FACT SHEET

Why SBS customers should change to a net meter

November 2016

If you are like most Solar Bonus Scheme (SBS) customers, you are likely to have a gross electricity meter, as this type of meter increased the financial benefit you received under the scheme. However, when the SBS ends, changing to a net meter will give you a greater financial benefit. Depending on the size of the PV unit, you are likely to be between $234 and $461 better off each year if you change from a gross meter to a net meter.[1]

1 Why would you be better off with a net meter?

With gross metering, as a SBS customer, 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 subsidised SBS feed-in tariff was higher than the retail price of electricity. For example, if you joined the scheme early, you earned 60 cents per kWh for the electricity you exported and paid around 25 cents per kWh[2] for the electricity you used.[3]

However, when the SBS ends, you will earn an unsubsidised feed-in tariff which, for reasons explained in our fact sheet, *Why feed-in tariffs are less than the retail price of electricity,* is well below the retail price of electricity. For example, these feed-in tariffs are currently around 5 to 12 cents per kWh.[4] In this situation, you would be better off with a net (or bi-directional) meter. With net metering:

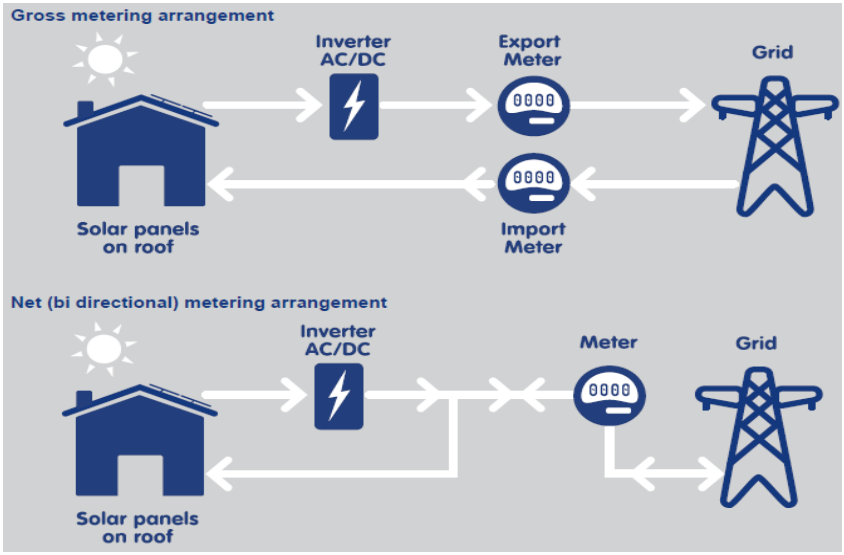
- the PV electricity you generate is used to power the appliances running in your home at the time the electricity is generated
- when this generation is more than required to power your home, the excess is exported to the grid and you can earn an unsubsidised feed-in tariff, and

1 For typical solar customers with a 1.5 kW and 3.0 kW PV unit. See Appendix A of this Fact Sheet for more details.
2 This is an estimate only. The retail price of electricity varies depending on the electricity offers.
3 Most SBS customers are receiving 60 cents per kWh and have a gross meter. Around 17% of the SBS customers are receiving 20 cents per kWh and have either a gross or a net meter.
4 As of October 2016.

- when this generation is less than required to power your home (including the times when your PV unit is not generating at all), the shortfall is imported from the grid and you pay the retail price.

Figure 1.1 illustrates the difference between gross and net metering.

Figure 1.1 How is a net meter different from a gross meter?



Data source: NSW Department of Industry, Resources & Energy, *Metering Fact Sheet*, October 2016, available at http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0010/683506/sbs-metering-factsheet.PDF accessed 21 November 2016.

We use a case study to estimate the financial impacts on SBS customers who stay on a gross meter compared to those who change to a net meter when the scheme ends. Our case study indicates that while both groups of customers are likely to see an increase in their electricity bills, those that move from gross to net metering would experience a much lower increase. Appendix A provides more information on our case study.

