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Disruption is already underway

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5TH IAEE ASIAN CONFERENCE 2016

Oliver Yates
CEO

Agenda

1. About the CEFC
2. The role of the CEFC
3. Examples of the disruption already under way in the energy sector
4. Case studies of disruptive technologies and businesses the CEFC has funded

About the Clean Energy Finance Corporation

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Driving productivity gains, lowering energy costs and reducing emissions

- Independent, Australian Government institution that operates like a traditional financier
- Private sector expertise with public purpose - Finance for energy efficiency, low-emissions and renewable energy projects and programs across the economy
- Access to $2 billion a year for five years
- Commercial return on investment (debt or equity)
- Projects that are smaller, more complex or new to the Australian market
- Operates as a co-financier to encourage participation in the sector from private sector financiers

A growing portfolio of clean energy investment commitments

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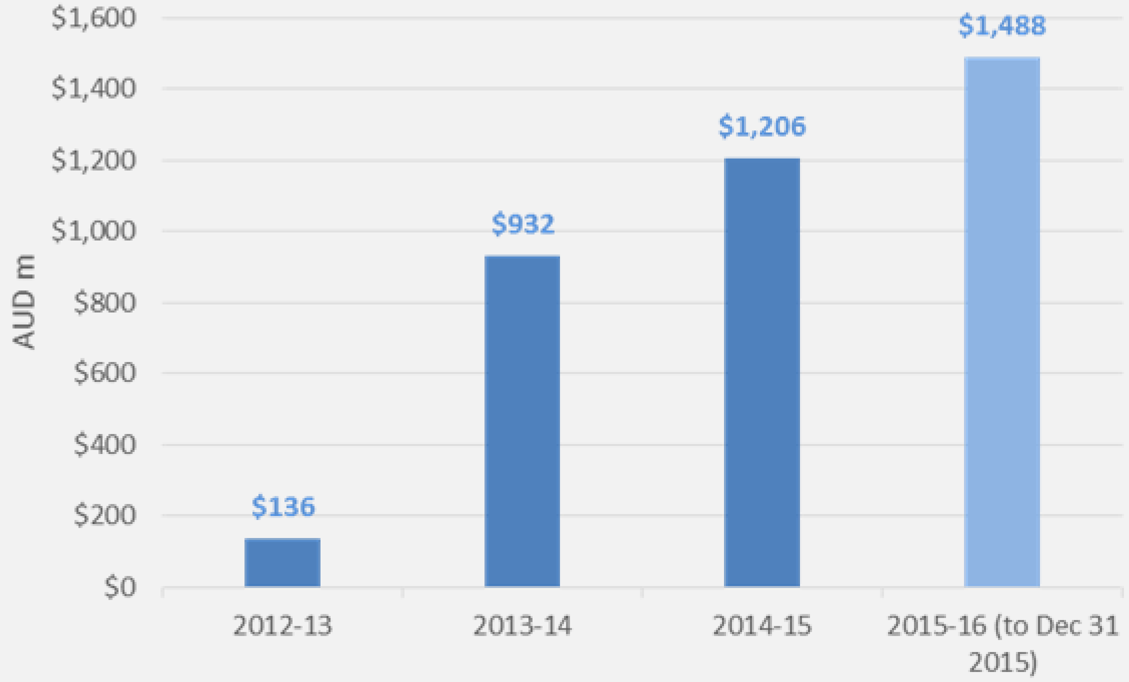
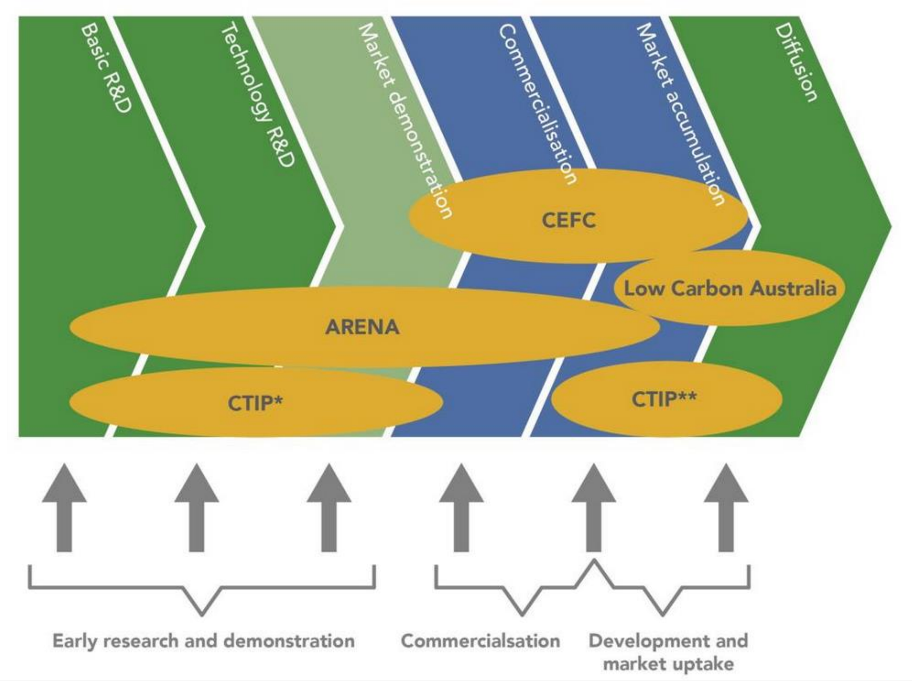


