

21 December 2022

Anna Collyer
Chair
Energy Security Board

Submitted by email: info@esb.org.au



Dear Ms Collyer,

Transmission Access Reform – Directions Paper

The Australian Financial Markets Association (AFMA) is responding to the Energy Security Board's (ESB) Transmission Access Reform – Directions Paper.

AFMA is the leading industry association promoting efficiency, integrity and professionalism in Australia's financial markets. AFMA has more than 125 members reflecting a broad range of participants in Australia's financial markets, including energy companies who operate the majority of scheduled and semi-scheduled generation in the NEM and are key participants in Australia's energy markets.

The operation of constraints in the NEM is complicated and can be difficult for new and experienced participants to fully comprehend. The ESB's aim of trying to make these arrangements more comprehensible to investors and dispatch more predictable for market participants, is welcome. The NEM regularly suffers from over-complexity as a result of a long history of policy makers attempting to engineer extremely precise solutions to problems that regularly are found to be impractical. This has resulted in a market that is difficult to understand with sometimes byzantine elements that do not necessarily achieve their aims. We therefore encourage the ESB to pursue simpler solutions wherever possible. We are concerned that the approach the ESB has taken in the Directions Paper, to providing certainty to new investors, will increase the complexity of the dispatch and settlement processes and undermine liquidity in the financial market. AFMA is as such concerned that this approach will ultimately be detrimental to new and existing market participants, as well as the market as a whole.

We also note the ESB is working with senior officials on other options for transmission reform that are not included in this paper and question the value of asking stakeholders to provide feedback on options that may not proceed as a result of decisions by Energy Ministers unrelated to this consultation. We query if the ESB's work on transmission access reform should be paused until the work with senior officials is complete to avoid unnecessary work by all stakeholders, including the ESB.

1. The spot and financial markets

A number of submissions to the Consultation Paper raised concerns with the ESB's analytical approach to the spot and financial markets. Particularly that the ESB's approach to the spot market was overly focused on

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allocative efficiency within a single 5-minute interval; and that the ESB failed to take into account the impact of the financial market on bidding behaviour. AFMA is disappointed that this weakness persists in the Directions Paper.

AFMA considers that a more sophisticated understanding of the operational and contractual environment that participants operate in would assist the ESB's analysis. The purpose of the NEM is to determine the most efficient dispatch to meet customer demand based on the results of commercial decision making by all participants. An efficient outcome does not mean that units with the lowest short run marginal cost (SRMC) will always be dispatched, it means that the market will determine the most efficient dispatch at any time, based on all the information available to all of the participants. The great strength of markets is that they are able to process this information into an efficient outcome in a way that would not otherwise be possible. AFMA considers that a more complete understanding of the function of the electricity market would assist the ESB to distinguish when market outcomes are genuinely inefficient and when they are a logical outcome of the market.

1.1. Operation of the spot market

AFMA considers that the ESB's analysis of efficient and inefficient bidding behaviour is lacking as it places too much focus on individual 5-minute intervals. The ESB's analysis appears to assume that units should only be dispatched in a given 5-minute interval if their SRMC is lower than the spot price. This analysis fails to appreciate the contractual and operational environment that participants work in.

On an operational level, most units will be subject to a range of factors, including; start costs, ramp rates, minimum loads and minimum run times, that limit their flexibility in any given 5-minute interval. As a result, when a participant commits a unit to run, their decision is based on the anticipated return over the expected run time of the unit not the return in each 5-minute interval. This may result in them choosing to run units during 5-minute intervals when the spot price is below their SRMC as the operational limits on the unit make it impossible to stop the unit, only to have to restart it in the following 5-minute interval. As an example a peaking generator with high fuel costs may choose to continue running during a period of prices below its fuel cost, as stopping and restarting the unit would lead to them incurring increased costs as a result of them having to undertake additional maintenance as a result of the additional start on the unit. It may therefore be more efficient for them to continue running the unit during a period of low prices rather than stopping and restarting it.

Additionally, the participants risk management position in the financial market will have a significant bearing on their decision to run or not run units. This may result in them making decisions to run units in circumstances that may appear uneconomic based purely on the spot market. For instance, a participant with a short position may choose to run a relatively high cost unit to lower the spot price and minimise their overall exposure to the market. Alternatively, a gas fired generator may have entered into an arrangement where another participant can put gas to them to allow them to run the unit and therefore will run during periods of relatively low prices to meet their contractual obligation to take the gas. AFMA's main observation is that the purpose of the electricity market is to determine the efficient dispatch of generation based on market outcomes. As a result, many of the behaviours the ESB has observed as inefficient are in reality an expected and natural result of a market working based on the commercial decisions of market participants. We are therefore concerned about any proposals that could limit the flexibility of generators to run their units when they see fit.

