

Elizabeth Bowron  
Senior Advisor  
Australian Energy Market Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

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Dear Ms Bowron,

**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 Options 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

At the Council of Australian Governments Energy Council (“**COAGEC**”) meeting of 10<sup>th</sup> August, the Energy Security Board was directed to report to the COAGEC in December 2018 on “how the Group 1 projects identified in the ISP can be implemented and delivered as soon as practicable and with efficient outcomes for customers”, as well as reporting on “how the Group 2 projects will be reviewed and progressed”.<sup>1</sup>

The Integrated System Plan (“**ISP**”)<sup>2</sup> was a recommendation of the *Finkel Review*,<sup>3</sup> which charged the Australian Energy Market Operator (“**AEMO**”) with “develop[ing] an integrated grid plan to facilitate the efficient development and connection of renewable energy zones across the National Electricity Market”.<sup>4</sup> It was published in lieu of the National Transmission Network Development Plan (“**NTNDP**”), which obliges AEMO “to prepare, maintain and publish a plan for the development of the national transmission grid”.<sup>5</sup>

Like its predecessor, the National Transmission Network Development Plan, the ISP can add great value to the National Electricity Market (“**NEM**”) by providing a broad strategic direction, and by assisting state-based transmission planners to coordinate. This national planning function was not intended to be followed by rote, but instead to provide an outline to planners that can help their work co-ordination and prioritisation, and assist them to schedule more detailed analyses of potential projects.

To the Energy Council’s mind, a plan indicates intention, but given the ambiguities and possible variations in a market with so many different variables over the twenty year period of the ISP, it would be inappropriate to ascribe certainty to the plan beyond widely accepted market trends and indicators. The ISP quite correctly recognises the potential for great variation in the exogenous inputs, such as technology costs and demand growth, by modelling a range of scenarios. While we understand that the impact of different scenarios was considered when initially filtering out transmission proposals, only the “core” scenario was tested for final

<sup>1</sup> p.2, COAG Energy Council, *Meeting Communique*, 10<sup>th</sup> August 2018

<sup>2</sup> Australian Energy Market Operator, *Integrated System Plan for the National Electricity Market*, July 2018

<sup>3</sup> Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, June 2017

<sup>4</sup> Recommendation 5.1

<sup>5</sup> Section 49(2)(a) of the National Electricity Law

benefits. It is highly likely that individual scenarios would have given different results. This is not to say the Energy Council disagrees with the technique, but that the inherent uncertainties in optimal transmission development identification should always be acknowledged. Such scenario testing, taken to its logical conclusion by the identification of alternative transmission infrastructure, provides great insight into the benefit of committing as late as possible to major monopoly investments (subject to accommodating the necessary lead times for projects of such magnitude).

The Energy Council considers the ISP should be characterised as a *possible* outcome in transmission network development, and an indicator of how the power system *may* develop.

On that basis the Energy Council is uncomfortable with any view that the projects identified in the ISP must be built to satisfy a particular view of the future, particularly as the ISP does not make any assessment of non-regulatory risks such as development approvals, environmental approvals and the procurement of easements. Instead it is important that inseparable projects are assessed individually, as late as possible, to ascertain whether they properly pass a rigorous cost-benefit test, thereby avoiding the risk that projects of negative value to consumers will be commissioned after being aggregated and cross-subsidised by projects with more demonstrable benefits. In addition, where investments contribute to overall “system benefits” as envisaged in the ISP, it remains critical that these investments also have a positive net present value to consumers at the project level.

## Discussion

### Making the ISP actionable

The AEMC has proposed five possible options which could make the ISP “actionable”, with the options varying as to the extent to which Transmission Network Service Providers (“TNSPs”) and AEMO share responsibilities for identifying options and implementing them. The options move from those most similar to the existing arrangements across to progressively greater roles for AEMO as the not-for-profit national transmission planner. Moving along the list towards Option 5, the Energy Council would accept that a possible upside for the higher options is that stakeholders will feel more confident that the NEM transmission is built seamlessly across the states, however it also introduces progressively greater downsides, being:

- replacement of the incentive-based regulatory framework with a cost of service/pass-through approach;
- transfer of the existing regulatory framework’s risks<sup>6</sup> in relation to planning, from network planners across to other parties;
- separation of planning from ownership and operations, creating operational inefficiencies;
- possibly mandating infrastructure which is not supported by the local TNSP; and
- reduced likelihood of efficient non-network options being explored, because:
  - the pass-through arrangement would remove the incentive to seek to defer capex between regulatory resets;
  - the national planner would have less of the granular knowledge necessary to contemplate innovative solutions; and
  - the national planner would be likely to be less nimble in terms of adapting quickly to changing local circumstances.

