

Chief Executive Officer  
Attention: Anna Mitchell, Senior Sustainability Strategist  
City of Sydney  
GPO Box 1591  
SYDNEY NSW 2001

Via email: [sydneyyoursay@cityofsydney.nsw.gov.au](mailto:sydneyyoursay@cityofsydney.nsw.gov.au)

17 April 2018

Dear Ms Mitchell,

**RE: GBCA SUBMISSION – SYDNEY’S SUSTAINABLE OFFICE BUILDINGS PLAN**

The Green Building Council of Australia (GBCA) appreciates the opportunity to participate in the City of Sydney’s consultation on *Sydney’s sustainable office buildings plan* (the plan).

The GBCA believes that the vision, opportunities and actions detailed in the plan generally reflect the shared view of industry and that of the GBCA.

The vision for Sydney’s office buildings articulated in the plan is:

**Efficient buildings, running on renewable energy will be in high demand across all parts of the office sector**

The plan targets – among other things – mainstream demand for net zero office space and buildings, continuous improvement of environmental performance in existing buildings, new developments designed and constructed to the highest level of sustainable performance available and improved waste management and water efficiency.

These are also goals of the GBCA and Green Star and we have seen ever-increasing momentum towards achieving these since the first Green Star rating tool was launched in 2003.

The paper also outlines challenges which the GBCA has been seeking to overcome through its own advocacy, through supporting the work of members and partners such as the City of Sydney. Working together to address the challenges identified in the Sydney’s sustainable office buildings plan will be critical if we are to achieve our carbon positive goals.

This submission endeavours to address the actions, targets, challenges and outcomes identified within the plan as they relate to the work of the GBCA. Some are addressed briefly in the tables below, while several of our key policies and initiatives are discussed in more detail. These are policies and initiatives which have been identified as matters of importance to our members and our organisation and which will continue to be the focus of GBCA leadership, advocacy, research and policy and rating tool development in the coming years. They are:

- Carbon Positive Roadmap
- Renewable energy and decentralised utilities
- Opportunity knocks – Accelerating energy efficiency for mid-tier buildings
- Building Code Energy Performance Trajectory Project

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The GBCA applauds the City of Sydney on its ongoing commitment to sustainability. *Sydney's sustainable office buildings plan* is another example of a City of Sydney initiative that demonstrates strong leadership while supporting and celebrating the efforts of industry and the community.

The GBCA looks forward to continuing to work closely with the City of Sydney on realising the objectives of the plan as well as the many other programs and policies that align with our mission. If you would like any further information, or to discuss any aspect of this submission in more detail, please do not hesitate to Sandra Qian, Senior Advisor – Policy and Government Relations at [sandra.qian@gbca.org.au](mailto:sandra.qian@gbca.org.au) or 0430 304 618

Yours sincerely



Jonathan Cartledge  
Head of Public Affairs



Established in 2002, the GBCA is Australia's leading authority on sustainable buildings and communities. We are an industry association committed to developing a sustainable property industry in Australia. Our vision is to create healthy, resilient and positive places for people and the natural environment.

To achieve this, we

- Rate the sustainability of buildings and communities through Australia's only national, voluntary, holistic rating system – Green Star;
- Educate industry and government practitioners and decision makers and promote green building programs, technologies, design practices and operations; and,
- Advocate for the sustainable transformation of the built environment.

The GBCA represents more than 650 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 ASX 200, 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 and suppliers.



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.

There are over 1722 Green Star-rated projects across Australia:

- 37% of Australia's CBD office space is Green Star certified
- 6% of the workforce head to a green office each day
- 42,000 people live in Green Star-rated apartments
- 425,000 people are moving into Green Star communities
- 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.



