

8 November 2019

Mr John Pierce  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

By online submission: AEMC EPR0073

Dear Mr Pierce

### **Coordination of Generation and Transmission Investment – Proposed Access Model Consultation Paper 2019**

Thank you for the opportunity to submit to the COGATI – Proposed Access Model Discussion Paper. AEMO notes the proposed access reform to assist with addressing problems in the NEM such as:

- Increase dispatch efficiency by reducing disorderly bidding
- Improve locational price signals and increasing price transparency
- Provide risk management tools to hedge congestion and transmission losses

While the proposed Full Nodal Pricing / Financial Transmission Right (FNP/FTR) model has the potential to address these objectives there are the key issues of prioritisation of reforms and the timing of reforms. For instance, AEMO believes more urgent reforms are required to address system security services and reforms to facilitate more contracting liquidity to hedge risk and reduce volatility.

Initial indications from independent consultants highlight implementation of FNP/FTR could cost hundreds of millions. This would be a substantial amount of expenditure and divert resources away from addressing other necessary reforms. AEMO and the Energy Security Board has also identified more pressing priorities such as ensuring the market has the range of services available for system security and consideration of ahead markets to provide the ability to manage variability in generation unit commitment to ensure the right resources are available at the right time. For these reasons AEMO considers it inappropriate to commit to this significant reform prior to addressing more pressing priorities in the NEM.

AEMO queries the problems the proposed access model aims to address. For instance, whether the disorderly bidding issue is material and whether in fact, local pricing will solve or lead to new forms of disorderly bidding. With respect to influencing generator investment location decisions, a local price may not be a sufficient signal to influence generator location decisions given the weight of other considerations such as existing and forthcoming transmission investment made evident in the ISP, fuel source availability and planning approvals.

The AEMC acknowledges that their proposed access reform would not resolve the co-ordination of transmission and generation investment problem. This further suggest that access reform needs to be part of a more comprehensive process. Finally, price separation between local and the new weighted RRP prices creates pricing “basis” risk for Participants.

This has the potential to adversely reduce contract market liquidity, and create increase Spot market volatility.

Participants may need time to adjust electricity forward contracts given changes to the calculation of the Regional Reference Price and the new risk management approach provided by Financial Transmission Rights. NEM contract markets are capable of adjusting in the face of necessary reform. However, if handled poorly, it can be disruptive, so the benefits of reform need to be clear. AEMO notes that these limitations are not applicable to proposed reforms such as the Short-Term Forward Market and Ahead markets.

The attached submission details further development of the access model that would be required in order to achieve intended benefits and avoid unintended consequences. For instance, it is not yet clear how system strength and losses can be included in the local price calculation.

The AEMC proposes their FNP/FTR model be implemented by July 2022. As outlined in this submission while AEMO shares the broad intent of the change to improve efficiency in the NEM, we highlight other more pressing issues that need to be addressed. In summary, the AEMC's proposed access reforms are major and fundamental changes to the NEM market design which should therefore be considered in a wholistic process with other broader reforms as part of the ESB's Post 2025 process.

AEMO welcomes the opportunity to discuss the matters raised in this submission. Should you have any questions, please contact Kevin Ly, Group Manager Regulation at [Kevin.Ly@aemo.com.au](mailto:Kevin.Ly@aemo.com.au)

Yours sincerely



Peter Geers  
**Chief Strategy and Markets Officer**

## ATTACHMENT 1: AEMO's submission to AEMC's Coordination of generation and transmission infrastructure proposed access model – Discussion Paper

AEMO shares the AEMC's drive to find effective and efficient solutions to ensuring reliability, security and affordability in the NEM. AEMO thanks the AEMC for the care it has taken to incorporate stakeholder views throughout the process and clearly communicate complex reforms through workshops and consultation documents.

