24 April 2018

Ms. Anne Pearson
Chief Executive
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Attention: Ms. Claire Richards

Frequency Control Frameworks Review – Draft Report (EPR0059)

Energy Networks Australia welcomes the opportunity to make a submission to the Australian Energy Market Commission's (AEMC) Frequency Control Frameworks Review (March 2018) Draft Report.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

Energy Networks Australia continues to support this important and necessary review into the regulatory and market frameworks that underpin frequency control in the National Electricity Market. We would also like to acknowledge the evident stakeholder empowerment and development of a more objectives-focussed view to regulation taken by the AEMC in the draft report.

In consultation with our members, Energy Networks Australia offers the following responses regarding the key themes and draft recommendations contained within the Frequency Control Frameworks Review draft report.

Participation of DER in frequency response markets

The assumptions made by the AEMC in regards to the drivers of frequency performance deterioration are supported by Energy Networks Australia, and changes to the Frequency Control Ancillary Service (FCAS) frameworks to allow utilisation of distributed energy resources (DER) should go some way to ameliorating this decline in performance in the future. The Energy Networks Australia/CSIRO '*Electricity Network Transformation Roadmap*'[1] placed significant emphasis on the positive role that DER could play in security of the evolving power system, including utilisation in the FCAS market. Therefore, Energy Networks Australia's position in regards to recommendations 5 and 8a is that it supports a broader review of the market ancillary

[1] CSIRO and Energy Networks Australia 2017, Electricity Network Transformation Roadmap: Final Report.

Energy Networks Australia www.energynetworks.com.au
Unit 4, 110 Giles St, Kingston ACT 2604
P: +61 2 6272 1555 E: info@energynetworks.com.au
Energy Networks Association T/A Energy Networks Australia
ABN: 75 106 735 406

service specification (MASS) as a means of enabling this important role of DER into the future.

Technical implications of DER provision of FCAS

Energy Networks Australia supports maximising the value of DER for all stakeholders, including due consideration of all technical challenges impacting benefits or costs to consumers. We agree with draft recommendation 7, that further technical analysis needs to be undertaken between key stakeholders (including transmission network service providers) on the use of DER for FCAS, with respect to technology types, metering and verification options, aggregation, and the influence to and from the grid under various network conditions.

Several Energy Networks Australia members have already conducted trials to try to manage these challenges, and we recommend that any implementation of recommendations 5 and 7 should look at utilising the outcomes of successful trials as a starting point for future analysis and design of larger scale trials. Energy Networks Australia welcomes the opportunity to facilitate engagement between the AEMC, AEMO and distribution and transmission network operators.

Visibility of DER and aggregator impacts

Energy Networks Australia supports the AEMC's efforts to seek greater visibility of DER[2] and aggregation impacts on networks. Networks require this visibility in terms of greater understanding of aggregation technological characteristics and potential impact on frequency, when undertaking load modelling, network investment planning and outage planning.

Energy Networks Australia suggests that the AEMC consider an additional further recommendation be included, in addition or extension to draft recommendation 7, which addresses the need for transparency of technical characteristics of aggregation technology and reviews a need for new technical standards to be applied to aggregators in terms of controlled aggregated response.

DSO collaboration between AEMO and Energy Networks Australia

Energy Networks Australia and AEMO are currently collaborating to develop a comprehensive framework to allow the most effective integration of Distributed Energy Resources (DER) into the NEM, with particular focus on the distribution system. This work is being undertaken in a manner designed to foster collaboration with all key stakeholders to assist us co-design a preferred framework for the coordination and optimisation of DER in the distribution network. It will also identify the benefits and importance of developing suitable arrangements for DER orchestration, and the challenges, options and no regrets actions for a sustainable long-term approach to deliver the desired result.

---

[2] Energy Networks Australia understands that Virtual Power Plants, the forecasting and the managing of consumers' use of new energy technologies, is beyond the Review's scope.

The outcomes of this work program have been designed in part to address the potential impact of DER on system security and frequency services, and could be utilised to inform the AEMC's frequency control frameworks review. Energy Networks Australia would be happy to consult with the AEMC on how these two projects could potentially be aligned, and invites the AEMC to contribute to the development of this framework, participating in the upcoming consultation process.

Energy Networks Australia DER connection guidelines

As a key outcome of the Electricity Transformation Roadmap, Energy Networks Australia are currently undertaking a major project to develop a set of National Guidelines for DER Connections. These guidelines are being developed, in in a manner not intended to mandate any particular services, and will be largely outcomes-based, allowing flexibility in application to network characteristics and accommodating differences in technology, while still improving consistency of connection processes.

Energy Networks Australia welcomes the AEMC's continued input into the development of these guidelines, and supports the call for wider stakeholder input. Issues surrounding the influence of AS4777 on the ability of DER to be utilised for frequency control need to be addressed through appropriate means with Standards Australia, and Energy Networks Australia continues to support engagement of AEMC on this matter.

Should you have any additional queries, please contact Heath Frewin, Head of Distribution, on 02 6272 1555 or hfrewin@energynetworks.com.au

Yours sincerely

Dr Stuart Johnston

General Manager, Network Transformation