**GBCA submission to Sydney’s sustainable office buildings plan consultation**

**Industry action and City of Sydney support (as identified in the plan)**

1.1 Owners	GBCA/Green Star response/activity
<ul style="list-style-type: none"> <li>• Implement environmental upgrades</li> </ul>	<p>The GBCA has been a strong advocate for mechanisms that support and encourage environmental upgrades, such as Environmental Upgrade Agreements and green leasing.</p> <p>We actively encourage building owners to upgrade their assets and recognise and reward their efforts in applying Green Star to upgrade and retrofit projects.</p> <p>Some outstanding examples include:</p> <ul style="list-style-type: none"> <li>• 5 Martin Place, Sydney NSW</li> <li>• 50 Martin Place, Sydney NSW</li> <li>• Perth GPO, Perth WA</li> </ul> <p>More information about Green Star certified projects is available at <a href="https://new.gbca.org.au/showcase/">https://new.gbca.org.au/showcase/</a>.</p>
<ul style="list-style-type: none"> <li>• Rate and disclose NABERS Energy performance ratings for base building, combined and whole building in collaboration with tenants</li> </ul>	<p>The GBCA works closely with the NSW Office of Environment and Heritage NABERS team to ensure alignment between NABERS and Green Star wherever possible. NABERS Energy ratings are a requirement of the Green Star Energy category (when NABERS Energy can be applied to the building type).</p>
<ul style="list-style-type: none"> <li>• Support energy performance disclosure and improvement by their tenants</li> </ul>	<p>Points are available within Green Star rating tools for facilitation of energy performance disclosure and cooperation between tenants and owners.</p>
<ul style="list-style-type: none"> <li>• Upgrade all general lighting systems within tenancies</li> <li>• Maximise on-site and off-site renewable energy supply options</li> <li>• Provide source-separated waste management services for recyclable materials, including organic waste where appropriate</li> <li>• Use industry best practice to manage and report on waste generation in offices via the NABERS Waste tool to improve industry insights and identify new opportunities for resource recovery</li> </ul>	<p>All these actions and initiatives have been used in Green Star rated office projects, of which there are 128 within the boundaries of the City of Sydney (as of April 2018). Points have been awarded in the rating tool certification process where they lead to demonstrated reductions in emissions, reduced resource consumption and waste and improved building occupant behaviours and well-being outcomes in line with the aims of the relevant Green Star category.</p>

<ul style="list-style-type: none"> <li>• Work with product and service contractors to implement innovative ideas to minimise waste generation on site and to encourage the re-use and replacement of non-recyclable materials with re-usable or recyclable materials</li> <li>• Seek non-landfill solutions when establishing waste contracts</li> <li>• Undertake and disclose NABERS Water whole building ratings</li> <li>• Install sub-meters to detect and rectify leaks and drive water efficient behaviour in tenants</li> <li>• Optimise cooling tower water efficiency</li> <li>• Regularly check for leaks and upgrade water fixtures to improve efficiency</li> <li>• Investigate recycled water supply to cooling towers and other non-potable water consumption and connect when access becomes available</li> <li>• Provide ample bike parking and end-of-trip facilities</li> </ul>	
<p><b>1.2 Tenants</b></p>	<p><b>GBCA/Green Star response/activity</b></p>
<ul style="list-style-type: none"> <li>• Rate and disclose environmental performance</li> <li>• Upgrade to energy-efficient lighting and appliances</li> <li>• Maximise renewable energy options</li> <li>• Demand high-performing buildings</li> <li>• Engage with building owners on base building performance improvements, including owner provided general lighting systems in the tenancy</li> <li>• Collaborate on whole-building performance</li> <li>• Request better waste services and reporting from owners</li> <li>• Engage staff to recycle correctly</li> <li>• Introduce print on demand software to reduce paper wastage</li> <li>• Assess water efficiency and contract management to upgrade water fixtures and install sub-meters</li> <li>• Encourage cycling, walking and public transport</li> </ul>	<p>Tenants are well-represented in the GBCA’s membership as well as being important stakeholders in our mission to develop buildings, communities and cities that are healthy, productive, resilient and sustainable.</p> <p>The Green Star rating tools encourage communication, consultation and cooperation between building owners and tenants, and developers and end-users.</p> <p>The GBCA is committed to ensuring that tenants (and other building users) have access to information that will help them to demand and positively influence sustainable outcomes for the spaces in which they work, live, learn and play.</p>
<p><b>1.3 Building managers</b></p>	<p><b>GBCA/Green Star response/activity</b></p>
<ul style="list-style-type: none"> <li>• Implement environmental upgrades</li> <li>• Measure and present the savings to owners and tenants</li> <li>• Develop business cases for major upgrades</li> <li>• Preference the replacement of end of life equipment with the highest efficiency option rather than like for like – considering the life</li> </ul>	<p>The GBCA recognises that building and facility managers play a critical role in ensuring buildings are run optimally. Throughout the development and ongoing use and review of the Green Star – Performance rating tool in particular, the GBCA has sought to connect with building and facility managers to ensure they</p>

