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Australian Energy Market Commission
Level 15, 60 Castlereagh Street
Sydney NSW 2000

Submitted online at: <https://www.aemc.gov.au/contact-us/lodge-submission>

Re: Response to AEMC Draft Determination – ERC0399.2

National Electricity Amendment (real-time data for consumers) Rule

National Energy Retail Amendment (Real-time data for consumers) Rule

Dear AEMC Team,

Thank you for the opportunity to comment on the Draft rule determinations - National Electricity Amendment (Real-time data for consumers) 2025 and National Energy Retail Amendment (Real-time data for consumers) 2025. This response follows our previous submissions to the AEMC Directions Paper (30 January 2025) and Consultation Paper (10 October 2024). We encourage the AEMC team to review our earlier submissions as background to this submission.

About Rheem Australia Pty Ltd (Rheem) and Combined Energy Technologies (CET)

As the largest Australian manufacturer of water heaters, Rheem offers a wide range of solar, heat pump, high-efficiency gas, and electric water heater models. Our brands include Rheem, Solahart, Vulcan, and Aquamax. We are now the third-largest supplier of PV systems through our Solahart channel. Today, Rheem's products are installed in over 4 million Australian homes. Over the past eight years, we have manufactured and installed smart electric water heaters with built-in metering, which can be orchestrated locally with other CER through CET's Energy Management Gateway or remotely controlled in aggregation by a cloud platform for grid services.

CET is an Australian technology company specialising in energy management for residential, commercial, and microgrid systems. CET systems utilise CET's local Energy Management Gateway to provide secure communications and local orchestration for a wide range of CER devices and manufacturers through a suite of Class 1 power metering, communications, and CER control modules. CET has extensive experience integrating and orchestrating systems with multiple CER devices, including solar PV, batteries, water heating, EV chargers, pool pumps and A/C for the benefit of residential consumers, Energy Retailers (Retailers), DNSPs and the grid.

This is a joint response on behalf of Rheem and CET. Our views draw from twelve years of experience across our fleet of residential and commercial mixed CER sites deployed across the NEM and WEM, where orchestration benefits consumers, enhances grid security, and supports renewable hosting. All our sites required installation of our own Class 1 meter (developed by CET) to provide real-time, "instantaneous" meter data, including voltage, current, power factor, reactive and active power, and energy interval data for HEMs and grid services. These services include:

- Compliance with DNSP-mandated dynamic connections and solar backstop requirements
- Consumer HEMs CER orchestration

- DNSP minimum and peak demand abatement services via aggregated CER
- FCAS services for grid security of supply

Concerns with the Consultation Process

Despite raising serious concerns in our two previous responses, we believe the draft rule determination has not adequately addressed these issues and, in some cases, has compounded them to the detriment of competition in CER products and services delivery. This will ultimately lead to additional costs and inconvenience for consumers, even though we should all aim to keep the consumer at the heart of our Energy Transition.

These significant issues also flow through to other rule changes, including "Unlocking CER benefits through flexible trading" and "Integrating price-responsive resources into the NEM." Given the narrowed scope of the draft rule determination, the history of raising these issues, and the absence of changes to resolve what we believe are significant structural market issues, we request a meeting with the AEMC at your earliest convenience to discuss our concerns.

Key Issues Not Addressed

The main issues we elaborate on in our response include:

1. **Required access to all smart meter data** (currently used by third-party metering) is necessary to mitigate the requirement for third-party metering. This includes guaranteed Class 1 accuracy of real-time data and on-demand pull access to smart meter energy interval data.
2. **The inclusion of Type 8 and 9 meters**, currently missing in the Glossary definition of real-time data.
3. **The requirement to preserve existing and ongoing access and control** of CER devices with embedded metering that may go "on market" under sub-metering/flexible trading arrangements, as currently the NER restricts access and control to only the MC and Retailer per Chapter 7.

Consumer Cost Saving Opportunity

Installation of our own Class 1 meter could have been avoided at thousands of sites, and can be avoided at future installations, if we have local access to all necessary consumer smart meter data, including real-time data and energy interval data, on a technically and commercially neutral basis with consumer consent. However, the restriction to just real-time data access does not allow replacement of third-party metering for the CER services described above.

As installation of a third-party Class 1 meter can cost up to \$1,200 per site, this impedes broader CER uptake, limits accessibility to those who can afford it and slows the transition to a two-way grid and net zero. To mitigate the need for third-party metering, the draft rule determination scope needs to include access to all necessary metering data locally (including real-time data and interval data). Only then can tens of millions of dollars in cost savings be realised for consumers, providing substantial benefits to both consumers and the grid while enhancing the network security of supply.

Consumer Consent Rights

We have highlighted that consent rights to consumer meter data need strengthening in the NERR. While the AEMC's suggested changes go some way toward this, we have recommended further changes. As consumers own their meter data, any accredited third-party should obtain the consumer's permission to use it. The same consent requirements should apply to MCs and Retailers for all meter data not used strictly for settlement and billing.

