

A few
words.

Mr Mark Feather
Executive Director
Energy Policy and Programs
9 January 2017

via email: metering.competition@delwp.vic.gov.au



Dear Mr Feather,

RE: Victorian Government's Transition to Metering Competition - Options Paper

AGL welcomes the opportunity to respond to the Victorian Government's Transition to Metering Competition in Victoria options paper (**Options Paper**).

AGL is one of Australia's leading integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy, providing energy solutions to over 3.7 million customers throughout eastern Australia.

In 2015, AGL established a New Energy division, with a dedicated focus on distributed energy services and solutions. AGL New Energy works with customers of all sizes (residential, business and networks) to understand their energy requirements and design tailored solutions. We offer customers 'beyond the meter' energy solutions, new and emerging technologies including energy storage, electric vehicles, solar PV systems, digital meters through our ring-fenced subsidiary business Active Stream, and home energy management services delivered by digital applications. We are also working with customers to develop a network services capability involving load management solutions.

AGL welcomes the Victorian Government's review of options to identify how best to transition Victoria to the new national arrangements for metering competition for households and small businesses.

Digital metering technology can provide significant benefits to consumers. For example, the detailed information that they capture allows customers to become much better informed about their energy use than was previously possible. With this information, they are better equipped to decide on new products and services and so become more empowered market participants.

Retailers and new entrants alike are currently competing on the development and provision of platforms and tools which give customers easy access to insightful and usable data. There are other opportunities associated with digital meter technology however the exclusive mandate of Victorian distribution businesses in the rollout of these devices means that other market participants encounter substantial difficulties when trying to build up product and service offerings which leverage their advanced capabilities. This limitation is hampering the growth of the new technology sector in Victoria.



AGL's preferred option and rationale

On 26 November 2015, the Australian Energy Market Commission (**AEMC**) made a final rule¹ under the National Electricity Rules to open up competition in metering services and provide consumers with greater opportunities to access a diverse range of products and services.

As a key enabler of the customer-driven transformation of the energy market, metering competition provides households and small businesses access to tools that can offer them more control over how they use electricity and allows them to see the costs associated with their usage and investment decisions. The final rule by the AEMC will facilitate a market-led approach to the deployment of digital meters where consumers drive the uptake of technology through their choice of products and services. This competitive framework for metering services is designed to promote innovation and lead to investment in digital meters that deliver the services valued by consumers at a price they are willing to pay.

AGL has reviewed all options considered in the paper and strongly supports implementation of option 1, being the wholesale adoption of the competition in metering reforms, including the meter specification. Full adoption of metering competition with the national minimum services specification (**NMSS**) is critical to the transformation of a customer-led energy market. AGL agrees with the AEMC's statement that

"the [NMSS] is more appropriate than the current Victorian specification for meters that are installed under a competitive framework. The value of maintaining a separate specification in Victoria is also likely to be outweighed by the competitive benefits and economies of scale that could be achieved through the adoption of a national specification"².

Further, we strongly consider that adoption of option 1 best supports harmonisation and interoperability of metering infrastructure, reducing meter churn and improving customer and market experience.

Although the Options Paper considers four options, we recognise that option 2 is the Victorian Government's preferred option. This preference appears to be based primarily on the protection of certain network benefits enabled by the Victorian minimum service specification (**VMSS**) – the specification being the only difference between options 1 and 2. While both specifications require core functionalities to support remote reading of interval data and the ability to perform remote disconnections and reconnections, the Options Paper draws out the additional Victorian functionality against the NMSS.

In AGL's view, there are ways in which the network benefits enabled by the VMSS can continue to be realised under option 1. For example, the AEMC's final rule provided Distribution Businesses' the ability to continue to use the existing meter³ deployed under the Advanced Metering Infrastructure (**AMI**) program, as network devices, where commercial negotiations to access specific services⁴ did not result in agreement with the Metering Coordinator at a connection point⁵.

Furthermore, AGL notes that the VMSS was originally developed back in 2005, when there was very limited solar PV on household rooftops, no energy storage behind the meter and home energy management was only a concept. Since this time, technology has evolved rapidly resulting in the emergence of new business models to support customer preferences in the uptake of these new products and services. As a result, some of the additional functionality in the VMSS has become either obsolete or has been superseded by other smarter and cheaper ways of realising network and customer benefits. Accordingly,

¹ Expanding competition in metering and related services- <http://www.aemc.gov.au/getattachment/ed88c96e-da1f-42c7-9f2a-51a411e83574/Final-determination.aspx>

² AEMC, Final Determination – Expanding Competition in Metering and Related Services, November 2015, p525

³ Where replaced by the Metering Coordinator for a customer connection point

⁴ Including those covered by the Victorian meter specification

⁵ AEMC, Final Determination – Expanding Competition in Metering and Related Services, November 2015, p88



preserving the VMSS does not appear to be sufficient rationale to defer a move to the full national framework and its associated competitive benefits and economies of scale.

