

Ensuring consumers benefit from Smart Meters

Dr Martin Gill

One of the most valuable lessons from the Victorian smart meter rollout was ensuring consumers could access the benefits. This article finds new market rules allowing smart meters to be offered to all Australian consumers do not adequately ensure access to these benefits. Without this access many consumers will ask “Why risk it?”

Introduction

The Australian Energy Market Commission (AEMC) sets the rules governing the operation of the National Electricity Market (NEM)¹. All Retailers, Distributors, and Generators participating in the NEM are required to comply with the rules set by the AEMC.



The above figure shows all AEMC rule changes must be in the “long term interest of consumers”. Rule changes often involve providing consumer freedom of choice while also protecting their access to an essential service.

The AEMC Smart Meter Rollout

The AEMC has decided to actively encourage the deployment of smart meters to Australian households. The decision was detailed in their “Power of Choice” review released in late 2012. The AEMC has now completed the rule changes allowing electricity retailers to offer smart meters to all their customers.

This review considers if the AEMC has applied the lessons from other smart meter rollouts.

The Victorian smart meter rollout

The Victorian Government mandated the rollout of smart meters to all Victorian households in 2006. Put simply the rollout was not well received.

¹ Only Western Australia and the Northern Territory do not connect to the NEM

Under the mandated rollout Victorian households were required to pay for their smart meter before it was even installed. After the meter was installed there was an option allowing customers to be forced to accept a time of use (ToU) electricity tariff.

The rollout removed consumer freedom of choice and failed to provide any certainty they would benefit from the changes. It is not surprising the rollout encountered major community resistance.

The benefit most consumers want is lower electricity bills

At the same time overseas rollouts of smart meters were encountering similar consumer resistance. One of the major lessons was to ensure smart meters empowered the consumer, especially giving them the freedom to choose their preferred tariff. Early in 2010 the Victorian Government removed the option for customers to be forced onto a ToU tariff. Instead customers were given the freedom to choose their preferred tariff.

The outcome

In the absence of evidence showing ToU tariffs lowered electricity bills the vast majority of Victorian households chose a fixed tariff.

Findings from other States

At the same time as the Victorian smart meter rollout was underway, some NSW households were being forced to accept ToU tariffs. When households installed a solar system (or large air-conditioner) they were forced onto a ToU tariff.

When the Victorian government gave households the freedom to choose their tariff the NSW Government made the same decision. Consumers originally forced onto the ToU tariff were given the opportunity to change back to a fixed tariff.

A very different outcome

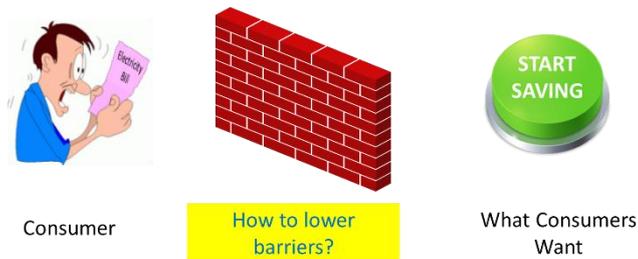
When NSW households asked to be switched they were presented with their electricity costs on the original fixed and the new ToU tariff. The comparison revealed roughly 80% of households were saving money on the ToU tariff. Presented with this *information* many NSW households chose to remain on the ToU tariff.

The difference between the outcome in Victoria and NSW was access to information and the freedom to make an informed choice. While Victorian smart meters provided exactly the same data as the NSW meters, in NSW that data was being turned into useful information.

When consumers were presented with information comparing their energy costs on different tariffs most chose the cheapest tariff

Lowering barriers

The Victorian Auditor-General’s 2015 review of the Victorian Smart Meter rollout found potential benefits had not been delivered. It also concluded most of the consumer benefits were still available. Delivering these benefits required barriers to be removed.



Lowering the barriers required giving consumers:

- Information showing “What’s in it for them?”
- The freedom to make informed choices
- The flexibility to make changes when circumstances change

SwitchOn website (formerly MyPowerPlanner).