Restricted Embedded Metering Access

This draft rule does not include Type 8 and 9 meters in the glossary definition of Real-Time Data. These meters will be used for submetering of CER, including for embedded metering in CER devices. Rule changes like 'Unlocking CER benefits through flexible trading' and 'Integrating price-responsive resources into the NEM' enable Retailers and MCs under the NER to exclude us from managing our devices, including water heaters, EV chargers, batteries, and solar PV, when our devices go on market via sub-metering. This environment favours MCs and Retailers, blocking CER providers like Rheem and CET from accessing existing and new CER devices, hindering industry-provided CER services for consumers. We believe this was unintentional, but it conflicts with the Commission's goal to deliver Consumer-Centric Outcomes and to ensure adherence to the NEO and NERO.

Market Impact

Beyond real-time data access, we have highlighted other issues that must be addressed concurrently. Innovation, competition, consumer benefits (including financial benefits) and the ability for consumers to choose CER third-party service providers will be greatly limited and CER service providers could be at a competitive disadvantage if the draft RTD rule change issues we pointed out are not urgently resolved.

Product manufacturers and off-market third-party energy market service providers will be unable to access the evolving market space. Metering Coordinators (MCs) and Energy Retailers will gain an advantage by leveraging regulatory walled gardens created through recent rule changes. They can use on-market embedded CER metering installations exclusively to provide services without facing competitive pressure. This regulatory loophole creates uncertainty and prevents other providers of CER products and services from entering the market. To enhance market efficiency and reduce costs for consumers, it is crucial to have competitive service options and a wide range of CER products available.

The meter should be a technically and commercially neutral enabler for CER products and services provision, not a competitor to third-party providers.

If these issues are not resolved, innovation and open market competition for off-market CER products and services behind the meter including HEMs, DNSP DR, DNSP Dynamic Connections, and competition in supplying aggregated CER grid services by non-FRMP participants will be severely compromised, resulting in consumer lock-in and competition lockout that will eventually destroy the off-market third-party Energy Market Service Provider ecosystem. A very poor outcome for consumers.

As this submission has been prepared using the expertise of Rheem and CET personnel, please direct any inquiries related to the submission to the contact below. We request an urgent meeting with the AEMC at your earliest convenience to discuss our concerns.



Yours sincerely,

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Included: Our response to the draft rule determination questions

Response to the draft rule determination questions

Question 1: Would our draft rule encourage consumers and energy service providers to access real-time data from smart meters? What is the benefit of this?

Our Response: The provision of *real-time data* locally by the smart meter must be at a frequency and accuracy to ensure that the calculated *energy interval data* negates the need for third-party metering currently deployed by consumers for local control and grid services participation purposes.

The real-time provision of “Measurements of voltage (in volts), current (in amperes) and phase angle” as proposed in the draft rule is insufficient to calculate accurate *energy interval data*¹. Even at a 1Hz frequency it is impossible to calculate energy interval data with any sort of confidence as the provided data metrics are unknown (i.e. is the voltage / current min, max or average for the period, what was the waveform sampling rate, how many sample points were used, has the meter error correction dropped packets of RTD in its transmission etc etc.) Other meter data, including energy interval data, is required to validate external calculations using RTD.

Note 1: *The need for energy interval data was raised / acknowledged on Friday 17 October 2025, in the AEMO hosted industry briefing to present AEMO’s draft High-Level Implementation Assessment (HLIA) for the “Real Time Data (RTD)” reform. Refer to the AEMO recording of the event.*

Third-party metering is typically installed with CER such as Solar PV, EV Chargers, Smart Water Heaters, Batteries and other loads and generation. Real-time data and other third-party meter data including energy interval data is increasingly being used by consumers through the deployment of third-party metering for both local and grid-related CER services, including:

- HEMs orchestration of CER (e.g. optimising CER for solar self-consumption (Batteries, EV Charging, Smart Water Heating), load shifting, tariff arbitrage, etc.).
- DNSP CSIP-AUS CER import export compliance, which requires accurate measurement of connection point and/or CER device power consumption/export levels in real time to enable changes to be made to CER device power levels for compliance with real-time kW site and/or device import/export limits. Site compliance is checked against specified kW levels and readings are transmitted at a frequency specified by the DNSP via CSIP-AUS to the DNSP DERMS.
- Participation of aggregated CER in off-market grid services, such as DNSP minimum and peak demand abatement.
- Participation in VPPs – though for FCAS, this requires metering capable of MASS FCAS compliance, and the current smart meters/data proposed to be available locally will need to be assessed against the MASS specification.

As such, if the delivery of data, including real-time data and energy interval data locally at the smart meter includes all data types required for the control of CER services, and is of the same accuracy as that which the third-party metering currently supplies, then this negates the need to install third-party metering as the smart meter can be used instead in most instances.

Consumer participation in the services above have in the past been voluntary (HEMs, VPPs, DR etc.), however with DNSPs mandating dynamic connections (kW import and/or export limits), this requires designated CER (or a site gateway controlling the CER) to be compliant with communicated (via the CSIP-AUS protocol) kW import/export and/or device consumption and generation energy levels, and this requires NMI / connection point and/or device level metering. As such, many thousands of sites are being installed that are incurring costs for mandatory third-party metering that could be mitigated with local access to the smart meter data,

including interval energy data and real-time data. Mandated CSIP-AUS control of designated CER extends to all new solar and battery sites in some DNSP jurisdictions and to L2 EV Chargers in QLD.

We have deployed many thousands of sites across the NEM and WEM with our own metering. The costs to consumers for us to provide Class 1 metering and installation range from circa \$500 to \$1200 per site, depending on site complexity and the number of devices/phases involved. Significant reductions in costs to consumers can be achieved with local access to the smart meter data, including interval energy data and real-time data. (Note: The dollar figure in the OG CBA report we contend is at the lower end of costs that CER service providers incur in the installation of third-party metering).

