2 August 2019

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Coordination of generation and transmission investment – Access Reform (EPR0073)

Energy Queensland Limited (Energy Queensland) appreciates the opportunity to provide a submission to the Australian Energy Market Commission (AEMC) in response to the *Coordination of Generation and Transmission Investment – Access Reform* directions paper (directions paper). Energy Queensland's responses to the issues raised by the AEMC in its directions paper are provided in the attached submission.

Energy Queensland notes that the AEMC has now determined that further change is required to the transmission network access framework in light of the significant volume of generators seeking to connect to the system. The directions paper presents the AEMC's proposed approach to reforming the access framework, including:

- the introduction of dynamic regional prices to more accurately reflect the marginal cost of supplying electricity at specific locations;
- allowing generators to better manage the risks of congestion by purchasing transmission hedges; and
- enabling transmission planning to be informed by the purchase of transmission hedges by generators.

It is intended that these changes will be implemented in July 2022.

Energy Queensland responded to the AEMC's initial consultation paper on this matter and highlighted that Queensland is also experiencing significant growth in large-scale embedded generation connecting to the distribution networks, resulting in similar challenges to that of generation connecting at the transmission level, including congestion issues. Energy Queensland therefore considers that focussing on coordination of future transmission and generation investment in isolation is too limited and that for the National Electricity Market (NEM) to effectively and efficiently evolve, a holistic NEM-wide approach is required. We therefore reiterate our recommendations that:

- there should be consistent arrangements, as far as is technically and economically practicable, for generation connecting at both the transmission and distribution network levels;
- any proposed reforms at the transmission level should take into consideration any flow-on impacts on distribution networks; and

- more detailed financial modelling and analysis should be undertaken across a wide range of scenarios to ensure there are no unintended consequences for customers, transmission network service providers, distribution network service providers or generator proponents.

Energy Queensland would welcome the opportunity to discuss our recommendations with the AEMC.

Should you require any additional information, please do not hesitate to contact me on (07) 3851 6787 or Charmain Martin on (07) 3664 4105.

Yours sincerely

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Energy Queensland

Submission to the Australian Energy Market Commission

Coordination of generation and transmission investment – access reform

Energy Queensland Limited

2 August 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).

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 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 the new energy services business Yurika which will provide customers with greater choice and control over their energy needs and access to the next wave of innovative technologies and renewables.

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1. Introduction

On 27 June 2019, the Australian Energy Market Commission (AEMC) published a directions paper on the *Coordination of Generation and Transmission Investment – Access Reform* (directions paper). The directions paper forms part of the second Coordination of Generation and Transmission Investment (COGATI) review on the potential need for changes to the transmission planning and investment decision-making frameworks.

The AEMC has now determined that further change is required to the transmission network access framework in light of the significant volume of generators seeking to connect to the system. The directions paper presents the AEMC's proposed approach to reforming the access framework, including:

- the introduction of dynamic regional prices to more accurately reflect the marginal cost of supplying electricity at specific locations;
- allowing generators to better manage the risks of congestion by purchasing transmission hedges; and
- enabling transmission planning to be informed by the purchase of transmission hedges by generators.

It is intended that these changes will be implemented in July 2022.

The AEMC has requested that interested parties make submissions on the questions raised in the directions paper by 2 August 2019. Energy Queensland's comments in response to the directions paper are provided in sections 2 and 3 of this submission.

We are available to discuss this submission or provide further detail regarding the issues raised.

2. General comments

Energy Queensland responded to the AEMC's *Coordination of Generation and Transmission Investment – access and charging consultation paper.*[1] In that submission, Energy Queensland highlighted the situation in Queensland where we are continuing to experience significant growth in the volume of large-scale embedded generator connections (up to 180 MW in size) to both the Energex and Ergon Energy distribution networks, but most particularly in regional and rural Queensland. Indeed, the rate at which large-scale embedded generation is connecting to the distribution networks in Queensland is greater than that connecting to the transmission network. As a consequence, the distribution networks and large embedded generators are experiencing similar challenges to those of generation connecting at the transmission level, including congestion issues.

