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11 November 2025

Energy Markets, Energy Policy WA

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RE: Power System Security and Reliability (PSSR) Standards Review

Neoen welcomes the opportunity to provide a submission in response to Energy Policy WA's Proposal 20 to amend the Power System Security and Reliability (PSSR) standards. This submission provides our views on the proposed amendments, with a focus on the amendments that may impact the connection process to the South West Interconnected System (SWIS).

Neoen is an independent power producer with a long-term vision to produce renewable, competitively priced energy on a large scale. We have a significant pipeline of renewable generation and storage projects under development in the SWIS and therefore a strong interest in maintaining an effective and efficient local connections process. With a contribution to Australia's energy transition of over 4.5 GW, and more than 8.5 GW globally, we consider we have considerable experience to share.

General feedback on the proposal and consultation process

It is Neoen's view that Proposal 20 represents a complete overhaul of Western Power's Technical Rules—that will introduce significant changes to the structure and requirements of the Electricity System and Market (ESM) Rules. While we appreciate changes to the Technical Rules are necessary as the nature of the power system changes, we are concerned that the process to-date has not allowed for adequate (nor sufficiently contemporary) consultation with industry, and we encourage Energy Policy WA to open a meaningful dialog with all stakeholders impacted by the proposed changes.

Specifically, we understand Western Power first launched a discussion related to updating the Technical Rules in 2021, and the last submission to the WA Economic Regulatory Authority[1] (ERA) was more than two years ago in 2023. With the Western Australian energy sector experiencing significant and fast paced changes in recent years, inputs that are up to four years old are highly unlikely to represent the best available information and must be re-visited before any changes are agreed.

Further, we note workshops held in 2021 on the subject had a narrow audience of only four organisations (Western Power, AEMO, Energy Policy WA and the ERA) and did not include other market stakeholders, such as Original Equipment Manufacturers (OEMs) and generation and storage developers and owners—i.e. those directly impacted by any changes to the Technical Rules.

[1] 2023, Western Power, *Technical Rules Review – Submission to the Economic Regulation Authority*, 1 September 2023, < https://www.erawa.com.au/sites/default/files/23555/ERA-Submission-Technical-Rules-amendments-supporting-document---Sep-2023.PDF>.

While we appreciate that Energy Policy WA has extended the period to comment on the draft Technical Rules, it is simply not possible to comprehensively respond to the document meaningfully without consideration of the current context and an open discussion on the rationale behind the desired outcomes. More generally, we are concerned that the proposed changes to the Technical Rules – if not properly and comprehensively consulted on – are at risk of repeating past inadequate changes to the NEM's National Electricity Rules, many of which are in the process of being rectified. We consider that there is an opportunity for the WEM to benefit from this hindsight and develop a fit-for-purpose set of Technical Rules for the SWIS without the need for immediate corrections.

Neoen therefore urges Energy Policy WA run a true consultation process on the 2023 Proposed Technical Rules themselves. We envisage this would include workshops with a wide range of market participants and stakeholders, including OEMs and owners and developers of inverter-based and conventional generation. Only following the completion of such a process should Proposal 20 be pursued if Energy Policy WA seeks to ensure the effective and efficient development and operation of the WEM.

Impact on the ESM Rules and transitional arrangements

Implementing this proposal will most certainly impact on the ESM Rules, as well as the connection process they govern. The timing, design, construction and cost of implementing new generating and storage assets in the SWIS will bear the consequences of that, which may in turn hinder efforts to deliver a more affordable, reliable and sustainable energy for the future.

Neoen supports the integration of certain aspects of System Standards and Connection Standards into the ESM Rules. A single reference for process and base standards is essential to optimising outcomes for new and existing connections and for ensuring the planning and operating framework for the SWIS aligns with the ESM Rules. At the same time, there should remain the opportunity for flexibility in managing the existing network to current standards, as expressed within the Technical Rules.

We believe that each of the proposed Western Power amendments to be integrated into the ESM Rules requires further definition and consultation regarding each issue of concern, particularly determining the desired outcomes, and the best way to integrate these into the ESM Rules.

