

## FACT SHEET

# Options for solar customers after the Solar Bonus Scheme ends

November 2016

When the Solar Bonus Scheme (SBS) ends on 31 December 2016, more than 146,000 households who installed small-scale solar photovoltaic (PV) units under the scheme will stop receiving the subsidised feed-in tariffs. If you are one of these households, how will this affect you financially? And how can you minimise the impact on your electricity bills after the scheme closes?

The Minister for Industry, Resources and Energy asked the Independent Pricing and Regulatory Tribunal (IPART) to investigate these questions, and examine the electricity products and services available in the market. We have produced a range of fact sheets to help you make well-informed decisions about the tariff and technology options available to you.

If you are like most SBS customers, you are receiving 60 cents per kilowatt hour (kWh) for the electricity you export and have a gross meter.<sup>1</sup> The feed-in tariff payments you have received during the life of the scheme have likely recovered the upfront costs of your PV unit and earned you a profit.<sup>2</sup> When these payments cease, you can continue to receive financial benefits from your PV unit. To get the most benefits, you should consider:

- ▼ changing to a net meter, if you don't already have one
- ▼ shopping around for the best retail electricity offer, focusing on the overall deal not just the feed-in tariff
- ▼ using as much of your PV generation in your home as you can, and
- ▼ the cost of installing a battery storage system for your PV electricity is likely to come down in the future.

While finding the best energy products and services involves reviewing a lot of information, these key points will help you to make an informed decision for your circumstances.

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<sup>1</sup> Around 17% of the SBS customers are receiving 20 cents per kWh and have either a gross or a net meter.

<sup>2</sup> Appendix A provides more information on our analysis.

## 1 Continue to receive financial benefits when the scheme ends

As a SBS customer, you can continue to get financial benefits from your PV unit after the scheme ends in two main ways:

- ▼ Savings on your electricity bills. You can use the electricity the PV unit generates in your own home, at the time of generation, rather than exporting it to the grid. This will save you having to buy that electricity, and so reduce your overall bills.
- ▼ Voluntary feed-in tariff payments. Depending on your retailer and market offer, you may receive voluntary feed-in tariffs for the PV electricity you export to the grid.

The savings on your electricity bills will be worth much more than the payments from voluntary feed-in tariffs. But to get these savings, you will need to have a net meter.

## 2 Change to a net meter

If you are like most SBS customers earning 60 cents per kWh, you are likely to have a gross electricity meter, as this type of meter increased the financial benefits available under the scheme. With a gross meter, you could:

- ▼ export (and earn the subsidised feed-in tariff for) every kilowatt hour (kWh) of PV energy your PV unit generated, and
- ▼ import (and pay the retail price for) every kWh of energy you used in your own home.

This made financial sense because the feed-in tariff under the SBS was higher than the retail price of electricity. However, when this subsidised feed-in tariff is no longer available, a net meter will give you much greater financial benefits.

With a net meter, the PV electricity you generate is used to meet your own energy needs at the time of generation. Only the amount in excess of those needs is exported to the grid. This way you can:

- ▼ save the equivalent of the retail price of electricity for every kWh of PV energy used in your home (currently around 25 cents per kWh), and
- ▼ potentially earn an unsubsidised feed-in tariff from a retailer for every kWh of excess PV energy exported to the grid (currently around 5 to 12 cents per kWh).

A typical household with a 1.5 kW PV unit is likely to consume around 67% of their own PV electricity during the day and export the remainder to the grid.

## 3 Shop around for the best retail offer

Like all customers, as a solar customer, you should shop around to make sure you are on the best deal for your individual circumstances. Currently, a range of retail offers are available to customers with PV units, with various retail prices, tariff structures, voluntary feed-in tariffs and other features.

When investigating your options, you need to consider all aspects of the available offers, not just the feed-in tariffs. Our analysis shows that the offer that includes the highest feed-in tariff may not represent the best deal overall. It is more important to determine what a retailer will charge you for electricity from the grid.

### 3.1.1 Consider all aspects of an electricity market offer

Feed-in tariffs are only part of an overall electricity market offer. When you have a net meter, one of the most important factors to consider is the price each retailer will charge you for electricity from the grid. This price typically includes a daily supply charge and per kWh usage charges.

