

21 May 2018



Mr John Pierce  
Chairman  
Australian Energy Market Commission  
PO Box A2499  
**Sydney South NSW 1235**

Dear Mr Pierce

**EPR0060 - Reliability Frameworks Review – Directions Paper**

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comments to the Australian Energy Market Commission (AEMC) on its Directions Paper on the review of the Reliabilities Framework.

The attached submission is provided by Energy Queensland, on behalf of its related entities, including:

- Distribution network service providers (DNSPs), Energex Limited (Energex) and Ergon Energy Corporation Limited (Ergon Energy Network);
- A regional service delivery retailer, Ergon Energy Queensland Limited (Ergon Energy Retail); and
- Affiliated contestable businesses, Yurika Pty Ltd (Yurika).

Should you require additional information or wish to discuss any aspect of Energy Queensland's submission, please do not hesitate to contact either myself on (07) 3851 6416 or Trudy Fraser on (07) 3851 6787.

Yours sincerely

A handwritten signature in black ink, appearing to read "Jenny Doyle", is written over a light blue horizontal line.

Jenny Doyle  
General Manager Regulation and Pricing  
Telephone: (07) 3851 6416  
Email: [jenny.doyle@energyq.com.au](mailto:jenny.doyle@energyq.com.au)

*Encl: Energy Queensland submission*

# **Energy Queensland Submission to the Australian Energy Market Commission**

## **Directions Paper – Reliability Frameworks Review**

Energy Queensland Limited  
21 May 2018



## 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 businesses, Yurika Pty Ltd (Yurika).

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<sup>2</sup> 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. Yurika is a key pillar to ensure that Energy Queensland is able to meet and adapt to changes and developments in the rapidly evolving energy market.

## Contact details

Energy Queensland Limited  
Jenny Doyle  
General Manager Regulation and Pricing  
Email: [jenny.doyle@energyq.com.au](mailto:jenny.doyle@energyq.com.au)  
Mobile: 0427 156 897  
PO Box 1090, Townsville QLD 4810  
Level 6, 420 Flinders Street, Townsville QLD 4810  
[www.energyq.com.au](http://www.energyq.com.au)

Energy Queensland Limited ABN 96 612 535 583

© Energy Queensland Limited 2016

This work is copyright. Material contained in this document may be reproduced for personal, in-house or non-commercial use, without formal permission or charge, provided there is due acknowledgement of Energy Queensland Limited as the source. Requests and enquiries concerning reproduction and rights for a purpose other than personal, in-house or non-commercial use, should be addressed to the General Manager Customer Strategy and Engagement, Energy Queensland, PO Box 1090, Townsville QLD 4810.

# 1 Introduction

Energy Queensland welcomes the opportunity to provide comments to the Australian Energy Market Commission on its Directions Paper on the review of the Reliabilities Framework (herein referred to as the Directions Paper). This submission is provided by Energy Queensland, on behalf of its related entities Energex, Ergon Energy, Ergon Energy Retail and Yurika.

Energy Queensland notes the AEMC's acknowledgement "that little feedback has been in received in this review on what existing ahead features of the National Electricity Market (NEM) may require change"<sup>1</sup>. In Energy Queensland's opinion, the potential establishment of a day-ahead market could provide a range of benefits in improving forecasting and visibility of the operation of a range of intermittent and decentralised energy resources at a network level. However, any disruption to current market structures would need careful and detailed consideration. Notwithstanding our view, Energy Queensland queries the rationale of seeking feedback on design options without first having established a clear case for change. The rationale for requesting stakeholder feedback on a set of objectives and identifying targeted changes and improvements to achieve these objectives is therefore not apparent. The AEMC should recognise in this review that any changes to the status quo will result in costs and as such, should be made only where clear market benefits and best practice guidelines are met.