At 31 December 2015

The CEFC was established to a catalyse economic transformation



The CEFC is part of the Green Bank Network

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Green Investment Bank

CONNECTICUT GREEN BANK

NEW YORK STATE OF OPPORTUNITY.
NY Green Bank
A Division of NYSERDA

GreenTech Malaysia

Sector-led programs announced in FY2016

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Local government

$250 million commitment to help councils reduce energy bills and lower emissions

- Financing eligible projects across renewable energy, energy efficiency and low emissions
- Loans of at least $10 million
- Councils can enter into joint financing agreements

Bioenergy and energy from waste

Cornerstone commitment of $100 million to establish the Australian Bioenergy Fund

- Co-investment with the Foresight Group to establish a $200 million dedicated Australian bioenergy and energy from waste equity fund
- Targeting the deployment of new bioenergy from waste capacity, investing in projects in the $2-100 million range

Large-scale solar financing

CEFC's single largest commitment to large-scale solar in Australia to date

- $250 million in debt finance available for merchant and contracted projects
- Substantially increasing installed large-scale solar capacity in Australia
- Developing the Australian supply chain for large-scale solar and bringing it down the cost curve

What does disruption mean for investors?

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New technology → Is it too early and too risky to invest in right now?

Growth of new sectors → Where will the growth be?
What industries will suffer?

Different business models → Who will get the trend right AND the delivery model right?