Further to the above, the AEMC and the OG CBA report have identified other benefits that consumers may derive from meter data access, including power monitoring devices that can take advantage of meter data to inform consumer behaviour, enabling consumers to choose how they use electricity and inform opportunities to save money. This is especially true in homes with generation sources and/or flexible loads/tariffs. However, to ensure consumer benefits and confidence in such devices, the meter data used by external devices must be accurate, complete, and fit for purpose to deliver the services described above.

Question 2: Should the min specs be changed to require all new meters installed from 2028 to be able to communicate real-time data both wirelessly and through a wired connection? Would changing the min specs increase benefits whilst imposing low costs on all consumers?

Our Response: In respect to the cost of data access, yes, the minimum specification should apply for all new meters installed from 2028. However, this should not preclude earlier access to metering that is deployed or being deployed now, provided they have such capabilities and the necessary security access requirements are implemented. Our experience is that almost all (certainly the majority) smart meters have provision to provide real-time data, energy interval data and many other parameters locally now. For instance, this data is currently accessed locally from the meter by embedded network operators to inform CER control, accounting and billing in embedded networks.

As one of the joint respondents of this submission to the draft rule change, Combined Energy Technologies Pty Ltd (CET) designs and manufactures metering to Class 1 specification in Australia. All CET meters also comply with the MASS specification and are used in the delivery of FCAS services to the market. As such, we are very aware of the costs involved in adding communications functionality to metering. The estimate from the AEMC draft determination of \$15 is, in our opinion, at the high end. We estimate the actual cost to be approximately \$5 to \$10 to support local data access, including real-time data. As with most electronics, we expect these costs to decrease over time.

Care should be taken in determining whether a smart meter deployed prior to January 2028 can deliver data, including real-time data, locally to the proposed “minimum service specification” (to be developed), as it most likely can already deliver data locally, but to some other standards-based specification, such as Modbus. A simple software download would bring a meter into compliance with any specification developed. These facts need to be considered to avoid commercial interests using unnecessary delays to preclude access to smart meter data, including real-time data on smart meters deployed prior to January 2028, per the draft rule.

As an example, the complete register map of meter data (available via a local communications port) from the commonly available EDM I Atlas Mk10 meter can be found here:

<https://www.aggsoft.com/modbus-data-logging/edmi.htm#atlas-mk10>

Hence, delays in meeting a minimum service specification should not be used as a commercial barrier by MCs and Retailers to prevent other capable service providers from accessing meter data and delivering competitive services to consumers now. With smart meters providing the same necessary full data set that third-party meters provide now for CER control, early access to smart meter data locally will avoid ongoing costs to consumers and mitigate the continued deployment of third-party metering in many instances, enabling earlier delivery of overviewed benefits to consumers sooner (as described in our response to Q1).

Note: We strongly recommend that the AEMC maintain a default requirement that a wired connection be available to access meter data locally. In our experience, Wi-Fi-based communications for metering and CER orchestration and control can be very problematic, noting that the meter box is typically of steel construction and is essentially a “faraday cage”, thereby limiting the range, surety and speed of Wi-Fi signals generated within the meter box, such as those from a smart meter. Whilst techniques such as external antennas can be used to mitigate these issues, that comes at an additional cost and complexity for the consumer. By maintaining a wired connection (such as a multi-user industry standard RJ45 TCP/IP interface), a variety of access methods can be used, including power line communication devices to bridge the metering data across building electrical wiring to receiving devices such as CER around the home / site. We currently use power line communications successfully on thousands of sites across the NEM and WEM to cost-effectively and securely (using 128-bit encryption) communicate between home/site CER, our own metering products, and our site energy management gateway. Enabling the smart meter with a physical communications port supporting industry-standard TCP/IP via an RJ45 interface would allow the industry to use a wide range of cost-effective, standards-based communication devices to benefit consumers. Wi-Fi communications can, of course, also be supported in the cost range given above, but wired communications should be mandatory.

Question 3: Do you agree with the costs the CBA estimates would be incurred to implement our draft rule? Would these costs decrease over time?

Our Response: We believe that the cost estimates in the CBA are reasonable.

Should the AEMC hold concerns regarding the potential for additional meter functionality costs to be passed on to consumers, it may be appropriate for the Commission to initiate a cost-benefit analysis (CBA) to examine the current trend of “scope creep” in metering. This refers to the expansion of meter processing power and functionality well beyond what is necessary for settlement, billing, and compliance with the minimum metering specifications.

The inclusion of features designed to support products and services that not all consumers may desire or require—particularly those inaccessible to consumer-authorised representatives and retained exclusively by the MC or Retailer under the assumed protections of the National Electricity Rules (NER)—raises significant concerns. Based on our experience in the design and manufacture of Class 1 meters, we contend that the costs associated with these enhancements are substantially higher than those evaluated in the CBA for Real-Time Data (RTD) provision. These elevated costs appear to be recovered from all consumers, without oversight from the AEMC. Furthermore, due to limited market competition, consumers are deriving minimal benefit, while Retailers and MCs gain disproportionately at the expense of innovation, competition, and consumer welfare.