AEMO notes that the AEMC's proposed access model would introduce local prices (dynamic regional price) for generators, scheduled load and batteries; and a volume weighted average price for retail and unscheduled load and generation. It would also introduce financial transmission rights (FTRs) from each local price to the regional reference price (RRP) and between RRP's. The FTRs are intended as a risk management tool for congestion between local prices and potentially dynamic losses subject to further advances in the market's design.

In the consultation paper, the AEMC outlines that the proposed access model is intended to assist with the following problems in the NEM:

- reduce disorderly bidding and improve operational efficiency at dispatch; and
- improve locational price signals so that generators locate more efficiently in the NEM;
- provide a risk management tool for congestion and losses;
- price signals from local prices and FTR auctions can inform the ISP.

The consultation paper also outlines that: the model will not lead to an increase in market power; it should be implemented in 2022; and consumers will benefit by having FTR auction revenues returned to them.

AEMO thanks the AEMC for progressing the discussion of coordination of generation and transmission investment in the NEM by proposing an access model which participants can now consider in detail. A model helps to elucidate the various impacts on participants and helps with consideration of whether:

1. the problems the model proposes to address are the most pressing in the NEM;
2. the proposed access model will adequately deal with these problems;
3. there are other solution(s) that deal more effectively with the problems outlined above and at a lower cost; and
4. whether this solution should be considered with other reform ideas that pertain to the reliability, security and affordability in the NEM such as those being considered by the NEM 2025 process.<sup>1</sup>

### 1. AEMO preliminary views on the problems the proposed access model aims to address.

<sup>1</sup> ESB. *2019 Energy Security Board Post 2025 Market Design*, September 2019. Available at: [http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/EC%20-%20Post%202025%20Market%20Design%20Issues%20Paper%20-%2020190902\\_0.pdf](http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/EC%20-%20Post%202025%20Market%20Design%20Issues%20Paper%20-%2020190902_0.pdf)

In terms of the problems the proposed access model is seeking to solve, AEMO is circumspect about:

- Disorderly bidding—AEMO queries whether the disorderly bidding issue is material and whether in fact, local pricing will solve or lead to new forms of disorderly bidding;
- Influencing generator investment location decisions—a local price may not be a strong signal to influence generator location decisions given the weight of other considerations such as existing and forthcoming transmission investment made evident in the ISP, fuel source availability and planning approvals. The AEMC acknowledges that their proposed access reform would not resolve the co-ordination of transmission and generation investment problem. This diminishes the need for this reform in the timeframe espoused by the AEMC of July 2022.
- Price separation between local and the new weighted RRP prices create pricing “basis” risk for participants. The proposed access model aims to resolve this with the introduction of a risk management tool in the form of FTRs. The combined effect of nodal pricing and FTR products may change participant approaches to contracting. If it results in lower levels of contracting, it could increase spot market volatility, which can impact on participant availability and operational forecasting.
- Local pricing and FTR auction prices as an input to the ISP—while this recommendation is relatively benign and may be relevant on the margins. AEMO points out that the ISP is an exercise in determining a least cost pathway for transmission and generation based on a range of scenarios using statistical techniques. It essentially already assumes rational decision making on the part of generators, so adding an input of local prices and FTR results is unlikely to dramatically change the outcome.

AEMO highlights these issues so that decision makers are measured in their consideration of the proposed access reforms ability to deliver on the original problem statements.

## **2. The proposed access model design needs further development in order to achieve benefits.**

There are a number of key elements of the access market design that need to be developed in order to deliver on the proposed benefits and avoid unintended consequences:

- System strength—it is not yet clear whether system strength constraints can be included in the local price calculation. They are not currently included in the NEM Dispatch Engine so detailed consideration and design work would be required. Therefore, the view that the local pricing model will reduce directions is questionable until further work can be undertaken.
- Losses—the proposed access model acknowledges that it has not yet worked out how dynamic losses will be included in local prices and the FTR products. AEMO is not yet clear whether this will be possible, given congestion is a transmission capacity issue and losses are a network flow issue and there is limited evidence of combining losses and congestion in overseas examples. AEMO is open to exploring this further. However, until it is, the proposed access model cannot be read as a solution to the MLF issue. AEMO has also proposed to implement near-term solutions such as

updating MLFs more frequently on an indicative basis and reviewing the MLF methodology.<sup>2</sup>

