7 November 2024

Ms Anna Collyer
Chair
Australian Energy Market Commission
Via online Portal
REF: ERC0399

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Dear Ms Collyer,

Ausgrid response to AEMC's "Real-time data for consumers" Consultation Paper

Ausgrid is pleased to provide this submission to the Australian Energy Market Commission (**AEMC's**) Consultation Paper on Energy Consumers Australia's (**ECA**) "*Real-time data for consumers*" rule change request (**Consultation Paper**).

Ausgrid is a Distribution Network Service Provider (**DNSP**) which operates a shared electricity network that powers the homes and businesses of more than 4 million Australians living and working in an area that covers over 22,000 square kilometres from the Sydney CBD to the Upper Hunter. Ausgrid is committed to supporting and enabling changes to the National Electricity Rules (**NER**) to accelerate the installation of smart meters, which will deliver benefits to customers and the National Electricity Market (**NEM**), including network visibility and safety improvements.

This rule change proposal is part of a package of reforms the AEMC is considering to realise the full benefits of accelerated smart metering and the integration of Consumer Energy Resources (**CER**). We support the underlying intent of ECA's rule change proposal to improve access of real-time data to consumers, which the ECA highlights is "…*critical to enabling consumers to offer, and benefit from, services that will help them manage their bills and deliver the transition"*[1].

Our response provides broad support for the ECA's rule change proposal. We have also provided further information on DNSP access to real-time data in **Attachment A** of our response.

Ausgrid supports efficient, equitable and improved access to real-time data for consumers, which can support market innovation and flexibility

Improved access to real-time data will empower consumers to better understand their usage and engage or participate in the energy market. In our view, this may also incentivise greater competition to unlock the development of innovative and compelling products and services that consumers value.

Our experience shows real-time data provides demonstrated 'whole-of-market' benefits for consumers through lower network costs and supports the continued uptake and integration of CER. For example, real-time data supports flexible services such as virtual power plants (**VPPs**) and flexible pricing arrangements, which provide long-term benefits to all consumers (as demonstrated by Ausgrid in Project Edith[2]).

To realise outcomes for consumers, real-time data should be in a useable and understandable format with consideration for education needed to support engagement

Existing approaches for accessing data are generally not 'consumer friendly'. This means not all consumers are likely to be fully aware of the benefits real-time data provides and how to use this data effectively. Empowered and educated consumers are more likely to take up innovative

[1] ECA rule change request: access to real time data for consumers and their authorised representatives p3: rule_change_request.pdf

[2] Ausgrid, Project Edith: https://www.ausgrid.com.au/About-Us/Future-Grid/Project-Edith

products, services or participate in demand response programs, which supports the energy system and provides customers with the opportunity to save on their electricity bills. We recommend this rule change ensures the data format is usable and understandable for consumers. We also encourage the AEMC to consider the consumer education or support needed to adopt the access and use of real-time data to enable consumer benefits to be realised.

DNSPs can unlock a greater scope of smart metering benefits than consumer access to real-time data alone

While Ausgrid welcomes the AEMC's recent draft determination on the *Accelerating smart meter deployment* rule change which would provide critical DNSP access to 'basic' Power Quality (**PQ**)[3] data, consistent with earlier submissions we are concerned there is no provision for real-time data through this rule change. The proposed approach requires DNSPs to procure access to real-time data from a small number of Metering Providers (more than 90 per cent of meters are owned by only two metering providers in Ausgrid's network). This does not promote effective competitive pressure in the current framework and limits market transparency of data services.[4]

Therefore, we support DNSP access to real-time data being considered in this rule change to enable DNSPs to deliver significant direct benefits to all consumers, through efficient growth capital expenditure and operational expenditure, and by enhancing safety and outcomes for CER customers. While there are legitimate costs to deliver access to real-time data, we encourage the AEMC to examine the costs and benefits of extending provision of real-time data access to consumers ***and*** DNSPs, which will unlock greater 'whole-of-market' benefits and efficiencies.

The enabling regulatory framework should be outcomes-based, with a clear definition of real-time data, standardisation, interoperability and improved market transparency

We agree a clear definition, format, standards and communication protocols will improve market outcomes for more seamless integration and data sharing between parties (including DNSPs). This promotes efficiencies by avoiding complex or bespoke arrangements between network businesses, third parties and metering parties to reduce existing technical or commercial overheads. In addition:

- We support the ECA's proposed definition for real-time data *as 'delivered to parties instantaneously or within a five-minute timeframe'* as a minimum service specification.
- We recommend provisions to improve transparency of cost recovery (for consumer ***and*** DNSP access). Current arrangements for 'advanced' (real-time) PQ data and enquiry services are not transparent and may prevent realisation of smart metering benefits.
- We agree an outcomes-based approach to interoperability will help facilitate flexibility and innovation between smart meters, consumers and third-party devices or apps.

