17 November 2022

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

Electronic Submission – ERC0290

Draft Rule Determination – Operational Security Mechanism

Dear Ms Collyer,

Energy Networks Australia (ENA) welcomes the opportunity to provide a submission to the Australian Energy Market Commission (AEMC) on the Draft Rule Determination on the Operational Security Mechanism (OSM).

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.

ENA supports the overall direction the AEMC has taken to establish an OSM. The OSM, as proposed by the AEMC, provides a mechanism to value, procure and schedule security services in operational timeframes. This is an important element of the energy transformation currently underway as the industry seeks to unbundle these security services from energy supply.

ENA supports a long-term goal of fully co-optimising these security services with energy pricing and dispatch, but acknowledges the current limits to engineering knowledge make this impractical in the short-term. ENA therefore considers the proposed Non Market Ancillary Services (NMAS) approach is a practical solution to address these limitations. This approach should also reduce the cost and complexity of initial implementation relative to the MAS approach. Importantly, it does not preclude moving to a fully co-optimised solution in the future.

ENA also supports the proposed approach that will have the volatile enablement and usage cost elements recovered through the OSM and AEMO's weekly settlements process from Market Participants.

Furthermore, ENA supports the proposed commencement for the OSM of 1 October 2025. This will see the OSM operational in sufficient time to be used for scheduling system strength services procured under the enhanced system strength framework with effect from 1 December 2025.

In summary, ENA recommends:

- the Rules requiring interim guidelines and procedures to be established by the end of 2023 to address system strength requirements before the full guidelines and procedures are finalised later to enable appropriate consideration and ability to contract non network solutions and forecast costs;

- that the obligation to ensure that the counterparty is accredited is not imposed on the SSSPs. The obligation would more logically be imposed on any provider of contracted security services to obtain OSM accreditation;
- the AEMC provide worked examples of the cashflows of each component of system strength costing – availability, enablement and usage, and the interaction with the system strength unit pricing and the recovery paths;
- considering how the OSM will interact with other operational and planning timeframe tools available to manage system security and ensure the most efficient tool is chosen;
- the AEMC clarify the application of the OSM in Victoria to ensure that system strength service contracts signed between AEMO and DTSOs can be scheduled as part of the OSM;
- that AEMO be required to share a register of technical characteristics of all accredited OSM participants with NSPs and SSSPs. Such technical information could include details of the OSM units, capacity, minimum generation level, reactive power limits and fault current contribution, mode of operation, inertia and system strength contribution;
- that the timing of any subsequent reviews be considered as an outcome of the initial review of the adequacy of the OSM arrangements in four to five years' time, after the OSM commences;
- that any material changes to the OSM guidelines and procedures should be linked to these periodic reviews and advances in engineering understanding. This will provide an appropriate balance of investment certainty and progress towards further unbundling of security services; and
- that AEMO's recovery of implementation costs and ongoing operating costs for the OSM should be confined to Market Participants and not simply fall to the AEMO's general fees, which now include networks.

ENA has provided more detailed comments in Attachment 1 and drafting suggestions in Attachment 2.

ENA looks forward to continued engagement with the AEMC on this rule change to ensure workable arrangements for system strength implementation and other services.

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

Yours sincerely,

Dominic Adams

General Manager - Networks

ATTACHMENT 1

ENA previously raised concerns with the AEMC regarding the operational aspects of the enhanced system strength framework. In particular, system strength providers' variable costs may be strongly influenced by factors arising from the energy spot market. These factors include:

- the frequency and duration of being called upon to provide system strength services; and
- the risk of low or negative energy spot prices requiring compensation payments to meet running costs.

ENA supports the proposed approach that will have these volatile cost elements recovered through the OSM and AEMO's weekly settlements process. This is appropriate as the system strength services will be scheduled by AEMO taking account of costs and opportunities in the energy market. However, SSSPs may also recover some of these costs through the system strength charge levied against connecting parties (e.g. inverter based resources). ENA recommends the AEMC provide further detail in the final determination on the treatment of these costs under the OSM and the interaction with system strength pricing.

Customer focus

We note that the AEMC proposes that cost recovery for security services scheduled through the OSM will be from market customers. While it would be more preferable to adopt a beneficiary-pays approach, ENA agrees that given the current understanding of the power system it is not practicable to isolate beneficiaries and their degree of benefit. As a result, we support the simplicity of recovering OSM related costs broadly across electricity consumers. ENA supports the system strength charging approach where the connecting parties are beneficiaries of the services and pay based on long run cost estimates.

