

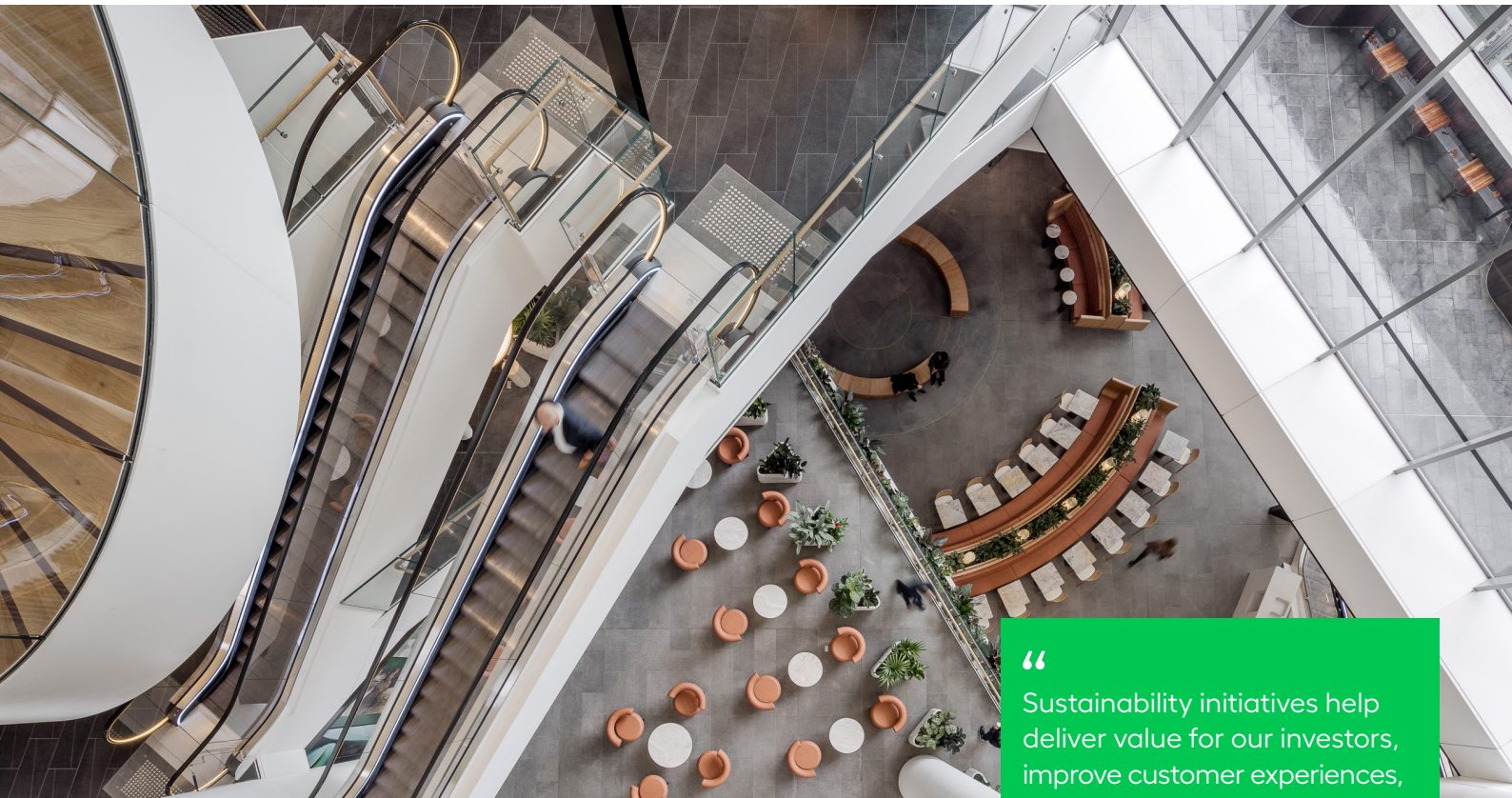


Australian Government



# Landmark buildings and the path to net zero emissions

How can landmark buildings support the transition to net zero carbon? The CEFC has been working with leading investors to deliver a net zero carbon portfolio of buildings where design landmarks can become benchmarks for clean energy innovation, including AWOF, now part of Mirvac.



“ Sustainability initiatives help deliver value for our investors, improve customer experiences, motivate our employees and support positive outcomes in the broader community. We will continue to ensure sustainability outcomes underpin our development, investment and management approach.”

