24 June 2019

Ms Olga Iaroshevska
Australian Energy Market Corporation
PO Box A2449
Sydney South NSW 1235

Dear Ms Iaroshevska

ERC0273 – Monitoring and reporting on frequency control framework – Consultation Paper

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comment to the Australian Energy Market Commission (AEMC), on its consultation on the *Monitoring and reporting on frequency control framework – Consultation Paper*. This submission is provided by Energy Queensland, on behalf of its related entities Energex Limited (Energex), Ergon Energy Corporation Limited (Ergon Energy), Ergon Energy Queensland (Ergon Energy Retail) and Yurika Pty Ltd (Yurika).

Should you require additional information or wish to discuss any aspect of this submission, please do not hesitate to contact either myself on (07) 3851 6787 or Barbara Neil on (07) 4432 8464.

Yours sincerely

Trudy Fraser
Manager Policy and Regulatory Reform

Telephone: (07) 3851 6787 / 0467 782 350
Email: Trudy.fraser@energyq.com.au

Encl: Energy Queensland's submission

Energy Queensland Submission on the National Electricity Amendment (Monitoring and Reporting on Frequency Control Framework) Rule 2019

Consultation Paper

Energy Queensland Limited

24 June 2019

About Energy Queensland

Energy Queensland Limited (Energy Queensland) is a Queensland Government Owned Corporation that operates a group of businesses providing energy services across Queensland, including:

- Distribution Network Service Providers, Energex Limited (Energex) and Ergon Energy Corporation Limited (Ergon Energy);
- a regional service delivery retailer, Ergon Energy Queensland Pty Ltd (Ergon Energy Retail); and
- affiliated contestable business, Yurika Pty Ltd (Yurika), which includes Metering Dynamics Pty Ltd (Metering Dynamics).

Energy Queensland's purpose is to "safely deliver secure, affordable and sustainable energy solutions with our communities and customers" and is focussed on working across its portfolio of activities to deliver customers lower, more predictable power bills while maintaining a safe and reliable supply and a great customer service experience.

Our distribution businesses, Energex and Ergon Energy, cover 1.7 million km^2 and supply 37,208 GWh of energy to 2.1 million homes and businesses. Ergon Energy Retail sells electricity to 740,000 customers.

The Energy Queensland Group also includes Yurika, an energy services business creating innovative solutions to deliver customers greater choice and control over their energy needs and access to new solutions and technologies. Metering Dynamics, which is a part of Yurika, is a registered Metering Coordinator, Metering Provider, Metering Data Provider and Embedded Network Manager. Yurika is a key pillar to ensuring that Energy Queensland is able to meet and adapt to changes and developments in the rapidly evolving energy market.

Contact details

Energy Queensland Limited
Trudy Fraser
Phone: +61 (7) 3851 6787
Email: trudy.fraser@energyq.com.au

PO Box 1090, Townsville QLD 4810
Level 6, 420 Flinders Street, Townsville QLD 4810
www.energyq.com.au

Energy Queensland Limited ABN 96 612 535 583

1 Introduction

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comment to the Australian Energy Market Commission (AEMC) on its National Electricity Amendment (Monitoring and Reporting on Frequency Control Framework) Rule 2019 – Consultation Paper (Consultation Paper). This submission is provided by Energy Queensland, on behalf of its related entities Energex Limited (Energex), Ergon Energy Corporation Limited (Ergon Energy), Ergon Energy Queensland Limited (Ergon Energy Retail) and Yurika Pty Ltd (Yurika).

Energy Queensland generally supports the proposed rule change, and in particular, supports the publication of increased frequency control ancillary services (FCAS) market information.

Energy Queensland agrees that frequency performance under normal operating conditions has deteriorated, and that there is a lack of flexibility in terms of smaller systems providing services. Energy Queensland is supportive of Energy Networks Australia's (ENA's) reforms in this area and remains actively involved in the development of the National Distributed Energy Resources Grid Connection Guidelines. Energy Queensland is also supportive of the Australian Energy Market Operator's (AEMO's) Virtual Power Plant (VPP) trials.

