

# CEFC finance for solar PV in the Northern Territory

## \$13 million finance from CEFC to expand grid-connected solar facility

### SUMMARY

The Clean Energy Finance Corporation (CEFC) is providing \$13 million to finance a major expansion of Australian company Epuron's Northern Territory Uterne solar power station.

The CEFC's loan will allow construction of Uterne 2, a 3.1 MW expansion adjoining Uterne 1, Epuron's existing 1.0 MW solar PV power plant in Alice Springs. Together, these will provide power into the local grid and are called Uterne from the local Arrernte language meaning "bright sunny day".

Uterne 1 and 2 have long-term power purchase agreements with the Northern Territory's Power and Water Corporation.

"Australia has a natural competitive advantage and resources in solar energy, and while we have been great adopters of solar energy at the domestic level, there is huge, untapped potential for solar at utility scale.

Solar power can make a big difference in keeping our energy costs down and helping us to compete globally."

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

Work on Uterne 2 is ready to start and will use the same solar-tracking technology as Uterne 1 that increases daily energy production by up to 30 per cent compared with conventional fixed-tilt installations.

The Northern Territory has abundant solar resources with one of the highest levels of solar radiation in Australia, making solar energy one of the most practical and cost-effective sources for power generation.

The existing grid and off-grid electricity sources in the Northern Territory are relatively expensive and more emissions intensive. Expanding available solar-generated power has both economic and financial benefits.

Utility-scale solar PV projects have experienced challenges in accessing finance in the Australian market. The CEFC's finance for Epuron helps demonstrate the investment potential of both large-scale solar PV and remote, off-grid solar PV. The CEFC's use of a project finance structure for this project demonstrates its potential to be used for other similar, smaller-scale projects.



Image courtesy of SunPower



Image courtesy of Epuron

## PROJECT IMPACT

### Benefiting from Australia's natural advantages

Australia has the highest average solar radiation per square metre of any country, with the potential for utility-scale solar PV to play a significant role in our energy mix. However, despite the rapid take-up of solar PV in the residential market, there remains significant potential for solar power in the utility and commercial sectors. Large-scale solar PV investment in Australia has lagged behind other countries like the US and China.

With 300 sunny days on average every year, Alice Springs has one of the highest levels of solar radiation in Australia. It has the highest solar insolation (i.e. the total amount of solar radiation energy received on a given surface area during a given time) in the country at an average 6.1 kWh of solar energy received on each square metre per day.

The Uterne 1 plant is producing over 2,300 MWh of electricity per year, representing about 1 per cent of Alice Springs' electricity requirements annually, and can meet in excess of 2 per cent of peak

demand on a sunny day. This is equivalent to the annual consumption of 270 average Alice Springs households and Uterne 2 can provide three times more output than the current facility.

### Providing clean energy to communities

The Alice Springs grid is supplied by gas and diesel-fired generation and the cost of electricity on the grid is relatively expensive compared with the National Electricity Market.

Providing solar-generated electricity, particularly in an area like the Northern Territory with its abundant solar resources, lessens dependence on expensive fossil fuels and provides both environmental and financial benefits for local communities. Sourcing power that is cheaper to produce than gas and diesel-fired power as well as locking in a fixed cost of electricity for the years ahead, provides long-term economic benefits, hedging against future price pressures and price volatility of gas and diesel.

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"The CEFC is very pleased to support this commercial project to supply the Northern Territory with clean power that is cost-effective today and will prove to be cheap in the years to come."

### Oliver Yates

CEO, Clean Energy Finance Corporation



Image courtesy of Epuron

### *Project Impact continued...*

Uterne 1 is one of the largest tracking solar power plants in the Southern Hemisphere. It won a 2013 Engineering Excellence award at the Engineers Australia Northern Division Awards, taking out the Australian Solar Energy Society (AuSES) Award for Sustainability.

Epuron also owns and operates three off-grid solar PV facilities supplying power to the Ti Tree, Kalkarindji and Lake Nash communities in the Northern Territory (TKLN). These comprise an additional 1.0 MW of power. Epuron's three TKLN solar power stations are capable of supplying high instantaneous solar penetration (up to 80 per cent of power demand at any instant) and up to 30 per cent of the average daily electricity consumed by the small local communities that they service.

Uterne 1 is outperforming the original base case projections on power generated.

