



# Environment





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## Act on climate change

The World Economic Forum’s Global Risk Report of 2019 ranked extreme weather events and the failure of policies to address climate change as the top two high-probability, high-impact risks facing the world. This is backed by the findings of the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) in its 2019 report. There is consensus that keeping global warming to well below 2°C can be achieved by reducing greenhouse gas emissions from all sectors, and many companies like us are acting to drive this change.

As a signatory to the UN Global Compact we take a precautionary approach to addressing climate risks, and in alignment with the Sustainable Development Goal 13 – Climate Action, we’re responding by strengthening the resilience and adaptive capacity of our assets to climate-related risks.

Charter Hall invests in high-performing, environmentally efficient assets, and developing those that have high-performing potential, reflecting our long-term investment in our properties. We continue to hold the largest Green Star footprint in Australia and seek improvements in our NABERS energy and water ratings for our portfolios.

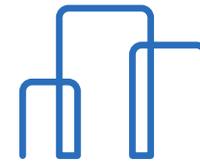
As global momentum grows for strong action on climate change, we are increasing our climate resilience by:

- setting emission reduction targets
- making our assets more energy efficient
- increasing our investment in renewables on our industrial, office and retail assets
- partnering with our tenant customers to improve energy efficiency in our buildings
- assessing and mitigating against the physical risks of climate change and developing adaptation plans for our assets
- aligning with best practice frameworks, such as Green Star, NABERS and WELL to demonstrate our environmental credentials and to enhance our operational efficiency
- investigating disclosures in alignment with the Task Force for Climate-related Financial Disclosure (TCFD).



Alignment with SDG13: Climate Action

### FY19 HIGHLIGHTS



Set a **target of 100% reduction** in Direct (Scope 1 and 2) emissions by 2030



Increased our **renewable energy** footprint in partnership with our tenant customers



Commenced **Stage 1 solar rollout** program for retail across 15 shopping centres



Completed investigation into alignment with the **Taskforce for Climate-related Financial Disclosures** (TCFD) Framework



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## Resilience

Issues	Achievements for FY19	FY20 Target	FY25 Target	FY30 Target
<p><b>Addressing climate change risk</b></p> <p>Understanding and mitigating climate risks like sea-level rises and extreme weather events is essential to building resilient assets and portfolios, in turn protecting people and remaining competitive in a challenging environment.</p>	<ul style="list-style-type: none"> <li>– Climate change adaptation planning underway across office, retail and industrial.</li> <li>– Climate change risk analysis commenced for childcare portfolio.</li> <li>– Review of TCFD framework and gap analysis completed.</li> </ul>	<ul style="list-style-type: none"> <li>– All office, retail and industrial assets have climate change adaptation plans.</li> <li>– Transitional and physical climate change scenario analysis undertaken with alignment to TCFD Framework.</li> </ul>	<ul style="list-style-type: none"> <li>– Capital improvements in portfolio in line with Climate Change Adaptation plans.</li> <li>– Alignment to TCFD Framework.</li> </ul>	<ul style="list-style-type: none"> <li>– 100% reduction in Direct (Scope 1 and 2) emissions by 2030, which equates to an intensity of 0kgCO<sub>2</sub>/m<sup>2</sup>.</li> <li>– Investigate opportunities to work with our tenant customers and contractors to reduce our indirect (Scope 3) emissions.</li> </ul>
<p><b>Managing environmental risk</b></p> <p>Environmental risks such as pollutants, waste management (including hazardous materials), indoor air quality, and tenant operations and activities can represent significant liability for property owners, and risks to the environment and people using our buildings. We work with our facility managers, developers and other suppliers to manage our environmental risks to internationally recognised standards.</p>	<ul style="list-style-type: none"> <li>– Draft Environmental Management Plans for office, retail and industrial sectors adopted.</li> </ul>	<ul style="list-style-type: none"> <li>– Seek certification of environmental management plan to ISO 14001.</li> </ul>	<ul style="list-style-type: none"> <li>– Maintain certified EMS to ISO 14001.</li> </ul>	



