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16 October 2020

Ms Merryn York
Acting Chair, Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Ms York

AER submission to Interim Report on Transmission Access Reform: Updated Technical Specifications and Cost-Benefit Analysis

The Australian Energy Regulator (AER) welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC's) Interim Report containing updated technical specifications and cost-benefit analysis for its Transmission Access Reform.

We maintain our support for the AEMC progressing its consideration of the proposed changes to the wholesale electricity pricing framework and accompanying financial risk management framework. We consider it important for generation and storage to face the right price signals for efficient location and dispatch, particularly as many relatively small and geographically dispersed renewable generators seek to connect to the network in the future. This avoids overbuilding network and generation capacity in a transitioning market, promoting energy affordability for consumers. In particular, we note:

- NERA's cost benefit analysis modelling shows Transmission Access Reform is likely to generate significant net benefits to consumers. The largest benefits arise from capital and fuel cost savings from more efficient locational decisions by generators; and dispatch efficiency improved through elimination of race to the floor bidding (as explained in the **attachment** to this letter).

- Locational marginal pricing (LMP) is important to realising the least cost outcomes arising from the modelling undertaken for the Integrated System Plan (ISP). LMP creates price signals that incentivise generators to make efficient siting decisions consistent with those forecast through the ISP. Together, LMP and the ISP should ensure efficient network and generation investment outcomes over time.

- LMP will assist in managing a national electricity market (NEM) with diverse energy generation, storage and demand response, as forecast through the ISP. This is because LMP promotes efficient dispatch according to merit order, which consequently

encourages an efficient mix of generation to meet demand. It also promotes efficient use of storage (and demand response), signalling when storage needs to dispatch or charge and when demand response should be activated. The current signals do not promote effective management of network constraints.

- Financial transmission rights (FTRs) can allow generators and storage to manage the risk of congestion and provide more revenue certainty. For example, FTRs will provide generators with some capacity to manage the risk of new entrants co-locating and constraining them, including in areas of new transmission capacity such as renewable energy zones (REZs). This is a risk they cannot currently manage under the existing open access regime.

- In turn, LMP and FTRs will facilitate REZs by promoting efficient locational decisions within these areas of new transmission capacity. This would include, importantly, deterring oversubscription once the generation capacity of each REZ has been met, which would manage congestion in those areas.

The ESB's Post 2025 consultation paper sets out a number of potential market design initiatives (MDIs), to develop a package of reforms for the NEM that delivers secure and reliable power at least cost to consumers over the long-term. The need for, and design of, the proposed Transmission Access Reform must be considered as part of the package of MDIs under the Post 2025 project. In our view, the question should be whether the introduction of this access reform is valuable in the *future* design of the NEM envisaged under the ESB's work, rather than the current market design.

Transmission Access Reform must also be considered together with the interim REZ framework that is being progressed by the ESB. Any interim framework that seeks to coordinate generation connection to REZs must be able to transition into long-term access reform. It is not practical to have two different access solutions between REZs and the broader transmission network. It may also cause significant confusion and complexity for NEM participants and investors. Our view is that even with new transmission capacity being planned in REZs, LMP and FTRs are needed to ensure ongoing efficient locational decisions within these areas of new transmission capacity.

In the **attachment** to this letter, we set out detailed considerations for the AEMC on specific aspects of the proposed Transmission Access Reform.

We look forward to continue working with the AEMC to ensure the new access framework promotes effective competition and our market monitoring framework is fit-for-purpose under the new regime. To discuss any matter raised in this submission, please contact Arista Kontos on (08) 8213 3492.

Yours sincerely

Clare Savage
Chair
Australian Energy Regulator

Sent by email on: 16.10.2020

Attachment: Detailed response to the Interim Report

The proposed LMP and FTR framework is a pragmatic step forward

We consider full LMP (for generation and load connected to the transmission network) is the most economically efficient option because it promotes supply and demand side efficiency. However, in our view, the AEMC's proposed LMP design (i.e. for scheduled and semi-scheduled participants only) is a pragmatic step forward that provides improved price signals for generators and storage.

