

# CLEAN ENERGY FINANCE CORPORATION

Australian Regional Development Conference  
Oliver Yates, Chief Executive Officer  
August 2015



## **CEFC Mission**

Accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction

## Renewable energy and energy productivity: Benefits for regional communities

1. About the CEFC
2. Overview of our investments
3. Australia's renewable energy resources
4. Opportunities for regional industries and communities to benefit from renewable energy and energy efficiency
5. Case studies



## Facilitating increased flows of finance into clean energy in Australia

- Australian Government-owned corporation that operates like a traditional financier
- Finance for renewable energy, energy efficiency, and low-emissions technologies
- Access to \$2 billion a year over 5 years.
- We take a commercial approach and expect a return on investment.
- Finance terms for specific project needs. Can work on projects that are smaller, more complex or new to the Australian market
- Facilitate the participation of private sector banks by sharing our expertise, acting as a co-financier and pioneering new financing structures.



## Clean Energy Finance Corporation

Helping drive Australia's push to a competitive clean energy economy

### CEFC HIGHLIGHTS

**\$1.4b**

**TOTAL CEFC  
COMMITMENTS**

**\$3.5b**

**TOTAL  
PROJECT VALUE**

**55**

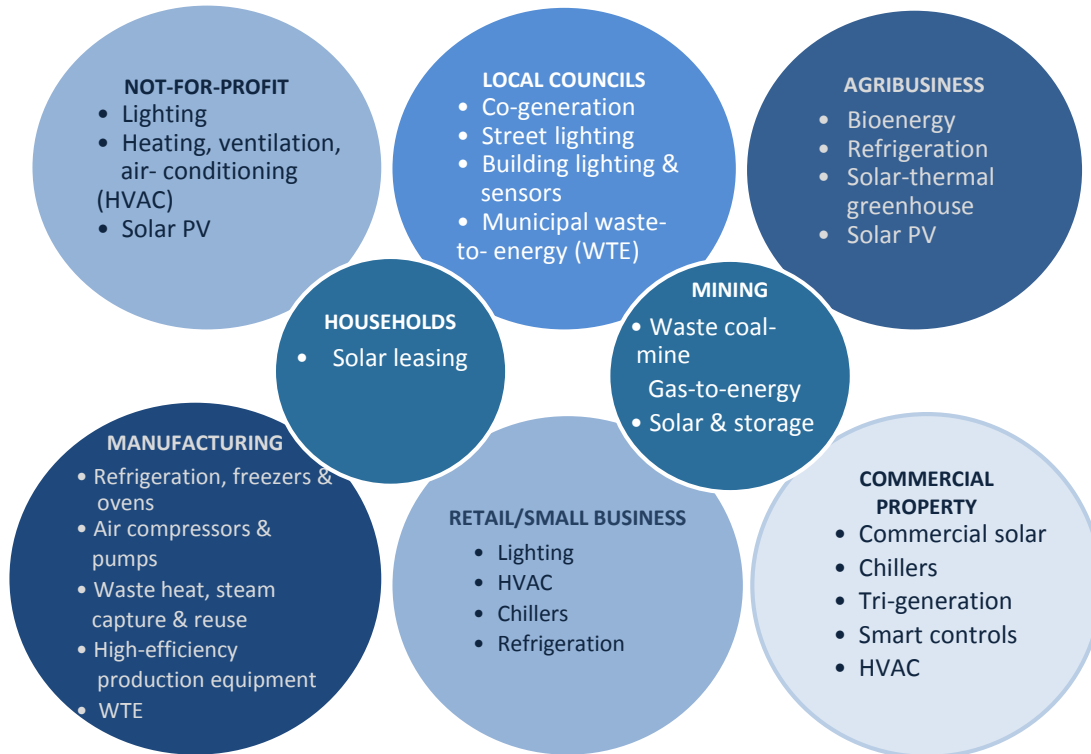
**DIRECT  
INVESTMENTS**

**34**

**PROJECTS  
CO-FINANCED**

*Since the CEFC began investing in 2013*

# Who the CEFC is financing



# What the CEFC is financing

## OFF-GRID

- Solar-thermal greenhouse
- Solar PV for businesses & councils
- Waste coal-mine gas to electricity
- Off-grid wind & solar for mine sites.

