

19 October 2018

Elizabeth Bowron  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Lodged electronically: [www.aemc.gov.au](http://www.aemc.gov.au)

Dear Ms Bowron,

## **COORDINATION OF GENERATION AND TRANSMISSION INVESTMENT OPTIONS PAPER (EPR0052)**

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, hydro, bioenergy, marine and geothermal energy, energy storage and energy efficiency along with more than 5,600 solar installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC welcomes the opportunity to provide feedback to the Australian Energy Market Commission's (AEMC's) Review of Coordination of Generation and Transmission Investment Options Paper. The generation mix in the National Electricity Market (NEM) is transforming, which requires a transformation of the transmission network to ensure reliable and secure electricity supply that is in the long-term interests of consumers. The options paper is a welcome addition to the ongoing energy transformation discussion.

### **Making the Integrated System Plan actionable**

The CEC has supported the development of an integrated grid (now system) plan and establishment of renewable energy zones (REZs) as recommended in the *Future Security of the National Electricity Market: Blueprint for the Future* (Finkel Review) from the outset. Now that the Australian Energy Market Operator (AEMO) has released its inaugural Integrated System Plan (ISP), we are keen to see it drive timely transmission investment to ensure the transmission network can support the efficient development of renewable projects. This is particularly important as the security and reliability of the energy system is vulnerable to the retirement of ageing and increasingly unreliable thermal generation. This vulnerability has been highlighted by the retirements of the Northern and Hazelwood power stations at short notice. Consequently, we support making the ISP into an 'actionable strategic plan' and welcome the discussion of options to strengthen the link between the ISP and investment decisions in the context of the National Electricity Objective and National Electricity Rules (NER).

At a high level, the CEC considers the ISP is the appropriate mechanism to:

- Take into account non-network options and various government public policies from a more national perspective, letting AEMO fulfil its National Planner role, with appropriate feedback loops with relevant market participants and

transmission network service providers (TNSPs) in fulfilling their role as a jurisdictional planning body in most NEM jurisdictions, except Victoria.

- Allow for fulsome stakeholder consultation on key ISP-identified transmission projects that could replace the early steps of a TNSP's regulatory investment test for transmission (RIT-T) process to avoid duplication of effort and analyses,<sup>1</sup> as well as streamlining the overall process that currently applies under the NER for TNSPs. This could also extend to enhanced dialogue with the Australian Energy Regulator (AER) earlier in the ISP development process.
- Acknowledge the technical and operational limitations that may arise from the potential developments proposed in these planning documents. These could include potential loop flows, thermal constraints, maintaining regular forecasts of critical 'system strength' locations across the NEM and undertaking sensitivity analyses on the economic realities of thermal generation closures (rather than assuming a full design life).

Of the options canvassed in the options paper, the CEC considers there is merit in further examining options 3 and 4. On one end of the spectrum, options 1 and 2 appear too similar to the status quo. We do not view these as agile enough to meet the needs of the NEM's rapid energy transformation. At the other end of the spectrum, option 5 appears an extreme option with a potentially poor governance model, requiring significant resources and both local and national experience concentrated in the one organisation. Under this option, AEMO would have little or no accountability and the current arrangements would need a considerable rethink and significant overhaul.

Therefore, the CEC considers options 3 and 4 could expedite the transmission investment process but still balances responsibilities between TNSPs and AEMO. As the key difference between these options is that under option 4 AEMO directs TNSPs to invest in the "best" option (potentially leading to more project certainty), key discussions would need to address:

- How a more AEMO directions-based framework would work and specifically, what 'direction' actually entails for all stakeholders.
- Whether this option facilitates a properly allocated risk management approach as it could lead to a risk transfer away from the TNSP to customers.

Also critical to this discussion is a need to remember that the investments made by TNSPs are at their core, commercial decisions and so must pass internal TNSP financial due diligence and approval processes.

Establishing which of option 3 or 4 to progress requires a consultative process to work through the detail of each option. This will allow industry to robustly respond to what are complex and potentially significant reforms to the existing governance and incentive-based regulatory arrangements underpinning transmission investment frameworks developed over two decades. This includes but is not limited to further examination of regulatory issues, involving revenue setting, timing, the management of contingent projects and how any amended cost-recovery approaches involving the AER will practically work.