Question 4: Our draft approach is to progressively enable consumers with new meters installed from 2028 to access real-time data at no charge. What is the benefit of enabling more consumers to access real-time data from smart meters, at no charge, sooner?

Our Response: In our answer to Question 1 previously, we have described the current CER services that consumers typically engage with, including voluntary services (e.g. HEMs, VPPs, Off Market DNSP services, etc.) and mandatory DNSP compliance-related services, including CSIP-AUS control of CER (Solar PV, Batteries, EV Chargers) all of which require metering. There are now hundreds of thousands of sites that have installed third-party metering to enable these services, and in the case of CSIP-AUS control, to ensure compliance with DNSP connection agreements. The past and ongoing costs to consumers are estimated to be in the high tens of millions of dollars and are now rising rapidly due to the mandatory CSIP-AUS control of CER (Solar PV, Batteries, EV Chargers) required by DNSPs, which by definition mandate third-party metering be installed.

If the smart meter can provide the equivalent metering data that third-party meters currently provide locally to enable CER services, there will, of course, be significant financial and other benefits to the consumer. This is because they can mitigate the need for additional third-party metering by using data from the smart meter

instead.

However, as we have detailed throughout our response, accuracy and validation of the proposed *real-time data* is required to deliver the above services (and ensure compliance, as is the case of DNSP CSIP-AUS control of CER). This requires other meter data, including energy interval data, to deliver these services.

As such, *real-time data* is not the only meter data that is required to enable replacement of third-party metering, nor the only issue, and urgent structural changes are also required to recent rule changes, including “Flexible Trading Arrangements”, and the “Unlocking CER Benefits Through Flexible Trading Rule Change”.

Please see our response to Q7 also, which includes the following summary of two main CER control issues related to meter data if CER with embedded metering goes “on market” as a sub-metered connection point as a result of the “Unlocking CER Benefits Through Flexible Trading Rule Change”.

- 1) CER service providers must retain the ability to continue controlling these CER devices with embedded metering to ensure continued delivery of the CER services overviewed, even if the sub-metered CER device (and hence its embedded meter) goes “on market” under a sub-metered Retailer arrangement.
- 2) The need for the CER service provider to continue accessing the embedded meter data, which is used to inform the control of the CER devices and hence to deliver the CER services and/or for DNSP compliance reasons, such as for CSIP-AUS power import/export control. Further, access to CER embedded meter data is required to comply with International and Australian Standards on some devices for both control and accounting purposes in the provision of the services described above. This includes access to voltage, current, *accumulated energy interval data*¹ and other embedded meter data as is required to control an EV Charger in compliance with the international OCPP standard.

Note 1: *The need for energy interval data was raised/acknowledged on Friday, 17 October 2025, in the AEMO-hosted industry briefing to present AEMO’s draft High-Level Implementation Assessment (HLIA) for the “Real Time Data (RTD)” reform. Refer to the AEMO recording of the event.*

Question 5: What information would be useful for consumers to help them determine if accessing real-time data is beneficial and if any charge to them, to upgrade the meter, is reasonable?

Our Response: Several regulatory, Government and industry initiatives could be provided to inform consumers of any costs, the steps to access RTD, and, if required, the steps to update their existing meter, along with a list of benefits.

Possible Regulatory Solutions:

Information on the consumer’s meter, whether it supports RTD, how it supports RTD (i.e. via the minimum specification, or if before the 2028 compliance date by some other specification, or via upgrade or replacement), along with information on how to access further information on any costs, could be added to the consumer’s electricity bill. Additionally, the information could be made available via an online lookup of the meter NMI. An online lookup by NMI is the simplest method to detail any costs associated with replacing or retrofitting a meter (before the 2028 compliance date for all meters to support RTD access). This information could be made available through an extension to the current “Energy Made Easy” Government website, and making it publicly available will help ensure that costs remain “reasonable”.

Further, an online process for consumers to access their meters should be an option in addition to phone support, given the usual lengthy phone wait times when contacting Retailers.

Possible DNSP Solutions:

DNSPs already provide web-based information on products and companies that are certified to provide CSIP-

AUS connectivity for specified CER in accordance with DNSP connection agreements. As DNSP dynamic connections require a designated CER (or a site gateway controlling the CER) to be compliant with communicated (via the CSIP-AUS protocol) kW import/export and/or device consumption and generation energy levels, this requires NMI / connection point and/or device-level metering. The embedded meter in the CER device (device level control) or a connection point meter (parallel to the smart meter) computes the import and/or export from the site/device in kW (i.e. Kilowatts - the rate at which energy is used or exported by the site or devices at a specific moment) with the certified CSIP-AUS controller or device on the site then sending command to CER to adjust the kW energy levels in real time. This process requires continuous two-way communication with the DNSP CSIP-AUS Distributed Energy Resources Management (DERMS) system server to ensure compliance with reporting requirements to the DNSP. As this DNSP compliance requires the use of metering, it would make sense for DNSPs to provide advice and information on certified suppliers that have solutions that may mitigate the need (and hence cost) of installing third-party metering for CSIP-AUS dynamic connection compliance.

However, the current draft rule determination does **not** cater for the replacement of third-party metering, as accurate RTD is required which must be validated using energy interval data. This is currently not proposed to be available under the draft rule. There are also further commercial, structural, and consumer lock-in issues to consider here if CER with embedded metering goes “on market”. We elaborate on these issues in answer to other questions in our response.