ENA also considers that AEMO's implementation costs and ongoing operating costs for the OSM should be confined to Market Participants and not simply fall to AEMO's general or NEM core fees, which now include an allocation of costs to networks.

Implementation timing

ENA strongly supports the proposed commencement for the OSM of 1 October 2025. This will see the OSM operational in sufficient time to be used for scheduling system strength services procured under the enhanced system strength framework with effect from 1 December 2025. However, we are concerned the proposed timeframes for AEMO to finalise the new security services guidelines and OSM procedures (January 2025 and June 2025 respectively) will be too late to allow TNSPs who are SSSPs to finalise contracts for the provision of system strength services and for services providers to be accredited by AEMO.

Under the evolved framework, AEMO will publish the first System Strength Report by 1 December 2022, setting out the 10-year forecast for system strength requirements at each system strength node. This will effectively fire the starting gun for SSSPs to commence the RIT-T processes to meet these identified needs. OSM arrangements will also affect the design of non-network contracts to meet system strength requirements in planning timeframes should these non-network options be considered as possible credible options at the end of the RIT-T, say in mid to late 2023.

Forecast costs for the provision of system strength need to be sufficiently robust to allow SSSPs to apply to the AER for a cost pass through or contingent project application to adjust revenue determinations to meet the system strength obligations at each node from 1 December 2025.

If a non network solution is the preferred option, it is not clear how SSSPs can practically ensure that system strength agreements comply with any requirements of the OSM procedures, if those agreements need to be entered into prior to publication of the procedures.

ENA considers that the security services guidelines and OSM procedures, so far as they relate to system strength services, should be established by December 2023. ENA suggests the Rules should require interim guidelines and procedures to be established by that time to address system strength requirements before the full guidelines and procedures are finalised at a later date.

The two sections below elaborate our concerns.

Accreditation requirements and compliance with OSM procedures

5.20C.4(b1) requires the SSSP, where it "procures *system strength services* that are eligible to be accredited to provide *security services*", to:

- require the provider to "obtain accreditation as a relevant *security service* in the *operational security mechanism*"; and
- ensure the *system strength services agreement* complies with any requirements of the *OSM procedures*.

This seems to suggest that the service is accredited, however the draft rule has no accreditation requirements for the security service. A service will be a *security service* if it meets the definition in rule 3.7G.3, with no requirement for accreditation. It is *OSM Participants* and *OSM facilities* that need to be accredited (per the definitions of those terms). The accreditation of the OSM participant and OSM facility to provide certain services should be made clear. ENA considers it preferable that the obligation not be imposed on the SSSPs to ensure that the counterparty is accredited. The obligation would more logically be imposed on any provider of contracted security services to obtain OSM accreditation.

Delineation of services to be provided under system strength agreements

The Draft Rule appears to contemplate that two types of service would be provided under a *system strength services agreement*:

1. *Security services* (as defined in the Draft Rule), which includes services that, when *enabled*, "can assist to achieve and maintain the *technical envelope*" (either as part of a *secure system configuration,* or otherwise).
2. *System strength services* that are not *security services* – which would include services for the provision of a contribution to achieving the standard in clause S5.1.14 in relation to a *system strength node.*[1]

The delineation between these two service types would appear to be critical to the rights and obligations of parties to a *system strength services agreement*. Whereas *security services* must be bid into the OSM (with financial settlement managed by AEMO),[2] other services will be effectively provided to (and paid for by) the SSSP.

The lack of clarity around service delineation potentially creates some uncertainty around the financial obligations of SSSPs and AEMO for services provided under the *system strength services agreement*. Until the OSM guidelines and procedures are published in 2025 making clear the definition of *security services*,

[1] Per the system strength rule change.
[2] Draft Rule, cl 3.7G.7(b); 3.15.6C.

it may be unclear which contracted service transactions will be settled by AEMO and which will be the financial responsibility of the SSSP.

Given the reasons above, it is likely to be difficult for SSSPs to effectively weigh up the merits of entering into *system strength agreements* (vs network investment) prior to publication of the relevant OSM guidelines, procedures and list of security services. The Security Services Guideline (which will include a description of the security services which may be procured by AEMO, technical parameters, etc.) will only be published on 1 January 2025, as will the *OSM Procedures* (addressing accreditation, bidding, scheduling, price limits, etc.). The security services list will not be published until July 2025. Until these guidelines, procedures and lists are published, there is likely to be uncertainty for SSSPs regarding the future operation of *system strength agreements*, including how the rights and obligations of parties to these agreements will be affected by interactions with the OSM.