TKLN Solar also won two awards from the Northern Division of Engineers Australia in 2013 – the Engineering Excellence Award for Research, Development and Innovation and the Australian Solar Council Award for Sustainability.

### **Demonstrating investment potential**

Large-scale solar PV projects in Australia have experienced challenges in accessing finance, and projects have often had to rely on government grants to proceed.

The CEFC's finance for Epuron demonstrates the investment potential of both large-scale solar PV and remote, off-grid solar PV as an alternative to carbon-intensive and more costly gas and diesel power. It will help accelerate the development of the local solar industry and build knowledge and skills in the sector.

The CEFC finance for Epuron uses a project finance structure which is rare for small projects of this nature. Small projects often face barriers to raising project finance despite their credit fundamentals. This demonstrates the potential for this financing model to be used for other similar, smaller-scale projects with contracted revenue streams.

### **Developing Australia's solar industry**

Epuron is an Australian company, developed and owned by two Australian engineers. The company has 21 employees and uses local contractors for construction and maintenance of its facilities.

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### *Project Impact continued...*

Epuron is also a joint venture partner in Fulcrum 3D, a business that specialises in remote sensing technology that is designed specifically for use in the renewable energy industry. Their high-precision products are designed and manufactured in Australia, and allow maintenance free operation in remote environments.

Australia's solar industry is creating new skilled jobs, developing new areas of expertise and contributes to the economic development of regional communities across the country. Employment in the solar PV sector grew from 1,800 in 2008 to 17,700 direct and indirect jobs in 2013.<sup>1</sup>

The industry can also provide valuable opportunities for companies operating in declining industries such as the automotive sector. For example, Victorian engineering and manufacturing group IXL, which has historically specialised in metal stamping and roll-forming for the local automotive industry, sees manufacturing mounting structures for solar farms as a natural extension of its business.

In supporting Epuron's growth, the CEFC is accelerating the expansion of the Australian solar sector, helping to strengthen the supply chain while fostering new, skilled employment opportunities and diversified economic activity in regional areas.

"Expanding our Uterne facility to take advantage of both the abundant solar energy in the Northern Territory and our existing infrastructure makes good business sense. The CEFC's finance has been critical for this expansion as the project was too small to appeal to the commercial project finance market."

**Andrew Durran**

*Executive Director, Co-Founder, Epuron*



Image courtesy of Epuron

## FINANCE

CEFC is providing \$13 million in construction and term finance.

Epuron is investing equity in the form of expansion capital and the value of the Uterne 1 and TLKN assets into the transaction.

There is no concessionality.

<sup>1</sup> International Renewable Energy Agency, Renewable Energy and Jobs: Annual Review 2014, May 2014.



Image courtesy of Fulcrum 3D

**Epuron** is a leading, privately-owned Australian renewable energy company with a focus on development, ownership and operation of utility-scale renewable energy projects. In solar energy, Epuron's focus is megawatt-scale power generation in both grid-connected and off-grid markets. Epuron is also one of Australia's most successful wind farm developers.

The construction of Uterne 2 will increase Epuron's total solar portfolio capacity to 5 megawatts. In addition to Uterne, Epuron owns and operates three off-grid solar projects located at Ti Tree, Kalkarindji and Alpurrurulam in the Northern Territory. These projects all displace diesel usage in these remote communities.

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.

As at 30 June 2014, the CEFC has contracted investments of over \$900 million in projects with a total value of over \$3 billion. The CEFC invests for a positive return, with its more than 40 direct investments and 25 projects co-financed under aggregation programs expected to achieve an average financial yield of about 7 per cent.

These CEFC investments are expected to achieve abatement of 4.2 million tonnes of CO<sub>2</sub>e per annum with a positive net benefit to the taxpayer in the order of \$2.40 per tonne CO<sub>2</sub>e. They 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](http://www.cleanenergyfinancecorp.com.au)

#### **Clean Energy Finance Corporation**

Suite 1702, 1 Bligh Street  
Sydney, NSW 2000 Australia  
ABN: 43 669 904 352

e [info@cleanenergyfinancecorp.com.au](mailto:info@cleanenergyfinancecorp.com.au)  
t 1300 002 332  
i +61 2 8039 0800  
[cleanenergyfinancecorp.com.au](http://cleanenergyfinancecorp.com.au)