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Reliability Panel
C/o Australian Energy Market Commission

Lodged electronically: via AEMC website

Dear Reliability Panel

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Review of the System Restart Standard – Consultation Paper (Stage 1)

EnergyAustralia (EA) is one of Australia's largest energy companies with around 2.4million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. We own, contract, and operate a diversified energy generation portfolio spanning coal, gas, battery storage, demand response, solar, and wind assets. Combined, these assets comprise over 5GW of generation capacity.

EA welcomes the opportunity to comment on the Reliability Panel's Stage 1 consultation paper on its Review of the System Restart Standard (SRS). The Review is timely, given the Federal Government's current focus on speeding up investments in the NEM to deliver against its emissions objectives. Given the scale of the investment required, it's easy to lose sight of the other important mechanisms and market standards that provide system stability and much needed system resilience capability, particularly in a renewables dominated grid. Ensuring the NEM maintains an ability to restart and/or re-energise impacted parts of the power system following a major disruption or black start (as the case may be) is critical to good industry practice, satisfactory NEM operations, and entirely consistent with the reasonable expectations of energy customers. We note that EA already works closely with AEMO to understand its needs, its procurement of SRAS, and the SRS.

EA agrees with the concerns raised by AEMO associated with their ability to procure necessary sources of System Restart Ancillary Services (SRAS) across the grid. This is clear in the very challenging role AEMO and industry has:

- in objectively determining guidelines for electrical sub-networks;
- identifying the number of firm SRAS providers per sub-network;
- determining the strategic location of SRAS providers; and
- securing diversity of such services.

Further AEMO's concerns are equally valid as a result of:

- the increasing number of participants and technologies and their connections in more remote areas;
- technological advancement and the need to push technical envelopes;
- changes in grid connection configurations and generator performance standards;
- the general lack of awareness and knowledge of system restart standards, capabilities and processes; and
- changes consumer behavioural changes and the rise of CER and its impacts on the distribution network.

Building and maintaining system resilience in a flexible but predictable way naturally becomes more complex as traditional sources of SRAS leave the market and as the NEM expands, for example, construction of the Copperstring transmission line[1] or any of the planned Renewable Energy Zones. It's clear that no one but pockets within AEMO and TNSPs operations teams, comprehensively understand system restart paths, and how they can be affected by the events that led to the system black. It is also genuinely not clear how well this speciality area is resourced, but it does seem clear that SRAS costs will be increasing because of the number of challenges AEMO need to resolve, in addition to ensuring the solution meets the Value of Customer Reliability.

Therefore, in our view, while the current SRS works for today's market (largely with thermal, hydro and gas assets), it requires hastened investigation to maintain its appropriateness as the energy system transitions. EA supports further efforts by the Reliability Panel to combat this complexity and the growing shortage of SRAS, by considering:

- the appropriateness of the SRS procurement methodology – i.e. recurring competitive bids for periodic contracts that struggle to capture new entrant interests often because of the high cost of developing local black start capability and maintain adherence to strict procedures.
- establishing processes to discuss SRAS or back-up facilities with new entrants (large generators, Bidirectional Units and loads).
- capturing insights from current SRAS service providers and bidders to determine if the SRAS framework is balanced – i.e. reviewing the costs and pressures to offer, test and maintain the assets and systems providing the services against revenue earned.
- the interdependency on integrated systems (gas and diesel commodity, transport and storage, etc).
- how best to modify the SRS for the future NEM (perhaps using AEMO's Integrated System Plan as a basis for how the system is expected to evolve)
- planning for system restart preparedness and restart capability within REZ and other large potential connection configurations (i.e. offshore wind etc.) to help bring back these mini supply grids faster online.
- integration with synchronous condensers, as the prevailing solution being focused on by System Strength Service Providers under the system strength framework to deliver locationally specific system strength.
- broadening of the SRS service description to enable other (newer) technologies to provide SRAS or less firm SRAS support services, particularly battery energy storage (BESS), as long as service enablement can be reliably secured
- the role that distribution connected solutions, including community batteries, could play in supporting local resilience.
- investigating how the demand-side, potentially utilising consumer assets like electric vehicles or aggregated BESS systems (i.e. VPPs) could contribute to regional grid restart.

While we acknowledge the potential for BESS as an SRAS or SRAS support provider, its potential 'swiss army knife' applicability is increasingly being seen as a solution for every emerging system problem. Therefore, we consider that careful consideration is needed when developing the SRS to ensure that BESS systems, specifically shorter duration systems, can continue to balance commercial operation with compliance adherence against applicable regulatory obligations. Reservation of significant BESS State of Charge for system restart would likely be a very expensive outcome given lost revenue

[1] CopperString 2032 | Powerlink

opportunities. As such, options to increase flexibility or development of a condition-based approach outlining when such a service may best be reserved (i.e. forecast severe storm conditions, or LOR levels, etc) may be another pragmatic way to balance the costs and benefits of SRAS. Clearly having a fast controllable load to support firm SRAS providers and maintain a strong supply/demand balance is a key feature of BESS charging.

EA strongly welcomes an industry discussion with the Reliability Panel and market bodies, especially when Stage 2 progresses to the point where the current or amended system restart standard quantitively settings and qualitative elements are to be determined

If you would like to discuss this submission, please contact me on 0422 399 181 or Dan.Mascarenhas@energyaustralia.com.au.

Regards

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