## BIOENERGY

- Municipal waste-to-energy
- Biogas in piggeries, poultry, abattoirs & rendering
- Plant waste-to-energy
- Biofuel
- Bagasse

## ENERGY EFFICIENCY

- Lighting & sensors
- Elevators
- Heating & Ventilation
- Air-Conditioning
- Chillers
- Insulation
- Smart controls
- Variable speed drives
- Light vehicles – electric, hybrid and best in class fuel efficient
- Trucks – high performance vehicles and electric

## UTILITIES

- Solar Farms
- Wave Energy Technology
- High-efficiency gas
- Hydro

## INDUSTRIAL

- Refrigeration, freezers & ovens
- Printing presses
- Air compressors & pumps
- Chillers
- New or upgraded high-efficiency production equipment
- Cogeneration
- Trigenation

# Opportunities for regional Australia

Renewable  
energy



- Local generation of energy & resilience
- Local income and jobs
- Long-term price stability
- Reduce exposure to CO2 risk
- Cheaper source of energy

Bioenergy,  
plastics and  
fuel



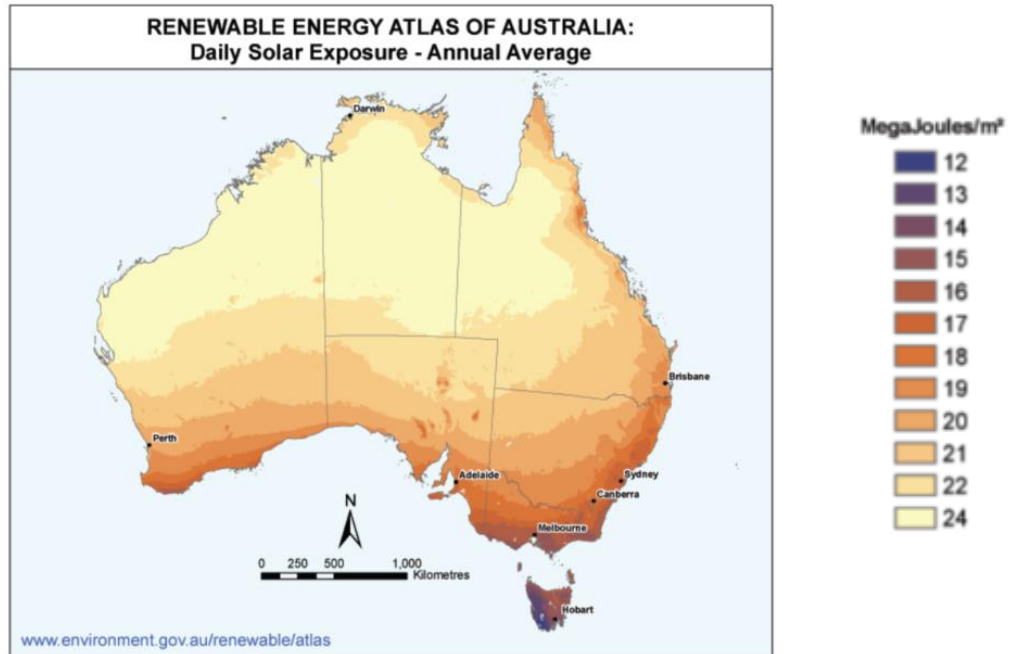
- Economic growth opportunity
- Displaces fossil fuel use
- Strengthens Australia's balance of trade
- Improves energy security