In comparing offers, look at the actual prices that a retailer charges you, rather than the percentage discount they offer. Because retailers discount off different base prices, just looking at the headline percentage discount isn't a reliable way to compare offers. There might also be exit fees and/or upfront fees. All of these should be considered before making a choice.

### 3.1.2 Don't assume the offer with the highest feed-in tariff is the best deal

With the end of the SBS, some retailers are promoting market offers that include substantially higher feed-in tariffs than other retailers. Based on our assessment, the electricity offer that comes with the highest feed-in tariff is unlikely to be the best overall electricity deal for SBS customers. For example, these offers may include higher retail prices – so even if you earn more from feed-in tariff payments, this is outweighed by the higher charges you would pay for the electricity you use from the grid.

The Australian Government's *EnergyMadeEasy* website can help you to identify and compare the offers available in your local area (see [www.energymadeeasy.gov.au](http://www.energymadeeasy.gov.au)). We have also developed an Excel tool to help you compare different offers in terms of their feed-in tariffs and retail prices. You can find this tool on our website ([www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)).

## 4 Use as much of your PV generation in your home as you can

As discussed above, **without** subsidised feed-in tariffs and **with** a net meter, the main source of financial benefit from your PV unit is the savings you make on your electricity bills. This benefit arises when you use the electricity your PV unit generates in your own home, at the time of generation. This saves you having to buy that electricity, and so reduces your overall bills.

You can increase this benefit by using as much of your PV generation in your home at the time it is generated, rather than exporting it to the grid. If you tend to export PV generation to the grid, you should consider shifting some of your electricity usage to the time your PV unit is generating most electricity – typically in the middle of the day when the sun is shining. For example, you might be able to use a timer to turn on your dishwasher or washing machine at midday rather than early in the morning or when you go to bed.

Your retailer may be able to provide you with information about how much of your PV electricity you tend to use when your PV unit is generating electricity.

## 5 Consider that the cost of installing a battery storage system is likely to come down in future

Some retailers are offering battery storage systems that allow you to use your PV electricity at night instead of drawing electricity from the grid. We have analysed the financial implications of installing one of these systems. We found that these vary depending on factors such as the size of the customer's PV unit and battery, the customer's daily electricity usage amount and pattern, and the electricity tariffs they are on.

However, based on our research of current battery prices, it would likely take more than 10 years for an existing solar customer to recover the initial costs of the battery storage system. This is longer than the most common warranty period for the systems on the market. Therefore, if you mainly want a battery storage system for financial reasons, you may want to consider that, as was the case with PV units, the cost of battery storage is likely to fall substantially in the future.

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### **Box 5.1 Further information**

We have published a series of information papers to help SBS customers make informed decisions about the tariff and technology options available to them, including more detailed papers on:

- ▼ why SBS customers should get a net meter
- ▼ why SBS customers should shop around for the best electricity offer
- ▼ why unsubsidised feed-in tariffs are less than the retail price of electricity, and
- ▼ home battery storage systems.

You will find these papers on our website ([www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)).

We have also developed an Excel tool to help you compare different offers in terms of their feed-in tariffs and retail prices. You can also find this tool on our website ([www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au))

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## A Case study: Solar Bonus Scheme outcomes

To analyse the financial impact on customers who invested in a solar PV unit under the SBS, we calculated the net present value (NPV), as of 31 December 2016, of:

- ▼ the total feed-in tariff payments received over the life of the scheme (ie, 1 January 2010 to 31 December 2016), less
- ▼ the estimated cost of a PV unit.

A positive (negative) NPV indicates a solar customer will have made a net profit (loss) after taking into account the initial upfront cost of their PV unit. We used interest rates of 2.0% and 3.9% in real terms to calculate the NPV. These are based on mortgage rates of 4.5% and 6.5%, respectively, and an inflation rate of 2.5%. For simplicity, we assumed that a customer bought the PV unit at the inception of the scheme on 1 January 2010, and received feed-in tariffs at the end of each calendar year. We sourced annual generation of PV units from IPART's review in 2012.<sup>3</sup>

Table A.1 shows the NPV of installing a 1.5 kW PV unit for a customer receiving 60 cents per kWh under gross metering. Based on annual generation of 1,882 kWh, the customer will have received \$1,129 (60 cents per kWh x 1,882 kWh) each year. Depending on the cost of the PV unit, the customer is most likely to have recovered the initial costs of their PV unit and have earned a profit.

