



Australian Government



Clean energy and community housing

How can Australia's community housing providers improve the standard of living for lower income families while making their homes more energy efficient?



The investment
CEFC-financed initiatives undertaken by community housing providers SGCH and Housing Plus are demonstrating how built-in sustainability measures can deliver ongoing benefits to tenants, housing providers and the environment.

Projected lifetime emissions abatement

SGCH
~144,600
tCO₂e

Housing Plus
~61,400
tCO₂e

- The projects**
- Up to \$170 million in debt finance to SGCH to build 500 social and affordable homes in Sydney
 - Up to \$95 million in debt finance for Housing Plus to build 220 social and affordable homes in Dubbo, Orange and Bathurst
 - Finance for retrofits to existing homes with energy efficient equipment and appliances
 - Support for tenant education programs on how to further cut energy consumption.

The investors

SGCH: A not-for-profit community housing provider with 35 years' experience, SGCH is one of the largest community housing providers in Australia, housing more than 11,000 people in 6,400 homes in Sydney.

Housing Plus: A progressive social enterprise, Housing Plus has a 30-year history of providing client-centred tenancy and property management services to communities in the Central West and Western regions of NSW.

CEFC: The CEFC has a strong commitment to reducing emissions across the Australian economy, including the built environment.

Community housing in Australia

More than 800,000 Australians are living in social or community housing, across more than 400,000 dwellings, according to the Australian Institute of Health and Welfare 2019 report: Housing Assistance in Australia.

Residents include those on low incomes, people with disabilities, and those either experiencing or at risk of homelessness.

The report found that while the majority of people were living in public housing, the number of community housing dwellings more than doubled over a decade, from 39,800 in 2008-09 to 87,800 in 2017-18. This was partly due to the transfer of ownership or management of public housing dwellings to community organisations.

Community housing dwellings

39,800
2008-09

87,800
2017-18

Source: Housing Assistance in Australia, 2019

Energy use in low-income households

The Energy Stressed in Australia analysis from the Australian Council of Social Service (ACOSS) and the Brotherhood of St Laurence, found that, on average, low-income households spend 6.4 per cent of their income on energy, while high-income households spend an average of 1.5 per cent of their income on energy.

In a separate analysis, Energy Efficiency and People on Low Incomes, ACOSS reported that persistent barriers have prevented people on low incomes from investing in energy efficiency technologies as a way of reducing costs.

These barriers include lack of access to capital for high value energy efficiency upgrades, and the inability of tenants to improve the energy efficiency of rental properties, through measures such as solar pv, insulation and appliances.

ACOSS also found there was a lower incidence of insulation in low income housing and tenanted properties, and higher rates of ownership of inefficient appliances that are cheap to buy but expensive to run.

Share of income spent on energy

6.4%
Low-income households

1.5%
High-income households

Source: Australian Council of Social Service





Nationwide House Energy Rating Scheme

The Nationwide House Energy Rating Scheme – NatHERS – is a star rating system out of 10, that rates the energy efficiency of a home, based on its design.

Often good design can reduce the amount of energy needed to keep a home comfortable with no or little additional construction cost.

NatHERS star ratings provide information about the thermal performance (heating and cooling needs) of a home's construction. Star ratings are based on information about the home's design, construction materials and the climate where it is being built.

By providing a 'measuring tape' to estimate a home's potential heating and cooling energy use, NatHERS helps to make Australian homes more comfortable for their inhabitants and also helps residents to save on energy bills through smarter design choices.

Star ratings in practice

NatHERS star ratings can be used by homeowners, builders, certifiers, councils and local, state and national governments for a number of purposes, including:

1. To meet the mandatory energy efficiency requirements for homes and major renovations based on the National Construction Code
2. To advise home owners, architects and builders on the energy efficiency of various house designs
3. To advise prospective home buyers on the thermal performance of a home they are interested in buying.

For more information, visit:
nathers.gov.au

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The CEFC's investment in community housing is about helping families cut their energy costs while also benefiting the environment. The benefits speak for themselves, with increased levels of comfort requiring significantly less energy for day-to-day living, reducing costs as well as greenhouse gas emissions.”

Ian Learmonth
CEO, CEFC

Cutting household emissions

Australian households are directly responsible for about 20 per cent of Australia's greenhouse gas emissions, according to yourhome.gov.au, an Australian government website. The average household's energy use generates more than seven tonnes of greenhouse gas emissions each year.

Many of the homes built today are expected to be in use in 50 or even 100 years' time. By incorporating a low emissions approach to home construction and energy use today, we can deliver benefits over the long term.

