

Therese Grace
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

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Submitted online to:

<https://www.aemc.gov.au/markets-reviews-advice/reporting-on-drivers-of-change-that-impact-transmi>

Dear Ms Grace,

Coordination of Generation and Transmission Investment
Reference: EPR0052

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”) *Coordination of Generation and Transmission Investment Discussion Paper*.

The Energy Council is the industry body representing 21 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 and sell gas and electricity to over ten million homes and businesses.

Introduction

The power system is in the midst of significant change, and there are a number of reviews, planning processes and policy changes, such as the outcomes of the *Finkel Review* and the proposed National Energy Guarantee, in train. The Energy Council appreciates the difficulties the AEMC has experienced in publishing its discussion paper during such a period of industry and general policy uncertainty.

Discussion

Transmission Framework

The transmission system and generators (and the distribution system) work in concert to ensure the reliable supply of electricity to consumers. It is important that the transmission system framework is such that it furthers the National Electricity Objective and considers its interrelationship with all aspects of the power system.

Access to the transmission system by generators is dependent upon the physical limitations of the transmission system, but the configuration of the transmission system and the means by which generators obtain access is dependent upon the transmission system framework. In the National Electricity Market (“**NEM**”) there has historically been little congestion, and according to Ernst & Young’s unpublished work, cited in the Discussion Paper, there is currently limited congestion, nominally attributable to interconnector transfer limits, and this is already correctly priced in the market.

The AEMC considers a number of options to improve transmission planning outcomes within the NEM.¹ The Energy Council considers that evaluating the different options would require significant resources from both the AEMC and industry, and any findings would be complicated by other reforms currently being considered, including, but not limited to, the *Reliability Frameworks Review*, the *National Energy Guarantee*, implementation of the *Finkel Review* recommendations and the Australian Energy Regulator’s *Review of the Application Guidelines for the Regulatory Investment Tests for Transmission and Distribution*. As an example, the Energy Council cites the Optional Firm Access Review, completed in July 2015, which required substantial commitment from the AEMC and industry, incurring significant direct costs in the process, but the exercise

¹ pp.28-29

was ultimately fruitless. On this basis the Energy Council supports suspending further consideration of transmission framework options for the time being.

Information Provision

Notwithstanding the above, the Energy Council believes improvements could be made in the area of accurate and transparent information with regards to the uncongested generator connection capability of locations within the existing transmission network. While Network Service Providers are starting to publish connection capability information in their Annual Planning Reports (“APRs”), this data fails to include critical information such as uncongested headroom. Data as currently provided in the APRs may result in prospective connection applicants having a general misunderstanding as to the true capability of the existing network, which may, in turn, potentially lead to increased network congestion, particularly at times of high consumer demand.

Storage

Storage is likely to become a more important part of the power system as large-scale variable renewable energy generation seeks to firm its output. This may take the form of adjacent storage, such as batteries, or more remote facilities, such as pumped hydro. As the Energy Council outlined in its submission to the *Coordination of Generation and Transmission Investment Approach Paper*, it supports establishing a separate registration category for storage, and specific consideration of the TUoS arrangements for such participants, reflecting the purpose of the storage, increasing the reliable supply to the grid.

Renewable Energy Zones

The Discussion Paper does contemplate Renewable Energy Zones (“REZs”) in some detail. The Energy Council considers that REZs are areas within regions (but possibly also straddling regions) which have sufficient renewable energy resources to justify large-scale development of generation, but the distance from the main transmission network and/or between generation sites is such that economies of scale could be achieved by extending and/or increasing the capacity of the existing shared grid. With respect to extensions, the existing National Electricity Rules already provide for Scale Efficient Network Extensions (“SENE”),² and the Energy Council believes this forms a good framework for renewable generation to establish its required connections. With respect to strengthening the existing shared grid, which is a monopoly common asset, this should only occur following a careful cost-benefit analysis, or as part of a non-prescribed, funded augmentation.

The Energy Council strongly believes that market forces should determine the most efficient means by which generation can connect and supply demand. It is important that economic principles underpinning the Regulatory Investment Test for Transmission (“RIT-T”) are followed, in order to:

- reduce the risk that customers will be exposed to the cost of uneconomic monopoly extensions if the connecting generation does not eventuate;
- encourage new generation to build in locations of spare existing uncongested network capacity first, thereby limiting unnecessary growth of monopoly assets; and
- promote an industry where competitive assets, i.e. generation and non-network options, lead the planning of monopoly assets, i.e. transmission, rather than the converse situation which would revert the industry to a centrally planned construct.

The Energy Council also observes that current arrangements must be satisfactory in the absence of REZs, as almost 40,000MW of renewable generation is proposed for connection to the existing grid.³ Therefore it appears there is no need to extend the grid’s coverage by use of specific mechanisms in order to foster even more projects. If, having connected many of these projects to the existing grid, material congestion results, the existing RIT-Ts will remove the congestion where it is efficient to do so.

The *Finkel Review’s* Recommendation 5.2, that “the Australian Energy Market Operator ... should develop a list of potential priority projects in each region that governments could support *if the market is unable to deliver the investment required to enable the development of renewable energy zones*” [emphasis added], is also reduced in importance, since it is clear that the market is anticipating delivery of the investment required.

² Section 5.19

³ <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Generation-information>

A danger in creating planning priority zones is that, by definition, other parts of the grid are de-prioritised. In the Energy Council's view, planning of the grid should be holistic, using a NEM-wide grid model that identifies points of congestion that are potentially economically addressable, regardless of where they emerge. As such, all congestion should be contemplated equally, and in the absence of the renewable energy zone concept, this appears to be the approach of national and state-based transmission planning.

Thus the AEMC's task under Recommendation 5.2 to "develop a rigorous framework to evaluate the priority projects, including guidance for governments on the combination of circumstances that would warrant a government intervention to facilitate specific transmission investments" can be limited in scope. To limit the amount of market intervention required to satisfy the recommendation, the Energy Council suggests that Options 1 (Enhanced Information Provision) and 2 (Generator Coordination) would be acceptable and may act to facilitate investment. The Energy Council rejects Options 3 (TNSP Speculation) and 4 (TNSP Prescribed Service) which allow transmission infrastructure to be built in anticipation of new generation, as these options are not in the best interests of consumers, due to the risk of unused assets being commissioned and the costs being passed on to customers. As there is an existing framework comprising the RIT-T and SENE, which allows transmission assets to be built as efficiently as possible, the Energy Council advocates that this framework should be used for generation connection, with the cost-benefit of new projects clearly established.

Conclusion

In conclusion, the Energy Council supports the AEMC delaying further work on the framework for co-ordinating generation and transmission until the path of other policy reform is clearer, or the need becomes greater. In regards to Renewable Energy Zones, the existing National Electricity Rules encompassing RIT-Ts and SENEs already offer a framework for prospective generators to seek efficiencies in their connection to the transmission system. The Energy Council recommends only changes to information provision to facilitate this occurring.

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,



Duncan MacKinnon
Wholesale Policy Manager
Australian Energy Council