The rate of technology disruption is often underestimated

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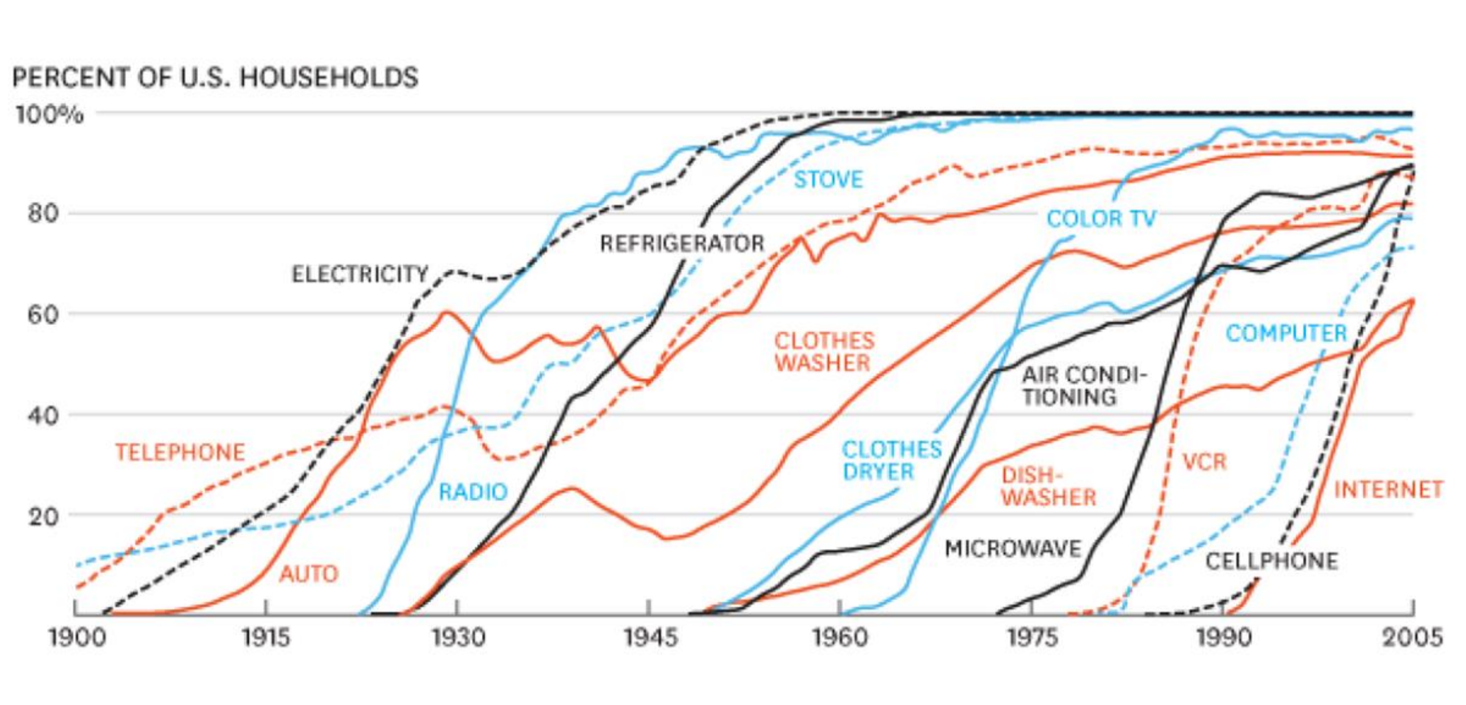

