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20 February 2025

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

Consultation Feedback on the Real-time Data for Consumers Directions Paper

Dear Ms Collyer,

SMA-Australia welcomes the opportunity to provide feedback to the Australian Energy Market Commission (AEMC) Directions Paper on real-time data for consumers.

SMA is a leading global specialist in photovoltaic (PV) system and battery energy storage system (BESS) power conversion and control technology. Our product range spans the home rooftop sector, commercial and industrial applications, and large grid-scale applications. Our PV solar inverter and battery storage products are complemented by components for energy management, system monitoring, and data analysis. SMA has a global inverter capacity of 140 GW in more than 190 countries and more than 9 GW inverter capacity in Australia. We are headquartered in Germany, with employees in 20 countries.

We strongly support the AEMC's recommendation that consumers should have access to real-time data as part of their electricity service. However, fifteen years is an extraordinarily long time to allow for the introduction of new consumer energy resources (CER) technology. Waiting fifteen years for the introduction of real-time data access would be a missed opportunity of major proportions. When new standards are mandated for inverters, original equipment manufacturers (OEMs) are usually given 12 months' notice.

We understand that the AEMC needs to balance support for better metering capability with costs to consumers. We therefore urge you to publish an estimate of the price difference between a smart meter with real-time data access and one without. The magnitude of the price difference should guide the implementation timeframe.

We welcome the proposal for the Australian Energy Regulator (AER) to publish prices for real-time data access. We recommend the AER should also publish the prices of smart meters with and without the capability of real-time data access, as they become available on the market. This will allow assessment of when it will be reasonable to mandate that all new smart meter installations should have capability for real-time data access.

We support the suggestion that the Australian Energy Market Operator (AEMO) or the AER could house a centralised consent form that is completed online. This would minimise the administrative burden of verifying that consent has been obtained appropriately from customers.

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I have enclosed a submission, which is in a format suitable for publication on your web site. SMA-Australia's head of Energy Policy and Regulation, Darren Gladman, will continue liaising with you on our behalf.

Best regards,

Patrick Duignan

Patrick Duignan
SMA Australia
Vice President, Home and Business

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Feedback on the Real-time Data for Consumers Directions Paper

SMA-Australia welcomes the opportunity to provide feedback to the Australian Energy Market Commission (AEMC) Directions Paper on real-time data for consumers.

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We strongly support the AEMC's recommendation that consumers should have access to real-time data as part of their electricity service. Personal data is a multi-trillion-dollar industry. Fortunes are being amassed, based on consumers' clicks, searches, habits and digital footprints. Consumers should be given as much power and agency over their personal data as practicable. Data cartels in the energy industry should be prevented or, where they already exist, should be dismantled.

Fifteen years is an extraordinarily long time to allow for the introduction of new consumer energy resources (CER) technology. When new standards are mandated for inverters, original equipment manufacturers (OEMs) are usually given 12 months' notice.

We understand that costs and the pace of development of protections for cybersecurity and privacy of personal energy data are difficult to predict with confidence and that in the face of this uncertainty, the AEMC has opted for a very cautious approach. However, locking in policy for a fifteen-year period is something we may live to regret. We recommend this issue of uncertainty could be addressed by a commitment to a review of the policy in, say, 2027 or 2028. The review could consider:

- Trends in the capabilities and costs of smart meters,
- Trends in safeguards for cybersecurity and protection of privacy of personal energy data, and

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- Whether the observed trends justify changes to the policies for real-time data and their timeframe for implementation.

A key piece of data missing from the Directions Paper is the estimated price difference between a smart meter with real-time data access and one without. The magnitude of the price difference would be helpful in guiding the implementation timeframe. If the price difference is small, then the fifteen-year implementation timeframe seems unjustified. However, if the likely price difference is very substantial then a protracted transition period could be more justifiable. It seems likely that the price difference will be small. We recommend the AEMC commission an independent consultant to provide an estimate of the price difference that can be used to guide policy development.

