AUSTRALIAN ENERGY REGULATOR

Our Ref: 14595894
Contact Officer: Chris Ridings
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Date: 21 November 2022

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

Dear Ms Collyer,

Operational Security Mechanism – Draft determination

The Australian Energy Regulator (**AER**) welcomes the opportunity to comment on the Australian Energy Market Commission's (**AEMC**) draft determination on the Operational Security Mechanism (**OSM**) rule change.

The AER has been closely involved with the development of reforms to the provision of essential system services through the Energy Security Board's NEM post-2025 work, as well as the suite of rule change processes being progressed by the AEMC. We acknowledge the considerable progress made in this area and would like to thank the AEMC for their open and consultative approach to these reforms.

We agree that the rapidly evolving nature of the power system requires the consideration of a mechanism to manage power system security in the operational timeframe. However, we note that the OSM represents a substantial departure from the design of the existing energy market. We recommend that further work is undertaken on the design to ensure that together the energy market and OSM deliver reliability and security in the most efficient manner for consumers.

As such, our submission addresses the following areas for further consideration:

- The potentially broad scope of procurement in the OSM;
- The limited extent to which the trade-offs in OSM design have been consulted on;
- The impact of disorderly bidding on optimising for net market benefits, and;
- The AER's role in identifying and mitigating market power.

Scope of services

Draft rule 3.7G.2 states the objective of the OSM:

> The objective of the *operational security mechanism* is to procure and *enable security services* to:
>
> (a) achieve and maintain *power system security* requirements as described in Chapter 4 and the *power system security standards*; and
>
> (b) subject to paragraph (a), maximise the expected value of *spot market* trading for the period of the OSM horizon in accordance with clause 3.8.1(b) and having regard to the cost of *security services* based on *OSM bids*.

Further clauses set out that the Australian Energy Market Operator (**AEMO**) would be responsible for publishing a security services list—containing a list of services which may be procured through the OSM—and a Security Services Guideline which "must include a description of the security services which may be procured by AEMO in accordance with this rule…"

The AER is concerned that procuring security services to "achieve and maintain power system security" is a very broad objective which could lead to a very large number of services being considered for procurement. For instance, we consider that this could potentially include every constraint in NEM dispatch engine (NEMDE) as part of the services list given that these constraints all manage power system security.

The first risk of an overly broad scope is the potential overlap of objectives with solutions to be implemented in the investment timeframe. A number of frameworks currently exist to manage system security risks in the investment timeframe (e.g., system strength, NSCAS, and the General Power System Risk Review). The time lag between investment decisions and real time operations may see sporadic system service gaps occur in the operational timeframe. However, it is important to ensure that existing frameworks are the primary mechanism for dealing with these gaps in the long term and that the OSM does not delay the implementation of more efficient, long-term solutions.

The second risk is that an overly broad scope may limit the quality of information available to market bodies and participants around the operation of the OSM and the services being procured. For example, the procurement of a large number of services may practically result in the information about those services being of reduced quality. This would have the effect of delaying the unbundling of those services, as well as acting as a barrier to entry for potential new providers of those services.

As such, the AER proposes that the AEMC consider a limit to the scope of services for procurement in the OSM. This could take the form of AEMO consulting on a limited number of services that it considers to be most likely required for procurement in the OSM in any given year. We note that if this forecast was inaccurate, or emerging conditions cause these forecasts to change, AEMO would still be able to rely on the use of directions as a last resort to maintaining power system security. Limiting the scope in such a way should address both risks identified above, while also limiting the potential impact on the energy market through distortions to bidding behaviour and self-commitment.

We consider that including such limitations on scope in the final rule would be beneficial for all market bodies, as well as participants. AEMO's role as market operator involves maintaining power system security, while the role of the National Electricity Rules (**NER**) is to act as the safeguard of market integrity. Therefore, enshrining such limitations on the scope of the OSM in the NER would act to protect the market, and allow AEMO the flexibility to operate the power system without being burdened by the uncertainty of the impacts on market integrity. The counterfactual could see an inefficient use of services geared to the short term, rather than long term interests of consumers, which would not be consistent with the National Electricity Objective (**NEO**).

OSM optimisation

Disorderly bidding

While the AER understands that the design of the OSM optimisation is still to be developed, we are concerned with the market outcomes which may occur because of disorderly bidding in the NEM.

The OSM objective to "maximise the expected value of spot market trading for the period of the OSM horizon" utilises an optimisation that will be based on generator offers (in pre-

dispatch, **PDS**) and OSM provider offers. This means the OSM optimisation for net market benefits will therefore be based on offer "prices" as opposed to costs.