---

<sup>1</sup> The Energy Security Board's Converting the Integrated System Plan into Action Discussion Paper (21 September 2018) notes that: "*Arguably, at least some of the steps in the RIT-T process could be subsumed into the ISP for projects identified through that process*" (p. 6).

Further consultation would necessarily have to occur after the Energy Security Board (ESB) is to report to the December 2018 COAG Energy Council meeting on its transmission work program. The CEC asks that the AEMC not rush to final recommendations for its final report, which is due at the end of 2018. Instead that report could lead to 'filtered' options for further consideration by the COAG Energy Council at its December 2018 meeting so that the COAG Energy Council can mandate a consultative assessment process through the AEMC and/or the ESB to reach a final option decision.

In addition to the five options given, the options paper asks about the interaction between the ISP and the uncertainty relating to government environmental and industry policies. The CEC supports the suggestion that the COAG Energy Council provide formal advice annually to AEMO so that AEMO can effectively incorporate government policies into its ISP modelling. We suggest that where practical, the ISP should report on scenarios both with and without the government policies as advised by the COAG Energy Council to give the market a fuller picture of the implications of these policies. We also caution that this annual advisory process should not be one that purely rubber-stamps AEMO's suggested policy inclusions.

### **Implications for the Regulatory Investment Test for Transmission**

The CEC welcomes the discussion of whether the AER's RIT-T is timely, robust and fit for purpose. The clean energy industry believes that the RIT-T is ill-suited to the large, strategic, coordinated investments outlined in the ISP and that will be necessary to support the energy transition. This is most evident in the chicken and egg dilemma whereby the financial investment decisions of new generation developments require certainty of a transmission network via which they can export their power, yet at the same time the outcomes of the RIT-T are often inconclusive if new generation developments are uncertain.

At the highest level, it appears necessary to broaden the economic, societal and price benefits of electricity transmission projects<sup>2</sup> (especially interconnectors) that are currently excluded by the NER from the RIT-T assessments undertaken by TNSPs. The investment test should appropriately consider strategic benefits, such as those outside of the electricity sector. Naturally, any expansion of the benefits would need to be accompanied by clear guidance on how they are to be incorporated in the RIT-T.

In addition, the timeframes to develop transmission are rarely aligned with the timeframes for renewable projects. Opportunities should be explored to better align these timing considerations. This should also consider the dispute process. The RIT-T could be improved by potentially limiting the opportunities for parties to intervene or (vexatiously) dispute the assessment process towards the end of the consultation to only those who have previously engaged in earlier phases of any ISP or RIT-T process undertaken by AEMO and/or a TNSP(s). It is important to note that this does not negate but rather necessitates robust and highly inclusive ISP and RIT-T development

---

<sup>2</sup> As outlined by AEMO's Chief Executive Officer Audrey Zibelman at the Melbourne ESB workshop on 11 October 2018, these include but are not limited to: relieving network congestion, transporting cheaper power from region to region, increasing competition, and being a good disciplinary force on the market. Ms Zibelman also noted that some US jurisdictions have allowed for the recovery of some of the initial transmission project costs that subsequently get cancelled to clearly address sovereign risk investment concerns.

processes. This would be particularly important the greater any move away from the existing planning and investment models are contemplated. As noted earlier, unnecessary delays could also be mitigated if the AER were to play a more active role in the earlier stages of the ISP development process.

As with the above section, the degree of change to the RIT-T process is potentially significant. A consultative process beyond the timeframe for the AEMC's final report is warranted to fully canvass and assess the potential improvements to the RIT-T framework. At the heart of this process should be a firm adherence to the RIT-T's fundamental priority to protect consumers from inefficient investment.

### **Renewable Energy Zones**

The concept of REZs and their identification and prioritisation through the ISP is a positive step in the energy transformation. The CEC supports the AEMC's view that how REZs might be facilitated is dependent on the above issue of how stronger links could be created between the ISP and transmission investment decisions. Therefore, the consultation process on options 3 and 4 must consider the subsequent implications for the facilitation of REZs. Under either option 3 or 4, we maintain that when a REZ is identified as a priority, then transmission investment needed for that REZ should also be a priority and a refined RIT-T approach needs to be adopted.