- i. The ESB should adopt a more sophisticated approach to analysing efficient dispatch which should, at a minimum, expand the analysis beyond a single 5-minute interval and consider the impact of participants' operational constraints and financial positions on their behaviour.

1.2. Role of the financial market

As you have identified, the physical NEM, with its 5-minute spot prices, is an inherently volatile market as a result of the need to instantaneously balance supply and demand. This volatility means investors who are fully exposed to the spot price face extremely volatile and uncertain returns. While the underlying spot price is critical to investment decisions the financial market also plays an important role by allowing investors to lock in stable longer-term prices through derivative contracts and power purchase agreements. This longer-term certainty is more important for investors considering long term projects than the results of any given 5-minute trading interval.

The current NEM design supports a generally robust financial market. While there is undoubtedly scope to improve and simplify it, the most successful feature of the current NEM design is the way in which it concentrates the risks faced by market participants into a single spot price for each region, the Regional Reference Price (RRP). The current regional system brings together a larger number of buyers and sellers who are all incentivised to manage their exposure to the RRP which creates liquidity. The combination of an easily understood reference price and a large number of market participants exposed to the price, has provided a solid foundation for the development of liquid financial markets based on the RRP.

AFMA is therefore very concerned about any proposals that could reduce the importance of the RRP as a price signal or reduce liquidity in the market. We have previously expressed strong opposition to the AEMC's Coordination of Generation and Transmission Investment proposal¹ and the ESB's Congestion Management Model (CMM);² on the basis that they would introduce basis risk between the RRP and the local prices that would be faced by participants. We anticipate that these approaches would reduce the effectiveness of the RRP as a pricing signal and reduce liquidity. This could result in a reduction in participants ability to manage their risk as participants risk would be tied to their local price rather than the RRP. Additionally, introducing a new source of risk leads to further complication of the market.

While the ESB is not currently consulting on the CMM, we are disappointed to see the ESB still considers it to be an alternative, in the event that the Congestion Relief Market (CRM) proves to be unworkable. We want to note, again, the near universal opposition to the CMM from the market and restate AFMA's view, in the strongest possible terms, that implementing CMM (or another variant of nodal pricing) would be extremely detrimental to the function of the financial market and undermine participants ability to manage risk in the physical market. AFMA is concerned that policy makers' continued interest in variants of nodal pricing is driven by a lack of understanding of the role and function of the financial market in ensuring the supply of electricity. AFMA and its members are happy to work with the ESB to ensure the implications of reforms on the financial market are fully understood.

¹https://afma.com.au/Site/media/Media/Documents/2019/Policy/R38-19_AEMC_COGATI_Proposed_Access_Model_-_Discussion_Paper.pdf?ext=.pdf

² <https://afma.com.au/getattachment/c98c2368-b679-41bf-89f0-6f6b49651a0f/R27-22-ESB-Transmission-Access-Reform.pdf?lang=en-AU&ext=.pdf>

- ii. The CMM and other variants of nodal pricing should be abandoned as potential reform options.

2. Congestion zones and fees

AFMA supports the ESB’s proposal to develop enhanced information about network capacity to assist investors to make informed location decisions. To the extent the ESB feels additional signals are required to drive location decisions, our membership is more supportive of congestion fees than priority access. The consensus view is that priority access is likely to be more complicated and expensive to implement, and its ongoing impact on dispatch is unknown – but is likely to lead to perverse outcomes. Additionally, we want to point out that the option to implement short term dynamic allocation of priority access is in practice very similar to proposals for financial transmission rights which the industry has not supported in the past.

By contrast, congestion fees are a relatively simple mechanism to send a price signal at the time of investment that would have no ongoing impact on the operation of the market once assets are built. We think the ESB should provide more detail on how congestion fees would be used, i.e. to fund augmentations or to reduce overall transmission charges.

AFMA considers that these relatively simple and low impact reforms could significantly improve constraints within the network, as new entrants would be incentivised to locate in less congested regions. Driving good location decisions, combined with the work being undertaken by state governments to facilitate transmission investment, should minimise the impact of constraints and reduce the need for further and more complicated interventions to manage constraints in an operational timeframe.

- iii. Support providing enhanced information about network constraints.
- iv. Prefer congestion fees as an incentive to drive location decisions in preference to priority access.
- v. Encourage the ESB to provide additional detail about how the revenue from connection fees would be used.
- vi. Consider if improving signals in the investment timeframe may remove the need to address constraints in the operational timeframe.

3. Congestion relief market

The CRM proposal presented in the May 2022 Consultation Paper received substantially more support from stakeholders than the CMM on the basis that it was an opt-in market to facilitate transactions between willing buyers and sellers. The CRM presented in the Consultation Paper was very high level and was described as an:

ancillary market that co-optimises the bid with the energy market and other ancillary markets. Participants can choose whether or not to participate in the ancillary market.

