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Kate Ryan
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Sent to: energytransformation@energy.wa.gov.au

Dear Ms Ryan

Metering Code

Perth Energy is a wholly owned subsidiary of AGL Energy Ltd (AGL), one of Australia's leading integrated energy companies and the largest ASX listed owner, operator, and developer of renewable generation. AGL's diverse power generation portfolio includes base, peaking and intermediate generation spread across the National Electricity Market (NEM), and now Western Australia. AGL is also a significant retailer of energy, providing energy solutions to over 3.6 million customers on the Australian east and west coasts.

Perth Energy is pleased to make this submission in response to the proposed changes to the Metering Code. We fully support the moves to implement changes to the code now even though five-minute settlement is not scheduled to be introduced until 2025. It is our experience from similar changes in the NEM that adequate time must be allowed to implement, test and prove changes of this magnitude.

As a general comment we would encourage EPWA to review the various definitions of "data" as there does seem to be some ambiguity in the use of terms "energy data" and "meter data". For example, if data is cleansed or estimated is it still defined as "meter data" or should it be referred to as something different? It may help to map out what happens to the data from being collected "raw" at the meter until it is provided to users for billing purposes. This may identify shortcomings within the definitions.

The Code does not appear to be fully compatible with changes that may be implemented as part of the DER Roadmap. In particular, the roles and rights of behind-the-meter service providers do not appear to have been fully addressed. For example, clause 1.2 does not show that the Code applies to BTM providers nor are they granted rights to data under clause 5.6.

We note that under clause 3.16 there is a date after which Type 5 & 6 meters may no longer be installed by Western Power. Western Power may have already implemented a policy to purchase no more of these meters but, if such a policy is not in place, it may be advisable for EPWA to consider making a direction to this effect.

Another general comment, which might be better addressed outside of the Code, is that there is an obligation for all meters and systems to be in place by the start date for five-minute settlement. This program really needs to be staged with progressive change-over rather than attempting a "big-bang" approach. EPWA or the ERA should ensure that each step is locked in successfully before the Western Power and users proceed to the next.

Detailed comments are provided in the Appendix.

Should you have any questions in relation to this submission please contact me on 0437 209 972 or at p.peake@perthenergy.com.au.

Kind regards,

Patrick Peake

Patrick Peake
Senior Manager, WA EMR

Appendix : Detailed commentary on the proposed Metering Code changes

Clause	Issue	Recommendation
1.2 Application	The DER roadmap anticipates new behind-the-meter service providers and demand management providers. These will need rights under the metering code	Include BTM and DSM service providers within the Code coverage
1.6 (aa) Publish	It is noted that this clause requires historical material to be **retained** for 7 years, but there seems to be no requirement for the *person* to make that material available on request	
1.7 Multiple Users	It is unclear how and whether this clause would apply to the situation where there is a retailer and separate demand response provider operating at the same connection point. The metering requirements of one party may vary from those of the other party, and as such, clarity on how action and services would be undertaken by WP for one party may negatively impact the other party, therefore consideration should be given to how these situations will be managed.	Review application to multiple service providers at same connection point.
3.14	PE suggests that these transitional requirements may not be suitable with the new requirements to upgrade meters for 5 minute settlements.	Western Power should review pre-2005 metering installations and upgrade those that are incompatible with the new Code
3.16 (1A)	Non-contestable customers with Behind the Meter Services or demand response services are likely to require interval / 5ms meters.	Western Power should provide data from these meters if requested by a service provider.
3.16 (3B) **3.16 (3C)**	While it is useful to have an end date to ensure that types 5 and 6 meters are no longer installed, it should be clarified that WP cannot purchase further stock of type 5 or 6 meters and should that stock run out, then only install type 4 AMI meters, including replacement of multiple meter installations where a single meter fails.	If Western Power does not have a policy to not purchase any further Type 5 & 6 meters consider EPWA giving a directive.
3.16 (a)(a) **3.18A**	Noting that while this is a long term code, the requirement to have 5ms processes ready **on** 5ms commencement should be further reviewed with a clear transition process to ensure that metering data collection, storage and transmission at 5ms is fully operational prior to 5ms settlements commencing, to ensure there are no start up or settlement issues when the 5ms market commences.	Consider a staged program of implementation. Perhaps transition all class 1 meters, then class 2, etc, to ensure that issues can be identified and resolved early.
3.17	As written, this clause still allows customers to retain a Type 5 meter when transferring. The opportunity should be taken to move transferring customers to Type 4 meters to accelerate the roll out of this technology.	This clause should be amended to ensure that transferring customers have only up to type 4 meters

