24 February 2025

Anna Collyer
Chair
Australian Energy Market Commission

Submitted online: www.aemc.gov.au

Dear Ms Collyer

Efficient Provision of Inertia – Directions Paper

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

Origin generally supports the development of real-time markets for essential service provision where possible, given spot markets typically represent the most efficient way to value and procure services. However, we are concerned by the approach set out in the Directions Paper which proposes that spot market arrangements for inertia will be limited to only procuring 'additional inertia' (i.e. inertia over and above minimum requirements). In our view, it is not clear the benefits of this limited application of spot market arrangements would outweigh the likely risks / costs (e.g. distortion of market outcomes).

Below we detail our concerns with the approach described in the Directions Paper and share our initial views on the two proposed inertia procurement models.

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.

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] Notwithstanding this, Origin is concerned the likely risks and costs associated with introducing a new spot market may outweigh any benefits under the proposed approach.

The Directions Paper suggests there is an economic case for the operational procurement of additional inertia. This is on the basis that additional inertia could reduce wholesale energy costs by allowing the system to cope with larger contingencies, specifically when: market dispatch may constrain the largest generating unit to operate below its potential because of insufficient inertia to support its maximum

[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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output; and inertia constraints bind which limit the output of renewables.[3] However, this approach inherently means the full efficiencies / benefits that spot market arrangements can deliver will not be realised, given minimum levels of inertia will be separately procured via contracts,

Further, there is significant complexity in introducing any new spot markets that then need to be co-optimised with all other existing markets. This would be heightened under the proposed framework as AEMO would have the discretion / ability to dispatch additional inertia which could lead to frequent, material and unpredictable changes in supply and hence price at short notice. This could make it difficult for participants to manage their positions and optimise their portfolios. For example, a participant may have incurred considerable costs in committing a unit to generate (based on forecast market conditions), only for AEMO to dispatch additional inertia and significantly change the supply dynamic and price outcomes. Uncertainty around whether AEMO will dispatch additional inertia could complicate participants' operational plans (e.g. managing starts for start-limited plant or arranging fuel).

These issues could potentially be overcome by reframing the proposed market such that it procures the minimum level of inertia required to ensure system security. The Directions Paper suggests the substantial costs of inertia undersupply are a key impediment to pursuing that approach.[4] However it should be noted that Frequency Control Ancillary Services (FCAS), which are equally as critical to system security as inertia, have been successfully procured via spot market arrangements since 2001. It also remains to be seen whether contracting processes led by transmission network service providers (TNSPs) will effectively facilitate low-cost service provision from generators given system strength Regulatory Investment Tests for Transmission are still in progress.

2. Framework design considerations and initial feedback on proposed procurement models

If the proposed framework is to be progressed, it is imperative there are transparent governance arrangements that regulate how AEMO dispatches additional inertia. These arrangements should be developed in consultation with stakeholders and, at a minimum, specify:

- how AEMO will determine the level of additional inertia to be dispatched;
- how AEMO will notify participants of its inertia dispatch decisions and how far ahead of real time it can dispatch additional inertia;
- any relevant system / market conditions that will prompt AEMO to dispatch additional inertia.

Clear eligibility criteria would need to be developed. The criteria should exclude resources that have separately contracted with, or been underwritten by, TNSPs to provide inertia to avoid any risk overcompensating those resources. The Directions Paper also indicates inertia providers may only be permitted to participate in the market if they are able to provide inertia at 0 MW. We consider this may be overly restrictive as it may omit many existing providers of inertia and could drive up the overall cost of service procurement.[5]

We also recommend that a detailed economic assessment of potential cost recovery arrangements is undertaken by the AEMC to enable participants to understand their potential inertia market exposures, noting this can also directly impact incentives for service provision.

Lastly, the Directions Paper set out two proposed procurement models: reforming the 1s FCAS market to value grid forming inverters or introducing a standalone inertia market. In our view a standalone

[3] AEMC, 2024, *Efficient Provision of Inertia - Directions Paper,* p. 43.
[4] Ibid, p. 36
[5] Ibid, p. 51.

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market may send a clearer price signal for inertia and avoids the risk of any potential disruptions to the well-functioning 1-second FCAS market. It is also not clear how the suggested reforms to the 1-second market would facilitate inertia provision from traditional synchronous sources.

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

Yours Sincerely,

Shaun Cole
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