

20 February 2024

Anna Collyer  
Chair  
Australian Energy Market Commission  
GPO Box 2603  
Sydney NSW 2000

Submitted via: <https://www.aemc.gov.au/contact-us/lodge-submission> (ERC0399)

Dear Ms Collyer,

### **Real-time data for consumers: Directions Paper**

Erne Energy welcomes the opportunity to provide a submission to the AEMC's directions paper on the rule change for real-time data for consumers, proposed by Energy Consumers Australia<sup>1</sup>.

The approach the AEMC proposes to pursue in the directions paper is very disappointing and appears to prioritise the needs of Metering Service Providers (MSPs) over consumers.

In both the Review of the regulatory framework for metering services (EMO0040<sup>2</sup>) and the Accelerating smart meter deployment rule change (ERC0378<sup>3</sup>), the AEMC stated:

*"We recommend implementing a framework that provides customers access to their smart meter data in real-time free of direct charge, where they request it<sup>4</sup>."*

The Review was completed only 18 months ago and the final decision for the rule change was made 3 months ago. In that time the AEMC has shifted its position to requiring consumers to pay for their own real-time data with it now taking at least 15 years for consumers to be able to access their own real-time data for free.

15 years, in the context of the rapid acceleration of technology in the energy environment, is completely unacceptable and will hamper the delivery of consumer-led flexibility as envisioned in the Integrated System Plan<sup>5</sup> and recent AEMO-initiated rule changes<sup>6,7</sup>. This consumer-led flexibility is one of the key benefits of smart meters identified in the Review and the Accelerating smart meter deployment rule change.

#### Rolling out obsolete smart meters

As noted in our submission to the draft decision on Accelerating smart meter deployment<sup>8</sup>, current smart meters are not fit for purpose for future consumer-led responsiveness.

There is little benefit to consumers and the wider industry of rolling out smart meters that are not capable of delivering real-time data on either trading interval times scales (5 minutes) or operational time scales (seconds). If the capabilities of today's meters are not sufficient to support consumer-led flexibility and if retailers are required to rollout unfit meters, then consumers, retailers and

<sup>1</sup> [https://www.aemc.gov.au/sites/default/files/2024-10/ERC0399%20Pending\\_rule\\_change\\_request.pdf](https://www.aemc.gov.au/sites/default/files/2024-10/ERC0399%20Pending_rule_change_request.pdf)

<sup>2</sup> [https://www.aemc.gov.au/sites/default/files/2023-08/emo0040\\_-\\_metering\\_review\\_-\\_final\\_report.pdf](https://www.aemc.gov.au/sites/default/files/2023-08/emo0040_-_metering_review_-_final_report.pdf)

<sup>3</sup> <https://www.aemc.gov.au/sites/default/files/2024-11/Final%20rule%2C%20determination%2C%20%20271124%20%28For%20publication%29.pdf>

<sup>4</sup> [https://www.aemc.gov.au/sites/default/files/2023-08/emo0040\\_-\\_metering\\_review\\_-\\_final\\_report.pdf](https://www.aemc.gov.au/sites/default/files/2023-08/emo0040_-_metering_review_-_final_report.pdf)

<sup>5</sup> <https://aemo.com.au/-/media/files/major-publications/isp/2024/2024-integrated-system-plan-isp.pdf?la=en>

<sup>6</sup> <https://www.aemc.gov.au/sites/default/files/2024-12/Final%20determination.pdf>

<sup>7</sup> <https://www.aemc.gov.au/sites/default/files/2024-08/Final%20determination%20-%20Unlocking%20CER%20benefits%20through%20flexible%20trading%20-%2015%20Aug%202024.pdf>

<sup>8</sup> [https://www.aemc.gov.au/sites/default/files/2024-06/erne\\_energy.pdf](https://www.aemc.gov.au/sites/default/files/2024-06/erne_energy.pdf)

aggregators will need to invest in additional metering devices to underpin flexibility services. This will place an additional cost burden on consumers.