Clause	Issue	Recommendation
		installed. Type 5 meters should no longer be allowed for transferring customers.
3.21	While this clause requires the metering hardware to record data for 35 or 200 days, there does not seem to be a requirement to ensure that the meter data is read before that recorded data is overwritten. The small use code only requires customer meters to be read at least annually. This is now problematic, as an annual read of a meter would see the data replaced (6 or 10 times over).	A new clause should be added to ensure that the responsible Meter Data party must read the meter before any recorded data can be overwritten. So, if a communications link fails then no more than say 30 days from the failure. If a manually read meter, then no more than say 190 days. This allows for initial read failure or delays due to COVID, bushfires blocking roads etc.
3.3C	The terms electricity production and consumption are not defined terms. Suggest amending the clause to use defined terms, such as apparent and reactive energy.	An *accumulation meter* … must record: (a) the ~~electricity production~~ apparent and reactive energy transferred into the *network;* and (b) the ~~electricity consumption~~ apparent and reactive energy transferred out of the *network.*
3.4 Ownership	It is unclear if this clause changes the ownership of check meters / check meter equipment required to be provided by a customer and installed on a metering installation per clause 3.13 or 3.5(7). Also, does this apply to meters provided for BTM services?	Review the definition to ensure it applies to the network metering installation equipment only.
3.5(9)	While this clause ensures that a metering installation non-compliance is rectified as soon as practicable, there should also be an obligation to liaise with the user around any amendments to the installation. Western Power should not be able to just install a new meter and bill the user.	Require Western Power to liaise with the user to rectify the issue. If not resolved in a reasonable time Western Power may act unilaterally.
3.9	Clause 3.9 (1) describes type 7 and refers to the annual throughput in Appendix 1, Table 3. Appendix 1, Table 3 refers to Cl 3.9 (2), which lists the specific usage of these meters rather than a throughput. Some of these nominated uses, such as telephone service equipment could include mobile mast sets or the new large display phone boxes which consume many kW and should be metered (especially given the availability	This should be updated to establish what is generally used. Network controlled devices (eg public lighting) or customer controlled devices generally with loads with loads less than a prescribed

Clause	Issue	Recommendation
	of AMI meters). This should be rectified and a load limit applied to UMS loads	amount (eg 2 amps) and which has a consistent load.
4.2	PE suggests that tables of information, such as the Standing Data, are best placed in the Appendices rather than in the middle of the Code.	Relocate Table 2 to an appendix.
4.2 **4.3**	The Designated Source is better described as the Meter Data Agent, with a general reference that the MDA may be the network operator, rather than the large number of footnotes.	
4.6(2)	Following a network operator amending the *registry* it should be required (where necessary) to advise the affected parties – either by way of sending updated data and or more formal communications, depending on the data inaccuracy. For example, a cross meter situation needs resolution involving the respective users and will impact network charges etc.	Require network operator to advise affected parties.
4.8(3)	Key learnings from the Victorian AMI rollout have led to data collection devices being made available to customers to directly monitor their energy consumption directly from the meter to assist in energy management. Suggest review of various Vic Dept of Energy reports on AMI installations. https://www.powerpal.net/free-in-victoria	This clause should be extended to any other party who is providing either Demand Response or Behind the Meter services to an end customer or the customer.
5.11	It would be preferable if the Network Operator was also required to provide a prospective retailer with the standing data to quote the customer or in advance of the transfer to set the customer up (This assumes the Prospective retailer has verifiable consent from the customer – per the transfer code)	Add prospective retailer
5.12 – 5.14	This clause does not contemplate the changes expected through the DER Roadmap.	The obligations should be extended to accommodate new roles – eg Demand Response, Prospective User etc
5.15	Provision of energy data should be by defined file format Again – standardisation will be required as the number of affected parties increases	Set a defined file format. We suggest that the NEM 12 format which specifies a number of additional pieces of information – eg meter read date, substitutions, substitutions reasons etc, be used for compatibility unless there are sound reasons for an alternative.
5.19	1. The information required in this clause doesn't seem to relate to metering obligations.	