Given these considerations, Energy Queensland reiterates the recommendations made in our response to the AEMC's consultation paper. In that submission Energy Queensland recommended that:

- there should be consistent arrangements, as far as is technically and economically practicable, for generation connecting at both the transmission and distribution network levels;
- any proposed reforms at the transmission level should take into consideration any flow-on impacts on distribution networks; and
- more detailed financial modelling and analysis should be undertaken across a wide range of scenarios to ensure there are no unintended consequences for customers, transmission network service providers, distribution network service providers or generator proponents.

Energy Queensland considers that focussing on the coordination of future transmission and generation investment in isolation is too limited. Rather, we consider that for the National Electricity Market (NEM) to effectively and efficiently evolve, a holistic NEM-wide approach is necessary and that the AEMC should therefore consider expanding the focus

[1] Energy Queensland, *Submission to the Australian Energy Market Commission: CoGaTI implementation – access and charging*, 26 April 2019.

of its review to include large-scale generation connecting both to the transmission networks and within distribution networks.

Energy Queensland looks forward to participating further in the consultation process on this matter and would welcome the opportunity to discuss our recommendations with the AEMC.

3. Detailed comments

Energy Queensland provides comment on the following questions raised in the directions paper:

AEMC Question	Energy Queensland Response
QUESTION 1: Allocation of Settlement Residues	
• Do stakeholders agree with the main advantages and disadvantages identified in relation to the different approaches for allocating settlement residues?	Energy Queensland broadly agrees with the main advantages and disadvantages identified in the directions paper. It is reasonable to assume that if a local price in a particular area was always lower than the regional price, then future generation connecting at that location would be disincentivised. Any localised pricing must be reflective of the treatment of loss factors.
• What other factors or information would stakeholders consider relevant to determining the preferred approach?	Energy Queensland considers the future work identified in section 4.4.2 of the directions paper is a crucial path to ensuring a coherent outcome. However, we consider that as part of this process, further investigation is required into how generation (and large loads) in the distribution networks are managed and how this will determine whether generators are incentivised (or disincentivised) to connect to either the transmission or distribution network.
QUESTION 2: Scope of Dynamic Regional Pricing	
• Do stakeholders agree with the above analysis in relation to the advantages and disadvantages of allowing different categories of market participant to be settled at locational marginal prices?	Energy Queensland agrees with the AEMC's analysis. In particular, it is vital that small customers are not disadvantaged. However, further clarification is required as to how this proposal will impact certain power purchase agreement arrangements, particularly in instances where the off-taker is also the financially responsible market participant.

AEMC Question	Energy Queensland Response
• Do stakeholders consider that the scheduled / non-scheduled distinction offers a sensible basis for determining which parties should face local or regional pricing?	If scheduled loads have the ability to change their loading depending on a dispatch signal, it makes sense for these loads to have access to a local price. The scheduled / non-scheduled distinction offers a sensible basis for determining which parties should face local or regional pricing.
• Are there other impacts that should be considered in this decision?	Energy Queensland is concerned that there may be impacts on forward contract market liquidity. Given that existing contracts reference the regional reference price, there is the potential for "change of law" provisions to be triggered as a consequence of a move to dynamic regional pricing. The need to terminate and / or renegotiate existing contracts and any subsequent impact on market liquidity should be a primary consideration when working through the detailed design phase. Energy Queensland is also concerned about the proposal to implement dynamic regional pricing and transmission hedging concurrently in July 2022. It is important that the implementation of these proposed reforms should also take into consideration other reforms that are currently underway, in particular five-minute settlement which is designed, in part, to also address issues such as inefficient pricing outcomes and disorderly bidding. Further, Energy Queensland disagrees with the AEMC's statement that virtual power plants (VPPs) will necessarily be close to the regional reference node. In Queensland, the regional reference node is in Brisbane and we are currently receiving interest from VPPs in Townsville, some 1,300 km distant from the regional reference node. In our view, the impacts to VPPs will largely be governed by the way in which pricing between transmission and distribution is managed.