Transitional arrangements for each change proposed should also be established to minimise impact on ongoing connection processes. It is not acceptable to allow Western Power to decide on a 'case by case' basis (as proposed in the 2023 Submission) which ongoing connection project must adopt the new Rules. The connection process should be clear, fair and consistent for all. Ambiguity on the transition process will decrease developers' ability to make investment decisions.

The form by which the proposed solutions may be integrated into the ESM Rules is at the moment unclear, as is the consequential adjustment to the Western Power Technical Rules.

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Feedback on the proposed amendments, the consultation process and impact on ESM Rules

The following table contains our feedback on the selected proposals in the consultation paper.

Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Transmission voltage limits	3.4	Stakeholders are requested to focus on any implications arising from Western Power's proposed technical limits and the inclusion of 'economic efficiencies' in clause 2.2.2.7(c).	The proposal will add complexity and impact on connection negotiations due to the multiple layers of requirements and new definitions. The assessment during connection will be extended and difficult. Considering the added difficulty, ambiguous terms should be avoided. The term 'economic efficiency' is not defined. Consideration also needs to be given to the proposed wording of 2.2.2(a)(1) and the intended outcome. The integration of this clause with other proposed changes such as 2.2.2.3 and 2.2.2.5 is unclear and must be considered.
Standard for transient stability	3.6		While broadening stability requirements to capture control system instability risk is desirable, it is important to retain specific terminology capturing the serious risks associated with the rotor angle stability of synchronous plant, which can have severe physical consequences in parallel with power system consequences.
Standard for oscillations	3.7	Note that as per proposal 8, the term "adequately damped" is proposed to be replaced with "adequately controlled" in Appendix 12 of the ESM Rules. Feedback is being sought on whether the same amendment should be made to the provisions discussed in 3.7 of the Technical Rules submission.	The inherent differences between "adequately damped" and "adequately controlled" need to be understood. Each has its place depending on the system condition being experienced and managed by the plant. We therefore recommend both "adequately damped" and "adequately controlled" be included as applicable, and clearly defined in both the ESM Rules and the Technical Rules.

[3] 2023, Western Power, *Technical Rules Review – Submission to the Economic Regulation Authority*, 1 September 2023, < https://www.erawa.com.au/sites/default/files/23555/ERA-Submission-Technical-Rules-amendments-supporting-document---Sep-2023.PDF>.

Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Voltage stability	3.8		While the proposed consolidation of the requirements for short- and long-term voltage stability is elegant, it is important that Western Power, as the transmission system planner, continues to understand the different/independent drivers around both short- and long-term voltage instability, and work to deliver solutions relevant to each of these phenomena.
Network Service Provider obligations - Stability and modelling*	3.9		This work is recognised as important in the ongoing development of the grid. Western Power, when developing modelling guidelines, needs to ensure that these retain currency and are at all times both fit-for-purpose and implementable in real-world circumstances. All requirements regarding modelling need to account for the need to establish reliable and accurate models, at a reasonable cost. There also needs to be provision to ensure that models are used efficiently in modelling packages that are suitable for the work being undertaken.
UFLS requirements	3.13	Western Power's obligation to analyse and understand if the UFLS system meets required outcomes in support of AEMO's development of the UFLS requirements will be considered. Work will continue between EPWA, AEMO and Western Power to arrive at the right level of regulatory specification, noting that the framework will need to be harmonised under the ESM Rules.	We note the objective to achieve greater alignment with the NEM practices. However, due to the SWIS being a much smaller and islanded grid, we suggest that its UFLS topic is much more sensitive than in the NEM and therefore requires very specific guidance. We agree that specific advice regarding capacitor bank switching may appear to be misplaced in the context of UFLS settings. However, we suggest that Western Power needs to ensure it has suitable controls in place to meet the voltage standards and ensure overall system security during UFLS events.

