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Submitted online: <https://www.aemc.gov.au/contact-us/lodge-submission>

Submission to ERC0339 – Efficient provision of inertia

Dear John Kim

Delta Electricity (Delta) welcomes the opportunity to respond to the AEMC's consultation paper on the efficient provision of inertia.

Delta agrees with the problems identified by the AEC in its rule change proposal. Maintaining adequate inertia is an essential power system characteristic that is critical to a safe and secure power system. The existing framework is not suitable for the more dynamic and variable power system in transition to low synchronous generation sources, where the need for inertia in the operational timeframe will be highly variable as more traditional providers of automatic inertia exit the power system.

Inertia procurement and allocation in real-time

Delta considers a spot market is likely to deliver the most efficient outcome for customers. A spot market will ensure that inertia is procured at the right market value and volume for the power system.

Investment signals for inertia

The existing inertia framework does not recognise the increasingly variable operational need for an inertia service, and it is therefore not able to signal and reward providers of inertia when inertia is needed most. That is, traditional providers of inertia are not explicitly compensated for providing the service and are therefore not explicitly responding to any signal to provide it.

As the need for inertia grows and this need becomes more dynamic throughout the day, it will be important for the inertia framework to reflect this highly variable need and appropriately reward those technologies that can provide it.

Technical information

Delta supports the AEMC's seeking greater technical input on:

- defining system inertia needs;
- defining the relationship between inertia from new technologies (for example, synthetic inertia from grid-forming batteries) and rotational inertia; and
- determining interactions with other security services.



Delta notes AEMO will drive most, if not all, of this work in part through its Engineering Framework. Delta considers the AEMC should engage separate technical advice to provide independent assessment of AEMO work on this technical input. This will support AEMO's work as it should remove a perceived conflict between AEMO providing technical input and also being responsible for the implementation of the eventual outcome. This independent consultant could engage with stakeholders through technical workshops to understand their key concerns. This approach will provide the Commission and stakeholders confidence that the technical and complexity limitations of implementation have been fairly assessed.

The AEC's proposed solution addresses the problems raised

An inertia spot market that is co-optimised with energy and other ancillary services would create a mix of least cost services to supply reliable and secure energy to consumers. This is a more transparent and efficient outcome for the market in the operational timeframe compared with the existing inertia framework.

The co-optimisation of spot markets approach will also provide transparent and clear investment signals to the market and investors. This will represent the true value of inertia services to incentivise the right amount of investment in the provision of inertia services.

The proposed framework will facilitate the unbundling of what are currently opaque and nil defined bundled ESS proposed under the OSM by AEMO. The sooner separate defined markets can be created for essential systems services, the more it promotes the Commission long term objective of unbundling ESS.

Alternative options

Delta notes the long-term goal, as flagged previously by the Commission, is for essential system services to each be identified, valued, and procured separately. The AEC's proposal is for this outcome, through an inertia spot market. Delta supports putting this new inertia spot market in place.

Regarding alternative option 1, an ahead or close to real-time market, Delta directs the AEMC to its submission on the OSM draft determination. Delta's agrees in principle that this could be a viable option, but the key issues raised in Delta's submission would need to be addressed, including a common clearing price to reward all providers of ESS and the unbundling of revenue for the service from energy revenue. As the proposal is to separately define and procure inertia services, Delta expects that it would be a separate market to the bundled service procurer of the OSM. To be clear, the OSM must determine what will or is likely to be procured through an inertia market, similar to how the OSM would consider what has already been procured through system strength contracts.

Regarding alternative option 3, RoCoF Control Service, Delta is supportive of this option, and considers it a similar approach to the AEC's proposed inertia spot market. Like an inertia spot market, procurement of RoCoF volume would be net of network service provider (NSP) provided regulated services and also synchronous inertia from energy market dispatch. Delta suggests the market design would not allow for unit commitment or de-commitment by AEMO as per draft OSM design, instead market participants would choose to commit or de-commit units based on forecast price outcomes (as is for energy market dispatch). A common clearing price would be paid to all service providers which NEMDE either



dispatches or relies on for the provision of the service i.e. a generating unit would be paid for RoCoF and energy if it was providing both services.

Regarding the structured procurement options, Delta does not support either of these for the reasons outlined above, primarily because they run the risk of over or under procuring inertia, leading to less efficient outcomes for the market and customers, and a failure to provide efficient signals to existing and future providers of an inertia or RoCoF service.

Implementation

The consultation paper notes that implementing an inertia spot market may be relatively higher in cost and complexity compared to other options. However, the costs should be assessed against the long-term benefits of implementing a more efficient solution compared with the less efficient structure procurement options and the risk of greater longer-term costs to customers. The Commission should not prefer the implementation of a relatively simpler and less costly proposal just because it is easier in the short term and the preference of AEMO. Delta considers a robust cost benefit analysis is required.

To discuss further please contact me at joel.aulbury@de.com.au.

Yours sincerely,

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