Australian Government

Clean energy and asset finance

The CEFC is helping Australian businesses, manufacturers, commercial property owners and the farming sector take advantage of the latest clean energy technologies to accelerate their transition to a low emissions, sustainable future.

>$1.27b
in tailored asset finance

~18,000
smaller scale clean energy projects Australia wide

> "Each economic sector has its own set of emissions challenges. This is reflected in the broad range of businesses accessing our finance – from the manufacturing and industry, property, transport and agriculture sectors, to construction, education, healthcare, hospitality and tourism."
>
> **Ian Learmonth**
> CEO, CEFC

Backing clean energy assets economy wide

>10,000
solar projects

>5,000
low and zero emissions vehicles

1,015
small scale battery systems

716
low emission tractors, headers and sprayers

201
energy efficient irrigation projects

90
energy efficient manufacturing plant upgrades

97
energy saving building retrofits

53
best-in-class cold storage upgrades

Delivering finance for Australian projects

Through our asset finance programs, the CEFC has delivered more than $1.27 billion in tailored asset finance to ~18,000 smaller scale clean energy projects Australia wide.

Eligible projects range from small-scale rooftop solar and battery storage, to energy efficient manufacturing and farm equipment, as well as improved building insulation, heating and cooling, demand management systems and low emission vehicles.

