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7 November 2024

Anna Collyer
Chair
Australian Energy Market Commission
Level 15, 60 Castlereagh St
Sydney 2000
E: aemc@aemc.gov.au

Consultation feedback on the National Electricity Amendment (Real-time data for consumers) Rule

Dear Ms Collyer,

I am writing to you to express support on behalf of SMA-Australia for the proposal to amend the National Electricity Rules (NER) to introduce a right for consumers and their authorised representatives to access consumers' real-time data from smart meters and further changes to facilitate access.

As you may be aware, SMA is a global inverter manufacturer with headquarters in Germany and an installed inverter capacity of more than 132 GW in almost every country in the world and more than 9GW inverter capacity in the Australian market. Our product range spans the consumer energy resources (CER) sector, commercial and industrial applications, and large grid-scale applications.

SMA-Australia strongly supports the proposal to recognise that consumers and their authorised agents have a right to access real-time data. It is their data, they pay for the cost of metering and they need the data to be able to manage their energy consumption in ways that can reduce their electricity bills while also reducing the overall costs to the system.

There will be short term cost savings for consumers who are no longer required to pay for the acquisition and installation of multiple meters (or current transformers) to obtain the real-time data they need to optimise consumption to take advantage of cost-reflective tariffs and for intelligent management of load, generation and storage. We agree with the observation made by Energy Consumers Australia (ECA) that enabling access to real-time data would support consumers to maximise the value of their CER and support the integration of CER into the energy grid.

In the longer term the most significant advantages for all consumers are expected to emerge from the partnerships between companies in the CER supply chain, which are catalysed by the availability of real-

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time data. We are already seeing evidence of the proposed rule change helping to drive these partnership opportunities.

We have included a submission which responds in more detail to the questions raised in the Consultation paper. SMA-Australia's head of Energy Policy and Regulation, Darren Gladman, will continue liaising with your staff on our behalf.

Best regards,

Doris Spielthenner
SMA Australia
Regional Manager APAC & Managing Director Australia & NZ

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Responses to questions raised in the Consultation Paper

Question 1: What are the benefits of improving access to real-time data?

a) What are the anticipated use cases of real-time data?

We expect many benefits from access to real-time data.

It will reduce costs to homes and businesses installing CER. They will not need to pay extra for additional meters, current transformers or other devices which are used to provide alternative avenues to obtain access to real-time data. This will save hundreds of dollars (and sometimes more a thousand dollars) per CER installation. The avoidance of unnecessary costs will help to make CER more accessible to lower socio-economic households. Across all the CER installed in Australia every year, the savings to consumers are estimated to be in the tens of millions of dollars.

It will reduce the need for additional equipment in the switchboard. Switchboards are already becoming very crowded. The need for additional space can cause significant installation costs that would not otherwise be required.

It will allow for reading of the end consumer's live data, which is especially useful in troubleshooting customer complaints.

It will enable CER to respond to cost-reflective tariffs, like demand tariffs.

If implemented well, it will reduce consumer 'lock in' to one company's product range, which will increase competition, improve consumer choice, and reduce costs to consumers.

It will reduce barriers to consumers participating in CER orchestration programs, which will improve CER integration and reduce the need for network augmentation.

It will reduce costs to comply with changing standards and requirements of the local distribution network service provider (DNSP) by reducing the need for additional hardware. There is a growing need for real-time data for compliance with requirements like dynamic operating envelopes (DOEs) and import control of electric vehicle (EV) chargers. Real-time data accessibility enables dynamic connections, and this helps to defer and reduce costs of network augmentation.

We expect (and we are already seeing evidence) that a rule change to improve access to real-time data will be a catalyst for new partnerships between in the CER supply chain, such as inverter original equipment manufacturers (OEMs) and technology providers.

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b) What is the value of the benefits that flow to consumers?

The most immediate benefit to consumers will be that it is no longer necessary for them to pay for the acquisition and installation of multiple meters (or current transformers) to obtain the real-time data they need to optimise consumption to take advantage of cost-reflective tariffs and for intelligent management of load, generation and storage.

We agree with the observation made by the ECA that enabling access to real-time data would support consumers to maximise the value of their CER and support the integration of CER into the energy grid.

Question 2: What are the costs of improving access to real-time data

a) What are the types of costs that would be incurred to improve access?

There would be minor costs incurred to enable access via a communication port on the meter. As noted in the Consultation Paper, real-time data from smart meters can be accessed locally via a communication port on the meter but local access is not currently permitted under the National Electricity Rules (NER). The communication ports are protected by a seal which the NER prevents third parties from breaking and replacing. The additional costs to enable local, real-time data access could include:

- Changes to physical construction of meters to expose communication ports or provide connectivity options like ethernet, RS485 etc.,
- Software updates to support interoperability using standardised protocols and data structures, and
- Cyber security improvements and verification.

b) What is the magnitude of these costs?

SMA-Australia is not in a position to accurately estimate costs. Many of the software changes envisaged are 'business as usual' changes and the additional marginal costs would be small. The costs would be amortised over millions of units, so the additional cost per meter should be minimal. An independent assessment of the costs would help to address the information asymmetry and would enable the AEMC and others to meaningfully interrogate the cost estimates provided by metering providers and others who might have a vested interest in inflating the estimated costs.

c) Who would incur these costs?

