



Ref. A4712241

22 June 2021

Attention: Mr Luke Robinson
Australian Energy Market Operator (AEMO)
By email: Internetnetwork.testing@aemo.com.au

Dear Luke

SUBMISSION ON CONSULTATION DRAFT INTER-NETWORK TEST GUIDELINES

Powerlink Queensland (Powerlink) welcomes the opportunity to provide input to the Australian Energy Market Operator's (AEMO's) proposed update to the Inter-Network Test Guidelines (the Guidelines).

Powerlink acknowledges the importance of ensuring additional interconnector capacity can be released to the National Electricity Market (NEM) in a safe and timely manner. However, Powerlink considers some aspects of the draft Guidelines as they are currently written may not be in the long-term interests of electricity consumers, as they are likely to increase costs without a commensurate improvement in reliability, safety and/or security.

The attached submission provides more detail so as to:

1. ensure governance arrangements included in the Guidelines are fit for purpose and can be adapted to suit project circumstances;
2. clarify the application of the Material Inter-Network Impact (MINI) criteria to actionable Integrated System Plan (ISP) in the National Electricity Rules (NER); and
3. address a range of technical issues in the Guidelines to ensure inter-network testing is undertaken in a prudent and efficient manner.

If you have any questions in relation to this submission or would like to meet with Powerlink to discuss this matter further, please contact Cameron McLean.

Yours sincerely

A handwritten signature in black ink that reads "Stewart Bell".

Stewart Bell

Executive General Manager, Network & Business Development

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1. Governance arrangements must be fit for purpose and capable of being adapted to suit project circumstances

Section 3.2 of the draft Guidelines outlines the establishment of a System Integration Steering Committee (SISC) to oversee the preparation, inter-network testing and approval of the release of additional inter-network capacity to the NEM. Although the SISC can determine whether workstreams that report to the SISC should be combined or divided, the Guidelines mandate this governance structure by default.

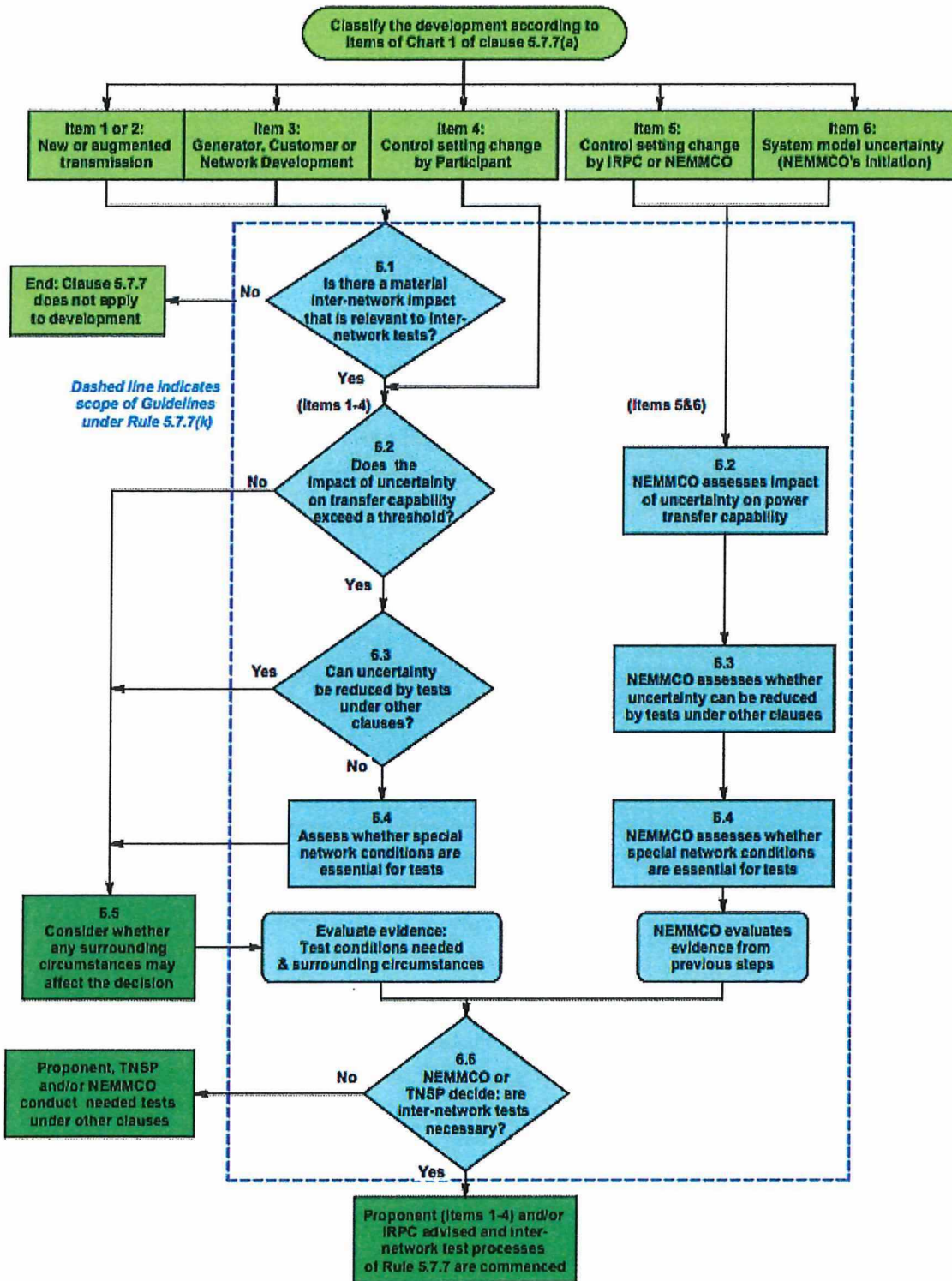
Powerlink considers the proposed governance structure is too prescriptive to apply across all projects involving inter-network testing and recommends a more flexible framework capable of being adapted to suit project circumstances. This is especially the case for projects within a single jurisdiction where the primary purpose is to address an intra-regional issue and there is only an incidental impact on inter-network capability that exceeds the MINI criteria. Powerlink considers these types of projects, in Category C in Table 2 of the Guidelines, are likely to result in only a modest increase in inter-network capacity and could be managed without the need for intermediate hold points.

