sector, and providing opportunities for organisations to integrate renewable energy solutions into their strategies for reducing emissions and reducing exposure to rising energy prices.

Changes to the RET and mixed messages from the Australian Government regarding its commitment to, and support for, renewable energy technologies have impacted investment in this sector. Renewable energy must be an expanding part of Australia's energy mix if we are to achieve our emissions reduction targets. If Australia is to remain competitive in a low carbon global economy, it must not miss the opportunity to attract investment into an innovative domestic renewable energy industry.

4.5 Clean Energy Innovation Support

The GBCA welcomes the commitment by the Government to supporting clean energy innovation via the Australian Renewable Energy Agency, the Australian Research Council, CSIRO, the Clean Energy Finance Corporation (CEFC) and others. Providing opportunities for industry to access finance and funding for projects that will deliver greater energy productivity and efficiency will greatly assist the built environment in achieving its abatement potential.

Clean Energy Finance Corporation

The CEFC has been working with the GBCA to use Green Star as an independent benchmark for building projects that must demonstrate energy efficiency and carbon emissions reduction to be eligible for finance.

The CEFC has invested \$60 million to allow St George Community Housing (SGCH) to build over 200 new energy efficient homes. The new homes will be built to a minimum 4 Star Green Star rating (representing best practice), or a 7 star rating under the Nationwide House Energy Rating Scheme (NatHERS). SGCH currently has two multi-unit residential projects registered for Green Star certification.

More recently the CEFC has invested \$100 million into AMP Capital's Wholesale Office Fund which has committed to becoming carbon neutral by 2030. This is just part of the fund's broad commitments to sustainability which include lifting the portfolio's NABERS average base building energy rating to 5.5 Stars by 2030 and delivering a pipeline of highly-sustainable flagship assets like Australian Technology Park and Quay Quarter Tower, which is targeting a 6 Star Green Star and 5.5 star NABERS rating once completed.

4.6 Australia's international climate policies

Given the critical role of the built environment in meeting emissions reduction targets, it is important that this sector is represented and included in the development of international climate policies. In 2015, the first 'Buildings Day' was included in the summit schedule at COP21 in Paris, followed by another in 2016 at COP22 in Marrakech.

As part of the Buildings Day discussions, 10 Green Building Councils, including the GBCA, have now committed to developing net zero certification pathways to support a target of net zero emissions for the buildings sector by 2050. This work will be underpinned by the

collaboration with Government on the NCOS for buildings and precincts and the GBCA's own work in developing a carbon positive roadmap for the built environment.

4.7 Commercial Building Disclosure

The GBCA applauds changes to the Commercial Building Disclosure (CBD) program lowering the threshold for mandatory disclosure in commercial office buildings from 2000 square metres, to 1000 square metres. The building sector in Australia accounts for approximately 19 per cent of total energy consumption and 23 per cent of overall GHG emissions³. Of this, commercial buildings account for roughly half of this amount at 10 per cent of the nation's overall energy consumption, whilst commercial *office* buildings make up approximately 25 per cent of this total^{4 5}.

Given the success of the CBD program, extending disclosure policies to other building types should be explored. The Green Star rating system applies to almost all building types and the GBCA welcomes the opportunity to work with Government on any investigation into further building disclosure programs.

4.8 Realising co-benefits across infrastructure and cities policy

While the opportunities to reduce emissions, reduce running costs, build resilience and deliver a range of environmental, social, health and economic benefits by improving buildings are substantial, the opportunities are exponentially greater when we take an infrastructure-, community-, or city-level approach.

There are already numerous precincts and communities in Australia that deliver world-leading energy, water and waste solutions, as well as the resilience, liveability and connectedness that Australian communities will need to survive and thrive in a changing climate and low carbon economy.

The Government has an unprecedented opportunity to leverage sustainable outcomes through the Smart Cities Plan and City Deals program. The Australian industry knows how to deliver world-class outcomes in buildings and precincts, and City Deals provide an opportunity to catalyse this knowledge and expertise in large-scale projects across the country. The GBCA encourages the Government to commit funding to opportunities that will deliver best practice outcomes and require planning and infrastructure decision-making to deliver positive environmental, social and economic outcomes.

