



19 September 2017

Sarah-Jane Derby
PO Box A2449

Sydney South NSW 1235

Dear Sarah-Jane

Reference: ERC0226

Pacific Hydro thanks the Commission for the opportunity to submit the attached document to the consultation on the proposed Declaration of Lack of Reserve Conditions rule change.

Yours sincerely

A handwritten signature in blue ink, appearing to read "K Summers", written over a horizontal line.

Kate Summers
Manager Electrical Engineering
Pacific Hydro

For enquiries regarding this letter, please contact:

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General comments

Pacific Hydro does not support the proposed rule change. We believe the Australian Energy Market Operator (AEMO) is already provided with sufficient ability under Clause 3.7 Projected Assessment of System Adequacy (PASA), Clause 3.8.20 Pre-Dispatch Schedule, Clause 3.9.3.D AEMO's Reliability Standards Implementation Guidelines (RSIG) and Clauses 4.2.3 Credible and Non-Credible Contingency Events and Protected Events, 4.2.3A Re-Classifying Contingency Events and 4.2.3B Criteria for Re-Classifying Contingency Events of the National Electricity Rules (the Rules) to implement all the changes proposed in their rule change request and that a change to the current Clause 4.8.4 Declaration of Conditions of the Rules is unnecessary and unwarranted.

The Proposed Rule Change

Pacific Hydro supports the introduction of transparent probabilistic modelling into the Short Term PASA and Pre-Dispatch process. The proposed rule change fails to provide the level of transparency expected by market participants and that currently provided by the existing requirements of the Rules, for these reason we oppose AEMO's proposed rule change.

In the rule change request, AEMO details a number of major factors which in AEMO's view are leading to deteriorations in short term power system condition.

- short-term grid demand forecast error, particularly during extreme hot weather, which is in turn affected by small errors in weather forecasts,
- short-term large-scale wind and large-scale solar generation forecast error,
- widespread partial availability reductions in thermal generation during stressful ambient conditions, and
- variations in network constraints.

AEMO is responsible for the forecasts that are mentioned in the first two and last dot points. With respect to the short term errors in large scale wind and solar forecasting, Pacific Hydro requests that the AEMC consider the errors in the AWEFS and ASEFS forecasting system that have been present in dispatch between 2012 to 2016 and only recently corrected. AEMO is currently responsible for the accuracy of the wind and solar forecast and if these are insufficient and inaccurate then further work is required to achieve a higher level of accuracy. The AWEFS and ASEFS systems are inaccurate for the short term (dispatch and pre-dispatch) periods. Errors and inaccuracies in these forecasts cause costs to participants through poor allocation of Causer Pays and cause a system security issue in dispatch.

The wind industry has requested that participants provide the 5 minute forward forecast, being the equivalent of a scheduled generator's availability. This has been accepted subject to AEMO agreeing with the accuracy of the data, however, given the inaccurate performance of the AWEFS forecast in the dispatch period it is questionable why AEMO ought to question data provided by a participant about their own plant. The inaccuracy in the existing forecast penalises participants through poor causer pays factors so there is an existing incentive to ensure that a participant created forecast is reasonably accurate.

Submissions to the MT PASA and the ST PASA have always required seasonal variations associated with the thermal performance of plant. This has been a requirement since the start of the market

and where the 10% POE demand is used, forecast plant availability is required to be in accordance with the regional reference temperature that would create that level of demand.

AEMO is also responsible for determining how the third factor is implemented in their PASA and Pre-Dispatch processes. AEMO currently has within the Rules the ability to introduce probabilistically determined inputs into the Short Term PASA and Pre-Dispatch processes via a transparent review of the RSIG.

In August 2017, AEMO completed a review of the RSIG. This review introduced into the Medium Term PASA process the same probabilistic modelling inputs to that as detailed in the proposed rule change for the Short Term PASA and Pre-Dispatch processes. We are unsure as to why AEMO would seek to alter the Rules to introduce the same probabilistic modelling inputs into the Short Term PASA and Pre-Dispatch processes as that introduced into the Medium Term PASA process via the recent RSIG review. We believe that AEMO should promptly commence a further and expedited review of the RSIG detailing to participants the proposed changes to introduce transparent probabilistic modelling inputs into the Short Term PASA and Pre-Dispatch processes. This will undoubtedly receive the same support for change to improve the existing AEMO processes as that which was received by AEMO for their final Medium Term PASA changes.

The current provisions of Clause 4.8.4 Declaration of Conditions are highly transparent and well understood by participants. Furthermore, the words in the definitions regarding the loss of the credible contingency refer to “This would generally be...largest generating unit”, meaning it is not ALWAYS the loss of the largest generating unit and it is in fact incumbent on the system operator to ensure that it understands what the largest contingency is within a region at all times. System controllers should be actively assessing this through the real time EMS facilities. Changing words in the rules and definitions does not resolve the reality that the largest contingency that can occur within a region may result from a variety of different operating conditions, this is why the words are a guide but not prescriptive. It is not possible to anticipate every combination or condition that could occur and the rules currently provide for the assessment and notification where a change to the measure must be made. It is true that power sources are changing, however, the principles regarding how a power system is operated have not changed. As such the framework within the rules still stand.

AEMO has the ability to change both the value of “capacity reserves” and “contingency capacity reserves” at short notice in accordance with Clauses 4.2.3, 4.2.3A and 4.2.3B in a transparent manner via a Market Notice. With the upgrading of the Heywood interconnector to 600 MW in the Victoria to South Australia direction, it is routine for periods of high flow towards South Australia for AEMO to issue a Market Notice to indicate the “contingency capacity reserves” for South Australia has been increased to 350 MW to represent the largest credible contingency event, being the loss of one circuit of the Heywood interconnector. Participants support this transparent and prudent change by AEMO to the “contingency capacity reserves” for South Australia. We are unsure as to why AEMO indicated in their rule change request that this was currently not the case.¹ There are two line contingencies in South Australia that could cause the loss of the largest generation in the region both are associated with wind farms.

¹ AEMO Rule Change Request – Lack of Reserve Declaration Page 5 – “AEMO does not generally consider the loss of other transmission line elements as contingencies for the purpose of LOR declaration”

We believe the concept of “credible contingencies” as contained within the Rules is also a transparent measure which is well understood by participants. The proposed rule change would significantly reduce the transparency of this area of the Rules.

Conclusion

Pacific Hydro opposes the rule change as proposed by AEMO. The proposed rule change fails to provide the level of transparency expected by market participants and that is currently provided by the existing requirements of the Rules. We believe that AEMO should promptly commence a further and expedited review of the RSIG detailing to participants the proposed changes to introduce transparent probabilistic modelling inputs into the Short Term PASA and Pre-Dispatch processes. This will undoubtedly receive the same support for change to improve the existing AEMO processes as that which was received by AEMO for their final Medium Term PASA changes.