**Kylie O'Connor**  
Global Head of Real Estate, AMP Capital

was accomplished through a combination of leading design and technology solutions; energy efficiency improvements, procurement of 100 per cent renewable electricity and the offsetting of residual emissions via certified carbon credits.

Office fund changing our cities

\$100m

CEFC investment

11

properties

\$7.7b

fund

\*At December 2021

## Iconic buildings achieving net zero

The AMP Capital Wholesale Office Fund (renamed the Mirvac Wholesale Office Fund) provides investors with exposure to 11 premium and A-Grade office assets, including some of Australia's most iconic buildings.

Key assets include the commercial and entertainment precincts of Quay Quarter and Darling Park in Sydney and the unique design of 700 Bourke Street at Docklands in Melbourne.

The portfolio achieved net zero carbon for Scope 1 and 2 emissions in January 2022, eight years ahead of target. This

## Quay Quarter Tower: a world-first innovation

The Quay Quarter Tower refurbishment, one of the biggest building upcycling projects ever attempted, demonstrates how building owners can get greater performance out of existing structures.

The office tower at 50 Bridge Street in Sydney, originally built in 1976, has been redeveloped into a 49-storey, 90,000 square metre building with double the floorplate of the original.

Two thirds of the original building core was retained, saving more than 12,000 tonnes of embodied carbon, which is the equivalent of more than two years of operational emissions from building services. The repurposed core also saved an estimated 12 months in construction time, when compared with building from the ground up.

Danish architects 3XN created collaborative modern workspaces featuring campus-style multi-floor vertical villages connected through atria and spiral staircases.

Shifting glass volumes of floors were stacked upon each other to maximise Sydney Harbour views and the use of natural light. Two lower floors were dedicated to flexible workspace, to cater to growing tenant demand.

“

It is a world first in terms of adaptive reuse, sustainability outcomes, design features and workplace benefits.”

**Kit Georgeos**  
Fund Manager, AWOF

Quay Quarter Tower photography by Adam Mørk

## Key sustainability features

1

A high performance façade featuring external shading hoods reduces heat and glare. Heat coming through the windows is reduced by 30 per cent, improving thermal comfort for occupants and lowering the energy consumption required for air conditioning

2

Industry leading building technology shows building managers operations in real time, enabling more efficient building management

3

100 per cent renewable electricity is procured from solar farms

4

New generation of climate friendly refrigerants used in chillers

5

A commitment to a zero-waste environment, involving the provision of organics bins and a requirement that all packaging used by retailers in the Quay Quarter Tower retail precinct is compostable

6

The AMP Capital “Now” app supports energy efficient building practices by providing mobile device access to a range of base building technologies as well as curated services such as building access, the latest building news, offers and events, and space bookings

7

Targeting a 6 Star Green Star As-Built rating, and a 5.5 Star NABERS Energy rating and WELL Gold rating.





Property

## A world-class smart building in a smart precinct

Quay Quarter Tower is part of a broader precinct which includes two other assets co-owned by the AMP Capital Wholesale Office Fund – the retail and residential development at Quay Quarter Lanes and the heritage listed 33 Alfred Street building.

Quay Quarter Lanes, which spans two Sydney city blocks, is a boutique, mixed use precinct featuring shopping, dining, commercial office and three residential buildings. It includes new and restored buildings and has been designed as a template for urban neighbourhoods, bringing a dynamic 'village' atmosphere to the city centre.

In a similar approach to Quay Quarter Tower, work is underway to revitalise and transform 33 Alfred Street into a state-of-the-art workplace, while retaining the building's existing structure. The building, regarded as Sydney's first skyscraper, was opened in 1962. Planned mechanical, electrical and energy efficiency initiatives are expected to provide a pathway to a 6 Star Green Star rating and deliver material embodied carbon savings when compared to a new building.