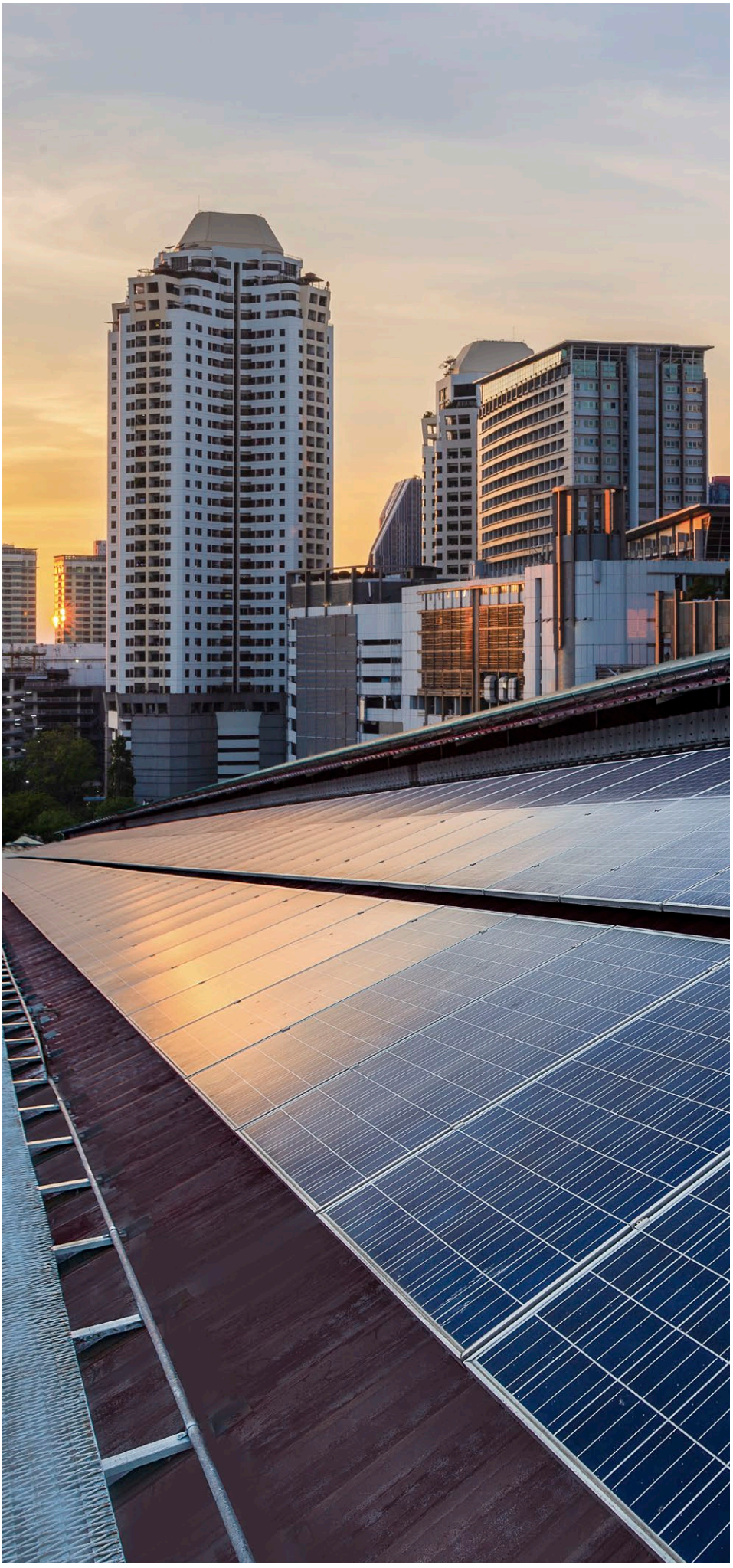
How CEFC asset finance works

We reach thousands of businesses by relying on the established networks of participating banks and specialised lenders who work with us to deliver our asset finance to their customers.

Through these asset finance programs, finance is available for investment in clean energy technologies, giving borrowers an incentive to choose best-in-class clean energy assets when considering new equipment purchases, property fitouts and vehicle upgrades.

Each program provides the CEFC with information about the business sectors drawing on our finance and the types of technologies they purchase. These insights enable us to tailor our programs to encourage further investment in beneficial clean energy technologies.

The investments made through the asset finance programs support the objectives of the Australian Government Technology Investment Roadmap, which is aimed at driving investment in low emissions technologies to strengthen the economy, support jobs and support businesses.



Getting started

Knowing where to start can be a major hurdle for businesses seeking to reduce energy use and lower emissions.

The first step is to understand your energy needs and demand profile. This can include conducting an energy audit to better understand the energy intensity of different activities and equipment and highlight areas for improvement. As a rule, it is best to focus on energy efficiency before installing onsite renewable energy generation, such as solar. This ensures that any energy generation system you install is sized correctly for your business.

Businesses may also benefit from a staged approach to investment, initially concentrating on areas that are likely to achieve the biggest savings – whether in changing and/or cutting energy use or taking steps to lower emissions.

What to consider

1

Cut your energy use

- Building management systems
- Energy efficient plant and equipment
- Industrial and commercial refrigeration
- Water efficiency and irrigation

2

Change your energy use

- Solar PV, water and heat pumps
- Waste heat recovery
- Building, vehicle and home battery storage
- Bioenergy, biofuels and energy-from-waste

3

Lower your emissions

- Electric vehicles
- Increasing on-farm soil organic carbon
- Reduce and re-use waste

How to apply

Participating banks and specialised lenders have dedicated asset finance channels to assist customers with clean energy technology eligibility and loan applications.

Up to $5 million is available for a project. To date loans have ranged from $2,000 to $5 million with an average investment of some $73,000. Up to 100 per cent of the cost of equipment can be financed, subject to the financier's usual credit approval considerations. The CEFC is not involved in individual financing decisions or loan administration.

Full details of the CEFC asset finance programs are available on the CEFC website cefc.com.au/assetfinance

Where we invest
Asset finance for manufacturing

Australian manufacturers are the most energy intensive in the OECD, and account for around 40 per cent of Australia's total natural gas consumption.*

As relatively large energy users, manufacturers who invest in clean energy solutions can experience swift and lasting benefits. This is particularly so when it comes to upgrades to large equipment, where continuous operating models require significant amounts of fuel or power.

Over $110 million of CEFC asset finance has been used in 90 small scale loans to improve energy performance, including 52 projects of more than $500,000 to upgrade laser cutting, grading, Computer Numerical Control (CNC) and printing machinery among many others.

*Australian Manufacturing: Gas Efficiency Guide, 2018

Reducing carbon emissions in the steel industry

CSF Steel has cut energy costs, improved productivity and reduced carbon emissions with an energy efficient welding system. The Cairns workshop handles steel fabrication, detailing, processing, blasting and painting and installation for clients across Australia and Southeast Asia.

CSF Steel installed 40 advanced Lincoln Electric Powerwave welders to replace its manually programmed welders. The pre-programmed machines allow the operator to adjust weld sizes and procedures at the push of a button, lifting quality and efficiency.

CSF estimates that the new welders will lift welding productivity by some 30 per cent and cut energy usage by some 21 per cent.