The effect of adopting options 2, 3 or 4 would, as acknowledged in the Options Paper, result in a further deferral of the decision on whether and when to transition Victoria to full metering competition. This would prolong associated investment uncertainty and regulatory overhead for entities seeking to enable the benefits of digital metering across their national customer base. Ultimately it will be Victorian consumers that miss out on the benefits of choice, delivered through a competitive market.

Benefits of retaining the Victorian specification

Customers in Victoria have incurred costs in supporting the additional functionalities required by the VMSS both in the meter and the Distribution Businesses back office systems. In AGL's view, the retention of these additional functionalities as mandatory no longer serves the interests of Victorian consumers:

1- ZigBee transceiver that enables a home area network (HAN), including in-home displays-

Zigbee ver 1.0 SEP is obsolete. This communications protocol is no longer being used and devices that are Zigbee-enabled are not available in the market. However, the cost of this added functionality (~\$8 a unit which excludes the cost of operationalising this functionality) is borne across the customer base.

Home automation and device integration is rapidly evolving. The Zigbee communications protocol has been overtaken by new technology platforms that enable the same and additional capabilities. As a result, the benefits that were identified through smart devices will be better realised without prescribing the Zigbee communications protocol.

2- Notification of supply failure (often called "last gasp") and restoration

The last gasp functionality is only supported by RF Mesh Solution technology and therefore is currently not deployed by all the Distribution businesses in Victoria. AusNet Services have adopted the WiMAX solution. This requires modems with battery backup or super capacitor at additional cost to support it. In our view there are alternative solutions particularly when there are a large number of devices on the network.

3- Load limiting (often called supply capacity control)

The supply capacity control functionality was debated at length at the inception of the VMSS. This functionality is not offered as a customer service, nor being used by Distribution Businesses. This is due to stakeholder concerns expressed at the time on the appropriate use of this functionality and associated customer implications. Nevertheless customers in Victoria have incurred the additional costs of the meter and the supporting back office network systems to support it.

4- Load management capability

Load management is currently not used, nor offered as a service to Retailers by the Distribution Businesses in Victoria.

There are alternative solutions and technologies that are more advanced and efficient. Through a number of trials, including a trial hosted on United Energy's distribution network⁶ and a trial soon commencing in South Australia⁷, AGL is

⁶ <https://www.agl.com.au/about-agl/media-centre/article-list/2016/march/agl-trials-impacts-of-emerging-technologies-on-the-grid-and-energy-bills>

⁷ <https://www.agl.com.au/about-agl/media-centre/article-list/2016/august/agl-launches-world-largest-solar-virtual-power-plant>

demonstrating alternative means of implementing programs for customer demand management that benefit network operations. The trial hosted by United Energy produced encouraging results, not only in the demand reductions achieved but in the customer feedback on the trial which received a 99% satisfaction rating. Rather than relying on the meter to deliver the load/demand management, this program leveraged sophisticated cloud based control of smart AC units and energy storage systems over the public 3G network. This infrastructure provided high data resolution, real-time monitoring, and the ability to actively control these smart devices which is not achievable through the smart metering infrastructure.

This is direct evidence that the VMSS is not itself a critical enabler of these services. Rather the market will find innovative ways to enable demand management that take advantage of new technologies as these become available. Continuing to impose the Victorian specification may therefore stifle rather than stimulate new customer demand management programs.

In any event, the supply contactor for load management is available as a standard in most digital meters in the market.

5- “auto-disconnect”, a safety feature that automatically disconnects supply when attempting a remote reconnection

The AEMC and Jurisdictional Regulators are currently considering whether digital meter safety functionality, such as ‘auto-disconnect’, will best protect customers where a remote energisation service is carried out at a customer connection point.

The Australian Energy Market Operator (**AEMO**), in conjunction with Standards Australia’s EL-011 committee, is currently developing an Australian Standard for smart meter safety, which is anticipated to be mandated through AEMO’s metrology procedures. AGL supports this approach because it will ensure consistency across all meter manufacturers, will reduce cost and maintains safety in the use of remote re-energisation and de-energisation.

The Essential Services Commission of Victoria has been consulted in the development of both processes, and therefore this issue should no longer be considered as an isolated Victorian service.

6- Metering installation and asset management (including tamper alert, import energy detected supply capacity control)-

Alerts, alarms and event recording is a standard functionality in meters including “non- smart” meters and is not specific to Victoria. However any additional functionality that is not deemed standard, for example ZigBee communications protocols, will require specific alerts and events. This is currently an additional cost in the VMSS with no real benefits being realised.