Benchmarking and measurement will be vital in ensuring desired outcomes and targets are met. Green Star has been used extensively across Australia for community and precinct-scale projects to demonstrate how these projects are delivering not just on environmental impacts, but also liveability, economic prosperity, governance and innovation.

³ ASBEC The Second Plank Report: Building a low carbon economy with energy efficient buildings, 2008

⁴ Baseline Energy Consumption and Greenhouse Gas Emissions in Commercial Buildings in Australia, 2012

⁵ Mid-tier commercial office buildings in Australia, EY, 2015

The Green Star – Communities rating tool assists governments, development project teams, contractors and other interested parties aiming to deliver large scale sustainable developments around Australia. Since 2012 we have certified 25 Green Star Communities.

Due to the holistic nature of its credits, the Green Star – Communities rating system provides established metrics to measure and communicate the outcomes sought at a community and project level through City Deals. The table below summarises each of the five principles underpinning Green Star – Communities as they align with the City Deals model:

Category	Metric for City Deals
Visionary Leadership and Governance	Recognises developers and developments that demonstrate: <ul style="list-style-type: none"> • sectoral leadership by establishing and maintaining strong governance practices • engagement, transparency, and community and industry capacity building.
Liveability	Recognises developments that deliver: <ul style="list-style-type: none"> • safe, accessible and culturally-rich communities • healthy and active lifestyles • high level of amenity, activity and inclusiveness
Economic Prosperity	Recognises developments that promote: <ul style="list-style-type: none"> • prosperity and productivity • affordable living and housing • investment in education and skills development • facilitation of community-capacity building • greater productivity via emerging opportunities in the digital economy
Environment Responsibility	Recognises developments that promote: <ul style="list-style-type: none"> • reduced negative impacts on sensitive ecosystems and the natural environment (land, water and atmosphere) • resource management and efficiency by promoting infrastructure, transport, and buildings • reduced ecological footprints
Design Excellence & Innovation	Recognises developments that encourage: <ul style="list-style-type: none"> • spread of innovative practices, processes and strategies that promote sustainable communities and cities

*Adapted from the Commonwealth Governments Smart Cities Plan

Barangaroo

Barangaroo South, developed by Lendlease, achieved a 6 Star Green Star – Communities rating representing 'world-leadership' in the design and delivery of sustainable communities. Barangaroo South is targeted to become Australia's first large scale carbon neutral community. Barangaroo is one of only 17 projects globally to be part of the C40 Cities-Clinton Climate Initiative's Climate Positive Development Program.

The precinct is capable of being water positive, with an on-site blackwater treatment plant capable of supplying one million litres of recycled water a day to the precinct and surrounding suburbs. Barangaroo is also targeting zero net waste to landfill by 2020.

Upon completion, Barangaroo South will become home to around 1,500 residents, there will be next generation office space for 23,000 workers, more than 80 new retail outlets and over 50 per cent of the precinct will be open public spaces for everyone to enjoy.

Tonsley

Tonsley was Australia's first mixed-use urban redevelopment to be awarded a 6 Star Green Star – Communities rating. When Tonsley's masterplan was being developed back in 2012, the South Australian Government set a clear brief for the site. The former manufacturing park was to become a sustainable centre for innovation and productivity, drawing workers, developing high-value industries and contributing to the state's economic success.

While planning Tonsley, the project team created a Site Wide Built Form Development Manual and site-specific Urban Design Protocol to ensure all buildings adhere to the sustainability and liveability vision for the site – and in doing so has set new benchmarks for sustainable urban renewal in Australia.

The former Mitsubishi Main Assembly Building (MAB) has been retained as the central town square. In addition to providing an activated hub at the heart of the community, retaining the MAB ensures that around 90,000 tonnes of embodied carbon emissions have been saved – the equivalent of removing 25,000 cars from the road for a year. Within the MAB, internal forests will provide beautiful natural spaces for members of the community to enjoy, while at the same time capturing carbon and purifying the air. The MAB's expansive roof also supports an extensive 3MW photovoltaic array.