21%

estimated energy reduction

Solutions for manufacturing

The CEFC worked with the Ai Group and the Energy Efficiency Council to identify low emissions technologies, investment and payback considerations for a wide range of manufacturers.

Technology	Estimated payback in under five years
1	
Feedwater management	Maximise feedwater temperatures through condensate recovery, tank insulation, waste heat recovery and economisers
2	
Hot water efficiency	Minimise hot water usage in food manufacturing cleaning processes with the use of efficient nozzles and trigger controls
3	
Air infiltration and seals	Thermal imaging, insulation and advice from seal specialists can help identify and implement air infiltration initiatives for ovens and furnaces
4	
Boiler sequencing	Sequencers can help control multiple boilers, improve overall efficiency, reducing partial load operation, purge cycle and radiant heat loss
5	
Heat pumps	Heat pumps can reduce gas use, particularly in systems requiring both heating and cooling, with one stream cooled while another is heated

Where we invest
Asset finance for buildings

The built environment is accountable for more than 20 per cent of Australia's emissions, according to ClimateWorks Australia. However, readily available energy efficiency and renewable energy technologies mean it is possible for commercial properties to achieve significant emissions reduction.

CEFC asset finance of $68 million for 97 investments to deliver energy efficient projects across commercial and residential buildings and 53 best-in-class cold storage upgrades. Major areas of improvement have included investments in energy efficient lighting, air conditioning, sensors and building management systems.

Property owners are also using CEFC finance to invest in renewable energy, cutting energy use and lowering emissions. CEFC asset finance is increasingly being used to support energy generation and storage, with 1,015 smaller-scale battery systems and over 10,000 solar systems financed.

Car dealership saves with innovative solar and lighting upgrades

Leading Sydney car dealership Col Crawford Lifestyle Cars has made big savings through a major solar installation and upgrade to LED lighting.

The business installed 1,000 solar panels with 260kW of capacity, with nearly half acting as a car park shading structure. It also installed 960 LED light fixtures. The dealership estimates its electricity costs more than halved, with the project cash flow positive from day one.

Car dealerships are high energy users, with large premises and a need for high security. The project demonstrates the real difference solar energy and LED technology lighting can make to a dealership's bottom line while reducing carbon emissions.

1,000
solar panels installed

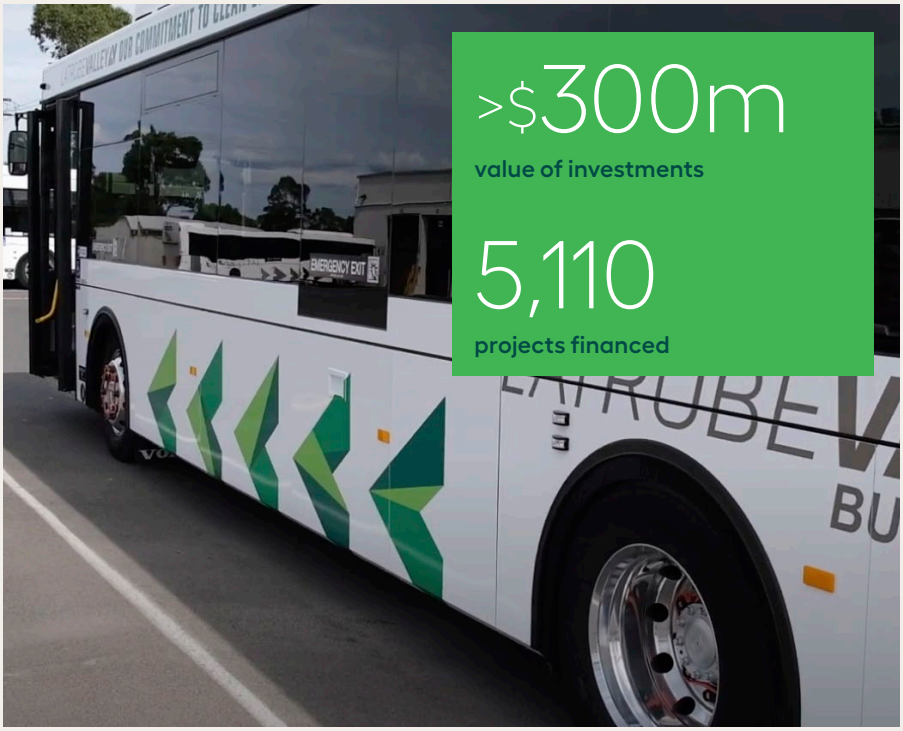
Unlocking property performance

The CEFC worked with the Property Council of Australia to identify low emissions technologies, investment and payback considerations for both new and existing buildings.

