



28 October 2021

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Australian Energy Market Commission  
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Reference code: EM0040

Dear Ms Collyer,

**Response to the AEMC's review of the regulatory framework for metering services directions paper**

AusNet is pleased to have the opportunity to provide this submission to the Australian Energy Market Commission's (**AEMC**) review of the regulatory framework for metering services directions paper. The review is a prime opportunity to improve customer outcomes for Type 1-4 smart meters in the National Electricity Market (**NEM**).

We have extensive experience with smart meters having replaced or installed over 787,000 smart meters to our customers to household and small businesses, pursuant to a Victorian government derogation and orders in councils. In 2017, the Victorian Government deferred metering competition through orders in councils that altered the National Electricity Rules (**Rules**) that apply in Victoria. Electricity distribution businesses (**DBs**) remain the exclusive provider of Type 5 smart meters to residential and small business customers with electricity use up to 160 MWh of electricity per annum in Victoria.

AusNet also owns Mondo Power Pty Ltd (**Mondo**), which provides a variety of contracted transmission and distribution services, including grid connections for new generators, contestable metering, battery energy storage systems and aggregation of Distributed Energy Resources (**DER**). Mondo is actively involved in providing contestable metering to customers in all NEM jurisdictions for 25,000 sites.

Our regulated smart meter network has been enhanced to collect a range of important distribution network data that can be utilised to provide insights into the performance, safety and maintenance aspects of our distribution network assets. Customers on our network are safer, have higher reliability and benefit financially from our smart meters. The table in Appendix A below outlines the ways our smart meters are being used to directly improve customer experiences.

The Directions Paper assesses a range of options for improving the regulatory framework for metering services, from incremental to more significant changes. This is an opportunity for DBs in other jurisdictions to provide the same smart meter benefits to their customers as are provided in Victoria, and we have provided the below recommendations to promote these benefits.

**Achieving critical mass of smart meter in a timely manner**

Our regulated smart meter rollout achieved greater than 99% smart meter deployments. Having a DB-funded smart meter rollout avoided issues that are currently preventing the deployment of a critical mass of smart meters in a timely manner in other NEM jurisdictions.

We have observed the importance of metering providers engaging directly with customers. This is the case in both contestable metering and for our regulated Victorian smart meter customers. Direct engagement with customers was essential to our ability to resolve the most challenging replacement issues, such as asbestos and wiring issues.

The benefits of direct customer engagement extend to ongoing customer interaction and value-added services, such as data portals. The Power of Choice rule changes made in 2017 assign the customer relationship for metering to the retailer for customers consuming less than 160 MWh per annum. Customers who directly appoint their metering provider, at a time they consumed greater than 160 MWh per annum, can have their metering provider changed by their retailer if their consumption drops below 160 MWh per annum. This issue is impacting our ring-fenced contestable business.

It would be better to extend direct customer engagement rights to protect the customer's preferred metering providers from the retailer being able to replace the meter, in circumstances where the customer's consumption drops below 160 MWh per annum. We recommend making this minor change to the Rules.

### **Enabling better access to smart meter data**

Our experience in providing our customer benefits, has taught us that the most useful smart meter data is the 5-minute (or 1-minute) interval data for more than 90% of meters that includes voltage, power and power factor data (**PQ data**) measured in time synchronised instantaneous measurements that is loaded into a central data source. With this resource, DBs can derive a full range of customer benefits and even provide those benefits to customers who themselves do not have an active smart meter, using voltage loop analysis. The average 5-minute or 30-minute data prescribed in the national services specification in schedule 7.5 of the Rules would also be useful but less precise in determining the state of the network. Specifically, we have systems that incorporate and run analytics on data from:

- 787,000 smart meters to record PQ data (time synchronised instantaneous measurement) every 5-minutes collected every 4-hours or every hour depending on the installed communications module;
- of these smart meters, 100,000 meters in prime network locations (e.g., golden meters) are recording 1-minute PQ data in addition to 5-minute PQ data for purpose of detailed voltage profiling with data downloaded as required; and
- the remaining 5,900 type 1-4 meters on our electricity distribution network providing 5-minute, 15-minute or 30-minute energy data (not PQ data) provided the next day.

For DBs nationally to achieve this level of benefits there must a minimum smart meter content requirement guarantee. Voltage, power (or current) and power factor data should be provided to the relevant DB, who can merge the data with geospatial, network topography data, asset information and other network data to deliver real customer benefits and better manage the two-way flows of energy associated with distributed energy. This data should be provided to DBs at least every 6 hours to enable customer and network benefits like the full suite of benefits that we provide listed in Appendix A.

### **Accessing the smart meter data**

A common exchange architecture used among industry participants like B2B transactions is the best way to share this information. B2B system and processes are used to provide the metering data for every customer in the NEM to the customers' retailer and DBs. Having a common interface, that leverages B2B existing market systems, is likely to reduce long-term transaction costs for data access because industry participants will be using the same communications platforms. We recommend extending the existing B2B system and processes to include PQ data with other metering data.