The proposed role for the Australian Energy Regulator (AER) to publish prices for real-time data access will be very important, but it is not sufficient. In addition to publishing prices for real-time data access, the AER should also publish the prices of smart meters with and without the capability of real-time data access, as they become available on the market. This will allow assessment of when it will be reasonable to mandate that all new smart meter installations should have capability for real-time data access.

We support the suggestion that the Australian Energy Market Operator (AEMO) or the AER could house a centralised consent form that is completed online. This would minimise the administrative burden of verifying that consent has been obtained appropriately from customers.

We agree with the AEMC's view that, "Real-time data contains personal and sensitive information about consumer behaviour, which third parties could misuse". We support the proposal to mandate some form of accreditation for third parties seeking to gain access to consumer data.

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Responses to questions raised in the Directions Paper

1. Do you agree with a staged implementation approach for when consumers pay for access to real-time data?

Fifteen years is an extraordinarily long time to allow for the introduction of new CER technology. When new standards are mandated for inverters, OEMs are usually given 12 months' notice.

The AEMC Consultation Paper on real-time data for consumers, noted 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 National Electricity Rules (NER). The communication ports are protected by a seal which the NER prevents third parties from breaking and replacing. It should not require fifteen years for meter suppliers to figure out how to make accessible data that is already available and for which access is prevented only by the NER.

We support the original proposal by Energy Consumers Australia (ECA) that local access should be enabled by requiring that all new meters have communication ports that can be accessed locally. This should not require a fifteen-year phase-in period. By building in a review of the policy in, say 2027 or 2028, there could be a possibility to reduce the fifteen-year phase-in period without additional costs or risks to consumers.

It could be helpful to distinguish between different types of customers when considering the fifteen-year phase in period. For customers who have already installed a smart meter and would like it replaced with a meter that has accessible real-time data, it might be reasonable to expect them to pay for the meter upgrade for the next fifteen years at which point all new and replacement meters are expected to have real-time data access. Of greater concern is the possibility that consumers who do not currently have a smart meter and who will receive one between now and 2030 as part of the accelerated rollout, will receive a meter that is already (arguably) obsolete due to lack of real-time data accessibility. This would be a missed opportunity of major proportions.

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a) Is 15 years the right timeframe for industry to achieve cost efficiencies in delivering real-time data access from smart meters? Are there ways to support industry to reduce this timeframe?

No. Fifteen years is far too long. Imagine if inverter original equipment manufacturers (OEMs) requested a fifteen-year phase-in period for a new inverter standard. No one would treat the proposal seriously. We simply don't understand how the AEMC could seriously contemplate a fifteen-year phase-in period for any aspect of CER technology.

The changes required to enable local, real-time data access are minor and they include:

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

Industry should be expected to achieve cost efficiencies in delivering real-time data access from smart meters in far less than fifteen years. In addition to reporting on prices to access real-time data, the AER should also report annually on the cost of smart meters with and without real-time data access. As the cost of meters with real time data access approaches or equals the cost of meters without real-time data access, it will become possible to mandate real-time data capability without additional cost to consumers.

b) Would the marginal cost to each consumer be material in the long-term if costs were smeared across all consumers after 15 years?

No, the cost would not be material. We agree with the AEMC statement that "the difference in cost between a meter that has in-built real-time data functionality and a meter that does not, would be immaterial to consumers in the long-term". The key question is, how long will it take for the price of meters with real-time data access to decrease to be equal or close to equal to meters without real-time data access? The AEMC has allowed fifteen years, which is too long.

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If the AER were to report annually on the cost of smart meters with and without real-time data access, it would be possible to quantify whether there would be any marginal costs and the expected size of the additional costs smeared across all consumers. This would allow a review to consider whether the fifteen-year transition period could be reduced without additional costs or risks to consumers.

c) Are there other ways to facilitate efficiency and equity and support industry to lower costs to consumers?