Possible Industry Solutions:

If access to RTD provides the industry with cost reductions in the delivery of CER monitoring, control and compliance, then competition will itself lead to innovation, and a wider range of cost-effective options to deliver consumer value. This, however, is contingent on the proposed access to RTD being fit for purpose in replacing the need for existing third-party metering. We discuss this throughout our response.

Question 6: Would any other regulatory mechanisms better enable all consumers to access real-time data from smart meters at a low cost to the market?

Our Response: In our response to Q5 above, we suggested that an online lookup by NMI is perhaps the simplest method to detail any costs associated with replacing or retrofitting a meter (prior to the 2028 compliance date for all meters to support RTD access). As indicated, this could be an extension to the current “Energy Made Easy” Government website, and having such information publicly available may assist (via competition tension) with ensuring that costs are kept “reasonable”. Such public access to information would allow comparison by consumers with neighbours and friends who may be on different Retailers with different meters supplied by different MCs. Costs should not vary much between meter models; hence, the ability to cross-check pricing could be formally extended to an online list of meters and the associated costs (informed by the Retailer/MC) to enable access.

Question 7: We proposed a definition of real-time data and a requirement on AEMO’s real-time data procedures. Would these provide the industry with sufficient clarity on what real-time data is, and how real-time data would be made accessible from smart meters?

Our Response: No.

In the “NER Indicative Markup Real-time data for consumers”, the following new Glossary term is used to describe real-time data:

real-time data

“Measurements of voltage (in volts), current (in amperes) and phase angle made available by one or more measurement elements in a type 4 or type 4A *metering installation* at a resolution of no less than once per second in accordance with the requirements of the *real-time data procedures*.”

We have the following concerns with this definition and offer recommended remedies:

1) Inability to calculate accurate (Class 1) energy interval data records.

The real-time provision of “Measurements of voltage (in volts), current (in amperes) and phase angle” as proposed is insufficient to calculate accurate *energy interval data*. Even at a 1Hz frequency it is impossible to calculate energy interval data with any confidence, as the provided data metrics are unknown (i.e. is the voltage / current min, max or average for the period, what was the waveform sampling rate, how many sample points were used, has the meter error correction dropped packets of RTD in its transmission, etc.)

In section 4.1.7 of the Draft Rule, the AEMC states that:

“Raw real-time data itself is not valuable for consumers. It is services using real-time data that can be beneficial to consumers, including CER management services or mobile application services.”

And in section 2.5.1 of the Draft Rule, the AEMC states that:

“ECA has noted several key insights that customers would find valuable:

- kWh total per day and in regular intervals
- cost per day and in regular intervals
- import/export from the grid
- average kWh used daily
- average daily spend
- monthly trends
- daily energy consumption compared to your average
- carbon intensity of energy consumption”

We agree with the AEMC statements, but to ensure that real-time data can deliver these benefits to consumers, that data must be accurate (Class 1) and capable of being validated against the meter energy interval data, to accurately calculate other parameters, such as energy consumption data, per the points above. Such capability should not be the sole domain of the Retailer. If the accuracy of the real-time data cannot be validated through the provision of energy interval data¹, then services provided in the use of real-time data may be unreliable, inaccurate and hence less than beneficial to the consumer.

To ensure the real-time data is accurate then time stamped energy interval data¹ is also required periodically from the meter, and this should be by request from the external device (pull request) over both wired and wireless interface options. (noting all smart meters being deployed now can provide such data – e.g. as it is required in embedded networks).

The “pull request” from the external device does not need to support 1Hz resolution. Still, it needs to be available on demand in a timely manner to enable time stamped energy interval data to be updated e.g. for use by HEMs, for DNSP CSIP-AUS dynamic connection compliance, for VPP applications, and particularly for EV Charging applications where the data from embedded metering in an EV Charger is used continually during charging sessions, with the metering updates required for in session control of the EV charging (constraint load management, kW power delivery control, user updates on kWh added, determining charge limits reached etc.) and for ending, and timely presentation of charge session information including energy interval data for use by the end user via the EV Charging energy accounting system.

Conclusion (re: Inability to calculate accurate (Class 1) energy interval data records)

Real-time data (as per the draft rule definition) of its own:

- Cannot be used for the purposes of calculating accurate energy interval data¹
- In all cases, due to the different meter brands and models, only the provision of time-stamped energy interval data, along with guaranteed Class 1 real-time data from the meter, can provide the necessary

energy data information for the intended monitoring, control and compliance applications of CER. (HEMs, VPPs, CSIP-AUS CER control, EV Charging accounting, sub metering CER control and accounting of CER with embedded metering (typically Type 8B and 9 meters).

Note 1: *This fact was raised/acknowledged on Friday 17 October 2025, in the AEMO hosted industry briefing to present AEMO's draft High-Level Implementation Assessment (HLIA) for the "Real Time Data (RTD)" reform. Refer to the AEMO recording of the event.*

Q7 Recommendation 1 of 4 – required NER changes:

- Real-time data must be of assured Class 1 Accuracy and
- On-demand "pull request" capability of time-stamped energy interval data from the meter must be added to the draft rule change for the reasons given above. If not available, then services provided in the use of real-time data will be unreliable, inaccurate and hence less than beneficial to the consumer.

2) Sub meter Types must be included in the rule change.