Protecting regulated AMI investments

AGL is of the view that the value of smart meters installed by Distribution Businesses pursuant to the Victorian mandate will be sufficiently protected under both the AEMC metering competition rule and the AMI Order in Council for the Victorian Government to adopt option 1- full adoption of metering competition with the NMSS.

Exit fees- The current Victorian AMI Cost Recovery Order in Council and the decision of the AEMC final rule has resulted in AMI regulated cost recovery being extended to 31 December 2020. This means that that Retailers who seek to replace an AMI meter prior to the meter reaching its end of life or becoming faulty, will be subjected to an exit fee. This exit fee for a single phase AMI meter, based on current AER approved pricing for the Victorian Pricing Determinations FY2016-2020, ranges between \$294.38 - \$611.70⁸. The

⁸ <http://aer.gov.au/networks-pipelines/determinations-access-arrangements/jemena-determination-2016-20>
<http://aer.gov.au/networks-pipelines/determinations-access-arrangements/powercor-determination-2016-20>
<http://aer.gov.au/networks-pipelines/determinations-access-arrangements/united-energy-determination-2016-20>



size and significance of this fee in comparison to the cost of a replacement digital meter will act as a suitable commercial deterrent, ensuring that full value is extracted from existing AMI metering infrastructure.

Meter Coordinator (MC) Role- Under the national metering competition framework, Distribution Businesses will become the initial MC for all sites with a regulated meter. Distribution Businesses will remain in this role until such time as the Retailer for the customer site appoints a new MC, or the regulated meter becomes faulty or reaches end of life and the Retailer is obligated to replace the meter and appoint an MC.

Therefore Distribution Business in Victoria are by default the MC and will be sufficiently protected under the exit fee arrangements that apply.

Network Devices- The AEMC final rule addresses the concerns of Distribution Businesses in Victoria with respect to the provision of societal benefits and network operational efficiencies through their limited right to install and utilise network devices. Under the new rules, Distribution Businesses can install a network device if they are unable to reach an agreement with the MC to access equivalent services through the metering installation. This was adopted purely as a transitional measure specifically for Distribution Businesses in Victoria as a way of allowing the expected benefits of the AMI program to be realised, even if the AMI meter was replaced prior to the end of its useful life⁹. In our view it is critical that approval of network devices includes a time-bounded derogation that eases the transition to the new, contestable marketplace. These arrangements are necessary to prevent Distribution Businesses installing 'network devices' without attempting to enter into 'good faith' negotiations with MCs at a connection point.

Access regulation- In our view, the AEMC clearly articulated why additional regulation on access to MC Services and on the price of services is unnecessary and, if introduced, could create economic barriers to effective competition. Specifically, the AEMC identified that:

"....introducing access regulation at the beginning of the market to manage the potential emergence of competition issues is likely to introduce more costs than benefits. In particular, access regulation may significantly diminish the incentives for different parties to invest in metering services. Without these incentives, investment in advanced metering infrastructure and the services this would facilitate may fail to develop. If that occurred, consumers, retailers, DNSPs and energy service companies would not be able to realise any benefits of advanced meters for many years"¹⁰.

However, the AEMC did acknowledge industry concerns that competition in the market may not eventuate as intended, and that therefore the need for access regulation should be reviewed three years after the commencement of metering competition on 1 December 2017. AGL supports this approach and the market review.

Importance of metering competition to customers

AGL supports metering competition under a market-led approach. A market-led roll out provides flexibility for retailers and other third parties to develop new products and services to customers by enabling a number of benefits:

- creates a new competitive metering service provider market, increasing the choice to retailers depending on service and price and reducing customer costs;
- avoids the pay now/benefits later approach which is problematic to customer acceptance and avoidance;
- customers retain choice over what products and services best deliver the solutions they require;
- allows customers a much greater ability to track and understand their energy usage by enabling intra-day monitoring of their energy use;
- customers can opt in/out of having a digital meter- they are not mandatory.

<http://aer.gov.au/networks-pipelines/determinations-access-arrangements/citipower-determination-2016-20>
<http://aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-sp-ausnet-determination-2016-20>

⁹ AEMC, Final Determination – Expanding Competition in Metering and Related Services, November 2015, p88

¹⁰ AEMC, Final Determination – Expanding Competition in Metering and Related Services, November 2015, p81



AGL has made a significant investment by establishing a wholly owned ring-fenced subsidiary Active Stream as the Metering Provider (**MP**) and Metering Data Provider (**MDP**). AGL has appointed Active Stream, as an accredited MP and MDP, to rollout digital meters to our customers outside of Victoria.

The market-led rollout of digital meters by AGL is focused on customer choice and control. This includes writing in advance to our targeted customers informing them that they will be receiving a digital meter at no cost to them and allowing them the opportunity to opt out.