cycle costs and benefits rather than simple cash up front	have the information and skills they need to operate buildings efficiently, make the case for sustainable buildings and advocate for sustainable building upgrades.
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<b>1.4 City support for owners, tenants and building managers</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Advocate for regulatory reform to facilitate increased investment in, and use of, renewable energy</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities
<ul style="list-style-type: none"> <li>• Advocate for increased minimum environmental performance standards in building codes, equipment and appliances</li> </ul>	See Section 2.4 Building Code Energy Performance Trajectory Project
<ul style="list-style-type: none"> <li>• Provide support for whole-building data disclosure and NABERS Energy Ratings</li> </ul>	See Section 2.3 Opportunity knocks
<ul style="list-style-type: none"> <li>• Continue to deliver the CitySwitch Green Office Sydney program to office-based businesses</li> </ul>	The GBCA will continue to support the CitySwitch program by raising awareness, participating on judging panels etc.
<ul style="list-style-type: none"> <li>• Continue to deliver the Better Buildings Partnership program for leading property owners in the local government area</li> </ul>	The GBCA is a strong supporter of the BBP and appreciates the opportunity to attend meetings and events as a supporter and observer. The BBP signatories are GBCA members and many of them are leaders nationally and internationally in their commitment to sustainability and achieving Green Star certifications for their assets.
<ul style="list-style-type: none"> <li>• Support environmental innovation through the provision of grants and the sharing of success and knowledge</li> </ul>	The GBCA is a strong advocate for innovation. We consider the sharing of success and knowledge the foundation of our organisation and our mission and do this in many ways including advocacy, events, training and case studies.
<ul style="list-style-type: none"> <li>• Encourage private owners to take action with information, disclosure and campaigns</li> </ul>	See Section 2.3 Opportunity knocks
<ul style="list-style-type: none"> <li>• Promote green leasing to enable upgrade activity</li> </ul>	The GBCA has been a strong advocate for mechanisms that support and encourage environmental upgrades, such as Environmental Upgrade Agreements and green leasing.
<ul style="list-style-type: none"> <li>• Support the cost-effective uptake of renewable energy with information and campaigns</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities.  The GBCA is willing to work with the City of Sydney to further progress this initiative as there is a lot of progress still to be made in this area.
<ul style="list-style-type: none"> <li>• Encourage the design, construction and operation of net zero office buildings, both new and existing</li> </ul>	See Section 2.1 Carbon Positive Roadmap

<ul style="list-style-type: none"> <li>• Encourage and support buildings to connect to recycled water</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities
<ul style="list-style-type: none"> <li>• Provide guidelines to assist the business community with operational and contract waste management templates to achieve improved sustainability outcomes and value for money</li> <li>• Support improved commercial waste data collection and verification</li> <li>• Educate the business community about available non-landfill, alternative waste treatment solutions for operational waste management</li> </ul>	The GBCA commends the City of Sydney on its proactive approach to waste management. The Green Star Waste category encourages the use of the resources and practices outlined here where they result in a demonstrated reduction in waste to landfill.
<ul style="list-style-type: none"> <li>• Continue to deliver the Liveable Green Network, providing connected walking routes across the city</li> <li>• Advocate for and develop an integrated bike lane network and distribute cycling and walking maps</li> </ul>	Green Star – Communities and Green Star rating tools for buildings encourage active transport both for emissions reduction and the health and well-being of our communities.

<b>1.5 Developers</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Design and construct new buildings to the highest level of sustainability performance available</li> </ul>	<p>The GBCA believes that all new buildings should be designed and constructed to the highest level of sustainability performance available.</p> <p>Australia has the industry expertise, knowledge and skills to deliver best practice sustainable buildings, in many cases on a cost-neutral basis.</p> <p>We cannot afford the construction of any new buildings that will lock in decades of avoidable carbon emissions.</p> <p>The GBCA calls on the City of Sydney to encourage and/or incentivise developers planning to deliver any new buildings within the City, to go beyond a commitment to the highest NABERS Energy rating and aim for Green Star certification as this will deliver a range of benefits and outcomes in line with the plan.</p> <p>Also see Section 2.1 Carbon Positive Roadmap</p>
<ul style="list-style-type: none"> <li>• Utilise the highest available NABERS Energy Commitment Agreement</li> <li>• Comply with the City of Sydney's Waste Management Local Approvals Policy and</li> </ul>	A NABERS Energy Commitment Agreement is a requirement within the Green Star Energy category (for applicable building types).