The CEC read with interest ENGIE's proposed 'transmission bonds' mechanism to better manage the development of REZs as outlined in the options paper as one potential option. We consider a more thorough assessment of the mechanism is warranted as a means for potential connecting parties to demonstrate their interest by offering a financial commitment to progress a connection. However, we caution that this concept will need to be carefully constructed so as to not be a major burden to new generators with higher capital costs and/or lower capital reserves.

The NER's provision for scale efficiency network extensions (SENE) has proven ineffective in allowing for the build of capacity for a cluster of expected future generation assets. No TNSP has ever successfully established a SENE and this is unlikely to occur in the future given generator commercial tensions, disparate generator project timing and restrictive confidentiality requirements on TNSPs currently contained in the NER. A transmission bonds mechanism may mitigate the downfalls with the SENE regime to address the problem that new generation is required to lead network expansion under current arrangements.

### **Congestion and access**

The ISP projects that congestion will increase with the connection of more renewable generators to the transmission network and augmentation will be required to keep congestion at an efficient level. The CEC supports the AEMC's primary focus on the role of the ISP and how to strengthen the link between the ISP and the transmission investment decision making but agrees that given current connection trends, access and congestion management issues are likely to need to be addressed in the near term. However, we would not support any assertion that work on congestion management should automatically pick up the optional firm access model. Instead, alternative models should be examined.

## Treatment of storage

The CEC supports the work being undertaken by the AEMC and AEMO to address the emerging issues related to utility-scale storage. We appreciate the efforts made to establish interim measures under the current NER to expedite the entry of battery projects in the NEM.<sup>3</sup> However, we consider a long-term approach to the classification and registration of storage facilities and a firm position on use of system charging arrangements are needed as a priority to ensure the efficient and timely development of further storage projects in Australia.

The current interim measures require that storage assets currently register as both a generator and market customer. The CEC strongly contends that storage should have its own classification under the NER. This would appropriately recognise this emerging technology's unique capabilities to provide services beyond traditional generation or load services, including network support by managing congestion, reactive power, voltage stability and frequency control ancillary services, as well as the cumbersome, costly and inefficient nature of current arrangements for storage assets.

Setting a separate market classification for utility-scale storage is a necessary precursor to determining appropriate and equitable network payment arrangements. Given the current interim requirements to register as both a generator and market customer, utility-scale storage is required to pay both connection costs and transmission use of system (TUOS) costs. A review of the applicability of TUOS charges should be undertaken for this specific new market class. In the interim until a separate market classification is established, utility-scale storage should be exempt from TUOS charges.

Storage is not a traditional electricity customer as it is not the end-use consumer of the electricity; it should be regarded as a fully controllable asset that stores electricity for eventual use by an end-use consumer. Given this, it seems appropriate that storage not pay TUOS costs under a separate registration classification as its imports are used to support the future dispatch of this energy in the NEM either to end-use consumers (who already pay TUOS charges) or as network support services (similar to other generators who do not pay TUOS charges). This arrangement supports NEM operations by ensuring reliable and efficient supply of electricity to consumers. Charging TUOS to a separate storage classification would introduce an inconsistent approach that would disincentivise future investment in storage.

An important point that has not been fully examined in the options paper is TUOS double counting. The current arrangement of requiring storage assets to pay TUOS charges leads to a perverse situation where network costs are double counted as the storage asset is charged TUOS to import electricity and then the final end-use consumer is charged TUOS on their import of the same electron of previously stored electricity. This point requires further assessment for a new storage classification.

As is rightly acknowledged in the options paper, there are a number of different storage configurations and intended uses. Setting up a separate market classification and the applicability of TUOS costs to this asset category must consider these different

---

<sup>3</sup> AEMO, Interim Arrangements for Utility Scale Battery Technology, Available at: <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Participant-information/New-participants/Interim-arrangements-Utility-Scale-Battery-Technology>

configurations. For example, it may be appropriate that behind the meter site specific loads should attract TUOS charges.

Thank you for the opportunity to input into this review. If the AEMC or ESB would like to discuss the issues raised in this submission further, please contact me on the below details.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lillian Patterson', written in a cursive style.

Lillian Patterson  
Director Energy Transformation  
03 9929 4142  
[lpatterson@cleanenergycouncil.org.au](mailto:lpatterson@cleanenergycouncil.org.au)