Real-time data access in the draft rule Glossary term has been restricted to type 4 and 4A metering and does not include the sub-metering classes detailed under the Final Determination – "Flexible Trading Arrangements", and as detailed in the "Unlocking CER Benefits Through Flexible Trading Rule Change" being:

- Type 8A meters:
Permitted for use at secondary settlement points (SSPs) and primary connection points in large customer premises
- Type 8B meters:
Permitted for use at SSPs in small customer premises, e.g. EV charger at a SSP.
- Type 9 meters:
Permitted for primary connection points for public street lighting and street furniture

Systems integrators, HEMs providers, off-market service providers and CSIP-AUS certified solution providers (for DNSP constraint mitigation through CSIP-AUS CER control) are some of the current CER service providers that utilise embedded meter data for CER control on hundreds of thousands of sites across the NEM and WEM.

As such, to maintain the above competitive services being provided to the consumer, it is critical that these CER service providers can maintain the same access to all energy data and control capability for any sub-metered CER device that goes "on market" with embedded metering (e.g. Type 8 and 9).

This may include EV chargers, smart water heaters, batteries, pool pumps, solar PV and the like, which are target CER devices for sub-metering under the aforementioned rule changes.

Summarising - there are two main issues:

- Retaining the ability to continue controlling these CER devices with embedded metering is required to ensure continued delivery of the services overviewed above, even if the sub-metered CER device (and hence its embedded meter) goes "on market" under a sub-metered Retailer arrangement.
- The need for the CER service provider to continue accessing the embedded meter data, which is used to inform the control of the CER devices and hence to deliver the above services and/or for compliance reasons, such as for CSIP-AUS power import/export control. Further, access to CER embedded meter data is required to comply with International and Australian Standards on some devices for both control and accounting purposes in the provision of the services described above. This includes access to voltage, current, accumulated energy interval data and other embedded meter data as is required to control an EV Charger in compliance with the international OCPP standard.

Conclusion (re *Sub meter Types must be included in the rule change*)

- Sub-meter types must be included in the rule change for the reasons given above, including control compliance with standards.
- Full device control and access to embedded metering data in the sub-metered CER devices that go “on market” must be maintained to:
 - ensure consumer contracted services can be maintained.
 - DNSP CSIP-AUS control compliance services can be maintained.
 - CER devices support open access for control under the standards to which they are tested. (e.g. The OCPP standard for EV Chargers, which requires using the embedded meter data for power control and energy accounting for every EV charging session).

Q7 Recommendation 2 of 4 – required NER changes:

- The NER definition for *real-time data* is updated to include relevant sub-meter types.
- The AEMC, as a matter of urgency, review the consequences of the “Flexible Trading Arrangements”, and the “Unlocking CER Benefits Through Flexible Trading Rule Change” and its impact on consumer benefits, competition, market innovation and compliance with the NEO as detailed above.

PLEASE NOTE: In our cover letter, we have sought an urgent meeting with the AEMC. The above consequences of these rule changes will fundamentally change the industry, providing regulatory protection to a few market participants at the expense of industry competition and innovation, and restricting consumer choice of how, and with whom their CER assets are controlled/monetised for their benefit. Further, we do not believe the current rule changes above and this draft rule change in their current forms are consistent with the NEO.

3) Inconsistency between the NER Glossary Term for real-time data and parts of NER Clause 7.16.6E

In the NER Indicative Markup-Real-time data for consumers, specifically the newly proposed clause 7.16.6E Procedures regarding real-time data Part (a) (6), there is a reference to a minimum time frame for *real-time data* to be received by an external device. If this rule change is to deliver a primary benefit of negating the need for a third-party metering installation at a consumer's connection point, the frequency of delivery, the data type, and the data accuracy must be equivalent to that provided by the third-party meter (Typically Class 1) it is intended to replace in order to perform the functions for which the third-party metering was installed. The proposed Glossary definition of *real-time data*, which we have discussed states timing of no less than once per second yet 7.16.6E Part (a) (6) (i) suggests a latency limit of up to 5 seconds, which is unacceptable, as is any contemplation of a longer latency as detailed in 7.16.6E Part (a) (6) (ii).

Q7 Recommendation 3 of 4 – required NER changes:

- Real-time data must be of assured Class 1 Accuracy and 1Hz or better as required to attain that accuracy, and;
- Changes should be made to the draft markups in 7.16.6E to reflect the Class 1 requirement and frequency of delivery to meet that requirement.
- Noting as detailed in our Q7 Recommendation 1 of 4, - On demand “Pull request” capability of time-stamped energy interval data from the meter must be added to the draft rule change for the reasons given in our Part 1 response to Q7.

4) Table S7.5.1.1 ambiguity and harmonisation of terms

The addition of a Service (g) *real-time data* access service, with the nominated access party being real-time data authorised recipients, should be harmonised with the access rights of a small customer, as detailed throughout the table, as the draft rule proposes it is the small customer that authorises a *real-time data authorised recipient's* access. Further, the existing small customer access rights in Table S7.5.1.1 cannot be delivered as Chapter 7 is currently written, due to what may be a “drafting error” in Chapter 7.

Referring to the NER extracts below, and in reference to the NER *Table S7.5.1.1 Minimum Services Specification – services and access parties* - the majority of the metering installation service access types listed in the table grant access (i.e. authorised parties in Column 3 of the table) to "A person to whom a small customer has given its consent under clause 7.15.4(b)(3)(ii)".

