INTER-NETWORK TEST GUIDELINES

ISSUES PAPER

Published: **May 2021**

EXECUTIVE SUMMARY

The publication of this Issues Paper commences the first stage of the Rules consultation process conducted by AEMO to amend the existing guidelines developed under clause 5.7.7(k) of the National Electricity Rules (NER).

In addition to the required content under clause 5.7.7(k), AEMO also proposes to significantly expand the current "Inter-Network Test Initiation Guidelines" (published in February 2008)[1], to provide more comprehensive guidance on the requirements for inter-network testing and a governance structure to improve coordination of the testing process. AEMO is also seeking stakeholder feedback on these proposals through this consultation.

The proposed amendments seek to put in place Guidelines that will promote the efficient and effective assessment and testing of major transmission investments planned for the National Electricity Market (NEM) over the next decade.

This Issues Paper aims to facilitate informed industry feedback to AEMO on the proposed updated Guidelines. Key aspects of the Guidelines where amendments are proposed are:

- General review and update.
- Proposed governance structure to progress interconnector projects.
- Improved, fit-for-purpose assessment criteria to determine when inter-network testing will be required for a project.
- Inclusion of project examples including a description of how 5.7.7 is assessed and applied.
- Power system disturbance methods for testing purposes, including a risk assessment approach.
- An overview of the approach to model development associated with developing future study cases to support assessment of interconnector upgrades.

AEMO invites written submissions from stakeholders on the matter under consultation, including any alternative or additional proposals they consider may better meet the objectives of this consultation and the national electricity objective in section 7 of the National Electricity Law.

Stakeholders are invited to submit written responses on the issues and questions identified in this paper by 5.00 pm (Melbourne time) on 22 June 2021, in accordance with the Notice of First Stage of Consultation published with this paper.

[1] See https://aemo.com.au/-/media/files/electricity/nem/network_connections/vic/inter-network-test-initiation-guidelines.pdf?la=en&hash=D412D0F701A8FCD6872DC352CA851474

CONTENTS

EXECUTIVE SUMMARY **2**

1. STAKEHOLDER CONSULTATION PROCESS **4**

2. BACKGROUND **4**

2.1. NER requirements 4

2.2. Context for this consultation 4

3. DISCUSSION **5**

3.1. General update 5

3.2. A proposed governance structure and advice on model requirements/management for projects exceeding MINI thresholds 5

3.3. Guidance around assessing when inter-network testing is required 5

3.4. Updated project examples 6

3.5. Advice on power system disturbance methods and risk assessment 6

3.6. Power system model development process 6

4. DRAFTING AND STAKEHOLDER FEEDBACK ON PROPOSED CHANGES **6**

1. STAKEHOLDER CONSULTATION PROCESS

As required by the NER, AEMO is consulting on amendments to its existing Inter-network Test Initiation Guidelines to determine when an inter-network test is required, in accordance with the Rules consultation procedures in rule 8.9 of the NER.

In addition to the matters required by NER clause 5.7.7(k), AEMO proposes to expand the guidelines to incorporate more comprehensive guidance on the requirements for inter-network testing and a governance structure to improve coordination of the testing process. While this additional content is not mandated by the NER and therefore not subject to the Rules consultation procedures, AEMO considers it appropriate to consult on this substantial new initiative.

Note that there is a glossary of terms used in this Issues Paper at Appendix A.

AEMO's indicative timeline for this consultation is outlined below. Dates may be adjusted depending on the number and complexity of issues raised in submissions and any meetings with stakeholders.

Deliverable	Indicative date
Issues Paper published	17/5/2021
Submissions due on Issues Paper	22/6/2021
Draft Report published	22/7/2021
Submissions due on Draft Report	9/8/2021
Final updated Guidelines published	22/9/2021

Prior to the submissions due date, stakeholders can request a meeting with AEMO to discuss the issues and proposed changes raised in this Issues Paper.

A draft of the amended Guidelines is published with this Issues Paper.

2. BACKGROUND

2.1. NER requirements

Under clause 5.7.7(k) of the NER, AEMO may develop, publish and amend guidelines to assist Registered Participants to determine when an inter-network test may be required. The Guidelines may be made or amended in accordance with the Rules consultation procedures set out in NER rule 8.9.