Real-time data use-cases and their benefits continue to be a developing area alongside innovative products and services for consumers. We recommend the AEMC considers how emerging use cases are catered for in accordance with proposed requirements, common data standards and delivery mechanisms, to promote cost-reflective and efficient provision of data over time.

We welcome further collaboration with the AEMC and industry on this rule change proposal. Please contact oli.morganwilliams@ausgrid.com.au should you wish to discuss our response further.

Yours sincerely,

Tim Jarratt

Group Executive, Market Development & Strategy

[3] The preceding AEMC Metering Review and Draft Determination defines Power Quality data as 'Basic' PQD with the characteristics of the power supply as measured by the meter, comprising voltage, current and power factor and 'Advanced' PQD which generally encompasses measurements in addition to those identified in basic PQD (including real-time data).

[4] Ausgrid response to AEMC's accelerating smart meter deployment – Draft Determination: Microsoft Word - 20240530_Agd sub to AEMC accelerating SM roll out

Attachment A: Ausgrid response to feedback on DNSP access to real-time data

The benefits for improving access to real-time data for consumers

Consumer benefits from improving access to all smart metering data, including real-time data are well documented and acknowledged in the ECA rule change proposal. Ausgrid supports strengthening data sharing and access frameworks for consumers to deliver:

- Improved customer awareness and engagement – supporting better understanding and management of energy usage (such as estimates for appliances and time of use).
- Improved customer experience – through notification to customers of changes in load profiles or status of solar export to avoid bill shocks or improve CER utilisation.
- Greater innovation and competition – through enabling development and access to innovative products or services that consumers value, which can support the grid at times of peak and minimum demand.
- Greater consumer participation or engagement in the energy market (either directly or indirectly), through greater uptake of innovative products and service offerings.

Consistent with the AEMC Metering Review final report, we support an improved data access and sharing framework for smart meter data (including real time PQ data), and we recommend the AEMC considers access to real-time data for consumers ***and*** DNSPs.

Access to smart metering data enables DNSPs to unlock a greater scope of smart metering benefits for improved network planning and operation, now and in the future.

The ENA's submission[5] to the AEMC Metering Review Directions Paper (Directions Paper), provides a useful reference of potential DNSP use cases. Materiality of benefits are generally dictated by each use case, the level of smart meter penetration across a relevant network area and the granularity and frequency of data available. These factors will also change overtime throughout the accelerated rollout and as LV network needs evolve.

The AEMC's Draft Determination for the *Accelerating smart meter deployment* rule change has proposed provisions for DNSPs to access to 'basic' PQ data[6] suitable for network visibility, planning and some safety improvements. However, access to real-time data can unlock further use cases including (non-exhaustive):

- **Outage management** – including real-time alerts and verification of customer supply or cause of outage at the time, or in advance of customers becoming aware of an outage.
- **Life support customer outage management** – improved notification of outages affecting life support customers to facilitate restoration prioritisation;
- **Asset condition monitoring** – using neutral integrity data[7] to assist in prioritising replacement and identifying potential safety risks, which helps detect defects within electricity infrastructure assets, allowing networks to fix them before they fail;
- **Innovative products and services for customers** – which promote demand response and/or use of cost-reflective tariffs or new dynamic access products such as flexible connections and dynamic operating envelopes; and

[5] ENA submission (Appendix A), p20: https://www.aemc.gov.au/sites/default/files/2021-11/Rule%20Change%20Submission%20-%20EMO0040%20-%20Energy%20Networks%20Australia%20-%2020211028.PDF

[6] This includes 5-minute readings of voltage, current and phase angle for both import and export; recorded for each element in the meter; and delivered for 100% of installed smart meters in a batch at least once every 24 hours.

[7] Neutral integrity data includes use of power quality data to assess asset condition to support prioritising replacement and identifying potential safety risks.

- **Dynamic voltage management** – monitoring voltage compliance at customer premises using smart meter data and actively setting network voltages. This can also be used to manage system security risks from minimum system demand events (e.g. emergency backstop measures).

These use cases are examples where DNSPs can deliver greater benefits enabled by the accelerated smart meter deployment, which would be unlocked through improved access to real-time data. We consider these use cases would provide a range of benefits for customers including:

- More efficient use of resources through a reduction in customer callouts, improved outage management capability and safety incidents;
- Enhanced safety benefits through neutral integrity monitoring and life support validation;
- Implementing more efficient growth capex through granular and timely information about CER assets, supporting faster and more accurate decision-making to integrate CER;
- Support better utilisation of CER assets and reduce the risk of curtailing CER through dynamic operating envelopes and dynamic pricing (as trialled by Project Edith); and
- Additional benefits through connectivity validation, voltage compliance and dynamic network management.