### Quay Quarter Tower

~66%

core building retained

12,000t

embodied carbon saved

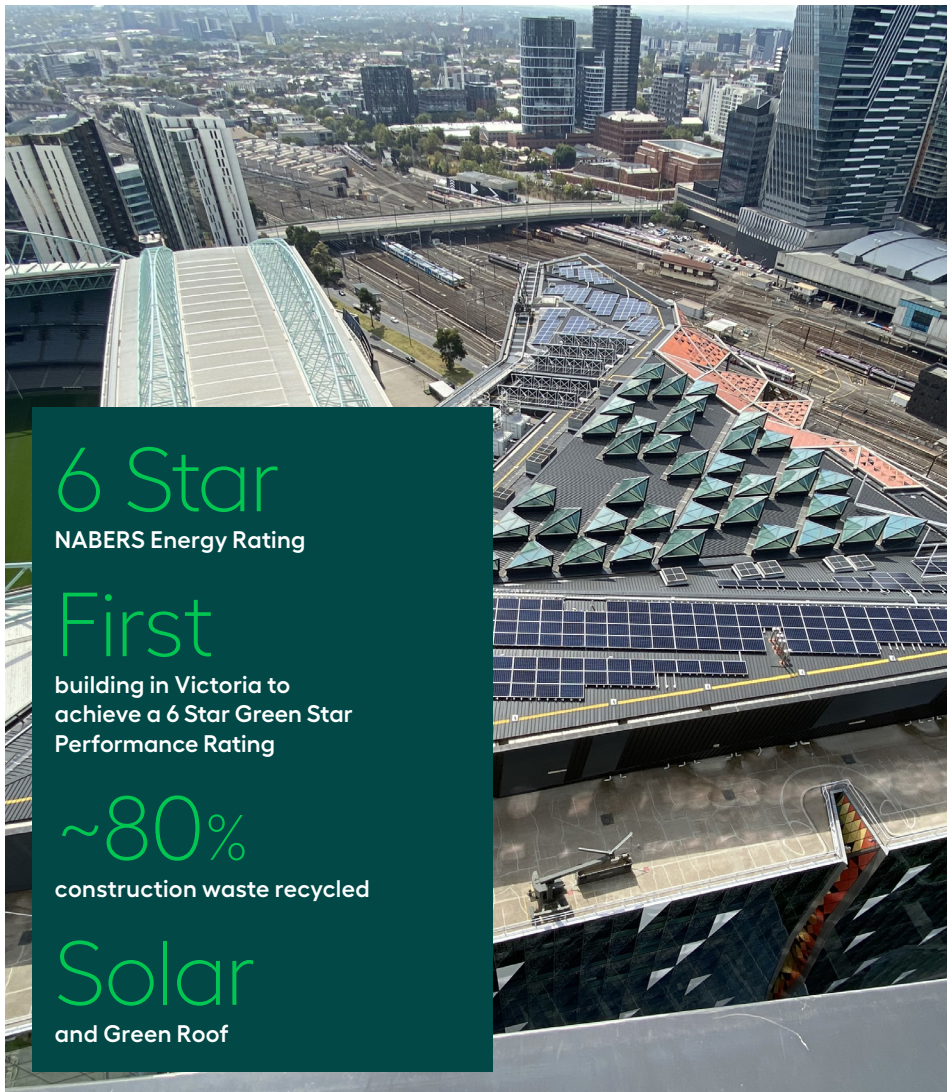
100%

powered by renewable energy

## Docklands precinct: A 6 Star landmark

Described as a gateway to Melbourne's Docklands precinct, 700 Bourke Street is an A-Grade office building that features a spectacular central atrium connecting all levels.

The building contains more than 65,000 square metres of campus style office accommodation, a childcare centre, auditorium, retail tenancies and outdoor terrace. 700 Bourke Street was one of the first buildings in Australia to achieve a 6 Star Green Star Performance rating in 2016. It also has 6 Star ratings for Design and As Built stages and holds 6 Star NABERS ratings in the Energy Base Building and Water categories.



## Key sustainability features

1

Atrium introduces natural light levels into the office spaces and allows for air flow through the centre of the building, removing the need for exhaust fans

2

Energy efficient façade, with patterned glass reducing heat load and energy use

3

150 kW rooftop solar, provides power for up to 15 per cent of base building needs

4

Up to 30 per cent of the concrete used in the structure incorporated recycled content such as fly ash, as a partial cement substitute in the concrete mix

5

Over 80 per cent of construction waste materials were recycled, with 90 per cent of the waste collected onsite either reused onsite or diverted from landfill

6

Motion controlled LED lighting in the foyer, car park, plant rooms and fire stairs

7

Green roof area featuring a variety of native plants.