Source: Michael Felton, The New York Times, Harvard Business Review

Residential solar has growth extremely rapidly

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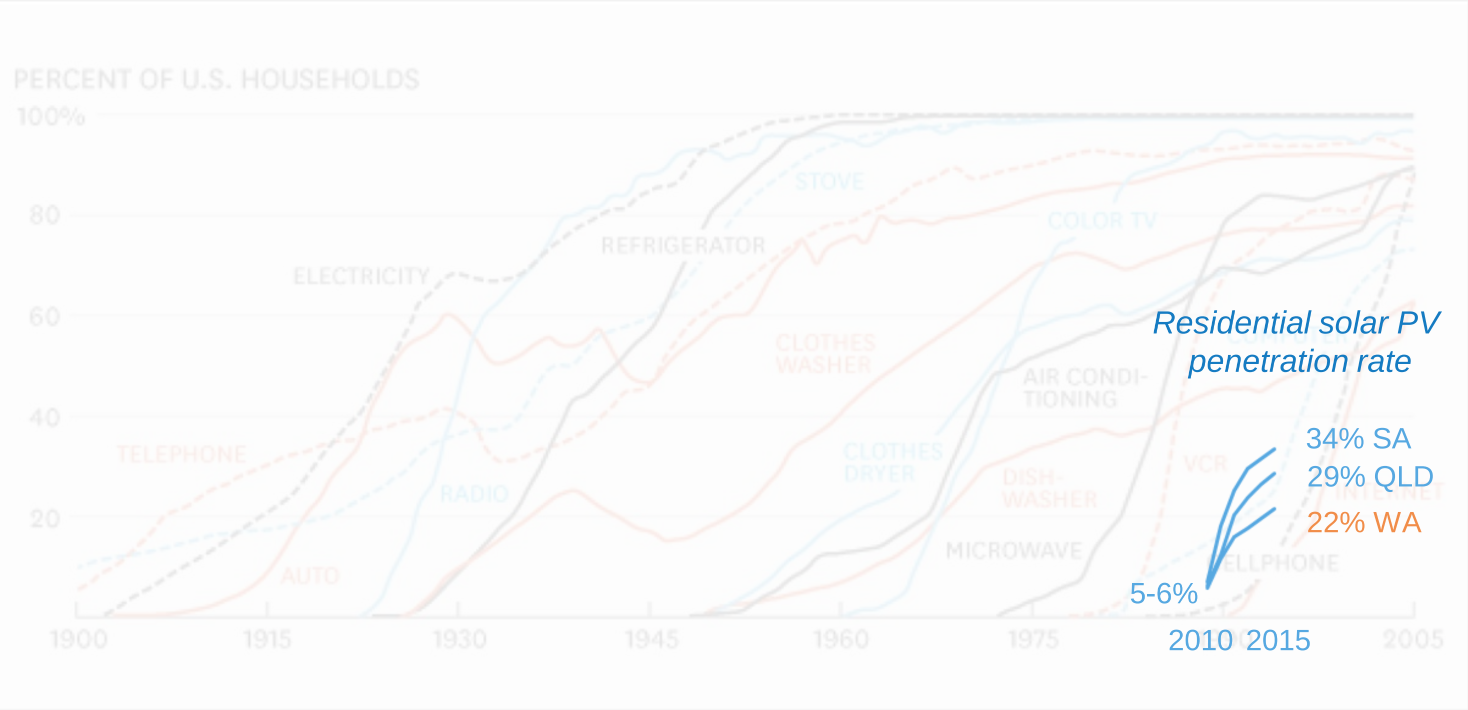

Source: BNEF

Australia now has 5000MW of solar

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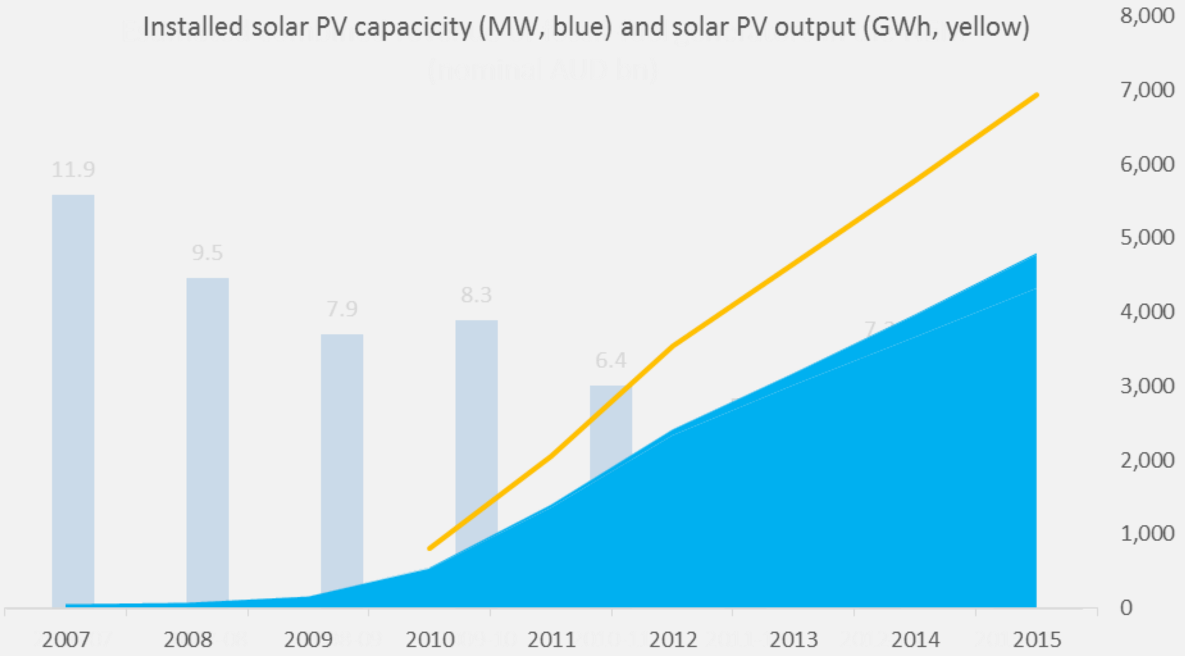

Since 2010, installed solar PV capacity and generation have increased at an average annual rate of 61%.