There also needs to be consideration as to where risk lies and the identity of the party which is best placed to manage the risk.<sup>7</sup> The Options Paper suggests that as the options do not seek to change access arrangements, “it is unlikely that there will be a substantial change of risk allocation for generators”. The Energy Council disagrees, suggesting that in an open access market, generators’ prospects hinge most greatly on monopoly network decisions. Every network planning decision will have positive and negative impacts upon different generator businesses. The Energy Council accepts this as an inevitable feature of the open access model, but suggests that having committed to that model, the AEMC must be cognisant of the resultant risks that changes to the network planning regime places upon generators who invested within the existing regime. To the Energy Council’s mind, generator risk is minimised by using the best possible cost-benefit

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<sup>6</sup> For example, the potential risk of optimisation of investments shown to be inefficient

<sup>7</sup> The Energy Council notes that the Option Paper suggests that risk should be allocated to the party which can best manage “the consequences of that risk” (p.24). It is important for the *probability* of a risk occurring to be considered also.

analysis techniques undertaken in transparent and challengeable ways, and that is what the Energy Council believes the current model is attempting to achieve.

Before considering the Options 1 through 5, the first question the AEMC should ask is whether any change is required. The existing NTNDP rules already oblige TNSPs to contemplate the national plan in the context of the “strategic plan” to which it is best suited, and the Last Resort Planning Power (“**LRPP**”) provides a safety net should the TNSPs fail, for whatever reason, to progress efficient investments. The Energy Council is pleased to note that this has not occurred, as the annual LRPP assessment has never found an efficient investment that had not already been independently progressed by the TNSPs.

Thus it is not clear that the existing arrangements have any fundamental shortcomings. It is noted that the 2018 ISP recommends a greater number of proposed transmission projects than the NTNDP of previous years, but there is no evidence yet that the existing regulatory arrangements will necessarily be unable to cope with a faster rate of investment if that proves to be most efficient when assessed at the more detailed level.

The Energy Council believes that the AEMC should favour an approach which encourages the market to address transmission needs in the most efficient way possible, and limit distortions introduced by relying on central planning. While the Energy Council is not convinced of a need for fundamental change, it prefers Option 1 “Requirement for TNSPs to consider ISP-identified needs in their TAPR”, and that TNSPs, as providers of the capital underwriting the network expansion, continue to have responsibility for their own businesses’ destiny. In doing so they should take the guidance provided by the ISP, the timetable for which should be changed to that of the NTNDP, thereby providing sufficient time for the ISP’s outputs to be incorporated into TNSPs’ Transmission Annual Planning Reports.

The Energy Council supports the Australian Energy Regulator having a role in approving the ISP preparation process. While the ISP, and before that the NTNDP, are important documents setting out a potential future for the power system, should there be more expectation from stakeholders and the community that the vision of the network set out is more likely to occur, it is important that the documents’ assumptions and methodology are adequately tested, and clearly communicated.

### Renewable Energy Zones

Chapter 6 of the Options Paper discusses Renewable Energy Zones (“**REZs**”), a concept first broached in the Finkel Review but without any basis in the National Electricity Law or the National Electricity Rules. The Energy Council continues to believe that market forces should determine the most efficient means by which generation can connect and supply demand. Accordingly it is appropriate for the Regulatory Investment Test for Transmission (“**RIT-T**”) to be followed, or new network developed as part of a non-prescribed, funded augmentation. The Scale Efficient Network Extensions (“**SENE**”) provisions of the National Electricity Rules<sup>8</sup> are also available for projects seeking to make efficient use of transmission network assets and improve their cost-benefit outcomes. The use of the existing RIT-T and SENE arrangements will:

- reduce the risk that customers will be exposed to the cost of uneconomic monopoly extensions if the connecting generation does not eventuate;
- increase the transparency of individual investment decisions;
- 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 with its inherent inefficiencies.