However,

Clause 7.15.4 (c) states a requirement for "local access and remote access by suitable password and security controls in accordance with paragraph (e);" is required to access the meter and by extension, the services cannot be accessed as specified to "A person to whom a small customer has given its consent under clause 7.15.4(b)(3)(ii)" without the required password and security controls.

And,

Clause 7.15.4 (e) (1) lists entities that may have the password/password access of which the *small customer* is NOT listed.

And Further,

Per Clause 7.15.4 (e) (2)

In relation to Clause 7.15.4 (e) (1), Clause 7.15.4 (e) (2) says "except as provided above [referencing the listed entities in Clause 7.15.4 (e) (1)], no other person receives or has access to a copy of a password allowing local access or remote access to the metering installation, services provided by the metering installation or energy data held in the metering installation."

Given the above, our interpretation is that although Table S7.5.1.1 provides local and remote access rights to the metering installation for data retrieval for the services listed as accessible to "A person to whom a small customer has given its consent under clause 7.15.4(b)(3)(ii)," this cannot actually occur due to the password restriction that does not include the "small customer" as an entity that can have password access.

Q7 Recommendation 4 of 4 – required NER changes:

- We would request that the AEMC makes updates to the remove this password restriction (whilst maintaining security, e.g. via mechanisms proposed for *real-time data* access) so that the *small customer* can access the specified data (locally) as noted as accessible to the *small customer* in Table S7.5.1.1 along with newly proposed *real-time data* access as per Table S7.5.1.1 markup, additional service (g). Harmonisation of stated existing access rights of the *small customer* and the new category of *real-time data authorised recipients* is required.

Note to table 3.2 of the Draft Determination

There are references in this table that quote circumstances where Retailers would not be required to facilitate access to real-time data.

Statements include:

"Section 4.1.1 explains that Retailers would not be required to facilitate access in certain instances..... For example, in apartment units where it may be infeasible to enable wireless access to meters that are far away from the unit. Customers would need to resolve signal strength issues before access may be enabled."

AND

"We consider that all solutions that facilitate access to real-time data from the smart meter should enable the data to be received within 5 seconds, all things being equal. However, we consider there may be circumstances, like Wi-Fi connectivity issues, which may affect the time it takes for data to be received."

These statements make no sense. For clarity, wired and wireless access are to be capabilities embedded in the meter. The actual physical access to the meter and the data connectivity between the meter (wired or

wireless) and the external device seeking access are unrelated to the Retailer or the location where the meter is installed. They should not be used as a reason to deny access. Providing the cables or wireless infrastructure to the meter, or even power line communications, as described in our response, is the responsibility of the access seeker.

Question 8: Our draft rule would introduce a range of requirements on different parties to enable customers to access real-time data. Do you consider that our draft rule would support a good customer experience for customers requesting access?

Our Response: No, it will not support a good customer experience in its current form. Further work is required.

A “good customer experience” is predicated on the delivery of new competitive services, and the continued delivery of existing services without interruption to the consumer, on a commercially and technically neutral basis. We have detailed in our answers to the questions posed by the AEMC where we believe the draft rule falls short in delivering on a good customer experience, including:

- The need for *real-time data* accuracy and validation locally by inclusion of *interval energy data*.
- The addition of Type 8 and 9 meters to the Glossary definition of *real-time data*.
- The preservation of existing and the ongoing access and control of CER devices with embedded metering that go “on market” under sub-metering / flexible trading arrangements.

We elaborate below on other issues, including access and consent issues, where we believe further work is required.

Question 8 Recommendation 1 of 3 - updates to the NER

We refer to the AEMC web site, specifically: <https://www.aemc.gov.au/our-work> and highlight the following statement:

“we’re bound under the National Electricity Law/National Electricity Objective [NEL/NEO] to make sure that households and businesses can access the energy they need at least cost.”

To ensure consumers can access energy at the lowest cost, a competitive market for controlling and orchestrating Consumer Energy Resources (CER) is required, with the Smart Meter playing an expanding role as an enabler of behind-the-meter CER products and services. Provision, locally (at the smart meter) of RTD is only part of the required solution and fundamental to this outcome, is to ensure no preferential access to smart meter data and smart meter CER control should be given to any one entity or group of entities such as Retailers and MCs for purposes beyond settlement and billing. We contend that this situation is happening now in the market, creating a “monopoly” or at least favoured access to smart meter capabilities, distorting the competitive landscape through the use of the Consumer’s smart meter data, and control of the Consumers CER by the smart meter, which is beyond the intended purpose of the smart meter in providing its stated function (per Chapter 7 of the NER) to provide settlement and billing services in the delivering of energy to consumers.

Therefore, in considering the Draft Rule Determination – “Real Time Data for Consumers”, and to ensure consumer outcomes aligned with the NEL/NEO (which the AEMC is obliged to follow), access to smart meter capabilities, including but not limited to RTD, must be provided to all consumers and their authorised representatives on a technically and commercially neutral basis.

