

Grid connected rooftop solar and the end of the solar bonus feed-in tariff – where to get advice.

The other topic that has been occupying us lately is the end of the solar feed-in tariff. We apologize that it's taken so long for us to get some information out there to you all, but there has been a lot of information around for us to get our heads around.

In this article you will find an explanation of who the end of the feed in tariff in NSW will affect, what you need to do if it affects you, what you need from a smart meter and how to shop around for a good energy retailer, and whether it is time to start thinking about investing in grid-connected battery technology (including some bulk buy schemes which have started in NSW).¹

Please remember that the information in this article is the best that we have come across and should not replace getting professional advice if you are thinking about investing (or deciding not to invest yet) further in solar or battery systems. We do not have any professional qualifications in this area.

I have a roof-top grid-connected solar system. What does the end of the subsidized solar feed-in tariff mean for me?

Firstly the end of the solar feed-in tariff has only affected those who have been receiving a subsidized feed-in tariff for the electricity they export to the grid. In NSW you were only eligible to receive this subsidized feed-in tariff if your application was received by your electricity distributor by April 28th 2011. You would have been either receiving a 60c or a 20c feed-in tariff. See <http://www.resourcesandenergy.nsw.gov.au/energy-consumers/solar/solar-bonus-scheme/solar-bonus-scheme-faq> for more information on the solar bonus scheme. If you installed solar after this date or receive a tariff less than these amounts (prior to Jan 2017) the upcoming changes will not affect you to the best of our knowledge.

¹ Please note that the information in this article is really for those who have already installed solar and are trying to understand the implications of the end of the feed-in tariff in NSW. If you haven't yet installed solar panels and are still at the beginning of your solar journey - the business case for doing this is still very good and you can still access the federal government RECs to help subsidize the upfront cost. For more information on installing roof-top solar now please download the guide to installing roof-top solar <http://www.solaraccreditation.com.au/consumers/purchasing-your-solar-pv-system/solar-pv-guide-for-households.html>. Another useful article, albeit on a commercial website (which we don't have any information on), is <https://www.solarquotes.com.au/top7mistakes.html?gclid=Cj0KEQjAt9vEBRDQmPSow-q5gs8BEiQAaWSEDtsAnFsvAOJoX50BKlzQI-rQULHomWhsLdn6wSrA8P8aAuH38P8HAQ>. We have some great installers in this region located around Tarago, Braidwood and Majors Creek.

If you were receiving the subsidized solar feed in tariff then now is a good time to investigate whether you need to change your current meter and whether you need to alter the daily patterns of energy use of your household to make sure you are getting the maximum benefit from your rooftop solar system. The subsidized solar feed in tariff ceased on December 31st 2016. After this date all solar customers will be paid a small feed-in tariff from their retailer for electricity exported to the grid (although watch out for retailers who may not allow export to the grid and thus you will not be paid anything for your excess production).

Do I need to change my meter?

If you were receiving the subsidized solar feed in tariff you need to find out whether you have a net feed-in meter or a gross feed-in meter. Under gross metering all electricity generated by your system is exported directly to the grid. Under net metering electricity generated by your system is firstly used up by household consumption and then any remaining electricity is exported to the grid.

If you have been receiving the subsidized solar feed-in tariff you probably have experienced a significant reduction in the rate of the feed-in tariff that you receive for your generated electricity after December 31st 2016. From this date onward it will be beneficial for your household budget if you can use as much of your own generated electricity in your own house rather than export it to the grid. This is because you will pay more for energy imported from the grid than you get for the energy you export to the grid. To use your own energy on your premises before exporting to the grid will require a net meter, and also (in the absence of energy storage) for you to manage your energy consumption patterns so that you are using most of your energy around the time that you are producing it.

Discovering whether you have a net meter or a gross meter may not be as straightforward as you might think but generally if you have been receiving the 60c or 20c tariff chances are you have a gross feed-in meter. If in doubt your retailer should be able to tell you.

Should I install a smart meter?

For many people the end of a subsidized solar feed in tariff will involve a meter change from a gross meter to a net meter. In some areas it **may** be possible to use your existing meter with a small wiring change which a qualified electrician can do for you at an estimated cost of \$150 (see *Renew Issue 136 Life after FITs*). There is however some debate about this and I have also been advised that this will require a 'Level 2' certified meter changer who can be quite hard to find. We suggest you contact your solar installer for advice on this. In other cases you may need to install a new net meter. Modern net meters (smart meters) can be remotely monitored by your retailer as well as providing you with more information about your energy use.

In some cases electricity retailers are offering to install a remotely monitored digital meter free of charge or at a subsidized rate (we are aware of offers from Origin like this). In cases like these you must ensure you understand what you are agreeing to, and ensure that there

are not alternative meters (from other retailers for example) that will provide you with better information for managing your own household energy consumption. If you are considering battery installation in future it may be that you will end up installing a power management system which will provide all the behind the meter consumption information you need, making a smart meter redundant if the wiring change mentioned above is accepted by your distributor.

