

# NEW PATHWAYS TO ACHIEVE ENERGY EFFICIENCY

Presentation by the Clean Energy Finance Corporation  
FEBRUARY 2018



# ABOUT THE CEFC



A unique mix of finance and clean energy experts



Proven track record in clean energy investment



**\$10 billion capital** backed by the Australian Government

**85**

direct investments over 4.5 years

**90+ employees** across offices in **3 states with national focus**

**Independently-run** government organisation

**NATIONAL COMMITMENTS:**  
**\$2.4 billion**

PLUS

**STATE-BASED COMMITMENTS:**  
**\$2.4 billion**



CEFC portfolio at 31 December 2017

**~\$4.8 billion clean energy** investment portfolio across a broad range of industry sectors

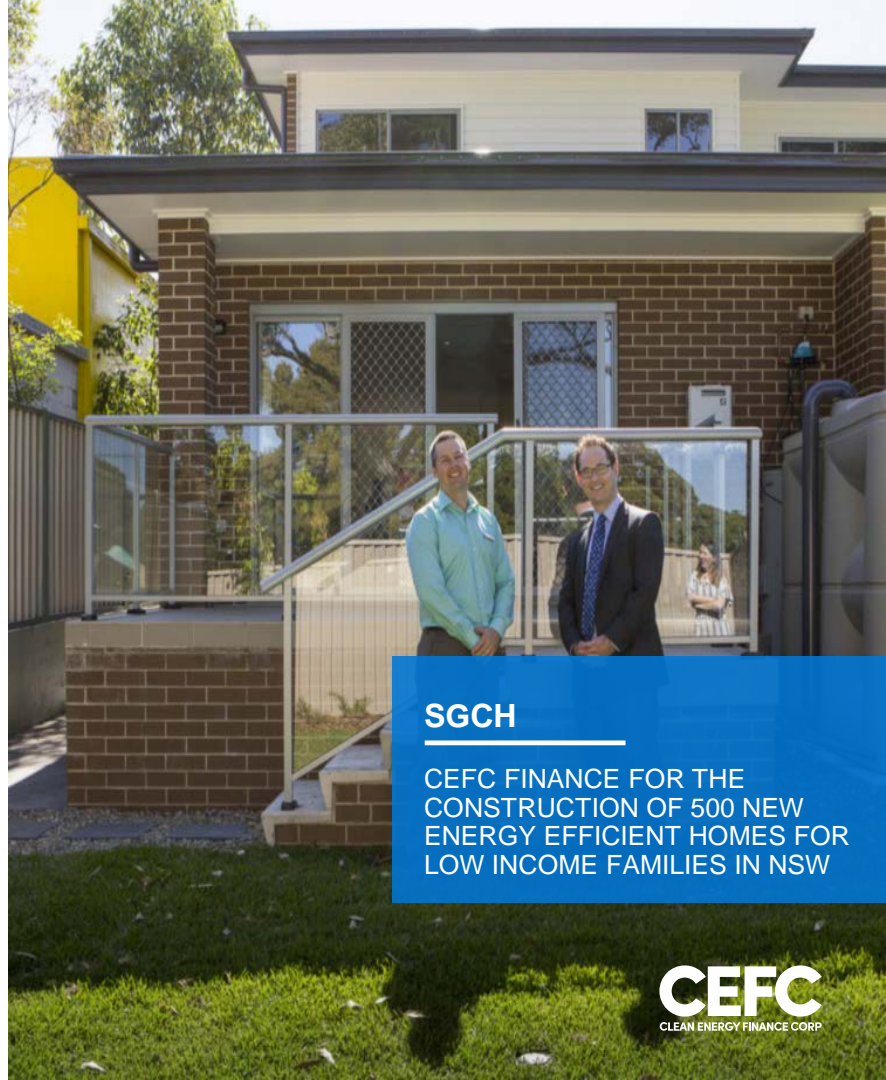
Through our investments we are transforming investment in clean energy, contributing to Australia's emissions reduction target of **26-28% by 2030**

# INVESTING ACROSS THE ECONOMY

Low carbon electricity		Large-scale solar		Waste, bioenergy and agriculture
		Wind		Grid solutions
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Energy efficiency		Local govt and universities		Infrastructure
		Community housing		Manufacturing and industry
		Property		Agriculture
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Transport		Biofuels		
		Vehicles		

# CEFC PROPERTY FINANCING

- As at 31 December 2017, CEFC had committed nearly **\$900m** in Property financing, to Projects with a value in excess of **\$3b**
- We provide whole of building/portfolio financing to drive leading **energy efficiency** and **clean energy** standards
- Financing across both residential and commercial property sectors, with recent investments including:
  - **\$100m** equity commitment to the Dexus Health Care fund
  - **\$200m** debt financing for QIC's Shopping Centre fund
  - **\$32m** debt project financing of a student accommodation development in Adelaide
  - **\$110m** commitment to the Investa Core Office equity fund
  - **\$130m** financing to St George Community Housing for 500 new dwellings and portfolio wide refurbishment



## SGCH

CEFC FINANCE FOR THE  
CONSTRUCTION OF 500 NEW  
ENERGY EFFICIENT HOMES FOR  
LOW INCOME FAMILIES IN NSW

# CEFC INSIGHTS AND LEARNINGS



## TECHNOLOGY

Current technology exists so buildings can be designed to significantly higher energy standards than the current building code



## EARLY ENGAGEMENT

Early consideration of technology and solutions at the design phase of buildings can drive significant efficiencies



## INFORMATION

Understanding key technologies, paybacks and their application is a key enabler of change



## CONSUMER

Customer demand and awareness can be a key driving force in both the residential and commercial markets

# ENERGY IN BUILDINGS: BEST PRACTICE INITIATIVES



Download the report:

[cefc.com.au/media/290062/ndy\\_ cefc\\_bestpracticeguide.pdf](https://cefc.com.au/media/290062/ndy_cefc_bestpracticeguide.pdf)



**Norman  
Disney &  
Young**

**CEFC**  
CLEAN ENERGY FINANCE CORP

# ENERGY IN BUILDINGS: BEST PRACTICE INITIATIVES

BUILT FORM AND EXTERIOR

## EXTERNAL SHADING

1 2 3 4 5 6 7 8

\$\$

<10



### REDUCES COOLING ENERGY USE

External shading is used to exclude direct sun before it reaches a building's windows and control glare. Horizontal 'fins' are the best type of 'fixed' (non-movable) shading for facades facing North (and South, for northern locations); vertical fins are best for East and West. 'Operable' (movable) shading can be used to admit direct sun when it's needed, exclude it when it's not, and improve natural daylight - but also takes longer to pay back. Shading structures must incorporate a 'thermal break' to avoid decreased insulative performance. Vegetation can be used as shading, with deciduous plants being very effective in temperate climates.

*Power and Water Corporation, Darwin, NT*



## ENHANCED DAYLIGHTING

1 2 3 4 5 6 7 8

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### REDUCES LIGHTING ENERGY USE

Beyond the built form, a number of other factors influence natural daylight (and therefore lighting energy). 'Soft-coat low-E' glass coatings on clear glass provide the best possible daylight transmission (measured as 'VLT' or 'T<sub>v</sub>', where higher is better) while achieving good solar control. 'Light shelves' are like external horizontal shading, but they also extend inside of the building. They are light in colour, and bounce daylight deeper into the building. Products are also available that can be fixed inside the window to achieve the same effect without the shelf. 'Sawtooth roofs' and 'clerestory windows' can be useful in some built forms.

*Main Assembly Building, Tonsley, SA*



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Young**

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