Given this uncertainty, SSSPs may be less inclined to meet system strength requirements through *system strength agreements*, at least until the OSM guidelines, procedures and service lists are published.

Interaction with system strength pricing arrangements

The new system strength pricing arrangements require SSSPs to calculate and publish system strength unit prices based on the expected long run cost of providing system strength at each system strength node. At the time the enhanced system strength framework was established it was envisaged that SSSPs would be responsible for recovery of all costs associated with procuring system strength to meet their obligations. In this respect there was a strong alignment between revenue received from system strength charges and the cost of providing that system strength – though it is clear the system strength unit pricing is a forward-looking economic signal rather than a detailed cost recovery mechanism.

However, the proposed OSM now separates the cost recovery for provision of system strength, with only availability charges having to be recovered through transmission charges and any enablement and usage costs recovered through the OSM.

ENA considers it is still correct that the system strength pricing arrangements reflect the expected long run cost of providing system strength, including enablement and usage costs even though these will no longer be part of the TNSP cost base. However, this raises the question of what the actual cashflows and their timing will be, for both networks and customers. ENA considers it will be useful for the AEMC to provide worked examples of this situation as part of the Final Determination to alleviate any concerns of TNSP over recovery.

Interaction with other power system security arrangements

ENA supports the AEMC's intent to use the OSM to complement other operational and planning timeframe tools available to manage system security.

ENA suggests that the OSM is designed in a way that helps promote the most efficient tool to maintain and extend the secure technical envelope of the power system is chosen. For example, in some cases it may be that the OSM is a more efficient option than Network Support Agreements (NSA), Remedial Action Schemes (RAS), or system strength contracts agreed in planning timeframes, and in other cases it may be less efficient. In other words, we see opportunities for the OSM to build optionality to help manage system security challenges by adding another tool into the mix. It is not intended to replace existing planning arrangements.

To achieve this outcome, there is benefit in the AEMC providing additional clarity around how the OSM interacts with existing tools and the incentives parties may have to participate in existing planning arrangements compared to the OSM.

For example, TNSPs currently use a variety of mechanisms to maintain and extend the secure technical envelope of the power system, including NSA and RAS in various forms. It is not clear whether the OSM is intended to subsume these existing mechanisms or not, noting these arrangements do not rely on AEMO direction. Some of these arrangements are relied on by TNSPs to be able to confidently schedule network outages and plan resources well in advance. ENA considers that TNSPs need the ongoing certainty of availability of service that these existing arrangements provide.

Related to this are the possible incentives on providers of security services to participate in NSA/RAS arrangements versus waiting until much closer to dispatch in the hope of securing a better price in the OSM. We would welcome the AEMCs consideration of these possible incentives.

In addition, the AEMC should clarify whether the OSM will be used to schedule sufficient security services to be able to restore the power system to a secure operating state within 30 minutes of the occurrence of a credible contingency event. If the OSM will not be used to facilitate this outcome it should be clarified that existing processes, such as energy / FCAS market redispatch or AEMO directions, will continue to be available. This would retain certainty around the availability of these services under existing planning arrangements.

ENA's position ties in well with the AEMC's recent *efficient management of system strength on the power system* final rule which together with the OSM could help promote operational conditions that enable TNSPs to undertake "critical planned outages."[3] This recognises that the energy transition is making the operation and maintenance of the transmission network increasingly complex and is expected to expand the need for planned outages.

Pricing and bidding arrangements

ENA supports the AEMC's position that regulated transmission network assets remain out of scope for scheduling system strength through the OSM. This is consistent with long-standing practice in the NEM that transmission network assets are inherently available to AEMO to be brought in or out of service as necessary to maintain power system security. The clearest example of this is the switching of reactive power equipment, such as capacitor banks, to maintain a secure voltage profile.

Excluding network assets from the operation of the OSM further supports the position that the costs of establishing and operating the OSM should be recovered from Market Participants.

