



Australian Energy Market Commission  
Attn: Mitchell Grande

By email: on-line submission via [www.aemc.gov.au](http://www.aemc.gov.au)

02 February 2023

Dear Sir

**Re: Review of the Regulatory Framework for Metering Services (project reference code EMO0040.)**

Thank you for the opportunity to comment on the Review of the Regulatory Framework for Metering Services (the Review).

This response is a joint response on behalf of both Rheem Australia Pty Ltd (Rheem) and Combined Energy Technologies Pty Ltd (CET), as we have a complementary interest in the Review.

As the largest Australian manufacturer of water heaters with products in over 4 million Australian homes, we offer a wide range of traditional and renewable energy water heater models to the domestic and commercial water heating markets under the Rheem, Solahart, Vulcan, Aquamax & Everhot brands, and we are the third largest supplier of photovoltaic (PV) systems in the country. Over the last five years we have also manufactured and installed thousands of smart electric water heaters, controlled remotely by our technology partner, CET.

Together, Rheem and CET are already actively participating in the emerging DER market with thousands of online, mixed, orchestrated DER sites (solar PV, batteries, smart water heaters, HVAC, pool pumps, EV chargers, other loads) across the NEM and the WEM and have developed a DER aggregation platform for grid services.

We strongly support the AEMC's summary of broad recommendations regarding the targeting of full smart meter rollout by 2030, and the benefits this will bring both to the consumer and to DNSPs managing the distribution network under high CER penetration. Our view is that more dynamic monitoring and control of CER will increase the PV carrying capacity of the distribution network. This should in turn reduce energy prices for all consumers. This significant benefit does not seem to have been mentioned in the Review.

**Customer access to data**

Considering that consumers are paying for their smart meter we consider it is essential that customers can get access to the same data that their meter data provider already enjoys. There are two means by which consumers can gain access to the import and export data from their smart meters. It is important to differentiate between these two use cases.

1. (Near) real time access assumes that a customer can access their meter data remotely based on access to a secure web application. For this reason, we prefer to refer to this



method as “remote data access”. This data would be required to be “pushed” by the meter to the cloud whenever the customer accesses this web application. We note that frequent use of remote data access by a large proportion of customers may increase telecommunications costs as the data is streamed more frequently than standard daily intervals. We do not believe that remote data access is a realistic solution to support DOE. Remote access also has an additional risk of any telecommunications constraints or failures from preventing the required local response.

With regard to the Review’s request for feedback on remote data access, we do not see any evidence in the market that these services are being “enabled organically, and regulatory intervention is not warranted”<sup>1</sup>. Markets in the USA have provided this type of access to data to many energy consumers and their service providers for more than a decade<sup>2</sup>, so it is not new technology. However, in Australia retailer provided data in the NEM via internet apps is typically 3 days in arrears. This delay does not make the data particularly useful to consumers.

2. Real time Local access The ESB’s Post 2025 market design emphasises the importance of DNSPs being able to implement Dynamic Operating Envelopes (DOE) to support increasing penetrations of household CER in the most economically efficient manner. DOE has the complimentary requirement for Dynamic Export Limits (DEL), and some DNSPs are also trialling dynamic pricing to provide appropriate incentives for households to respond to DEL. Each of these initiatives has a mandatory requirement for the household CER to respond in real time at the point of connection. Because the household CER does not currently have real time access to the revenue meter, this currently requires the installation of a second meter to measure net exports/imports. This is economically inefficient as the customer will be paying either directly or indirectly for each meter. The addition of more meters at consumer cost may also act as a disincentive for households to participate in DOE based orchestration. Once the home comes under DOE orchestration, all of the CER needs to be coordinated on a “whole of home” basis, so all but one meter becomes redundant. This is because the home cannot have multiple providers controlling different household CER. It may also act as a disincentive for households to participate in DOE based orchestration.

**Ecosystem of the future grid.** We note the Review’s comments that “concerns raised by multiple stakeholders that smart meters might not be the right device to deliver wider consumer benefits in the form of improved and/or innovative energy products and services.”<sup>3</sup> It is important to note that our Home Energy Management System (HEMS) does provide functionality/capabilities well beyond that of a Smart Meter. However, we strongly support the Smart Meter being the foundation of this additional capability.