Further, the provision of real-time data during a minimum system demand event could assist DNSPs and AEMO manage these events and monitor the performance of emergency backstop measures (including active distributed PV curtailment, relevant agent schemes, emergency voltage management and support targeted shedding of reverse flowing feeders when absolutely necessary).

Victoria provides a useful case study for the NEM, where safety and network efficiency benefits are well understood with ubiquitous smart metering in place since 2015. Examples from one DNSP use case included $26 million per annum savings for improving safety (through neutral fault detection) [8]. Victorian DNSPs are now delivering further benefits, including customer experience (e.g. data portals, outage notifications, solar PV export notifications), in addition to local network and wider system security benefits, including dynamic voltage management.

Consistent with Victoria's experience, DNSP access to smart meter data will deliver a range of benefits. In this context and in preparation for the AEMC's *Accelerating smart meter deployment* final rule, Ausgrid has undertaken trials for smart meter use cases to demonstrate benefits and inform prudent investment decisions for 'advanced' real-time PQ data or meter enquiry services. These are key enablers to our CER integration strategy, which aims to:

- Make it easier for customers to participate in voluntary demand response programs and/or earn incentives through tariffs;
- Improve visibility of existing and emerging network constraints so they can be resolved, and the network can be managed more dynamically and efficiently;
- Improve the ability of non-CER customers to access and benefit from excess solar energy;
- Improve our ability to work with CER customers, aggregators and VPPs to coordinate and optimise flexible loads; and
- Increase resilience for customers in areas where local generation and CER can be utilised to reduce frequency and duration of outages.

We welcome the opportunity to support further collaborative work in examining the costs and benefits of the rule change with the AEMC and industry through this rule change process.

[8] AMEC Metering Review Final Report, p122: https://www.aemc.gov.au/sites/default/files/2023-08/emo0040_-_metering_review_-_final_report.pdf

There are costs and limitations under the existing provisions for 'advanced' PQ data (including real-time data)

There will be legitimate costs to improving access to real-time data for consumers ***and*** DNSPs that should be considered in the investigation of this rule change. While smart meters can collect technical data at short intervals, there are costs associated with transmitting data on a near real-time basis (e.g. storage and telecommunications costs). However, there are also costs that are incurred by consumers, DNSPs and authorised third parties under the existing market framework.

Under the AEMC's draft determination on the *Accelerating smart meter deployment* rule change, DNSPs would be required to negotiate access to 'advanced' data. The only avenue for DNSPs to gain access to real-time PQ data would be via commercial negotiations with a small number of metering parties. In our experience, the limitations to this approach risks driving higher costs for customers and a lack of market transparency for smart metering data services under the existing arrangements including:

- Non-standard or bespoke application programming interfaces (**APIs**);
- Immature or missing products or capabilities from some Meter Data Providers (**MDPs**);
- Commercial restrictions between retailers and metering providers; and
- Inefficiencies due to multiple administrative contracts, IT systems and data formats leading to higher than efficient costs.

Additionally, there are limited protections in place to prevent costs from being shifted from the provision of 'basic' PQ data services to 'advanced' PQ services. Ultimately, DNSPs are a price-taker from a handful of metering parties across the network area.

We recommend that access to real-time PQ data is investigated through the ECA's rule change, which provides the opportunity to consider an appropriate real-time data access and sharing framework, to improve standardisation of transactions and common data protocols across consumers, DNSPs and their authorised representatives.

Under existing arrangements, this may require more targeted investment of real-time data through contractual arrangements to test and prove use case benefits over time, leading to barriers in scaling use cases with demonstrable long-term benefits quickly across the network. For example, some benefits will scale in a linear relationship with the level of smart meter penetration across the network. An example of this is outage management, where greater coverage of real-time data across the network available to the DNSP delivers a greater available benefit.

At a minimum, Ausgrid recommends a requirement for MDPs to provide access to real-time PQ data on days of minimum system load through a standardised API. This monitoring data is key to assist DNSPs and AEMO manage minimum system load events and monitor the performance of emergency backstop measures (including active distributed PV curtailment, relevant agent schemes, emergency voltage management and support targeted shedding of reverse flowing feeders when absolutely necessary). Only triggering this provision of near real-time data on days where a minimum system load event is forecast may provide a compromise on any expected or additional costs identified for MDPs to deliver this real-time data (notably telecommunications fees).

Where costs of real-time PQ data increase, DNSPs may be required to explore and invest in alternatives, including increased investment for additional network monitoring devices. This may not deliver the best long-term outcome for consumers, where available smart meter data can deliver a more efficient option. We support the AEMC in considering the development of well-defined standards for data access and services for consumers ***and*** DNSPs, with the aim to reduce these potential transaction costs across the industry, which can ultimately benefit all consumers.