

Submission to:

The Australian Energy Market Operator Draft Determination: Amendment of the Market Ancillary Service Specification - DER Consultation

1. System security provisions should recognise the role of flexible DERs in mitigating their own integration risks.

In both the draft MASS and its justifications presented through the consultation process, AEMO has indicated that it has several concerns with regards to system security and the role of DERs in the network. At this stage it appears that the process for evaluating the DER contribution in this regard has not been completed and Discover Energy would suggest that major changes to the MASS are not made until better, more collaborative and forward thinking assessments of the role of DERs are completed.

DERs are part of the network, and will become increasingly so as cost effectiveness and electrification of transport increases. AEMO should adopt an approach that incentivises the implementation of flexibility mechanisms that support DER integration as their hitherto unrecognized potential to support the grid exceeds the potential risks they pose to system security.

AEMO's concern with "risks associated with large-scale, rapid active power injection or withdrawal from deeply embedded assets (aggregated to provide FCAS) exceeding the limits of secure distribution network operation limits" highlights the general risks of network management. This is not unique to controllable DERs, but conversely is exactly the argument that there is value in the ability to control the flexibility of DERs.

This sentiment has been echoed by the Australian Energy Market Commission (AEMC), who recently recognised the importance of harnessing the flexibility of DER operation through VPPs and other forms of aggregation and its Draft Determination on integrating energy storage systems into the National Electricity Market (NEM).

DER control is the solution, not the problem, and as such mechanisms for control should be monetarily incentivised through access to grid services.

2. A comprehensive redesign of ancillary services is required: DNSPs are also working in this area.

Redevelopment of the ancillary grid services market is required and should be conducted in coordination with DNSPs (amongst others) to ensure that services reflect local as well as global grid security requirements without conflict. Conflict has already been identified with the incoming AS 4777 standard requirements, and DNSP initiatives to control local loads and limit exports dynamically will complicate these issues further.

This is a critical aspect for the consideration of DERs as they are typically connected at low voltage network levels in contrast to larger assets which the MASS (FCAS and other ancillary services) have been primarily designed to service. This is not a criticism of the design of the current regime, merely an acknowledgement that it has been designed for large, high voltage resources of which DERs are not. Acknowledging that this is beyond the remit of the current MASS review, underlines our position that it is better to make changes to the MASS only when such a comprehensive review as we are suggesting can be completed.

3. Measurement of the whole site (at grid connection point) for ancillary services

AEMO has expressed a concern regarding control of multiple devices behind the meter and as a rationale for measurement at the connection point. Discover energy supports this concern but asks AEMO to consider the implications of this principle and its implementation

3a. Metering hardware and measurement principles

Measurement of all loads behind the meter is possible without an additional dedicated meter at the connection point. In seeking to procure ancillary services at the lowest possible cost, AEMO should consider that its technical requirements do not lead to redundant hardware installations where other options would deliver an acceptable outcome for grid security. This could be through calculating the total load based on separate measurements or through use of existing smart meters, already a requirement for all DERs and soon to be ubiquitous in the network. Virtual strategies should be given adequate opportunity to demonstrate equivalent performance - as yet, all options have not been explored and tested to this effect.

3b. Implications for whole site metering ancillary services

If all controlled and/or uncontrolled loads can mitigate the FCAS response as is the concern of AEMO, then by the same principles they can also enhance the response. The implication of this is that, for example, controlled curtailment of PV would be able to provide or contribute to a lower response service, and that Regulation FCAS is technically able to be provided by units that do not have set-points. Highly accurate "baseline" methods are used to obtain similarly accurate predictions of future load for the purpose of services that provide demand response or are the same as Regulation FCAS - for example in Germany where wind farms produce the equivalent of the lower service.

Rules and specification governing the participation in grid services should be technology and size neutral and based entirely on the results that can be achieved through control mechanisms, and not impose unnecessary specification on the control mechanisms themselves. If AEMO is not satisfied that this is currently achievable, there are many organisations that are able to help them investigate and prove this principle.

4. MASP Registration Processes

Given that the MASS determines the requirements for registration, including fees for new registrations and transfers and underscores the testing process to prove capability for ancillary services, said testing processes should be standardized and as such included or directly linked to the MASS.

4a. Testing and Standardisation for DERs

Within this context, it should be reflected that it is either highly difficult or impossible to conduct tests based on frequency injection for DERs, and as such their testing outside of lab testing is, currently, determined by the availability of grid conditions that replicate their intended implementation. The bottom line is that it is not sustainable for testing to be dependent on a “worst/extreme case” scenario occurring in the grid to prove aggregated DERs’ limits of response as these events are far too infrequent. An alternative to this method of determining the response of aggregated DERs should be investigated and determined.

4b. Transfer of operational control of a NMI (site) between MASP/DRSPs

In line with the philosophy of Power of Choice and the concept of one MASP/DRSP for one NMI, the process for the transfer of a NMI (and its associated, behind the meter assets) should be streamlined and adjusted to reflect the administrative costs of transferring the registration of one NMI from one DUID to another. If AEMO still envisions that the administrative labour of such a transfer is still in the order of \$2,800 as it is according to the current fee structure, then AEMO is obliged to consider changes to its administrative processes to expedite the process and reduce this cost.

Discover Energy understands that the concepts that it has put forward are highly innovative and is more than willing to assist AEMO in assessing their suitability, confident that, as they have been implemented extensively in other jurisdictions, they will be able to satisfy AEMO’s provision of system security.

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