



2 August 2019

The Commissioners
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Sent to: AEMC by online lodgement

Dear Commissioners

**Coordination of Generation and Transmission Investment
Access Reform Directions Paper
EPR 0073**

Major Energy Users Inc (MEU) is pleased to provide its thoughts on the issues raised in the Directions Paper for Coordination of Generation and Transmission Investment – access reform.

The MEU was established by very large energy using firms to represent their interests in the energy markets. As most of the members are located regionally and are the largest employers in these regions, the MEU is required by its members to ensure that its views also accommodate the needs of their suppliers and employees in those regional areas. It is on this basis the MEU and its regional affiliates have been advocating in the interests of energy consumer for over 20 years and it has a high recognition as providing informed comment on energy issues from a consumer viewpoint with various regulators (ACCC, AEMO, AEMC, AER and regional regulators) and with governments.

The MEU stresses that the views expressed by the MEU in this response are based on looking at the issues from the perspective of consumers of electricity but it has not attempted to provide significant analysis on how the proposed changes might impact generators, TNSPs and other stakeholders.

In its response to the Consultation Paper on this topic, the MEU expressed general support of the thrust of the changes proposed by AEMC in that they provided an approach to resolving the issue of congestion that has always been an intransigent problem in the transmission network since the NEM first commenced operation. The MEU noted that a move for generators to be able to fund the building of transmission

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assets to ensure they are not prevented from delivering their product to their markets by the actions of other generators is a partial acceptance of the MEU view that the cost of transmission should have always been in the purview of generators.

The MEU supports the objective of better coordination of generation and transmission investment and while supportive of the general thrust of the concepts discussed in the Directions Paper, the MEU does have some concerns that should be addressed on how generators should be able to get firm access to the transmission network and so deliver their product to market.

Brought to its essential constituent elements, the AEMC proposal can be exemplified as:

1. The cost of congestion will be identified through the development of dynamic regional pricing
2. Generators will be able to buy hedges for access to the shared network and so have certainty on being able to deliver their product to market
3. The revenue received by selling these hedges will be either returned to consumers in transmission pricing or used to fund augmentations to the shared network
4. Use of the revenue from the hedges sold for funding augmentations will be based on the concept of a market transmission asset (ie not added to the regulated asset base with the TNSP able to receive higher returns to reflect the higher risks they face)

As the MEU reviewed the AEMC approach, it identified that there was no clear set of principles enunciated that guided the AEMC processes, other than in implied terms. Specifically, the MEU considers that the AEMC should have identified certain basic principles that should have guided its recommendations.

The MEU considers these principles are:

-) The benefits of change must exceed the cost of change
-) The beneficiary of an augmentation should pay for the augmentation
-) Where an entity has paid for or contributed to an augmentation, its rights to access should be firm and not diminished
-) Locational signals for generation (eg loss factors and the cost of assets to connect to the shared network) must not be weakened
-) Temporal aspects need to be recognised and evaluated
-) Consumers must not be exposed to risks of paying for unused or underutilised transmission assets or for transmission asset stranding
-) Generators must not be able to locate where they can act as gatekeepers to the shared assets and so prevent other generators being dispatched
-) Complexity should be minimised

While some of these principles can be found within the detail of the Discussion Paper, in most cases they could have been made much clearer in their application. Based on these principles, the MEU makes the following comments.

The cost of change

The MEU is aware that AEMO already publishes the costs of congestion in the networks. In the past, these costs have been relatively modest, perhaps some \$10s of millions per annum. In a market that reflects perhaps \$20 Bn per annum turnover, the costs of congestion recorded so far are not significant. Equally, the MEU accepts that the costs of congestion might increase as the mix of generation changes in the NEM

The AEMC has not examined the costs involved with implementing its proposed changes or compared these costs to the benefits that might accrue from the changes. In this regard, the MEU points out that the proposed Optional Firm Access process developed only four years ago as part of the Transmission Frameworks Review was not implemented because the costs of the change were not warranted when compared to the potential benefits that might have flowed.