While networks (outside of Victoria) may not be active participants in the OSM we are nevertheless interested in the incentives on OSM participants from the proposed arrangements. ENA understands the AEMC expects OSM participants to balance their risk position across energy, FCAS and OSM, at least in the period prior to OSM gate closure. OSM gate closure is expected to be several hours prior to energy and FCAS market dispatch. ENA also understands the AEMC proposes that OSM participants will be paid their offer price if scheduled through the OSM and will not receive energy spot market revenue for the energy associated with their minimum load.

While the proposed "pay as bid" arrangements can work effectively when decisions across energy, FCAS and OSM can all be made contemporaneously, we are concerned that the earlier OSM gate closure may compromise these arrangements.

Prior to OSM gate closure an OSM participant can review forecast prices across all markets and rebid their plant to manage their overall risk. However, following OSM gate closure they may be irrevocably

[3] TNSPs are required to take transmission elements out of service to conduct essential capital replacement, maintenance, connections and augmentation works. Planned outages are an essential business-as-usual activity to maintain network reliability and security.

committed to providing OSM services at their OSM offer price, but energy and FCAS dispatch prices and volume are not yet firm and will continue to update until dispatch time.

If energy spot prices move up significantly following OSM gate closure this could leave an OSM participant whose plant has a material level of minimum generation, say several hundred MWs, receiving less than the energy spot price for that minimum generation. This in turn could limit the ability of the OSM participant to use the energy from that minimum load operation to back their energy hedge contracts. The AEMC should consider whether the time gap between OSM gate closure and energy market dispatch will introduce risks that impact the energy hedge contract market.

ENA recognise that there may be an opportunity to use network assets in a new way in the system services market as it evolves and DNSPs should not be precluded from providing security services where this in is the long term interests of consumers. ENA note the development of the security services is still evolving. Just as DNSPs are able to provide certain RERT services, there may be services that only a DNSP is able to perform. Given the rapid change in the power system and the minimal incremental cost of DNSPs providing these services, DNSPs should not be precluded where these services are cheaper than OSM bids.

Basis for pricing bids

The proposed OSM will allow OSM participants to structure their OSM bids on either a $/hour or $/MWh basis. The AEMC considers the $/MWh variable price will be used by participants who generate electricity as a by-product of supplying security service – for example, a thermal generator operating at minimum stable generation.

ENA considers there should be transparency regarding the minimum generation levels for those OSM participants who bid in $/MWh form. This will allow all bids to be considered on an equivalent $/hour basis and enable appropriate price discovery.

Application of OSM in Victoria

Under Victoria's transmission planning and investment framework, AEMO has declared network functions and is responsible for planning and procuring system strength in investment timeframes (i.e. is Victoria's Primary TNSP and SSSP). Unlike other jurisdictions in the NEM, the efficient expenditure to meet the system strength standard is achieved through a competitive tender process where AEMO contracts for these services. In some cases, a network service provider who builds, owns and operates network and non-network assets, also known as declared transmission system operators (DTSOs) - may be the successful tenderer and be contracted to provide system strength services.

The Draft Determination is currently silent on how system strength service provided by a DTSO agreed with AEMO in its capacity as the jurisdictional planner for Victoria will be scheduled into the OSM. ENA encourages the AEMC to clarify the application of the OSM in Victoria to ensure that system strength service contracts signed between AEMO and DTSOs can be scheduled as part of the OSM. For example, it may be that the DTSOs are required to be accredited as a security services provider for the sole purpose of scheduling these contracts.

Distribution connected OSM facilities

The proposed OSM provides that an OSM participant may be accredited by AEMO to provide a contracted security service or an uncontracted security service. A contracted security service is a security service provided under an agreement with AEMO or a TNSP. ENA notes that the enhanced system strength framework explicitly allows for SSSPs to contract with distribution connected facilities for the provision of system strength. This mechanism provides TNSPs with visibility and understanding of the contracted distribution connected facilities and the impact they have on the transmission network.

However, the OSM proposal does not appear to provide for similar transparency for distribution connected facilities that provide uncontracted security services directly through the OSM.

ENA considers all of this information needs to be made available to TNSPs (not just those TNSPs who are SSSPs) to understand the impact the security services have on the transmission network. The information may influence the monitoring systems and level of modelling required to securely and reliable operate the transmission network.

Whilst this submission has focussed on the system strength implementation, the OSM will be developed over time for other essential system services. These can be connected at the distribution or transmission level, DNSPs will also need to understand how these services impact on the reliable operation of the distribution network.

