AUSTRALIAN ENERGY REGULATOR

Our Ref: 15785286
Contact Officer: Stephen Watson
Contact Phone: 02 9102 4039
Date: 28 September 2023

Ms Anna Collyer
Chair – Australian Energy Market Commission
PO Box A2449
Sydney South, NSW, 1235

Dear Ms Collyer,

Improving security frameworks for the energy transition – second directions paper 2023

The Australian Energy Regulator (**AER**) welcomes the opportunity to comment on the second directions paper released by the Australian Energy Market Commission (**AEMC**) on the *Improving Security Frameworks for the Energy Transition* rule change (previously known as the 'Operational Security Mechanism').

This consultation results from two rule change requests proposed in 2020 by Hydro Tasmania and Delta Electricity and was developed into a more detailed proposal entitled the Operational Security Mechanism. This mechanism would have been implemented by the Australian Energy Market Operator (**AEMO**) to procure, schedule, and dispatch efficient levels of essential system services.

As the AEMC notes, stakeholders were concerned by the complexity of the proposed mechanism and considered it would not lead to efficient investment in the energy transition underway in Australia. The AER's previous submission noted that procurement based on a very broad objective would lead to risks including the diluting of investment signals and limiting the availability of information required to optimise the quality of the services being provided. We also considered that disorderly bidding would obstruct the mechanism from its objective of maximising the value of trade, while there were also concerns around competition for the provision of services in the proposed design of the mechanism. For these reasons, among others, we support the AEMC's decision not to proceed with the implementation of a mechanism for procuring system services in the operational timeframe.

In this submission, we provide the AER's views on some of the issues raised in the directions paper. These include:

- the inertia framework
- new non-market ancillary services (**NMAS**) framework for transitional services
- AEMO enabling system security contracts
- the directions framework.

The inertia framework

In the current framework for the provision of inertia, AEMO defines the boundaries of inertia sub-networks, and for each, determines the level of inertia required to maintain a satisfactory

and secure operating state over the coming five years. Based on the likely inertia levels, and risk of the sub-network becoming islanded, AEMO can declare a shortfall in which case TNSPs are required to procure additional inertia to meet this gap.

In the directions paper, the AEMC has proposed several adjustments to this framework. One proposal would enable AEMO to declare inertia shortfalls when a sub-network is not at risk of islanding. Another would adjust the timeframe for inertia procurement in line with the timeframe for system strength. For each inertia sub-network, AEMO would project inertia needs over a 10-year period, and require the transmission network service provider (**TNSP**) to ensure that a minimum level of inertia is continuously available over that timeframe.

The AER is broadly supportive of these proposals, which would align the frameworks for inertia and system strength. As noted in our submission to the *Efficient Provision of Inertia* rule change,[1] networks may procure more efficient solutions for inertia when they are able to procure system strength at the same time, because both services can be provided by similar sources. As such, it is important that the regulatory framework does not prevent TNSPs from considering the two services holistically.

Regarding the declaration of inertia shortfalls for a sub-network that is not at risk of islanding, it is critical that the process of identifying sub-networks and for allocating the inertia floor is transparent. It is also important to ensure that the setting and allocation of inertia floors and AEMO's role in this can be undertaken in a way that delivers an overall efficient outcome from an investment perspective and which is in the interests of consumers.

We also note that the AEMC's proposal to allow synthetic inertia to be counted towards the proposed inertia floor should also help drive investment efficiencies. Throughout the energy transition, it is expected that synchronous capacity will decline, and there will be an increase of inverter-based resources in the National Energy Market (**NEM**). If inverter-based resources are able to provide services equivalent to synchronous inertia, then allowing these services to be utilised in meeting inertia requirements will allow for greater competition with the aim of reducing the price of providing this service.

New NMAS framework for transitional services

In the directions paper, AEMC proposes a new NMAS framework which could be used by AEMO to procure "transitional services". These services would replace the current use by AEMO of directions in SA. However, AEMO would still have the power to issue additional directions when it determines there is a need. The services could be procured by AEMO to ensure system security throughout the energy transition, with a proposed sunset after ten years. By that time, alternative means would need to be found if these services were to be provided on a permanent basis.

Contracts for these transitional services will likely be more expensive than the current arrangements for directions, due to the limited number of participants that can provide the configurations that AEMO seeks. If the NMAS contract is commercially insufficient, then a generator will be unlikely to agree to a contract, which may result in it being directed. This was evident in South Australia when the first system strength gap was identified. ElectraNet assessed that procuring system strength services from providers was more expensive than directions. As such, directions were utilised as an interim measure until synchronous condensers were commissioned.

The AER recognises that there are significant challenges faced by AEMO as system and market operator in managing a more complex and decentralised energy system. We also acknowledge therefore that there will be times when AEMO needs to procure services on a temporary basis in order to keep the system secure. At the same time however, the

[1] https://www.aemc.gov.au/rule-changes/efficient-provision-inertia

procurement of system security services should be accompanied by the provision of sufficient information to the market, particularly where those services are ultimately relied on over the long-term and funded by electricity consumers.