2 What are your options for getting a net meter?

There are several different types of metering technology available in NSW (see Box 2.1). For most SBS customers, a smart meter is the best option. Smart meters are digital meters that can function as a net meter, record electricity usage every 30 mins and can be read by remote communication systems.

For a small number of SBS customers, remote reading of smart meters may not be available due to limited 3G coverage. In addition, some retailers may not offer, or may charge extra for, a smart meter for those who have a controlled load or a three-phase power supply (see Box 2.2). These customers can get an interval meter, which can also function as a net meter.

Some electricity retailers are currently offering an upgrade to either a smart meter or an interval meter with net metering arrangements, as part of their electricity offer. Of these retailers, AGL, ENOVA Energy, Red Energy, Origin Energy and Powershop are offering a smart meter upgrade at no up-front costs, including installation with no lock-in contract period, or no early termination fee, for eligible customers. Our Fact Sheet, *Solar customers should shop around for the best retail electricity offer,* provides more details of metering upgrade offers available to SBS customers.

Box 2.1 What are the types of meter available in NSW?

There are three types of electricity meter available in NSW:

- Accumulation meter: An accumulation meter (known as Type 6 meter) records only the total accumulated electricity usage. Customers with this meter pay a flat rate for all their electricity usage irrespective of the time of use. The meter data can only be read manually.
- Interval meter: An interval meter (known as Type 5 meter) records electricity usage every 30 minutes and can be configured for net metering. Customers with this meter can be on time-of-use tariffs. The meter data can only be read manually.
- Smart meter: A smart meter, which functions as a net meter, records electricity usage every 30 minutes. It is classified as Type 4 meter. Customers with this meter can be on time-of-use tariffs. The meter data can be read via remote communication systems.

Box 2.2 What are a controlled load and three-phase supply?

- Controlled load: Customers with a controlled load may have a separate meter connected to specific appliances, such as electric hot water systems or slab or underfloor heating. A controlled load is metered and billed separately from usage under a flat rate or time of use tariff.
- Three-phase supply: Most residential properties are on a single electricity supply. However, a single electricity supply may not be adequate for some large residential properties, for example those with a large air conditioning unit, floor heating and a swimming pool pump. These types of properties may be on three single phase supplies, known as a three phase supply. Customers on a three phase supply may have three separate meters or one multiphase meter measuring each phase of electricity usage.

3 How can you get the most financial benefit with a net meter?

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.

The size of this benefit increases as you use more of your PV electricity when it is generated.

With most smart meters, you can track your energy consumption using a smart phone app, if this service is offered by your retailer. 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.

Box 3.1 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)

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)

A Case study: financial benefit of changing to a net meter

This case study compares the financial impacts of the following two scenarios:

- A SBS customer with a gross meter who does not change to a net meter
- A SBS customer with a gross meter who does change to a net meter.

We have considered two types of SBS customers: one with a 1.5 kW (with 6 solar panels) and the other with a 3.0 kW PV unit (with 12 solar panels). We found these customers would be $234 and $461 better off each year, respectively, by changing to a net meter.

A.1 Assumptions

Table A.1 sets out the assumptions used for our case study. Our assumptions represent PV generation and electricity consumption of typical solar customers.

Table A.1 Assumptions

	Customer 1	Customer 2
Customer characteristics		
PV system size	1.5 kW	3.0 kW
Total annual generation	1,882 kWh	3,716 kWh
Common assumptions to Customer 1 and Customer 2		
Annual consumption	6500 kWh	
PV electricity consumption and export		
% of solar PV electricity used by the home	67%	
% of solar PV electricity exported	33%	
Electricity tariffs (nominal)[a]		
First 1,000 kWh usage per quarter (cents per kWh)	25.11	
Next 1,000 kWh usage per quarter (cents per kWh)	25.11	
Remaining usage per quarter (cents per kWh)	19.01	
Daily supply charge (cents per day)	78.57	
Feed-in tariffs (cents per kWh)[a]		
Unsubsidised feed-in tariff	6.5	
Subsidised feed-in tariff under the SBS	60	

