Wednesday, 22 January 2025

Mr Ben Blake

AEMO

Sent via email to: ben.blake@aemo.com.au

Dear Mr Blake

2024 Congestion Information Resource Guidelines Consultation

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia, representing nearly 1,000 of the leading businesses operating in renewable energy, energy storage, and renewable hydrogen. The CEC is committed to accelerating the decarbonisation of Australia's energy system as rapidly as possible while maintaining a secure and reliable supply of electricity for customers.

We welcome the opportunity to provide feedback on AEMO's draft report and proposed amendments to the Congestion Information Resource Guidelines (**CIR guidelines**), as part of its 2024 consultation on the CIR Guidelines. This submission only reflects the views of our developer and investor industry members and does not reflect the views of TNSPs.

Section 2.4.3 – Network Status and Capability – updated Transmission Line Diagrams

Section 2.4.3 of the CIR guidelines indicates that AEMO publishes Transmission Line Diagrams as part of the "publications describing the real time status of networks and their general capability". CEC understands that that these diagrams have not been updated since April 2019 and are now out of date.

We recommend that AEMO make available on its website as soon as possible updated transmission line diagrams of the same quality to those previously made available by AEMO to participants. AEMO should update those diagrams every 6 months given the scale and speed of the clean energy transition, so the diagrams reflect recent network augmentations and work undertaken to connect new projects to the grid.

Please note that the transmission line diagrams in the transmission annual planning reports are not equivalent or adequate as they lack the detail that AEMO's previously published transmission line diagrams provided and are not of a consistent quality.

Real time outage data

As noted above, section 2.4.3 of the CIR guidelines states that the transmission line diagrams, and other documents listed in that section, is to provide information about the **real time** status of networks and their general capability. Improved information about the real time status of

networks will permit Registered Participants to react promptly to unplanned network outages and make better projections of market outcomes (consistent with the objective of the Congestion Information Resource under rule 3.7A of the NER). As noted by Shell in its submission on the 2021 CIR guidelines consultation:

> *There are a range of situations where real-time information would prompt a more efficient response from market participants, which would ultimately flow through to lower prices paid by consumers. Examples include the following:*
>
> - *Real-time outage information may prompt generators to source fuel and/or bring units online prior to being directed by AEMO.*
> - *Providers of time-limited services (e.g. short-duration storage or demand response) would be better-placed to anticipate system requirements for the near future. Improving the information available to them could avoid a situation where they exhaust their ability to generate (or reduce demand) prior to when their output would be most beneficial to the system. This will become more important as synchronous generating units retire, and storage and demand response become more critical for power system operations.*

As suggested by Shell in its submission on the 2021 CIR guidelines consultation, we recommend that AEMO makes available a secure live resource with the same level of network detail as that provided in AEMO's control room mimic panel.

We consider that there are no security risks in publishing this information via a secure live resource as detailed information on transmission lines is now publicly available[1] and as information about outages is published in market notices and the AEMO network outage schedule (albeit after a slight delay)[2].

AEMO could make this real information available via a password protected secure AEMO website to mitigate any remaining perceived security risks. For Registered Participants, this real time information could be hosted on the Electricity Market Management System.

AEMO should also consider making this real time information about the status of networks and their capability available to non-participants (including academics, policy makers, and those making decisions, or providing advice, about where new projects should be located). This would further the National Electricity Objectives and be consistent with the AEMC's recommendation in its Final Report on Transmission Access Reform that "AEMO continue to work with transmission network service providers (TNSPs) and market participants to improve the quality and timeliness of locational information to inform investors and other stakeholders through the annual Enhanced Locational Information Report, including by providing locational information on system security issues": see recommendation 4.

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[1] See for example NEM Outages.

[2] We also consider that this information is not confidential and can be made available by the AER as it is information made generally and publicly available; see 8.6.2(2) of the NER.

Real time line ratings

In providing real time network information, AEMO should also provide the best information available about line ratings in real time (with the dynamic ratings of lines updated in real time to reflect weather and seasonal dependent conditions).

Precedents in other jurisdictions

There are precedents in other jurisdictions for the further information which we are requesting on Network Status and Capability.