Technology	Estimated payback in under five years
1 **Daylight harvesting**	Sensors identify when there is a sufficient amount of available natural daylight and reduce the use of artificial lighting to cut energy consumption
2 **Insulated roller doors**	Insulated and well-sealed roller doors installed at access points to heated and cooled spaces, operating automatically to maintain temperature control
3 **LED Lighting**	Light emitting diode lights provide more light for the same amount of electricity compared with fluorescents, metal halides and halogens
4 **Occupancy detection**	Sensors identify when a space is vacant, switching off or turning down building systems to save energy on lighting, ventilation and air conditioning
5 **Solar installations**	Systems generally sized to meet 10 to 20 per cent of the building electricity load, or the maximum system that rooftops can accommodate

Where we invest
Asset finance for transport

Transport accounts for almost 20 per cent of Australia's greenhouse gas emissions, or around 100 million tonnes of emissions each year.



Best-in-class internal combustion engine, electric and hybrid passenger vehicles account for around 24 per cent of the individual investments financed through our asset finance programs since 2015, valued at more than $300 million.

Some 30 per cent of the vehicles financed by dollars – more than 1,100 loans – have been electric and plug-in hybrids. The availability of electric vehicles is increasing rapidly with 13 new EV variants, each with a range of over 500km, entering the market in 2019, according to the Australian Government's Green Vehicle Guide.

Investment in electric vehicles has been highest in metropolitan areas, with an absence of charging infrastructure in regional Australia cited as a barrier to more widespread adoption.

To help overcome that barrier, the CEFC has invested in EV charging infrastructure specialist JET Charge to support its deployment of smart charging hardware.

Environmentally friendly bus fleet

A Latrobe Valley family business that has been providing public transport for more than 50 years is driving change with its plans for an environmentally friendly bus fleet.

Latrobe Valley Bus Lines is investing in eight hybrid electric buses, that they expect will deliver a 35 per cent saving on fuel, a 30 to 40 per cent reduction in carbon emissions and up to 50 per cent less nitrogen oxide or particulate emissions.

Maintenance costs on the hybrid electric buses are also expected to be lower. The hybrid buses use an electric motor that works in parallel with a diesel engine to drive the vehicle.

35%
saving on fuel

Driving towards to a cleaner energy future

The CEFC worked with leading industry groups to identify low emissions technologies, investment and payback considerations to address transport-related emissions.

Technology	Variable scale of investment
1 **Vehicle electrification**	Electrification of passenger, commercial and light transit vehicles, including buses and light rail, reduces diesel and petrol demand
2 **Vehicle selection**	Choosing a vehicle that is suited to the task can significantly reduce fuel consumption and related emissions
3 **Engine modifications**	Turbochargers and superchargers increase engine efficiency by compressing air intake and intercoolers can further improve efficiency by exhaust gas
4 **Tyre size increase**	Increased tyre diameter increases the tyre footprint, spreading the vehicle's load more evenly to achieve greater traction and less rolling resistance
5 **Auxiliary power unit**	An auxiliary power unit can power accessories such as fans, refrigerators and air conditioners while a vehicle is moving or stationary

Where we invest
Asset finance for agriculture

Energy is one of the fastest growing costs for Australian agriculture, with high rates of technological innovation and mechanisation driving the demand for grid electricity and diesel fuel. However, there are significant opportunities for farm operations to lower energy consumption and reduce energy related emissions.

Some 52 per cent of investments through the asset finance programs have occurred in regional Australia, including the major food bowls of the Darling Downs in Queensland, New England and the Riverina in New South Wales and the Sunraysia district in North Western Victoria.

CEFC finance to growers and producers averages about $345,000 per loan, with average lifetime interest cost savings of $3,400 compared to standard equipment finance rates. Finance for machinery equipment and vehicle upgrades makes up about 59 per cent, and efficient irrigation projects about 14 per cent of new borrowing for Australian farm operators.

Horticulture and fruit growing, cattle farming and grain and seed farming have drawn more than $230 million in CEFC asset finance. Other farming sectors accessing finance include services to agriculture, other crop growing, sheep farming, poultry and pig farming.