One of the tools the Victorian Government chose to lower barriers was to provide consumers with access to an incredibly powerful tariff comparison website. The SwitchOn website now enables Victorian consumers to use their energy consumption to directly compare the cost of all available tariffs giving them the freedom to choose their preferred tariff.

Note the SwitchOn site uses actual household consumption data. This allows the site to accurately compare both fixed and ToU tariffs.

SwitchOn empowers consumers by providing them access to information clearly showing “what’s in it for them”. By using the site consumers can quickly, easily and accurately find the cheapest electricity tariff.

The question becomes “How do households access their meter data?”

National Energy Retail Rules

The AEMC also sets the rules under which Australian Energy Retailers operate. These are referred to as the National Energy Retail Rules (NERR).

These rules describe how households can access their meter data. The applicable paragraph from the latest version of the NERR states:

9.4A Your electricity (only) consumption information

Upon request, we must give you information about your electricity consumption for up to 2 years free of charge.

Personal Experience

To test the NERR I rang my retailer to ask for my consumption information. Despite quoting the appropriate paragraph from the NERR the call centre operator insisted there was no obligation for them to provide this information. They refused to escalate my request or pass me to another department.

The next phone call was made to the retailer’s legal department (an assumption they might understand their legal obligation under the NERR). After a short discussion in which I started quoting the NERR they simply hung up the phone.

The third call may have started with “this is my third call and the next call will be to the NSW electricity ombudsman to report your non-compliance with the NERR”. The call was passed to a senior manager who indicated they had never heard of the NERR or the consumer rights it detailed, but she would look into it.

After several weeks an electronic copy of my consumption data was finally emailed to me.

Others less successful

As an experiment I have encouraged a small number of NSW consumers to ask their retailer for their consumption information. It is revealing I remain the only one who has been successful.

It appears only Victorian consumers are asking for their consumption information. This raises the question of “Why only in Victoria?”

Simple Access to Meter Data

Personal experience suggests the NERR does not provide households with simple access to their meter data. This challenge has been addressed in both the USA and Victoria.

USA

In the USA the Green Button initiative provides consumers with simple access to their smart meter data in a common format.



Green Button Initiative

Utility websites offer the above button (link). After registering on the site (for security reasons) consumers simply click on the button to download their meter data.

Consumers can use their data to compare electricity tariffs or even gain energy advice. Indeed competitions have been run in the USA to stimulate the development of suitable tools.

Victoria

The Victorian Government took a similar approach to the Green Button Initiative with a simple button offered on distributor and retailer websites. Like the Green Button, clicking on the displayed link allows consumers to easily download their meter data. The SwitchOn website can then be used to convert the data into useful information (e.g. to compare tariffs).

It is enlightening that the Victorian Government has not relied on the AEMC’s NERR to give consumers access to their meter data. The Victorian Government has instead negotiated consumer access directly with local distribution businesses and Victorian retailers.



Providing customers simple access to their meter data is vital. While Victorian consumers have been provided this access, the NERR fails to provide similar simple access.

The AEMC’s smart meter rules should:

- Ensure consumers are provided simple access to their meter data

Turning data into information

Having obtained my smart meter data from my retailer I was immediately presented with a new problem. There are no publicly available tools allowing me to use the provided data.

SwitchOn is the only tool allowing consumers to convert smart meter data into useful information

SwitchOn enables Victorian consumers to convert meter data into useful information. The data is converted into the annual cost of electricity on all available tariffs. The development of the SwitchOn website was made unnecessarily complex because there is no single data format. To provide this service the website supports over half a dozen different data formats!

SwitchOn is one example of what is possible in the emerging area of personal analytics:

Personal Analytics is the application of algorithms to a consumer’s personal data with benefits flowing directly to the consumer (Gartner)

Software Companies want to develop these tools

Major software companies like Google and Microsoft wanted to develop software tools to convert smart meter data into customer specific energy advice. The aim was to lower customer electricity costs.

For a number of reasons both Google and Microsoft failed. One was an inability to access the meter data however another contributing factor was the lack of a common data format. With well over 1000 electricity utilities active in the USA the lack of a common data

format made the development of software able to read the meter data almost impossible.