<p>Guidelines for Waste Management in New Developments</p> <ul style="list-style-type: none"> <li>• Include dual plumbing in planning proposals where there are opportunities to connect to a recycled water scheme</li> <li>• Ensure highest available Water Efficiency Labelling Standard (WELS) for taps, toilets and urinals, and dishwashers.</li> <li>• Minimise water wastage from fire protection systems testing</li> <li>• Provide bike parking and facilities</li> <li>• Minimise general car parking and provide car share vehicle spaces and dedicated charging stations for electric vehicles where possible and appropriate</li> </ul>	<p>The other initiatives listed are encouraged and points awarded in the Green Star certification process where they lead to demonstrated reductions in emissions, reduced resource consumption and waste and improved building occupant behaviours and well-being outcomes in line with the aims of the relevant Green Star category.</p>
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<b>1.6 City support for developers</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Advocate for increases to the National Construction Code (NCC) minimum environmental performance standards for building and refurbishments, and increased compliance with the NCC</li> </ul>	<p>See Section 2.4 Building Code Energy Performance Trajectory Project</p>
<ul style="list-style-type: none"> <li>• Advocate for regulatory reform to facilitate increased investment in and use of renewable energy</li> <li>• Encourage and support buildings to connect to recycled water</li> <li>• Investigate how dual plumbing could be mandated in areas where recycled water is available</li> </ul>	<p>See Section 2.2 Renewable energy and decentralised utilities</p>
<ul style="list-style-type: none"> <li>• Investigate the inclusion of planning control provisions that introduce NABERS Energy Commitment Agreements for new commercial office buildings and major commercial office refurbishments over 500 sqm or 1000 sqm.</li> <li>• Update the Development Control Plan (DCP) to specify minimum waste and recycling storage requirements in buildings</li> <li>• Develop a pathway for the City's current planning controls to be strengthened over time to deliver net zero building standards</li> </ul>	<p>While Green Star is a voluntary rating tool, the GBCA has always advocated for policies and regulations that set and increase minimum requirements to ensure that the environmental performance of our built environment continues to improve over time.</p> <p>The GBCA supports the proposed actions listed here. We encourage the City of Sydney to work together with the GBCA and industry on the Carbon Positive Roadmap which can underpin the goal of planning controls that will deliver net zero building standards (see Section 2.1 Carbon Positive Roadmap).</p>
<ul style="list-style-type: none"> <li>• Encourage the design, construction and operation of Sydney's first net zero buildings, both new and existing</li> </ul>	<p>Leadership on net zero buildings in Sydney (and across Australia) is being delivered through Green Star certified projects.</p>

	<p>Examples of buildings and precincts leading the way to carbon positivity include:</p> <ul style="list-style-type: none"> <li>• Barangaroo South, Sydney NSW</li> <li>• Pixel Building, Carlton VIC</li> </ul> <p>More information about Green Star certified projects is available at <a href="https://new.gbca.org.au/showcase/">https://new.gbca.org.au/showcase/</a>.</p> <p>As mentioned above, the GBCA calls on the City of Sydney to encourage and/or incentivise developers planning to deliver any new buildings within the City, to go beyond a commitment to the highest NABERS Energy rating and aim for Green Star certification.</p> <p>See also Section 2.1 Carbon Positive Roadmap.</p>
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<b>1.7 Australian Government</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Establish a price on carbon and increase the mandatory renewable energy target providing policy certainty to the energy market</li> </ul>	<p>The GBCA and its members have been calling for strong government leadership and policy certainty regarding a price on carbon and the Renewable Energy Target (RET) for several years.</p> <p>Australia has almost unlimited potential for renewable energy production, but investment to this sector will not be guaranteed until there is a strong and consistent commitment to moving towards low emission renewable energy production and away from high-emissions energy production.</p> <p>Delivering on Australia's commitments under the Paris Agreement will take a coordinated approach. Each sector must contribute, but we will not achieve our emissions reductions targets without economy-wide levers such as carbon pricing and an ambitious RET.</p>
<ul style="list-style-type: none"> <li>• Remove energy market barriers for decentralised energy and affordable off-site renewable energy access</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities
<ul style="list-style-type: none"> <li>• Implement regular mandatory disclosure of NABERS tenancy and whole-building ratings, as opposed to at the time of sale or lease and</li> </ul>	See Section 2.3 Opportunity Knocks