AEMC Question	Energy Queensland Response
QUESTION 3: Choice of Regional Price	
• Under the proposed model, some categories of market participant would continue to face a common regional price. Do stakeholders agree that the issues outlined above are relevant for assessing whether this regional price should be the existing regional reference price or an alternative (for example, a LAP approach)?	Energy Queensland considers that complexity of system design is a key component of this model. We agree that the issues outlined in the directions paper are relevant for assessing whether the common regional price should be the existing regional reference price or an alternative. We also agree that complexity should be a consideration when assessing approaches such as “load aggregation pricing” and are supportive of further consideration of these issues. As noted above, Energy Queensland is concerned that there may be impacts on forward contract market liquidity and consider this should be a primary concern when working through the detailed design phase.
QUESTION 4: Losses	
• Noting that the Commission will be considering the merits of different approaches to calculating and applying loss factors in relation to the Adani Renewables rule change requests, what are stakeholders' views of the advantages and disadvantages of the different approaches outlined above, in the specific context of the dynamic regional pricing model outlined in this chapter?	How losses are handled will be an important factor in the effectiveness of any regional pricing model. Energy Queensland is broadly supportive of dynamic loss factors. It is essential that any changes to the pricing regime should take into consideration the effect of marginal loss factors and distribution loss factors to ensure fair pricing outcomes. Care should be taken to ensure that the approach to calculating and applying loss factors does not lead to the concentration of market power at a particular node.

AEMC Question	Energy Queensland Response
QUESTION 5: Expected impact of the reforms	
• Do stakeholders agree that these issues are relevant in assessing the impact of dynamic regional pricing?	Energy Queensland agrees that the issues outlined in the directions paper are relevant in assessing the impact of dynamic regional pricing.
• Are there other issues that should be considered?	Energy Queensland recommends that the following issues should also be taken into consideration: - pricing impacts to end users, particularly small customers; - differences between connections to transmission networks and distribution networks; and - optimisation of generation investment. Other proposed reforms currently underway, such as the wholesale demand response mechanism rule change, should also be considered. Given the significance of the issues outlined in the directions paper and the fundamental nature of the market reforms being proposed, Energy Queensland considers that in may be more appropriate for this reform to be included as part of the Energy Security Board's post-2025 Market Design for the National Electricity Market review.
QUESTION 6: Transmission planning	
• Do stakeholders agree that access reform and the Integrated System Plan should be integrated? If so, do stakeholders agree with the Commission's assessment about how this could be achieved?	While the Integrated System Plan could take access arrangements into account, it should be noted that augmentation projects are still subject to the Regulatory Investment Test for Transmission (RIT-T). Hedging would therefore form part of the RIT-T economic analysis.

AEMC Question	Energy Queensland Response
QUESTION 9: Product pricing	
• Do stakeholders agree that a fair value approach to pricing may be beneficial?	Energy Queensland considers further clarity is required as to how the potential for any spare capacity to be used will be determined and how the construction of spare capacity will be justified.
QUESTION 10: TNSP incentives and regulations	
• Do stakeholders agree that an operating incentive scheme on TNSPs is required?	It is not clear that an operating incentive is required. If the revenue recovery regime is appropriately designed, the requirement for a separate incentive scheme may not be necessary.
QUESTION 11: Reducing the risk	
• Do stakeholders think that clustering of generators that wish to connect to the network would be valuable in assisting in development of renewable energy zones?	While the proposal to cluster generators by location does appear attractive, it is not certain that it would be achievable in practice given competing commercial interests.
• Do stakeholders consider that this model would be relatively simple and straightforward to implement? If so, how could this process be designed and administered?	Energy Queensland does not consider that this model would be straightforward and simple to implement. There are significant risks and technical and financial milestones involved in generator connections which would make coordinating between several parties challenging. A project becoming “committed” is not a guarantee that it will go ahead, as financial backing may not yet have been secured at this point.

AEMC Question	Energy Queensland Response
QUESTION 12: Potential shared cost recovery model	
• Do stakeholders consider that a risk-sharing model would be relatively simple and straightforward to implement?	Energy Queensland anticipates that a risk-sharing model would be complicated to implement as a result of commercial and legal implications.