Obj Ref: A2880550

OFFICE OF THE CHIEF EXECUTIVE

19 April 2018

Attention: Babak Badrzadeh
Australian Energy Market Operator (AEMO)

By Email: ***SystemStrengthGuidelines@aemo.com.au***

Dear Babak,

Powerlink Queensland Submission
System Strength Impact Assessment Guidelines

Powerlink Queensland (Powerlink) welcomes the opportunity to provide input to the first stage of consultation to the draft *System Strength Impact Assessment Guidelines* (the Draft Guidelines).

Powerlink is supportive of the new framework for the management of system strength in the National Electricity Market (NEM), including the role of Network Service Providers (NSPs) in the assessment of system strength impacts of new and modified connections on networks.

Powerlink's key concern is the proposed stage in the connection process at which proponents are to be considered when assessing another proponent's impact assessment as part of the connection process.

The key points in our submission are:

1. Preliminary and full assessments should only consider existing and committed connections.
2. Safeguards are required to avoid unintended consequences transitioning to the Final Guidelines – this will be even more critical if projects at 'application' stage of the connection process are to be included in the assessments.
3. Guidelines should provide clarification that residual risk of system strength issues remains the responsibility of the proponent if issues are identified up to and during commissioning.
4. The establishment of a centrally managed model / commitment register to support the exchange of models and to manage the order in which proponents meet the criteria for consideration in impact assessments.

These matters are addressed in more detail in the **attached** submission.

If you have any questions in relation to this submission or would like to meet with Powerlink to discuss this submission, please contact Stewart Bell.

Yours sincerely

Merryn York

Merryn York
Chief Executive

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1. 'Committed projects' - assessing system strength in the connection process

The Draft Guidelines now include a requirement that the impact assessment considers all existing and proposed generating units or generating systems or proposed market network service facilities where an application to connect has been submitted. This is a significant shift from the first and second versions of the Interim Guidelines which referred to committed generation projects. The reference to 'committed generation projects' has been removed in the Draft Guidelines.

The Interim Guidelines, released in November 2017, specify that only committed changes to the network and existing and committed generation projects are to be taken into account in the impact assessment process. These Interim Guidelines defined 'committed generation projects' as those that had a connection agreement and agreed Generator Performance Standard (GPS)[1].

Powerlink notes a second version of the Interim Guideline, released 26 March 2018[2], makes reference to 'financial close' as a measure of project commitment. Powerlink does not consider reference 'financial close' is an appropriate mechanism for assessment of commitment in the System Strength assessment for a number of reasons:

- Projects may not be subject to external financing and may proceed independently; and
- For projects subject to external financing, the term is not defined in the NER. The meaning and use of the term is dependent on how the term is practically agreed and applied between parties. From that perspective, it would be inappropriate and inefficient for NSPs to actively monitor the non-transparent activity of private companies in the NEM.

Powerlink does not support the inclusion of all existing and proposed generating units in the system strength assessment as Powerlink considers such inclusion will not deliver the best outcome for customers and consumers overall. Instead Powerlink proposes only committed generation should be included and provides a proposed definition later in this submission.

Powerlink is currently assessing 38 projects which have made an application to connect to the Queensland transmission network. Powerlink is aware that there are also significant numbers of projects which have made applications to connect to adjacent networks – either distribution in Queensland or transmission in New South Wales. A number of these projects are proposing to connect to similar locations which may not be feasible or commercial. It is therefore likely that a number of projects which have made application to connect will not proceed to commitment or the timing of their progress to commitment may be significantly different to currently proposed.

In the current environment specifying the system strength mitigation solutions based on all projects which have made an application to connect to a relevant network will not be meaningful nor efficient. The system strength mitigation solutions identified will not be of "right size", likely much larger, for the sub-set of connection applicants that do progress. There is a risk that higher cost may unnecessarily impact the individual proponent's commercial business cases and, if built too large, could result in costs being indirectly borne by consumers.

