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Australian Energy Markets Commission (AEMC)
Level 15, 60 Castlereagh St,
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Consultation paper – Real-time data for consumers (ERC0399)

Endeavour Energy appreciates the opportunity to provide feedback to the AEMC's *Real-time data for consumers* consultation paper. We support the intent of the proposed rule change to unlock the value of smart meters by improving access to real-time metering data for customers and authorised parties, and have highlighted below some related matters for the AEMC's consideration.

Real-time data access to customers and authorised parties

The accelerated smart meter deployment will provide customers the opportunity to benefit from new and innovative energy services and pricing options which leverage the digital capabilities of smart metering. Granular data captured by smart meters enables customers and parties acting on their behalf to draw insights about their energy use and make informed decisions to take up services and products which help lower their bills, reduce their emissions impact and support the net-zero energy transition.

Community acceptance will be critical to unlocking the full benefits of smart metering and achieving the goal of near-universal take up of smart meters by 2030. Earning the social licence required to enable the smart meter rollout will involve assuring customers that:

- they can readily access their real-time data at no additional cost;
- they retain ownership and control of their metering data; and
- their access to real-time data, and access by parties to whom they have given their consent, will be unencumbered by metering data providers (MDP) as the custodians of that data.

Currently, many customers can access detailed information of their energy use and costs through information portals and applications paired with smart meter and consumer energy resource (CER) devices. However, access to this data is typically only available with a 24-to-48-hour time lag, making it difficult for CER and non-CER customers alike to monitor their electricity generation and consumption as it occurs and understand how best to coordinate their smart and passive appliances in the most efficient way.

We note the provision of in-home displays which gives customers direct access to near real-time metering data is a feature of the smart meter rollout in the United Kingdom and is also available via the Victorian Energy Upgrades program. In the absence of an equivalent real-time metering data program, customers may be required to install, and self-fund, monitoring devices to access real-time data that could more efficiently be collected from meters they already fund through metering service charges bundled into their retail contracts.

Obligations for retailers and Distribution Network Service Providers (DNSPs) to provide metering data to consumers and their authorised representatives are set out in the Australian Energy Market Operator's (AEMOs) Metering Data Provision Procedures and the National Energy Retail Rules (NERR). Broadly, these require metering data be provided to a customer or their authorised representative on a best endeavours basis within 10 days (or longer for data requests for multiple customers). Furthermore, customers may be charged for requesting their billing and consumption data more than four times in any 12-month period.

We consider these provisions have not kept pace with the significant technological advances in metering which enables smart meter data to be collected and shared more frequently and at a substantially lower cost relative to the accumulation meters they are replacing. In the context of a rapidly growing smart meter population and a greater role for real-time data as an input into customers energy decisions, these minimum access requirements are no longer fit-for-purpose.

We further note that the Consumer Data Right can only provide consumers and their authorised recipients access to their historical metering data and therefore is not a suitable mechanism to deliver real-time data. It is therefore appropriate to amend the metering framework to enable customers and authorised parties access to their real-time data in a consistent format that is easy for customers to understand. Doing so may require:

- the provision of real-time metering data (including power quality data) defined as a mandatory service in the minimum services specification in the National Electricity Rules, with customers and their authorised representatives (including DNSPs) defined as access seekers; and
- including in the minimum services specification open standards-based protocols and communication interfaces to promote interoperability and facilitate seamless real-time data transfers to all prospective recipients to promote competition in markets for innovative energy services.

We suggest that the AEMC should also consider whether it is appropriate to continue to give customers the option to request their data from their retailer or DNSP. While acknowledging the value in providing customers with choice in how real-time data can be accessed, we note that DNSPs encounter significant obstacles in accessing this data from MDPs and would need to be afforded additional rights to access real-time data to comply with new obligations.

DNSP access to real-time data

Metering and power quality data (PQD) provided through smart meters can be used to support a range distribution network functions, enabled through network analytics platforms to support use cases (including the examples set out in Appendix A).

DNSP metering data needs, data coverage required to deliver optimal benefits, and challenges involved in accessing the requisite data were discussed extensively during the AEMC's *Review of the Regulatory Framework for Metering Services.* The AEMC ultimately determined that 'basic' PQD provided once-a-day would enable several use cases necessary to efficiently operate the distribution network, with DNSPs left to commercially negotiate with metering service providers for access to advanced PQD for applications requiring more frequent and/or additional datasets.