Energy Queensland suggests the AEMC should also consider a review of under-frequency load shedding schemes as part of this rule change. As more distribution feeders become net generators during the day (and potentially also at night time with battery / electric vehicle (EV)-to-grid technology), regular review and reassessment is required to ensure that shedding feeders to address the under-frequency does not exacerbate matters by shedding generation.

It is not clear if there will be any cost impact to end consumers if changes to the current frequency regulation framework are made. Notwithstanding, it is noted that the AEMC has suggested that the proposed changes are not expected to result in significant additional costs to consumers.

Energy Queensland does not have any preference for the timing of the reports to be released by the Australian Energy Regulator and AEMO, nor on the specific metrics that should be reported. As we do not have any comments to provide on the specific questions raised in the Consultation Paper, Energy Queensland has focussed more broadly on the recommended actions made in the Final Report on the Frequency Control Frameworks Review.

Energy Queensland is available to discuss this submission or provide further detail regarding the issues raised, should the AEMC require.

2 Final Report on Frequency Control Frameworks Review – key recommendations

2.1 Arrangements for the provision of primary regulating services

Energy Queensland is strongly supportive of a review of the primary regulation services. It is suggested that all registered generators should be actively involved in regulating frequency locally as part of their normal expected performance, within the capability bounds of the Generator Performance Standards. It is noted that the Group of Generators were opposed to this, but recent frequency regulation performance does not support their arguments. It can be inferred that a purely market-based system will only lead to increased costs at this time. Additional technology may be required in the future to address a regulation shortfall as more large generators retire, and it should be possible to signal a future constraint in this area once the 3 year notification of generator retirement requirement becomes effective in September 2019. However, it is not clear that the present issues are caused by a lack of capacity, but instead are a result of certain technical decisions.

2.2 Reporting on frequency performance of the power system

As noted in Section 1 above, Energy Queensland does not have any preference for the regularity of the frequency reports.

2.3 Reporting on FCAS market outcomes

As noted in Section 1 above, Energy Queensland is supportive of the publication of increased FCAS market information.

2.4 Aggregator regulatory frameworks

Energy Queensland is tentatively supportive of moves to expand the Market Ancillary Service Provider to include generation, with the caveat that analysis of the impact on the capacities and voltage regulation of the distribution network is required. This is particularly true where a number of participants are connected to the single distribution feeder or substation.

2.5 Connection arrangements and AS4777

As noted in Section 1 above, Energy Queensland is actively involved with the development of the National Distributed Energy Resources Grid Connection Guidelines with ENA. It is noted that there is currently a gap in terms of universal requirements between those inverters to which AS4777 applies and the larger grid-scale inverters being used in generation connections under 5MW. Energy Queensland has developed performance and protection standards for these systems and in addition is working with ENA on an appropriate high voltage guideline.

2.6 Technical interactions between distributed energy resources and the network

Energy Queensland is supportive of the AEMO-run VPP trials that are occurring. It must be noted that the distribution network contains complexities and variance not seen on the transmission network. As such, supply of information such as an 'available capacity' at each node is challenging. The distribution network can be constrained by thermal constraints, with a distribution feeder comprising of several different conductor types along its full length; voltage at the point of connection, the beginning of the feeder or the end of the feeder (both during operation, but also generation-rejection type changes, as well as the effect of rapid charge or discharge of battery systems); aggregation of several feeders of generation to a common point such as the zone substation; protection sensitivity and design; as well as constraints which emerge through reconfiguration of the network for planned or unplanned outages or future growth scenarios. It is also believed that significant change will occur to usage patterns with increased use of grid-connected EVs, pending how tariff structures are implemented.

2.7 Market Ancillary Services Specification (MASS)

Energy Queensland is supportive of the trial or review of the MASS and in particular, the required telemetry and communications requirements and this can enable or limit systems depending on location.