The MEU considers that the AEMC needs to either demonstrate that its proposed approach will deliver a long term benefit exceeding the costs and/or find a lower cost approach.

What is not clear is whether the proposed model will really deliver the outcomes discussed in the Discussion Paper. The MEU considers that the AEMC needs to develop a model which demonstrates that the hedging process will really deliver the expected benefits and to show how the process will operate to the benefit of consumers.

Beneficiary pays and must retain its rights to access

The proposed model implies that the process delivers a beneficiary pays outcome although, as the AEMC has yet to develop the detail of the methodology underpinning the hedge auction process and whether this will provide a benefit to the generators commensurate with the costs they might incur, it is not clear that the proposed approach will actually deliver sufficient benefit to offset the costs of its introduction.

Some generators have already paid “deep” connection costs in order to connect to the shared network¹ and so have already contributed to ensuring they have

¹ An example of this would include the costs to ensure fault levels are maintained adequately such as might be incurred by an end user wanting to have its own generation capability. Augmentations such as these are very expensive and essential to allow the transfer of power in a safe manner

access. The proposed model is silent on how these generators will be treated under the proposed regime, yet it is only equitable that these contributions must be recognised under the proposed approach.

The proposal seems to leave the decision of when to build the generator funded augmentation up to the TNSP as the generator(s) impacted by the congestion only have the ability to buy hedges to ensure they have access. The Discussion Paper implies that there will be a joint AEMO and TNSP consideration on when to build the augmentation which is part of the planning process (including that of the ISP), leading to a view about when the augmentation might be more than a “good idea” and should be built. But there is no clear decision process detailed that imposes a requirement for proceeding with the augmentation.

Locational signals for new generation

The proposed model implicitly includes for calculating, through the use of the regional dynamic pricing approach, the cost of congestion if the existing shared network is incapable of exporting any additional volumes of power that might be generated at a specific location. While any augmentation paid for under the proposed approach will allow the existing generators relief from congestion, care must be taken to ensure that these locational signals are not reduced for other new generation that might want to connect.

Temporal aspects

There is discussion in the Discussion Paper about whether the hedges might be short or long duration. This raises a very important aspect from the point of consumers. To ensure consumers are not exposed to the risk of incurring costs in the future for any augmentations initiated by generators, there are a number of aspects where consumers might be exposed to future costs, by addressing:

-) What occurs where the expected life of a generator is less than the expected life of the transmission assets built? For example, a solar PV generator might have an expected life of some 25 years whereas transmission assets are typically 40+ year assets. The proposed approach has to manage this reality while ensuring that consumers are not left paying for assets that are no longer used or needed after the generator ceases production when its operating life is reached
-) Many renewably fired generators (wind and solar) can be built within 12-18 months but transmission assets commonly take 2-3 years to design and build. How is this to be managed?
-) Generators operate in the market and if they do not make a profit they will close down ahead of their technical life. What occurs in the case where a generator closes early and/or goes bankrupt and so is unable to pay the continuing cost of the augmentation to the TNSP? From a consumer

viewpoint, this asset should not get added to the RAB and become a consumer cost.

-) As most augmentations increase capacity in step amounts, it is probably that more capacity will be created by an augmentation than is needed by the current generators. This then creates an opportunity for a future generator to connect at no cost – a future “free rider” problem
-) There are a number of current augmentation proposals just granted or about to be granted approval under the RIT-T process, including the augmentations to the QNI and VNI, and the WestVic augmentation and the new EnergConnect interconnector. All of these will lead to relieving current generator congestion. It is not clear how the AEMC proposal (especially noting its planned date for implementation to be 2022) will address these projects. Will they get a “free ride” from consumers or will they be subject to ex post adjustments cost allocations for generators that benefit from these augmentations? If they are to get a “free ride” will this precipitate a number of new augmentations to get approved before the implementation date of the proposed change in 2022?

The MEU considers that the AEMC needs to be very clear about these temporal issues and how they will be managed as part of its approach.