The AEMC requires all exchanges of meter data between market participants to utilise tightly defined common formats. The format is managed by the Australian Energy Market Operator (AEMO). On the 1st March 2016 AEMO's Metering Data Provisions Procedure came into effect ensuring retailers provide customer data in a common format.

The remaining step is providing consumer access to tools able to convert their meter data into information. The Australian Energy Regulator (AER) is required to manage the energy price comparison website, Energy Made Easy. Unlike SwitchOn, Energy Made Easy does not allow consumers to use their meter data to compare electricity tariffs.



The AEMC's smart meter rollout should ensure:

- Tools are available allowing consumers to turn their meter data into information

Freedom of choice

Arguably the most valuable lesson from the Victorian rollout was ensuring consumers could access smart meter benefits. Rather than forcing consumers onto specific tariffs they should be given the freedom to choose a tariff using access to their smart meter data and appropriate tools.

The AEMC's rules make retailers responsible for offering smart meters to consumers. Much like mobile phone contracts the household signs a contract with an electricity retailer including (a hidden) payment for the smart meter. Similar to the mobile telecommunications industry most households will find they are locked to the retailer for a number of years with potential penalties should they wish to change.

Increasingly consumers are choosing to purchase their mobile phone separately from the mobile provider, giving them the freedom to choose mobile plans from all mobile retailers. The original Power of Choice intended to provide customers similar freedom of

choice. By separating the smart meter provider from the electricity retailer, consumers would be able to choose from all available tariffs. The ability for consumers to purchase their own smart meter is not provided for in the AEMC's final rules.

A 2015 consumer survey found energy retailers were the least trusted service provider (below appliance salespeople and mortgage brokers). Almost 44% of respondents indicated they felt retailers were not acting in their best interests. In this context the AEMC's decision to limit customer choice seems inconsistent with their requirement to consider the "long term interests of consumers".



The AEMC's smart meter rollout should ensure:

- Consumer rights to freedom of choice are protected

Conclusion

Previous smart meter rollouts both in Australia and overseas have highlighted the importance of ensuring consumers are empowered by the changes.

If the AEMC smart meter rollout is to gain consumer acceptance it should ensure:

- Consumers are given simple access to their meter data
- Tools are provided to help consumers determine "What's in it for them?"
- Consumer freedom of choice is protected, especially to make informed choices and have the flexibility to change

Without these fundamentals consumers are going to ask themselves "Why risk it?"



Citation

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Comments or Questions?

The author is happy to receive comments or questions about this article. He can be contacted at martin@drmartingill.com.au

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About Dr Martin Gill

Dr Gill is an independent consultant specialising in the provision of advice and data analysis to the energy industry. He has provided this advice to government regulators, distributors, retailers, consumers, asset operators and equipment vendors.

Dr Gill has a broad technical background having personally developed advanced communication modems, burglar alarms, electricity meters, high voltage fault monitors and power quality analysers.

Dr Gill is a metering expert. His innovative products have been recognised with the Green Globe Award, NSW Government's Premier's Award and Best New Product by the Australian Electrical and Electronics Manufacturers Association.

Points of Clarification

Meter change at end of retail contract term

This article explains the difference between the two meter models proposed in the AEMC's original Power of Choice using the example of buying a mobile phone outright or agreeing to a subsidised handset probably locked to their chosen network provider. The article notes the AEMC's current rules only allow households to choose a smart meter from their retailer. The AEMC rules do not clarify if retailers will lock their meters to prevent other retailers from using the meter. If retailers choose to install unlocked smart meters then at the end of the retail contract ownership of the meter could be transferred to the new retailer (assuming the retailers can agree on costs to transfer ownership of the meter).

Since the start of the Victorian smart meter rollout the price of smart meters has dropped dramatically. Fully installed meters are now less expensive than most mobile phones.

SwitchOn site also supports customer profiles

The real power of the SwitchOn website is its ability to use actual measurements of electricity consumption to compare tariffs. For completeness it is noted the site can also use reference profiles to compare both fixed and ToU tariffs.