The AEMC has considered the costs of requiring metering service providers (MSPs) to retrofit most smart meters with real-time data functionality and has concluded that the costs that would impose on all consumers would, in many cases, be greater than the benefits an individual consumer may derive. We agree that forcing widespread retrofits would be expensive. The AEMC should be considering how to increase the proportion of smart meters with real-time data access capability in its accelerated rollout plans. This is why we recommend publication by the AER of the cost of smart meters with and without real-time data access, and a review process to consider whether timelines for implementation could be brought forward.

d) What incentives would our approach create for retailers, MSPs and third parties?

The most likely outcome of the proposed approach is that the accelerate smart meter rollout up to 2030 will be comprised mostly of meters without real-time data access capability and that this capability will not be provided as a standard feature until smart meters are subsequently replaced at the end of their life. This would be a missed opportunity. Within years, it is likely that some smart meter providers will supply meters that have real time data access capability at little or no price premium to meters without real time data access. The AEMC should be willing to mandate meters with real-time data capability once it becomes clear that the cost differential has become insignificant.

2. Should the prices for real-time data access be published by the AER?

Yes. We support the proposal for the AER to publish prices for real-time data access.

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The proposed role for the AER to publish prices for real-time data access will be very important, but it is not sufficient. In addition to publishing prices for real-time data access, the AER should also publish the prices of smart meters with and without the capability of real-time data access. This will allow assessment of when it will be reasonable to mandate that all new smart meter installations should have capability for real-time data access.

a) How and where should the AER publish prices to access real-time data?

The prices should be published annually on the AER web site.

b) What other measures would incentivise retailers to offer real-time data at competitive prices?

It seems likely that in future some retailers in conjunction with their MSP will offer real-time data access as a standard feature while others are likely to offer meters without real-time data access for as long as they are able to. Access to customer data is the basis of many business models. Companies who have privileged access to customer data will not give it up without a fight. The incentives will be strong to delay giving up that privileged access for as long as possible. For customers who are about to receive their first smart meter as part of the accelerated rollout, it would be useful to know which retailers and their MSPs offer real time data access and at what additional cost, if any. This would enable customers to switch retailers and not be required to pay again for a meter upgrade later or wait until 2040 or beyond when their first meter fails and needs to be replaced.

3. Do you agree with our proposed definition of real-time data?

a) Does the proposed definition enable real-time data products and services to deliver the benefits of real-time data to consumers?

We support the proposal, which would require data to be recorded every second and delivered within a second.

b) What other features of a real-time data definition should be described in AEMO procedures?

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The experience with introducing energy backstop mechanisms and dynamic operating envelopes (DOEs) indicates that it is beneficial to introduce DOEs as a precursor or at the same time as emergency backstop mechanisms, as was done by SA Power Networks. This allowed for a staged implementation in South Australia (SA), which has proven more successful than the quick, mandated approach used in Victoria.

The ability to respond to emergency backstop instructions (including DOEs) will become a minimum expectation for new CER systems in the not-too-distant future. The AEMC (possibly working with AEMO) should therefore ensure that all customers that are expected to be capable of implementing an emergency backstop mechanism in the foreseeable future should have the capability in their smart meter to support DOEs without the need to pay for an additional upgrade. CER sites are expected to comply with DOE instructions within 15 seconds and report compliance within a minute.

4. Do you agree with the obligation on retailers to provide real-time data access?

a) Are the proposed timeframes of 10 business days and 20 business days sufficient to enable retailers to give customers access to real-time data?

SMA does not have access to the information needed to assess whether the proposed timeframes of 10 business days and 20 business days are reasonable. We will leave it to retailers and others who are better placed to comment on this.

b) Are there circumstances where the obligations on retailers to offer and give real-time data access upon customers' request, and the timeframes within which to give access should not apply?

There will be strong commercial incentives for companies who have privileged access to customer's personal energy data to retain that access and to limit its availability to customers and their authorised agents.

We are not aware of any extenuating circumstances that would justify retailers restricting access by customers to their own consumption data. There can be no justification for a retailer to being able to access data on its customer's energy consumption and refusing to make that data available to the customer when they have requested it.

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c) Are additional obligations on retailers required to enable the provision of real-time data access to consumers?

