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Dear Blake

### **Congestion Information Resource**

The National Generators Forum (NGF) appreciates this opportunity to provide feedback to the Australian Energy Market Operator (AEMO) on the Congestion Information Resource (CIR).

Generally, while the fact of congestion is rightly the major focus of the CIR, the forecasting of congestion is also very important in allowing market participants to make considered responses to the impact of congestion on them. The NGF suggests that AEMO consider this a high priority request. Specific suggestions are included in the response to the questions.

#### **Q1: What additional information do stakeholders consider should be included in the CIR?**

##### Forecasting of congestion

The forecasting of congestion relies on many inputs including forecasts of demand, generator availability, network outages and forecasts of network ratings.

AEMO currently has a project underway to improve demand forecasting. In parallel, the AER is requiring generators to improve availability forecasting by considering the expected weather conditions. In this context it is desirable to consider whether the forecasting of network outages and network ratings should also be improved.

It is noted that there is sometimes reconsideration of network outages or of network ratings close to dispatch time, for example to reduce the incidence or the effect of congestion. We are not suggesting that there should be any reduction of such activities, but rather we propose a consideration of whether these activities could be better forecast.

A further addition to the forecasting of congestion can be enhanced by utilising information from the National Transmission Development Plan and provide information about potential long term congestion in the future. This could be achieved by selecting various development paths and using monte carlo simulation techniques to determine the likely transmission paths and the congestion that could emerge in the future under different transmission/generation build scenarios.

#### Development of an indicator of TNSP performance against approved MIP targets

Notwithstanding the provisional nature of any such measure, the NGF believes an indicator showing the cumulative annual performance of a TNSP against its approved Market Impact Parameter incentive target would be beneficial. The measure would attempt to track the hours of material congestion realised, allowing for defined exclusions, and inform market participants of the degree to which a TNSP may be influenced by the incentive scheme throughout the year.

Reporting of the current performance in these aspects will inform any subsequent consideration of these issues, and is therefore recommended for inclusion in the CIR.

#### Reporting on current levels of congestion

The AER has previously reported on levels on congestion but this maybe more suitable for AEMO to publish. Reporting on the levels of congestion in MWh and the increase in cost of dispatch would allow the industry to assess the materiality of congestion in the market. It is also suggested that this report over time be progressively populated with data to show trends over a minimum 10 year period.

#### Changes to planned outages within the pre-dispatch period

We propose that particular consideration be given to changes in planned outages of transmission elements which occur after the planned outage has impacted on pre-dispatch and hence its forecast consequences are likely to be influencing commercial decisions by market participants.

It is recognised that the duration of planned outages has some inherent uncertainty as a result of unexpected plant condition revealed during an outage. It is therefore proposed that reporting in this matter should focus on cancellation of an outage and outage starting times. It is further recognised that there is some inherent uncertainty in the preparations for an outage and consequently the proposal for variation to starting time is to consider only variations of 1 hour or more in starting time.

It is also noted that some planned outages may have very minor effects in pre-dispatch, and hence need not be considered in this context. Given that only a minor reporting task is at issue, we suggest that matter of materiality could be a judgement issue. For example we consider that a judgement by AEMO that the summated changes in dispatch targets, either up or down, due to an outage would be likely to alter effected generation dispatch by an amount greater than 100MW should lead to efficient reporting of any material changes to the starting time for that outage.

For outages where the starting time is varied by an hour or more, and when the outage has already had a material impact on pre-dispatch, the following reporting is proposed – a brief, specific and verifiable reason for the cancellation of the outage or change in the planned outage commencement time, which organisation requested the change to the outage, and the time at which that reason became known to the relevant Network Service Provider.

#### Relevant constraint set for each outage submitted in the NOS report

The NGF considers that AEMO should include the relevant and likely constraint set ID for each outage entry submitted, as well as any other relevant background information. This allows users to sort by those outages that may affect market dispatch. We note that this information is generally included by the TNSP's in their 13-month plans, but not included by AEMO in the hourly NOS report until the outage has been reviewed and progressed from 'submitted' to 'MTLTP' status.

#### Relevant constraint recall time and original date/time within the NOS report

Consistent with the outline of section 6.1.2 of the guide to the CIR, NGF considers that AEMO should include within the hourly NOS report the relevant recall time, and original date / time of the outage as submitted, the date / time of the last change and the number of times a change to that outage has occurred.

#### Changes to network ratings within the pre-dispatch period

We propose that information be collected and published in the CIR to show the extent to which changes in network rating are occurring between pre-dispatch forecasts and dispatch. To ensure that the information is relevant we propose that it be gathered only in relation to ratings that are relevant to constraints that either bind in dispatch or were forecast to bind in pre-dispatch.