Urgent revision of the standards that govern smart meter capabilities is needed to ensure that any smart meter installed at a customer connection is capable of real-time data transfer locally. This is likely to mean that revision of Australian Standard 61869 Instrument transformers<sup>9</sup> is necessary, with any revision to be expedited so that completion is within 12 months and compliance required 12 months after that. This expedited timeframe was adhered to for revisions to Australian Standard 4777.2, with inverter manufacturers required to comply by December 2021<sup>10</sup>.

Local provision of electricity use data to the consumer is as important as ensuring that rooftop solar PV inverters comply with power quality requirements, but, it seems, MSPs, unlike inverter manufacturers and providers, are not required to upgrade their meters to ensure data can be accessed locally in real-time and are being given 15 years to provide local real-time data compliant meters<sup>11</sup>.

Rather than allowing MSPs to provide smart meters capable of providing local access to real-time on the basis of the life cycle of meters, MSPs should be required to deliver compliant meters in an expedited time frame. There is no justification for delaying the development and deployment of smart meters that can deliver local real-time data to consumers when other technology providers have been expected to comply more rapidly to support wider power system goals.

### Social licence

Access to real-time data is the only tangible direct benefit a consumer can receive from having a smart meter. The majority of the benefits put forward for smart meters accrue to other parties in the power system, with only indirect reductions in broad power system costs accruing to consumers.

The AEMC<sup>12</sup> suggest that consumers demonstrate little or no interest in accessing their real-time energy use data. This “demonstrated” limited uptake of real-time data could be for a variety of reasons and a lack of evidence today does not mean that consumers are uninterested in accessing real-time data. Energy Consumers Australia surveys indicate that consumers are very keen to better understand their energy use so they can better manage their increasing bills<sup>13</sup>.

Consumers may not pursue access to real-time data because:

- They don’t know that real-time data is available
- They don’t know that, in Victoria, they can access funding for device to access real-time data
- Accessing funding for a device is too complicated or appears risky (e.g. Zigbee and recent enforcement action<sup>14</sup> in Victoria)
- Wider issues of trust prevent consumers from obtaining devices
- The data interface is not user friendly
- They don’t feel they would understand data even if they had access

Given retailers and DNSPs have a vested interest in consumers using more electricity, since that is how industry costs are recovered, there is a low interest in educating consumers on how to understand and/or modify their energy use.

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<sup>9</sup> <https://www.standards.org.au/standards-catalogue/standard-details?designation=as-61869-9-2021>

<sup>10</sup> <https://onestepoffthegrid.com.au/new-solar-inverter-standard-rushed-through-as-aemo-pushes-for-tighter-controls/>

<sup>11</sup> <https://www.aemc.gov.au/sites/default/files/2025-01/Real-time%20data%20for%20consumers%20-%20directions%20paper%20%281%29.pdf>

<sup>12</sup> <https://www.aemc.gov.au/sites/default/files/2025-01/Real-time%20data%20for%20consumers%20-%20directions%20paper%20%281%29.pdf>

<sup>13</sup> <https://energyconsumersaustralia.com.au/wp-content/uploads/ecss-jun24-topline-results-report.pdf>

<sup>14</sup> <https://www.esc.vic.gov.au/media-centre/regulator-takes-strong-action-ensure-integrity-victorian-energy-upgrades-program>

Yesterday's electricity use data (via the Consumer Data Right – Energy (CDR-E) and retailer) is not as informative as real-time usage data<sup>15</sup>. Real-time data access allows a consumer to see immediately which appliance has increased electricity use, providing education on which appliances use significant amounts of electricity.

#### Background on how data is measured and transferred today

The Rules<sup>16</sup> (7.8.1 and 7.8.2 b1) and metrology<sup>17</sup> that govern meters today require that Power Quality Data (PQD, voltage, current and phase angle) is measured every at least 5 minutes (trading interval). However, to minimise mobile network telecommunications costs some MSPs only transfer the data from the meter to their databases once or twice a day. There is also a requirement for a local port to access data at the meter<sup>18</sup>.

Providing even a data point every 5-minutes (rather than the 1 second data proposed in the directions paper) to a consumer would require an MSP to upload data every 5-minutes via the mobile network (288 uploads a day), this is even if there was a mobile phone application that would enable the consumer to view that uploaded data in an MSP database. If the MSP had to then download the 5-minute data to a consumer display, this would double the telecommunications transactions required.

