

31 March 2023

John Kim
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Dear John

RE Efficient provision of inertia rule change (ERC0339)

TasNetworks appreciates the opportunity to provide comments to the Australian Energy Market Commission (**AEMC**) regarding the Australian Energy Council (**AEC**) proposal for an ancillary service spot market for inertia. We would also like to acknowledge the considerable amount of work that has been already been invested in this issue by the AEMC, which is reflected in the *Efficient provision of inertia - Consultation paper* released on 2 March 2023.

As noted in the Consultation paper, inertia, along with system strength, is a critical requirement for a stable and secure power system. Synchronous inertia is an inherent property of synchronous generation that resists changes in frequency, improving the resilience of the power system. However, as inverter based generation continues to displace synchronous generation in Tasmania and in the National Electricity Market (**NEM**) more widely, without countervailing measures, inertia in the system will inevitably reduce, bringing with it increased risks of system instability and supply interruptions.

TasNetworks agrees that the current inertia framework is focussed on the provision of inertia to address shortfalls that are only likely to arise in what the Consultation paper describes as “the worst possible conditions”. This means that there is no mechanism for transmission network service providers (**TNSPs**) to release additional inertia under normal operating conditions to enable more asynchronous generators to inject energy into the power system.

However, TasNetworks does not consider the introduction of a new spot market for inertia services is the best or most efficient means of ensuring the inertia needed to maintain frequency and voltages in each region of the NEM is available at all times. In TasNetworks’ view, there are other ways of delivering the benefits which the AEC is seeking to deliver that are less complex, and maybe be more certain, than a market based solution.

The introduction of the proposed market-based solution in relation to the provision of inertia services would be at odds with the approach adopted by the AEMC in October 2021¹ in relation to system strength services, which sees system strength supplied through TNSP led procurement of services (working closely with AEMO). With this in mind, TasNetworks would look favourably on moves to harmonise the framework for the provision of inertia services with the arrangements in place in relation to system strength.

In TasNetworks' view, the AEMC should use the extended timeframe allocated to the *Efficient provision of inertia* rule change process to also investigate the use of co-optimisation as part of the Australian Energy Market Operator's (**AEMO**) central dispatch process as a potentially more efficient means of delivering increased levels of inertia. If the proposed Operational Security Mechanism proceeds, it could be used to co-optimize inertia with the energy market to align inertia with other essential system services, including system strength. A contracting model could be used as a 'back-stop' if the co-optimisation model is preferred.

Co-optimisation would have the advantage of delivering additional inertia as a by-product of energy, whereas a market-based procurement mechanism that separates inertia from energy potentially requires all dispatched providers of inertia to be paid. Particularly in a region of the NEM where the predominant form of generation is still synchronous, and is likely to remain so, a co-optimisation approach to despatching generation has the potential to maximise the provision of inertia while at the same time minimising the cost.

We agree with the AEMC's observation that the implementation of a spot-market for inertia services (and potentially a derivative contracting market as well), with TNSP procurement only used as a 'last resort', may result in lost opportunities and decreased efficiency in cases where TNSP-led provision of inertia is the most cost-effective option. The example referred to in the Consultation paper of a flywheel being added to a synchronous condenser installed by a TNSP for the purposes of providing prescribed transmission services highlights that regulated assets represent a potentially efficient source of inertia and should not be excluded from any revised inertia framework.

TasNetworks is concerned that sufficient competition for the provision of inertia services does not exist, nor is likely to emerge, to create a spot market which would deliver the efficient procurement of inertia in Tasmania. There is effectively only one market participant with synchronous generation supplying energy to the Tasmanian region of the NEM, making a spot market for inertia services (and the exclusion of regulated assets from the provision of inertia) essentially unworkable.

Given the capital intensity of many of the assets that provide inertia, the pricing signals provided to investors by a spot market for inertia services are not likely to be sufficient to overcome the barriers preventing potential competitors from entering and competing in a spot-market.

It must also be recognised that Tasmania is not facing a decline in inertia due to synchronous plant leaving the system. Considering this and other matters raised in this submission, the cost and complexity of developing and implementing a new ancillary services spot market in the Tasmanian region of the NEM is unlikely to benefit Tasmanian electricity customers compared

¹ Rule determination, *National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021*, Australian Energy Market Commission, 21 October 2021

to the current inertia arrangements. Other alternatives should be explored to ensure the efficient level of inertia is released to maximise energy market outcomes.

Once again, thank you for the opportunity to comment on the proposal for a spot market for inertia services. To discuss the views expressed in this letter please contact Chris Noye, Leader Regulation, at Chris.Noye@TasNetworks.com.au or on 0417 399 009.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Chantal Hopwood'.

Chantal Hopwood

Head of Regulation