Energy  
efficiency



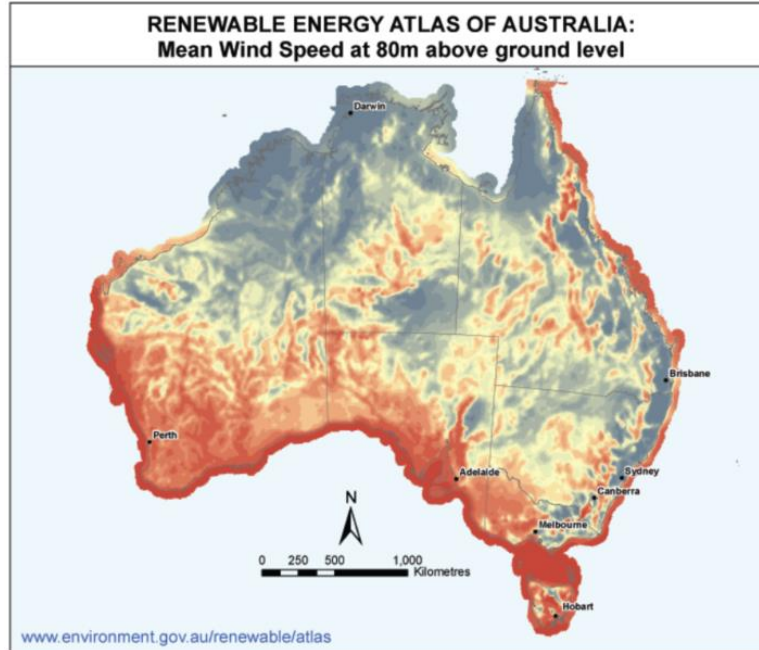
- Saves money
- Improves productivity
- Reduces exposure to energy price volatility
- Other benefits (e.g. better buildings)