Any requirement for access to data more than once or twice a day, regardless of whether it is 5-minutely data, 1-minute data or 1-second data, effectively means enabling local access to avoid increased telecommunications costs for MSPs.

#### Enablement of flexibility

Smart meters are a critical element of enabling consumer-led flexibility<sup>19</sup>. However, as Energy Consumers Australia noted recently<sup>20</sup> consumers tend to flex only the use of lower electricity use appliances such as washing machines and dishwashers, rather than large electricity use appliances such as hot water and heating/cooling. Significant work is needed to support consumers to understand their electricity use and real-time access is an important tool to facilitate that understanding<sup>21,22</sup>.

Both this lack of understanding of what appliances to flex and delayed access to smart meters<sup>23</sup> that are capable of sharing real-time data (instantaneously) with consumers<sup>24</sup>, present significant barriers to the enablement of consumer flexibility.

#### DNSPs now having to purchase “advanced” PQD

The final outcomes of the Accelerating smart meter deployment rule change (ERC0378) have not resulted in the access to the PQD that DNSPs require<sup>25</sup>. Providing the suite of basic PQD to DNSPs for free was a major benefit case for accelerating the deployment of smart meters.

5-minutely data, aggregated for 24 hours, once a day is not sufficient to deliver the safety benefits of “basic” PQD to DNSPs. This means that DNSPs are now having to negotiate directly with MSPs to purchase the “advanced” PQD that will underpin key safety benefits. As a result, consumers will fund

<sup>15</sup> <https://www.energy.vic.gov.au/victorian-energy-upgrades/homes/veu-latest-news-for-households/veu-news/product-focus-in-home-displays>

<sup>16</sup> <https://energy-rules.aemc.gov.au/ner/639/572053#7>

<sup>17</sup> [https://wa.aemo.com.au/-/media/files/electricity/nem/retail\\_and\\_metering/market\\_settlement\\_and\\_transfer\\_solutions/2024/metrology-procedure-part-a-v781-clean.pdf?la=en](https://wa.aemo.com.au/-/media/files/electricity/nem/retail_and_metering/market_settlement_and_transfer_solutions/2024/metrology-procedure-part-a-v781-clean.pdf?la=en)

<sup>18</sup> [https://wa.aemo.com.au/-/media/files/electricity/nem/retail\\_and\\_metering/market\\_settlement\\_and\\_transfer\\_solutions/2024/metrology-procedure-part-b-v781-clean.pdf?la=en](https://wa.aemo.com.au/-/media/files/electricity/nem/retail_and_metering/market_settlement_and_transfer_solutions/2024/metrology-procedure-part-b-v781-clean.pdf?la=en)

<sup>19</sup> [https://www.aemc.gov.au/sites/default/files/2023-08/emo0040\\_-\\_metering\\_review\\_-\\_final\\_report.pdf](https://www.aemc.gov.au/sites/default/files/2023-08/emo0040_-_metering_review_-_final_report.pdf)

<sup>20</sup> <https://energyconsumersaustralia.com.au/publications/consumer-energy-report-card-consumer-knowledge-electricity-pricing-responsiveness-price-signals>

<sup>21</sup> <https://energyconsumersaustralia.com.au/wp-content/uploads/ecss-jun24-topline-results-report.pdf>

<sup>22</sup> <https://www.energy.vic.gov.au/victorian-energy-upgrades/homes/veu-latest-news-for-households/veu-news/product-focus-in-home-displays>

<sup>23</sup> <https://www.aemc.gov.au/rule-changes/accelerating-smart-meter-deployment>

<sup>24</sup> <https://www.aemc.gov.au/sites/default/files/2025-01/Real-time%20data%20for%20consumers%20-%20directions%20paper%20%281%29.pdf>

<sup>25</sup> <https://www.aer.gov.au/system/files/2024-12/Energex%20-%206.04A%20-%20Business%20Case%20-%20Smart%20Meter%20Data%20Acquisition%20-%20November%202024%20-%20public.pdf>

that DNSP purchase of “advanced” PQD, eroding the wider benefits of ensuring more consumers have a smart meter.

