



Alisa Toomey
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

29/10/2021

RE: AEMC Capacity Commitment mechanism and Synchronous Services Markets (ERC0306)

Dear Alisa

Re: AEMC Review of the regulatory framework for metering services (Directions Paper)

Tesla Motors Australia, Pty Ltd (Tesla) welcomes the opportunity to provide the Australian Energy Market Commission (AEMC) with a response to the Review of the Regulatory Framework for Metering Services (Directions Paper). Metering is a critical topic and should be considered within the suite of emerging market trends and policy changes for distributed energy resources.

Tesla has experience in the challenges presented by the current metering arrangements, and the opportunities presented by a well-considered reform process for metering. In the below, Tesla has provided a number of observations and suggested framework improvements that should be considered within the scope of the next steps of the Review process.

The AEMC should consider the role of smart DER in providing metering needs

Instead of referring to meters, we should be considering devices that act as the gateway at the connection point to the distribution network. That device at the connection point could be a meter (as it is now) or in future the role of the gateway at the connection point could be filled by other devices, provided they have all the functionality currently required by smart meters.

In future, it will be important for the gateway device at the connection point to be capable of receiving instructions and complying with Dynamic Operating Envelopes. The gateway device could also be responsible for orchestrating DER and controllable load behind the connection point.

Under the current regulatory arrangements, many homes and businesses participating in a virtual power plant (VPP) or power purchase agreement (PPA) arrangements are required to have two revenue grade meters per site – one at the connection point and one to accurately record output from the solar / solar and battery.

In the long term, it would make sense for the inverter / gateway device at the connection point to combine its functions with metering. We urge the AEMC to consider whether there are any regulatory barriers to allowing the gateway device or inverter to also fulfil the metering function. The current pattern approval process for approval as a revenue

grade meter is not fit for purpose for registering smart DER assets as revenue grade meters (or revenue grade meter equivalent).

There are a number of areas AEMC could assist in supporting a more fit for purpose future framework:

- Consider whether there's a more streamlined pattern approval process that could be used to certify more DER gateways as revenue grade. This can be based on systems meeting all of the accuracy requirements in the National Electricity Rules (NER) but should also consider the minimum additional requirements necessary to be considered a revenue grade meter.
- Alternatively, the AEMC might want to consider a tiered approach for different DER metering, such that a DER gateway can start to replace the need for a second on-site revenue grade meter to better enable new and emerging, innovative DER customer offerings at a lower cost. As this is effectively a dummy meter, it may not need to provide the exact same functionality as the "market facing" primary NMI used for market settlement.

AEMC should also consider a world in which the original equipment manufacturer (OEM) may wish to become the metering provider for some customers if this is efficient under future policy settings.

Note as well that the ability of asset level metering to provide the same functionality as revenue grade meters will likely also be relevant to different approaches taken to EV charging. Similarly, to VPPs and PPAs, creating a more streamlined approach for asset level meters to provide the traditional "revenue grade meter" functionality, will naturally lend itself to more innovative customer offerings in the EV space.

Alignment with dynamic export and interoperability requirements

There also seems to be a disconnect at the moment between the interoperability and development pathways and obligations placed on inverter OEMs in respect of dynamic export and interoperability requirements (particularly compliance with IEEE2030.5) and those obligations placed on metering providers.

If there is an expectation that metering providers may also receive smart signals from networks for the purpose of dynamic export, then it would make sense for smart meters to be compatible with the same interoperability requirements. Separately if smart meters are in any way expected to act as the gateway device receiving site based commands, they also need to be smart enough to differentiate between different assets behind the meter. A customer may have multiple DER assets all enable to provide different services. If the Smart Meter is used to control the flow in and out of the meter, it needs to ensure that it does not impact on the different services that those assets may have contractual or regulatory obligations to provide.

There is also potentially a role for metering providers to become more active in the DER market space. A number of metering providers responding to the AEMO Market Ancillary Services Specification (MASS) noted their ability to comply with the 50ms measurement requirement. Where metering providers become more involved in market activity it will be critical to differentiate whether their role is as a service provider or as a provider of data used for compliance purposes.

Improving customer experience

Another area that the AEMC should consider as part of this Review is how to improve the customer experience associated with smart meter installs. In Tesla's experience we have seen the following issues:

1. Due to having multiple parties required to enable a smart meter installation, coordinating the installation of smart meters with DER installs can be challenging and lead to significant delays. Installation of smart meters weeks after installing the DER can create a negative customer experience and a loss of cost savings on the customer's energy bills.
2. In most jurisdictions, smart meters can only be installed by accredited third party metering installers, a key driver for these delays. The approach taken in NSW, as established by Fair Trading provides a good benchmark for a more streamlined process. In NSW any contractor can do training to become an accredited metering installer. This leads to a more straightforward installation process, can compress timeframes and enable the installation of Smart Meters and DER within one day.
3. Networks Service and Installation Rules are not generally well set up for smart meters. A detailed review should be undertaken across the Networks to remove irrelevant requirements on meter install location which should not apply to meters that can be read remotely (i.e. rules preventing the installation of meters behind gates are more relevant to meters that need to be physically read, rather than remotely read).

For more information on any of the content above, please contact the Tesla Energy Policy Team.

Sincerely,

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