## South Eveleigh precinct: Heritage transformation

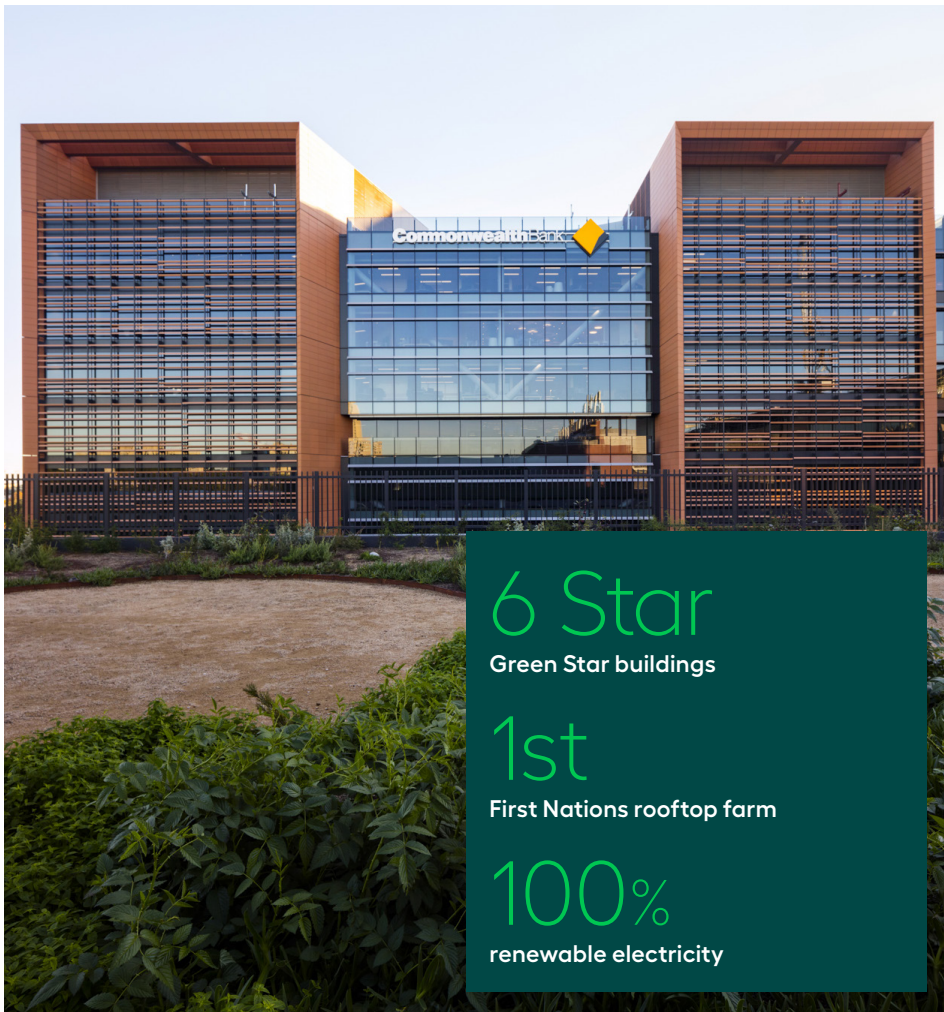
### Sydney's South Eveleigh precinct has emerged from the redevelopment of the Australian Technology Park.

The site has an important First Nations cultural legacy which informed the redevelopment. The Cultural Landscape Garden was designed in collaboration with local First Nations people and shares the rich social and environmental history of South Eveleigh. The redevelopment also includes a community rooftop garden at Yerrabingin House which features urban food production, community sustainability, permaculture and wellbeing workshops. South Eveleigh has additional historical relevance as the site of the Eveleigh Railway Workshops. The Locomotive Workshop and its machinery collection are listed on the NSW State Heritage Register.

The site's world-class technology and innovation hub features nine buildings with three commercial workplaces.

1. Axle, which has Commonwealth Bank as its anchor tenant
2. The Community Building, which features a gym, retail, childcare centre and multipurpose community space
3. The Foundry, which has a campus style working environment and is home to the Commonwealth Bank Innovation Labs.

The Axle and Foundry buildings have been awarded 6 Star Green Star ratings while the Locomotive Workshop is targeting a 5.5 Star NABERS Energy rating.



## Key sustainability features

1

Australia's first First Nations interactive rooftop farm at Yerrabingin House features urban food production, community sustainability, permaculture and wellbeing workshops

2

Powered by 100 per cent renewable electricity

3

Rooftop solar on all buildings

4

Double glazed curtain walls on building facades reduce air conditioning use

5

Rainwater harvesting systems for the Axle and Foundry buildings

6

Energy efficient LED lighting in all buildings

7

Water efficient fittings in all buildings

8

Energy efficient mechanical plant and equipment.