ENA suggests that AEMO be required to share a register of technical characteristics of all accredited OSM participants with NSPs and SSSPs. Such technical information could include details of the OSM units, capacity, minimum generation level, reactive power limits and fault current contribution, mode of operation, inertia and system strength contribution.

The secure system configurations and separate security services lists complement the Security Services Guideline. As the extent of generation on the distribution network increases, it will be important for AEMO to include DNSPs as well as TNSPs in determining secure configurations so that parties don't assume a specific level of operational security is required when DNSPs may be able to operate at a different level of security. It will be important to avoid unanticipated consequences throughout the transition.

AEMC Review

ENA supports the recommendation for a review on the adequacy of the OSM arrangements in four to five years' time, after the OSM commences. ENA suggests the timing of any subsequent reviews be considered as an outcome of the initial review.

An important consideration for the initial review will be progress in technical understanding beyond the current paradigm of plant configurations towards being able to define security services in terms of a service to be provided. ENA considers that any material changes to the OSM guidelines and procedures should be linked to these periodic reviews and advances in engineering understanding. This will provide an appropriate balance of investment certainty and progress towards further unbundling of security services.

ATTACHMENT 2 - PROPOSED AMENDMENTS TO RULES DRAFTING

Proposed drafting	Explanation
3.7G.6 OSM Participants (f) An *OSM Participant* may only be accredited to provide a contracted security service if the security services agreement: (1) permits or requires the ~~counterparty~~ *OSM Participant* to be accredited in the *operational security mechanism*; (2) requires the pricing for *security services* to be in a form consistent with the requirements of the *OSM procedures*; (3) provides that where the ~~counterparty~~ *OSM Participant* is *enabled* for *security services* in the *OSM*~~.~~: (i) the ~~counterparty~~ *OSM Participant* will be paid by *AEMO* for the services *enabled* in accordance with the *Rules*; and (ii) no payment will be required for those services under the security services agreement; (4) complies with any other requirements set out in the *OSM procedures*.	The references to "counterparty" in 3.7G.6(f) are potentially confusing – this could be interpreted as referring to the OSM Participant's counterparty (i.e. the SSSP), whereas we understand that the intended references are to the OSM Participant itself. The changes from "counterparty" to "OSM Participant" are intended to clarify this. We would also suggest clarifying that, where an OSM Participant is enabled for security services in the OSM, no payment will be required under the SSSP contract for those OSM security services, since the OSM Participant will be paid by AEMO. We understand this is the intent.
3.7G.7 OSM bidding (a) An OSM Participant may, but is not required to, submit an OSM bid for uncontracted security services in the operational security mechanism. (b) An OSM Participant must submit an OSM bid in the operational security mechanism for contracted security services in accordance with any requirements of a security services	Per the proposed transitional / saving provision below, we would suggest that this obligation not apply to agreements entered into prior to commencement of the OSM and publication of the OSM Procedures, Security Services Guideline and security services list.

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Proposed drafting	Explanation
agreement to the extent those requirements have been registered with AEMO as part of that OSM Participant's accreditation for that service.	
5.20C.4 System strength services information and approvals (b1) Where the *System Strength Service Provider* procures *system strength services* that are eligible to be accredited to provide *security services*, ~~it~~ the relevant *Market Participant* must unless otherwise agreed with *AEMO*: (1) ~~require the relevant *Market Participant* to~~ obtain accreditation ~~as a~~ to provide the relevant *security service* in the *operational security mechanism*; and (2) ensure the system *strength services agreement* complies with any requirements of the *OSM procedures*.	The obligation to obtain accreditation and ensure compliance with the OSM procedures would seem to most logically sit with the Market Participant that is (or will be) accredited to provide security services. Per the proposed transitional / saving provision below, we would suggest that this obligation not apply to agreements entered into prior to commencement of the OSM and publication of the OSM Procedures, Security Services Guideline and security services list.
11.###.8 System strength agreements entered into prior to the commencement date The following provisions do not apply to *system strength agreements* or contracted security services capable of being provided under a *system strength agreement*, where the relevant agreement is entered into prior to the commencement date: Clause 3.7G.7(b); and Clause 5.20C.4(b1).	The intention of this proposed transitional / savings provision is to avoid uncertainty for parties who may wish to enter into *system strength services agreements* prior to commencement of the OSM and publication of the OSM Procedures, Security Services Guideline and security services list. The obligations regarding content of these agreements and obligations of parties to bid into the OSM would only come into effect once the relevant procedures and guidelines have been published.