We understand that the model is based on Edify Energy’s proposal for a opt in market allowing buyers and sellers of congestion relief products to transact with each other in a market that ran alongside the energy market. We are concerned that the model proposed in the Directions Paper is unnecessarily complex. Additionally it mixes the markets for CRM and energy which is likely to have a significant impact on market outcomes for participants who do not opt-in to the CRM, as a result of the introduction of both Local Marginal

Prices (LMP) and CRM adjusted RRP. AFMA's considers that the complexity of the proposed CRM is likely to make it difficult to implement and the mixing of the energy and CRM markets is likely to have a significant impact on the energy market. AFMA's experience is that our members have found the Directions Paper difficult to understand and respond to, which suggest that even sophisticated incumbents struggle to understand the reforms.

3.1. Separation of energy and CRM markets

AFMA considers that preserving the RRP as the key market signal is important for the functioning of the energy market. We therefore recommend that energy and the CRM should be separated into two services with all energy priced at the current RRP (adjusted for loss factors) and separate settlement of CRM transactions. Conceptually we think this could work as follows, where the CRM determines that Participant A will be backed off to allow Participant B to increase their output:

- both Participant A and B will be paid RRP for the energy supplied by their units, as currently occurs
- Participant B will have to pay a CRM charge
- Participant A will receive a CRM payment

We consider that the benefits of this approach are that it makes no changes to the current arrangements for determining the market price for energy and all participants energy market risk ultimately remains linked to the RRP. We think this approach removes the complexity the ESB has encountered as a result of having multiple CRM RRP and LMPs in addition to the RRP. It also makes the choice to participate entirely voluntary as participants who choose not to participate have no risk of being exposed to a price other than the RRP and facilitates participation in the CRM by parties who do not participate in the energy market.

3.2. Short run marginal cost bidding

Section 4.2.3 of the Directions Paper has a lengthy discussion of the perceived risk that, under the CRM, a generator with a higher SRMC may be dispatched in preference to one with a lower SRMC and proposes a range of options to mitigate this perceived risk. As discussed above, we do not agree that this situation is necessarily inefficient as there may be a number of legitimate commercial reasons why a participant would be willing to be dispatched at a spot price that is lower than their SRMC. As a result, we do not think any additional measures are required to address this perceived problem. AFMA's view is that it is the role of the market to determine efficient dispatch based on the commercial decisions of the participants, including decisions to run below SRMC, and that there should be no restrictions on participants flexibility to run their units as they see fit.

We also want to caution that both of the proposed compliance mechanisms are likely to be impractical to implement and may increase inefficiency in the market. AFMA is concerned that both mechanisms require a regulator to determine the SRMC of all units participating in the CRM. We consider that this is a more or less impossible task as SRMC is a dynamic number determined by a range of operational and commercial factors that can change during a day. As a result, it can be difficult for even the operator of a unit to know its SRMC precisely at any given time and we do not think it is an activity that should be attempted by regulators. We also restate our point that under a range of circumstances it will make commercial sense for a participant to run below SRMC and that there should be no restriction on this as it will reduce the efficiency of the market and potentially increase spot prices.

3.3. Competition for CRM services

The directions paper identifies generators and scheduled loads as the parties who could participate in the CRM. AFMA is keen to encourage as much competition in the market as possible and thinks there should be no limits on the class of people who can provide CRM services. We think separating the CRM payments from those for energy would assist this by allowing assets that are not participating in energy dispatch, such as run-back schemes or synchronous condensers, to offer CRM services if they are technically able to.

We recommend that scheduled registered participants should automatically be able to participate in CRM and that there should be a new registered category of CRM providers that should be open to people who do not participate in the scheduled energy market.

- vii. The CRM should be developed as an opt-in market separate from the energy market.
- viii. CRM payments and charges should be separate to payments for energy.
- ix. All payments for energy should be made at the RRP.
- x. The SRMC of a unit should not be a factor in the dispatch of units in the CRM.
- xi. Any person who is technically able to provide CRM services should be able to participate in the CRM, regardless of if they are a participant in the scheduled energy market.

4. Implementation costs

Our members have raised concerns about the implementation costs of the CRM. They wish to ensure that participants who do not opt-in to the CRM do not incur any individual implementation costs as a result of needing to update their systems to accommodate the CRM. Additionally, they think that, before making final recommendations, the ESB should conduct a thorough assessment of the costs of changes to AEMO and participants systems and, in the event that changes are made to the calculation of the RRP, the impact of these on participants who choose not to opt-in to the CRM.

- xii. The CRM should be implemented in a way that ensures participants who do not opt-in to it do not incur individual implementation costs.
- xiii. The ESB should conduct a thorough assessment of the implementation costs of the CRM, including the impact of any changes to the calculation of RRP, prior to making recommendations.

AFMA would welcome the opportunity to discuss the ESB's transmission access reforms. Please contact me on 02 9776 7994 or by email at lgamble@afma.com.au.

Yours sincerely



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