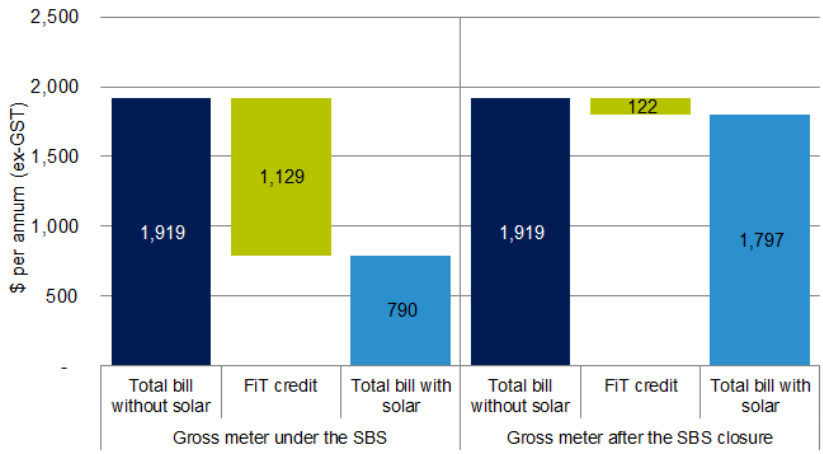
[a] Based on a current market offer

A.2 *Not* changing to a net meter

Figure A.1 and Figure A.2 show annual feed-in tariff credits **Customer 1** and **Customer 2** receive with a **gross meter** and their electricity bills before and after the SBS ends.

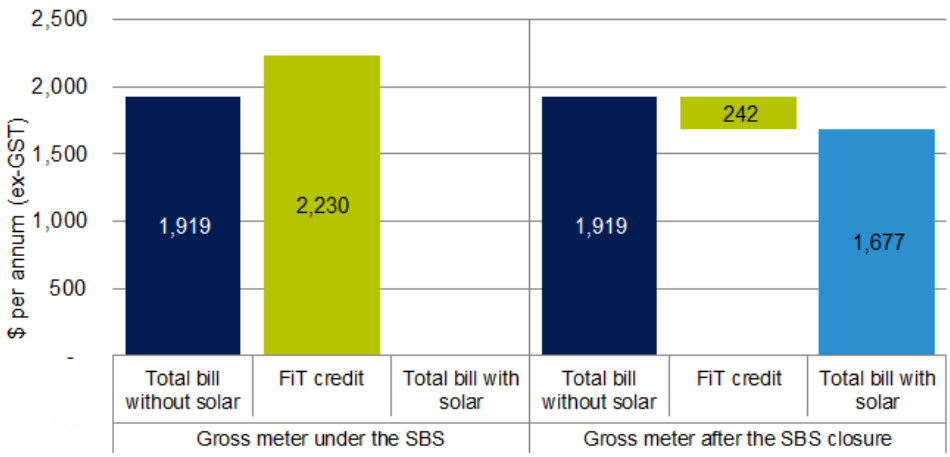
- Under the SBS, **Customer 1** receives a total feed-in tariff credit of $1,129 and the total electricity bill after the feed-in tariff is $790 per annum. **Customer 2** receives a total feed-in tariff of $2,230 per annum. For this customer, the annual feed-in tariff more than completely offsets their annual electricity bill.
- After the SBS ends, the total feed-in tariff per annum decreases substantially because the available feed-in tariff after the Scheme ends is considerably lower than the feed-in tariff under the SBS.
  - **Customer 1** would receive a feed-in tariff of $122 per annum. The total annual electricity bill after the feed-in tariff is $1,797, which is around $1,000 higher than that under the SBS.
  - **Customer 2** would receive a feed-in tariff of $242 per annum. The total electricity bill after the feed-in tariff is $1,677, as compared to zero under the SBS.

Figure A.1 Total electricity bill for Customer 1 with a gross meter *before* and *after* the SBS closure



Data source: IPART analysis.

