



11 April 2023

Ms Anna Collyer  
Chair  
Australian Energy Market Commission

Submitted through [www.aemc.gov.au](http://www.aemc.gov.au)

Dear Ms Collyer

**Stanwell Corporation Limited Response to  
Consultation Paper – Efficient Provision of Inertia**

Stanwell Corporation Limited (Stanwell) welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) *Efficient Provision of Inertia - Consultation Paper* (the Consultation Paper).

Stanwell is a major provider of electricity to Queensland, the National Electricity Market (NEM) and large energy users throughout Australia. We own and operate two coal-fired power stations, providing reliable and affordable energy, with a pipeline of renewable generation and storage technologies to reduce our emissions intensity and create future opportunities for our people and communities.

This submission contains the views of Stanwell in relation to the Consultation Paper and should not be construed as being indicative or representative of Queensland Government policy.

Many of the essential system services (ESS) that support the stable and reliable operation of the NEM are presently provided free-of-charge by thermal synchronous generators as an intrinsic by-product of this generation technology. However, the provision of these services is diminishing gradually, and will do so more swiftly over time as the market transitions to higher levels of inverter-based generation. This is already creating critical technical challenges for the Australian Energy Market Operator (AEMO) in maintaining power system security, and will only get worse over time unless new providers of these services are incentivised to enter the market.

In this context, the current regulatory arrangements that oblige transmission network services providers (TNSPs) to ensure that the minimum level of inertia is available by procuring any shortfall identified by AEMO is not sustainable. The lack of a transparent pricing signal in both the operational and investment timeframes acts as a deterrent to new sources of inertia services, limiting alternative supply and likely resulting in higher costs to be ultimately passed through to customers.

The Energy Security Board (ESB) recognised the importance of incentivising new reliable sources of system security services ahead of their inevitable decline and endorsed the unbundling and procurement of ESS through market-based reforms wherever possible and practicable. In particular, it acknowledged the potential advantages in developing a spot market to co-optimize the supply of inertia and frequency control services, operating reserves and energy.<sup>1</sup>

Stanwell has consistently advocated for these reforms in previous submissions to the ESB<sup>2</sup> and the AEMC,<sup>3</sup> emphasising the need for these “missing markets” to be developed and implemented as a priority and in parallel with other ESS rule changes. It contends that the benefit of having operational markets in place prior to shortfalls occurring far outweighs the costs incurred with waiting too long and only acting upon their realisation.

In December 2021, the Australian Energy Council (AEC), with the support of its members, proposed a rule change to enable inertia to be procured from the lowest-cost available sources and co-optimised with other NEM spot markets to minimise dispatch costs.<sup>4</sup> Through the AEC rule change request, market participants have provided a potential framework for the development of a market for inertia, setting a value for current providers and a price signal to incentivise investment in new sources as traditional providers exit the market.

Stanwell strongly endorses the AEC’s proposed model, which offers a solution to the deteriorating supply of inertia in both the operational and investment timeframes. Its design is generally consistent with the existing energy and Frequency Control Ancillary Services markets and well understood by all parties.

The ESB, AEC and market participants recognise the inherent advantages of market forces in the efficient and effective delivery of inertia, decentralising operational and investment decision-making to commercial entities that are best placed to bear the costs and manage the risks of those decisions. This competitive framework has characterised the delivery of wholesale market energy services in the NEM since its inception.

Most importantly, the transparent real-time signals of a competitive clearing price from a decentralised inertia market would reflect the true underlying value of that resource. In turn, this would:

- incentivise the production of inertia in quantities sufficient for AEMO to avoid shortfalls and maintain system stability and security,
- ensure inertia is produced at least-cost, driving affordability outcomes for energy users, and
- encourage new investment and innovation in technology to support the energy transition over the medium and longer-term.

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<sup>1</sup> Energy Security Board 2021, [Post-2025 Market Design: Final Advice to Energy Ministers Part A](#), p. 9.

<sup>2</sup> Stanwell Corporation Limited 2020, [Submission to Post-2025 Market Design Consultation Paper](#), and Stanwell Corporation Limited 2021, [Submission to Post-2025 Market Design Options – A Paper for Consultation](#).

<sup>3</sup> Stanwell Corporation Limited 2022, [Submission to Essential System Services and Inertia in the NEM](#), and Stanwell Corporation Limited 2022, [Response to Draft Rule Determination – Operational Security Mechanism](#).

<sup>4</sup> Australian Energy Council 2021, [Inertia Spot Market Rule Change Request](#).

