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Submitted online to:

<https://www.aemc.gov.au/market-reviews-advice/coordination-generation-and-transmission-investment-implementation-access-and>

Dear Ms Boddington,

Renewable Energy Zones
Reference: EPR0073

The Australian Energy Council (the “**Energy Council**”) welcomes the opportunity to make a submission in response to the Australian Energy Market Commission’s (“**AEMC’s**”) *Renewable Energy Zones Discussion Paper*.

The Energy Council is the industry body representing 22 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Introduction

The changes in the generation mix due to increases in the amount of variable renewable energy in the system and the retirement of conventional thermal generation are altering the nature of the transmission system, as new generation locates to areas with bountiful energy resources, but inadequate transmission capacity. Such projects are being proposed by multiple different developers who do not wish to grant their competitors an advantage by collaborating, but conversely do not wish to miss out on the economies of scale to be achieved by having multiple parties connect to the power system at the same time.

Scale Efficient Network Extensions (“**SENEs**”) were proposed as a solution to the conundrum,¹ but to date no proponents have used these provisions in the National Electricity Rules.

The Finkel Review proposed the establishment of Renewable Energy Zones (“**REZs**”),² but did not define their characteristics. REZs have no standing in the law, and the AEMC’s Discussion Paper explores possible frameworks to facilitate such zones.

The Energy Council acknowledges the rationale for the development of REZs, being the efficient development of transmission infrastructure to geographic areas which can support multiple variable renewable energy projects, but is concerned that proposals will not work in concert with the Renewable Investment Test for Transmission (“**RIT-T**”) or a transmission network which is no longer linear, but is now increasingly meshed.

Discussion

Definition of REZs

The 2018 Integrated System Plan proposed 34 REZs,³ totalling over 33GW (approximately 80% of the current scheduled registered capacity of the National Electricity Market). The size and geographic dispersion of the zones challenge the perception that they are discrete areas, since adjacent areas are likely to enjoy similar abundant renewable energy resources, and are limited only by the transmission infrastructure to export their

¹ National Electricity Rules Section 5.19

² Finkel, A. *et al.*, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, June 2017

³ Australian Energy Market Operator, *Integrated System Plan for the National Electricity Market*, July 2018

output. Instead they are only discrete due to the linear nature of the transmission system, but with increased interconnection, this distinction is becoming increasingly weaker.

The AEMC's proposed classification of REZs is for there to be two types:

- a Type A REZ, within which the generators pay for the connection assets; and
- a Type B REZ, the connection charges for which consumers pay via Transmission Use of System charges.

It is possible that the delineation will not be quite as distinct, and there may be connection costs which are shared between developers and consumers, therefore strict categorisation is unlikely to be successful, and it may be more appropriate to leave the definition loose.

Utility of REZs

The AEMC lists three limitations to connecting REZs, being:

- incentives to coordinate generation infrastructure;
- incentives to coordinate transmission and generation infrastructure; and
- incentives for efficient transmission infrastructure.⁴

To the Energy Council's mind, the problem rests almost exclusively with the generators seeking to connect, as the transmission infrastructure issues can be solved by the actions of the Transmission Network Service Providers ("TNSPs") (detailed further below).

It is the tension within the generators' ranks between collaborating with a competitor to optimise the connection assets and individual generators' costs, and building assets exclusively, but at higher cost, which cruels a simple solution from a generation perspective, and indicates that such issues are unlikely to be resolved by changes to the regulatory framework.

Conversely, under the RIT-T process, TNSPs have the ability to construct assets, subject to passing the nett economic benefits test. This means that TNSPs can canvass potential project developers, and aggregate parties' requirements to build the solution which best fits their needs. As an alternative, TNSPs have the ability to build transmission infrastructure speculatively, and recover their costs directly from connecting generators.

In addition, there is the SENE process which, although it has yet to be used, offers opportunities for generators with common interests to seek to share the costs of connection. The Energy Council notes that TransGrid has suggested that the SENE process should be reviewed to facilitate REZs as a transitional measure to access reform,⁵ and the Energy Council supports this review.

Interaction with CoGaTI

The Energy Council notes that the Discussion Paper has been issued simultaneously with the CoGaTI Proposed Access Model Discussion Paper.⁶ It is appropriate for REZs to be considered in conjunction with CoGaTI, since changes to the transmission regime will affect REZs, and the proponents who would use them to facilitate connection to the transmission network.

The Discussion Paper has proposed five possible models for REZ development, unfortunately none of which address all three issues identified. The Energy Council appreciates the magnitude of the problem, and suggests that the difficulty lies with trying to establish a framework which resolves competitive tensions between prospective market participants. The aim of the National Electricity Objective is to promote efficient investment, and while addressing competitive tensions may improve capital allocation between proponents, it is more likely that a solution brokered by the relevant TNSP will provide a better outcome for consumers than offering incentives, the costs of which must be ultimately borne by consumers, to generators to encourage them to collaborate on shared infrastructure assets.

