



**EnergyAustralia**

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Future Power System Security Project  
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Dear Project Team

Lodged via email: [stakeholderrelations@aemo.com.au](mailto:stakeholderrelations@aemo.com.au)

### **AEMO Future Power System Security, Progress Report, August 2016**

EnergyAustralia is one of Australia's largest energy companies with over 2.5 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. We also own and operate a multi-billion dollar energy generation portfolio across Australia, including coal, gas, and wind assets with control of over 4,500MW of generation in the National Electricity Market (NEM).

EnergyAustralia supports AEMO's Future Power System Security (FPSS) program, in particular efforts to discuss and explore the technical issues affecting security with participants who are not always close to these matters. We see AEMO's experience operating the integrated power system as central to informing timely and pragmatic industry changes that are well-considered and minimise surprises or step changes in risks to participants and consumers.

To that point, we have some concerns surrounding the potential for inconsistent messaging to participants about threats to system security. Clarity is required to minimise confusion and subsequent risks of poor decisions being made. This is particularly the case given the numerous technical reviews being conducted by the Australian Energy Market Commission (AEMC), Council of Australian Governments Energy Council and AEMO covering overlapping or interacting topics. There are presently multiple system security Rule change proposals before the AEMC and we are aware that AEMO is also assessing the need for further Rule change proposals.

In reference to the FPSS progress report, EnergyAustralia generally supports the proposed work program and key deliverables over the next six months, but encourages AEMO to:

- Accelerate investigations into acceptable rate of change of frequency (RoCoF) standards. At present, it appears there is an inconsistent approach being adopted. For prior outages, AEMO has limited interconnector flows based on a <1Hz/sec standard immediately after the event, yet accepts RoCoF of >4Hz/sec may occur for non-credible events even though that level will likely breach the frequency operating standards. AEMO needs to continue current work to confirm whether higher RoCoF levels are a threat to system security and plant across the NEM as a matter of urgency, including whether installation of some RoCoF relays may be warranted.

- Establish and publish clear, well-defined, leading indicators of technical issues (for fault levels, RoCoF, frequency response, reserve margins, inertia levels, voltage changes, changes to scheduled demand, etc.). These indicators should be based on prevailing system conditions, and include how these change over time, to inform participants of risks.
- Provide clear advice through this work program on what the likelihood of regions separating through either credible or non-credible events is, explain how this is changing, as well as the consequences of separation.
- Consult with participants and provide transparency in endeavours to design any new over-frequency scheme, and in any future modifications to the existing under frequency load shedding scheme in South Australia. This would include disclosing the studies, assumptions and limits adopted.
- Provide timely and transparent advice on any changes to system operating procedures and processes well before they are made, with clear advice on the likely implications. This should include, where possible, consulting with and advising the market on actions it proposes to take before it does so. This includes decisions to open transmission lines to manage over-voltages, adjust transient stability equations on a discretionary basis or procure frequency control ancillary services.
- Carefully consider solutions to security issues or changes to existing standards that may also have material impacts on existing (energy and ancillary) markets.
- Ensure any considerations of future power system security matters do not detract from the core objective of broader studies, such as the Electricity Statement of Opportunities and National Transmission Network Development Plan programs of work.

We are keen to continue engaging with AEMO on the above issues, and the FPSS work program more broadly, to ensure the best outcomes for the market and customers, and look forward to leveraging off AEMO's experience and expertise as the system operator.

If you would like to discuss this submission, please contact Chris Streets on (03) 8628 1393.

Regards

Melinda Green

Industry Regulation Leader