#### Contention on cost to enable local access

The AEMC must get an independent assessment of the cost to upgrade current smart meters to provide local access as there is contention on whether the costs are of the order of a few dollars to over \$100.

Revenue grade meters must already have local access<sup>26</sup> and it is unclear why this local access cannot be opened to the consumer.

Cybersecurity concerns are not a reason to justify delaying or limiting local real-time access to data for the consumer. This is an issue that has been successfully resolved in the UK and there have been no breaches of either the security of personal metering data or the power system as a result of local access to real-time smart meter data<sup>27</sup>.

Some revenue grade meters in the Australian market already have real time access to data enabled<sup>28</sup>. Enabling consumer access to their real-time data from the smart meter should not be held back because some MSPs have yet to enable or develop that capability.

Perhaps consumers should have the choice of MSP or meter, rather than having an MSP and associated meter imposed on them by the retailer. That way consumers that do want access to a meter capable of providing real-time data can opt for a capable meter. Metering data is already provided in a standard format<sup>29</sup>, so it shouldn't matter to the retailer where the data comes from, other than the requirement on the retailer to negotiate a contract with an MSP.

If competition in metering provision is supposed to provide lower cost outcomes for consumers, then requiring MSPs today to provide real-time access to a consumer's data or within 12 months, would favour MSPs who can already do this and would motivate those MSPs who haven't enabled real-time access to develop the capability rapidly. This is how competition is supposed to operate – driving innovation to meet the needs of customers at lowest cost. It is not entirely clear why the AEMC are protecting MSPs who can only deploy meters that are unable to deliver real-time data to consumers.

Another alternative is to make MSPs a party to the Consumer Data Right – Energy, as currently this only applies to Retailers for metering data.

MSP stakeholders are unlikely to be the most reliable source of cost data for upgrading current smart meters to provide real-time data. The AEMC must seek independent advice on the cost to enable real-time access from smart meters from a range of providers and publish this information. This will be competitively sensitive information, so the names of the MSP should be removed from the publicly tabulated cost data but it is important that data is available to support good consumer outcomes in both this rule change and ERC0378.

#### More discussion needed on the time resolution for “real time” data

There is too much focus on those with CER and the potential for VPPs by the market bodies and government. Those with CER while a growing cohort of electricity consumers, are not the majority of

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<sup>26</sup> [https://wa.aemo.com.au/-/media/files/electricity/nem/retail\\_and\\_metering/market\\_settlement\\_and\\_transfer\\_solutions/2024/metrology-procedure-part-a-v781-clean.pdf?la=en](https://wa.aemo.com.au/-/media/files/electricity/nem/retail_and_metering/market_settlement_and_transfer_solutions/2024/metrology-procedure-part-a-v781-clean.pdf?la=en)

<sup>27</sup> <https://www.ncsc.gov.uk/information/the-smart-security-behind-the-gb-smart-metering-system>

<sup>28</sup> <https://exteltechnologies.com/mondo/>

<sup>29</sup> AEMO | Business-to-business procedures

consumers. The suggestion in the directions paper that consumers who want access to real-time data pay for 1-second PQD is significant overkill for most electricity consumers.

Understanding electricity use in real-time can be achieved via 1-5 minute data, but as described above, this will still mean enabling local access to data via the smart meter.

Just as for DNSP<sup>30</sup>, the AEMC should work with consumer stakeholders to develop several categories of data sets and requirements that ensure that consumers can have free access to real-time data for a basic data set and for more elaborate data, such as highly time resolved data, consumers may be asked to pay.

However, regardless of the time resolution of meter data, any provision of data more often than once a day, requires a meter upgrade and as a result the AEMC must focus on ensuring that smart meters are upgraded to support local access to real-time data within no more than 24 months through revision of standards, the Rules and industry procedures.

There is no justification for accelerating the deployment of meters that are not able to provide local real-time data access to consumers as this will increase costs to consumers by requiring them to invest in additional devices to provide real-time energy use data to both understand their use and to provide flexibility services.