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Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Definition of credible contingency	4.2	Definition of credible contingency to be clearer and consider the change in certainty over planning and operational horizons. The proposal presented in the Technical Rules amendments submission is predicated on the ongoing separation between the ESM Rules and the Technical Rules. As both frameworks will be integrated into the ESM Rules, attention will be given to ensuring the harmonisation of the credible contingency definitions.	Agreed that clarity is required, but it also beckons significantly greater consultation to identify the intended outcome, how to achieve it, and the secondary consequences to be avoided. Furthermore, it is vitally important that 0.0001% probability events are not ever deemed to be credible contingencies.
Definition of plant ratings to adopt cyclic or short-term ratings	4.3	Stakeholder are requested to focus on potential impacts on the market of the proposed changes.	The adoption of relevant short-term ratings is a valuable tool in managing efficient investment and operation of facilities. Aligning the ratings timeframes with market times (dispatch intervals, including bidding time allowance) would be a worthy consideration.
Duration of protection equipment being taken out of service	5.3	Western Power has proposed additional flexibility, for example through guidelines. Consideration will need to be given to whether a Guideline is the most appropriate instrument under the ESM Rules for these matters, and the means by which transparency, consultation and accountability is addressed.	Agreed that greater flexibility is required and that risks can and should be managed. We suggest that the relationships between this criterion and the discussion regarding credible contingency definition needs to be clarified.

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Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Definition of equipment for which Critical Fault Clearing Times (CFCTs) apply	5.4	Consideration will need to be given to whether a Guideline is the most appropriate instrument under the ESM Rules for these matters and the means by which transparency, consultation and accountability is addressed.	Suggest that this is an economic regulation issue, but the requirement should not require upgrade of equipment for which there is no clearly-defined engineering necessity.
Weak infeed assessments under islanding conditions	5.5		The applicability of this matter to overall planning of distribution protection needs to be clarified. Western Power has not proposed a discernible solution to the identified issue. It would be prudent to do so as a first step.
Distinction between transmission and distribution protection operation for critical fault clearance times	5.6		The specification of CFCT must seek to meet the requirements for physical and plant protection, as well as meeting any relevant stability requirements.
Review of user control and protection settings. System design and construction standards	6.2.6, 6.2.7		We support the adoption of practices that ensure optimal control and protection settings are applied to suit the operational conditions of the era. However, we regard any attempt to set protection and control systems today to meet infinite/unknowable future scenarios to be contrary to the National Energy Objective (NEO) as it would deliver a suboptimal outcome for customers and the wider power system.

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Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Aligning protection and disturbance ride-through requirements	6.8.6		We note that while it is desirable that protection is set to ensure disturbance ride-through is met, there may be specific conditions relating to a connection point or plant within a facility that means it is preferable for protection to operate within the disturbance ride-through bands. Flexibility to do this should be retained, noting that where it does occur, documentation and agreement around the circumstances should be required.
Alignment with revisions to network planning criteria and Network Service Provider obligations	8.3		It is desirable that the Technical Rules align planning and operational criteria. Regarding the removal of certain clauses (5.3.2 information provision and 5.6 stability co-ordination) we seek clarification and confirmation that these essential activities are included elsewhere. Regarding the operational requirements around credible contingencies, we seek confirmation that connections are treated in the same manner. We are concerned that potential definitions attributed to credible contingencies may result in generator connections being designed to a higher standard than the network which is not cost efficient.
Clarifying arrangements for planning network outages	8.5		We hold the view that Western Power's obligations in planning network outages should be documented in a *procedure* rather than a guideline, to give certainty to Users about the robustness of any outage decision.
Clarifying acceptable timeframes for protection outages	8.9		We suggest this needs to be aligned with the aims of section reference 5.3 above.

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Issue	Section Reference[3]	Notes in the Consultation Document	Neoen's Comments
Wording of voltage control can be improved	8.10		The requirement to ensure that voltage stability is assessed and managed has always been an issue at times other than peak demand. This should remain a priority. It is not apparent how this consideration is integrated into the proposed wording. We refer to our previous comment on the deletion in Chapter 2 of specific reference to long term voltage stability. The management and coordination of voltage stability cannot be underestimated.

Should you need further information or clarification on any aspect of our submission, please do not hesitate to contact us.

Regards,

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Head of Origination and Corporate Affairs

Neoen Australia