In the event that the final Guidelines specify the inclusion of all existing and proposed connection applicants, AEMO needs to consider:

- Inefficiency with repetition of system strength assessment when a new connection application is received, including by neighbouring NSPs; and
- System strength mitigation solutions are specified based on EMT-type models and associated plant settings that have not undergone detailed design and due diligence at the time the application to connect is made (this usually occurs during the application process).

[1] Refer paragraph 5.3.3 Treatment of other future generating systems the Interim Guidelines released 17 November 2017
[2] Interim System Strength Impact Assessment Guidelines, Version 2 released 26th March 2018, page 22, paragraph 5.3.3 Treatment of other plant, 3rd dot point.

Powerlink proposes the Guideline should revert to the standard in the Interim Guidelines and consider only existing and committed generation projects when assessing each individual connection application, but with a different definition as outlined below. This allows clear identification of the individual proponent that causes "harm" and individual mitigation measures can be identified. The approach does not exclude the possibility of a shared mitigation solution being investigated with more than one proponent. Under the current NER arrangements regarding confidentiality, the individual proponents would need to initiate this co-ordination but changes to these requirements could be considered through another mechanism to assist in facilitating economies of scale and efficient outcomes.

In terms of what is a committed generation project, Powerlink suggests that 'committed generation projects' should more appropriately be linked to:

- an application to connect being in place with the NSP;
- a NER clause 5.3.4A letter having been issued by AEMO; and
- proponent agreement to NER clause 5.3.4B work, if required.

2. Transition to the Final Guidelines

The Interim System Strength Guidelines (Interim Guidelines) were published 17 November following collaboration between AEMO and TNSP members of a technical Task Force coordinated by the Power System Modelling Reference Group (the PSMRG).

The Interim Guidelines specify the criterion below which connecting applicants have to complete a Full Impact Assessment (FIA) as a pre-requisite to a connection agreement. Although delivering more certainty on the technical viability of connections there were unintended consequences associated with implementation of the Interim Guidelines in regards to the commercial impact on applications to connect which were already in progress.

Subsequently, Powerlink, AEMO, the AEMC and other NSPs, developed some supporting transitional arrangements that assisted the management of commercial and technical risks by applicants. Powerlink appreciates the collaborative approach taken by AEMO in developing these transitional arrangements and wishes to ensure that the likelihood of unintended consequences when transitioning to the Final Guidelines are minimised.

With respect to this concern, Powerlink recommends AEMO and the technical Task Force give consideration to commercial impacts which may arise due to the currently agreed transitional arrangements ceasing on 1 July and the Power System Model Guidelines coming into effect 1 July. These impacts will be different depending on the stage of the connection process at which projects need to be included with much more significant impacts if all projects which have only made an application to connect are to be included in the assessments.

3. Management of system strength risks

The objective of system strength assessments is to identify the likelihood of an adverse system strength impact caused by a new connection or change to existing connection based on proponent supplied mathematical models which aim to replicate the physical system. However, if during the connection and commissioning process the generating system is found to cause 'harm', the Guidelines should clarify that the risk for remediation expenditure still lies with the proponent who is causing 'harm'.

Powerlink does not consider it appropriate for this risk to be passed on directly to consumers through minimum fault level obligations.

4. Model / commitment register

As discussed in section 1, the right balance needs to be reached of the generators to be included in system strength assessments to ensure investments in system strength mitigation measures are fit for purpose, ensuring unnecessary costs are not indirectly passed on to consumers. Since system strength spans across NSP boundaries, it is important that process and criteria is followed consistently by all NSPs. To assist with ensuring all NSPs and proponents are aware of the projects to be included and their timing, Powerlink recommends the establishment of a register to inform NSPs of the generators (and corresponding models) to be assumed in system strength assessments. NSPs should be responsible for providing updates as proponents meet the generator inclusion criteria. Consideration should be given to how such information could be made available all relevant parties in a timely and transparent manner.