Where a retailer's MSP is unwilling or unable to provide real-time data access to consumers, and if there are other retailers whose MSP can provide real-time data access, there should be an obligation on retailers to advise their customers that those customers who wish to have access to real-time data (possibly as part of the accelerated smart meter rollout) could obtain that access by switching retailers. This would place commercial pressure on retailers to ensure that they work with MSPs that are keen to enable real-time data access in a timely manner.

5. Do you agree that MSPs should ensure multi-party, interoperable and secure access to real-time data?

We support the proposal to require MSPs to enable multi-party, interoperable and secure access upon request.

We agree that requirements on MSPs to enable multi-party access will be important because it will support consumer choice and enable innovation in third party products and services such as virtual power plants (VPPs) and home energy management systems (HEMS).

We share the AEMC's concern that without additional regulation, MSPs could satisfy the letter (but not the intent) of the law by, for example, providing real-time data in a way that is difficult for third parties to access. We support the proposal to utilise open standards-based protocols and communication interfaces.

We strongly support the intention to ensure that parties do not require proprietary protocol translations to read and understand real-time data from different meters.

a) Are there requirements that we should impose on MSPs in addition to multi-party, interoperable and secure access obligations?

It is important to understand that mandating a protocol (such as the Australian Common Smart Inverter Protocol, also known as CSIP-Aus) can be necessary but not sufficient to avoid compatibility issues. For example, the experience with implementing the emergency

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backstop mechanism in Victoria has shown that it was not sufficient to rely on the list of inverters that had been demonstrated capable of communicating with the SA Power Networks utility server. This is because there is no standard to guide the implementation of CSIP-Aus in utility servers and the protocol is open to interpretation. This has led to three different implementations of the utility server by distribution network service providers (DNSPs) in Victoria. It would be a disaster if each MSP implements CSIP-Aus slightly differently, leading to compatibility issues with DNSPs' utility servers and inverters. The development and implementation of a standard for utility servers based on the CSIP-Aus protocol might be required as a precursor to implementation of interoperability by smart meters. There could also be better ways of addressing this problem. We support the suggestion that AEMO could consider whether, compared with CSIP-Aus, JavaScript Object Notation (JSON) may have the potential to facilitate a more efficient and innovative system.

6. Which consumer consent pathway do you consider to be the most practical and why?

We agree with the AEMC's assessment that the MSP-centred approach is likely to be a more efficient pathway.

a) Are there any barriers to implementing this pathway?

There should be no insurmountable barriers to the implementation of the MSP-centred approach.

b) Are there any viable alternative pathways that better deliver outcomes for consumers?

The primary obligation for ensuring that customer consent has been obtained in accordance with all requirements should be on the third party to whom the customer intends to grant access to their real-time data. Neither the retailer not the MSP has a

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direct interest in making sure that third party access is granted. The MSP should not be required to engage directly with the customer to ensure that forms have been filled in correctly. The MSP should be expected to ensure that the third party has obtained customer consent according to the requirements specified.

7. What should third party access consent look like?

There is an opportunity for the AEMC to clarify in the NER what constitutes personal energy data and the rules that apply to it. The AEMC has put forward its view that, "At this stage, we do not consider that local access to real-time data poses any increased privacy or cyber security risks to consumers". That way be the case, however the framework for protection of privacy and cyber security requirements for personal energy data is poorly defined in the NER. For example:

- What privacy requirements apply (or should apply) to inverter OEMs, who might already have access to certain personal energy data?
- Which energy data should be considered personal (and therefore subject to privacy and consent provisions)? For example, is electricity consumption, generation and storage data considered personal?
- Which energy data should not be considered personal and could therefore be subject to lower thresholds of protection? For example, are inverter installation settings personal data or are they system parameters that can be monitored and, if necessary, adjusted remotely without explicit customer consent?
- Are there any limitations to storing and handling of personal energy data in computer servers located in other countries?
- If there are no limitations to storing and handling personal energy data overseas, which country's legislation should apply?

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 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.

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a) Should the form of consent be left to third parties to determine?

