Monday, 8 September 2025

Ms Victoria Mollard
EGM, Economics and System Security
Australian Energy Market Commission

Dear Ms Mollard

PROJECT: Efficient provision of inertia rule change (ERC0339) draft rule determination

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia, representing nearly 1,000 of the leading businesses operating in renewable energy, energy storage, and renewable hydrogen. The CEC is committed to accelerating the decarbonisation of Australia's energy system as rapidly as possible while maintaining a secure and reliable supply of electricity for customers.

The CEC welcomes the opportunity to comment on the *Efficient provision of inertia* draft determination.

Under Section 29(1) of the National Electricity Law, the AEMC has two primary responsibilities: rule-making and market development. It is therefore ironic that, in this instance, the AEMC has used its rule-making authority to hinder the development of an industry-initiated inertia market. This is particularly concerning given that Section 29(2) empowers the AEMC to "do all things necessary" to fulfil its market development functions.

The proposed rule change offered a practical and efficient pathway for inertia services to be delivered through a market mechanism, integrated into operational timeframes and co-optimised with energy in the NEM. In line with the NEO, we believe the AEMC should prioritise sending clear and strong investment signals for system services.

Inertia service provision, especially through emerging technologies, is a rapidly evolving field. To support its growth, the market needs effective investment drivers—such as price signals—to encourage adoption and innovation.

Issues with current arrangements

Currently, AEMO addresses inertia and broader system security issues using asset-based approaches and specific unit combinations within operational timeframes. However, there is a risk that this method becomes entrenched as the default—without ever being tested against the NEO. If this happens, AEMO's existing operational approach may become the benchmark against which all alternative solutions are measured, potentially stifling innovation and market development.

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The broader issue of “missing markets” in system security remains unresolved—not because solutions are too complex, but due to a lack of commitment to pursue them.

The continued rollout of synchronous condensers by Network Service Providers (NSPs) raises concerns about overcapitalisation and the risk of stranded assets, with consumers ultimately bearing the cost. Emerging technologies may offer more efficient alternatives for providing inertia and other essential system services (ESS). Yet, the National Electricity Market (NEM) lacks a technology-agnostic framework to assess and deliver these services.

To address this, the Reliability Panel and AEMO must establish system specifications and performance requirements that are technology-neutral. Without clear power system standards and specifications for inertia, the “missing market” problem will persist, and the opportunity to develop a market-based mechanism for inertia will be lost. It is difficult to reconcile this outcome with the principles of efficiency and good market design.[1]

AEMO must initiate a systematic work program to trial and facilitate both the technical and economic unbundling of ESS, including inertia. To ensure accountability, the remit of the Reliability Panel could be expanded to monitor, review, and critique AEMO’s progress in this area.

Current investments into grid-forming inverters should not be interpreted as evidence that the existing framework is working

Feedback from renewable energy and storage developers indicates that investment in grid-forming inverters has not been driven by clear market demand within the National Electricity Market (NEM). Instead, investment to date has largely been motivated by two key factors:

1. Significant uncertainty around future technical and grid requirements.
2. High costs associated with retrofitting existing assets.

This means that current investment in grid-forming inverters should not be interpreted as evidence that the existing framework is working or that it is sending efficient investment signals. Rather, developers are “upsizing” their assets as a form of insurance against regulatory and market uncertainty.

The Transitional Services Framework is as an interim solution

The Transitional Services Framework (TSF) was introduced as an interim solution, intended to bridge the gap until a more enduring system security arrangement could be established. However, in its current form, the TSF lacks a clear pathway toward a long-term solution. Its implementation has been left to AEMO, with limited transparency, stakeholder engagement, and accountability for outcomes.

For the TSF to fulfil its purpose, it must deliver clear and measurable outcomes that advance the sector—specifically by establishing standards and trialling market mechanisms for system

