

Backgrounder: Metering services for residences and small businesses

History

Australia started to manufacture electromechanical accumulation electricity meters around 1920. These meters had glass windows showing a metal disc that spins as electricity is consumed; along with a series of dials that display the total (or accumulated) amount of electricity consumed at households and small businesses.

Electromechanical accumulation meters are read manually, usually once a quarter, so consumers at the premises can be charged for the power they use. These meters do not allow households and small businesses to see how much electricity they use each day; or how much they use at peak periods; and do not support services which could help manage consumption and costs.

From the 1980s electronic accumulation meters were manufactured in Australia. The spinning disc was replaced by electronic circuits and the dials replaced by electronic displays but they provided the same level of service as the earlier electromechanical meters. As the manufacturing costs of electronic accumulation meters reduced, they began to replace electromechanical accumulation meters in greater numbers.

By about 2005 electromechanical accumulation meters were no longer made in Australia and are now very hard to source internationally.

Today, electronic meters are evolving into advanced meters which use increasingly sophisticated computing capability. Advanced meters (also known as smart meters) can support a range of additional services as well as recording consumption.

The additional services supported by advanced meters would enable:

- consumers to monitor, manage and adjust their use of electricity to suit their lifestyle and budget;
- retailers to more efficiently operate their businesses, by reducing costs for remote meter reading and connecting customers more quickly; and
- distribution businesses to better manage the operation of their electricity networks with access to more detailed outage and power quality information.

The range of services that will be enabled by advanced meters will evolve over time as new benefits are identified and the technology develops.

Regulation

Before de-regulation of the electricity supply industry electricity meters were provided by vertically integrated utilities that were responsible for both the supply and distribution of electricity to individual consumers.




Following de-regulation, the provision of meters for residential and small business consumers was primarily undertaken by the distribution businesses. Prices charged by the distribution businesses for metering services are currently regulated by the Australian Energy Regulator.

Today, electricity consumption decisions made at the household and small business level can help improve the operation of the entire electricity market, leading to greater system efficiencies and cost savings for all consumers.

Increased consumer choice around energy use and the adoption of new technologies can greatly influence the future direction of Australia's electricity system.

New and emerging technologies like real-time energy usage displays and portals, smart air conditioners and in-home storage systems enabled by advanced technology will facilitate a wider range of ways for consumers to manage their electricity consumption, particularly during peak demand periods.

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	<p>Electromechanical (spinning disc) accumulation meter</p> <ul style="list-style-type: none"> Made in Australia from the 1920s (the model meter on the left was available from 1963 to 1972). Only measures total electricity consumption at a home or business. Manufacture of electromechanical meters was phased out about 2005 following introduction of cheaper electronic meters.
	<p>Electronic accumulation meter</p> <ul style="list-style-type: none"> Made in Australia from the late 1980s. Provides the same service as an electromechanical accumulation meter – it only measures total consumption. Replaced electromechanical meters as manufacturing costs reduced – now the standard meter for new houses and small businesses other than in Victoria.
	<p>Electronic advanced meter</p> <ul style="list-style-type: none"> Made in Australia from 2009. An electronic meter with a bigger computer which has the ability to monitor and control electricity consumption and conditions in the distribution network (outages, and power quality). Capable of supporting a greater range of services to benefit consumers and improve the operation of the retailer and distribution businesses.

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