

8 February 2019

Reliability Panel
c/- Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Reference: REL0069

Consultation on request for protected event declaration

ElectraNet appreciates the opportunity to respond to the Reliability Panel in regard to the AEMO request for a protected Event declaration in South Australia.

ElectraNet is the primary Transmission Network Service Provider in South Australia and is responsible for the reliability and security of transmission services for South Australian customers.

At the outset, we would like to acknowledge that ElectraNet has worked with AEMO in the Power System Frequency Risk Review 2018, including the proposed protected event declaration. We consider that following the September 2016 system black in South Australia and subsequent further penetration of renewable generation in South Australia, it is prudent to take appropriate measures to avoid the disruption arising from recurrence of a similar event with its high economic impacts.

By way of background, ElectraNet developed and implemented a System Integrity Protection Scheme (SIPS) in December 2017 in consultation with AEMO, aimed at taking reasonable and timely action to avoid the risk of SA system separation and potential blackout for loss of multiple generating units.

However, this scheme is not designed to take any action after the SA system separates from the NEM. Following its initial implementation, ElectraNet will be examining the scope for improvements to make the SIPS more effective.

Against this background, ElectraNet supports AEMO's recommendation to reduce interconnector transfers during destructive weather conditions as well as upgrade the SIPS, for the following reasons:

- The significant and growing dispersion of generation in South Australia heightens the power system security risk during adverse weather conditions

- The loss of multiple generating units can occur without initiation by transmission faults (e.g. wind generation cuts off at very high wind speeds)
- Reducing the interconnector imports provides an operating margin for significant events, during extreme weather conditions
- The upgraded SIPS will further improve the reliability of the scheme, and can be delivered at a relatively low cost. With any such sophisticated wide area control scheme, there will always be a very low residual risk that it may not pick out all events and therefore the additional action of reducing the interconnection flows will reduce the overall risk exposure

AEMO estimates that the SIPS modifications can be completed within two years.

Our preliminary investigations indicate that the use of phasor measuring units as a detection mechanism will require an initial pilot project, which is expected to extend the delivery time frame beyond two years.

Please contact me on 08 8404 7983 if any further clarification is required in relation to this submission.

Yours sincerely



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