No-fuss solar helps farmer cut pumping costs

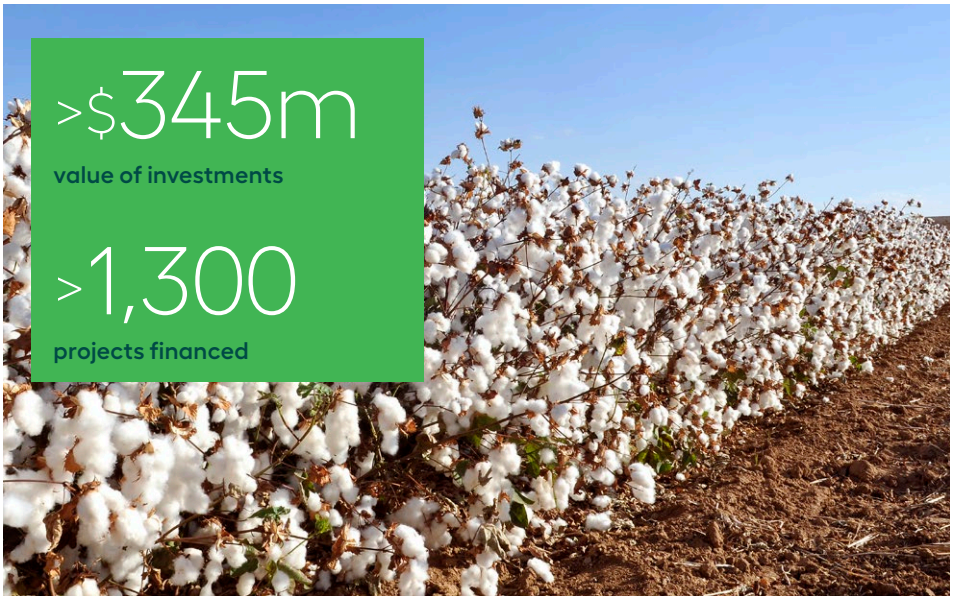
A Darling Downs cotton farm has installed solar to reduce pumping costs with a purpose-built system that is providing a reliable energy supply with a fuss-free operating system.

The 25kW solar system serves an 18kW bore pump, which uses nearly 49,000kWh of energy a year. The solar system has been sized so that on a clear day, it will run the pump from about 8am until 4pm, with grid power mostly used to run the pump off-peak.

The system is saving over $8,000 annual in electricity costs. The farm can also earn up to $5,000 per year for exporting surplus power.

$8,000

annual saving in electricity costs



Making energy savings in agriculture

The CEFC worked with the National Farmers' Federation to identify low emissions technologies, investment and payback considerations across the farming sector.

Technology	Investments from $5,000
1 **Smart monitoring and controls**	Cut fuel costs by using long range wireless communication to remotely monitor and control gates, pumps and other equipment
2 **Variable speed drives**	Better manage electrical motor speeds using pressure sensors and flow meters, to cut electricity consumption by up to 60 per cent
3 **Biogas**	Use anaerobic digestion to process organic waste, producing electricity, heat and a residual organic product that can be used as fertiliser
4 **GPS auto-steer**	Automatically control tractors for seeding, spraying, fertiliser application and harvesting, reducing overlap in farming operations and cutting fuel use
5 **Energy storage**	Batteries, fuel cells and energy storage can maximise the benefits of renewable energy and cut reliance on grid electricity

Addressing Australia's emissions challenge

The CEFC asset finance programs provide a practical way for Australia to address our emissions right across the economy. The opportunities for action are significant, with Australia's economy ranking in the top 10 in the world for emissions per capita according to the International Energy Agency.

Through wholesale funding, which can include discounted finance for borrowers, the CEFC is supporting smaller scale investment in a diverse range of proven technologies. This funding is designed to help businesses better manage their energy use and improve their carbon footprint.