Clause	Issue	Recommendation
	2. It would be expected that the participant responsible for issuing the NMI (the network) would also be responsible for maintaining the supply address	
5.22	Validation and Estimation processes should not be specified as a minimum, they should be extensive enough to cover the majority of situations, and where an unusual situation exists, require the MDA to liaise with affected parties and get agreement prior to making a change. Allowing the MDA to undertake undocumented processes does not allow the user to easily replicate the process or test it for accuracy.	
5.23 (3)	This clause assumes that the connection point is still viable and that someone is consuming energy. A premise destroyed by a bushfire may never be replaced	Amend the code to require replacement if there is a viable connection point and a customer seeking to consume energy.
5.3(1)	See comment about reading meters with communications links prior to memory rollover.	Add an obligation to ensure that comms meters which lose links or manually read interval meters must be read prior to memory rollover to ensure there is no loss of energy data.
5.3(2)	See previous comments around the use of the term electricity production and consumption.	Replace with apparent and reactive energy.
5.4	See previous comments – eg 5.3(1) regarding interval meter memory rollover.	
5.6 **5.7**	The number of participants who require energy data may increase with BTM Meter services and Demand Response Services – suggest that this clause be extended to include other relevant participants.	
5.6(5)	See previous comments around the use of the term electricity production and consumption.	Replace with apparent and reactive energy.
6.22	Per previous comments, the changes to the metering code should also allow for any transitional changes to meters and meter data flow prior to the commencement of 5ms.	
7.2 **7.3**	The requirements for facsimile machines and facsimile machine numbers is no longer current, and its likely most participants no longer have this equipment. Even post is not likely to be used for business operational communications.	Delete obligation for facsimile machine.
3.2(2), (2A)	Where an interval energy data meter is installed at a non-contestable customer's site, it should not be treated	Clause 2A should be modified to allow the end

Clause	Issue	Recommendation
	as an accumulation meter if the end use customer requires it to be used for a BTM service.	user to have the meter treated as an interval meter.
1.3 Definition Accumulated Energy Data	The definition of energy data uses the term production or consumption which are not defined. Suggest for clarity that these terms be replaced with apparent and reactive energy, which are defined terms.	Proposed amendment **"accumulated energy data"** is to be expressed as a measure of *energy* over time, and means a measurement (including an *estimated* or *substituted* measurement) of *apparent* and / or *reactive energy* transferred in or out of a network ~~*electricity* production or consumption~~ at a *metering point*, which is accumulated for a period longer than a *trading interval.*
1.3 Definition Accumulated Energy Data	The definition of *accumulated energy data* (below) indicates that *energy data* is the data held in the metering device itself. However, other definitions define energy data which is data which **'means a measurement (including an *estimated* or *substituted* measurement)'**. This implies that energy data is data which has been processed and either accepted or replaced with a substitute. **"accumulated energy register"** means the visible indication displayed on an *accumulation meter*, or the memory location within the *meter*, that records *accumulated energy data.*	For clarity it is suggested that the terms be reviewed to ensure that one term refers to data from a metering installation and one term refers to processed data, including substitutions, used for billing.
1.3 Definition automated meter reading system	It is unclear why the definition of automated meter reading system (which would include AMI meters) is defined in relation to the manager of premises or the premises. Does this definition cover remotely read meters, if so, the definition should be changed.	**"automated meter reading system"** means a system operated ~~by the person who has control or management of a premises,~~ to enable *meters* ~~located throughout the premises~~ to be read remotely ~~at a single location within the premises~~.
1.3 Definition Average Daily Load	As an ADL may also be calculated based on established or calculated load rather than measured load (eg – estimates for a new connection), suggest that the definition be amended to clarify that it is a load consumed within a day (24 hrs).	Possible definition (eg NEM Definition) The net electricity delivered through a *connection point* over an extended period averaged to a daily amount.
1.3 Definition Data	Data is defined as energy data or standing data. *Interval Energy data* or *Accumulated Energy Data* are defined terms.	