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If there are changes to manufacturing required, the costs are expected to be very minor and would initially be incurred by the manufacturers. They could absorb the additional costs if they are relatively small or pass on the costs to purchasers of new smart meters. The additional costs, to the extent that there are any, would ultimately be passed on to consumers. The savings from this reform would also be passed on to consumers. The net savings are expected to exceed net costs by orders of magnitude, ensuring net benefits to all consumers.

d) Do the benefits of improving access to real time data outweigh the costs?

Yes. The costs of changing the metering configuration should be in the order of cents per unit. This cost is overwhelmed by the savings in installation, even before the additional benefits to system integration and innovation are considered. We agree with the observation in the Consultation Paper that the rule change would facilitate innovation and support start-ups. This will be to the long-term benefit of all consumers.

Question 3: Do metering parties currently have a competitive advantage?

a) Do you agree with the proponent that metering parties have a competitive advantage in providing services not related to their core functions of settlement, billing and maintenance?

Yes, access to data is crucial to providing useful energy services. Any company with a competitive advantage in data access has a very significant competitive advantage when it can leverage that access to compete against other providers of energy services.

Metering parties have privileged access to data, which allows them to embed products and services within the metering platform. Without the same access to data, competitors are severely disadvantaged, and their products and services have a higher cost base because of the need for multiple measurement systems.

b) How would any competitive advantage impact the costs of new energy services to consumers?

Better access to real-time energy data will increase competition in energy services. Increased competition in energy services will drive down the cost of the services. This will help to reduce the electricity bills of customers utilising new energy services and, in the long run, will put downward pressure on electricity prices for all customers.

Question 4: Do DNSPs need more than PQD to improve network planning and operation?

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SMA-Australia is not fully informed on DNSPs' need for more than power quality data to improve network planning and operation, and how often any additional data would be required. The DNSPs will be better informed about this, and we will leave it to them to provide detailed comments.

Question 5: Who should have a right to real-time data in the NER?

Should consumers, their authorised representatives or any other party, including DNSPs, have a right to access real-time data?

Yes, consumers and their authorised representatives should have a right to access real-time data. It is their data, they pay for the cost of metering and (depending on the structure of their tariff) they need the data to be able to manage their energy consumption in ways that can reduce their electricity bills while also reducing the overall costs to the system.

Question 6: How should real-time data be defined?

a) Do stakeholders agree with the proposed definition of real-time data and customer power data?

It would be preferable for data to be received instantaneously or as close to instantaneous as is practical.

A delay of 300 seconds is too long. There are applications that require more rapid response. For example, sites are expected to comply with DOE instructions within 15 seconds and report compliance within a minute. We recommend that real-time should mean within no more than 15 seconds, and preferably within one second.

b) What should be defined and/or further expanded in AEMO procedures?

The Australian Energy Market Operator (AEMO) procedures should address the practical aspects of implementation to ensure that the data available is fit-for-purpose. For example, accounting for latency.

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c) Should data be validated or not?

We support an approach that is consistent with the European Union (EU) Data Act, which requires non-validated metering and consumption data to be made available through a standardized interface or through remote access as per the meter's minimum functionality. Local access via communication ports is preferable.

Question 7: How should real-time data be accessed and shared?

a) Do parties, other than metering service providers, need to locally connect directly to the meter to access real-time data? If so, what changes are needed to enable this?

We support the ECA's proposal that local access should be enabled by requiring that:

- all new meters have communication ports that can be accessed locally, and
- communications ports can be unsealed and accessible to approved parties.

Making real-time data accessible locally from the meter would help to prevent consumer 'lock in' to one company's product range.

b) Are there alternative data sharing arrangements that should be enabled by a rule change, if made?

The most important changes needed are those identified by the ECA, namely that all new meters have communication ports that can be accessed locally and that communications ports can be unsealed and accessible to approved parties. In principle, we would support the AEMC's intention to pursue an outcome-focused approach that is flexible with regards to implementation. However, in practice it needs to be clear who is responsible for providing access. If consumers and their authorised representatives

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have a right to access real-time data locally, it is clear that the responsibility resides with the metering provider to ensure that local, real-time data is accessible. If the data can also be provided via the cloud, there could be arguments about whether this is the responsibility of the meter provider, the electricity retailer or someone else. Clarity of roles and responsibilities is crucial, and an implementation-neutral approach could muddy the waters regarding roles and responsibilities.

Question 8: Who should bear the costs of accessing real-time data?

a) Should all consumers bear the cost of accessing real-time data?

Additional costs should be minimal, given that real-time data from smart meters can be accessed locally via a communication port on the meter but local access is not currently permitted under the NER. There should be no need for consumers to face additional costs under this proposal, given that consumers already pay for or contribute to the costs of metering installations through their retail bills.

Rather than focusing on the additional hardware costs (which will be minimal), it might be more appropriate to focus on the additional savings from reduced installation costs (which will be far more substantial) and how the savings will be shared with all consumers.