Importantly, our finance is targeting the key drivers of Australia's scope 1 and 2 emissions*:

Emissions by sector

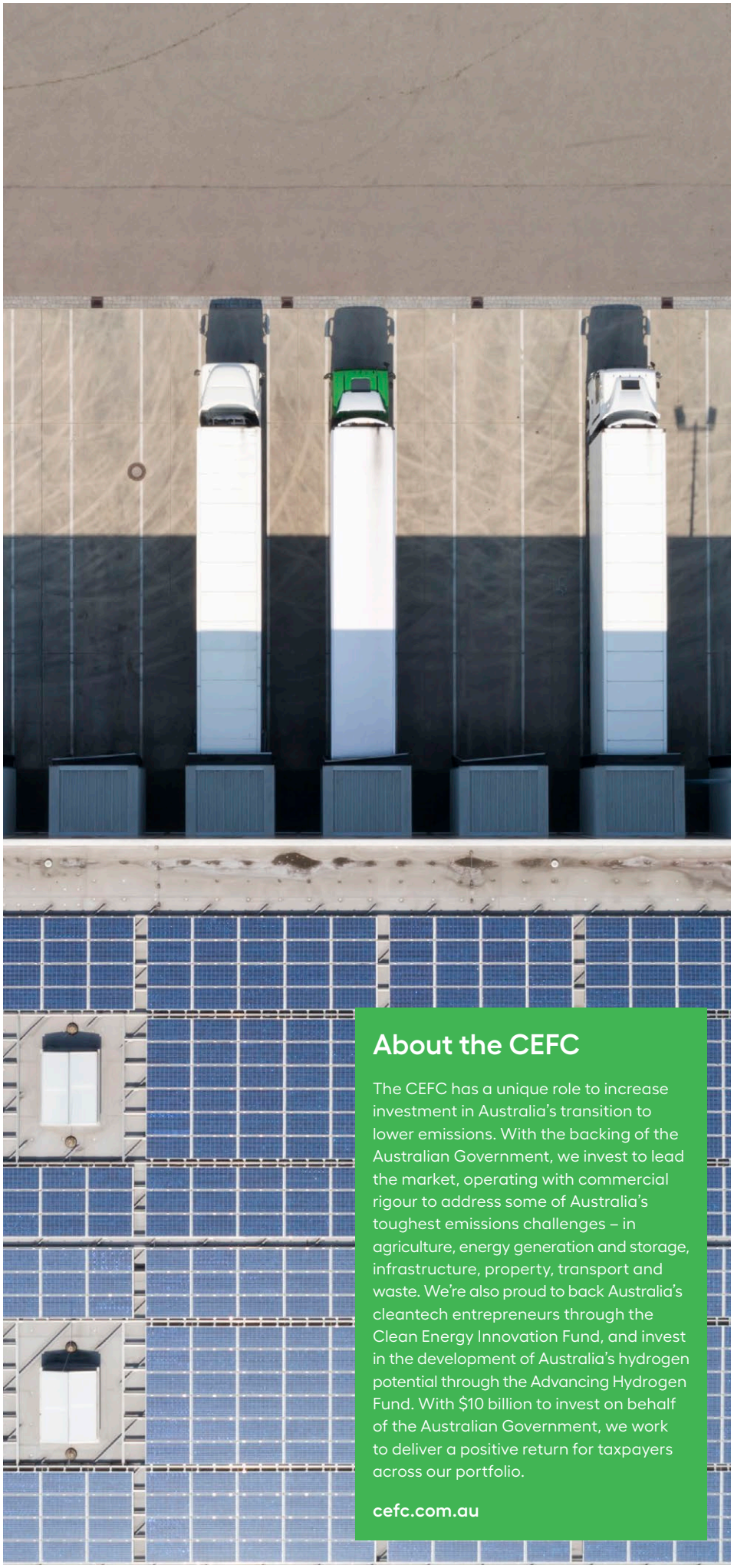
~47%
manufacturing and industry

~21%
buildings

~20%
transport

~12%
agriculture

*ClimateWorks Australia, "Decarbonisation Futures", March 2020



About the CEFC

The CEFC has a unique role to increase investment in Australia's transition to lower emissions. With the backing of the Australian Government, we invest to lead the market, operating with commercial rigour to address some of Australia's toughest emissions challenges – in agriculture, energy generation and storage, infrastructure, property, transport and waste. We're also proud to back Australia's cleantech entrepreneurs through the Clean Energy Innovation Fund, and invest in the development of Australia's hydrogen potential through the Advancing Hydrogen Fund. With $10 billion to invest on behalf of the Australian Government, we work to deliver a positive return for taxpayers across our portfolio.

cefc.com.au