In particular, the rules surrounding the framework should stipulate clear obligations on AEMO and TNSPs to detail the relevant system risks before a solution is pursued, to promote transparency for stakeholders. In designing the new NMAS framework, the AER considers that the NER should require AEMO to detail in the General Power System Risk Review (GPSRR) all risks that will lead to NMAS procurement or ongoing use of directions for system security management. AEMO's activities and performance in managing these risks should be reported each subsequent year, in sufficient detail to inform the market on the services needed, the level of progress made away from procuring services based on configurations of generators and the nature of competition for provision of these services.

By way of example, AEMO has issued directions to synchronous generators in South Australia from late 2021 onwards (following commissioning of the synchronous condensers) to meet AEMO's requirement that a minimum number of units be online at all times in SA (the minimum unit requirement). The AER notes that at present, under the GPSRR, AEMO is not required to analyse all risks, just those that it prioritises. As such, in the AER's view, there has not been detailed analysis published to clearly outline the power system risks the minimum unit requirement in SA is managing, though we acknowledge the complexity of this assessment. Currently, there is no defined path for the transition away from the minimum unit requirement. As a result, existing participants and new providers are unaware of what services AEMO requires in the region, which contributes to the continuing reliance on directions to meet the minimum unit requirement.

Separately, the AER also considers that there should be clear obligations on TNSPs to provide AEMO with the information it needs to undertake and publish detailed risk assessments.

The AER considers that these governance arrangements would help drive better risk management and sector knowledge in relation to system security risks and the solutions to address those risks. In addition, transparency around the nature and scope of the services, the need for them and the cost of procurement should help provide the necessary investment signals to market participants. In turn this will allow existing participants to adapt and encourage new entrants for the provision of those services.

Reporting and transparency are key to ensuring there are appropriate signals for new entry to increase competition for the provision of these services. A lack of transparency may ultimately increase providers' cost of capital and reduce the number of new entrants, adding to scarcity and competition risks.

AEMO enabling system strength contracts

In the current framework for system strength, System Strength Service Providers (namely, TNSPs) procure system strength services from generators, and make information about these contracts available to AEMO. AEMO's role includes enabling or scheduling these TNSP contracts to provide inertia, NSCAS and the minimum three phase fault level required for system strength. However, it is solely the TNSP's responsibility to enable contracts to ensure a stable voltage waveform (the other limb of system strength). The AEMC has proposed that AEMO would enable these latter contracts in real time, in a similar way to the other contracts that it enables or schedules.

The AER supports this proposal. Placing this responsibility within AEMO's remit would reduce the complexity of the system security framework and reduce the risk of doubling the work required to ensure that sufficient levels of system strength services are scheduled and dispatched.

With AEMO in this role there is also the potential to optimise for the least cost solutions to meet requirements over multiple regions, an optimisation which is not possible if the responsibility for enabling some contracts is shared between regional TNSPs. We also support the proposal to make public AEMO's methodology for system strength contract enablement, as it would provide more transparency for new market entrants.

The directions framework

The AER broadly supports the AEMC's proposed amendments to the framework for directions issued by AEMO. Under the current framework, generating units undergoing directions are compensated at the 90th percentile energy price throughout the course of the direction. The AEMC has proposed a new framework where AEMO would produce a benchmark cost for each generation type, and this would provide a basis for compensation payments in the case of directions.

We agree with the AEMC that the current basis of directions compensation is likely not fit for purpose, and an approach to compensation based on a benchmark cost of energy is likely to provide better outcomes for both directed participants and, ultimately, consumers. However, we consider that the proposal that directed generators would be paid a premium amount over their benchmark costs may need more detailed consideration.

In the current framework, the AEMC notes that in some circumstances, generating units may decide to withhold supply, since they may find it preferable to wait for AEMO to issue a direction rather than to sell energy directly to the wholesale market.[2] We agree with this assessment. However, in the proposed benchmark framework, the inclusion of a premium could also give rise to this situation. This incentive for generators to withhold supply could arise at any point where the wholesale price is close to a generator's benchmark costs, which should often be the case as generators compete to bid into the market. This represents a significant risk to energy prices in the proposed framework.

We note that the benchmark approach without a premium does not risk under-compensating generators, because if the benchmark is lower than their operating costs, they would be able to claim for additional cost recovery, as is the case under existing frameworks.

The AEMC has also proposed that AEMO would include more detail in market notices that are published for each direction. Additionally, AEMO would be required to publish a comprehensive quarterly directions report detailing all the directions that had been made over that quarter. We strongly support these changes. These measures would provide more clarity and transparency around the reasons for directions, allowing for more efficient investment in services that would help to reduce the need for directions in future.

We thank the AEMC for the opportunity to submit on this process. If you have any questions about our submission, please contact Stephen Watson on 02 9102 4039.

Yours sincerely,

Mark Feather
General Manager, Strategic Policy and Energy Systems Innovation
Australian Energy Regulator

[2] AEMC, Second directions paper 2023, p. 98