Powerlink recommends the Guidelines adopt a more flexible approach that would propose, but not mandate, the SISC governance structure for more complex projects with multiple stakeholders that would be classified as Categories A or B in Table 2 of the Guidelines. Typically these projects would involve more than one Transmission Network Service Provider (TNSP), where the primary purpose is to increase inter-network capacity in support of efficient market outcomes.

For less complex projects, such as those in Categories C, the Guidelines could:

- specify the tasks or processes that need to be fulfilled when assessing and meeting the requirements for inter-network testing;
- require a party or parties to be nominated as accountable for ensuring the prescribed tasks or processes are completed; and
- acknowledge that accountability for certain tasks or processes, such as AEMO's power system security obligations, cannot be transferred.

The prescribed tasks or processes, including any minimum requirements if deemed necessary, could build on Figure 1 of the existing Guidelines (reproduced below) and reflect the SISC activities and workstreams identified in the draft Guidelines.



2. Application of MINI criteria to actionable ISP projects

The draft Guidelines use the MINI criteria to determine whether inter-network testing may be required. Rule 5.21 of the NER requires AEMO to publish criteria to assess whether a proposed transmission network augmentation is reasonably likely to have a MINI, but this does not apply to actionable ISP projects as a result of clause 5.21(a).

By virtue of their size and impact on the power system, Powerlink considers most actionable ISP projects, other than intra-regional projects, could have a MINI and therefore trigger an inter-network testing requirement. Powerlink recommends that the Australian Energy Market Commission's (AEMC's) next minor update to the NER should clarify the treatment of actionable ISP projects and whether they are associated with a MINI.

3. Prudent and efficient inter-network testing

Category C of Table 2 identifies that changes to generation within a jurisdiction could trigger a MINI. Given that inter-network testing will not test for the actual voltage or transient stability limit, Powerlink sees no practical advantage in requiring inter-network testing under NER clause 5.7.7 if:

- the interconnector has been operating as expected;
- PhasorPoint and/or OSM has not flagged an emerging oscillatory stability issue;
- no detrimental impact on the oscillatory modes of the network (including inter-regional modes) has been shown during the design phase of the generation change and Generator Performance Standard (GPS) negotiation and compliance assessment; and
- the existing interconnector limits are defined by thermal, voltage or large signal stability.

Section 4.2 (b) of the Guidelines suggests that exceeding any one of the MINI criteria triggers an inter-network testing requirement. Powerlink considers this is too prescriptive and could result in performing tests that add to network costs without being in the long-term interests of electricity customers. For example, Powerlink considers that exceeding the fault level impact threshold should not be an automatic trigger for testing. Powerlink recommends the Guidelines allow for AEMO and the relevant TNSP(s) to agree what testing is required.

Section 4.4 (a) (iii) states that if any one of the relevant TNSP(s), AEMO or the Proponent considers an inter-network test is required then an inter-network test must be conducted under clause 5.7.7. Powerlink considers that if agreement cannot be reached between AEMO and the relevant TNSP(s) then the issue of whether testing is required should be referred to the Joint Planning Committee for a decision.

Section 6.1 (c) (ii) of the Guidelines states that all network models and modelling data should conform to NER clause 5.2.3(d)(8), while section 6.1 (e) appears to imply that R2 model of new systems and equipment are available before an inter-network test. Powerlink considers these requirements could unduly delay the testing and release of capacity, potentially adding to system costs. If plant commissioning is a prerequisite for inter-network testing, Powerlink recommends that, at minimum, R1 models and parameters are available during the preparation phase and R2 should be available for the later hold-point testing. For new systems and equipment, Powerlink suggests that it would be appropriate to progress the initial testing phases using R1 models and parameters.

Section 8 (c) outlines several options to achieve the desired conditions for the required duration of the proposed test by way of arranging test facilitation services. Of the services listed in this section, reactive power injection and voltage step-testing can usually be provided at no or minimal cost.

Powerlink recommends that AEMO ensure the Guidelines do not set an expectation that reactive power injection and/or voltage step-testing need to be procured at a cost.

Section 10 (b) (iv) proposes the Proponent's post-test report must compare the new limits achieved with the limits proposed in the approval document for the Project (for example, the Project Assessment Conclusions Report). This information represents an *ex-post* analysis of the performance anticipated through the regulatory investment test for transmission (RIT-T) process. As such, Powerlink considers should this be required the Australian Energy Regulator (AER), rather than AEMO, is the appropriate body to request this information.