Under the current wholesale regional pricing regime, generators who are behind a binding constraint often bid at the market floor price (-$1000/MWh). This is because they are incentivised to maximise their dispatched volume, noting they cannot affect the regional reference price at which they are settled.

The actual cost of the generation that bids at the floor price may be the same as similar generation which is not behind a constraint, and therefore bid into NEMDE at its marginal cost. In these situations, the OSM could view PDS bids as reflective of cost (as opposed to an artefact of disorderly bidding) and procure high-cost generation to unlock generation behind a constraint given it would perceive that this generation had a significantly lower cost than the unconstrained generation. However, the cost to consumers is the spot price, which is set by the marginal offer. This may be, and in practice often is, significantly higher than the offers from low priced renewable generation which is behind the constraint. Consumers may then pay through the OSM to relieve constraints on generators which do not influence spot price—i.e., an increased cost to consumers (through the OSM) with no corresponding decrease in costs through the spot market.

The ESB's Transmission Access Reform workstream is exploring models that can remove the incentives for disorderly bidding and promote more efficient utilisation of the network in operational timeframes. However, this work is still very much under development and therefore the risks posed by disorderly bidding may persist for some time.

Ahead optimisation

The AER considers that including too much technical detail in the NER can lead to a rule that is overly prescriptive, and difficult to manage in practice. However, this must be balanced against having an appropriate amount of detail included in the NER to ensure any functions meet the NEO in practice.

Regarding the OSM, there are many trade-offs to be considered in the design of the mechanism and many of these present risks to consumers based on accuracy and efficiency of procurement. While these trade-offs will likely be consulted on (through the Rules consultation procedures), we consider that it would be beneficial to consult on the more significant of these trade-offs before a final rule and determination is made. This will ensure that a final rule is only made if the OSM is capable of meeting the NEO in practice.

In principle, it would be more efficient for the scheduling and dispatch of system services to be co-optimised in real time along with energy and market ancillary services. Not only would the co-optimisation of all products and services be likely to achieve the most efficient outcome, but the optimisation being performed in real time—i.e., scheduling immediately prior to actual dispatch—would allow for the most accurate information on demand for both energy and services to be used.

We understand that real time co-optimisation is likely not to be feasible with the OSM, particularly given the time needed for the optimisation (using mixed integer linear programming) to be performed is longer than the time required for NEMDE to co-optimise in real time, which is less than five minutes.

We understand that consideration may be given to further increasing the 'aheadness' of the OSM in order to provide additional operational certainty of system service provision. However, we consider that the timing of when the OSM cut-off time occurs should only be dependent on the length of time required to perform the optimisation, such that it is performed as close to real time as practicable and therefore is as accurate as it can be.

As described in the draft rule and determination, service procurement will take place during OSM blocks which will likely be of four-to-eight-hour duration. This means that OSM providers may be procured to provide a service across an entire block, only to address a service gap that occurs only towards the end of a block. The complexities around forecasting

the timing and quantity of these gaps, which is further complicated by the uncertainties around energy supply and demand forecasts, is likely to lead to a level of procurement which is inefficient. However, this inefficiency is likely a necessary result of the requirement to schedule across OSM blocks. We therefore consider that any unnecessary increases to gate closure time will increase the risk of inefficient procurement. Therefore, while increased confidence in service provision may be desirable from an operational perspective, this needs to be balanced against the efficiency of procurement and particularly the potential for passing inefficient costs on to consumers.

Market power

Market power identification and mitigation

The AEMC has given significant consideration towards the issue of market power in the OSM as highlighted both through the consultation and draft determination, and the deep dive session held on 20 October 2022. As raised in our submission to the 2021 Directions paper, the AER considers that participants in the OSM could derive benefits conferred by market power, such as bidding at high prices without risk of any meaningful competitive constraint, particularly where a participant identifies that it is in the unique position to supply a required service.

The draft determination introduces a new rule, 3.7H, which aims to introduce a framework for identifying the potential for an exercise of market power and establish measures to mitigate the ability to benefit from that market power where it arises. The rule allocates these tasks to the AER through the publication of an annual OSM market power review and the ability to implement price monitoring or price caps in the OSM. The AER generally agrees that we are best placed to undertake these functions given the overlap with our existing roles and objectives to effectively regulate competitive markets primarily through monitoring and reporting, and enforcement and compliance.