### Yerrabingin House rooftop garden

- Diverts more than 5 tonnes a year of local café food waste from landfill
- Produces its own liquid organic fertiliser through worm farms
- Sells solid organic fertiliser to other precinct gardens
- Improves understanding of First Nations knowledge and plant use.

## A portfolio of performers

Working to maximise the sustainability of each building within the portfolio helped AWOFF achieve a weighted average 5.3 Star National Australian Built Environment Rating System (NABERS) Energy rating at December 2021, beyond the 5 Star 2020 target agreed with the CEFC.

Further portfolio sustainability achievements will be needed to meet the CEFC agreed target of 5.5 Stars by 2030.

AWOFF has five wholly owned and managed assets and has influence over how the remaining six assets are managed. The individual assets within the portfolio have either achieved or are targeting NABERS ratings of 5.5 Stars to demonstrate their accomplishments against a well-recognised sustainability performance reporting framework.

## AWOFF star achievers



### 100% AWOFF owned

**Bourke Place, Melbourne**  
5 Star NABERS Energy

**700 Bourke Street, Melbourne**  
6 Star NABERS Energy

**Collins Place, Melbourne**  
4.5 Star NABERS Energy

**Angel Place, Sydney**  
5.5 Star NABERS Energy

**255 George Street, Sydney**  
5.5 Star NABERS Energy



### Co-owned AWOFF interest %

**Darling Park 1 & 2, Sydney (25%)**  
5.5 Star NABERS Energy

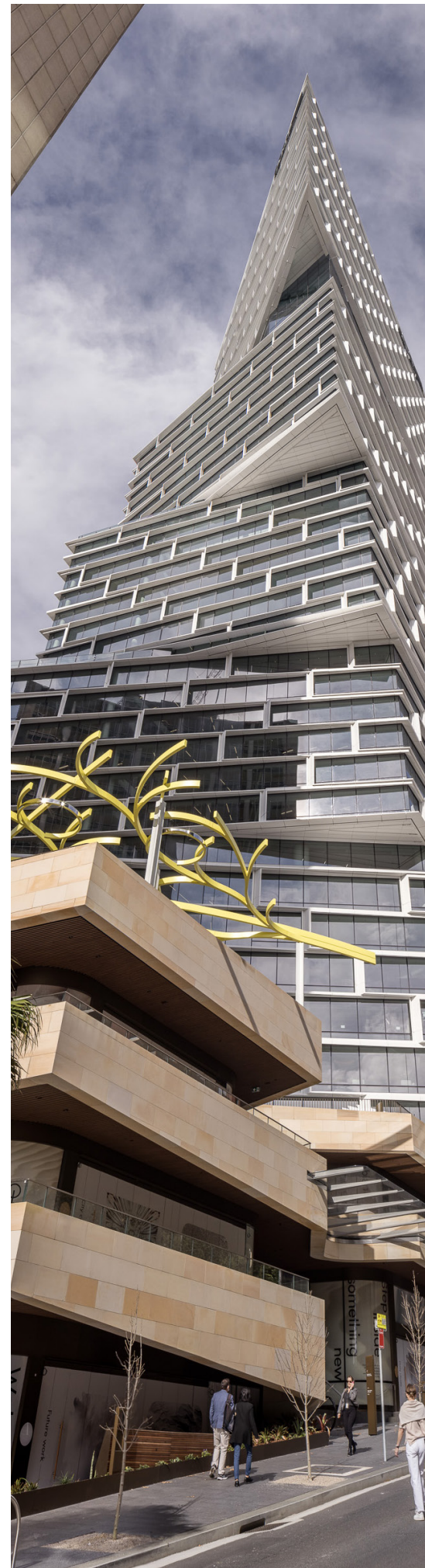
**South Eveleigh, Sydney (33%)**  
Foundry: 5 Star NABERS Energy  
Axle: 5 Star NABERS Energy  
Workshop targeting 5.5 Star NABERS Energy

**33 Alfred Street, Sydney (50%)**  
5.5 Star NABERS Energy

**Quay Quarter Lanes, Sydney (51%)**

**Quay Quarter Tower (33%)**  
Targeting 5.5 Star NABERS Energy

**Brookfield Place, Sydney (25%)**  
Targeting 5 Star NABERS Energy





## This changes everything: Mirvac targets market-leading sustainability

One of Australia's largest listed property owners, Mirvac Group became manager of AWOOF in 2022, renaming AWOOF as Mirvac Wholesale Office Fund.