investigate the opportunity for retro-commissioning of existing buildings to minimum standards	
<ul style="list-style-type: none"> <li>• Increase minimum standards in the National Construction Code</li> </ul>	See Section 2.4 Building Code Energy Performance Trajectory Project
<ul style="list-style-type: none"> <li>• Increase Minimum Energy Performance requirements (MEPS) and accelerate uptake of energy efficient appliance standards under the national Greenhouse and Energy Minimum Standards (GEMS) program</li> </ul>	The GBCA supports the establishment of an increasing trajectory for efficiency and energy productivity for Minimum Energy Performance requirements (MEPS) under the Greenhouse and Energy Minimum Standards (GEMS) program. International standards are currently the main drivers of innovation for energy efficient products and in many cases are more advanced than Australian standards.
<ul style="list-style-type: none"> <li>• Promote the National Carbon Neutral Offset Standard for Carbon Neutral Buildings</li> </ul>	See Section 2.1 Carbon Positive Roadmap
<ul style="list-style-type: none"> <li>• Develop financial incentives for high environmental performance in buildings</li> </ul>	<p>The GBCA has advocated and supported a range of incentives for high environmental performance in buildings since our inception in 2002, including the Green Building Fund and tax breaks for green buildings.</p> <p>Currently, the GBCA is advocating that building owners captured by the recent expansion of CBD to office space between 1000m<sup>2</sup> and 2000m<sup>2</sup>, and any further expansion of CBD to the sectors identified above should be eligible to apply for a one-off bonus tax deduction of 50 per cent of the cost of building upgrades that improve efficiency. Please see Section 2.4 Opportunity knocks.</p>
<b>1.8 NSW Government</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Increase the Government Resource Efficiency Policy (GREP) to specify that agencies need to occupy buildings with minimum 5.5 - 6 star NABERS Energy rating and ultimately net zero buildings</li> <li>• Rate and disclose the energy and water performance of government owned buildings</li> </ul>	The GBCA supports any policy that encourages governments to lead by example and commit to sustainable, and ultimately, net zero buildings. The GBCA encourages the NSW Government to work together with us and with industry on the Carbon Positive Roadmap so that this may underpin a pathway for GREP towards net zero buildings. See also Section 2.1 Carbon Positive Roadmap.
<ul style="list-style-type: none"> <li>• Collaborate with industry associations to build capacity and deliver targeted information, resources and training to private owners</li> </ul>	The GBCA is has worked with many governments to build capacity, host events, share information and resources and deliver training. We look forward to many more opportunities to do the same.

<ul style="list-style-type: none"> <li>• Deliver waste market reform to incentivise resource recovery (avoiding waste, recycling, alternative waste treatment, and transparent waste reporting on volume, weight, composition and diversion from landfill)</li> <li>• Deliver a recycled water pipeline along George Street between Circular Quay Station and Central Station by 2018</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities
<ul style="list-style-type: none"> <li>• Fund, and where appropriate deliver, an integrated bicycle network to encourage the further take up of cycling</li> <li>• Deliver key components of an integrated and safe walking network, including road crossings and links through Government lands and developments</li> </ul>	The GBCA supports and encourages – both through advocacy and the Green Star rating tools – initiatives such as those listed which will lead to demonstrated reductions in emissions, reduced resource consumption and waste and improved community well-being.

