Metering Fact Sheet

Overview

With the upcoming closure of the NSW Solar Bonus Scheme on 31 December 2016, customers currently on gross metering arrangements may look at options to move to net metering arrangements, which would allow them to use the electricity their solar photovoltaic (PV) systems produce rather than drawing more expensive electricity from the grid.

This fact sheet is designed to give an overview of the different types of meters and configurations used in NSW and their benefits and limitations. It also discusses the impacts on customers of the voluntary smart meter roll out and provides guidance to customers on changes they can make to their current metering arrangements to maximise the benefits of their systems once the scheme closes.

What is an electricity meter?

An electricity meter (or energy meter) is a device that is used to measure the volume of electrical power supplied to electricity consumers. Because electricity is a billable service, an electricity meter is an important device to ensure you are correctly charged for the electricity you use.

Types of electricity meters used in NSW

There are several different types of electricity meters used in households in NSW. These differ largely based on the type of tariff and/or the technology used.

Accumulation meters

Accumulation meters only track the total accumulated electricity usage. Consumers with an accumulation meter are charged at one usage rate for all electricity, regardless of when they use it. For this reason, these meters are also known as flat rate meters. Accumulation meters can be electromechanical or electronic. Electromechanical accumulation meters use a rotary disc and have either a dial display or a cyclometer display. Electronic accumulation meters have a digital display.

Accumulation meter displays must be read by authorised meter readers, who enter the consumption data into handheld devices. The data is then processed and validated by the electricity distributor’s metering systems and sent to the electricity retailer to produce the bill.
**Interval Meters**

Interval meters are digital meters that record how much electricity is used at 30 minute intervals. Data is saved in the meter until read by the meter reader. The grid operator can access this information if required. The main benefit of having an interval meter is that you can access different usage rates during the day. These types of pricing plans are called time of use (TOU) tariffs. For this reason, these meters are also known as time of use meters.

To read an interval meter, an authorised meter reader attaches a probe to the communications port on the meter. The meter downloads interval data into the meter reader’s handheld device. This data is processed and validated by the grid operator’s metering systems and sent to the electricity retailer to produce the bill.

Interval meters are all electronic. The display is programmed to show the date and time as well as the total kilowatt hours (kWh) consumed.

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**Digital (smart) Meters**

A digital (smart) meter, also called an advanced meter, is a digital electricity meter that records electricity usage every 30 minutes and can be read remotely.

With a digital (smart) meter you can get access to accurate and up-to-date information on your electricity usage and can choose new electricity tariffs and services. Digital (smart) meters help you save money on electricity bills by allowing you to better manage your consumption, such as by reducing energy use during peak periods.

The NSW Government is supporting a voluntary, market-led rollout of digital (smart) meters to promote innovation and competition. The approach is intended to ensure you have the widest choice when purchasing electricity.

Potential benefits of digital (smart) meters are that they:

- can be read remotely, eliminating the need for manual meter reading and estimated readings and reducing the cost to consumers
- can be remotely shutdown when a tenant moves out of a premises
- allow for easier monitoring of electricity supply conditions by utilities so that, for example, network blackouts and other supply problems can be detected and fixed promptly
- give you access to new and innovative electricity pricing to save on electricity bills
- allow you to obtain up-to-date information about your electricity use and costs
- enable you to have some energy hungry appliances, such as hot water and floor slab heating, controlled automatically to reduce electricity consumption during peak price periods.

Some of the features outlined above may not be available with all electricity retailers at this time. Check with your retailer, and talk to other electricity retailers, to confirm they offer digital (smart) meters and the range of services and features offered. Be mindful...
of the terms and conditions of your existing electricity contract. You may have to pay an exit fee if you choose to change retailers.

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**Net metering (see infographic on the next page)**

If you are a Solar Bonus Scheme customer currently receiving a 20c per kWh subsidised feed-in tariff, you may have a net metering arrangement. This is because, with the lower tariff, you are better off consuming the electricity your solar PV system generates within your household before feeding the remainder to the grid. The price you pay for grid electricity is usually more than 20c per kWh, especially during the daytime peak hours where your solar system is working at its full potential.

Regardless of the tariff you currently receive, it is important to verify your metering arrangement with your retailer. Some 60c customers may be on a net metering arrangement and some 20c customers may be on a gross metering arrangement. Knowing the metering arrangement you currently have is crucial to the steps you take once the Solar Bonus Scheme ends (see *Next steps for Solar Bonus Scheme customers below*).

**Controlled loads**

In NSW, some retailers offer you a choice of low cost usage rates for hot water or slab heating. These usage rates are limited only to specific appliances and are controlled by the distributors’ load control equipment. This arrangement is called a “Controlled Load.”

If you have a controlled load you may have a separate meter connected to specific devices, and electricity consumption of the devices is measured and billed separately from your normal usage under a TOU or flat rate tariff. The aim is to supply relatively low cost electricity for the controlled load during off-peak periods.

**Gross metering (see infographic on the next page)**

If you are a Solar Bonus Scheme customer and are currently receiving a 60c per kWh subsidised feed-in tariff, you are likely to have a gross metering arrangement in place. This is because the high tariff means you are better off financially, until the closure of the scheme on 31 December 2016, if you feed all electricity generated from your solar PV system to the grid and buy back electricity from the grid at a cheaper rate.

**Digital (Smart) meter - three phase**

**Digital (Smart) meter - single phase**

**Metering arrangements used in NSW**

Electricity meters are wired and arranged differently based on consumer requirements. These arrangements allow you to access different tariffs and, in the case of digital (smart) meters, can be changed to access additional features to help with energy management.

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Three phase supply

In some cases, a single electricity supply (called a phase) may not be adequate for a large residential property with a large air conditioning unit, floor heating and a swimming pool pump. These types of properties may require three single phase supplies, commonly known as 3-phase. If you are on a 3-phase supply you may have three separate single phase meters or one multiphase meter measuring each phase of your electricity. However the metering configuration for gross, net or controlled load will be the same as for a single phase.

More information


If you have a complaint that can’t be resolved directly with your retailer, the NSW Government has approved the Energy & Water Ombudsman NSW (EWON) as an independent body to assist you. Contact EWON on freecall 1800 246 545 or visit [www.ewon.com.au](http://www.ewon.com.au)

Infographic - metering arrangements used in NSW

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