Fishermans Bend

The Andrews Government has made a commitment that Fishermans Bend will achieve Green Star – Communities certification, ensuring that this future community of more than 80,000 people will not only be environmentally sustainable, but also liveable, resilient, prosperous and healthy. With such a significant urban renewal project right on the doorstep of the city, the responsibility to Melbourne's existing and future residents is huge, but the opportunities – for reducing emissions, increasing energy productivity and delivering desirable density – are even greater.

Western Sydney Airport

Prime Minister Malcolm Turnbull has said that the Western Sydney Airport project will be the largest planning, investment and delivery partnership in Australia's history. It is a once-in-a-lifetime opportunity to ensure that it becomes the productivity powerhouse that Sydney and NSW need.

Australia's property and construction industry already knows how to deliver sustainable large-scale communities. Government must support and enable industry by encouraging innovation and clearing the way for the delivery of world-leading utility solutions that are carbon and water positive. This project deserves nothing less than complete commitment by government, industry and all stakeholders to meeting best practice benchmarks for all aspects of sustainability.

A rating tool such as Green Star – Communities can provide the common language to assist stakeholders in working together towards a common goal, as well as providing a method for measuring outcomes against best practice.

Parramatta Square

Parramatta Square is one of the largest urban renewal projects in Australia. The three hectare mixed-use urban renewal project will provide the foundation for growth in the city and create a future based on good urban design that is environmentally sustainable, has vibrant, beautiful public spaces and an effective public transport system.

The six-stage development will incorporate a new civic building, community centre and library as well as commercial, residential and retail developments. A 5 Star Green Star ratings target for all buildings across the six stages of the development has also been set.

City of Parramatta's objectives for Parramatta Square are:

- To showcase design excellence and environmental sustainability
- To provide opportunities for future employment growth
- To provide a gathering space and ceremonial centre for public use as well as civic events and recurrent cultural and community events
- To contribute to the City's identity and its social and cultural life by becoming a showcase for innovative design in the heart of Parramatta CBD.

Targeting a Green Star – Communities rating for the development provides independent proof to residents, businesses and investors that Parramatta Square delivers economic, social and environmental sustainability.

5. LEADING BY EXAMPLE

There are now more than 1450 Green Star-certified projects across Australia. Of these, over 140 projects, nearly 10 per cent, have been led by governments. These projects, and the policies that support them, like the Government's Energy Productivity Policy, help deliver not just value for money outcomes, but also the longer-term sustainable transformation of our built environment.

The GBCA's 600 member organisations choose to deliver environmentally sustainable projects, not just because it is the right thing to do, but because environmentally sustainable buildings and communities deliver cost benefits, mitigate and reduce exposure to the risks of a changing climate, contribute to national and global emissions reduction targets and deliver social and health benefits to occupants and users. Government cannot afford not to do the same.

Industry continually finds ways to reduce costs throughout the whole procurement process and supply chain, while delivering high quality outcomes. In the 15 years since the GBCA was established, its members have driven change that has led to many products and practices that were virtually unheard of then, to now be commonly and cost-effectively available. Many of those early leaders and adopters have been governments; federal, state and local. The impact of visionary government leadership on driving change cannot be underestimated.

One of the first examples of government leadership in sustainable building was the Victorian Government's requirement that all new office space must be Green Star-certified. At the time, Green Star certification was still relatively new and only a small portion of industry was familiar with it. However, to supply government demand for high quality Green Star office space, industry rapidly upskilled and adopted Green Star and today 4 and 5 Star Green Star certification is usually achieved on a cost-neutral basis.

With increasing commitments by all governments to reach net zero emissions targets by 2050, it is important that parallel commitments are reflected in government procurement policy. Leadership on committing to net zero buildings is now being led by industry with companies like Investa, who has committed to a net zero emissions target by 2040 across its \$10 billion+ office portfolio and business operations, and AMP Capital cited earlier.

5.1 Delivering Value for Money

Governments owe tax payers value for money on any government expenditure. Best practice procurement by government is a powerful mechanism to drive transformation through supply chains and catalyse improvements in the behaviour of responding markets for goods and services. Governments must consider supply chains holistically to achieve the best value. The argument that more environmentally sustainable options and certification cost more, often do not hold up when the full benefits are taken into account.

