

# Let the sunshine in – and get paid for it

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**E**xtrême weather conditions and the ever growing concern over the long term effects of greenhouse gas emissions on the environment, has created a global movement to change the way in which we source and use energy.

Many of the Australian state governments have introduced incentive programs which encourage and assist people to invest in alternative, cleaner energy sources – the most common of which being solar.

The progression in solar technology, government incentive programs and innovation in financing solar solutions is making the technology more and more accessible for Australians, especially those in rural areas.

Within Australia, individual states operate one of two feed-in-tariff options – gross or net (Table 1).

A gross feed-in tariff (like the one just implemented in NSW) allows the customer to receive payment or credit for all the electricity their renewable energy generator generates.

A net feed-in tariff, allows the customer to receive payment or credit for the excess generated electricity they export to the national electricity grid from their renewable energy generator, after their use.

These feed-in-tariffs can make the economics of going solar not only affordable but also profitable.

## How the numbers stack up

An average rural house would use around 14,000 kW hours per year, costing around 20 cents per kW hour or \$2800. This cost is only going to increase with some experts predicting five per cent year on year growth for the next 10 years.

But given the collective acres of roof area available on most farms, there's a great opportunity to get a cheque in the mail from the electricity company rather than a bill.

For example, if a NSW farmer was to install a 10 kW system on the machinery shed roof, they would produce around 16,000 kW hours per year from which they would receive approximately \$9600 based on the \$0.60 gross feed in tariff on offer until December 31, 2016.

This could potentially generate \$67,200 by the end of 2016 and provide them with a source of energy for the life

**TABLE 1: Current available feed-in-tariffs**

State	Commencement	Max size	Rate paid (per kWhr)	Program duration	Model
QLD	July 2008	30 kW	44c+	20 years	Net
NSW	January 2010	10 kW	60c	7 years	Gross
VIC	November 2009	5 kW	60c	15 years	Net
SA	July 2008	10 kW	44c+	20 years	Net
ACT	March 2009	30 kW	50.05c up to 10kW 40.04c up to 30kW	20 years	Gross

WA and NT figures not yet available

of the system (conservatively estimated at 20 years).

A 10kW solar system typically needs 100 square metres of roof area, ideally facing the north at a 30 degree pitch.

And with the current strength of the Australian dollar, discounts available through the sacrificing of Renewable Energy Certificates and the global demand for solar power, the price of accessing a system of this size has dropped almost 20 per cent in the past six months. Systems now range from \$50,000 to \$60,000.

While this all looks very appealing, the reality of utilising \$55,000 of your available capital to invest in solar may not be a financially viable option. This has forced solar providers to start looking at innovative ways to allow small businesses, community groups and farms to access the benefits of solar energy.

The newest cab off the rank is the introduction of the Solar Power Purchase Agreement.



**Windorah Cultural Centre roof fitted out with an Ingenero solar system.**

A PPA allows customers to have access to solar power via solar power generation facilities installed at their own premises without the upfront cost of the system or the installation. Instead, a PPA provides the customer with a simple way to purchase the power generated by the photovoltaic (PV) system located on their roof.

Regardless of the finance model, stability and longevity of the system are two very important elements to get right. They need to withstand the harsh Australian climate and be easily replaced or maintained. In terms of warranty, whilst most panels come with a 25 year warranty and inverters five years, it is important that the supplier can support those warranties.

Well established and reputable firms are most likely to be around in 25 years to honour that warranty.

## Outback partnership

Located in outback Queensland, Barcoo Shire Council has partnered with renewable energy company, Ingenero who offers the PPA model. Four solar systems have been installed on various council buildings totalling 72 kW.

The council consumes much less energy than what is being produced. By feeding the excess energy back into the grid they receive the Queensland Government Net Feed-in-Tariff of 44c per kilowatt hour.

More than just affordability, PPAs also offer security. The benefit of locking into a long term agreement, means that the customer is insulated against the impact of rising energy costs.

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