How we use energy

40%
Heating and cooling

21%
Water heating

33%
Appliances and equipment,
including refrigeration
and cooling

6%
Lighting

*All figures are for an average home.
Source: yourhome.gov.au*

Practical solutions to cutting emissions

There are practical measures that can be implemented to reduce household energy use, and emissions output.

Water heating

- High efficiency hot water heat pump units

Lighting

- LED lighting for both tenant spaces and common areas

Heating and cooling

- Ceiling, wall and under-slab insulation
- Optimised window sizing and location
- High-performance double glazing or low-e glass
- Ceiling fans to reduce the need for air conditioning
- Draught proofing to reduce unwanted air leakage

Appliances and equipment

- Smart electricity and water meters to empower residents to reduce usage

Whole of building energy

- Rooftop solar PV where appropriate





Sustainability goals

SGCH and Housing Plus are targeting areas of high household energy demand to cut energy use, lower emissions and achieve higher NatHERS ratings. Their priority sustainability goals are:

- Develop portfolios of new homes that achieve an average minimum of 7 stars under the Nationwide House Energy Rating System (NatHERS)
- Increase tenant comfort through energy efficient heating and cooling
- Improve sustainability in existing properties through retrofitting.

Sustainability and community housing

Benefits for tenants

- 1 Increased level of thermal comfort throughout the year
- 2 Increased energy efficiency and renewable energy technologies reduce electricity and gas bills

Benefits for owners/property managers

- 1 Reduced energy demands make managing community housing more favourable for service providers
- 2 Local communities have a favourable view about the development of sustainable community housing
- 3 Reduced ongoing maintenance costs