On the other hand if you don't currently have a good understanding of the daily patterns of energy production and consumption for your household, you may not be able to judge when a battery system will become a cost effective investment for your household! It may be worth installing a smart meter now (or shopping around for a better energy retailer who may provide you with one) so that you can start collecting this information (or find a manual way to do it) – but make sure that the meter you install will provide you with the information that you want (for more info on what to look for in a meter see <http://renew.org.au/environmental-policy/smart-meters-a-rough-guide/> , and <https://www.choice.com.au/home-improvement/energy-saving/power-meters/articles/smart-meters-how-do-they-work>). Another good article on smart meters is here <https://mozo.com.au/energy/guides/smart-meters> which includes some information on possible health concerns and privacy which you should make yourself aware of. Another alternative is to look at a logging station which will give you minute by minute data on up to four channels (compared to 30 minute data from a retailer's smart meter if they let you have it!).

Smart meters should allow you to take advantage of any time of use (TOU) differences in rates that your retailer might offer. Some retailers offer different prices for peak, shoulder and off-peak times of use, with off-peak generally being between 10pm and 7 am on week days and the whole of the weekend (although check to see what applies in your area). This means you pay more for electricity during peak and shoulder periods, but a lot less during off-peak. It doesn't make your electricity consumption any 'greener' but it might help your household budget, IF you are able to shift your consumption from the grid into off-peak periods (see <http://yourenergysavings.gov.au/information/peak-smart-meters-time-use-pricing> for more Information).

The best advice in this space is probably to shop around for a good retailer and ask what kind of smart meter they are installing, whether it includes access to Time of Use and other tariffs, how often the data is logged (you want 30 minute time periods as a minimum and finer detail if possible), and also if it includes an in-home display which will tell you how much you are generating, how much exporting, importing and how much using in your house before export. There is a great article here <http://www.solarchoice.net.au/blog/best-retail-electricity-plan-for-solar-sydney-july-2016> comparing electricity plans available in Sydney, which we think is probably more comparable for us here in southern NSW than the ACT article on the same website.

For many of us who go to work during the time of maximum solar production (daytime) it can be a challenge for us to match our energy consumption to our production. This is why so many people are now considering investing in battery technology, so they can keep the

energy they generate from solar during sunny times and then use it later in the day, or when the weather isn't that good for generating electricity from your panels.

Is now the time to invest in grid connected batteries?

For household consumption the short answer is 'yes' if you want to support renewables and can afford to be an 'early uptaker' and help bring down the price for everyone else; **unfortunately if you need your investment to pay off in avoided energy costs the price point is probably not quite there yet, although we are hopeful that it might not be far away.** *Renew* issue 134 has an article *Solar plus batteries – when will they add up?* Which discusses how current high up-front costs of grid connected batteries are still unattractive when looking purely at cost savings, although this will change as battery prices come down. *Renew* issue 137 on the other hand has an article *should I quit the grid? If so which grid?* Which discusses the pros and cons of where we should invest our sustainability dollars if our goal is to reduce our greenhouse impacts- the gas, petrol or electricity grids? This issue of *Renew* is a bumper one for anyone currently considering investing in batteries. A key issue is to make sure you don't invest in a battery that is too small to give you any real benefit, so having some good data on daily and seasonal energy use patterns for your household is important in sizing your system correctly.

What about bulk-buy schemes for batteries?

You may be aware that a number of groups have been looking at bulk-buying batteries in order to try and get a better price for batteries, and start bringing some market pressure to bear with the ultimate goal of making batteries cost effective. There are small informal groups looking at this in our region, and also some large organized campaigns.

FuturePLANS spent some months in 2016 in conversation with the organisation SUNCROWD (<https://suncrowd.com.au>) who is currently running a large grid-connect battery bulk-buy campaign in NSW in partnership with community based renewable organizations. The model is a very exciting one with community organizations like PLANS partnering with SUNCROWD to help their members and networks access a large bulk-buy negotiated deal with an installation company. After a lot of due diligence research by FuturePLANS committee members we decided (not without some regret as we would love to be promoting such a campaign) that we would be more comfortable recommending such a campaign to our members once we had seen the outcome of the first round campaign. A second issue for us was whether we could find a way to work better with local installers who have supported us so strongly in all of our renewables work over the years.

It is our intention to continue to monitor the grid connected battery market along with campaigns like that being run by SUNCROWD, keep up our discussions with local installers and develop some kind of grid-connected bulk battery buy in the near future, either as part of a mass campaign, or in some kind of locally negotiated partnership with installers when we think that battery prices are starting to look closer to getting a good return on investment....so Watch this Space!

For those who are interested in the SUNCROWD model it has been taken up by the Goulburn Group for those in the Goulburn Mulwaree Council area. If you have heard anything about the success or otherwise of this campaign or any other bulk-buy scheme for batteries that you think might be good to have in our region please get in touch with me at mel.hillery@futureplans.org.au or 0427440335.

I still want to invest in grid connect batteries. Where can I get more information?

Renew magazine Issue 137 contains a number of articles on how to upgrade an existing grid connect solar system to include batteries, as well as extensive information on batteries themselves and all the considerations (including waste issues if you are thinking about the whole life cycle). As *Renew* issues can be downloaded by non-members for \$5 at <http://renew.org.au>.

And don't forget your local solar installers in the region. We have some excellent companies based around Tarago, Braidwood and Majors Creek. It is also worth having a look at companies like Reposit that can help you to get the most out of your grid-connect battery installation <http://www.repositpower.com>

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For general advice around renewables and sustainable living generally we strongly recommend *Renew* magazine, the magazine of the Alternative Technology Association (see <http://renew.org.au> where non members can download an issue for \$5).