Transpower (the Grid Owner and System Operator in New Zealand) has a dedicated and routinely updated website which provides to market participants as well as interested parties (including consultants, academics and developers):

- detailed information about grid capability and grid configuration: Grid capability and configuration | Transpower
- an Outage Visualisation Tool - Outage planning | Transpower
- variable line ratings - Variable line rating information | Transpower

Planned transmission projects

There is a need for further information about planned transmission projects to assist with forecasting network congestion in the medium term:

- AEMO's 2024 Enhanced Locational Information report recognises information about anticipated and committed transmission projects, as well as future ISP projects, is needed to assess market congestion in the medium term.

- AEMO at section 4.1.1 of its draft report on the 2021 review of the CIR Guidelines also acknowledged that the CIR could be used to provide forecasts of network congestion in the medium term, in addition to information on past binding constraints. We note that information is valuable for potential future investments and operational and contracting strategies.

Further Information required

To assist with making projections of market outcomes and to understand patterns of network congestion ie the CIR objective in rule 3.7A, the following information should be provided for a planned transmission project as soon as a project has had funding approval and/or a firm date for construction is announced (which means that at least the preliminary design for the project has been completed and basic information such as network capacity would be available) (**Planned Transmission Project**):

- diagrams of these projects

  The following new category of information could be added to section 2.4.3 of the CIR guidelines*: Transmission Line Diagrams for Planned Transmission Projects*.

- a TNSP's constraint equations for that project and all material changes likely to be caused by the planned transmission project to other constraint equations for existing and committed generation and transmission projects[3].

- network data including line parameters, line ratings, preliminary substation layouts for proposed transmission lines and substations.

The CIR guidelines should require the TNSP to provide this information to AEMO. We note that TNSPs are required to provide AEMO with the information specified in the CIR guidelines under 3.7A(n) and (o) of the NER.

It is important that the CIR guidelines are amended to include this information on planned transmission projects as otherwise participants (and other stakeholders) will not have access to this information to make projections about network congestion in the medium term. CEC has been advised that TNSPs do not provide information about a major planned transmission project, even if it is under construction, until the project has reached "considered" status eg network information was not released on Project EnergyConnect until after construction had commenced on that the basis that the project had not reached considered status.

Section 2.4.4 - Statistics and incident reports

We support AEMO publishing a Network Outage Statistics Report.

We consider that this will be a valuable report in monitoring whether each of the TNSPs are:

- providing adequate advance notice of outages via the NOS to achieve the National Electricity Objectives and the CIR objective
- complying with their obligations under clause 3.7A (n), (o) and (p) of the NER[4].

The data, and tables, in the Outage Statistics in AEMO's Annual Constraints Report 2023 show that between 80 to 100 per cent of planned network outages are inputted into the NOS by TNSPs less than 3 months before starting.

It is the CEC's view that TNSPs need to give at least 4 months' notice of planned outages in the NOS for market impacts to be minimised. This would permit:

- retailers to adopt risk mitigation measures to minimise impacts on consumer prices (via hedging)
- generators to schedule their own maintenance work to align with the network outage
- better coordination to minimise consecutive network outages which impacts generators on borders and market pricing outcomes
- AEMO and TNSPs to work collaboratively to move planned outages during the planning stages to reduce market impacts

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[3] CEC has already written to AEMO indicating that there is a need for this information to be provided as soon as possible after a NSP achieves FID for a major transmission project and/or augmentation: see para 5 of the Annexure to CEC's submission on improvements to ELI Reports.

[4] TNSPs are required to submit their current intentions on planned network outages that, in the reasonable opinion of the relevant TNSP, will have or are likely to have, a material effect on transfer capabilities for the next thirteen months: rule 3.7A incorporating the requirements of 11.30.2(b).

- AEMO, TNSPs and generators to collaborate to minimise impacts of planned network outages through the NEM Maintenance Forum. This ACCC authorised forum was set up to manage reliability risks associated with System Works and it uses NOS data.