<b>1.9 City support for Australian and NSW Governments</b>	<b>GBCA/Green Star response/activity</b>
<ul style="list-style-type: none"> <li>• Advocate for increased minimum environmental performance standards in building codes, equipment and appliances</li> </ul>	See comments above and Section 2.4 Building Code Energy Performance Trajectory Project
<ul style="list-style-type: none"> <li>• Advocate for the Government Resource Efficiency Policy (GREP) to specify that agencies need to occupy buildings with minimum 5.5 – 6 star NABERS Energy rating and ultimately net zero buildings</li> </ul>	See comments above and Section 2.1 Carbon Positive Roadmap
<ul style="list-style-type: none"> <li>• Advocate for the mandatory regular disclosure of tenancy ratings and retro-commissioning to above minimum standards, including tax incentives for action</li> <li>• Provide support for whole-building data disclosure and NABERS Energy Ratings</li> </ul>	See Section 2.4 Opportunity knocks
<ul style="list-style-type: none"> <li>• Advocate for regulatory reform to facilitate increased investment in, and use of, renewable energy.</li> </ul>	See Section 2.2 Renewable energy and decentralised utilities.

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## GBCA key policies and initiatives

### 2.1 Carbon Positive Roadmap

In the lead up to COP21 in Paris, Green Building Councils from around the world identified the need to set a path towards net zero and carbon positive buildings. Since the Paris Agreement of 2016 where 170 Governments, including the Australian Government, agreed to limit global temperature rise to less than 2°C, and to strive towards global temperature rises of no more than 1.5°C, the GBCA has been working even harder on developing a pathway towards carbon positive buildings.

As you may be aware, the GBCA recently released the *Carbon positive roadmap for the built environment* discussion paper which outlines our plan for carbon positive buildings and communities.

The four key priorities identified for the roadmap are:

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.

The above priorities can also 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 Roadmap will seek to deliver on its priorities and outcomes through three core areas of action:

- **Empower** industry by setting clear trajectories and actions towards net zero carbon over time for any project seeking Green Star certification, in line with a 1.5C target.
  1. Define carbon neutral buildings and precincts
  2. Deliver a carbon positive Green Star
  3. Drive industry commitments
- **Influence** policies and programs to remove barriers to sustainable solutions, increase standards, and improve infrastructure.
  4. Advocate for renewable energy incentives and sustainable utility infrastructure
  5. Campaign for a carbon neutral building code
  6. Demand government, institutions and corporates lead by example
- **Inspire** stakeholders to value a net zero carbon future and develop the solutions to collect, report, and reduce our impacts.
  7. Deliver training to all stakeholders
  8. Provide evidence of value and impact
  9. Partner for success

We are encouraged and pleased to see that these priorities, outcomes and actions reflect and align with the key outcomes, targets and actions identified in the plan. More information about the Carbon Positive

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Roadmap can be found in the discussion paper [available on the GBCA website](#).

## **2.2 Renewable energy and decentralised utilities**

Australia's built environment holds many cost-effective opportunities for driving the transformation of the energy and utilities sectors. These opportunities can provide additional baseload generation, reduce demand peaks, build resilience and support longer term security across the National Energy Market.

Many GBCA members are already delivering district-based/decentralised energy and water utilities, using emerging technologies including solar PV and battery storage. The most effective solutions and services for the project proponents as well as the end-users are often limited by state legislation and regulation supporting existing distribution infrastructure. This reduces the commercial viability of more innovative solutions, stifles investment and erodes the consumer experience. These requirements differ across states and distribution networks within states, imposing substantial costs on customers and delaying the uptake of new technologies. The GBCA is working with its members, industry and all levels of government to address barriers to the connection of renewable distributed utilities, services and supporting technologies and calling for a more consistent approach to how standards for connections are set, governed, and applied.

A wider uptake of distributed energy solutions would increase generation, reduce demand and improve energy security through increased resilience. It will also be a critical factor in ensuring that Australia can meet its emissions reduction commitments and in achieving a carbon positive built environment (see Section 2.1 Carbon Positive Roadmap above).

Alkimos Beach in Western Australia, a residential master-planned project was awarded Australia's first 6 Star Green Star – Communities rating. Key sustainability innovations at Alkimos Beach include mandatory solar panels and gas boosted solar hot water systems as well as other energy-efficient appliances. These features are supported by a financial incentive package from Alkimos Beach development partners to reduce home energy bills by up to 50 per cent. Alkimos Beach also represents Australia's first community energy storage trial that has more than 100 homes connected virtually to innovative solar energy storage as part of a development-wide initiative to reduce peak electricity demand.

