

10 October 2017

Mr. Neville Henderson
Chairman
Australian Energy Market Commission Reliability Panel
PO Box A2449
Sydney South NSW 1235

Dear Mr. Henderson

Review of the Frequency Operating Standard – Stage One Draft Determination – (REL0065)

Energy Networks Australia welcomes the opportunity to make a submission to the Australian Energy Market Commission (AEMC) Reliability Panel's ("the Panel") Frequency Operating Standards (FOS) Stage One Draft Determination released on 12 September 2017.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks. As we noted in our response to the Panel's Issues Paper, Transmission networks play an important role in power system security and reliability. This includes changing obligations in respect of the design, implementation and monitoring of emergency frequency control schemes in accordance with 'protected event' standards established by the Panel and in the provision of inertia services.

Energy Networks Australia is therefore supportive of an assessment of the FOS which demonstrates how it takes account of all the related on-going reviews of market and regulatory arrangements across the National Electricity Market (NEM).

Key elements of the Panel's draft FOS

Energy Networks Australia generally accepts the Panel's proposed changes to the current FOS, notably:

- » The inclusion of a standard for protected events¹, so that following a protected event, the frequency should remain within the emergency frequency excursion tolerance limits.

¹ At page 25, the Panel explains, "*The purpose of a protected event is to limit the consequence of certain high consequence non-credible contingency events, the occurrence of which may otherwise lead to cascading outages that may result in major supply disruptions and potentially a black system condition for all or part of the power system*".

- » A requirement on the Australian Energy Market Operator (AEMO) to use “reasonable endeavours” to stabilise and restore the system following non-credible contingency events and multiple contingency events that are not protected events².
- » A revised definition of ‘generation event’ to include the sudden, unexpected and significant change in output from one or more generating systems of 50MW or more within a 30-second period.
- » The revision of the definition of an ‘island’ in applying the FOS for island operation, following a separation event.
- » The increase of the limit for accumulated time error that applies for the mainland from 5 to 15 seconds, noting the limit of accumulated time error in the draft FOS for Tasmania remains unchanged at 15 seconds.

Stage 2 of the Review

Energy Networks Australia understands that the Panel will conduct a thorough review of the settings of the FOS as part of Stage 2 of the Review. This will include examining the boundaries of the various frequency bands and the timeframes for restoration of power system frequency following specific events, and under a number of different power system conditions. As part of this review, we look forward to further stakeholder discussion with the Panel on:

- » whether a general limit should be placed on the rate of change of frequency in the FOS
- » benefits in keeping a performance measure on accumulated time error.

Energy Networks Australia looks forward to on-going engagement with the Panel and the wider industry as part of the FOS consultation process, as well as playing an integral part of the AEMC’s impending Frequency control frameworks review.

Should you have any additional queries, please contact Norman Jip, Energy Network Australia’s Senior Program Manager – Transmission on (02) 6272 1521 or njip@energynetworks.com.au.

Yours sincerely



Andrew Dillon
Interim Chief Executive Officer

² This is also in line with the automatic access standard for the connection of generators as set out in Rules S5.2.5.3 (refer page 32).