Figure A.2 Total electricity bill for Customer 2 with a gross meter *before* and *after* the SBS closure



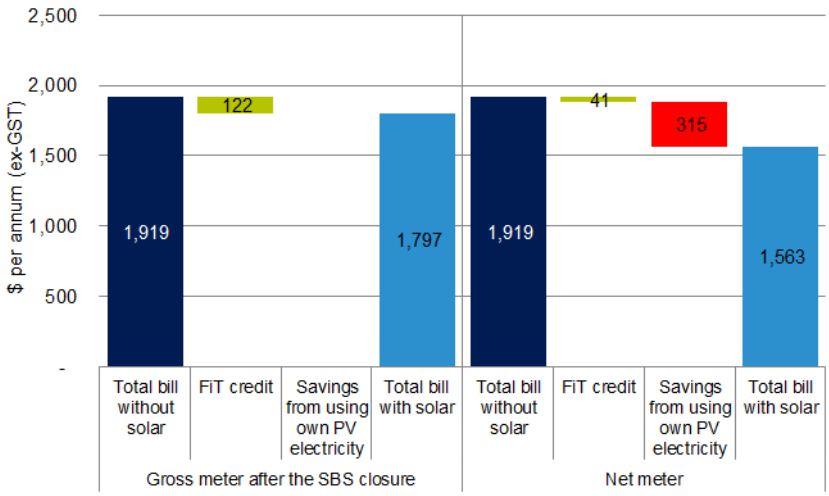
Data source: IPART analysis.

A.3 Changing to a net meter

Figure A.3 and Figure A.4 compare annual feed-in tariffs for **Customer 1** and **Customer 2** and their total electricity bills with a **gross** and **net** meter after the Scheme ends. With a gross meter, since all the electricity a PV system is exported to the grid, the feed-in tariff is the only source of financial benefit (shown in the left panel of the figures).

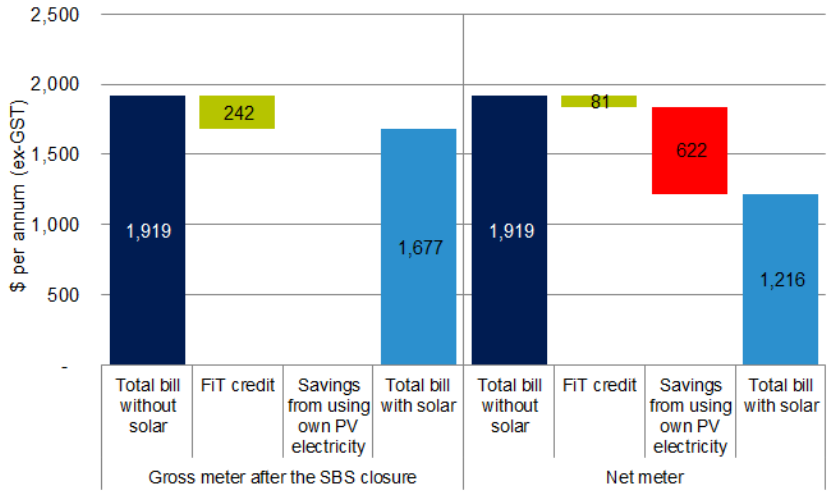
However, moving to a net meter gives rise to an additional source of the financial benefits from their PV unit, which is savings on the electricity bill from using the electricity their PV unit produces. Assuming these customers consume two thirds of their own PV electricity during the day and export the remainder to the grid, **Customer 1** and **Customer 2** would save $315 and $622, respectively, on their annual electricity bills from using their own PV electricity. This, combined with the annual feed-in tariff, means **Customer 1** and **Customer 2** would be $234 and $461 better off, respectively, by changing to a net meter.

Figure A.3 Total electricity bill for *Customer 1* with a gross and net meter



Data source: IPART analysis.

Figure A.4 Total electricity bill for *Customer 2* with a gross and net meter



Data source: IPART analysis