# Australia has vast solar energy resources

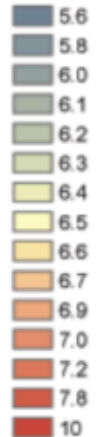




# Australia has vast wind energy resources

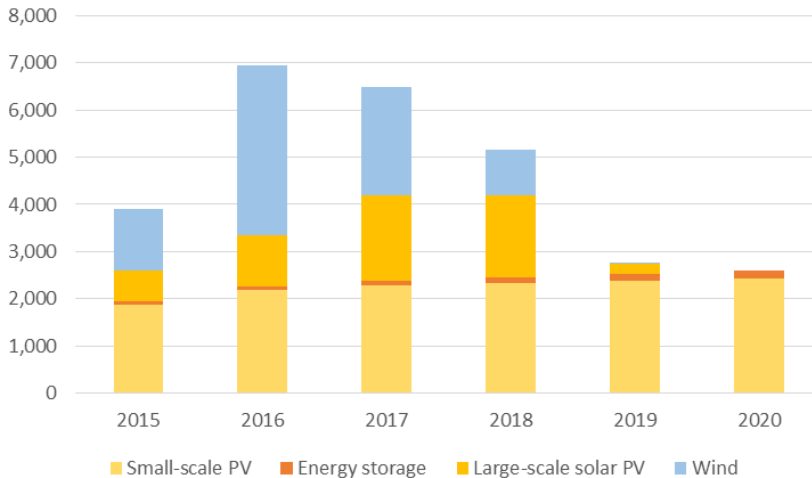


Metres per Second



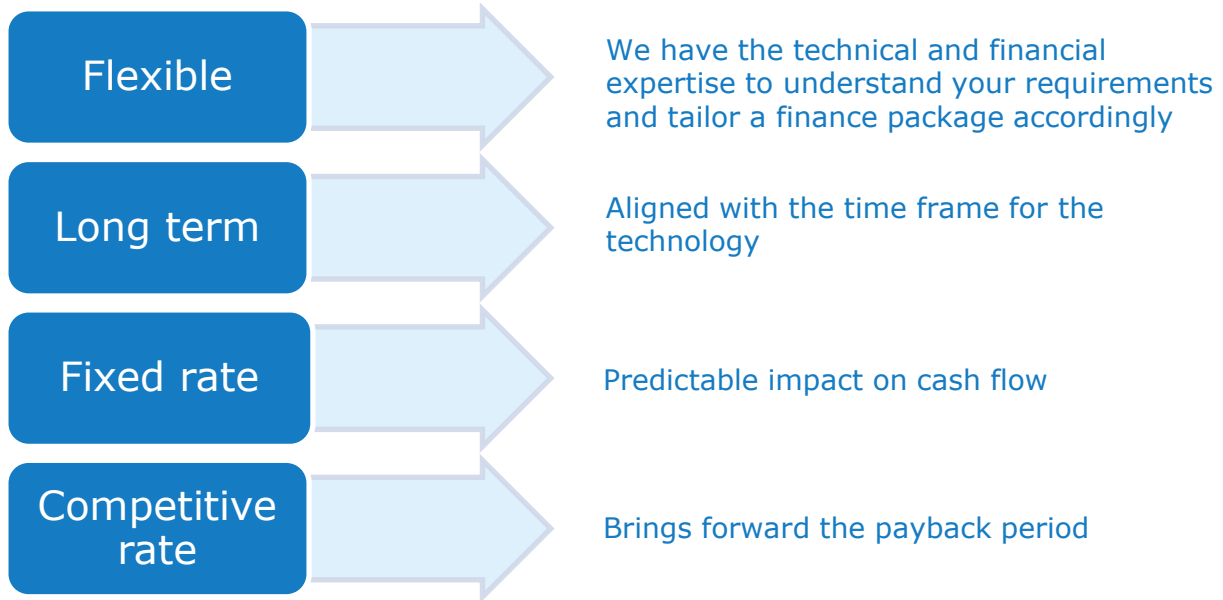
# Solar and wind in Australia: how much will regional Australia capture?

Annual estimated investment in renewables and energy storage (AUD \$M)



- Up to \$30 billion of investment to 2020 and \$40 billion over the life of the scheme.
- Up to 15,000 jobs.
- 30-50 major projects
- Thousands more businesses and households with solar

# CEFC finance is available to capture this opportunity



# Finance for regional industries

The CEFC has over \$300m in finance programs available to businesses for investments in equipment that will lower energy costs

- Irrigation motors, pumps and other equipment
- Heating, ventilation and air conditioning
- Lighting
- Processing equipment upgrades
- Refrigeration and cool stores
- Solar PV, solar hot water and heat pumps
- Variable speed drives
- More fuel efficient vehicles
- Waste diversion and waste-to-energy
- And more!



Image courtesy of Irrigation Australia

# Cutting costs with more efficient lighting and buildings

**Lighting and building upgrades can cut costs and save rate payers money**



# Cutting costs with more efficient refrigeration and freezing

**Smart upgrades to refrigeration and freezing equipment can cut costs and improve business competitiveness.**

Produce  
coolstores



New efficient  
refrigeration system

Energy  
savings of  
between  
25-40%

Food  
manufacturers



State of the art  
industrial spiral  
freezers

Increases in  
refrigeration capacity  
and reductions in  
freezing times

Energy  
savings of  
up to 55%

# Cutting costs by investing in solar

**Investing in solar can reduce reliance on the grid and provide a hedge against rising electricity prices**

Produce  
coolstore



Large-scale solar PV  
systems (~100 kW)

Reduce grid  
energy use by  
10-25 per cent

Beef  
producer



Solar PV at 15 sites  
across Queensland

Reduced grid  
energy demand  
by around 30 per  
cent

## Turning waste into onsite energy can offset grid electricity use & reduce costs

Egg  
producer



Anaerobic digester  
turning chicken  
manure and other  
waste to energy

Will provide 100%  
of energy in non-  
peak periods and  
save more than  
\$250,000 per year

