13 August 2021

Callan Masters
AEMO
Level 22/530 Collins Street
MELBOURNE VIC 3000

Dear Callan

RE: Inter-network Test Guidelines – Stage 2 Consultation

ElectraNet welcomes the development of Inter-Network Test Guidelines (Guidelines) for determining when an inter-network test may be required under clause 5.7.7(k) of the National Electricity Rules (NER), and additional guidance, requirements and processes for the assessment and conduct of inter-network tests.

We appreciate the opportunity to comment on the Stage 2 consultation draft of the proposed Guidelines.

We have the following high-level comments:

1. The governance arrangements for a System Integration Steering Committee (SISC) would benefit from some clarification. Our view is that the INTRC is a body to be consulted with and advised by a SISC but has no direct authority or control over any project. It would be more appropriate that the SISC report directly to the EJPC and remain accountable to the relevant organisation's project governance processes.

2. Table 1 suggests the SISC establishes its own Terms of Reference. For improved governance we should be clear about who the SISC is accountable to and who approves the Terms of Reference and provides oversight to the SISC in carrying out its role.

3. We suggest the role of the INTRC be reconsidered and clarified it to be an expert advisory group to the EJPC and individual SISCs. Its role would not be "Coordination of all Projects" as currently stated in Table 1. We think it is worth clarifying given the closer working arrangements being developed between the EJPC and NEMOC.

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4. In most cases internetwork testing would lead to the release of transfer capacity across an interconnector with associated benefits to the market. The test program should be developed to facilitate and release this additional transfer capacity in a timely way, e.g.

    a. testing delays impacting on the planned release of power transfer capacity should be avoided insofar as possible;

    b. Favourable test conditions may not occur for a long time and creating the right conditions may be prohibitively expensive. We consider the use of active monitoring and the organic occurrence of system events would be a more cost-effective verification solution in this case.

5. Maintenance of sufficient dynamic reactive reserves in key parts of the system is crucial for critical parts of the test process and should be explicitly acknowledged in this Guideline – this can be relatively easily managed by AEMO and the responsible TNSP.

6. We consider that additional emphasis should be placed on the installation and use of both temporary and permanent high resolution monitoring systems as a means of passively monitoring and verifying network performance.

In addition to the above comments, specific comments are included as Attachment A relating to specific clauses and appendices in the draft guideline.

We trust the comments above, and the feedback provided in Attachment A is helpful in clarifying and shaping the final version of these guidelines.

If you have any questions about this submission or require any clarifications, please contact me on 0430 475 923.

Yours sincerely,

Hugo Klingenberg
Manager Network Development

Attachment A

Reference	Comment
3.1, Table 1, Row 1	AEMO is the only party listed with a safety responsibility for inter-network testing. As all parties involved are responsible for safety under WH&S, it is recommended it be clarified that safety is primarily related to AEMO's overarching network security responsibilities, that is, AEMO is not wholly responsible for the tests being carried out in a safe manner.
3.1, Table 1, Row 7	ElectraNet recommends that SISC members establish a TOR "for approval by relevant Executives"
3.2.2 (c)	This clause and the paper more generally seem to assume that all modelling work is explicitly allocated to a single workstream. This is not the case for large projects where, for example, NEM Integration Modelling and the SPS Assessment workstreams will both have a significant modelling and studies function to perform. We suggest the language be reviewed and made less specifically targeted towards one workstream.
3.2.2 (e)	The relationship to the INTRC would benefit from clarification. ElectraNet's view is that the INTRC is a body to be consulted with and advised by a SISC but has no direct authority or control over any project. ElectraNet considers that the SISC should report directly to the EJPC and remain accountable to the relevant organisation's governance processes.
3.2.2 (e), Figure 1	Based on ElectraNet's current experience with PEC, it is recommended the possible workstream composition be updated so the external communications group also includes government relations. In addition, Figure 1 and the supporting text should incorporate a 7th possible Customer Connections Workstream made up of the network customer managers who are tasked with providing a consistent response to proponents on project progress and customer connection impacts/opportunities.
3.2.2 (e)	Primary and Secondary Systems Workstream – we suggest that the GPS and CPS impact studies would sit better with the NEM Integration Modelling Workstream (also note spelling error in AEMO paper 'Workstream'), alternatively, this package of work would also be logically placed under the remit of the proposed Connections Workstream.
6.1 (d) & 6.2 (b)	ElectraNet recommends that the SISC approve the choice of modelling requirements and software packages with reference to the current modelling requirements guideline published by AEMO. We recommend removing "and approved by AEMO" in 6.2 (b) since AEMO is represented on the SISC.
6.1 (e)	ElectraNet recommends the testing and validation implied in this clause be listed for affected plant, e.g. synchronous condensers, SVCs, STATCOMs, phase shifting transformers. These requirements could be noted in an Appendix.
6.2 (a)	With reference to the diagram shown in Appendix D, we suggest that it is clarified that this process is relevant during delivery of the project. The process to validate models post-test will still have to be worked through.
7.3 (a)	This clause implies a disturbance must be applied to perform a valid test. ElectraNet recommends the Guideline also state that there may be times where passive testing performed through high fidelity system monitoring and network control is to be preferred over active testing.
7.3 (b)	The use of ongoing active system monitoring and waiting for a system event in the right part of the network is missing as a valid means of providing real-life testing of equipment and special protection schemes.
7.3 (b) (i)	It is preferrable to avoid tripping of generators and loads for the purpose of system testing.
7.3 (b) (iii)	Tripping of lines requires the booking of outages for this purpose. This may be very difficult depending on the network configuration available and time of year the testing needs to occur at. Transmission lines, particularly interconnector lines, have very small outage windows available due to high DER penetration, the lack of rotating machines, etc.
7.3 (d)	It is recommended that monitoring quantities be explicitly spelt out to ensure a minimum standard of fault recorders and measurements are achieved by TNSPs and proponents.
8 (b)	It is not possible to guarantee suitable conditions will ever be present during a testing window. With reference to comments made on 7.3 (b), the solution may be to await suitable conditions to arise in the system and use post-commissioning validation of models.
Appendices	We suggest the sequencing of the Appendices be revised so they appear in the order they are referenced in the main body.
Appendix B	The second 'S' in SISC stands for 'Steering' not 'Sub'.
Appendix G	If tests are not required, it sounds overly onerous to provide "Details of what tests would be carried out if inter-network testing was completed."