Stanwell acknowledges and appreciates the work the AEMC has done to present a range of alternative market-based and procurement-based options to the AEC's proposed model for reform of the existing inertia framework. This rightly ensures that the review process is comprehensive, providing stakeholders with an opportunity to weigh up the merits of competing models to identify a solution that best addresses the National Electricity Objective.

The Operational Security Mechanism (OSM), currently under development by the AEMC and AEMO, is designed to price, procure and schedule as-yet unbundled - and as-yet undefined - system security services. However, it has always been intended as a temporary or transitional arrangement to ultimately be replaced by a collective of individual spot markets.

Stanwell considers that inertia is well-understood and capable of being readily unbundled from the energy service. In this context, there is a strong case for the AEMC to focus on the development of an inertia market in the first instance, without a need for inertia services to be managed transitionally through the OSM or similar ahead or close to real-time market. This would avoid the duplication of implementation costs and result in cost savings for energy users. Moreover, this unbundled but integrated inertia market could become a framework for other markets for ESS as they are better defined and unbundled, minimising the time that they participate in the OSM.

The two other market-based reform alternatives proposed by the AEMC are likely to add unnecessary complexity and, by distorting market signals, may impair the capacity of market participants to respond efficiently to them. For example, a shadow price for inertia, based on the identification of the marginal cost of an otherwise binding constraint, fails to account for, and hence value, the broader role of inertia in maintaining system security. As a result, it is likely to undervalue the service and be ineffective in procuring the efficient levels needed.<sup>5</sup>

The RoCoF Control Service model appears to value only one aspect of inertia and may similarly lack the ability to bring forward efficient levels of supply. If a RoCoF Control Service is favoured by the AEMC, Stanwell recommends the parallel introduction of a procurement mechanism for inertia which supports AEMO in efficiently relaxing operational constraints such as those relating to transitory or oscillatory stability, however introducing two markets appears unnecessarily complex.

The two procurement-based models presented in the Consultation Paper are generally akin to the existing centralised regulatory arrangements, although they do result in the entire stock of required inertia being procured, instead of just any shortfall. Regardless, they lack transparency, are likely to result in less efficient procurement outcomes, and fail to provide meaningful long-term pricing signals that will incentivise new providers into the market.

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<sup>5</sup> MarketWise Solutions 2021, [Inertia Ancillary Service Market Options](#), a report prepared for the Australian Energy Council, p.3

Accordingly, Stanwell is of the view that the AEMC's alternative models are unlikely to offer significant advantages over a spot market that would warrant them being considered as more fit-for-purpose.

The AEMC also raises the possibility of maintaining the current framework until further technical work more fully establishes the needs of the power system and the capacity for new technologies to substitute for synchronous inertia. However, Stanwell considers this is not a credible option. To Stanwell's knowledge, AEMO and AEMC have not yet crystallised a definition of what is to be procured – a process which is independent of designing the procurement mechanism and so implementation of any option is likely to be the work of multiple years. With the transition from synchronous to inverter-based resources already underway, further delay is almost certain to create unnecessary cost relating to crisis management, as occurred in relation to Primary Frequency Response.

The Consultation Paper itself highlights the extent to which declining inertia will likely present a future threat to power system security.<sup>6</sup> AEMO's most recent forecasts project that the threshold level of inertia is expected to only be exceeded 65 percent of the time by 2029-30. Moreover, in addition to the inertia shortfalls declared for South Australia and Tasmania in 2021, new shortfalls are expected in Queensland and Victoria from 2026. This evidence lends strong weight to the case for the AEMC to act now.

## **Conclusion**

For some time, the ESB and stakeholders have expressed a preference for the implementation of genuine market-based arrangements to resolve the problem of diminishing system services as the energy market transitions. In this context, Stanwell strongly supports the AEC's proposal to establish a spot market for inertia services. It considers the rule change request provides the AEMC with a crucial opportunity to progress the ESB's vision and act upon the aspirations of market participants.

Importantly, in recognition of the lead time required for the finalisation of market design and implementation, the AEMC should not defer its decision-making until the inertia problem becomes imminent. Decisions made when you're out of options are more than likely to result in sub-optimal solutions compared with those that have had the luxury of sufficient time for considered development and refinement.

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<sup>6</sup> Australian Energy Market Commission, [Consultation Paper - Efficient Provision of Inertia](#), p. 9.

Stanwell welcomes the opportunity to further discuss the matters outlined in this submission. Please refer any questions to Steve Williams, Market Regulations Senior Advisor, on 0409870998, or email at [Stephen.Williams@stanwell.com](mailto:Stephen.Williams@stanwell.com).

Yours sincerely

A handwritten signature in blue ink, appearing to be 'I. Chapman', with a long horizontal flourish extending to the right.

**Ian Chapman**  
***Manager Market Policy and Regulatory Strategy***