The minimum services specification, under schedule 7.5 of the NER, is well placed to establish a change to metering obligations that would apply to new or altered metering installations. Modifying the minimum services specification, as opposed to seeking payments from DBs, makes contestable parties responsible for providing these clearly defined services. Regulated DBs would

then be able to efficiently invest in systems and services, and leverage their other network data, to provide the full range of customer benefits that smart meters can provide.

Therefore, we recommend that the AEMC amend the meter service specification to require that new smart meters must be capable of providing PQ data, including voltage, power (or current), and power quality as a scheduled meter read service. Then DBs in other jurisdictions can provide the same smart meter benefits that we provide to our customers.

#### **Introduction of a centralised organisation to collect and distribute smart meter data**

We do not support the introduction of a centralised organisation, like the United Kingdom's Data Communications Company (DCC), to collect and distribute of all smart meter data. We already have a mature industry of communications solutions that leverage existing 4G telecommunications network infrastructure with a variety of service providers. The establishment of mesh radio infrastructure may be of some benefit, but DBs are better placed to provide this shared capability as it is the individuals DBs that host the access points on distribution poles.

The costs involved in establishing and operating the organisation would likely need to be socialised among all electricity consumers via regulation and ultimately on consumers. NERA outlines that DCC costs in the United Kingdom currently work out to be around \$74 AUD per customer per year. These charges are 10% higher than our current single-phase meter yearly alternative control service for the complete metering service (and not just the meter comms and data service). The costs of establishing a centralised organisation to collect and distribute smart meter data are not justified by the benefits, in comparison to the alternative options of making no such major change or DBs providing smart meters.

Additionally, this organisation will take time, potentially years, to establish, delaying any benefits of coordinated data delivery. Therefore, the option of authorising a centralised organisation should not be progressed.

If you have any queries on our submission or wish to meet with us to discuss our experience in providing customers with the benefit of smart meters, please do not hesitate to contact Justin Betlehem on 03 9695 6288.

Yours sincerely,



Charlotte Eddy  
General Manager Regulatory Strategy and Policy

## Appendix A: Benefits of smart meters for customers

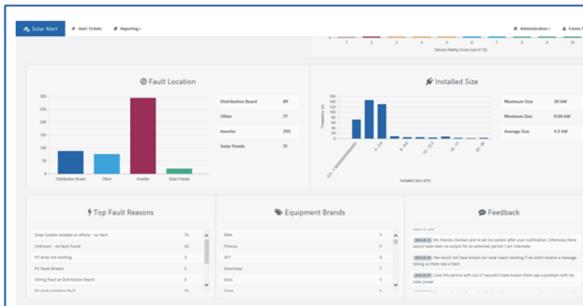
AusNet provides a range of customer services that are making significant contributions to making electricity distribution services safer and more reliable while assisting customers to achieve reductions in their energy bills.

The customer benefits that are currently being delivered through our AMI network are set out in the table below.

<b>Benefit type</b>	<b>Initiative</b>	<b>Description</b>	<b>How does the AMI network enable this initiative?</b>	<b>Metrics</b>
<b>Keeping your energy prices down</b>	Alerts for when your solar stops working	We send customers an SMS when their solar system has stopped working so that they get their system reviewed and quickly resolve the issue. This means they are able to continue generating electricity to receive the benefits of their feed in tariff and/or offset their own consumption.  We send them another message to notify them that solar generation has re-started so they are aware that they are back on.	Our AMI network collects the quantity of energy exported for our solar customers which is analysed to identify customers where no energy is being exported.	Over 6,000 customers notified of an issue with their solar system, enabling the issue to be addressed and generation restored.
	Reducing energy theft	We are able to monitor electricity use to determine if energy is being stolen. Detecting and shutting down these illegal and unsafe premises allows us to prevent further losses which would otherwise be paid for by all customers.	Our network intelligence system utilises voltage data collected by our AMI network to identify sites where electricity theft may be occurring.	In excess of \$1 million per year of stolen electricity is detected and shut down.
	An online webpage to allow you to see your energy use	Our meter data portal enables customers to understand when they are using energy and therefore how to manage their consumption.  This was integrated into the Victorian Government Energy Compare website so that customers could use their energy data to get the best deal from their energy retailer.	Customer energy consumption and solar export is collected by our AMI network and provided to our My Home Energy portal for customers to view and download.	Over 22,000 customers registered with average 55 logins per day.  Customers on average save \$223 through switching electricity retailers.
<b>Keeping you and your community safe</b>	Identifying and fixing faults before they become safety issues	We can pro-actively identify faults on the network (low voltage service neutral faults) that can lead to electrocution, so we are able to fix them before any customers are harmed.	Our network intelligence system utilises data collected by our AMI network to identify low voltage service neutral faults.	Approximately 300 electric shocks have been prevented since 2013. Over 200 loss of neutral truck visits in 2019.
	Prioritising life support customers in an outage	In the event of an unplanned outage, we can specifically detect when life-support customers are off supply so that we can rapidly respond and prioritise restoring supply to their property and provide advice to follow their emergency plan in the event of any delays.	Our AMI meters have been configured to send alerts when life support customers experience a power outage	100% life support alerts actioned.