Meat  
processors



Biogas and water  
treatment plants

Gas-fired  
tri-generation plant

Saving more than  
\$1 million a year on  
natural gas costs

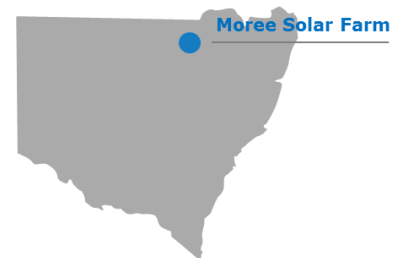
Cutting grid  
electricity use by  
about a third



# Case study: Moree Solar Farm

## \$46 million in senior debt for one of Australia's largest grid-connected solar PV power stations

- CEFC **underwrote the senior debt**
- Investment supports innovative **on-grid, large scale solar** with **single axis tracking** to increase performance
- CEFC provided finance even with **merchant power price risk.**
- **150 people currently** employed for construction including 50 locals.
- Up to **40 local businesses** benefitting from construction-related expenditure.



# Case study: Solar and storage for DeGrussa copper mine

## \$15 million for Australia's largest solar and battery storage project to date with Sandfire Resources

- **34,000 panel, 10.6MW solar PV array with 6MW of battery storage** – integrated with existing diesel-fired power station.
- Designed to **provide majority of DeGrussa's daytime electricity** requirements
- Will **offset around 5 million litres of diesel fuel** per annum, abating over 12,000 tonnes of CO<sub>2</sub>-e annually



# What is coming next?



Ubiquitous  
LED lighting

Solar  
everywhere

Energy  
storage

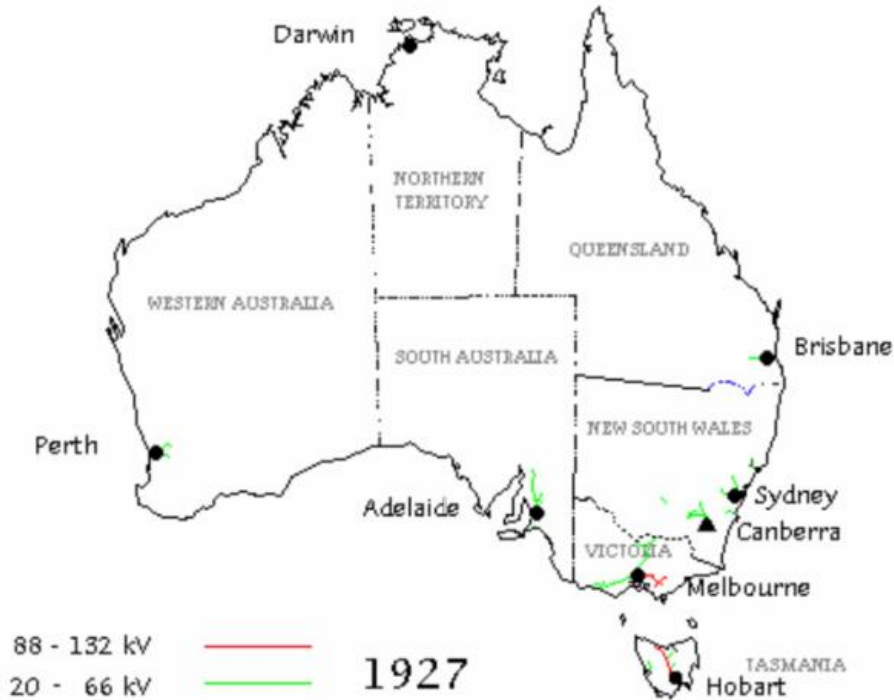
Smarter  
energy  
management

Widespread  
bioenergy

Electric and  
hydrogen  
vehicles

## Exporting renewable energy?

# Distributed energy generation, energy efficiency and bioenergy will improve regional resilience



# The CEFC is here to help regional Australia become a clean energy powerhouse

**Visit our website for more information:**  
[cleanenergyfinancecorp.com.au](http://cleanenergyfinancecorp.com.au)

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