CEFC
CLEAN ENERGY FINANCE CORPORATION

FACT SHEET

# Transforming Australian agribusiness with clean energy technology

**CEFC has flexible finance to suit individual business needs**

## CEFC AND AGRIBUSINESS

There is significant opportunity for agriculture businesses to transform their businesses by lowering operating costs through investments in renewable energy and energy efficient equipment.

Small and medium-sized agribusiness enterprises have experienced significant increases in energy costs over the past five years. However, it can be challenging for agricultural businesses to finance upfront capital costs for equipment such as upgrades to new energy efficient refrigeration or solar power or biogas, in tight economic conditions.

The CEFC has worked with financiers and energy service providers to create a range of financing options to help agribusinesses save on energy costs, increase their competitiveness and boost their export potential.

"Energy use is a major cost for Australia's agricultural sector and, if addressed, can have a positive impact on Australia's economic competitiveness. We have developed finance programs which can provide an incentive for businesses in rural and regional Australia so they can act now on their energy costs by investing in high-performance, energy-efficient technologies and equipment."

**Oliver Yates**
*CEO, Clean Energy Finance Corporation*

## ENERGY DEMANDS

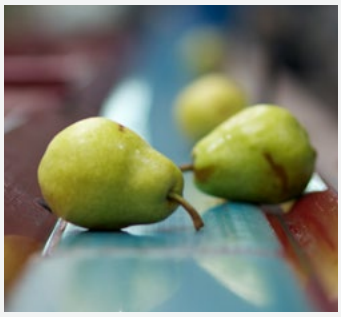
Agriculture accounts for nearly four per cent of industry energy usage in Australia. Energy is consumed in three major ways on most farms:

- General electricity – lighting and appliances
- Fuel – machinery, vehicles and freight costs
- Heating/cooling – especially in subsectors such as dairy, horticulture, piggeries and poultry.

The CEFC has provided co-financing for agribusinesses for a diverse range of projects – from on-site generation using biogas, solar PV and cogeneration to new refrigeration units and other equipment upgrades. These investments allow farmers and food producers to generate energy on-site and reduce their energy bills.

## AUSTRALIAN AGRIBUSINESSES

**Agriculture is the fourth most energy-intensive industry in Australia,** behind manufacturing, transport and mining[1]. Agriculture is also the only industry that has seen its energy intensity – measured as energy consumed per unit of industry value-added – rise continually since 2008-09.



**Asia's economic rise presents substantial opportunities for Australia's agriculture and food sector.** Asia is expected to contribute most of the projected 35 per cent growth in global food demand by 2025[2]. Asia is already a large market for Australian agricultural exports and is well placed to increase its share as the market grows.


**Australian agriculture has a record of innovation.** Innovation has allowed Australian farmers to become among the most productive and efficient primary producers in the world[3]. Investments in research and development and the deployment of new technologies will be key to improving Australia's ability to meet the food needs of a growing global population.

"The opportunities for the sector are enormous. We sit on the edge of the strongest growing region in the world, have a developed agriculture sector, have world-class food safety and environmental credentials, possess modern technology, have a strong economy and employ skilled labour."

**Agricultural Competitiveness White Paper, 2015**

[1] ABS Energy Account Australia
[2] Australian Government, Australia in the Asian Century White Paper
[3] ABS Year Book

## OPPORTUNITIES FOR ENERGY EFFICIENCY

In August 2015, NAB Research surveyed a sample of its agribusiness clients to identify their biggest business concerns. Energy costs, water scarcity and soil health were the top three.

The Australian Dairy Industry Council cites energy efficiency in the dairy industry as a primary opportunity for reducing both operating costs and emissions.

As of June 2015, 21 per cent (1,399) of Australian dairy farmers had completed an energy assessment through the Australian Government's "Smarter energy use on Australian dairy farms" project. While no two dairies are the same, the areas of highest energy use are milk cooling, milk harvesting and hot water production.

Dairy Australia has found that solar water units installed in dairies at an average cost of around $16,000 can save more than 15 tonnes of $CO_2$-e and more than $3,000 in electricity costs per annum. On King Island, a group of nine dairy farmers has co-ordinated the installation of solar hot water systems for dairy sheds. This innovation is forecast to cut hot water costs by up to 50 per cent.

Preliminary findings of the Irrigation Energy Savers Project in Queensland have shown that farmers can make efficiency gains of up to 30 per cent by replacing old, inefficient pumps and motors. Farmers can also calibrate equipment to reduce the number of times water can be pumped on-farm.

In the meat industry, a 2013 Australian Meat Processor Corporation study found energy usage by meat processing plants depends on whether the plant has on-site rendering and/or on-site freezing of meat. The study found that for plants with on-site rendering, the most economic renewable energy technology is the capture and use of biogas from effluent ponds. The most effective use of this captured biogas is in a co-generation plant, with payback periods of between 3.8 years and 10.1 years.

