

31 March 2023

Ms Anna Collyer

Chair

Australian Energy Market Commission

PO Box A2449

Sydney South NSW 1235

Electronic Submission – ERC0339

Efficient Provision of Inertia Consultation paper

Dear Ms Collyer,

Energy Networks Australia (ENA) welcomes the opportunity to provide a submission to the Australian Energy Market Commission's (AEMC) consultation paper on the Efficient Provision of Inertia.

ENA is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia. This submission is on behalf of transmission members.

In summary, ENA considers:

- » It is premature to lock in an option where other critical system service reforms such as system strength are still to be fully implemented and may help address declining inertia in the long term.
- » Some TNSP system strength contracts with generators already include inertia and some TNSP network solutions also provide both system strength and inertia. In any evolved framework these services arrangements (existing and any new arrangements) may need to be transitioned in some manner.
- » The interactions with other essential system services frameworks need to be carefully considered in the inertia review so that unnecessary costs to consumers are avoided.

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- » The costs and benefits of an inertia spot market or any other alternative solution to address inertia requirements, along with its implementation costs, needs to be rigorously explored and tested through the policy development process.

Clarification of the nature and magnitude of the technical problems

ENA concurs with the AEMC that the studies underway provide an important factual base to evolve inertia provision from the current TNSP procurement process which is to address notified shortfalls. To ensure the proposed solution has a long-term consumer benefit, it is important to consider the following:

- » the role of rotational inertia in general power system stability and the need for locational distribution;
- » the relationship between inertia from new technologies (e.g. synthetic inertia) and rotational inertia;
- » defining the power system needs;
- » determining the interactions with other system security services.

In assessing the alternative options, it is important to understand the power system needs and which option(s) provides the best value for consumers. This should take into account the system and operational costs across the market and the starting point. The evolved system strength arrangements when implemented, and the revised frequency arrangements may both impact the inertia type and needs of the power system. An evidence-based approach is required to determine whether this might be better aligned with frequency and energy services or whether inertia services may be better considered with the provision of system strength to ensure no unnecessary costs to consumers.

ENA considers that it is premature to lock in an option where other critical system service reforms, such as the system strength reforms, are still to be fully implemented and may help address declining inertia in the long term.

The starting point is TNSP structured procurement

System strength and the inertia shortfalls are notified to TNSPs to assess network and non-network options in the market. Having completed the regulatory processes, TNSPs procure the services required to meet the shortfall or gaps identified in each service.

The revised system strength framework requires TNSPs to procure efficient levels of system strength in the future to enable more renewable generation on the power system. This procurement of system strength can also include the provision of inertia to meet the forecast gaps with multi-year contracts. TNSPs will be assessing options in 2023 to meet system strength obligations, and any inertia gaps may also be considered in the decision-making process in early 2024, to ensure that the services are provided at the least cost. TNSPs go to the market to assess the costs of both network and non-network options. Pragmatic regulatory approaches should allow investment in high-inertia specification of synchronous condensers that are

required first to provide other prescribed services, such as system strength, where this approach is efficient and justified.

The Operational Security Mechanism (OSM) is proposed to be fully implemented in the market by December 2025 to enable AEMO to dispatch the lowest cost system services to keep the power system stable and lower costs in the wholesale market¹. This framework will develop and maintain a system services list and services guidelines for services operated in the OSM. Services can include rotational inertia, synthetic inertia and other services.

In addition, a number of system strength contracts entered into by TNSPs with generators already include inertia. Furthermore the majority of network solutions that are currently being explored by TNSPs such as synchronous condensers and batteries have the capability to provide both system strength and inertia. In any evolved framework these services arrangements (existing and any new arrangements) may need to be transitioned in some manner.

Implementation considerations

ENA agrees with the AEMC, that the interactions with other essential system services frameworks needs to be carefully considered. The size of the synthetic and rotational inertia services requirements and costs should be clearly understood. Total implementation costs need to be considered across participants and AEMO, including whether decisions to proceed with an OSM have already taken the associated costs into account.

ENA agrees with the AEMC that the service price needs to be clear and distinguishable from other services provided co-incidentally. Services provided coincidentally with other essential services, such as providing system strength and inertia through one contract or network solution, may have very low incremental costs. For the benefit of consumers, opportunistic pricing and potential for double recovery should be avoided.

Any mechanisms for providing inertia in the future also need to be workable in Tasmania, not just mainland regions of the National Electricity Market. With only one synchronous generator supplying the Tasmanian wholesale market and significant barriers to entry, a spot market is unlikely to deliver efficient procurement of inertia in Tasmania.

The Australian Energy Regulator (AER) suggested that a more pressing reform may be to harmonise the provision of inertia with the existing system strength framework to enable improvements in inertia to be considered with system strength². This might offer an appropriate transitional arrangement and will also provide a more complete fact base to allow a more comprehensive and forward-looking consideration of the appropriate allocation of roles and responsibilities in an enduring inertia framework.

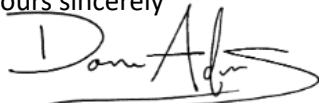
¹ AEMC expected to make a Final determination in July 2023

² AER response to AEMC, Essential system services and inertia in the NEM, 21 July 2022

Ultimately, the costs and benefits of any proposed reform to ensure appropriate levels of inertia are maintained needs to be rigorously explored and tested through the policy development process.

Should you have any queries on this response please feel free to contact Verity Watson, vwatson@energynetworks.com.au.

Yours sincerely



Dominic Adams

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