Similarly, we consider a range of risk management instruments (or FTRs) are valuable for different types of generators (and storage) to effectively manage congestion risk. However, we acknowledge the complexity of designing a range of FTRs that remain reasonably firm in terms of their payout (which is dependent on settlement residue). As such, we strongly support the AEMC's updated decision to allow non-physical participants in the FTR auctions. Non-physical participants that build portfolios of FTRs could provide a variety of tailored hedging products that more precisely target a market participant's congestion risk. We consider this could also promote contract market liquidity.

Quantitative cost benefit analysis estimates significant net benefits to consumers

We welcome NERA's cost benefit analysis modelling. This shows Transmission Access Reform is likely to generate significant net benefits to consumers. The largest benefits arise from capital and fuel cost savings from more efficient locational decisions by generators; and dispatch efficiency improved through elimination of race to the floor bidding.

'Race to the floor' bidding arises when generators are located behind a binding transmission constraint. As their offers will not affect the settlement price they receive, these generators have an incentive to instead bid towards the market floor price (-$1,000) in order to maximise their physical dispatch.[1] The AEMC's proposed LMP design should remove incentives for generators behind a constraint to bid to the market floor price, as doing so would drive down the locational marginal price at which they will be settled.[2]

We agree with NERA's use of data and assumptions from the Australian Energy Market Operator's (AEMO) ISP to ensure consistency with the ISP reforms. However, we consider the ISP and NERA's modelling outcomes are complex and dependent on key input assumptions. As such, there could be value in testing the sensitivity of NERA's modelling results to variations in some key input assumptions, and presenting the results to stakeholders. This is an important part of the cost benefit analysis guidelines we have provided for AEMO's ISP development.

We also welcome HARD Software's preliminary estimates of implementation costs for the Australian Energy Market Operator (AEMO). These appear to be significantly less than the net benefits of Transmission Access Reform to consumers, although we recognise these are likely to increase as the analysis progresses. We look forward to AEMC progressing stage two of its implementation cost analysis.

Transmission Access Reform should demonstrate interactions with Post 2025 Electricity Market Designs

[1] This can result in inefficient dispatch outcomes as higher cost generation resources may be dispatched instead of lower cost resources that are available.

[2] AEMC, *Directions Paper Coordination of Generation and Transmission Investment – Access Reform* (27 June 2019), pp. 39-41.

The ESB's Post 2025 consultation paper sets out a number of potential market design initiatives (MDIs), to develop a package of reforms for the NEM that delivers secure and reliable power at least cost to consumers over the long-term. The need for, and design of, the proposed Transmission Access Reform must be considered as part of the package of MDIs under the Post 2025 project. In our view, the question should be whether the introduction of this access reform is valuable in the *future* design of the NEM envisaged under the ESB's work, rather than the current market design. This holistic consideration is important to ensure a cohesive and complementary combination of market reforms.

The ESB's Post 2025 consultation paper notes that a key element of the project is to assess how the different MDIs, including the Transmission Access Reform, fit together.[3] In its Interim Report, the AEMC points to evidence from overseas markets where LMP and FTRs have been implemented in order to demonstrate their flexibility in accommodating a variety of different market structures and designs.

We consider more work needs to be done in demonstrating how the other MDIs would operate under an LMP and FTR framework in the NEM. For example, it's important to understand how the nodal pricing arrangements would interact (if at all) with new essential system services arrangements governing matters such as operating reserve, inertia, system strength and fast frequency response. Setting out these operational links would:

a) Ensure the Transmission Access Reform is designed in a way that enhances the operation of the other MDIs being considered. Equally, a holistic view of the reforms will ensure a consistent regulatory/policy approach is adopted across the reforms (we expand on this below under 'Impacts on competition – market power issues').

b) Assist stakeholders in understanding how the future NEM will operate with all the MDIs brought together. In particular, market participants (both existing and potential) need to understand how they would participate in this future NEM.