No. This could introduce unnecessary risks or administrative processes. Standardising the consent giving process would ensure consistent standards and expectations, would simplify the consumer education task and would prevent unintended consequences that might arise from third parties designing their own consent forms.

We support the suggestion that AEMO or the AER could house a centralised consent form that is completed online. This would minimise the administrative burden of verifying that consent has been obtained appropriately from customers.

b) Should there be specifications placed on the form of consent that third parties must obtain from consumers? If so, what could this look like?

The form of consent should specify:

- Who is consenting? (e.g. name of person on electricity account)
- What are they consenting to? (e.g. sharing of real-time data)
- To whom they are consenting? (e.g. the third-party service provider)
- Are there limits to the agreed data sharing (e.g. can the third-party service provider share the real-time data with any other party?)
- Requirements for privacy and cyber security that apply to the third-party service provider.

c) Should the process for withdrawal of consent also be specified?

Yes. Customers should be able to withdraw their consent at any time and the process for doing so should be simple and straightforward.

8. Should additional requirements be placed on third partes that request access to consumer data?

Yes. We support the proposal to mandate some form of accreditation for third parties seeking to gain access to consumer data.

a) Should third parties be accredited by AEMO under the NER?

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We support additional accreditation for cybersecurity. This could be administered by AEMO, however that might no longer be necessary. Between the publication of the Consultation Paper and the Directions Paper on real-time data for consumers, the Cyber Security Act 2024 passed into law and Ministerial rules under the Act are being made. New rules affecting the cybersecurity of CER, based on ETSI EN 303 645, are anticipated. The new rules will be administered by the Department of Home Affairs (DHA). There could be an opportunity to avoid duplication of cybersecurity accreditation, provided that AEMO is able to access the relevant information collected by DHA under the Cyber Security Act 2024.

b) Are there any other safeguards required to ensure third parties do not misuse data?

Cybersecurity is a necessary, but not sufficient condition for the protection of privacy of personal energy data.

Cybersecurity prevents the illegal acquisition of data by unauthorised actors. It does not address the inappropriate use of personal energy data, which might be legal (or in a legal 'grey zone') under current regulatory frameworks.

There are fundamental questions regarding privacy of personal energy data that are not addressed by the AEMC Directions Paper or the Cyber Security Act 2024. The AEMC Directions Paper states, "At this stage, we do not consider that local access to real-time data poses any increased privacy or cyber security risks to consumers". Even if that is true, the proposed accreditation process should be used as an opportunity to address flaws in the current system. These flaws include:

- Inverter OEMs already have access to certain personal energy data, and it is unclear what legislation governs the storage, handling and use of that data.
- Many inverter OEMs store and handle customers' personal energy data in computer servers located in other countries, and it is unclear which country's legislation governs the storage, handling and use of that data.

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.

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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.

The NER (or possibly the National Electricity Retail Rules (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.

We share the AEMC's concerns that, at this stage, opening control of the smart meter to third parties would increase cybersecurity and consumer privacy risk. However, we do not agree that the most appropriate response is to rule out the option for future consideration. We agree that more work is needed to investigate how to minimise the risks without restricting competition. Accreditation is likely to be a superior solution to restricting competition. We understand that it is beyond the scope of this rule change to determine what would be the appropriate pre-conditions for enabling third party access to use the smart meter for CER services. This is why we recommend a review of this policy in several years' time, so that there can be an opportunity for policy makers to reassess the policy considering changes in meter technology, meter technology costs and the development of protective measures for cybersecurity and privacy of personal energy data. These are areas that are difficult to predict with accuracy and that will affect the costs and benefits of bringing forward the implementation timeframe for real-time meter data policies.

9. What features of the consumer data right (CDR) can we adopt?

a) What specific features of the CDR would be beneficial to apply to third parties who seek access to real-time data?

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We agree with the AEMC that applying the CDR to third parties who seek access to real-time data would not be a feasible solution. We also agree that the CDR accreditation criteria should be considered when developing the other safeguards required to ensure third parties do not misuse data.