Benefit type	Initiative	Description	How does the AMI network enable this initiative?	Metrics
	Detailed view of customers in outages	In addition to regular maintenance and inspection programs, we will be able to detect if certain areas in the network are at a higher risk of safety issues such as fires from fuse candling. We can proactively investigate and mitigate these risks before issues occur.	Power quality data collected by our AMI network will be processed by our network intelligence system to determine areas of our network that are at risk of fuses “candling”.	Newly implemented
Ensure you are kept accurately informed in the event of an electricity outage	Correct mapping of the network to understand who is on and off supply	We are working to ensure that our data is constantly updated and accurate so that we are able to identify which customers will be off supply when we have a planned outage. This ensures accurate notification of outages so customers can plan accordingly.	Our AMI network collects voltage data that enables our asset management team to accurately identify each customer's substation to ensure outage notifications are accurate.	50% reduction in planned outage notification breaches since implementation (9 months)
	Enabling our call centre staff to view meter supply status	When customers call we are able to use the smart network to check in real time if a customer's meter is on supply and therefore if the supply issue is caused by an AusNet Services network outage, or caused within the house. This means our call centre staff can provide timely, accurate information to customers about whether we will restore supply or if the customer needs to contact an electrician. This reduces the likelihood of wasted truck visits that are paid for by customers.	Our AMI network enables our meters to be ‘pinged’ real-time to support our customer service team to check the supply status of a meter.	Average of 88 ‘pings’ per day with peaks of over 300 during storm events.
	Detailed view of customers in outages	This allows us to detect outages for individual customers. We can use this capability to ensure all customers' supply is restored after an outage and, if not, which individual customers require assistance.	Our AMI network will allow our control centre to view the supply status for all customers in real time and proactively initiate a site visit to restore supply where required.	Newly implemented
	Enhance outage notifications and alerts utilising AMI data	We will embed AMI data throughout our unplanned outage processes to improve notifications, monitoring and accuracy of reporting regarding outage timeframes.	Customer consumption data, events provided by our meters and network data collected by our AMI network will be utilised to improve communications sent to customers before, during and after outage events, and to improve accuracy of reporting of total minutes off supply for customers.	Newly implemented
Responding to your solar or battery application quickly	More accurate and timely approvals for solar and battery applications	Our relaunched online pre-approval tool reduces wait times and now provides the maximum capacity the customer is able to export as well as the inverter capacity allowed for the system. The tool combines business rules with AMI data to provide an accurate assessment for each customer in real-time.	Our DER approval tool uses data collected by our AMI network to provide an accurate assessment of DER capacity available to be installed at a customer's property.	Average of over 100 pre-approval requests per day with consistent 90%+ online pre-approval rate.

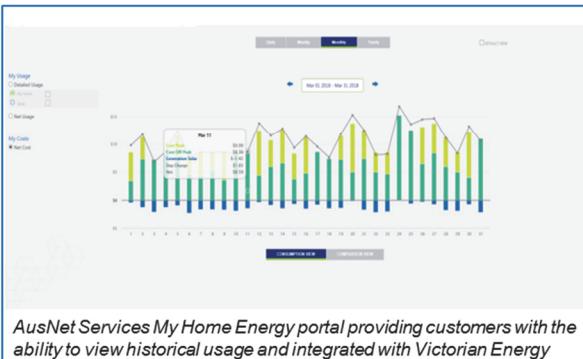
The data collected by our smart meters has been progressively integrated in business operations through several dashboards, safety alerts and monitoring tools. One example is 'Explore' is illustrated in the figure below.



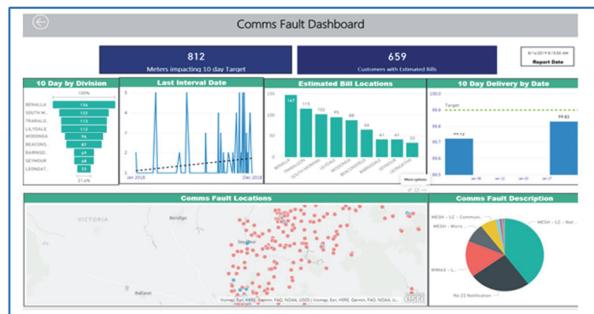
AusNet Services Solar Alert tool that identifies customers who's solar panels have stopped generating.



AusNet Services Explore dashboard that provides operational teams and network engineers visibility of near real-time individual customer and aggregated power quality data



AusNet Services My Home Energy portal providing customers with the ability to view historical usage and integrated with Victorian Energy Compare website.



AusNet Services AMI communication fault dashboard providing visibility of faults locations and meter communication status.