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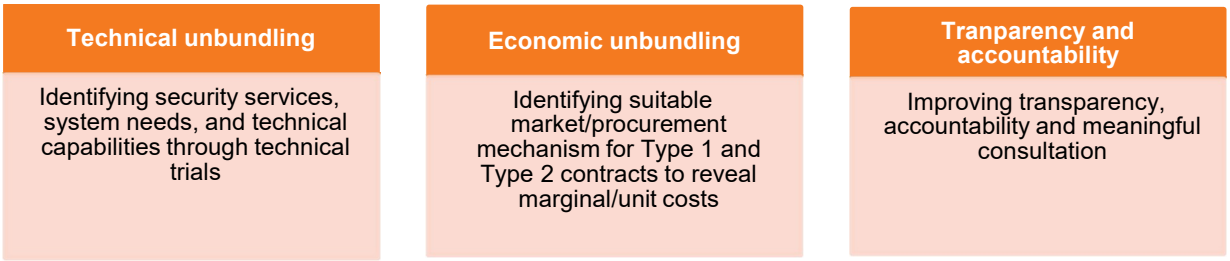
[1] It is envisaged the Reliability Panel in the development of the standards would utilise technical advice from AEMO. This process could be enhanced by a formal working group to deliver the required transparency and incorporation of specialised industry expertise such as the those reflected in Tesla Energy: the Role of Grid-Forming Inverters in Providing Inertia - White Paper

services. This is the core justification for the TSF's existence. Without such outcomes, the TSF cannot be considered consistent with the NEO.

Recommended specific requirements

Whilst we are disappointed with the direction of the *Efficient provision of inertia* draft determination, and with the current progress of the implementation of the TSF, we would like to offer a list of action items that could be incorporated into the final determination. These suggested changes could improve the outcome of the *Efficient provision of inertia* rule determination, and concurrently strengthen the TSF.

We provide recommendations along the following areas that are also depicted in the graph below.



1. **Technical unbundling: Identify services, system needs and technical capability, including technical trials**
   - Require AEMO to execute a defined minimum number (e.g. min 4) of Type 2 contracts for inertia services per year.
   - Require AEMO to undertake inertia service technical trials using Type 2 contracts to manage security during normal operations, and especially during times of system stress/market peak events.
   - Define a system operability metric and develop standards for all known essential system services (ESS), including inertia. The specifications and performance requirements must be expressed on a technology neutral basis.[2] Furthermore, standards must be developed for an interconnected NEM, potential separation events and electrical island operation.
   - The standard and specification framework would include the development of Lack of Inertia 1 and 2 thresholds. The thresholds would provide market signals on the level of inertia availability (scarcity signals). Regardless of the final inertia framework, the development of thresholds is required to reflect good operating practice including management of power system security and generation of market signals.
   - Require AEMO to use the system operability metric in its procurement and enablement process, through a consistent parameter to which service providers must adhere.[3]

[2] The Reliability Panel is the custodian of the NEM power system standards. Currently, only the Frequency Operating Standards (FOS) and System Restart Standards (SRS) exists with associated specifications. The FOS is complemented with the Market Ancillary Services Specifications that underpin the FCAS market.
[3] AEMO has issued directions for specific essential system services including inertia and have declared shortfalls in specific services in a number of jurisdictions. We take these as encouraging signs that AEMO has recognised that the essential system services could be unbundled.

2. **Economic unbundling: Market/Procurement mechanism for Type 1 and Type 2 contracts, including systematic market trials**
    - Require AEMO to explicitly define and quantify the system security service needs (the demand) that it intends to meet using Type 1, Type 2 and other ESS contracts. In the case of inertia, AEMO should explicitly define and quantify inertia service needs that is required at certain 'inertia nodes' at an operational timescale.
    - Require AEMO to report annually on its progress of unbundling security services (i.e. individual specification, valuation, and procurement of services through spot market arrangements) and provide an outline of 'next steps/action plan' for the following year. Specifically, for inertia, AEMO should report annually the steps it has taken to unbundle inertia as a service in the NEM.

3. **Transparency, accountability and meaningful consultation**
    - Require AEMO to develop and justify the criteria it used to demonstrate where the lowest cost Type 1 or Type 2 tender was not in the best interest of the consumer. AEMO should publish a position paper for stakeholder consultation.
    - Require AEMO from 2026 to work with TNSPs to deliver one or more fully modelled plans for how to operate the grid either without coal, or with N-2 coal stations in each region (allowing for outages/closures and other unplanned events), and share the technical details of this modelling in the TPSS. This would allow participants to then engage on the details, including looking for non-network alternatives.
    - Expand the remit of the Reliability Panel to include the monitoring, reviewing and critiquing AEMO's progress in the technical/economic unbundling of ESS, including inertia, for example through enhancing the Annual Market Performance Review.

We consider that the above provisions would improve the outcome of the *Efficient provision of inertia* rule and also strengthen the Transitional Services Framework.

The CEC welcomes further engagement with the AEMC in relation to inertia and other essential system services. Further queries can be directed to Veronika Nemes vnemes@cleanenergycouncil.org.au

Kind regards

Dr Veronika Nemes

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