### Consumers paying multiple times for smart meters

Consumers want to understand their use<sup>31</sup> and they already fund the cost of a smart meter installation. The directions paper suggests they should pay again for access to their real-time data and then, given the fact that the free basic PQD that MSPs must provide DNSPs must only be provided once a day, consumers will pay for the advanced PQD that DNSPs will now have to purchase from MSPs:

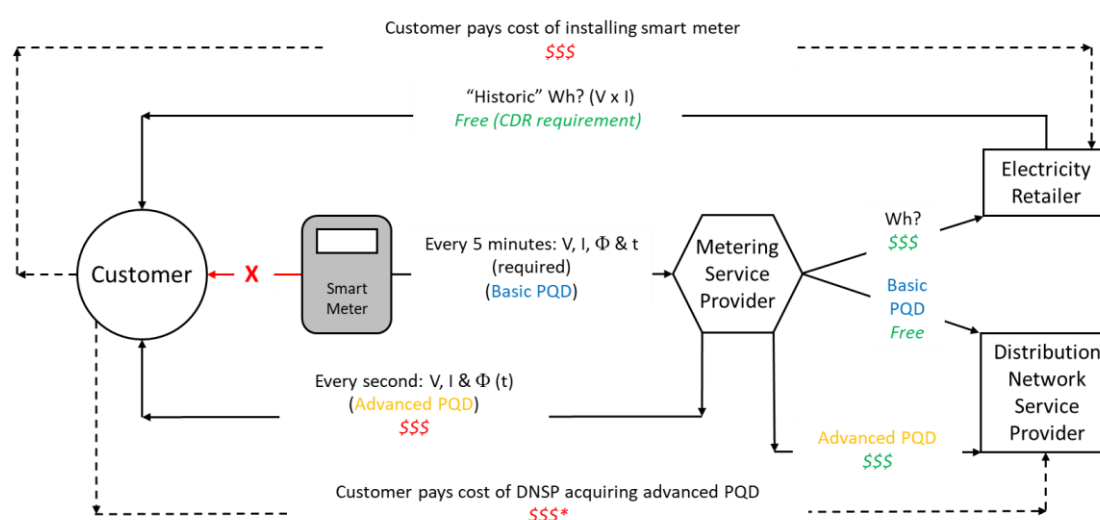


Figure 1: Consumers pay over and over again for smart meter data

- Installation of smart meter
- Enablement of real-time data
- Funding DNSP purchase of advanced PQD
- Replacement of obsolete smart meter

<sup>30</sup> <https://www.aemc.gov.au/sites/default/files/2024-11/Final%20rule%2%A0determination%2%A020271124%20%28For%20publication%29.pdf>

<sup>31</sup> <https://energyconsumersaustralia.com.au/wp-content/uploads/ecss-jun24-topline-results-report.pdf>

While DNSPs may be a third party that the consumer authorises to have access to their real-time data, we agree with the AEMC that DNSPs should not have an automatic right to consumer real-time data (once a consumer pays for that access). If the DNSP wants access to consumer-initiated real-time data then they should compensate the consumer for having invested in a real-time data capable meter.

Given that consumer energy data is “their” data under the CDR-E<sup>32</sup> and that consumers have a right to access that data for free, it is counterintuitive that the same data accessed in real-time requires the consumer to pay more.

The CDR-E does not define the variables nor the age of the data (time between acquiring the data and sharing the data) that must be shared with the consumer, only referring to the Rules that cover metering data.

It is not immediately clear how many times an MSP may monetise the same 5-minute consumer data points and it is not immediately clear why DNSPs may access consumer data for free, while consumers themselves must pay multiple times.

Even accepting that provision of real-time electricity data locally requires upgrades to some meters, other industries governed by the CDR such as banking, are able to show data in real-time (via a mobile phone application). It is not clear why a consumer’s electricity data is any different to, say, a consumer’s financial data.

Many thanks for the opportunity to provide a submission to the Directions Paper on real-time data for consumers. Please contact me if you need further information.

Yours Sincerely

A handwritten signature in black ink that reads "Jill Cainey". The signature is written in a cursive, flowing style.

Dr. Jill Cainey MBE

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<sup>32</sup> <https://www.legislation.gov.au/F2020L00094/2024-11-12/2024-11-12/text/original/pdf>