We also note that with adequate notice, AEMO can use its powers to minimise impacts eg through the Systems Integrity Protection Scheme (SIPs). We encourage AEMO to consider, and discuss with the TNSP, how it can minimise market impacts of planned outages on consumers and generators.

Section 3.2.2 – Quantitative measure needed

We note that the definition of Planned Network Outage in paragraph 2 of Section 3.2.2 of the CIR Guideline is in qualitative terms and may not capture all outages which have a material impact**.**

We recommend that the definition of Planned Network Outage in section 3.2.2 be expanded to add a quantitative measure of when a planned outage is likely to have a material effect on transfer capability or materially affect network constraints in relation to a transmission system. We recommend the adoption of a quantitative measure based on the following criteria:

- *10-15% expected impact on a network flow path's transfer capability*

This would, for example, capture outages of transmission lines in any of the Yass to Marulan/Bannaby or Canberra – Kangaroo Valley – Dapto – Sydney South flow paths (ie lines 4 and 5 in NSW in the southern to central NSW flow path). These are currently not classified as high impact outages, even though an outage on these lines would reduce transfer capability between Southern and Central NSW by approximately one third.

- *10-15% expected impact on a generator(s) output capability*

We note that a TNSP should be able to predict whether a generator's output would be impacted if a transmission line is taken out. As noted above, it is important that a generator is given at least four months' notice of such a planned outage so that the generator would be in a position to organise maintenance work to occur at the same time.

The adoption of quantitative criteria will help:

- capture those planned network outages which are not currently categorised as high network outages within section 3.2.2 of the CIR guidelines, but which have a material impact on the market, generator output and interconnector flows

- limit the opportunity for the qualitative criteria in section 3.2.2 to be interpreted narrowly, with the result that less network outages are notified via the NOS at least 4 months in advance of their commencement and in accordance with the requirements of rule 3.7A of the NER. This will result in TNSPs providing more network outage information earlier via the NOS, which will support the CIR objective and the National Electricity Objectives.

Section 3.4 - Updates to Information

If there has been a material change to the information first submitted by a Transmission Network Service Provider via the NOS, the Transmission Network Service Provider must provide AEMO with the revised information as soon as practicable and resubmit via the NOS: clause 3.7A(o) of the NER.

The NOS requires a reason to be given for resubmitting an outage in the NOS. TNSPs typically state “Update Information” as the reason which the CEC considers to be unsatisfactory when compared to information requirements imposed on other participants.

We consider that AEMO should provide more guidance in the CIR guidelines on the level of detail, or the information, it expects to be provided when providing a reason for resubmitting the notice of the outage. More detailed reasons are needed to assess whether the TNSP is complying with clause 3.7A(p) of the NER.

Section 4 – CIR Development

We recommend that AEMO keep the requirement to discuss and consider development of the CIR at least annually in section 4 of the CIR guidelines but modify it so that that CIR development is considered at a meeting of the NEM Reform Program Consultative Forum (instead of the NEM’s Wholesale Consultative Forum which it replaces).

We note that the information on planned outages captured by the NOS permits market impacts to be minimised by TNSPs and market participants and it remains important for there to be a forum which can consider at least once a year whether the information on planned outages and reporting processes via the NOS are adequate to support the clean energy transition.

Consultation with stakeholders

We consider that AEMO should consult broadly in relation to the draft CIR guidelines, for example, with:

- the AER – the data in the CIR guidelines is relevant to both the Market Impact Component and Network Capability Component of the Service Target Performance Incentive Scheme which is currently being reviewed by the AER
- other parts of AEMO – the information provided under the CIR guidelines may be relevant to AEMO’s Enhanced Locational Information Reports. AEMO is considering expanding on information provided in future ELI Reports following consultation with industry[5].

AEMO should consider extending the consultation period, and the date for publishing its final report on the revised CIR guidelines, to permit this broader consultation.

As always, the CEC welcomes further engagement from AEMO on the 2024 consultation on the CIR guidelines. Further queries can be directed to Diane Staats on dstaats@cleanenergycouncil.org.au

Kind regards

Christiaan Zuur

Director, Market, Operations and Grid

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[5] See CEC’s recommendations as to information that should be included in future ELI reports