Mirvac sees the fund as enhancing its position as a top tier manager of prime office assets in Australia and plans to continue to improve the Fund's sustainability performance over time.

Mirvac has a target of being net-positive by 2030 and its *Planet Positive Carbon* plan hinges on a commitment to eliminate more carbon than emitted. A key element to its approach has been a swift transition to renewable electricity at retail and office assets.

The CEFC has previously worked closely with Mirvac on its Australian Build-to-Rent Club to support the sustainability aims of the investment platform and on the sustainability focused Woodlea masterplanned community in Victoria.

“

Mirvac is thrilled to be taking on this portfolio of iconic office buildings and working with them as they become key players in our 'This changes Everything' strategy of targeting industry-leading sustainability goals.”

**Sarah Clarke**  
Group General Manager, Sustainability,  
Mircvac

## Green buildings and climate change

To avoid the worst impacts of climate change, the World Green Building Council has called for all new buildings to operate at net zero carbon by 2030 and for all existing buildings to be renovated and operate at net zero carbon by 2050.

To achieve net zero carbon building stock by 2050, the International Energy Agency estimates that by 2030, direct building emissions need to fall by 50 per cent and indirect building sector emissions need to fall by 60 per cent. Australia could reach net zero by 2035, according to Climateworks Centre and CSIRO research.

### How to make a difference

- High levels of electrification in buildings
- Energy efficient buildings using proven clean energy technologies
- Customers choosing to switch to renewable electricity contracts and rapid decarbonisation of electricity generation.

## CEFC finance for cleaner greener buildings

The CEFC is working with investors and asset owners to accelerate measures to reduce the property sector's carbon footprint. We encourage the use of the latest sustainable material and design innovations to reduce emissions without incurring higher costs in a win for the environment and buildings.

We offer tailored investment solutions, financial products and structures to deliver private sector investment in renewable energy, energy efficiency and low emissions technologies that support the transition to net zero.

We invest in publicly traded and privately held instruments including senior debt, subordinated debt, preferred equity or convertible debt, common equity and interests in pooled investment schemes, trusts and partnerships.

The CEFC has worked with some of Australia's largest and most progressive property investors, to demonstrate the long-term benefits of planning and implementing emissions reduction across the diverse range of property sector assets. Our investments have covered healthcare, commercial property, residential, build-to-rent projects, student accommodation, community housing, special needs accommodation and seniors living.

### About the CEFC

The CEFC is a specialist investor at the centre of efforts to help deliver on Australia's ambitions for a thriving, low emissions future. With a strong investment track record, we are committed to accelerating our transition to net zero emissions by 2050. In addressing some of our toughest emissions challenges, we are filling market gaps and collaborating with investors, innovators and industry leaders to spur substantial new investment where it will have the greatest impact. The CEFC invests on behalf of the Australian Government, with a strong commitment to deliver a positive return for taxpayers across our portfolio.



### Delivering precinct transformation

**\$100m**

**CEFC investment**

The Lendlease Australian Prime Property Fund Commercial has 21 assets and is targeting abatement of more than 40,000 tCO<sub>2</sub>-e as part of its drive towards net zero by 2025. Global benchmark GRESB recognised APPF Commercial as a global sector leader for office in 2021.



### Shopping centres target ongoing savings

**\$80m**

**CEFC investment**

QIC Town Centre Fund is committed to achieving net zero emissions by 2028 for its core assets, by focusing on maximising efficiencies and smart investments. QIC takes a proactive data-driven approach to reducing carbon emissions and improving environmental performance of its assets. QIC was the first Australian signatory to the World Green Building Council Net Zero Carbon Buildings Commitment for a retail portfolio.



### A portfolio approach to sustainability

**\$75m**

**CEFC investment**

Stockland is aiming to reach net zero across all business activities, covering some 170 active assets and projects by 2028. Stockland is installing more than 20 MW of solar capacity across its portfolio. Stockland is also focused on energy efficient design and operations and on electrification of its portfolio.



### Healthcare sets new sustainability standards

**\$100m**

**CEFC investment**

The Dexus Healthcare Property Fund is targeting a net zero portfolio of healthcare properties aligned with the Dexus net zero target of 2030. Since inception in 2017, the Fund has raised \$850 million from 12 investors and investor groups. Assets include North Shore Health Hub in Sydney, Spring Hill Medical Centre in Brisbane, and Calvary Private Hospital in Adelaide.