Also, it should be clearly established that current market frameworks may not provide a suitable level of visibility to enable the efficient operation of networks as well as the efficient dispatch of resources, including, both centralised and decentralised generation sources, across the NEM. A systematic and transparent approach in assessing forecasting outcomes and methodologies is therefore welcomed.

In response to the AEMC's invitation to provide comments on the Directions Paper, Energy Queensland has focused on identified key issues, including the following:

- Forecasting and information provisions;

---

<sup>1</sup> Refer to page vi of the Executive Summary, AEMC's Reliability Frameworks Directions Paper.

- Day ahead markets;
- Wholesale demand response; and
- Strategic reserve.

Our concerns for these above issues are discussed in more detail below at section 2. Energy Queensland is available to discuss this submission or provide further detail regarding the issues raised, should the AEMC require.

## 2 Specific comments

### 2.1 Forecasting and information provision

Although Energy Queensland supports in principle greater reporting on the differences between forecast and actual values, we consider that further evidence is required to highlight that current forecasting approaches will become more challenging over time. Notwithstanding this view, Energy Queensland notes that with increased transparency in reporting, more accurate forecasts would prevail including the impacts of different variables on demand, energy and weather forecasts.

The current trial being undertaken by the Australian Energy Market Operator (AEMO) and Australian Energy Renewable Regulator (ARENA) to enable self-forecasting by wind and solar projects is expected to highlight benefits of more accurate forecasting. As the AEMC correctly notes that “.....depending on the results of the trial, there could be benefits from embedding this in the regulatory framework.”<sup>2</sup> We would therefore caution an early adoption of embedding a self-forecasting obligation for wind and solar generation in the National Electricity Rules until the outcomes of trial are known and there is quantifiable evidence demonstrating an improvement of forecasting.

In the event that the trial is successful, another factor to note is that wind and solar generation self-forecasting should be coordinated with system and spatial demand and energy forecasting. Additionally, as AEMO is currently using the Australian Solar Energy Forecasting Systems (ASEFS) and the Australian Wind Energy Forecasting Systems (AWEFS) to forecast the potential output of wind and solar generation, a self-forecasting

---

<sup>2</sup> Refer to page v of the Executive Summary, AEMC Reliability Frameworks Directions Paper.

obligation could enable AEMO and network service providers (NSPs) to provide renewable and network “heat maps” with different risk Projected Assessment of System Adequacy (PASA) scenarios. This will lead to more accurate assessment of available system capacities and network risks associated with variability of renewable generation.

Energy Queensland is not convinced that a retailer demand-side forecasting obligation would necessarily improve the accuracy of forecasting. Therefore, before applying a strict compliance framework on retailers, Energy Queensland recommends that the AEMC undertake more detailed analysis of the costs and benefits of this proposal. Of particular concern is where retailers are required to “bid in” to the wholesale market. We think that this may end up creating perverse behaviours by other participants in the market. For example, demand response may not be dispatched as participants, such as generators, will respond by rebidding to optimise their position given market conditions. This will in turn diminish the value of demand-side response. Also, one of the most important roles of demand and energy forecasting is to provide NSPs and AEMO with sufficient information to make adequate investment and disinvestment decisions as well as appropriate operational decisions. Technically and structurally, involvement of a retailer in demand-side forecasting will add additional layer to an already very complex demand and energy forecasting process.

In the event that self-forecasting obligations prevail, Energy Queensland considers it crucial that networks are able to access self-forecasting data provided by distributed energy resource providers to understand local network operational implications. An underlying assumption is that these forecasts will be provided to AEMO or another body; however, networks also need access to this data. Networks play an integral role in managing system security and network reliability and therefore it is paramount that they are granted access purely from an operational role. As such, Energy Queensland supports further examining mechanisms where NSPs could potentially undertake aggregate load forecasts as part of any future retailer-forecasting obligation. This could support current work being undertaken to provide more visibility of loads at a network level so that NSPs are able to operate local networks efficiently while maximising the value of the distributed resources connected at different points in the network.