The augmentation

Implicit in the proposed approach, is an assumption that the TNSP will provide a market based augmentation to relieve the congestion, presumably predicated on the value released from removing the congestion. The MEU points out that the history of market based augmentations² in the NEM has been very much to the detriment of both the builder of the market based augmentation and later then to consumers as the owners of the market based augmentations sought to have these regulated. The AEMC must explain how the approach will overcome the challenges faced by previous market based augmentations in the NEM.

The MEU members have provided advice that, from their discussions with monopoly network service providers, it is clear that the NSPs are quite prepared to charge whatever they consider is appropriate for any augmentation to their network³ that is unregulated. Under the regulatory approach, the costs for an augmentation are fully reviewed by the AER and only legitimate costs are allowed.

² For example, Murraylink between SA and Victoria and Directlink between Queensland and NSW which were both built as market interconnectors and subsequently became regulated but never provided the full value of their capacity when included in the regulated asset base paid for by consumers

³ One MEU member cites a case where an NSP wanted more than double the cost assessed by a well qualified engineering consultant (one used by the AER for assessing network augmentation capex) for an augmentation

The MEU considers that there is a paucity of control inherent in a market based augmentation compared the greater rigour implicit in a regulated augmentation, and questions whether a market based approach to an augmentation is in the long term interests of consumers. While it might be the generator that pays any excessive costs for a market based augmentation, this cost will be effectively pass onto consumers through higher prices from the generator.

The development of the model proposed by the AEMC needs to explain what the TNSP will actually sell as a hedge. From the examples used in discussions with the AEMC⁴ and in appendix B of the March 2019 Consultation Paper on access and charging, the value of the hedge seems to be the cost of the congestion⁵ but it will be the purchase price of the congestion hedge resulting from an auction that will determine the value placed on the congestion by the generators. The MEU presumes that the sale of the hedges will be the cost used to drive the decision whether to augment the assets or not, but it is not clear that this is the case because the approach seems to imply it will be the regional dynamic price that sets the cost of congestion.

In the Discussion Paper, there is reference to the “PIAC proposal” for addressing the cost of augmentation to reduce congestion. While the MEU considers that the PIAC proposal has merit, it does not support the very basic premise inherent in the proposal that consumers must contribute to the relief of generator congestion and to pay a fixed share of the cost of any augmentation to relieve the congestion.

Renewable energy zones

The ISP has identified a number of Renewable Energy Zones considered to be high productivity regions for new renewable generation. Many of these zones are at the periphery of the shared network and to enable these zones to be accessed requires augmentation of the transmission network.

To enable these zones to be connected, the transmission network needs to be expanded above the needs of the consumers located in these regions; this then raises a number of questions.

-) Should network augmentations required for consumer benefit be modified (perhaps at higher cost) to increase the ability of generation in these zones to connect? An example of this is the EnergyConnect proposal (SA to NSW interconnector). Should the alignment and capacity of the interconnector be changed at consumer cost to allow easier connection of generation and should the capacity be increased to allow more generation to connect. The MEU considers that consumers should, at most, only be liable for the most efficient alignment and capacity needed

⁴ For example at the teleconference set up with the ECA, consumers and the AEMC on 23 July

⁵ ie flow*(regional reference price – dynamic regional price)

by consumers and that the generators benefiting from the new augmentation should also contribute to it

- J) Should consumers pay for augmentations needed to allow generators in these zones to be able to export all of their capacity? An example of this is the proposed WestVic augmentation. Consumers in that region already have sufficient network capacity for their needs, but the WestVic augmentation is primarily to allow generators in that region to be able to export all of the likely capacity being built. The MEU considers that the bulk of the augmentation should be funded by the generators that benefit from this augmentation.
- J) Should generators in these zones be able to prevent other generators from exporting their capacity and so be able to influence the regional prices? An example of this is where Snowy Hydro has the ability at times to limit flows between NSW and Victoria by “judicious” dispatch from its generators to limit flows on the VNI. A similar potential for “gate keeping” might occur on the proposed EnergyConnect interconnector where SA based generators might be prevented from exporting through injections into EnergyConnect from generators in the SW NSW REZ. The MEU considers that these issues need to be examined in significant detail to ensure that the long term interests of consumers are not put at risk.