# CEFC FINANCE HELPING AUSTRALIAN AGRIBUSINESS INVEST IN ENERGY EFFICIENCY

## Pump and vehicle upgrades

Croppa Creek, NSW

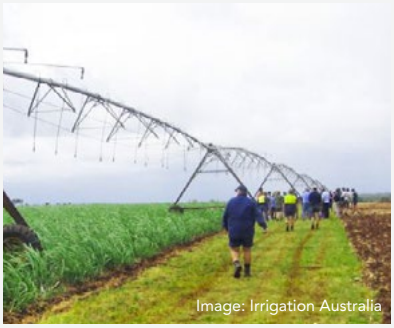


Image: Irrigation Australia

A broadacre and irrigation farmer has replaced a diesel pump with a high-efficiency engine which uses four litres less fuel per hour. Upgrading a loader to a four-wheel drive vehicle has cut fuel costs by up to 20 per cent.

## Smart controls and drives

Corowa, NSW

Rivalea Australia upgraded its refrigeration by installing smart controls and drives and heat recovery devices to a two-stage ammonia refrigeration plant. This upgrade has cut the abattoir's energy costs by 10 per cent.

## Refrigeration upgrade

Wandiligong, Victoria

Nightingale Bros, a family-owned apple and chestnut grower in Victoria, upgraded its refrigeration to cut its energy costs by just under 40 per cent.

## Tri-generation

Wodonga, Victoria

Wodonga Rendering and Wodonga Abattoirs have invested in a gas-fired 2MW tri-generation plant. This supplies the abattoir with electricity, hot water and steam.

**Learn more about our energy efficiency projects at cleanenergyfinancecorp.com.au/energy-efficiency.aspx**

# CEFC FINANCE HELPING AUSTRALIAN AGRIBUSINESS INVEST IN RENEWABLE ENERGY

## Solar PV

Queensland

Australia's largest beef company AACo installed solar PV units across 15 grid-connected sites in Queensland and reduced grid energy consumption by 30 per cent.

## Energy from waste

Pittsworth, Queensland


Darling Downs Fresh Eggs invested in an energy from waste project using an anaerobic digester and generators to provide power and heat from chicken manure and other organic waste. The power plant helped reduce grid electricity usage by 60 per cent in the first year and provides 100 per cent of the company's energy in non-peak periods.

## On-site biogas

Dinmore, Queensland

JBS Australia, the country's largest meat processor and exporter, is capturing and using biogas at its Dinmore facility to reduce dependence on grid-connected natural gas by about 50 per cent. The facility has reduced its carbon emissions by 89 per cent and is saving more than $1 million a year on natural gas costs.

## Solar thermal technology

Port Augusta, South Australia

Sundrop Farms' major greenhouse development uses solar thermal technology to desalinate seawater for growing tomatoes and for heating and cooling.

**Learn more about our renewable energy projects at cleanenergyfinancecorp.com.au/renewable-energy.aspx**

## CEFC PROGRAMS FOR AGRIBUSINESS

### Australian Bioenergy Fund

Bioenergy remains a relatively new technology in Australia but there is potential to double bioenergy output over the next five years, with much of the fuel for bioenergy plants coming from agricultural waste. The CEFC has made a $100 million cornerstone commitment to the new Australian Bioenergy Fund, to be managed by the Foresight Group. The Fund will support investment in a range of eligible technologies including energy from waste and anaerobic digestion.

### NAB Energy Efficient Bonus

The CEFC is providing $120 million through the National Australia Bank (NAB) to support a major investment program to help Australian businesses cut their energy and operating costs and lift business performance. The NAB's $120 million CEFC-supported program is available across a broad commercial base, with a particular emphasis on agribusiness and regional Australia. The finance supports small and large-scale projects of up to $5 million, with the benefits of the CEFC investment flowing directly through to the business operators.

### CBA Energy Efficient Loans

The CEFC and Commonwealth Bank are financing loans to help agribusinesses better manage their energy costs. The Energy Efficient Loan program, co-funded by the CEFC and Commonwealth Bank, provides financing for projects valued at up to $5 million. The finance includes $100 million for business loans, which can be used for a range of projects, covering energy efficiency, low emissions technology and small-scale renewable projects.

**To contact our Agribusiness team, please call us on:** 1300 002 332 or **email us at:** info@cleanenergyfinancecorp.com.au.

CEFC FINANCE

HELPING AUSTRALIAN AGRIBUSINESSES TRANSFORM OPERATIONS WITH CLEAN ENERGY TECHNOLOGY

The Clean Energy Finance Corporation (CEFC) invests using a commercial approach to overcome market barriers and mobilise investment in renewable energy, energy efficiency and low emissions technologies.

Since its inception, the CEFC has committed over $1.4 billion in finance to investments in clean energy projects valued at over $3.5 billion.

The CEFC invests for a positive financial return, with more than 55 direct investments. These projects help to improve energy productivity for businesses across Australia, develop local industries and generate new employment opportunities.

The CEFC operates under the *Clean Energy Finance Corporation Act 2012*. More information is available on our website www.cleanenergyfinancecorp.com.au

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