We expect that several of the Post 2025 MDIs will, as they are developed, need to address distinct local conditions that arise when network constraints bind, which is supported by LMP (and FTRs). For example, where there is congestion on the transmission network:

- resource adequacy mechanisms must not only take into account resource adequacy at the level of the market as a whole, but in every sub-market that arises when there is transmission congestion
- the procurement of FCAS or "operating reserve" services may need to occur on a local basis
- if ahead markets could improve pre-dispatch price forecasts, those ahead markets must operate on a local basis to improve forecasts of local prices.

Transmission Access Reform and Renewable Energy Zones should provide an integrated solution to transmission access

Our view is that even with new transmission capacity being planned in REZs, LMP and FTRs are needed to ensure efficient locational decisions within these areas of new transmission capacity. They will, importantly, deter oversubscription within REZs which would lead to congestion. Once the capacity of a REZ has been met, LMP and FTRs will incentivise new

[3] Energy Security Board, *Post 2025 Market Design Consultation Paper*, 7 September 2020, p. 116.

generation to locate elsewhere in the network with transmission capacity to support their dispatch (unless they are able to bid competitively within the REZ).

The need for, and design of, Transmission Access Reform must be considered together with the interim REZ framework that is being progressed by the ESB. Any interim framework that seeks to coordinate generation connection to REZs must be able to transition into long-term access reform. It is not practical to have two different access solutions between REZs and the broader transmission network. It may also cause significant confusion and complexity for NEM participants and investors.

Market power mitigation mechanisms should be fit-for-purpose

The introduction of local prices has the potential to change the way participants seek to profit from instances of localised market power in the NEM. Remote generators behind constraints will likely have little influence on the regional price but may have incentives to influence their local price. Participants influencing prices can lead to inefficiencies in the market, at the expense of consumers. We note that FTRs will either enhance or mitigate different participants' incentives to exercise localised market power, depending on where the participant is located and the FTR it holds.

The AEMC's position and our views

The AEMC has determined that an ex ante offer cap is the preferred mechanism to mitigate market power under the proposed access framework, pending empirical analysis on the need for such a mechanism.

We agree with the need to consider how to address the exercise of market power under the proposed new access framework. However, we consider empirical analysis should be performed before selecting the appropriate solution. Our view is that the AEMC first needs to understand the likelihood for market power to be exercised by participants—to understand the nature and magnitude of the problem—before considering what the solution should be. Only then can we assess and comment on the trade-offs identified by the AEMC in determining the appropriate approach.

We therefore support the AEMC's decision to analyse historical dispatch information to quantify the number of potentially inefficient pricing outcomes to occur under the new framework. However, caution should be exercised in relying on such analysis as historical dispatch outcomes may not be a good predictor of future dispatch outcomes. We also encourage the AEMC to consider the impact of FTRs on participants' incentives to influence their local prices.

The AEMC's analysis should also have regard to existing mechanisms to mitigate market power. The NEM already has a mechanism for protecting consumers from periods of high or volatile prices in the Consumer Price Threshold (CPT). The other existing mechanisms and frameworks that the AEMC should consider are:

- the AER's market monitoring function
- requirements in the National Electricity Rules that prevent generators from making bids that are false, misleading or likely to mislead[4]

[4] National Electricity Rules r 3.8.22A.

- the *Treasury Laws Amendment (Prohibiting Energy Market Misconduct) Act 2019* (the Big Stick legislation), which prevents generators in the wholesale market from acting in a way that is fraudulent, dishonest or in bad faith to distort or manipulate wholesale electricity prices[5]
- the *Competition and Consumer Act 2010* (Cth).

Lastly, it is important for the issue of market power under the proposed access framework to be considered wholly within the ESB's Post 2025 package of MDIs. This is important to ensure consistency across the reforms from a regulatory and policy perspective.

Competition in the FTR market

As stated above, we strongly support the AEMC's decision to allow non-physical market participants to purchase FTRs. We consider that this decision will promote competition in the FTR market and reduce the ability of participants to hoard FTRs. Based on its analysis, the AEMC continues to consider that no specific hoarding mitigation mechanism is needed for the FTR market.[6] We acknowledge this, and support a register of FTR holders that would enable analysis of competitiveness of the market. This could be used to monitor competition in the FTR market and assess whether additional mitigation mechanisms are required in the future (for example, 'use it or lose it' provisions).