SGCH

178
New homes delivered

7.69 stars
NatHERS rating*

345
Homes under construction

1,230
Retrofits to existing homes

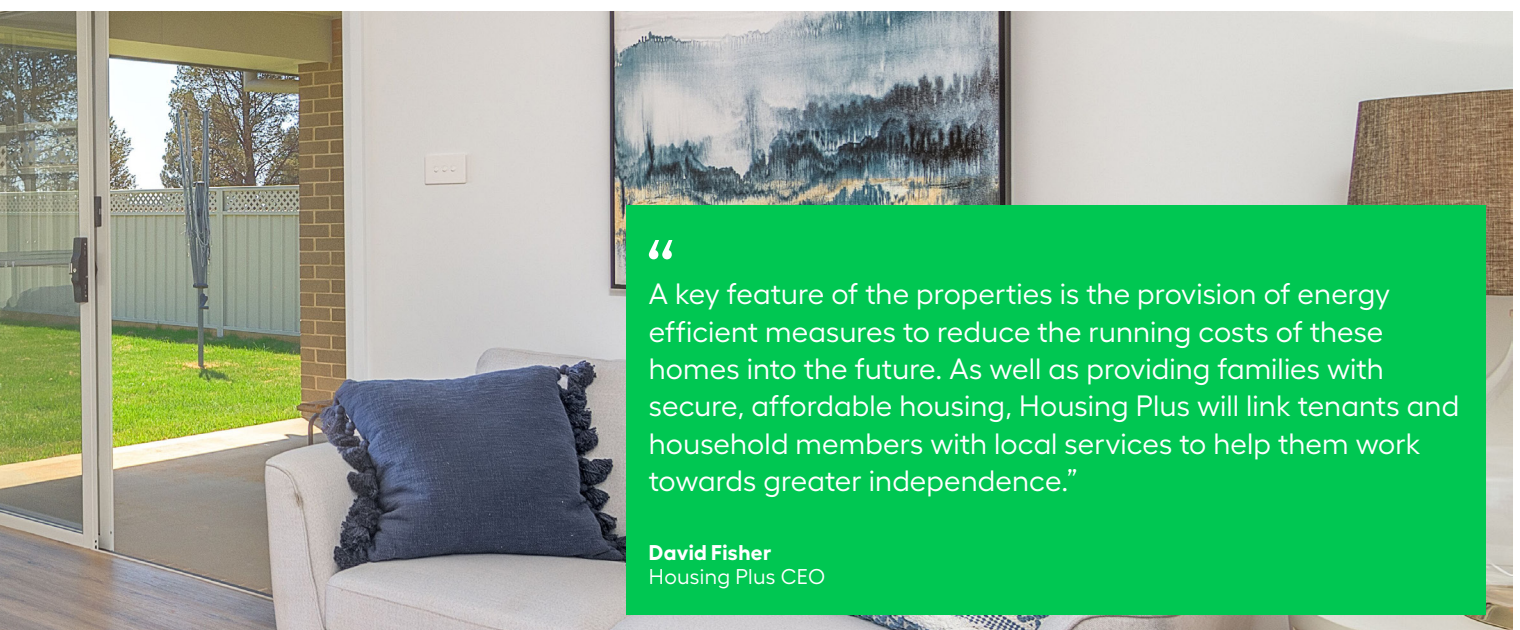
Housing Plus

28
New homes delivered

7.09 stars
NatHERS rating*

102
Homes under construction

Progress to 31 December 2019. *Weighted average portfolio rating



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A key feature of the properties is the provision of energy efficient measures to reduce the running costs of these homes into the future. As well as providing families with secure, affordable housing, Housing Plus will link tenants and household members with local services to help them work towards greater independence.”

David Fisher
Housing Plus CEO

Costs, savings and valuation

A 7-star NatHERS dwelling represents an average 40 per cent saving on heating and cooling energy demand compared with dwellings built to a minimum compliant level in NSW.

SGCH and Housing Plus invested an additional \$5,000 to \$6,000 per dwelling to achieve the targeted 7-star NatHERS rated homes compared with the minimum compliant home. This cost was substantially lower than anticipated.

SGCH estimates that at current energy prices, its tenants in the higher-rated new dwellings are saving some \$500 a year on their energy bills.

SGCH has been inspired to implement sustainability measures across approximately 1,000 other homes based on the improved comfort levels and energy savings experienced in its CEFC supported projects.

It is also testing even higher energy ratings at its largest development, in Sydney's Redfern. SGCH is on track to achieve an 8.3-star NatHERS rating at the new site, which has the potential to deliver a further 43 per cent cut in heating and cooling energy use compared with a building with a 7-star NatHERS rating.

Estimated annual cost savings

\$500*

New homes:
7 Star NatHERS

*CEFC and SGCH analysis; savings compared to NSW minimum code compliance.

\$400**

Existing homes:
Clean energy retrofit

**SGCH analysis of average energy savings from completed retrofits.



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We couldn't be happier!
We're saving money and
living in a new, large and
safe home.”

Sodebeh and her daughter benefit from living in one of SGCH's energy efficient apartments.





Rejuvenation through retrofits

Existing community housing dwellings generally have poor thermal comfort levels which can be improved through retrofitting with energy efficient and renewable energy technologies.

SGCH has upgraded approximately 1,230 dwellings with clean energy improvements, at a total cost of \$4.1 million, and is working to upgrade more.

SGCH estimates the energy saving for the 1,230 dwellings is some 2,270,000 kWh of energy a year. This represents a cost saving at current electricity prices of \$491,700 for the portfolio and an average \$400 saving per dwelling.

SGCH data on energy efficient equipment installations across the retrofitted properties provides insights into the savings and payback periods that can be expected from readily available technologies.