Over time, access to real-time metering data will become increasingly critical as DNSPs adopt more sophisticated network operations required to successfully perform the functions of a Distribution System Operator (DSO). Transitioning to a DSO model requires DNSPs to take on increased responsibilities for managing local network conditions while enabling more complex and variable energy flows bought on by customer investment in CER and other new technologies. Some key DSO functions include:

- **Real-time monitoring:** Measuring the usage of electricity and identifying any spatial and/or temporal irregularities or patterns. This is increasingly supported by smart meters and digitisation which allows DSOs to be more agile in responding to maintain a safe and reliable service while optimising the supply and use of electricity at any point in time. Access to real-time data would facilitate the development of intervention solutions to correct over/under voltage or power quality service violations.
- **Grid stability:** Actively balancing the supply and demand of power within the grid. Driven by the data provided from monitoring use, DSOs can employ a wide variety of strategies to ensure a reliable supply of power. This may include using network and community batteries to locally store excess energy and deploy it to the grid at times when power input to the grid isn't saturated. By leveraging the capabilities and collaborating with AEMO, DSOs will be able to provide much more sophisticated support to the wider national electricity network.

- **CER integration:** Optimally integrating the power generated by customer investments in rooftop solar, batteries and electric vehicles (EV) and balancing it against network demands given the environmental conditions that affect output. To get the most out of the existing network, DSOs can allocate network capacity to existing and future CER customers and use signals to dynamically manage congestion within pre-defined upper and lower bounds in any given time interval for each connection point.

With real-time data, DNSPs can accurately and comprehensively monitor these energy flows and make the interventions necessary to dynamically balance supply and demand on the distribution network to mitigate sudden and unforeseen safety issues and technical constraints. In short, real-time metering data is a key enabler of a smarter, greener and lower cost distribution network.

Victorian DNSPs have a distinct advantage in making this transition through their ability to efficiently access customer smart meter data which is typically collected at the following intervals:

- Usage data every 30 minutes;
- PQD every 15 minutes; and
- Additional PQD from various sites for advanced data analytics every 5 minutes.

We understand near real-time metering data has become integrated with Victorian DNSPs' business systems, and the operation of these systems is heavily dependent on this data. The use of near real-time PQD has facilitated the delivery of several of use cases which has improved the efficient and safe operation of their respective networks and provided material consumer benefits.

Although the provision of 'basic' PQD for no direct cost will go some way to closing this capability gap, non-Victorian DNSPs and their customers will continue to be disadvantaged with respect to use cases which require frequent data streams and real-time operations and controls. Unless barriers which prevent DNSPs from negotiating access to data at shorter intervals at reasonable cost are addressed, the prices charged by MDPs may prevent the full value of these applications from being realised by customers. By way of illustration, we have set out in **Appendix A** some of the distribution network use cases that real-time data could facilitate.

We acknowledge that many DNSP applications would be supported by real-time PQD, and that access to this subset of smart meter data is out of the scope of this rule change. Nevertheless, the substantial benefits which could be delivered to all customers through data-driven distribution network operation and service improvements underscores the importance of providing DNSPs with clear and improved access to real-time data. As technology and innovation are likely to foster new use cases in the future, the data access framework should be sufficiently flexible to enable DNSPs access to the requisite smart meter data, in lieu of more costly and duplicative network devices and instruments, to enable these use cases to be trialled and deployed as they emerge.

To unlock the full value of smart meter data for customers, we consider it would be appropriate for DNSPs to be given the same opportunities to access real-time metering data as a customer's authorised representative. This would ensure a consistent set of access rights and obligations across all parties that a customer has provided explicit and informed consent necessary to deliver a specified valued service or better customer outcome.

Cost of accessing real-time data

A framework for real-time data will require several parties to upgrade their data and communications systems to provide additional functionalities needed to collect, process, share and store an increased volume of metering data.

As previously discussed, ensuring customers are not charged for accessing their own real-time data will help to build community trust and support for the smart meter rollout. However, they may ultimately indirectly fund most of the enabling costs incurred by metering service providers, retailers, DNSPs and authorised representatives through their bundled retail bill or other separate, discrete service charge. It is therefore important that both the investment in IT infrastructure and access prices charged by metering service

providers be as low as possible to maximise the net benefits of real-time data and minimise the cost implications to parties seeking access.

Regarding access charges, we note the AEMC's position that authorised representatives (including DNSPs) should pay metering parties for new and direct costs incurred to make real-time data available, but not for data collection or production costs. Whilst this approach would incentivise metering service providers to explore adopting lower cost communication options, the failure of the metering framework to provide stakeholders transparency in the composition of metering service costs makes it unlikely that the accuracy and exclusion of data collection and production costs from real-time data charges could be verified and enforced.

Lack of transparency in metering services also makes it difficult to ascertain whether the access charges payable by DNSPs and authorised representatives are efficient. Indeed, the metering framework establishes the MDP as the monopoly provider of a customer's data, and in the absence of competitive tension, DNSPs and authorised representatives are effectively price takers with no genuine ability to negotiate a price for access.

Within the Endeavour Energy network, over 95% of smart meters are serviced by three MDPs. This market power limits our ability to run competitive tenders to negotiate a reasonable for accessing data for relatively few sites, and is exacerbated because a single MDP often services the vast majority of meters in a specific area which requires enhanced real-time data visibility. This includes areas where there is a high penetration of CER exporting into the network that are causing (or have the potential to cause) overvoltage problems.