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## Energy and carbon

Issues	Achievements for FY19	FY20 Target	FY25 Target	FY30 Target
<b>Reducing our emissions footprint</b>				
In Australia, the built environment represents 23% of the country's emissions. As a manager of 844 assets nationally, we have a strong platform to contribute to emissions reductions.	<ul style="list-style-type: none"> <li>– Emissions reduction targets developed for Scope 1 and Scope 2 emissions, from base buildings in Charter Hall direct operational control.<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>– Pathway to targets identified.</li> </ul>	<ul style="list-style-type: none"> <li>– Investigate opportunities to work with our tenant customers and contractors to reduce our indirect (Scope 3) emissions.<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>– 100% reduction in emissions within Charter Hall direct control (Scope 1 and 2) by 2030, which equates to an intensity of 0kgCO<sub>2</sub>/m<sup>2</sup>.<sup>1</sup></li> </ul>
<b>Investing in renewable technologies</b>				
Increasing cost of energy and more cost effective solar PV investments supports accelerating investment in renewable energy.	<ul style="list-style-type: none"> <li>– Increased renewable energy footprint from 2.5MW, in 2018, to 5.2MW of solar PV across the portfolio, generating 7,598MWh of electricity per annum in green energy, or enough to power 507 homes.</li> <li>– Stage 1 solar rollout program for retail underway with the installation of 13 MW generation capacity across 15 shopping centres, producing 18 GWh of electricity per annum, equivalent to powering 1,200 homes.</li> </ul>	<ul style="list-style-type: none"> <li>– Stage 2 of retail solar power purchase agreement implementation across applicable Charter Hall-managed shopping centres.</li> <li>– Renewable energy on all new large retail and industrial developments.</li> </ul>	<ul style="list-style-type: none"> <li>– Investigate renewable energy target.</li> </ul>	<ul style="list-style-type: none"> <li>– Investigate opportunities to work with our tenant customers and contractors to reduce emissions outside of our control (Scope 3 emissions).<sup>2</sup></li> </ul>
<b>Improving efficiency of buildings</b>				
<p>Charter Hall's assets have always been high-performing and environmentally efficient.</p> <p>We use Green Star and NABERS ratings to seek continual improvement in the quality and performance of our assets.</p>	<ul style="list-style-type: none"> <li>– Maintained and expanded Australia's largest Green Star footprint, with the addition of 5 and 6 Star Green Star Design and As Built ratings achieved on office developments.</li> <li>– Achieved 4.77 Star NABERS Energy Weighted Average Rating for Office Assets, up from 4.66 Star NABERS Energy Weighted average in FY18.</li> <li>– Maintained 3.9 Star NABERS Energy Weighted Average Rating for retail assets.</li> </ul>	<ul style="list-style-type: none"> <li>– 3 Star average Green Star Performance Rating across the Group.</li> <li>– Green Star ratings across all new developments, with 5 Star Green Star Design and As Built ratings sought on all new large office developments.</li> <li>– 4.75 Star NABERS Energy Weighted Average Rating for office assets.</li> <li>– Improvement on NABERS Energy Ratings for retail assets.</li> <li>– Smaller retail centres targeting 3% reduction in energy consumption, from FY19 baseline.</li> </ul>	<ul style="list-style-type: none"> <li>– 4 Star average Green Star Performance rating across office assets.</li> <li>– 5 Star Green Star Design and As Built ratings sought on all new office developments.</li> <li>– 5 Star NABERS Energy Weighted Average Rating for office assets.</li> <li>– 4 Star NABERS Energy Weighted Average Rating for retail assets.</li> </ul>	

<sup>1</sup> Emissions from our base building that are in Charter Hall direct operational control, related to energy use and refrigerants include: Scope 1: Gas, diesel and refrigerants from our base buildings and operations, and Scope 2: Electricity purchased for our base buildings and operations in our control.

<sup>2</sup> Scope 3 emissions outside of Charter Hall direct control include emissions from our tenant customers and contractors in development construction.



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## Water

Issues	Achievements for FY19	FY20 Target	FY25 Target	FY30 Target
<b>Conserving water resources</b>				
<p>Water scarcity is a feature of many Australian cities and regions, with growing urban populations and unpredictable rainfall exacerbating the problem. Competition for scarce water resources poses an increasing risk to the business sector, including Charter Hall.</p>	<ul style="list-style-type: none"> <li>– 3.8 Star NABERS water weighted average in office.</li> <li>– 3.2 Star NABERS water weighted average in retail.</li> </ul>	<ul style="list-style-type: none"> <li>– 4.0 Star NABERS water weighted average in office.</li> <li>– 3.5 Star NABERS water weighted average in retail.</li> </ul>	<ul style="list-style-type: none"> <li>– 4.5 Star NABERS water weighted average in office.</li> <li>– 4 Star NABERS water weighted average in retail.</li> </ul>	<ul style="list-style-type: none"> <li>– 100% reduction in Direct (Scope 1 and 2) emissions by 2030, which equates to an intensity of 0kgCO<sub>2</sub>/m<sup>2</sup>.</li> <li>– Investigate opportunities to work with our tenant customers and contractors to reduce our indirect (Scope 3) emissions.</li> </ul>
<b>Waste</b>				
<b>Reducing waste and increasing recycling</b>				
<p>With China and India restricting imports of Australia’s co-mingled recycling, the focus on reducing waste and increasing diversion from landfill is laser sharp for businesses like ours. We work with our waste contractors to increase recycling and other diversions from landfill.</p>	<ul style="list-style-type: none"> <li>– 32% waste diversion in Office assets, a reduction of 3% since FY18, with integration of Better Buildings Partnership Waste reporting.</li> <li>– 24% waste diversion in retail assets (2% increase from FY18) with implementation of waste management plans.</li> </ul>	<ul style="list-style-type: none"> <li>– 50% waste diversion in retail and office assets.</li> </ul>	<ul style="list-style-type: none"> <li>– 70% waste diversion in retail and office assets.</li> </ul>	

## Retail solar

In FY19 our retail sector formed strategic partnerships to generate 18 GWh of solar energy across 15 of our assets per annum. This is the equivalent of powering 1,200 homes, helping us to manage energy costs while reducing our emissions.