## **2.2 Day-ahead markets**

Energy Queensland notes that the AEMC considers that many features of a day-ahead market already exist. As such, we recommend further investigation to highlight deficiencies in the existing market that warrant the introduction of a re-design of the market to cater for a day-ahead market. Specifically, we recommend more analysis is undertaken to highlight the security and reliability benefits of a day-ahead market and the interrelationship with other reviews, for example, the role of distribution system operators, the National Energy Guarantee and AEMO's five-minute settlement project prior to implementing regulatory changes. Notwithstanding this view, we note the importance and benefits of having more accurate information for network operations given the increasing volume of decentralised intermittent energy resources and the growth of aggregated demand response using resources at a local level.

While potentially improving network visibility of distributed resources, the potential implications of a new day-ahead market could have significant implications for market settlement processes and network operations which should be carefully considered before moving towards any changes. Assessment should also consider that networks are able to procure network services at localised levels where such services can provide effective and cost-efficient non-network support.

## **2.3 Wholesale demand response**

Although we believe that wholesale demand response can support the reliability of the power system and that there are no significant regulatory barriers to demand response participating in the market; further consideration is required related to the practical aspects of using demand response in the market. For example:

- what conditions would be placed on the demand response provider to participate in the market?
- How to measure demand resources into the dispatch process?
- How to calculate a consumer's demand response?

Given the uncertainties, Energy Queensland considers that it is reasonable that the demand response load is separately metered and registered as a market customer. This aligns with views expressed during the AEMC's review of the Power of Choice – giving consumers options in the way they use electricity. In that review, the use of separate metering was encouraged over baseline consumption methods.

Energy Queensland also highlights the capability that DNSPs have demonstrated in their ability to enable effective load control mechanisms through reductions in consumption during heatwaves. This capability enables networks to achieve network outcomes in terms of security and safety of supply. Additionally, Energy Queensland highlights that further work is needed to create a better understanding of local network constraints, which could otherwise prevent customers with active distributed energy resources (DER) from gaining the full benefit from demand response participation.

Energy Queensland supports efficient wholesale demand response mechanisms, which support network reliability. Energex has already successfully implemented demand response during periods of extreme demand to maintain electricity supply to end use customers, preventing area problems and network outages<sup>3</sup>. Both Energex and Ergon Energy have incentivised customers to participate in demand response programs and have around 1.2 million customers representing around 850 MW of diversified non-firm load under control that can be called upon during periods of extreme weather and other network contingencies.

These programmes have ensured an efficient and effective reliability service for dealing with network and localised constraints whilst maintaining service to end use customers. There is an opportunity to realise additional value in the wholesale market of demand response participation where additional capacity is available. DNSPs would be supportive of frameworks which allow this value to be captured.

In Queensland, the demand response market provided by third parties is still in its infancy. We believe that it will take some years before demand response capabilities offered by third parties will reach sufficient maturity to provide the reliability required (refer to Figure 1 - Transition of Demand Response). However, Energy Queensland acknowledges the role that third parties have in the wholesale demand response market; nevertheless, this should not mean that DNSPs should be excluded given the existing capacity.

---

<sup>3</sup> In the week commencing 11 February 2018 South East Queensland had heatwave conditions. The distribution network experienced high demand across the week and a new system peak was recorded. Air conditioning load was a main contributor to the surge in demand. Energex implemented demand response across five days – the energy consumption of PeakSmart air conditioners was capped to 50% and on two days the heating of hot water systems on load control tariffs was delayed to later than usual to further reduce localised demand. By reducing demand from air conditioning and hot water loads, Energex was able to reduce the number of fuse faults and keep the supply of electricity on for customers.