It is important to note that the customer would still have to add this additional hardware (we call this an Energy Management Unit, which forms part of the HEMS) to provide this

<sup>1</sup> AEMC “Review of Regulatory Framework for Metering Services” Page X

<sup>2</sup> <https://www.greenbuttondata.org/>

<sup>3</sup> AEMC Op Cit Page 12

functionality. This may be the cause of the concerns raised by stakeholders with regards to meeting the future functionality requirements. But this architecture would not be independent of the existing smart meter - it would rely on the smart meter for the required data at the point of connection.

**Cyber Security.** The Review notes the AESCSF work being done by AEMO. We consider it essential that consumers have confidence when granting data access to third party providers that any data will be managed and stored in a responsible fashion. It is appropriate therefore that 3<sup>rd</sup> party access to local or remote customer data is limited to accredited providers who are able to demonstrate the ability to meet the proposed AESCSF security standards.

**Consumer Data Right.** We note the AEMC's advice that from 15 November 2022 consumers have the right of access to their import and export data via the Consumer Data Right<sup>4</sup>. We trust that this means that the CDR will override the current barrier imposed by the NECF, which does not provide the customer with the right to real-time local data from their smart meter.

Additional to the above feedback, Rheem has also addressed some of the specific consultation questions raised. Our response is attached as Annexure A below.

We would ask that you give due consideration to the perspective of innovators looking to invest in the substantial but largely unrealised role that controlled DER could play in the Australian energy transition. If you have any queries regarding this response or our market, please do not hesitate to contact me.

Yours Sincerely



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<sup>4</sup> AEMC Op Cit pg 127



## ANNEXURE A

Question	Response
<p>17. Regulatory Measures to enable innovation in local access to near real time data sooner. If so, would it be suitable to:</p> <p>a. Define a customer’s right to access the smart meter locally for specific purposes?</p> <p>b. Outline a minimum local access specification, including read-only formatting and unidirectional communications? Are there existing standards that MCs can utilise, for example, IEEE2030.5, CSIP-AUS, or SunSpec Modbus?</p>	<p>We are confused by the AEMC’s statement that local access is “near real time”. The objective of local access by its very nature is to enable real time access. Low latency is particularly important for FCAS market participation.</p> <p>We believe that all consumers should have access to their own metering data. The primary purpose of this local access should be to support the management of household CER for optimisation of the householders demand and PV generation, and to support grid optimisation via DEL/DOE. While this primary purpose should have priority over other use cases, we would be hesitant in restricting local access for other future use cases.</p> <p>We would support adopting SunSpec Modbus with Modbus currently being the most widely accepted BTM protocol. From a physical perspective, ethernet or rs485 would be a minimum (and preferred) requirement, with the ability to connect to these without requiring an electrician licence. The transport layer can then be either Modbus RTU (for rs485 connection) or Modbus TCP (for TCP connection). These physical connections are compatible with the majority of devices in the field and have been very reliable standards for many decades. It also means that you need physical access to the meter to read the data. We do have concerns with low-cost Wi-Fi. given it is being phased out and cannot generally penetrate meter boxes.</p> <p>We are not familiar enough with the current metering data provision procedures to comment as to their suitability. We do note that the access requirements would be continuous. Our system is currently able to modify CER settings every 5 seconds. The consent to local access should be limited to accredited providers who have demonstrated compliance with AESCSF cyber security standards.</p>



<p>c. Codify a process for activating, deactivating, and consenting to a local real-time stream? If so, could the Commission adapt the current metering data provision procedures?</p> <p>2. Are there any other material barriers that the Commission should be aware of?</p>	<p>While the normal requirement would be for read only access, we need to differentiate the requirements for FCAS market participation. Considering most smart meters are not currently FCAS compliant, this is a moot point. However, if smart meters were to provide an FCAS compliant capability, there would certainly be a need for certificate / password access for configuring FCAS.</p> <p>However, for FCAS participation it may be more cost effective to install a second meter, rather than upgrade / modify the current smart meter specification.</p> <p>Local access by its very nature may limit the number of providers who can physically get local access to the comms port. This may encourage some providers to attempt to secure monopoly access in an attempt to lock out other providers. Consideration needs to be given to rules to prevent this type of monopoly behaviour. This may include a port design that supports physical piggy backing at the comms port. This may require the first provider to install a plug in the primary port that allows for multiple connections. It may also include rules restricting access to the provider / or providers supporting DEL capabilities for the home. This could be linked to point 17.a above.</p>
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