- FTR market design—if AEMO is to operate the FTR market, we would prefer to have all options available in designing the FTR framework before design choices are removed from scope. It is likely the AEMC’s rigid FTR market design with very granular local price and FTR product offering (for example, a local price and FTR path at each transmission node identifier) will not lead to any auction revenue in the first place due to limited participation at each auction. AEMO also notes that the market design excludes speculators from intra-regional FTR auctions. It may be that broadening the local price and FTR hub area will improve the operation of the auctions, reduce likelihood of market power and allow for financial intermediaries to participate.
- Market power—the AEMC considers that the proposed access model will not lead to market power and if it does, a cap on a generator’s offer would be applied if it was deemed to be pivotal. AEMO is not confident that the proposal will not lead to increases in exercise of market power – particularly if local prices and FTR products are established at a very granular level. Similarly, the implementation of a cap on generator offers is a substantial reform in its own right and would need to be combined with a review of the NEM’s reliability standard and settings (market price cap, market price floor, cumulative price threshold and administered price cap). AEMO is concerned that in seeking to achieve improvements in locational marginal pricing, subsequent market power reforms will be required, which then potentially upturn a range of other market rules. Reliability settings and the reliability standard require review for their own reasons, but it would be unfortunate if a targeted review was required due to somewhat foreseeable effects of the introduction of local pricing.

The list above represents immediately identifiable issues in the proposed access model. AEMO will continue to consider these issues as part of the NEM 2025 process as outlined in the following section.

### **3. Implementing a new access model is a significant reform and may benefit from consideration along-side other NEM 2025 reforms.**

The proposed access model represents a major reform to the NEM. To harmonise the consideration of the proposed access model with other significant reforms AEMO does not think it is appropriate for any rule change proposals to be considered next year with a proposed implementation date of July 2022.

There are a number of other reasons why an implementation date of 2022 is problematic:

- Five-minute settlement—2022 will arrive very shortly after the implementation of five-minute settlement (5MS) and global settlement in July 2021. The implementation of local pricing will touch the same systems as these reforms (dispatch and settlement). AEMO is cautious about opening up the same systems for a major reform so soon after implementation of 5MS. From a control room and operation planning perspective, participant behaviour change following 5MS may be significant. From a system security perspective, AEMO would benefit from time to understand new

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<sup>2</sup> AEMO. *Transmission loss factors (Adani Renewables Rule change requests) – AEMO Submission*, August 2019. Available at:

patterns of behaviour following 5MS implementation before another significant reform is implemented.

- Electricity contracts—electricity contracts may be affected, and contract holders would need lead-time to renegotiate contracts given the new calculation of the RRP and the new risk management approach provided by FTRs. It may be that contract market notice periods are a necessary limitation on implementation timeframes. AEMO observes that NEM contract markets are capable of adjusting in the face of necessary reform. However, if handled poorly, it can be disruptive, so the benefits of reform need to be clear. AEMO notes that these limitations are not applicable to proposed reforms such as the Short-Term Forward Market and Ahead markets.
- As per section 2, there are many details to develop and refine in the proposed access model, which also suggest the July 2022 implementation is too ambitious.

This submission highlights a number of issues in terms of the proposed access model's ability to address the challenges it set out to solve and certain details within the design which may create further market issues. AEMO believes there are more pressing priorities to resolve such as ensuring the market has the range of services available for system security and consideration of ahead markets to provide the ability to manage variability in generation unit commitment to ensure the right resources are available at the right time. In summary, AEMO believes FNP/FTR should be considered in a wholistic process with other broader reforms as part of the ESB's Post 2025 process.