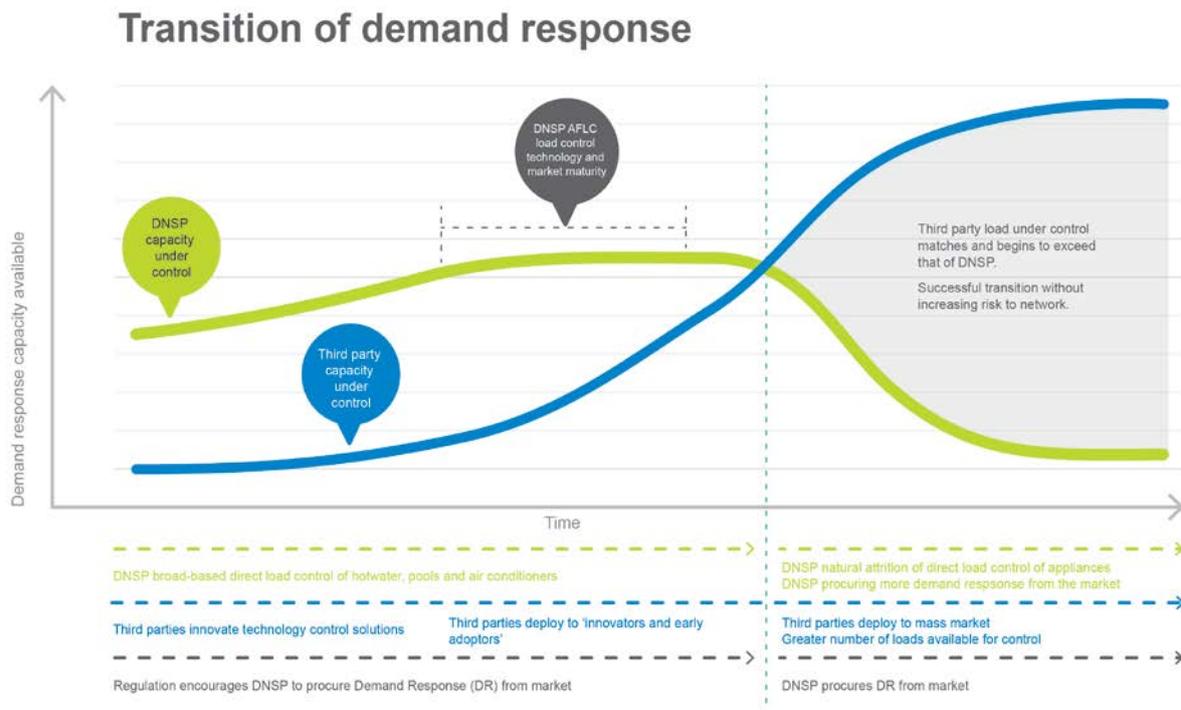


Figure 1 – Transition of Demand Response for network reliability<sup>4</sup>.

Energy Queensland also notes that AEMO currently has no visibility and little ability to anticipate loading beyond each transmission connection point. With increasing levels of demand response originating from within the distribution network, a necessary capability will be the ability to identify and manage constraints within the distribution network and then orchestrate demand response such that it dynamically facilitates the effective operation while ensuring the safety, security and reliability of both the distribution and transmission systems. Energy Queensland also considers that further support is needed to better understand and manage local network constraints, to enable the realisation of demand response capabilities in the wholesale market across the entire network.

<sup>4</sup> Joint Energex and Ergon Energy Network Demand Management Plan 2018/19. Note that this has been submitted to regulator for approval, so is therefore unpublished.

## **2.4 Strategic reserve**

Energy Queensland reiterates our earlier sentiments in our response to the AEMC's Interim Report, in that there is no compelling case for a strategic reserve for retailers and that such a mechanism would likely be expensive and results in costs being borne by consumers. However, as noted that there may be value for distributor network providers.

Both Ergon Energy and Energex support the decision by the AEMC to explore potential improvements to the Reliability and Emergency Reserve Trader (RERT). This is especially important considering experiences by some NSPs in the development and implementation of a Safety Net. We also support the AEMC's proposal regarding the potential improvements to the RERT progresses through a rule change rather than within scope of this review.