⁴ pp.22-23

⁵ TransGrid, Submission to Coordination of Generation and Transmission Investment – Access Reform – Directions Paper, 2nd August 2019, available at <https://www.aemc.gov.au/sites/default/files/2019-08/TransGrid.PDF>

⁶ Australian Energy Market Commission, *Coordination of Generation and Transmission Infrastructure Proposed Access Model – Discussion Paper*, 14th October 2019

To this end, the Discussion Paper has proposed a model involving long-term hedges to fund transmission assets, as suggested by the Energy Networks Association. The Energy Council is generally supportive of the proposal, but suggests that the following matters be clarified or amended:

Financial Commitment

The Energy Council agrees that it is reasonable for generators to be obliged to pay TNSPs for their expected costs of evaluating the proposed RIT-T project, and determining the most appropriate solution for the expected demand. What is not clear, however, is the size of the deposit required by generators to demonstrate good faith to the TNSP that they will contribute to the cost of construction. The Energy Council suggests that rather than paying 50% of the expected cost of the generator's share of the proposed REZ, this value should be 20% or less, with interest (deemed at a bank-equivalent rate) credited to the amount for as long as the TNSP holds it without expenditure.

Cost Recovery for the REZ

The issue of how to account for the "lumpiness" of transmission investment is vexed. Should TNSPs "underbuild", a prospective generator will be unfulfilled (or a number of prospective generators will be constrained), while should TNSPs "overbuild", prospective generators will have the value of their transmission rights diminished.

The Discussion Paper suggests that spare, unfunded capacity should be valued by amending the AER's RIT-T Application Guidelines to either:

- remove or modify the market impact component; or
- remove or modify the wealth transfer restriction for generators.⁷

The Energy Council disagrees with these proposed amendments. By removing the generators' contribution from the RIT-T assessment, it is possible that an uneconomic project may be rendered economic and built, at a cost to consumers for the unused portion of the expansion. Therefore the Energy Council believes that if the project cannot be justified on the expanded basis, it should be scaled back until it passes the RIT-T (or be abandoned if no option is economically justifiable).

Long-term Transmission Hedge

The Discussion Paper proposes that long-term transmission hedges would be auctioned to those project proponents that have underwritten the transmission expansion, and suggests that the hedge would need to be close to the same length as the generator's investment. The Energy Council agrees, for financial underwriting reasons, that at face value this would be helpful, but notes that investments are subject to discount rate effects, therefore the value of a hedge in later years is significantly diminished. Accordingly a shorter period, but still longer than the proposed three year auction period, e.g. ten years, would be acceptable.

The Paper suggests the hedge should be between the generators and the regional price. In this case, it seems incorrect to provide the generator with any rights that extend beyond the exit point of the REZ. To do so would put connectors to the REZ at an advantage to those connecting outside the REZ. Should the separate access reforms be made, it may be possible to provide a Financial Transmission Right ("FTR") only to this exit point, and this will create the possibility of mismatches between the FTRs within the REZ, and the FTR from the exit point to the regional reference node.

The Energy Council is also very concerned at the price struck for the long-term transmission hedge. As the price needs to hedge the difference between the generator's local price and the regional price, the hedge price will necessarily have a view of the long-term path for the congestion. This is impossible to predict with any certainty, particularly as market liquidity is limited more than two to three years hence, therefore the price struck has a significant risk of being inappropriately low or high. On this basis, the Energy Council submits that establishing the price as based on anything other than the cost of the augmentation is misplaced.

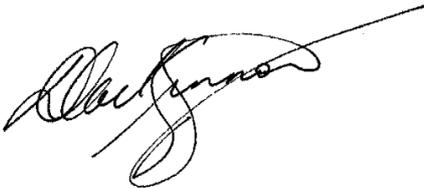
⁷ p.37

Conclusion

In summary, the Energy Council sees little utility in developing the concept of REZs beyond the common understanding of that they are, and believes that existing arrangements with TNSPs, perhaps with the enhancement of the SENE process, can be used to facilitate a collection of like-minded, proximal generators connecting to the power system. It is important that REZs do not drive access reforms, given their indistinct nature and uncertain benefit. The AEMC's proposed model offers promise, and should be modified to make it even more effective for its intended purpose.

Any questions about this submission should be addressed to the writer, by e-mail to Duncan.MacKinnon@energycouncil.com.au or by telephone on (03) 9205 3103.

Yours sincerely,



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