

Technical Advanced Metering Advisory Committee (TArMAC)

1 November 2017 at Gas Industry Co

Meeting Minutes



In attendance:

Andrew Maseyk, Genesis	From Gas Industry Co:
Bernie Cross, Contact	Andrew Walker
Bill Miller, Vector	Ian Dempster
Craig Muirhead, Nova	Pamela Caird
Howard Wood, Trustpower	
Jo Iggulden, Vector	
Matt Wilson, First Gas	
Michael Binney, Powerco	
Nicolas Vessiot, Powerco	

The meeting started at 10AM.

The meeting was a wide-ranging discussion of advanced metering issues and concerns. The following notes are broadly organised by topic:

Terms of reference and the scope of work

- The aim of the group is to develop a baseline or set of minimum standards for advanced metering (AM). Metering providers and data services companies can then innovate and provide services that are in excess of this minimum.
- It is important not to be too prescriptive, because we don't want to close off options that might otherwise be viable, and we don't want to prescribe standards that will result in stranded assets (as has been the case in the UK). At the same time, AM technology is still developing, and it is possible that subsequent innovations will render earlier AMs obsolete.
- At the moment, the group is focussed on metering abilities and operation. Consideration can also be given to specifying file formats and changing the gas registry if needed to support the introduction of AM.
- It is possible that different minimum standards for different classes of customers would be appropriate; for example, different standards for small commercials vs domestics.

Access to metering data

- There are lots of potential users of advanced metering data: besides retailers, the customers themselves, lines companies, regulators, multi-utility aggregators, infrastructure planners, marketers of energy products and services. Each user group is likely to have differing data requirements, with frequency of recording and frequency/method of collection the most pertinent in terms of cost.
- The increase in amount and availability of data, along with the increase in consumers of data, suggests that it may be necessary to re-think the metering business model and separate asset ownership/rental from data services.

- At the moment, in electricity, the retailer is the data gatekeeper, but this is not an ideal solution. It may be better for each interested party to contract directly with the provider of AM data in order to satisfy its particular data requirements and pay for the desired level of service.
- Concurrent with this is a need for parties accessing the data, and the industry as a whole, to be up front with the consumer about what is collected, what it is used for, and by whom. There was discussion about codifying who can access consumer data and developing a sort of charter that could lay out the principles of consumer data management and access in a transparent way. It was envisaged that this would help to address concerns around privacy and maintain confidence/trust in the social contract between the consumer and the energy sector.
- A related concern was the contention that an industry participant could use AM data for marketing purposes e.g. identifying customers with profiles that would benefit from solar installations or spot pricing for electricity, with the suggestion that some of these could be detrimental to the gas industry.
- If customers are able to access data directly from their meters, there should be a standard format to reduce confusion. Customers who can access their electricity AM data ask for the equivalent in gas. (Though it was noted that sometimes the novelty of retailer apps can wear off for consumers.)
- Data exchange between participants could be via bespoke file formats.
- AM data and technology could be the enabler of innovation, as we saw in the electricity industry.
- It's hard to know right now what the uses of AM data will be in the future, and where the value will arise. It may be coincidental, such as using domestic gas consumption data as a proxy for water consumption.

Abilities of advanced metering

- Suggestion was that consumption data should be logged in half hourly increments, to align with electricity advanced metering. Data points could be aggregated to provide hourly or daily consumption.
- An AM should also be able to communicate its data remotely.
- Would the meter log pressure and temperature? Pressure transducers are expensive: probably not a viable option for domestic meters now. Very few (maybe one, if any) AMs log temperature, but this is much cheaper than pressure correction.
- Remote disconnection and reconnection would be one of the biggest advantages. But, aside from the safety issues that need to be worked through, there is also the question of the life of the battery. To conserve battery life, gas AMs are dormant for most of the day, just "waking up" once a day to transmit consumption data. Remote disco/reco would require meter to be on standby, which has implications for battery life.
- Cybersecurity is a risk that needs to be robustly managed.
- Not clear at the moment what the lifespan of an AM is. It is possible that the modem could become obsolete (because it uses the 2G network, for example), but the meter itself still be functional. It is not clear that a new modem can be retrofitted to a meter.

Timeline for advanced metering uptake

- Cost and reliability are the primary hurdles to AM uptake. At the moment, AMs are either affordable or reliable, but not both.
- For a large scale rollout, retailers are likely to need the costs of metering to be the same or lower than current costs. The savings involved in eliminating meter readings are not great enough to make much difference to the calculation (6 reads/year @ \approx \$2/read). But, in the near term at least, AM is likely to cost more than legacy meters.
- On the other hand, due to the large roll out of gas meters in the 1960-70s, there is a bulk of meters nearing end of life that need replacement which presents an opportunity similar to the electricity AM roll out. Gas AM today is in an equivalent situation to electricity AM in 2000. The tipping point for electricity AM was 2007. Estimate large scale uptake of gas AM to be some years away.

Other issues

- Is it possible to separate the regulator and the meter? Doing so would allow the meter to be located inside, which could be better for communications (meter could possibly use household's broadband rather than cellphone transmission) and mean that weatherproofing is not an issue. This type of setup is not really done at present and would be costly. At the moment, NZS5259 would not allow it.
- Not easy to transplant metering solutions from other countries, as a lot of them have low pressure distribution systems, unlike NZ's higher pressure ones.
- D+1/DR Rules: the Downstream Allocation Working Group (DAWG) has been looking at options to make D+1 allocations more accurate. One of the most promising options is to use more ToU data in the calculations, which would mean more ToU sites on telemetry. There is a suggestion of moving the requirement for telemetry to sites that consume more than 20TJ/year or its daily or monthly equivalent (so as to capture sites like grain drying, which may fall below the annual threshold but have large loads when they are running).
- Regulatory landscape: two key areas to monitor to ensure they remain appropriate and don't become a barrier are (i) the safety/hazardous areas requirements for gas metering and (ii) economic regulation of gas assets by the Commerce Commission. It was suggested (by a retailer) that the competitive element of gas metering is in data provision so the ownership of the meter itself could be separated and 'given back' to the distributor.

Next steps

- GIC to update draft minimum standards document in light of discussion; also add section on metering data considerations
- Next meeting to be scheduled February/March 2018.