2 August 2024

Mr Daniel Westerman
CEO, Australian Energy Market Operator
Lodged by email to: mlf_feedback@aemo.com.au

Dear Mr Westerman,

Response to AEMO's Issues Paper on Methodology for the Calculation of Forward-looking Transmission Loss Factors

Windlab welcomes the opportunity to provide feedback to the AEMO's issues paper on Methodology for the Calculation of Forward-looking Transmission Loss Factors published in July 2024.

Windlab is a member of the Clean Energy Investor Group (CEIG) and the Clean Energy Council (CEC) and fully supports their submissions.

In addition to what is contained in those two submissions, Windlab would like to make the following comments:

1. When using the minimal extrapolation method to balance supply & demand in periods where there is excess supply, AEMO needs to define appropriate min generation levels for thermal generation (section 3.3.3) that reflect historical behaviour. AEMO should look at the generators historical bids to see at what MW level they try to keep running even when the price goes significantly negative.
2. Recommend semi-scheduled generation is added to the indicative extrapolation publication (see 3.4.3). Moreover, AEMO should annually review differences between indicative extrapolation data and actual generation data to determine if cluster definition is working effectively and more broadly if other changes to the methodology are required.
3. In addition to point 2 above, AEMO should also annually publish a comparison of actual vs forecast MLF for the previous year by REZ by technology. This is important to demonstrate if the MLF methodology is systematically biased for or against a particular technology, eg, thermal, hydro, wind, solar or battery.
4. For batteries (3.3.4), recommend that AEMO look at option 3 to apply a bespoke battery scheduling algorithm. Batteries are currently shifting away from a predominantly FCAS focused operation to an arbitrage focus. As a result, their dispatch will change significantly compared to historical behaviour. Moreover, charging times will increasingly be occurring during periods of excess RE as RE penetration increases.
5. For new batteries (3.2.1), current methodology is for the proponent to supply generation/load profile. While the proponent is likely confident that much of the battery

will be charging during the middle of the day & discharging during the afternoon & evening peak, the actual profile will also depend on what wind generation is likely to be doing. For example, if there are very high levels of wind generation at 3am, then it is likely that batteries may charge from that. But many proponents will likely not know wind generation levels when creating their profiles. This is particularly important given the very large number of batteries that are currently under construction. It would be clearly nonsensical to have the profile of multiple GW of new batteries all discharging in an evening that had very high levels of wind. For this reason, it is recommended that new batteries be included in the bespoke battery scheduling algorithm as mentioned in point 4 above. Moreover, it is important that battery discharge is the first to be minimised in the minimum extrapolation method during periods of excess supply, particularly given that the bespoke methodology is unlikely to be ready for the 2025/26 calculations.

6. For new wind and solar (3.2.1), given the long length of time that it takes for some projects to reach full generation due either to lengthy construction times or extended hold point testing, it is important that AEMO's estimated generation profile includes a realistic ramp up period. This should reflect historical ramp up times.

Windlab thanks AEMO for the opportunity to provide feedback on the Methodology for the Calculation of Forward-looking Transmission Loss Factors. For any further information about Windlab's submission, please contact David Osmond via the email david.osmond@windlab.com

Yours sincerely

David Osmond

Principal Engineer

Windlab