Solar now makes up over 5% of capacity and up to 4% of demand

Source: BNEF

Disruption is already underway:
Revenue for fossil fuel generators is down 50%

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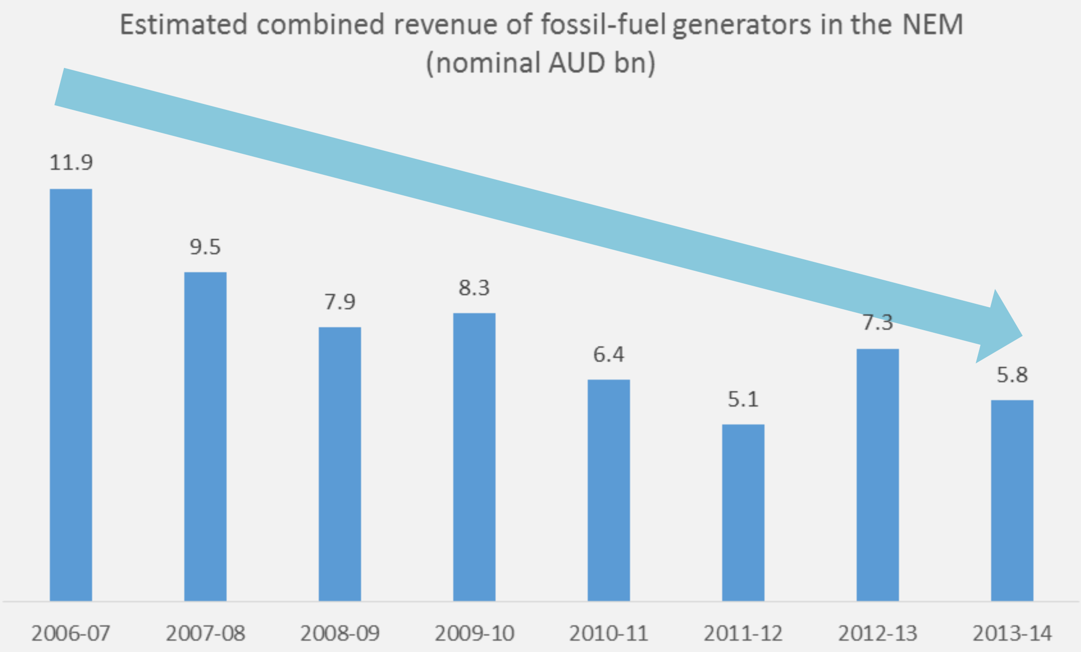

Since 2006, fossil fuel generator NEM revenue is estimated to have fallen by 50%

Source: Australian Energy Regulator, Australian Energy Market Operator, Bloomberg New Energy Finance (BNEF)

What we're doing in solar

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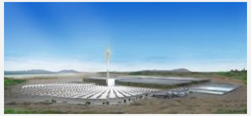
Cornerstone investor for new solar technologies	Underwrote debt for Sundrop Farms solar thermal greenhouse	
New financing models, setting a precedent for the financial market	Solar leasing and PPAs. $250m large-scale solar program.	
Finance for smaller utility-scale projects	$13m for Uterne PV plant in NT. $15m for DeGrussa solar and storage in WA	
Financing merchant solar, when needed	56MW Moree Solar PV Farm	

World-leading application of solar thermal technology

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Funding solar thermal to grow produce

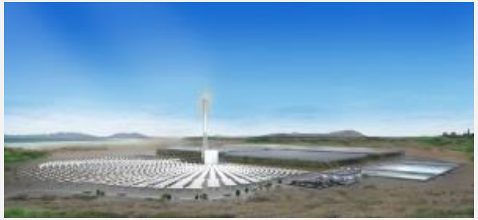
Action	Impact
• Sundrop Farms is pioneering the use of solar thermal for heat, electricity, and desalinated water to grow vegetables in greenhouses • CEFC underwrote up to A$40 million in senior debt finance, then secured commercial bank debt package and private equity capital	• Sundrop Farms has entered into a partnership with global investment firm KKR (up to $100m) and is constructing a state-of-the-art glasshouse in Port Augusta.