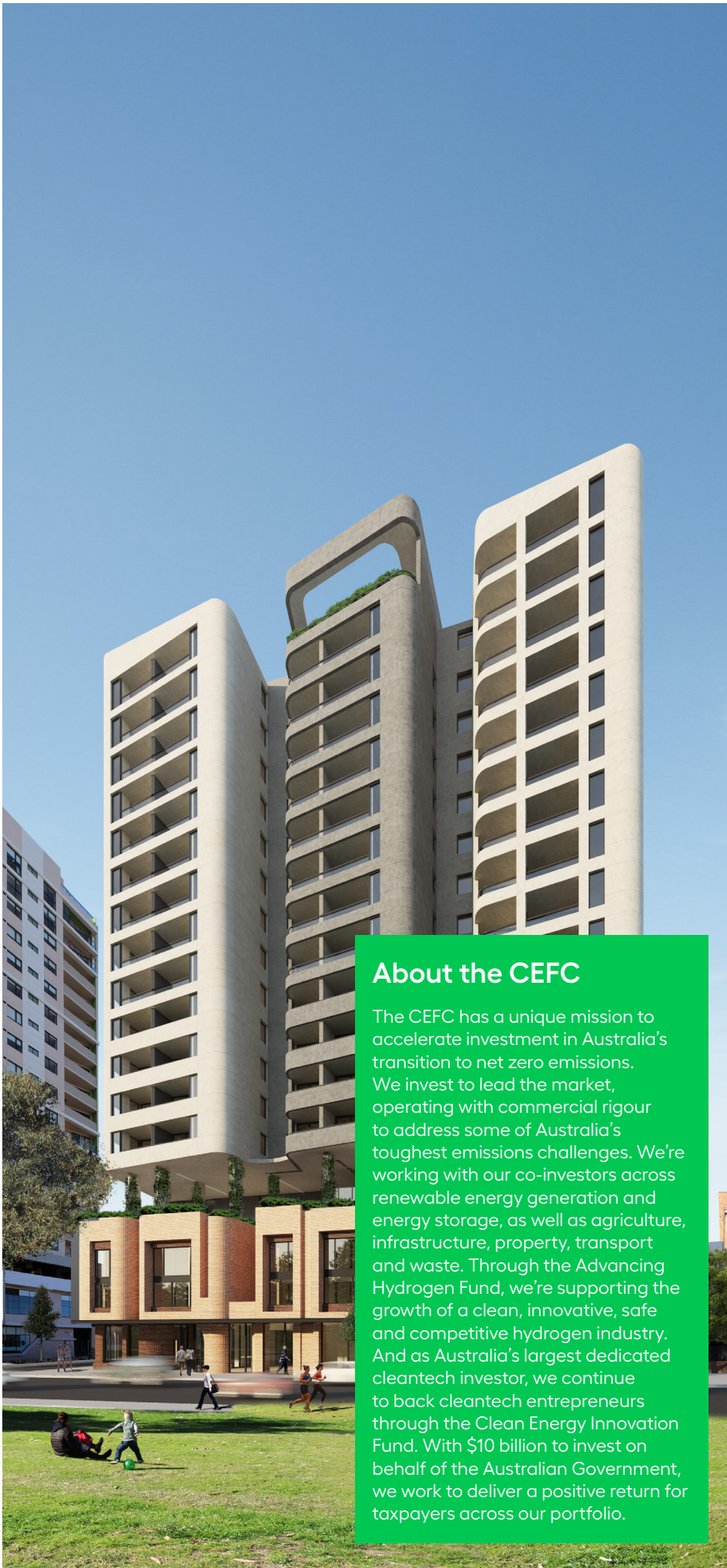
SGCH delivers benefits with clean energy retrofits

	Energy efficient installations	Impact on annual energy use	Impact on annual energy bill	Investment per initiative	Estimated payback period
	Property	kWh	\$	\$	Years
Insulation	39	1,180	320	1,600	5
Heat pumps for hot water systems	61	1,265	330	2,750	8.3
Draught proofing and LED lighting	275	110	28	150	5.4
Ceiling fans	250	300	75	300	4
Solar PV: 1.66kw system average	864	2,570	580	3,700	6.4

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Our tenants will be able to manage their electricity costs using the latest clean energy solutions, while living in well-located, sustainable and affordable housing.”

Scott Langford
SGCH CEO



Low emissions living

CEFC investments in community housing are an important part of our broader focus on reducing emissions across the residential building sector. We have a strong track record of investing in a diverse range of cleaner, greener residential options, from build-to-rent housing to masterplanned communities, as well as seniors living and student accommodation.

Green home loans for greener homes

CEFC commitment up to \$60 million

Through our first green home loan program, with Bank Australia, we are aiming to spearhead the construction of market leading, energy efficient housing, aided by discounted interest rates to Bank Australia borrowers for mortgages below \$1.5 million.

Clean energy focus for build-to-rent housing

CEFC commitment up to \$125 million

The Qualitas Build-to-Rent Impact Fund, Australia's first dedicated BTR debt platform, will finance housing that meets strong sustainability standards and reduces greenhouse gas emissions by at least 35 per cent compared with the current building code.

Seniors' living village a model of sustainability

CEFC commitment up to \$60 million

A Canberra office park is being transformed into Greenway Views - a seniors' living village providing homes for up to 450 people and creating a new model for sustainability for Australia's rapidly growing retirement living and aged care sectors.

About the CEFC

The CEFC has a unique mission to accelerate investment in Australia's transition to net zero emissions. We invest to lead the market, operating with commercial rigour to address some of Australia's toughest emissions challenges. We're working with our co-investors across renewable energy generation and energy storage, as well as agriculture, infrastructure, property, transport and waste. Through the Advancing Hydrogen Fund, we're supporting the growth of a clean, innovative, safe and competitive hydrogen industry. And as Australia's largest dedicated cleantech investor, we continue to back cleantech entrepreneurs through the Clean Energy Innovation Fund. With \$10 billion to invest on behalf of the Australian Government, we work to deliver a positive return for taxpayers across our portfolio.