

Solar Mortgage enables up-sized savings for smaller cost - September 2015

In 2010 many Australians thought the framework by which the government would catalyse the nations greenhouse gas emissions reductions had been well considered, carefully designed and was receiving growing support. Indeed, the Carbon Pollution Reduction Scheme (CPRS) seemed to have all the hallmarks of an innovative, intelligent and affordable plan that could help Australia meet its share of the global fight against Climate Change.

By 2014 the Garnaut Review, CPRS and emissions trading scheme seemed a distant memory, with “realpolitik” contributing to the demise of the CPRS and subsequent abolition of a price on carbon. Where there had once been certainty around Australia’s response to Climate Change, there lay under-developed opportunities, back-tracks and re-reviews.

Unity Finance members and partners worked with several environmental finance programs during the above period, this experience is helping pave the way for “changerous” finance products that reward client sustainability and are powered solely by the private sector. One in particular, the Solar Mortgage, is realising growing interest.



A Solar Mortgage finances both your home and rooftop solar PV.

It’s different because it also provides a grant (i.e. unrelated to government REC’s) that helps upsize your system, so you can enjoy increased energy savings for little or no extra cost.

If you live in a unit, you can use a Solar Mortgage grant to invest in your local community solar PV project and enjoy the returns.

There are several options when funding domestic rooftop solar PV systems; cash, personal loan, finance lease, equipment rental, Power Purchase Agreement (PPA) or mortgage. Measuring the comparative cost of each option can be difficult because some are priced in the form of finance terms or rental payments, while others are priced as a long term energy tariff. Like any solar PV product or service, there are initial assumptions regarding system costs, quality and performance that may not apply to an individual’s actual situation (i.e. these assumptions are listed later in this article), however there is no doubt that the Solar Mortgage provides a Levelised Cost of Energy (LCOE) for financed domestic solar PV options which is at the sharp end.

Before explaining the finer details of the Solar Mortgage, it’s important to review the most reliable measurement when comparing the true cost of financed residential rooftop solar PV – the LCOE.

LCOE is the constant price (i.e. in cents / kWh) that reflects electricity generated by the solar PV system, and can consider combinations of capital cost, operations, maintenance, performance, tariffs & finance. A great calculator for working out the comparable LCOE is provided by an informed and independent specialist solar business - [Solar Quotes](#).

Using the same average system price for each option (i.e. [pricing data](#) from national solar brokerage & comparison service [Solar Choice](#)) and fixed assumptions for system performance, tariffs, consumption and efficiency, we are able to highlight the difference in finance options through the resulting LCOE (i.e. illustration & assumptions below).

	Pay Cash	Personal Loan	Lease	Rental	PPA	Solar Mortgage
Location	NSW	NSW	NSW	NSW	NSW	NSW
System size	3 kW	3 kW	3 kW	3 kW	3 kW	4 kW
Out of pocket	\$ 5,353.00	\$ -	\$ -	\$ -	\$ -	\$ -
Output, kWh p.a.	4270	4270	4270	4270	4270	5694
Current tariff, c/kWh	27.00	27.00	27.00	27.00	27.00	27.00
Illustration term, yrs	15	15	15	15	15	15
Finance rate, p.a.	n/a	10.00%	7.00%	9.00%	n/a	4.04%
Finance term, yrs	n/a	5	5	7	n/a	15
Total Cost	\$ 5,353.00	\$ 6,824.13	\$ 6,359.75	\$ 7,234.49	\$ -	\$ 7,146.52
Electricity saving, 15 yrs	\$ 13,736.91	\$ 16,145.76	\$ 16,145.76	\$ 16,145.76	\$ 10,248.00	\$ 21,530.20
Net savings, 15 yrs	\$ 8,383.91	\$ 9,300.00	\$ 9,800.00	\$ 8,900.00	\$ 10,248.00	\$ 14,400.00
Payback, years	8	8	7	8	n/a	6
LCOE, c/kWh	10.74	10.91	10.17	11.57	11.00	8.57

LCOE, Financed Solar PV comparisons (assumptions & notes below)

Location - solar radiation for Metropolitan NSW (i.e. Sydney, Newcastle, Wollongong)

System size - Solar Mortgage upsizes system from 3kW to 4kW (i.e. inc. upside grant of \$1,500 plus \$250 for refinance costs)

Out of pocket - assumes pay cash or finance 100% of system installation costs

Output - system degradation at 0.3% p.a.

Current tariff - what you currently pay (i.e. not a time-of-use tariff)

Illustration term - all options illustrated over 15 years of output with no inverter replacement costs

Total cost - system costs assumed, 3kW system at \$5,353 / 4kW system at \$6,822

Savings - assumes 40% exported energy, 7c FIT and annual inflation of 5% p.a. (except in the case of PPA where inflation & tariffs are constant), "pay cash" scenario has been discounted with a 3% p.a. opportunity cost

Warning & Disclaimer - Mortgage comparison rate is based on a \$400k p&i loan over 15 years. Comparison rate is applicable only for the example given & changes in loan terms & conditions will change the comparison rate, not all transaction costs may have been included in the example given. Amounts & repayment periods are estimates only, actual amounts may be higher or lower. Unity Finance cannot warrant the accuracy or otherwise of information available from third parties linked to this page. Always obtain an independent quote. Grants & discount rate loans are subject to assessment of eligible clients who obtain a qualifying mortgage loan product through Unity Finance.

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The Solar Mortgage has possibly the lowest LCOE for financed residential solar PV, and due to the additional upfront grant, discounted rate and long term finance, there is no waiting time for net savings to "kick in". The Solar Mortgage is currently available in Metro NSW with grants from \$1,750 (i.e. \$1,500 for system + \$250 for costs) for loans > \$400k.

Contact [Unity Finance](#) to find out how much your sustainability reward could be.