

Friday, 21 October 2016

John Pierce
Chairman
Australian Energy Market Commission
Lodged Electronically

Dear Mr Pierce,

RE: ERC0212-13 Emergency over- and under-frequency control schemes

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, energy efficiency, hydro, bioenergy, energy storage, geothermal and marine along with more than 4,000 solar installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC can appreciate the need for refinements to the NEM's emergency frequency control schemes. Given the changing nature of generation and demand it is appropriate that the current arrangements are revisited, especially with regards to the rapid growth in embedded generation and changes in generation mix.

However, the CEC is concerned with the apparent 'urgency' by which these rule changes have come about, given that the underlying changes have been self-evident now for years. The Commission should take care to ensure that solutions are well planned and measured despite pressures to expedite this process. Solutions developed in this rule change should be forward looking and designed to encourage new solutions to participate in the future,

In the first instance the CEC is unsure that a heavy reliance on the Under Frequency Load Shedding is consistent with the efficient use of Distributed Energy Resources (DER) that could respond rapidly to changes in frequency. The CEC believes that a more integrated approach to DER would include consideration of capability for DER control schemes to act rapidly to assist in suppressing both high and low frequency events. The market is moving towards a more distributed energy system and the opportunity for connected active DER

devices to measure and respond to changes in frequency has never been greater, and is increasing. Any refined scheme should be accounting for this potential opportunity.

In addition to the above the CEC's members have raised some issues with the proposed over-frequency generator shedding (OFGS) scheme and do not believe this proposed scheme is forward-looking or well developed.

Since the characteristics of over-frequency events have not been well articulated by the work undertaken by the Commission, AEMO or the rule change proponents the CEC questions whether the proposed scheme is proportional to the issue. For example it is reasonable to expect that lower rates of change of frequency would result during an over-frequency event, as compared to an under-frequency event. However, the rule change proponents and AEMO appear to be treating the responses as being in the same class. While there is no evidence to support this approach the Commission has no way to gauge whether the response is proportional to the issues.

Shedding generation within the contingency frequency bands to manage frequency is by definition a contingency frequency service. It is therefore reasonable that market mechanisms are relied on to illicit a response in the first instance.

Any proposal to simply trip entire wind farms is not an acceptable solution and may lead to unnecessary equipment damage for some generators. Individual wind farms and turbines are capable of responding very quickly to an over-frequency event so are far better suited to manage the tripping and/or ramping of turbines given specific response requirements.

The CEC disagrees with the interpretation of the rules as cited in regards to managing over-frequency. AEMO already has the power to set generator responses to over-frequency events in generator performance standards. There is no clear need for rule changes to enable OFGS.

Additionally the proposed rule change is likely to provide negative investment signals towards renewable energy investments. Given that OFGS as proposed is arbitrary and lacks any compensation arrangements investment in semi-scheduled technologies would be disadvantaged over other technologies. Such treatment conflicts with the technology neutrality principles expected to be considered by the Commission and creates negative signals to prospective investors.

Further, there is a clear contradiction in the proposal of a scheme that removes generators from the market, when these generators are expected to provide contingency lower FCAS. AEMO's current work in their Energy Conversion Model Guidelines Review (Stage 3) and

revision of the Market Ancillary Services Specification is addressing barriers to semi-scheduled generation providing FCAS services. Semi-scheduled generation has a clear potential to provide contingency lower services and these are the exact same services that would be needed to settle frequency following an over-frequency event.

Despite there being a growing need for these generators to play a more active role in FCAS the proposed OFGS would deter investments to enable this capability and reduce competition for frequency lower services increasing consumer costs.

It is for these reasons that the CEC believes the only workable solution that is consistent with the market objectives is to create a scheme that elicits a rapid response from generation and DER devices to manage over-frequency events. It is imperative that the rule change ensure a market-based scheme is created that does not negatively impact investments in to the energy sector and reduce competition in FCAS services.

Please contact the undersigned for any queries regarding this submission.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tom Butler', with a horizontal line extending to the right.

Tom Butler

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