As the COAGEC found in its *Review of the Regulatory Investment Test for Transmission*,<sup>9</sup> “... the RIT-T in its current form remains the appropriate mechanism to ensure that new transmission infrastructure in the NEM is built in the long term interests of consumers. Further, it remains an appropriate mechanism for the assessment of interconnection investments.” Accordingly the Energy Council believes that the RIT-T, with the minor improvements identified in the paper, remains the best option for the assessment of efficient transmission

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<sup>8</sup> Section 5.19 of the National Electricity Rules

<sup>9</sup> p.4, Council of Australian Governments Energy Council, *Review of the Regulatory Investment Test for Transmission*, 6<sup>th</sup> February 2017

investment and agrees with the AEMC's position that, "... the role the RIT-T fulfils in protecting consumers from inefficient investment should not be diminished".<sup>10</sup>

### Treatment of Storage

The Energy Council acknowledges that storage will form an important part of the power system of the future, and agrees that the current need to register as both a market generator and a market customer is cumbersome, and a barrier to new entrants. Accordingly it is appropriate that a dedicated technology-agnostic participant category be developed to simplify projects' participation. This participant category should be sufficiently flexible to allow the proponent to participate in the markets it chooses, e.g. energy and ancillary services, and the manner in which it chooses, e.g. scheduled or non-scheduled.

In relation to Transmission Use of System ("TUOS") charges, any proposed rule should attempt to treat the storage consistent with the underlying economic principles that led to the current approach to charging customers rather than generators, which were:

- the right of customers to receive effectively a "firm" supply (to a set reliability standard) whereas generators have no such right; and
- that where costs are fixed, they are most efficiently allocated upon those whose behaviours are less distorted by it. In this case final consumers, with relatively inelastic consumptions, are a better choice than generators, who would likely take inefficient actions to avoid TUOS charges.

Storages such as the NEM's existing pumped-hydro facilities exhibit characteristics closer to generators with respect to the above two concepts.

The AEMC's discussion in section 8.2 was thoughtful and comprehensive. It articulated the very wide range of possible forms of storage that might emerge in the future. Their business models may vary in terms of:

- the times and ways in which they draw electricity from the network, which for some models such as "normally-off" pumped hydro, the network will be used purely opportunistically (i.e. in a "non-firm" manner) but in other models may provoke additional network investment; and
- the use of that electricity being either purely for the future generation of electricity, or for the diversion of some of that electricity to the production of other goods, such as the sale of hydrogen.

These appear to be critical questions with respect to the fairness and efficiency of storage paying charges for use of the shared transmission network. On the basis of these uncertainties and the AEMC's discussion, the Energy Council's reflection is that a "one size fits all" approach is unlikely to be appropriate.

Fortunately the existing rules provide the TNSPs a clear objective in seeking to apply network charging *efficiently* for each user and gives them considerable latitude for doing so, ultimately overseen by the regulator. For some business models zero TUOS charging will be correct, but in other cases TUOS charges equivalent to conventional transmission customers would be appropriate.

The Energy Council's view would be paralleled in distribution charging.

While the Energy Council considers that in some cases payment for energy storage consumption may be appropriate, it sees no value in changing arrangements for sunk investments which would only increase the perception of investor risk. Therefore, for the avoidance of doubt, it is prudent to grandfather legacy storage arrangements.

### **Conclusion**

In conclusion, the Energy Council has concerns about the authority for transmission network development which is implied by the ISP being "actionable". Irrespective of the scrutiny given to the ISP by stakeholders or the AER, the long-term nature of the document means that its projections will necessarily suffer from inaccuracies. On that basis, the Energy Council does not believe it is appropriate that the ISP be wholly relied upon to commission transmission network augmentations and interconnections. Instead it is preferred that the ISP be used as a guide for TNSPs to conduct their own enquiries and analysis to facilitate new, efficient


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<sup>10</sup> p.66, Options Paper

investment. This may or may not involve complementary projects being developed in a common geographic area, but the concept of REZs should not be used to validate projects which would be unable to be justified in their own right.

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

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Duncan MacKinnon', with a long horizontal stroke extending to the right.

**Duncan MacKinnon**  
Wholesale Policy Manager  
Australian Energy Council