We agree that the EU Data Act provides a useful starting point for a cost allocation framework.

b) What would be the benefits of a dispute resolution framework and how should it operate?

A dispute resolution framework would help to ensure that metering service providers and other data gatekeepers are fulfilling the spirit of the real-time data access reforms and that consumers can achieve the outcomes desired. It would give greater transparency and agency to consumers and would help to level the power imbalance that exists between consumers and metering providers.

Question 9: What changes would be required to ensure interoperability?

Should consumers, their authorised representatives or any other party, including DNSPs, have a right to access real-time data?

Consumers and their authorised representatives should have a right to access real-time data. We support the ECA proposal to require smart meters to have open standards-based protocols and standards-based communication interfaces. We support the proposal for:

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- changes to the minimum services specification requirements in Schedule 7.5 of the NER to allow standards-based communication protocols and communications interfaces for read-only data, such as real-time data, and
- consideration of the interoperability provisions in the EU Data Act to support consumers and their authorised representatives' access to real-time data.

To support different types of devices, RS485 and ethernet connectivity will be required.

Question 10: Do existing arrangements sufficiently protect consumer privacy and maintain cyber security for any real-time data framework?

a) Would any additional consumer privacy and cyber security protections be required if a real-time data framework were implemented?

SMA supports the ECA proposal to classify real-time data as confidential information. We also support the proposal for consideration of whether changes to the NER and/or the National Electricity Retail Rules (NERR) are required to enhance the consumer privacy and cyber security of real-time data. We agree that there are risks from the use of artificial intelligence applied to personal energy data and that these risks could increase as real-time energy data becomes more widely available.

The Privacy Act 1988 is the relevant Australian legislation that regulates the way individuals' personal information is handled, including energy-related data. The Act requires notification to affected individuals and the Office of the Australian Information Commissioner in the event of a Notifiable Data Breach, however it does not impose positive obligations on OEMs regarding how they handle and use customers' personal energy data. The National Electricity Rules do not directly regulate use of energy-related customer data held by inverter OEMs. It is unclear what privacy protections apply when OEMs use offshore servers for storage and handling of customers' personal energy data. It would be appropriate to introduce regulations regarding the privacy of real-time energy data that apply to OEMs and other technology providers.

On 9 October 2024 SMA announced that our customer data management portal, known as Sunny Portal Solution and its associated software, hardware and support processes, are certified under ISO 27001, which is the premier international standard for information security management systems and has been adopted as an Australian Standard. Compliance with ISO 27001 provides assurance of a high level of cyber security and protection of the privacy of customers' personal energy data. The AEMC should consider whether compliance with ISO 27001 (or an alternative standard that achieves the same outcomes) should be a requirement on companies seeking access to real-time customer data.

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Rules for protection of the privacy of confidential information will be ineffective unless they are underpinned by rigorous cyber security frameworks. SMA is a strong supporter of measures to uplift the cyber security of Australia's energy system. In September 2024 we successfully completed our assessment to demonstrate compliance with the SA Power Networks' *Dynamic Exports Cyber Security Requirements*, which is based on the Australian Energy Sector Cyber Security Framework (AESCSF). We support the SA Power Networks initiative as a 'light touch' starting point. However, there are clear limitations to a framework based on self-assessment. Ultimately, we should move to a framework based on third-party, independent assessment using Australian and international cyber security standards. The AEMC should consider whether assessment against the AESCSF (even if that is only self-assessment to begin with) should be a requirement on companies seeking access to real-time customer data.

b) Do you consider other work programs could provide any additional protection required, such as the Roadmap for CER Cyber Security?

The Roadmap for CER Cyber Security has identified international standards like ISO 27001, IEC 62443 and IEC 62351 that could be used to improve privacy and cyber security in the NEM. ISO 27001 has already been adopted as Australian Standard and Standards Australia has commenced a process to consider direct adoption or modification of other relevant international standards for use in the Australian context. These are positive developments that SMA strongly supports, however there are some areas that only the AEMC can address.

The NER (or possibly the NERR) should be reviewed to ensure that the privacy provisions that apply to metering service providers and electricity retailers will also apply to the authorised representatives who would have the opportunity to access the confidential information of consumers under the proposed rule change.

Question 11: What other changes would be required to enable a real-time data framework?

Would other changes be required, for example to clarify data and storage arrangements or to implement relevant best practice features from other frameworks?

It is unclear which laws and regulations apply to the storage and handling of personal energy data when it is held in computers servers in countries other than Australia. It would be timely for the AEMC to

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undertake a desktop review to determine the countries in which customers' personal energy data is held and the laws and other protections that apply in those circumstances.

Question 12: Do you agree with the proposed assessment criteria?

Are there additional criteria we should consider or criteria included here that are not relevant?

We support the proposed assessment criteria. We suggest that an additional criterion could be to ensure that the reforms are progressed in way that improves cyber security and privacy protections for customers' personal energy data.

The rule change should also be implemented in way that avoids the possibility of consumer 'lock in' to one company's product range. The metering provider should not have any commercial advantage in the provision of CER products and services to the consumer by virtue of its privileged access to meter data that is not available to companies competing to provide CER products and services.