Part of Energy Queensland

10 February 2023

Mr Daniel Westerman
Chief Executive Officer
Australian Energy Market Operator
GPO Box 2008
Melbourne VIC 3001

Email: ssiag@aemo.com.au

Dear Mr Westerman

AEMO Draft Report and Determination on Amendments to the System Strength Impact Assessment Guidelines

Ergon Energy Corporation Limited (Ergon Energy Network) and Energex Limited (Energex), both distribution network service providers (DNSPs) operating in Queensland, welcome the opportunity to provide feedback to the Australian Energy Market Operator (AEMO) in response to its *Draft Report and Determination on Amendments to the System Strength Impact Assessment Guidelines* (the draft report).

We appreciate AEMO's efforts to amend the System Strength Impact Assessment Guidelines, and the draft report clarifying when the amended requirements will apply.

This letter and our enclosed detailed response do not contain confidential information.

Should the AEMO require additional information or wish to discuss any aspect of this submission, please contact me on 0409 239 883, or Andrew Bozin on 0436 447 814.

Yours sincerely

Alena Chrismas

Alena Chrismas
Acting Manager Regulation

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Encl: *Ergon Energy Network and Energex responses to consultation questions*

AEMO – Second stage consultation – SSIAG

AEMC issue	Ergon Energy Network and Energex commentary
AEMO's Discussion of Material Issues	
1. General system strength impact	Ergon Energy Network and Energex support the calculation methodology for the reduction in available fault level (AFL) proposed in Section 3.4.2 of the draft System Strength Impact Assessment Guidelines (SSIAG). However, we would like to see more detail regarding how the Stability Coefficient should be determined.
2. Materiality Threshold	We support no materiality threshold, on the understanding that if there is no adverse system strength impact identified, then the calculation of the AFL will be positive, as the Stability Coefficient will be greater than the Withstand Short Circuit Ratio (SCR). i.e. not a reduction in AFL and therefore no General System Strength impact.
3. Preliminary Assessment	Ergon Energy Network and Energex support AEMO proposing an amendment to the Amending Rule that is consistent with the information likely to be available at the connection enquiry stage. This would be similar to the proposed methodology for the Preliminary Assessment where no PSCAD model is available, and Withstand SCR is assumed to be 3.
4. Full Assessment	A Full Assessment should be performed whether or not there is a general system strength impact identified in the Preliminary Assessment.
5. Stability Assessment	No comments.
6. System Strength Locational Factor	No comments.

AEMC issue	Ergon Energy Network and Energex commentary
7. Available Fault Level	No comments.
8. System Strength Remediation	Does AEMO consider that curtailment schemes are acceptable SSRs, where any such scheme is aligned with the Remedial Action Scheme Guidelines?
9. Short Circuit Ratio	Ergon Energy Network and Energex welcome guidance on the appropriate course of action for a Network Service Provider (NSP) where the Withstand SCR has been determined through dynamic model simulation studies, and this model is changed, affecting the Withstand SCR. In our view, a reassessment of the system strength charge, stability assessment, or full assessment would be required.
10. Criteria for Classification of Load as IBL and IBR as LIBR	While inverter-based load is defined in the National Electricity Rules, is there scope to include examples in an Appendix of the SSIAG, for example, data centres, industrial-scale electric vehicle charging?
Key areas where AEMO anticipates further work may be needed	
11. Mandatory use of a simple isolated model such as a SMIB model to undertake Preliminary Assessments	We agree with AEMO's assessment that a vendor-specific PSCAD™/EMTDC™ and/or PSS®E model is unlikely to be available in many cases, and as such, support the proposed methodology of utilising an estimated Withstand SCR.
12. Appropriateness, and assessment, of the reduction of AFL at the connection point of a 4.6.6 Connection (4.6.6 Connection Point) as a measure of general system strength impact	Appropriate studies are required to adequately assess system stability. Where these studies are not possible due to lack of models, the reduction in SCR is an acceptable proxy to highlight the need for further study.

AEMC issue	Ergon Energy Network and Energex commentary
13. Calculation of system strength quantity (SSQ) and its relationship with the AFL at a 4.6.6 Connection Point	No comments.
14. Calculation of the SSLF as being representative of impedance between a 4.6.6 Connection Point and the relevant SSN	No comments.
15. Technology-appropriate access standards, especially for grid-forming technology	No comments.
16. Distinguishing between SCR and Withstand SCR and the circumstances in which each is applicable	No comments.
17. Any other issues from Energy Queensland's perspective?	In relation to the definition "committed", we suggest that item (d) is amended to "a connection agreement between the Connecting NSP and the Applicant has been entered into as per 5.3.7 of the NER" to reflect industry practice. Otherwise, including projects that have only had an offer issued, but not accepted, will unnecessarily result in re-work and churn.
Other Matters	
18. No Mark Up on SSIAG	No comments.
19. Restructure of SSIAG	No Comments