While the MEU is supportive of the development of the Renewable Energy Zones, it is concerned that unless a strong regime is implemented that is both equitable and reflects that generators are also beneficiaries of new transmission augmentations, then consumers will end up having to pay for transmission assets that they do not need and provide no value to them.

Complexity and an alternative approach

It is clear that the approach outlined in the discussion paper, while attempting to impose the rigours of market pressures rather than a regulated approach based on central planning, the AEMC has developed what appears to be a quite complex methodology for what currently might be considered an issue of low materiality, although one that is likely to become more material in the future. While accepting that some change is probably needed, the MEU questions whether the complexity (and cost) of the proposed approach is warranted by the materiality of the problem

At the forum on 23 July to discuss the CoGaTI process, there was a presentation made by a representative from New Zealand where they have introduced some eight pricing nodes, apparently not unlike the proposed dynamic regional nodes. The NZ approach provides strong locational signals for both generation and end users.

However, what the presentation also highlighted was an approach used where an augmentation of the transmission interconnector between the North and

South Islands was built as a regulated augmentation but the costs of the augmentation were passed to the beneficiaries of the augmentation, which were the largest generators in the South Island.

With this in mind, the MEU considers that rather than trying to develop a market based approach to the problem, a simpler option could be developed which addresses a number of the concerns identified by the MEU in the commentary above. The MEU considers that:

-) There be a central planning role for proposed augmentations with the materiality defined by the outcomes of dynamic regional pricing as proposed by the AEMC
-) In the short term, generators could seek to buy hedges to enable them to have firm access to the shared network, and the value of these hedges sought would help inform whether an augmentation is necessary and to what capacity
-) Once an augmentation is seen as viable based on both sets of costs (sale of hedges and the cost of congestion revealed by the dynamic regional pricing approach), a regulated augmentation is undertaken.
-) The cost of the regulated augmentation is allocated by the AER to the beneficiaries of the augmentation in proportion to the value each beneficiary receives⁶, noting that the beneficiaries would include all of the generators getting better access, consumers and governments⁷.
-) As new generation adds capacity at the dynamic regional node, the AER has the ability to vary the allocations of the costs involved. This might mean, for example, that as new generation is added, the costs for each generator will be shared across a greater number and thereby reduce costs for the existing generators⁸. Equally, if the new generation added reduces the price of electricity, then consumers might have their share increased.

Such an approach is simple, easy to manage, reflects that the market is dynamic and has the ability to change as circumstances change.

While the MEU considers that change is needed to the current arrangements, it is also of the view that the changes made need to reflect

-) A cost of the change that reflects the magnitude of the problem
-) Consumers must not be required to take increased risk that comes from underutilised or stranded transmission assets that might eventuate in the future
-) Generators must be required to take responsibility for their locational decisions

⁶ For example, based on the amount of energy that each generator actually exports through the node

⁷ Governments are included as they set policies that drive the incidence of renewable generation and might also be prepared to fund augmentations that assist them in delivering their policies

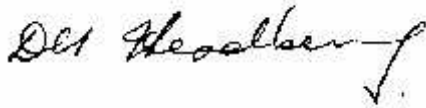
⁸ This recognises that transmission capacity increases come in steps

-) Temporal aspects need to be fully recognised in the development of any change in approach
-) Generators should be able to contribute to the transmission network and when doing so, get some certainty they can export their product
-) Any arrangement structured needs to allocate the costs of an augmentation to the beneficiary of that augmentation
-) Monopolies have the ability to charge prices much higher than their actual costs
-) The history of market based network augmentation shows that in the NEM, this approach has not been to the benefit of consumers

The MEU considers that it's proposed alternative approach best meets these requirements and the AEMC approach is probably too complex for the needs identified for the NEM.

The MEU is happy to discuss the issues further with you if needed or if you feel that any expansion on the above comments is necessary. If so, please contact the undersigned at davidheadberry@bigpond.com or (03) 5962 3225

Yours faithfully



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