**Table A.1 NPV of installing a 1.5 kW PV unit under the SBS**

<b>Estimated costs of a 1.5 kW PV unit in January 2010 (\$January 2010)</b>	<b>NPVs using a discount rate of 2.0% in real terms (\$December 2016)</b>	<b>NPVs using a discount rate of 3.9% in real terms (\$December 2016)</b>
\$3,500	\$4,209	\$4,102
\$4,500	\$2,876	\$2,580
\$5,500	\$1,543	\$1,058
\$6,500	\$210	-\$465

**Note:** The discount rates of 2.0% and 3.9% are based on mortgage rates of 4.5% and 6.5%, respectively, and an inflation rate of 2.5%.

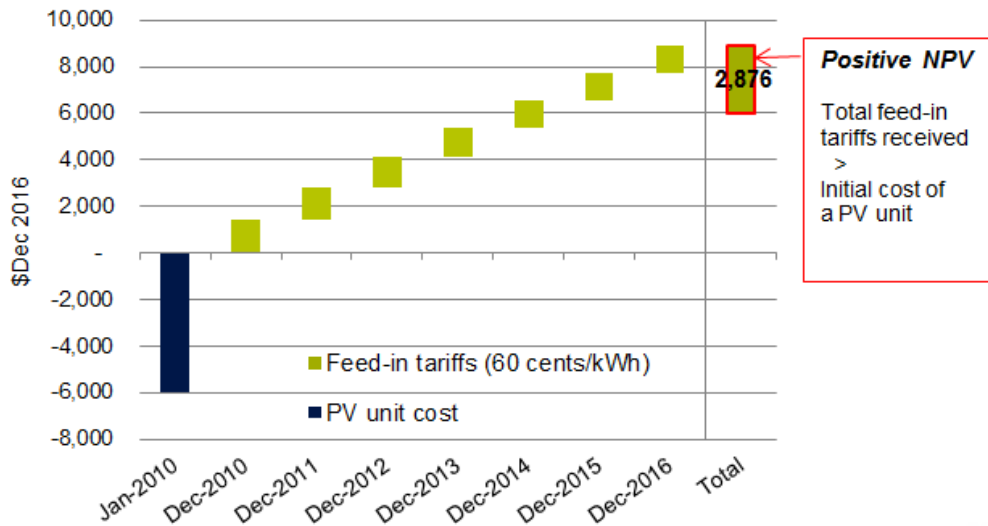
**Source:** IPART analysis.

Figure A.1 shows that the NPV of a 1.5 kW PV unit at an estimated average cost of \$4,500<sup>4</sup> based on a discount rate of 2.0%. A customer who bought a 1.5 kW PV unit at this average cost on 1 January 2010 will have gained a total profit of \$2,876 in today's dollars from the feed-in tariffs under the scheme.

<sup>3</sup> IPART, *Solar feed-in tariff – setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW*, March 2012, p 32.

<sup>4</sup> Dr M. Gill, *Speaking for the majority of NSW electricity consumers*, p 1 (Dr Gill's submission on IPART's fact Sheet, IPART, *Feedback sought on retail offers available to NSW Solar Bonus Scheme customers*, 13 October 2016).

**Figure A.1 NPV of buying a 1.5 kW PV unit as at 31 December 2016 for a customer receiving 60 cents per kWh under gross metering (\$December 2016)**



**Note:** The analysis above is based on the PV unit cost of \$4,500 in \$January 2010 including GST and a real discount rate of 2.0%. Adjusting for the time value of money and inflation, the PV unit cost is \$6,000 as of 31 December 2016 in \$December 2016. All figures are in \$December 2016 and are adjusted for the time value of money.

**Data source:** IPART analysis.