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	Meter data is a defined term (but not in the code). It is referred to in clause 6.7(i) of the Metering Code. It is unclear at this point whether meter data is the validated data from a meter or energy data is. Nevertheless, should this definition include metering data ?	
1.3 Definition five minute metering Interval	The definitions for metering interval and 30 minute metering interval are not as extensive as this definition (eg end time etc).	Review all definitions, including interval meter, interval energy data, metering interval and then align time periods to those definitions Suggest metering interval contain the elements relating to start and end time etc
1.3 Definition Interval Energy Data	The definition of energy data uses the term production or consumption which are not defined – eg does production include discharge from a battery? Suggest for clarity that these terms be replaced with apparent and reactive energy, which are defined terms.	Proposed amendment **"interval energy data"** means a measurement (including an *estimated* or *substituted* measurement) of ~~*electricity* production or consumption~~ *apparent* and / or *reactive energy* transferred in or out of a network at a *metering point* which is accumulated for each *trading interval* or, if applicable under clause 3.16(3), each submultiple of a *trading interval.*
1.3 Definition Load	The term electrical energy is not defined, however *apparent energy* and *reactive energy* are defined terms. For clarity, suggest that the definition of load be updated - Is load the same as consumption?	Proposed amendment **"load"** means: (a) for a *metering point*, the amount of ~~electrical~~ apparent and / or reactive energy transferred out of a network at the *metering point* at a specified time or across a specified period; and

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1.3 Definition Market Participant	Suggest that this definition may no longer be appropriate, given the inclusion of roles such as demand side participants and BTM service providers.	Suggest that this definition be updated and / or referred to the rules.
1.3 Definition Meter Data	The term Meter Data is used as a defined term in Cl 6.7(i) but is not defined in the Metering Code, nor is it considered in the general definition of Data.	Include a definition for Metering Data or a reference to its definition.
1.3 Definition Throughput	The terms electrical production and electrical consumption are not defined, nor is it clear if its apparent or reactive power, or what units of measurement would apply. Suggest that the terms be amended with defined terms to ensure a clearer meaning.	Eg: **"throughput"** means, for a period: (a) for a *connection point*, the sum of: (i) the ~~electricity production~~ apparent and reactive energy transferred into the *network* at that *connection point* during that period; and (ii) the ~~electricity consumption~~ apparent and reactive energy transferred out of the *network* at that *connection point* during that period; and
1.3 Definition Verifiable consent	The Electricity Code Consultative Committee is proposing to amend the definition of verifiable consent to verifiable confirmation and amend the definition to include oral confirmation and include reference to a nominated person who may give that consent. (a) expressly; and (b) in writing or orally; and (c) by the customer or a nominated person competent to give the confirmation on the customer's behalf.	As most consents for small customers are now captured via voice recordings and in relation to metering where there will be agents acting on behalf of end customers, then it seems reasonable to amend the Metering Code definition to align more closely with the Energy Marketing Code or refer to the energy marketing code for the definition.
1.3 Definition 5ms Meter	It is unclear why a 5ms meter is defined as only being an installation at a connection point for a contestable customer. The introduction of Behind the Meter services and Demand Response is likely to see non-contestable customers require 5ms metering capability. Further, as WP has been given a mandate to roll out AMI meters, it would be expected that any such meter would be operating at 5ms once it is installed, and there should be no consideration of reversion or deeming as	

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	accumulated metering once such an installation has been completed.	
General Comments	A lot of the provisions of the metering code in relation to the request and provision of data seem quite manual and laborious. With new participants being involved in the WEM, consideration should be given to moving to a more automated B2B process which would allow more participants to operate on a single platform	