Since March 2015, AGL has ramped up the deployment of digital metering to our customers across South Australia (SA), Queensland (QLD) and New South Wales (NSW). We have installed over 100,000 digital meters to residential and small business customers with only 1 per cent of customers choosing to opt-out of receiving a digital meter.

As a result, AGL is offering and trialling a number of products and services in SA, QLD and NSW, enabled by digital metering through a competitive approach that go beyond traditional energy plans. AGL is keen to make these products and services available to our customers in Victoria, however this is fundamentally dependant on Victoria adopting the AEMC final rule in its entirety. These include:

Electric Vehicles: From November 2016, AGL will offer an Electric Vehicle (EV) concierge service and a \$1/day "all-you-can-eat" capped charging plan. The capped charging plan is made possible by digital metering infrastructure which can measure the EV charging load within the household, and reconcile it against the various network and retail tariff structures that apply across AGL's service area.

Solar: Digital metering allows us to provide near real time information and insights to our customers to maximise the value of their solar system. Our 'Solar Command' product provides customers with a personalised online dashboard with near real time information on the performance of their rooftop solar system and inverter unit. We are rolling out our new 'dual element' net meter which allows us to provide customers with insights through Solar Command online and via the AGL mobile App. These customer benefits and insights include:

- o Expected daily solar production versus actual production;
- o Information on whether the system is performing to its potential based on system size, arrangement, configuration and shading profile.
- o recommendations on when to use more solar-produced electricity e.g. pool pump or air conditioning while solar production curve is higher than consumption

Hot water: SA controlled load hot water demand is causing wholesale price spike events. These spike events are managed by the operation of Torrens supplying hot water peak which result in costs to AGL and the market. This includes the ramping up and down of Torrens, cost of meeting price spikes, starting additional generation units and keeping them on to meet hot water peak.

Our digital metering solution being rolled out in SA, has the remote control load functionality which enables the switching of hot water loads remotely. This functionality resulted in 1,000 digital meters reconfigured in a recent event shifting 1.4MW of load via remote communication signal. This was simply by changing the switch on time from 11:45pm to 1.30am with randomised start times to reduce peak.

AGL Mobile App: The AGL Energy mobile app enables customers with a digital meter to gain greater control over their energy usage. Customers can see usage and usage charges on a daily, weekly, monthly and yearly basis enabling them to identify usage trends and see a projection of their next bill. There is also the ability to set an alert when overall spend for the billing period reaches a specified amount plus customers can pay bills from the app using their credit card.

AGL's Virtual Power Plant (VPP) Trial: AGL is currently in the process of selling and installing 1,000 batteries in residential homes and businesses across metropolitan Adelaide. These batteries will be remotely connected and managed,



to provide 5 MW of peaking capacity and offering customers the opportunity to save on their energy bills. Customers signing up to the trial will also receive a digital meter. This is to allow the monitoring and verification of data on the network. However, the Network support services and the orchestration of the VPP will be delivered through sophisticated cloud based solutions and VPP infrastructure platform.

Implementation and Transition

Irrespective of the final option selected, greater clarity on its implementation and key timeframes is required to ensure that suitable regulatory frameworks are in place to support its adoption. For example, changes to all identified regulatory instruments in the Options Paper, particularly the Energy Retail Code¹¹, is required to enable specific flexibilities and/or obligations on market participants in line with the AEMC final rule. We also believe that a government communication plan should be developed in conjunction with industry to inform customers of the transition to metering competition, and that sufficient engagement with industry and the appropriate Victorian authorities be conducted to secure business and system readiness for 1 December 2017.

In addition, the Victorian Government should also confirm that meter exit fees in Victoria will not be extended further than the AEMC's recommended date of 31 December 2020 and that the existing metering derogation will cease on 1 December 2017.

Conclusion

AGL believes that the adoption of option 1- full adoption of metering competition with the NMSS, best supports the Victorian Government's objectives in achieving metering competition and protecting network investments in Victoria by aligning the regulatory and technical frameworks with other Jurisdictions in the NEM. AGL is of the view that the value of digital meters installed by Distribution Businesses pursuant to the Victorian mandate will be sufficiently protected under both the AEMC metering competition rule and AMI Order in Council.

In our view, should the Victorian Government progress with their preferred option 2, we do not consider that a competitive market will occur in Victoria due to the associated cost barriers imposed through the higher VMSS and the application of exit fees.

We therefore urge the Victorian Government to carefully consider its preferred approach and its impact on Victorian customers. AGL appreciates the opportunity to provide our view and is very happy to engage further with the Victorian Government in ensuring that the option adopted is in the interest of consumers in Victoria both in the short and long term.

Should you have any questions in relation to this submission, please contact me on (03) 8633 6836 or email on sbashir@agl.com.au.

Yours sincerely,

Head of Policy & Regulation, New Energy

¹¹ AEMC, Final Determination – Expanding Competition in Metering and Related Services, November 2015, p89