We note that there is an important distinction between ratings that are dynamically determined by automatic means and those that are provided by manual means.

Where ratings are dynamically determined, it is inevitable that even with high quality forecasting, there will be differences between forecast and actual. But these errors should generally be small.

On the other hand, with manual changes to ratings there are not likely to be small differences because these would not justify the manual intervention, but rather occasional larger differences.

Hence we propose that for dynamic ratings, statistical analysis of differences from forecast should be prepared and published in the CIS, whereas for manual changes the circumstances of individual changes should be reported.

For manual changes the reporting should include forecast rating, revised rating, a brief, specific and verifiable reason for the change in the rating, which organisation requested the change to the rating and the time at which that reason became known to the relevant Network Service Provider

#### **Q2: Of the congestion related information currently published by AEMO, what information should AEMO stop publishing?**

#### Improved correlation between the monthly TNSP plan and the hourly NOS report

The NGF has identified that there are often clear and material inconsistencies between the outages identified in the two source files. Whilst some differences can be expected towards the end of the monthly reporting - because the TNSP 13-month outlook is a single snapshot undertaken once each month, and the NOS is a 24-month outlook updated every hour – Market Participants should reasonably expect that at the time of publication, the 13-month TNSP outlook and the NOS report are entirely consistent. If this were to be guaranteed, then this approach would ensure that the singular NOS report is the definitive reference for planned outages at any one point in time, rendering the 13-month Market Information on Planned Electricity Network Outage reports effectively redundant. AEMO could then stop publishing these 13-month reports.

**Q3: Is there adequate information on how constraint equations are formulated and constructed in the CIR?**

Some NGF members would like to see more context and purpose of the constraints. This would help with understanding.

**Q4: Is there sufficient information on how AEMO formulates constraint equations in Predispatch and PASA timeframes?**

Improved transparency in the application of dynamic inputs in pre-dispatch timeframes

On occasions, NGF members have identified significant step changes in constraint equation RHS values within the predispatch timeframes. It is understood this is an outcome of the approach used to forecast equipment ratings influenced by real time parameters such as wind and ambient temperature. Additional information outlining the approach and parameters adopted for different lines would be appreciated.

**Q5: Should more videos be added to the CIR and, broadly, on what topics?**

In general, additional videos will always be beneficial. Suggested topics include:

- constraint automation examples;
- use of dynamic ratings and impacts in pre-dispatch;
- executive / summary overview of quarterly/annual statistical reports;
- use of interconnector limits in ST/MT PASA;
- treatment of ratings in 5-minute pre-dispatch timeframes; and
- constraints that caused unusual market events, in particular those constraints where market outcomes were not entirely intuitive such as The Palmwoods – South Pine (2/11/2010) and Rocklea flood – related constraint (January 2011)

It would also be helpful to place the videos in 2 different formats on the AEMO website. Some companies restrict access to video media in certain formats. A format that runs in the Windows media player (normally a standard installation on desktops) would be helpful.

**Q6: Is there enough timely network outage information in the CIR?**

AEMO's exception reporting process should proceed with priority

NGF members consider this matter should be dealt with as a matter of priority. The ability to quickly and easily identify any added, removed or amended outages from one NOS report to the next is essential to the efficient management of potential network or congestion related risks. The NGF considers exception reporting from one hourly report to the next is preferable compared with a summary of changes over the preceding 24 hours.

AEMO should consider exception reporting for transmission equipment ratings

The ability to quickly and easily identify any added, removed or amended transmission equipment ratings implemented by asset owners will also provide for the immediate understanding of potential changes to the network transfer capacities.

Information on ramping constraints

Pre-dispatch does not incorporate ramping constraints applied before planned network outages commence. Often, volatile price outcomes occur more so when the ramping constraint is applied, rather than when the actual outage commences (and the outage constraint is applied). Traders may be able to rebid more effectively if it was known which trading interval(s) the ramping constraint is to be introduced, that is either 1 or 2 trading intervals prior to outage commencement.

**Q7: Is there sufficient statistical/reporting information in the CIR? If not, what additional information would you like to see?**

In the NGFs' views, yes.

Finally, the NGF believes the CIR is a worthwhile resource and provides a range of congestion related information in an easily accessible source. The NGF also notes that the CIR generally meets the needs of a wide range of users, from casual occasional users to users who require the in-depth technical detail provided in the CIR. In further developing the CIR the NGF requests that AEMO continue to consider the wide range of backgrounds of CIR users.

Should you wish to discuss any aspect of this submission, please contact Lana Stockman on 03 8628 1632.

Yours sincerely,

A handwritten signature in blue ink that reads "M. Roberts".

Malcolm Roberts  
Executive Director