

The following information answers questions consumers most commonly ask the Authority about smart meters. This document was last updated on 15 August 2011.

What is a smart meter?

There is no industry-agreed definition. Also known as advanced meters, the terms generally refer to meters that offer two-way remote communication, and recording of electricity in half-hourly values (rather than a cumulative register), and which can be remotely reprogrammed to activate additional functionality.

Is the Electricity Authority requiring retailers to use advanced meters?

No.

Most residential meters have certification that expires on 1 April 2015. To ensure that they operate accurately, all these meters need to be recertified before that date. Many retailers are using this as an opportunity to update metering technology, rather than having existing meters recertified.

Do I have to have an advanced meter at my house?

If your retailer approaches you to install an advanced meter and you are concerned about this, discuss the matter with them.

In their contracts with consumers, retailers almost always reserve the right to replace meters at their discretion.

In which case, refusal to allow the installation of an advanced meter means you will be in breach of contract.

However, you would be within your rights to switch to a retailer that is not using advanced meters. Note that:

- At some stage, all retailers may opt to replace existing meters with advanced meters;
- If the certification for the existing meter in your house is due to expire, the retailer you switch to will still require access to certify the metering installation prior to expiry; and
- Consumer contracts occasionally include penalty clauses for early termination of a contract. Check your terms and conditions.

How can I get an advanced meter at my house?

In the first instance, ask your existing retailer if and when they plan to install an advanced meter. If you are unsatisfied, you may wish to switch to a retailer that is prepared to offer what you want.

What are the advantages of advanced meters?

The advantages of a particular meter are best discussed with your retailer. However, some of the advantages may include:

- Eliminating estimated reads;
- Meter readers will no longer need to visit your property on a regular basis;
- Retailers and distributors being able to offer a wider range of billing rates, based on when you use electricity, which may suit your lifestyle; and
- More detailed information about your electricity consumption.

»» Will my power bill increase as a result of an advanced meter being installed?

In general, there should be no cost increase to you. However, it is possible that the existing meter has deteriorated and has been measuring inaccurately.

There have been cases where consumers have seen billing changes after the installation of an advanced meter. This is the result of the installation process identifying a problem with the configuration of the existing meter and/or the tariff structure. In other words, the existing meter and historic billing have been in error, and the installation of an advanced meter has picked up the error.

»» How much will an advanced meter cost me?

We do not know of any retailer who is charging consumers for the cost of providing an advanced meter as part of their planned roll-outs. Charges may be incurred if a consumer asks for a meter to be installed outside the retailer's planned roll-out.

»» What happens if I move house?

The advanced meter remains at the property and you would make use of the existing meter at your new property (which may or may not be an advanced meter).

»» If I have an advanced meter, am I still able to switch retailers?

Yes.

»» If an advanced meter is installed, will it need to be replaced if I switch retailers?

Generally, no.

However, there are two instances where your new retailer may want to replace the existing meter. The first is if the meter does not provide the functionality that your new retailer needs. The second is where your new retailer can achieve significant cost savings with an alternative metering supplier.

»» What happens to the existing meter if an advanced meter is installed?

An advanced meter usually replaces the existing electricity meter(s). If there are multiple meters on the site, these may be replaced by a single advanced meter, with multiple measuring elements. The replaced meter is returned to the asset owner, who will dispose of it, if it has reached the end of its useful life.

»» Where will an advanced meter be installed in my house?

An advanced meter will usually be installed in the same location as the electricity meter(s) it replaces. Relocation of meters and/or communications equipment may be agreed between the retailer and consumer, if the consumer is willing to meet the associated costs.

»» Has the Electricity Authority set any standards for advanced meters?

The Authority has published optional guidelines for the use of advanced meters, and advised the Minister of Energy and Resources in December 2009 that extensive regulation of the roll-out of AMI (Advanced Metering Infrastructure) is unnecessary.

The guidelines and advice to the Minister can be found at www.ea.govt.nz/industry/market/metering/advanced-metering

»» Are advanced meters required to be HAN-enabled?

At this time, Home Area Network (HAN) devices are not required to be installed in advanced meters. However, the Authority recommends advanced meter systems should support a HAN capability, should it be desired at some time in the future.

»» How do advanced meters communicate?

Signals from advanced meters use radio frequencies of various wavelengths. The two main transmission methods are:

General Packet Radio Service (GPRS) – involving cellular transmission in the 900MHz or 1800MHz frequency bands. It is point-to-point communication, from the advanced meter to a cell phone tower. Transmission time will usually be less than a minute a day. However, as with all cell phones, there will be ‘heart-beat’ connection periods of very short duration at intervals throughout the day.

Radio mesh – involving radio transmission in the 900MHz frequency band and can be considered point-to-many communication. Typically, these systems are relatively low-power and short-range (a few kilometres). Information is collected into concentration points called ‘data concentrators’ and relayed to back-office processes.

»» How is the privacy of the information collected by advanced meters protected?

The Privacy Act 1993, administered by the Privacy Commissioner (www.privacy.org.nz), specifies the circumstances under which the information can be used or disclosed. The Act requires agencies that collect personal information to have security safeguards and measures, such as encrypted communication.

»» Where can I find out about radiofrequency fields from advanced meters?

Radio transmissions from advanced meters should comply with local council and Ministry of Economic Development requirements. Questions concerning radiation from advanced meters should, in the first instance, be directed to your retailer. General information about exposure standards and health effects is available from the National Radiation Laboratory of the Ministry of Health (www.nrl.moh.govt.nz).

In general, background radiofrequency fields have been increasing as devices such as cellular phones, computers, remote controls and other electronic items become more common. Radio signals produced by an advanced meter are roughly similar to having a cell phone on stand-by in your house.

»» What are the exposures to radiofrequency fields from a HAN?

As benefits emerge, use of Home Area Network (HAN) devices within a house will be a matter of consumer choice. While designs will vary, it is expected most HAN installations will not employ continuous communication. Exposures to the radiofrequency fields that HANs produce are likely to be very small fractions of recommended limits of exposure. As the actual radiofrequency fields produced will be primarily determined by the type and number of transmitters used, specific information about radiofrequency fields should be sought from the relevant HAN supplier.