Impacts on AER functions should be considered

We reiterate the need for the AEMC to review the AER's wholesale market monitoring and reporting requirements in the NER, to ensure they are fit-for-purpose under the proposed new access framework. Specifically, the requirements should be reviewed to ensure the AER can most effectively and efficiently identify instances of market manipulation. For example, as noted in our previous submissions, the introduction of local marginal prices would significantly increase the number of reports we would need to produce under clause 3.13.7 of the NER. We therefore recommend the AEMC consider whether the current NER requirements would remain appropriate and fit-for-purpose under the proposed new framework. It would be more efficient and informative for the AER to group events and report on them periodically (e.g. quarterly), as opposed to reporting on all of them individually.

We are happy to work with the AEMC to make sure the impacts of any changes to our functions are well understood and factored into their decision-making. This includes our monitoring and reporting functions and any additional monitoring functions that may arise under the new framework.

Service Target Performance Incentive Scheme

The AEMC's preferred design is for the AER to adjust its Service Target Performance Incentive Scheme (STPIS) to use the granular information from LMP to inform the market impact component.[7] The AEMC notes that the decision to implement such a change sits with the AER. We are happy to consider how the STPIS can be enhanced under the new access framework to further promote incentives on TNSPs to reduce the risks of inefficient

[5] See https://www.energy.gov.au/government-priorities/energy-markets/prohibiting-energy-market-misconduct#:~:text=The%20Treasury%20Laws%20Amendment%20(Prohibiting,effect%20on%2010%20June%202020.&text=The%20legislation%20creates%203%20new,detrimental%20to%20competition%20and%20consumers.

[6] AEMC, *Interim Report Transmission Access Reform: Updated Technical Specifications and Cost-Benefit Analysis* (7 September 2020), para. 3.2.2.

[7] AEMC, *Interim Report Transmission Access Reform: Updated Technical Specifications and Cost-Benefit Analysis* (7 September 2020), para 3.7.

unplanned outages and to maximise network availability in response to demand. We will consider the usefulness of the information arising from LMP in meeting the STPIS objective and potential changes to the metric as appropriate.

Transitional arrangements should not reduce effective competition in the NEM

We agree with the AEMC's proposal to adopt transitional arrangements in implementing the Transmission Access Reform. We consider the purpose of transitional arrangements is to allow market participants to adapt to new reforms without incurring undue operational or financial risks (that did not exist when the investment was made).

However, we consider an implementation period and transitional (or grandfathered) FTRs both contribute to this purpose, and so should be considered together. In doing this, the AEMC should have regard to mitigating potential competition issues, such as:

- Barriers to entry—the potential for new entry is an important feature of an effectively competitive market, particularly where ownership among existing participants is concentrated. Transitional FTRs should not add to revenue uncertainty for new entrants, as this could increase barriers to entry in the NEM.

- Market power—there are elements of the NEM which make it vulnerable to the exercise of market power. A few large participants control significant generation capacity and output in each region of the NEM. Further, as low cost thermal generation exits the NEM, market dynamics will shift which could change the competitive position of remaining generators. Transitional FTRs should not increase the incentive for incumbent generators to exercise market power.

- Economic rents for exiting coal—in gifting transitional FTRs to incumbent generators, the AEMC should consider any interactions with the ESB's Post 2025 ageing thermal generation strategy MDI. For example, the ESB's consultation paper considers the potential for some ageing thermal generators (that stay in the market following the exit of other aging thermal generators) to capture economic rents for some time as prices will need to rise to new entry levels, and at a significant premium above the costs of existing thermal generation. To the extent this is a material issue, it may be exacerbated by gifting FTRs to these generators.

The AER's biennial wholesale electricity market performance report considers effective competition in the NEM, and may be a useful source of information to consider in determining the transitional arrangements for Transmission Access Reform. The 2020 wholesale electricity market performance report is scheduled for release in December 2020.