CEFC COMMITMENT
CEFC underwrote up to A$40 million in debt financing

TECHNOLOGY
Solar thermal

LOCATION
Port Augusta, SA

SECTOR
Agriculture



Large-scale solar financing

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CEFC's single largest commitment to large-scale solar in Australia to date

Action	Impact
• $250 million in debt finance available for merchant and contracted projects • Eligible across the NEM, SWIS and off-grid • Senior debt that is fixed-rate and long-dated	• Help develop the Australian supply-chain for large-scale solar • Bring large-scale solar down the cost curve • Substantially increase installed large-scale solar capacity in Australia

CEFC COMMITMENT
Up to $250m

LOCATION
Australia-wide

TECHNOLOGY
Solar

Large-scale solar for edge-of-grid applications

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Large-scale solar supporting rural and remote communities

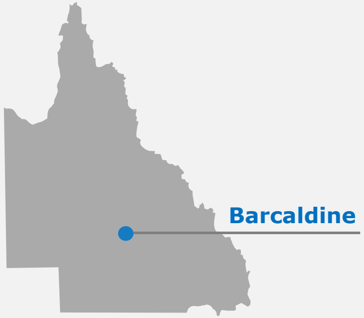
Action	Impact
• Up to $20 million in cornerstone debt finance for a large-scale $69 million solar farm near Barcaldine, Central Queensland	• The new 20MW solar plant will be capable of generating power for over 5000 homes • Demonstrates use of solar at edge-of-grid locations

CEFC COMMITMENT
Up to $20 million

NEW RENEWABLE CAPACITY
20 MW

LOCATION
Queensland

TECHNOLOGY
Solar



Replacing diesel fuel with solar and storage

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Debt financing for solar and storage at remote copper mine

Action

- A commitment of $15 million to Sandfire Resources for Australia's largest integrated off-grid solar and battery storage facility
- Installation of 34,000 solar PV array integrated with battery storage and existing diesel generator at DeGrussa Copper Mine

Impact

- Peak-load power expected to offset nearly half of mine's daytime electricity consumption
- Reduces reliance on diesel fuel and exposure to oil price volatility.

CEFC COMMITMENT
Up to $15 million

PROJECT VALUE
$40 million

EXPECTED CO_2 REDUCTION
12,000 t/CO_2-e annually

MW OF RENEWABLES
- 10.66MW battery storage with existing diesel system
- MW solar PV

CEFC helps accelerate the University of Melbourne’s clean energy goals

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$9.1 million for energy efficiency and renewable energy

Action

- The installation of voltage optimisation equipment.
- More efficient freezers for medical and science research facilities.
- 1,500kW of solar PV across 18 roof spaces.
- Install micro turbines at three buildings
- Install concentrated solar thermal power system for space heating and swimming pool

Impact

- Expecting to reduce its grid electricity use by around eight per cent.
- Helps the University move more rapidly towards its aspiration of carbon neutrality.

CEFC AMOUNT
$9.1m

TECHNOLOGIES
Voltage optimisation, energy efficient equipment, solar PV and concentrating solar, micro turbines.

SECTOR
Universities

Client
The University of Melbourne

More disruption is (always) around the corner

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Ubiquitous LED lighting

Solar everywhere

Energy storage

Smarter energy management

Widespread bioenergy

Electric and hydrogen vehicles

Exporting renewable energy?

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Contact us

Clean Energy Finance Corporation
Suite 1702, 1 Bligh Street, Sydney NSW 2000

Telephone
1300 00 2332
1300 00 CEFC

www.cleanenergyfinancecorp.com.au
contact@cleanenergyfinancecorp.com.au