However, the AER has significant concerns with the role as drafted in 3.7H.1(c) (1) and (2). The information and analysis required to form a view as to whether an entity has market power is often extensive and complex in sophisticated markets and requires a high threshold to be met. This is evidenced through the significant experience of the Australian Competition & Consumer Commission (**ACCC**) in bringing cases of misuse of market power under s. 46 of the Competition and Consumer Act 2010 (the **CCA**). Section 46 requires that the alleged contravenor has a *substantial degree of power in a market*. Establishing that element requires extensive evidence relating to the market and the conduct of its participants. The standard in the proposed rule is made more complicated by the requirement to assess the *potential* for the exercise of substantial market power. Proceedings instituted by the ACCC which allege contraventions of s. 46 of the CCA generally focus on past or ongoing conduct.

The AER does currently perform a cursory analysis of market power issues in the NEM as part of our bi-annual Wholesale Electricity Market Performance Report. But this work is ex post, and largely to provide an update on the health of competition in the market, rather than acting as an explicit trigger for further action. We therefore have two main concerns with the current draft rule in this respect:

1. In many cases, the explicit identification of the potential for exercise of market power in the *following* year may prove, in practice, to be too onerous to ever trigger mitigation measures.
2. The uncertain overlap in functions with the ACCC who are tasked under Commonwealth legislation to respond to issues regarding market power.

We therefore propose that the AEMC consider re-drafting of this role to one of market regulation. The AER could regulate offers taking into account similar principles as outlined in draft rule 3.7H.1(e)—such as reflecting the value of services, maintaining operational incentives, and allowing cost recovery. We consider that not only would this avoid the two

complications outlined above but may be more fit-for-purpose in a new market where there will likely be significant initial uncertainty regarding costs and offers.

Additionally, we consider that the challenges associated with determining whether to set offer caps can be mitigated to an extent by limiting the scope of the services that are to be procured to those that are most likely required, as suggested above. A reduction in scope would reduce both the size and complexity of the assessment task, and ensure appropriate assessment is given to the services which are most required.

The AER would welcome working further with the AEMC to define and develop this role.

Mitigating market power through increased competition

Network Service Providers (**NSP**s) play a pivotal role in defining the operational envelope, including transfer limit advice, ensuring protection system adequacy, and providing complex engineering modelling and studies on system stability, grid formation and grid reference. This culminates in NSPs providing to AEMO the results of their system modelling, which includes a list of generating unit combinations under which the system has "passed" stability tests. This information therefore forms the basis of the configuration services which are proposed to be procured through the OSM.

However, while the draft rule includes provisions for AEMO to communicate the technical description of services to be procured and the reasons they are required, we consider that there is only a limited obligation and incentive on NSPs to proactively engage in this space. This situation will likely limit the efficacy of the proposed transparency requirements, given that there are no obligations on NSPs to work with participants to understand technical parameters or adjust modelling in an attempt to unbundle services. This issue is exacerbated by the potentially broad scope of the mechanism, as discussed above.

We understand that the NSPs would need to commit additional resources to assist in this way. However, we consider that facilitating the entrance of new providers of system services is the most effective way to limit exercise of market power. However, the entrance of new system service providers will be discouraged if there is no way for them to understand why certain unit configurations are required, and what plant or connections settings will be required if they are to compete for provision of those services. Further, a targeted approach that limits the scope of services that are procured should also mitigate the resourcing impact on NSPs.

The AER would welcome the AEMC giving further consideration as to how to increase NSP involvement in assisting market participants to understand network advice and what technical parameters would be required to gain accreditation as a new provider of configuration and security services.

Issues to work through for final determination

Overall, we agree with the importance of ensuring that AEMO has the necessary tools to effectively manage the scheduling and provision of system security services and we commend the AEMC for the significant progress made in developing the OSM framework. However, we also consider that due to the changes OSM will have on the energy market design, there is a substantial amount of detail remaining to work through to ensure the efficient operation of both the OSM and the energy market. This further work covers re-framing aspects of the draft rule and understanding further details from AEMO as to the implementation of the OSM and how this will be guided.

We are concerned that progression straight to a final determination early in 2023 may not allow for adequate time to consult on and understand these issues. This could then result in a framework that is not fit for purpose and may pose a risk of inefficient costs being passed on to consumers.

While we understand that the timeframe for OSM implementation is influenced by the start of the new system strength framework[1], we request the AEMC give consideration as to the options for a staged implementation of this framework, including limiting the scope of services procured as is suggested above. Such an approach may allow for the required implementation of the new system strength obligations by December 2025, while ensuring appropriate time for consideration of how to best incorporate the alternative aspects of the OSM into the design of the energy market.

We thank the AEMC for the opportunity to submit on this process. If you have any questions about our submission, please contact Chris Ridings [redacted].

Yours sincerely,

[redacted]

Jim Cox
Deputy Chair
Australian Energy Regulator

[1] https://www.aemc.gov.au/rule-changes/efficient-management-system-strength-power-system