Government-occupied premises account for 14 per cent of the identified emission reduction opportunity across commercial buildings.⁶ Until 2012, the Government collected and published data on energy use across its operations. The electricity used to power federal government facilities in 2011-12 amounted to over 6,200,000 GJ, which generated approximately 1,670,000 tonnes of carbon dioxide.

The GBCA calculated the cost of this electricity at \$205/MWh, which amounts to an annual power bill of over \$350 million.⁷ A modest 10 per cent improvement in energy efficiency would save more than \$35 million per year in electricity costs and be equivalent to the electricity required to power 23,000 homes. A 10 per cent improvement would also reduce carbon emissions by 167,000 tonnes – the same as taking 46,000 cars off the road.

When evaluating the environmental and sustainability benefits of goods and services being procured, officials should seek evidence that the delivery of those goods and services is done with appropriate regard to the Government's energy efficiency and productivity objectives. Green Star certified buildings, on average: produce 62% fewer greenhouse gas emissions and use 66% less electricity than the average building; 51% less potable water than minimum industry requirements; and recycle 96% of their construction and demolition waste. On average Green Star projects are delivered for less than 3% of the overall project budget.

Green Star-rated buildings or office fit-outs should be a pre-condition for the procurement of any government building or office. The use of rating tools like Green Star can provide evidence to support a claim of sustainability and energy efficiency.

⁶ ASBEC Low Carbon, High Performance, ClimateWorks Australia, 2016

⁷ This price is based on the Average Retail Electricity Price projections according to Climate Change Authority modelling. It is acknowledged that Australian Government agencies may negotiate lower prices.

5.2 Reviewing the Commonwealth Procurement Framework

Considerations supporting the delivery of sustainability through the Commonwealth Procurement Framework (CPF)—most recently considered as part of the Joint Select Committee on Government Procurement Inquiry—are appropriately reflected in the core rule of the Commonwealth Procurement Rules (CPRs) to achieve value for money. As part of delivering value for money, Section 4.5 notes:

...that when conducting a procurement, an official must consider the relevant financial and non-financial costs and benefits of each submission, including, but not limited to: [...]

e. environmental sustainability of the proposed goods and services (such as energy efficiency and environmental impact);

The additional requirements considered by the Joint Select Committee under Section 10.18, are that:

officials must make reasonable inquiries that the procurement is carried out considering relevant regulations and/or regulatory frameworks, including but not limited to tenderers' practices regarding: [...]

c. environmental impacts.

This is also appropriate, and reflects the increasing importance of environmental sustainability in determining value for money outcomes. Consistent with Section 4.5, the GBCA recommends that Section 10.18 (c.) should be expanded to reference: environmental sustainability, as opposed to just environmental impact.

With this increasing emphasis on evaluating environmental impacts and broader sustainability, and in light of the Government's international commitments to reduce Australia's emissions and increase our national energy productivity, it is also timely to consider opportunities within the CPRs to provide additional guidance to officials to support their consideration of these impacts and benefits.

Just as the CPRs provide some further guidance on assessing whole of life costs (see Section 4.6), alongside this, we recommend that the CPRs provide additional guidance on what could be assessed to evaluate the environmental and sustainability benefits manifest in the goods and services being procured. For example, expanding Section 4.5, this could include that:

Environmental sustainability of the proposed goods and services (such as energy efficiency and environmental impact), may be demonstrated through:

- a. evidence that, wherever possible, providers of both goods and services are increasing their energy efficiency in a manner consistent with the Government's emissions reduction and energy productivity targets.*
- b. providers evidencing support for the delivery of environmental sustainability through their own supply chains.*
- c. the use of rating tools like Green Star and NABERS for a provider's own office accommodation and other facilities (warehousing, data centres etc.).*

5.3 Reviewing Energy Efficiency in Government Operations (EEGO)

A review of the Australian Government's Energy Efficiency in Government Operations Policy presents a great opportunity for the Government to lead by example in the move towards net zero government buildings by 2030 (consistent with the GBCA's own carbon positive roadmap), and additionally to augment the benefits that come with the specification of just energy ratings through NABERS for Government buildings and tenancies with the broader public policy benefits associated with ratings like Green Star.