An on-site blackwater treatment plant has been installed at Barangaroo South in Sydney, NSW, a 6 Star Green Star – Communities project. The plant is capable of supplying 1 million litres of recycled water per day to the completed precinct and surrounding suburbs.

These examples reflect the need for regulatory frameworks that are fit for purpose and sufficiently flexible to cope with the effects of emerging technologies and market innovation that is taking place across Australia. This would play a significant role in boosting generation capacity, increasing resilience and security, delivering new productivity benefits for businesses and improvements in quality of life for households.

## **2.3 Opportunity knocks – Accelerating energy efficiency for mid-tier buildings**

Mid-tier buildings—those classed as non-A Grade or non-Premium Grade – account for around 80 per cent of Australia's office buildings and 50 per cent of floor space.

As identified in the plan, this sector is highly fragmented, and characterised by varied ownership structures that contribute to market failures including split incentives between owners and tenants, and a lack of information and awareness amongst building owners and operators.

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In 2015, the GBCA led a project to examine mid-tier office building sector, resulting in the release of the *Mid-tier commercial office buildings in Australia – A national pathway to improving energy productivity*. This and other recent reports, including the Finkel Review, CSIRO Low Emissions Technology Roadmap, Sustainability Victoria's Energy Efficient Office Buildings and the Australian Sustainable Built Environment Council's Low Carbon, High Performance, create a compelling evidence base for new policy development targeting mid-tier buildings. Collectively these reports are clear on the necessity for governments to lead practical policy interventions that will deliver real benefits across the economy.

The GBCA, together with AIRAH, ASBEC, City of Sydney, CitySwitch, Energy Efficiency Council, Facility Management Association of Australia and the Property Council of Australia, recently released the paper, *Opportunity knocks - Accelerating energy efficiency for mid-tier buildings* in anticipation of the Australian Government's upcoming review of the Commercial Building Disclosure program.

The paper recommends five immediate actions for governments to realise the opportunities established through the latest policy thinking, overcome some of the challenges of this sector and accelerate energy efficiency for mid-tier buildings:

1. Investigate reducing the disclosure threshold for Commercial Building Disclosure below 1000m<sup>2</sup> to capture more mid-tier office buildings at the lowest cost-effective threshold for this sector.
2. Expand Commercial Building Disclosure to new sectors including but not limited to mid-tier building stock, and with a priority focus on office tenants. This includes the recommendation that in the absence of sale or lease, periodic disclosure for buildings captured through CBD should be required every four years, and that periodic reporting should be used to align base-building and tenancy disclosure to deliver whole-building ratings for commercial offices.
3. Create a new tipping point for change with targeted tax incentives providing a one-off deduction of 50 percent of the cost of building upgrades.
4. Lead by example and set targets for net zero emissions across government operations by 2030 with strengthened requirements for transparency and performance of government tenancies.
5. Invest in research to further quantify and access the mid-tier sector, and in programs and initiatives that further improve energy efficiency.

More information about the Opportunity knocks – Accelerating energy efficiency for mid-tier buildings initiative is available at <https://new.gbca.org.au/advocacy/thought-Leadership/>.

#### **2.4 Building Code Energy Performance Trajectory Project**

The GBCA is proud to support the Building Code Energy Performance Trajectory Project – an industry-led initiative seeking improvements to the energy requirements in the National Construction Code (NCC).

The NCC is a ready-made policy instrument to influence the energy efficiency of new buildings and major renovations. Improved building energy efficiency presents a win-win-win solution, reducing stress on the electricity network and supporting a least-cost pathway to decarbonisation while also delivering cost savings and improved comfort to households and businesses. Improvements to the NCC can have a large impact because new construction adds up fast: More than half of the buildings expected to be standing in 2050 will be built after the next update of the NCC in 2019.

One of the central purposes of the Building Code Energy Performance Trajectory Project is to define a set of evidence-based long-term targets for the performance requirements of new building work. A final report will be published in mid-2018 focused on the establishment of a long-term trajectory for Code energy requirements for both residential and non-residential buildings.

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More information about the Building Code Energy Performance Trajectory Project is available at [www.asbec.asn.au/publications/](http://www.asbec.asn.au/publications/).