For these Guidelines to be effective and useful, however, they should be supplemented by explanation and process guidance the application of the essential aspects of clause 5.7.7 including:

- Application of the material inter-network impact (MINI) criteria to determine when inter-network testing is required.
- Supporting information and guidance regarding governance and processes to meet the requirements of clause 5.7.7.
- Practical examples of how the Guidelines may be applied.

2.2. Context for this consultation

AEMO considers that it is timely to review the Guidelines for the following reasons:

- The existing Guidelines were published in 2008 under the Interregional Planning Committee (IRPC) (which no longer exists), and the NEM power system and its interactions have changed significantly since then.
- The 2020 Integrated System Plan (ISP) Central scenario predicts that an additional 6 gigawatts (GW) of interconnector capacity will be needed over the next 20 years[2]. The majority of these upgrades will have a material impact on the power system and necessitate a coordinated approach to testing and release of new capacity to the NEM. It is therefore prudent to maintain the currency and usefulness of the Guidelines.

3. DISCUSSION

AEMO proposes to amend and expand the existing Guidelines in the following key areas:

- General review and update.
- Proposed governance structure to progress interconnector projects.
- Improved, fit-for-purpose assessment criteria to determine when inter-network testing will be required for a project.
- Inclusion of project examples including a description of how clause 5.7.7 is assessed and applied.
- Power system disturbance methods for testing purposes, including a risk assessment approach.
- An overview of the approach to model development associated with developing future study cases to support assessment of interconnector upgrades.

3.1. General update

AEMO believes the current Guideline structure, layout, and contents can be simplified and improved to make the document clearer and more user-friendly. These updates should contribute to improved consistency of application of clause 5.7.7 across all proponents who need to consider inter-network testing for their projects going forward.

3.2. A proposed governance structure and advice on model requirements/management for projects exceeding MINI thresholds

AEMO proposes to include in the Guidelines a governance structure indicating:

- Roles and responsibilities for the different entities involved in inter-network testing.
- The responsibilities of the System Integration Steering Committee (SISC) to be established for each project.

The proposed governance structure set out in the draft Guidelines reflects AEMO's recent experience of best practice working arrangements with *proponents* on projects with a MINI.

3.3. Guidance around assessing when inter-network testing is required

The proposed Guidelines include advice on assessing whether clause 5.7.7 applies to a project. The Guidelines have been drafted to explain how registered participants should consider surrounding circumstances that may affect the decision to test under 5.7.7 or testing requirements.

[2] See https://aemo.com.au/-/media/files/major-publications/isp/2020/appendix--3.pdf?la=en

3.4. Updated project examples

The proposed Guidelines include examples of projects which are assessed against the MINI criteria, with an explanation of the outcome of this assessment. Compared with the existing guidelines, these examples reflect a broader set of network upgrade types, improving their utility. The draft Guidelines also include an example of a project determined to exceed the MINI thresholds cumulatively.

3.5. Advice on power system disturbance methods and risk assessment

The proposed Guidelines include a suggested approach for assessing the benefits of network tests against the risk carrying out those tests. Included in the guidelines is a sample risk assessment with a table of probabilities and consequence including objective criteria for assessing these. It is envisaged that proponents will use this risk assessment to help them identify which tests should be undertaken as part of the inter-network testing process.

3.6. Power system model development process

The proposed Guidelines include a model development process outlining the process for model development for assessment of inter-network projects. This process is intended to help identify which organisations should be responsible for different aspects of developing and accepting the models. The draft process is based on AEMO's recent experience working with proponents on projects that require inter-network testing.

4. DRAFTING AND STAKEHOLDER FEEDBACK ON PROPOSED CHANGES

AEMO has published a draft of the proposed replacement Inter-Network Test Guidelines, incorporating full details of the proposed changes outlined in this Issues Paper.

AEMO invites feedback from interested stakeholders on the matters discussed in this Issues Paper and the proposed drafting of the Guidelines. AEMO also welcomes views on alternative or additional content for the Guidelines (within the scope of the NER) that may better achieve the objective of a useful and fit-for-purpose guide for proponents and other parties involved in the assessment and testing of interconnection and other major transmission projects.