This would support a harmonised approach across government and greater consistency with long-standing policies in the [ACT](#) (2014; p.23-25), [South Australia](#) (2007; p.7), [Victoria](#) (2007; p.13-15) and [Western Australia](#) (2014; p.5) office accommodation and design guidelines.

The accompanying narrative in the policies as hyperlinked above clearly acknowledge the benefits of specifying Green Star as a tool to help secure value for money, sustainability, quality and healthier and more productive workplaces. This rationale is helpful in positioning the value-add offered within the Government's broader procurement objectives through the Energy Productivity Policy.

Consistent with these policies and more ambitious targets, we recommend for Government buildings:

- The application of ≥ 5 Star Green Star - Design & As Built, and ≥ 5 Star Green Star - Performance for buildings in operation over 1000 square metres.
- The application of ≥ 5 Star Green Star - Interiors for fit-outs for office accommodation over 1000 square metres.

Any review of this policy should also provide for a longer-term vision to support business certainty and confidence in planning in the years ahead towards 2030 targets. This policy should clearly acknowledge that requirements will inevitably increase again in the future with the need to move towards net-zero. This would provide a longer-term indicator to industry and support confidence for continued investments beyond the minimum requirements. Ultimately, the inclusion of these additional requirements in the Australian Government's own policy, would provide for a far more comprehensive and consistent approach across government realising greater value for money outcomes for the taxpayer.

6. CONCLUSION

Australia has committed to considering a potential long-term emissions reduction goal for Australia beyond 2030. What factors should be considered in this process?

Visionary government leadership and full commitment to a suite of policies that work together towards zero net emissions will be essential to achieving Australia's Paris commitments. There can be no delay in setting and implementing a policy roadmap to 2050 with a series of ambitious interim targets. Collaboration with industry will be vital in delivering emissions reductions across the economy and this can only be gained through genuine consultation and policy certainty.

What are the issues in the transition to a lower emissions economy with respect to jobs, investment, trade competitiveness, households (including low income and vulnerable households) and regional Australia?

A transition to lower emissions economy will deliver benefits far beyond emissions reductions. This is already evident through investment in our sustainable real estate, demand for Australian sustainability expertise and the rise of jobs in sustainability-related fields. To achieve our emissions reduction targets, Australia will need to further encourage and invest in innovative technologies and practices. Australia's international trade competitiveness will rely on being at the forefront of emerging industries such as renewable energy and sustainable construction and development.

Sustainable buildings and communities also deliver benefits such as lower running costs and healthier, more productive, better connected places to live, work, learn and play which positively impact people and households across Australia, every day.

How can energy and climate policy be better integrated, including the impact of state-based policies on achieving an effective national approach?

The Australian Government's Paris commitment provides the common goal towards which all policy can now be designed and coordinated to deliver. It is not just energy policy and climate policy that must work together towards zero net emissions. As this submission has outlined, it will also need policies such as the NCC, international policy, innovation policy, government-backed finance and funding mechanisms, and the Government's own policies on procurement and energy productivity all working towards the same goal.

The GBCA's carbon positive roadmap and Green Star rating system, ASBEC's *Low Carbon, High Performance* recommendations, the NEPP, NCOS, the CBD program and projects financed by the CEFC are all excellent examples of how government and industry can work collaboratively to achieve successful outcomes. All spheres of government now have a responsibility to enhance and amend their policies to drive the transition towards zero net emissions.

What are the opportunities and challenges of reducing emissions for household, SMEs and the built environment? Are there any implications for policy?

As this submission has detailed, the opportunities for carbon abatement in the built environment are significant, often low-cost and all possible without needing to wait for new technology. Equally important to consider are all the complementary benefits that can be realised when government and industry works together to realise the full potential of this sector. Energy efficiency does not just equal tonnes of carbon saved; it reduces costs and encourages innovation. Renewable energy does not just decarbonise the energy grid; it creates job and opportunities for trade and investment. Sustainable buildings and communities are not just efficient, healthy places to live, work, play and learn; they are resilient, productive, future-proofed assets that boost our economy.