Neville Henderson
Chairman
AEMC Reliability Panel
PO Box A2449
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Dear Mr Henderson

REVIEW OF THE SYSTEM RESTART STANDARD – DRAFT DETERMINATION 2016

Origin Energy Limited (Origin) welcomes the opportunity to comment on the draft determination of the System Restart Standard (SRS).

South Australia System Black Event
The recent system black event in South Australia on 28 September 2016 has highlighted the importance of having an appropriate SRS that ensures the restoration of power quickly and efficiently. It is imperative that in finalising the new SRS the Reliability Panel determines whether the proposed standard would have been met under the same conditions.

It is noted that an international comparison of major blackouts was undertaken by the Reliability Panel. This included an analysis of the regulatory arrangements and restoration timeframes[1] and their applicability to the National Electricity Market (NEM). While international comparisons do offer precedents in terms of the impact and restoration response times, the SA event provides a practical example of NEM specific issues with an opportunity to now tailor the standard to account for these.

Appendix A[2] shows the restoration of generation and demand throughout the course of the SA event. What is evident is the slow restoration of load by SA generation when compared to the current system restart standard[3] of 40% of peak demand (~1300MW) to be supplied within 4 hours. It also highlights the integral role that the Heywood Interconnector played in providing additional megawatts to consumers, highlighted by the gap between the scheduled demand (red line) and SA generation (blue line). The proposed standard explicitly excludes the use of interconnectors to restore load, so that planning can be undertaken for a true, NEM wide, black system event. Origin is supportive of this exclusion as it allows the SRS to plan for a worst case scenario.

Origin questions whether some of the modelling assumptions underpinning the draft SRS should now be modified given learning's from the SA event and if there should be an increased economic value placed on SRAS redundancy. For example an assumption of 100% transmission reliability within the modelling is not appropriate. Transmission assets are subject to a number of potential faults that can hinder the restoration process.

Appendix A also shows that the restoration of generation and demand does not occur in a linear fashion, rather there are periods of retraction when generation levels reduce. Origin would contend that there is a need to assess the likelihood of plant failure or reduction of output when calculating the restoration curves. This would better align with the actual restoration of supply to generation and take into account the realities of plant operation.

[1] Review of the System Restart Standard – Draft Determination, AEMC Reliability Panel, 2016, p.27
[2] NemSight, Creative Analytics and AEMO Data, 2016
[3] System Restart Standard, AEMC Reliability Panel, 1 August 2013.

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Draft Determination – Additional Points

Origin is cautious at the use of only current SRAS offers and procurement processes as an input into the economic modelling undertaken by Deloitte[4] as it may exclude SRAS sites that did not tender in the last procurement process. There is potential for AEMO to develop a new participant survey that would seek to identify new technologies that could provide SRAS and assess the modifying costs participants may be willing to incur to provide an additional service. This additional information would provide a more complete picture of SRAS providers across the NEM, which may lead to cheaper procurement and more geographically and energy diverse sources.

Origin is broadly supportive of applying different standards to each electrical sub-network. This enables tailoring of the SRS based on the unique characteristics of that network including geographical diversity and transmission layout.

Additionally Origin is supportive of the diversity parameters when assessing the procurement of the SRS. Electrical, geographical and energy source diversity provides an additional layer of redundancy which can aid the restoration of load following a black event. Further to this Origin is supportive of the NSW clause that seeks to re-supply and energise the auxiliaries of at least 500 MW of generation capacity north of Sydney within 1.5 hours of a major supply disruption with an aggregate reliability of at least 75%. This requirement reinforces the high economic value that should be placed on the Sydney region and prioritises restoration around the large generation assets such as Eraring, Bayswater, Liddell, Mt Piper and Vales Point that that reside immediately north of Sydney.

Origin looks forward to the final report scheduled for December 2016. Should you have any questions or wish to discuss this information further, please contact James Googan (02) 9503 5061 or james.googan@originenergy.com.au.

Yours sincerely,

Steve Reid
Manager, Wholesale Regulatory Policy

[4] Review of the System Restart Standard – Draft Determination, AEMC Reliability Panel, 2016, p.35

Appendix A – SA Black Event – Generation and Load Restoration