WOOLNORTH RENEWABLES

9 June 2022

Mr Charles Popple
Reliability Panel Chairman and AEMC Commissioner
Australia Energy Market Commission (AEMC)

Via Email: Peter.Thomas@aemc.gov.au

Dear Mr Popple,

RE: 2022 Review of the Frequency Operating Standard

Woolnorth Renewables (WNR) appreciates the opportunity to provide a submission to the 2022 Frequency Operating Standard (FOS) Review, with particular emphasis on the revision of the existing limit of 144MW (FOS limit) for the largest allowable generation event in the Tasmania system.

WNR owns, operates, and maintains three large scale wind farms in Tasmania (Bluff Point, Studland Bay and Musselroe Wind Farms). The total installed total capacity is 308MW, making WNR a valuable and significant provider of reliable, renewal generation (approximately 10% of Tasmania's electricity needs) in Tasmania.

Musselroe Wind Farm (MRWF), which has a generation capacity of 168MW, has been the only Tasmanian generator to be financially impacted by the FOS limit following its implementation in January 2020. Since that time (2.5 years), MRWF has been constrained to 144MW at the wind farm's connection point at Derby. Allowable maximum generation at the site is 153MW (15MW lower that the designed wind farm output). WNR calculated the annual loss in revenue, as a result of this limit, is over $1.0M. As per the applicable FOS provisions, MRWF is able to generate above the FOS limit by activating/implementing a Generator Contingency Scheme (GCS).

As a result of the significant financial losses calculated and forecast, following the enforcement of the 144MW FOS limit, WNR worked closely with TasNetworks and AEMO to establish a GCS scheme for MRWF. The scheme commenced operation on 20 December 2021 following 2 years of actively seeking a participant load and negotiating commercial terms. Despite WNR investigating almost 10 interruptible loads, only one viable option was available for the MRWF GCS. This load is also utilised, with priority, for the Special Protection Scheme (SPS) for Basslink contingency events. This operationally results in a significant loss of access to the GCS for MRWF. Across the first 3 months of operation, WNR have concluded the contracted load has not been available for approximately 40% of the time when the MRWF GCS has been required. This has directly impacted revenue (cost of load access and lost generation) and prevented additional renewable energy generation entering the grid.

In addition to the above impact, MRWF has registered with AEMO to provide Frequency Control Ancillary Services (FCAS - Regulation, Slow and Delayed contingency services), however because of the FOS limit, MRWF could not register the full plant generation capacity (168MW) with AEMO to provide FCAS Regulation services. This results in an additional financial loss to WNR, as well as preventing MRWF providing further FCAS to support the safe and reliable operation of the grid.

WNR have provided several submissions to the AEMC on this matter (including a separate communication on 7 April 2021). We would like to draw the Panel's attention to the following points:

- The procurement (availability & cost) of Contingency FCAS in Tasmania has been one of the key factors that was used in the determination of the size of the single largest generator contingency event by the Reliability Panel in 2008. We are not aware of renewed modelling or assessments since this time.
- The current availability of FCAS Raise 6Sec services in Tasmania is many times greater than what is required for the additional 11MW that could potentially be exported by MRWF to the grid (at the connection point).
    - The Adaptive under frequency load shedding scheme (AUFLS2 of Hydro Tasmania) provides 76MW of FCAS R6Raise services in Tasmania.
    - The market data shows that the dispatch level of the AUFLS2 has been 50MW or lower (25MW available) for more than 85% of the time.
- The market data shows that the cost of FCAS contingency services in Tasmania have dropped significantly.
- AEMO were tasked in 2008 with establishing dynamic FCAS assessments. We are not aware of this being implemented or attempted. A dynamic limit may be an alternative approach, although increasing the limit is WNR's preferred method.
- The limit of 144MW for the largest allowable generation event in the Tasmania system, being applied to MRWF, is likely to impact on other future energy developments of state significance.
- MRWF generated at its full plant capacity (155MW at connection point) between July 2013 and January 2020, without causing any notable power system security issues.

WNR concludes, for MRWF specifically, that an additional 11MW is very unlikely to make the power system insecure or lead to runaway FCAS pricing outcomes. Despite establishing a GCS for MRWF, WNR continues to bear the impact of the FOS limit through the cost of lost production revenue and cost to access the GCS load. A further downside is lost renewable energy generation supplied to the grid and less FCAS support for safe and reliable operation of the network. MRWF operated for over 6 years at full plant capacity without issue and the 144MW FOS limit introduces constraints for future Tasmanian energy developments. Considering the obvious benefits of raising the FOS limit, WNR propose to the Reliability Panel, that the largest allowable generation event should be reviewed and increased to a minimum of 155MW (at the connection point) for Tasmania.

If you require further information in relation to this, please contact Selva Palaniyappan (Engineering and Business Analyst) on 0473592636 or via email selva.palaniyappan@woolnorthwind.com.au.

Yours sincerely

Chris Sims
On behalf of and for
General Manager
Woolnorth Renewables