In order to address these adverse pricing impacts, we consider that there are two potential options:

- **mandate the provision of real-time data to DNSPs**: This would remove the risk of high access charges deterring DNSPs and authorised parties from unlocking the full value of metering data and stimulate greater competitive tension between MDP and retailers (or their Metering Coordinators) to help lower the cost of data services.

  Furthermore, the introduction of obligations which provide DNSPs access to real-time data at no charge would compel the NSW and ACT DNSPs to also make that data available to customers and their representatives at no charge in accordance with the 2024-29 Service Classification. We note that this condition has been replicated in the 2025-30 draft Service Classification for Energex, Ergon and SA Power Networks; or

- **apply a regulated price for real-time data:** Setting prices that would apply consistently to all MDPs would reduce their ability to exercise market power and help to ensure that real-time access charges are fair, reasonable and non-discriminatory between access parties.

  Although this option may require the AER to conduct a holistic review of metering charges to determine and maintain efficient benchmark prices, this process would deliver transparency into metering data costs, and would be no more burdensome than the existing process undertaken to establish maximum prices for Ancillary Network Services (ANS) which apply to DNSPs as the monopoly provider of these services.

If you would like to discuss any aspect of our submission, please contact Patrick Duffy, Manager Regulatory Transformation and Policy via email at patrick.duffy@endeavourenergy.com.au.

Yours sincerely

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Appendix A – Distribution network use cases for real-time data

Managing unplanned supply interruptions

We consider there is significant scope to use real-time data to improve our outage management capabilities which continue to rely predominantly on customers notifying us of a supply interruption.

When we respond to a customer outage enquiry it can be difficult to determine the extent of the outage and identify all the premises impacted, which can lead to a slower restoration. Once restored, it can be difficult to determine whether power has returned to all affected customers or if there is a nested fault (i.e. a service down within a faulted area) which can lead to customers being inadvertently left off supply longer than necessary.

Real-time data allows service checks that would reveal whether an outage is due to a customer or network fault and assist in identifying the location of the fault, contributing to reduced field visits, faster supply restorations and much improved overall customer experience. This use case could also be applied to public lighting and improving the provision of smart streetlighting services.

Supporting vulnerable customers

Real-time metering data could be used to support improved services to life-support customers whose wellbeing is contingent on a continuous power supply, consistent with the intent of a recent rule change proposed by Essential Energy and SA Power and supported by all Energy Charter signatories (including Endeavour Energy).

Real-time data would allow constant visibility of this critical and increasing subset of vulnerable customers, and encourage the development of targeted service enhancements that would allow customers to be supported more effectively during unplanned power outages.

Maintaining safety

Real-time responses to meter pings would allow DNSPs to confirm mains are de-energised and ascertain the extent of a de-energisation. The complexity of the low voltage network means that, in rare cases, switches may be closed that are thought open, potentially placing workers and the public at risk of electrocution via back feeds through paralleled supplies.

Real-time data could help DNSPs detect such issues and allow us to quickly isolate and remove these risks which could become more common as the connection of batteries, public EV chargers and other technology types become more ubiquitous.

With respect to risks associated with the loss of neutrals, the AEMC indicated access to ‘basic’ PQD would allow DNSPs to identify and resolve neutral integrity issues and improve customer safety. We consider that neutral integrity faults hazards can emerge at any time without warning, and the DNSP has the responsibility for detecting and rectifying the hazard to avoid a customer shock incident or fire from a hot joint.

The total time taken between the emergence of a hazardous neutral integrity fault and its rectification has a direct bearing on the incidence of customer shocks. Once-a-day provision of PQD does not allow a sufficiently timely response and exposes affected customers to potentially significant harms. Sampling or batch testing a proportion of the metering population will not adequately mitigate these risks; rather, real-time data is required from all premises to enable DNSPs to respond effectively to neutral integrity.

Flexible connections

Real-time data facilitates low voltage visibility and analytics which supports several time-sensitive use cases such as demand-side participation initiatives and dynamic operating envelopes (DOEs) by providing live insights into grid conditions. In addition to optimising the value of CER, DOEs represent the most effective mechanism to respond immediately to emergency minimum demand curtailment directives from AEMO to support system strength.

A successful scaled deployment of DOEs requires real-time PQD visibility, notionally at least 20-30% of customers per LV network for accurate DOE calculations. A complete coverage of real-time consumption

data would be highly valuable for DOE implementation; currently, given the limitations and access costs associated smart metering data, we have invested in dedicated distribution transformer monitors in areas of high rooftop solar penetration to get the equivalent visibility and insights. Aggregation of real-time consumption data would also be useful to overcome visibility and measurement gaps higher up in the network such as lack of directional MW measurement on most HV feeders.