The cost of energy is a significant one for both Charter Hall and our tenant customers. To address this challenge in a way that provides long-term positive sustainable outcomes, we embarked on a program in 2014 to make our buildings more energy efficient.

We have installed LED lighting across all common mall and carparks within our large retail assets and will continue the roll-out with our smaller assets. We are also creating guidelines to help tenant customers design and build sustainable fit-outs.

In FY18, we installed our first solar array at Singleton Square in NSW, and in FY19 completed an investigation into implementing a renewable energy solution across our entire retail portfolio. Recognising that solar is not a core capability, we sought out industry experts and formed active partnerships aimed at delivering a good outcome for both our centres and our customers.

The result is an innovative approach to solar, whereby we have negotiated a solar power purchasing agreement (PPA) with two partners – Clean Peak Energy and Solgen Energy Group (in conjunction with Macquarie Group). Under the PPA, our partners arrange for the design, regulatory approval, installation and ongoing operation and maintenance of solar energy systems on our centre rooftops.

These partnerships are enabling the rapid deployment of best-in-breed solar energy systems at 15 of our shopping centres, along with battery storage at an initial four sites. The initiative to date has reduced our retail portfolio energy emissions by 25% and has also helped secure stable energy pricing for around 40% of each sites' electricity demand over the next decade.

Tamworth Square was the first shopping centre to benefit from the solar roll-out. It is anticipated the remaining 14 installations will be completed by the end of calendar year 2019. Planning for Stage 2 of the rollout is underway for the balance of the retail portfolio, which we aim to complete by the end of FY20.

Taking a staged approach to our investment in renewables and energy storage has allowed us to take the technical lessons we have learned to effectively deliver on our broader sustainability program.

“The PPA has given us a high level of cost certainty in a volatile market. The learnings from the solar roll-out will also help our major tenant customers to expand their renewable energy programs across our portfolio.”

Nick Symons, Head of Portfolio Management, Retail



Tamworth Square, Tamworth NSW

## Caroma's state-of-the-art facility

We are extremely proud of the first 5 Green Star Design and As Built v1.1 development in our industrial portfolio – a state-of-the-art logistics facility developed for Caroma, a subsidiary of ASX-listed GWA Group, a leading Australian supplier of building fixtures and fittings to households and commercial premises.

Charter Hall acquired the Caroma facility at Victoria Street, Wetherill Park, NSW, on a sale and leaseback in 2015. As part of a further procurement process led by Caroma, Charter Hall offered a solution to meet their future needs for a specialised warehouse. Caroma's motivation was to provide employees with an attractive environment, both in which to work and to showcase new products.

The new warehouse located at the M5/M7 Logistics Park in Prestons, New South Wales, includes a logistics centre, research and development lab, product development and quality assurance facilities for testing new products on site. With both our companies focused on sustainable outcomes in our products, the features of the developments include a 200kW solar system, which will generate 354 MWh per year, approximately 20-30% of Caroma's energy requirements, and electrical sub-metering that will provide information for building users to help identify and address high-use areas.

With Caroma being a leading provider of sustainable water solutions, water efficiency and conservation in the building and its fittings was a strong focus for the development. Water meters linked to the Building Management System are in place to help identify any leaks. The installation of Caroma's water efficient fittings and products and rainwater capture and reuse, further build on water efficiency features, while the on-site waste management system provides over ten streams to assist with waste diversion from landfill. "The 5 Green Star rating works both to showcase the site and to provide the extra performance benefits desired," says Matthew Cox, National Industrial Delivery Manager.

"Partnering with Charter Hall allowed us to deliver a sustainable solution that all of our teams can be proud of. We look forward to continuing our progressive, sustainable partnership into the future."

Anthony Mortimer, General Manager Supply Chain, GWA Group Limited

Positioned close to rail links and with bicycle racks and end-of-trip facilities, Caroma's new facility makes it easier for employees to commute more sustainably. Once at work, they will also be able to take advantage of spaces set up for flexible working through activity-based work environments.

The success of the logistics facility has encouraged us to pursue another development for Caroma at their 7,000sqm industrial site in Brisbane. We are also trialling the Caroma intelligent bathroom management system, Caroma Smart Command®, in our head office in Sydney. This mutually beneficial relationship serves as proof of the value we can deliver from our partnership approach with tenant customers.



(GWA) Caroma, M5/M7 Logistics Park, Preston NSW