If the intent of the Draft Rule Determination is only to deal with the delivery of RTD, then any rule change must explicitly state that any, and all other functions and capabilities of the smart meter (beyond settlement and billing / prescribed minimum services) are prohibited until such time as a further rule change is enacted to ensure extended data access and control functionality being added to smart meters is available to the consumer and their authorised representative on a technically and commercially neutral basis in accordance

with the NEL/NEO *“to make sure that households and businesses can access the energy they need at least cost.”*

In response to Section 4.1.3 the consumer should be given all reasonable information to identify if they have a meter with the new minimum specification and if not, how this can be easily achieved. One easy method of achieving this outcome with minimum effort from the consumer (e.g. avoiding phone calls) is to simply provide such information on the consumers’ electricity bill, and or via an online lookup of the NMI.

Question 8 Recommendation 2 of 3 - updates to the NERR

In respect to the NERR, changes must be made to ensure the supply of energy **cannot** be contingent on the consumer relinquishing their rights (to the Retailer, MC or other party) of the consumer's meter data, and/or control of the consumer's CER as a prerequisite to the supply of energy to the consumer.

We note many energy contracts include the above requirements.

As such, the NERR must be updated to eliminate this practice that seeks to void the consumer (or their nominated representatives) consent rights over the use of their meter data and meter CER control functions, including rights of access to RTD. Explicit consent should be required for accessing and using any consumer data, and any exclusive access consent should be a decision for the consumer. We note that in section 4.2.1 of the Draft Determination, consent is discussed. Here, the AEMC states that:

“In seeking customer consent, parties must:

- present the customer with an active choice to give consent, which would not be the result of default settings or pre-selected options - this is so customers do not unknowingly provide consent, and are actively aware that they have provided their consent.”

We agree with the above if the statement “would not be the result of default settings or pre-selected options” is intended to include the energy contracts issue we have described above.

Further section 2.5.1 notes that consumers may find valuable other information, including:

- kWh total per day and in regular intervals
- cost per day and in regular intervals
- import/export from the grid
- average kWh used daily
- average daily spend
- monthly trends
- daily energy consumption compared to your average
- carbon intensity of energy consumption

We agree, and since this is the consumer’s data, it makes sense that the consumer and their representative should have access to it without involving the Retailer. We have consistently advocated that all meter data should be available to the consumer and to their nominated representatives. Beyond initial enablement, as proposed in the draft rule change, this data should be accessible locally from the meter for use by the consumer and their representatives. There is no technical reason to restrict the data available locally from the meter. To ensure commercial neutrality in the delivery of innovative products and services as per the “Four criteria” detailed by the AEMC in the draft rule, all data, including the above data and *real-time data*, should be made available locally at the smart meter.

No entity should be granted privileged access to data sets that are not available to the consumer or the consumer's representative locally, as this could lead to market distortion in the delivery of CER products and services and consumer lock-in.

Question 8 Recommendation 3 of 3

NERO considerations as applied to the draft retail rule – real time data for consumers

The AEMC states that the draft rule has been assessed against four criteria being:

- Delivering good consumer outcomes
- Improving market efficiency
- Encouraging innovation and maintaining flexibility
- Facilitating a smooth implementation

In reference to the *NERR Indicative Markup-Real-time data for consumers* we contend that further changes are required to deliver on the above criteria by ensuring that consumers (i.e. the *small customer*) have choice in how and with whom their data, (including *real time data*) and any meter controlled/informed CER (e.g. controlled load) and other CER enabled by the meter is utilised.

Further, as detailed above, there are now widespread practices whereby current energy supply contracts have clauses that require the consumer to give up their rights to, for instance, control over their controlled load circuit(s) and by inference all data generated in the remote manipulation of their controlled load circuit(s) by the Retailer / MC.

Updates to the “NERR Indicative Markup-Real-time data for consumers” should include:

Additions to clause 59D to ensure that consumer consent requirements are expanded to include:

- All meter data, including *real-time data*
- The use of *meter data*, including real-time data (other than for settlement and billing purposes), within the meter itself to inform or control CER attached or communicated with from the meter.

AND

Additions to clause 59E be made to ensure that a consumer:

- May not be penalised (including financial penalty such as voiding a discount) by an energy Retailer or be required to accept assignment of their data rights (including real-time data) and/or control over and/or data associated with the control of CER as a prerequisite to the supply of energy to the *small customer*.
- Energy supply contracts should be precluded from enforcing exclusivity (e.g. with the Retailer) to restrict assignment by the consumer (*small customer*) from engaging with / consenting to allow multiple representatives access to data (including *real-time data*) and meter informed or controlled CER.

The above enhancements to the *NERR Indicative Markup-Real-time data for consumers* should be enforced **now**, and are necessary steps to ensure the AEMC works towards establishing a commercially neutral meter access framework consistent with their stated mandate that:

“we’re bound under the [National Electricity Law](#)/[National Electricity Objective](#) [NEL/NEO] to make sure that households and businesses can access the energy they need at least cost.”

Question 8 response: concluding remarks

We would seek to meet with the AEMC further to discuss the above urgent industry and consumer issues and suggest that the AEMC also engages the wider industry in discussions, particularly the Consumer Advocates (ECA, JEC, EWON, etc.), to discuss the issues raised.

Question 9: Would our draft rule introduce appropriate security measures to protect customer information from being accessed by unauthorised parties?

The proposed security aspects of the draft rule seem sound. It is the regulatory and technical framework that needs to be fully developed, which will guide the appropriate data security measures to protect consumer information without imposing unnecessary restrictions on access by the consumer or their authorised representative.