

Reliability Panel
Australian Energy Market Commission
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AEC submission to REL0065: Frequency Operating Standard Review Draft Report

The Australian Energy Council (AEC) welcomes the opportunity to make a submission to the Frequency Operating Standard (FOS) Review Draft Report

The AEC is the industry body representing 23 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia and sell gas and electricity to over 10 million homes and businesses.

Scope of the Review

The AEC recognises that the Panel's work on the FOS sits within a broad group of work which includes the:

- Protected Events rule change;
- Frequency Control Frameworks Review,
- AEMO's work on the Market Ancillary Services Specification (MASS); and
- AEMO's frequency control trials.

In section 3.2 the report suggests the Panel will allow these processes to further develop thinking regarding:

- The Normal Operating Frequency Band (NOFB) standard; and
- A Rate of Change of Frequency (RoCoF) standard.

As a result the Report proposed no change to the FOS on these matters at this time. However these matters, particularly the NOFB, are pressing concerns with respect to frequency control in the NEM.

The AEC understands that whilst the NOFB mainland standard of 99% 49.85-50.15Hz remains largely met, the frequency sits much more commonly towards the outside of the standard now than it did historically. This is often cited as a serious concern by AEMO with respect to power system resilience. It is also a concern for some AEC members regarding plant operation, for example causing synchronisation delays.

Progress on these solution-focussed workstreams would be assisted by having a clear outcome to work towards, such as a new form of NOFB standard. In the AEC submission to the Frequency Control Frameworks Review Draft Report, we noted:

“The Energy Council's view is that reform should ideally follow a structured and considered approach, focussing first on defining the desired outcome through the Frequency Operating

Standard (FOS), followed by designing a sound market mechanism that encourages voluntary provision from the widest possible range of competing technologies.”¹

In the AEC’s view, it is the role of the Panel to firstly set the desired outcome and it is then the role of the solution workstreams to find the most efficient solutions to deliver that outcome.

Definition of a Generation Event

The AEC appreciates TasNetworks’ concern that Tasmanian generation projects may connect by long single radial lines that carry an appreciable contingency risk and should therefore be captured by the 144MW maximum Tasmanian generation event. On the understanding that it has no impact on any existing operations in the mainland, the AEC supports the Panel’s proposed NEM-wide redefinition of a generation event.

It is noted the new definition will potentially impact upon one existing Tasmanian generator when operating at very high outputs. TasNetworks proposed two possible solutions for this generator. The report considered and rejected one of those solutions - increasing the 144MW limit - due to its broader implications.

The report appear to have not engaged with the other proposed solution – exempting this existing generator from the new definition. An exemption seems attractive in this case because:

- The generator investment was made in good faith under the previous definition;
- The amount of exceedance of the maximum generation event is small – only 13 MW after allowing for losses – and occurs infrequently;
- The generator has been operating for five years under the existing definition with no obvious impact on the integrity of the Tasmanian network.

Credible Contingency Event standards

The AEC supports the recommendation to retain the existing generation and load change band of 49.5-50.5Hz. The introduction of new sources of contingency Frequency Control Ancillary Services (FCAS), appear to have already reduced the cost of contingency FCAS, and this trend is likely to accelerate. Thus the benefit in avoided costs is unlikely to justify the risk.

Accumulated Time Error

Accumulated time error is a very useful metric for monitoring:

- frequency control performance over time;
- systemic biases in control systems; and
- periods in the day where the energy market consistently fails to adequately balance supply and demand and unintentionally calls upon the frequency control systems.

A large time error indicates a frequency control problem that has occurred in the past but is not necessarily occurring presently. If it is large then we should look to rectify its cause in order to prevent its repetition, however there is no market or customer benefit in realigning electrical time by applying an intentional frequency bias to a subsequent, unrelated period.

The draft report argues that

“...the energy market should be self-contained and frequency control arrangements (should) not end up being used to correct energy imbalances that may occur in the energy market.”²

If we are to follow such a principle, it should be applied instantaneously, or at least be contained within a single dispatch interval. Intentionally biasing the energy market in an unrelated subsequent dispatch interval does not support the principle and potentially contradicts it.

¹ Australian Energy Council Submission to Frequency Control Frameworks Review Draft Report

² Draft report, page 27

The AEC suggests the accumulated time error limit should be re-expressed such that a rapid change triggers an investigative action but does not oblige AEMO to reduce it through intentional frequency biases upon future, unrelated dispatch intervals.

Any questions about our submission should be addressed to me by email to ben.skinner@energycouncil.com.au or by telephone on (03) 9205 3116.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Ben Skinner', with a large, stylized flourish at the end.

Ben Skinner
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Australian Energy Council