7 August 2025

Anna Collyer
Chair
Australian Energy Market Commission

Submitted online: www.aemc.gov.au

Dear Ms Collyer

Efficient Provision of Inertia – Draft Determination

Origin Energy Limited (Origin) welcomes the opportunity to provide comments on the Australian Energy Market Commission's (AEMC) Efficient Provision of Inertia Draft Determination.

Origin does not support the Draft Determination not to introduce an inertia market. While we agree with the AEMC's finding that there would be limited utility in establishing a real-time market to only procure 'additional inertia' (i.e. inertia over and above minimum requirements), we maintain that further consideration should have been given to the potential application of such a market to procure the minimum level of inertia required for system security. This approach would have been likely to deliver more material benefits, given spot markets typically represent the most efficient way to value and procure system services, and other ancillary service markets (such as FCAS) have been a success.

Notwithstanding our concerns with the Draft Determination, we note the AEMC has also provided several recommendations to enhance existing system security frameworks. In the absence of an inertia market, these recommendations are sensible and should be progressed.

Below we detail our concerns with the Draft Determination and share our views on the AEMC's proposed improvements to existing frameworks.

1. Inertia procurement via spot market arrangements

It is important to ensure frameworks / mechanisms are in place to appropriately value and procure essential system services, such as inertia, to ensure the system remains secure as traditional service providers progressively retire. Spot markets are generally the most efficient procurement mechanism as they send clear price signals to participants which then inform prudent investment and unit commitment decisions. They also facilitate competitive service provision which helps to minimise costs and encourage innovation.

As we have previously noted, inertia is seemingly well suited to a spot market-based approach. This is because inertia can generally be procured globally, which allows for a greater pool of providers and promotes competition.[1] It can also be objectively defined, measured and monitored.[2]

For the above reasons, we do not support the Draft Determination's proposal not to establish an inertia market and the underlying rationale for this decision. In its Directions Paper the AEMC came to an early

[1] We note location-specific requirements may be necessary in certain cases, such as for areas that are at risk of islanding.
[2] FTI Consulting, 2020, *Essential System Services in the National Electricity Market – a report for the ESB*, p, 140

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conclusion that minimum inertia was unsuitable for operational (i.e. market) procurement due to its critical role in system security and the substantial costs of inertia undersupply.[3] In our view this is inconsistent with the approach applied to other services such as FCAS, which are equally as critical to system security as inertia, and have been successfully procured via spot market arrangements since 2001. In limiting the potential application of the market, the full benefits of procuring all inertia via market arrangements were seemingly not considered by the AEMC in reaching its Draft Decision.

In addition, from a longer-term perspective, we consider that establishing a well-designed inertia market that sends strong operational and investment signals could have 'future-proofed' the provision of inertia, especially in the context of the following two risks:

- The Draft Determination notes that synchronous condensers, installed by transmission network service providers (TNSPs) to meet system strength requirements, will significantly boost inertia supply.[4] However it remains to be seen whether contracting processes led by TNSPs will effectively facilitate timely, low-cost service provision, noting the Regulatory Investment Test for Transmission (RIT-T) process for system strength solutions is largely untested. In the event there are unexpected delays in the procurement / deployment of synchronous condensers (e.g. due to supply chains tightening as global demand for these machines increases), there is a risk that the future inertia needs of the system may not be met.[5] An inertia market with transparent pricing and clearly defined service specifications would better support competition and service provision from a variety of sources, reducing the reliance on any one technology.

- Minimum inertia requirements are influenced by the size of the largest credible generation and load contingencies. As the AEMC notes, it is possible that larger credible contingency sizes could arise in the National Electricity Market (NEM) in the future.[6] This could occur following the connection of large renewable energy zones or offshore wind farms.[7] A dynamic inertia market (as opposed to slower-paced formal TNSP contracting) could more quickly respond to any unexpected increases in the demand for inertia by sending clear price signals to providers (and potential providers).

2. Proposed improvements to existing frameworks

Notwithstanding our concerns above, if an inertia market is not developed (consistent with the Draft Determination), Origin considers it would be prudent to progress all the recommendations the AEMC has proposed for existing frameworks. We provide initial comments on each recommendation below. The second recommendation is particularly important and the AEMC should consider enshrining it in the National Electricity Rules (NER) so that market participants have confidence this key proposal will be actioned.

1. *AEMO to report on key inertia-related workstreams[8] through its annual Transition Plan for System Security report* – greater visibility of AEMO's technical work will help improve participants' understanding of system needs and could support a future inertia market.

2. *TNSPs to strengthen transparency and technology-neutrality by focusing on improvements to the clarity of project justifications* – this could provide participants with a clearer view of how TNSPs

[3] AEMC, 2024, *Efficient Provision of Inertia - Directions Paper,* p. 36
[4] AEMC, 2025, *Efficient Provision of Inertia - Draft Determination,* p. iii.
[5] This risk has been identified by Transgrid. Transgrid, 2024, *Meeting system strength requirements in NSW, System Strength PADR Supplementary Report,* p. 17.
[6] AEMC, 2024, *Efficient Provision of Inertia - Directions Paper,* p. 29
[7] For example, the Victorian Government has a legislated capacity target for offshore wind of 9 GW by 2040, *Renewable Energy (Jobs and Investment) Act 2017 (Vic)*.
[8] These workstreams include: real-time inertia measurement, locational analysis, improved inertia integration in dispatch, and performance standards for emerging technologies.

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evaluate different network and non-network solutions and could also enable participants to better respond to TNSP's Expression of Interest (EOI) processes for service provision. As an extension to this recommendation, we would also support a new requirement on TNSPs to publish key contractual terms and conditions in the early stages of the RIT-T process. This would help to ensure participants have sufficient information to prepare comprehensive submissions to EOI processes.

3. *TNSPs to improve how emerging technologies are incorporated into planning and procurement processes under the existing frameworks* – we support a clearer articulation of the technical assumptions used to determine the feasibility / capability of solutions, particularly for new technologies.

4. *The AER to consider how existing oversight functions and guidance can support consistency in assessing TNSP decision-making* – increased guidance could support efficient and predictable procurement decisions.

5. *The AEMC to ask the Reliability Panel to monitor system conditions as part of its annual Reliability and Security Report* – it would be prudent for the Panel to assess and report on key shifts / trends in inertia supply and demand, such as delays in the deployment of infrastructure and changes in contingency sizes.

If you wish to discuss any aspect of this submission further, please contact Thomas Lozanov at thomas.lozanov@originenergy.com.au.

Yours Sincerely,

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