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Coordination of generation and transmission investment – Options Paper (PR0052)

Energy Networks Australia welcomes the opportunity to lodge this submission in response to the AEMC's Options Paper on its Coordination of generation and transmission investment review[1].

We understand that the Options Paper is focused on establishing a regulatory framework that ensures AEMO's future Integrated System Plans (ISPs) are actionable. More immediately, however, the Energy Security Board (ESB) is taking steps to remove impediments to the timely delivery of Group 1 and Group 2 projects that were identified in AEMO's 2018 ISP. This submission is therefore focused on the broader framework issues, without diminishing in any sense the importance of progressing the projects identified in the 2018 ISP.

Our TNSP members will continue to work closely with the ESB on progressing the next steps for Group 1 and 2 projects to deliver overall benefits to consumers in the electricity market.

Integrated System Plan

Our key points are:

- The current regulatory framework will not deliver timely and coordinated generation and transmission investment to best serve the long term interests of Australian energy consumers.
- Energy Networks Australia supports AEMO's role in publishing an ISP that employs robust cost-benefit analysis to identify national, strategic transmission projects that demonstrably benefit electricity consumers in net present value terms.
- In relation to the AEMC's range of options, Energy Networks Australia supports a 'middle ground' option that leverages AEMO's expertise in relation to national planning, while ensuring that TNSPs local knowledge, regional planning expertise

1 AEMC, Options Paper, Coordination of generation and transmission investment, 21 September 2018.

and skills are leveraged to optimise project scoping and delivery and maintain clear accountability for regional transmission service outcomes.

- Further work is required to ensure that the cost-benefit assessment and stakeholder consultation is conducted in a coordinated and robust manner, without duplicating effort or second-guessing AEMO's analysis.
- Energy Networks Australia will continue to work with the AEMC, AEMO and the ESB in developing planning and regulatory arrangements that deliver the best outcome for electricity consumers.

Energy Networks Australia reiterates its strong support for AEMO's role in publishing an ISP that facilitates the efficient coordination of generation and 'least regrets' transmission investments for the benefit of customers. Our members – which include transmission and distribution networks – remain committed to delivering the best energy solutions for electricity customers. Energy Networks Australia regards robust cost-benefit analysis and effective engagement with stakeholders as essential pre-requisites to achieving this objective.

In relation to implementing an actionable ISP, the Options Paper examines how the current RIT-T provisions could be allocated between AEMO and the TNSPs in relation to the appraisal of national, strategic transmission projects. The five options considered range from AEMO taking a very limited role in the investment process (Option 1) through to AEMO making the investment decision and procuring the required service (Option 5).

Energy Networks Australia supports a middle ground position, in which AEMO progresses the project identification and assessment in accordance with its existing role as the independent national transmission planner. Energy Networks Australia does not support an extension of AEMO's role to procuring the preferred solution (Option 5). This option would essentially convert AEMO from national planner to national TNSP, which would necessitate major changes to the regulatory framework and create significant resourcing challenges for AEMO. Such a radical change to AEMO's role would dilute accountability for regional transmission service outcomes and is not warranted in order to give effect to an actionable ISP.

Energy Networks Australia strongly supports AEMO using its expertise as the independent national planner to identify the preferred national, strategic transmission projects in the ISP. AEMO's robust cost-benefit analysis should make extensive use of the available planning information, including the TAPRs, in order to maximise the net benefit to customers.

The TNSPs' role should be to use their local knowledge and project expertise to refine each project specification, ensuring that it delivers the optimal outcome for customers. In addition, each TNSP should remain wholly accountable for addressing regional reliability, security, resilience and congestion needs. As outlined below, there are significant benefits in jurisdictions maintaining clear lines of accountability within each region to address issues if and when they emerge.

In completing any detailed cost-benefit assessment, a TNSP should be able to rely on AEMO's quantification of the system-wide benefits arising from an ISP transmission

project. In addition, a TNSP should utilise the inputs, assumptions, scenarios and development pathway identified by AEMO in the ISP. Where there has been a material change in any such parameters or regionally specific circumstances, the TNSP should be able to build on and vary AEMO's inputs and assumptions or test additional scenarios where these changes can be justified. TNSPs should consult with AEMO about such variations as part of the joint planning process.

The ISP should be published annually or biennially, depending on how the various planning processes and the ISP are best integrated. In relation to cost recovery, the existing contingent project provisions or some other cost pass through arrangement may be used with appropriate trigger events to enable TNSPs to recover their efficient project costs. It is important that the AER's cost approval process avoids project delays and duplication of effort. To address this issue, some steps in the planning and cost approval processes may need to be streamlined.

It is evident that further work is required to develop a regulatory and planning framework that would deliver an actionable ISP. In this regard, Energy Networks Australia understands that AEMO is currently developing a 'straw man' largely based around the AEMC's Option 4. Our TNSP members are working closely with AEMO, and look forward to discussing these proposals with the AEMC.

Renewable Energy Zones

In our submission to the AEMC's earlier Discussion Paper, we commented that a number of the approaches described could be applied in combination under the existing Rules. However, the reluctance amongst generators to collaborate on their investment needs undermines approaches that require cooperation, such as the clustering approach.

Energy Networks Australia agrees with the Options Paper that the 2018 ISP has clarified that long transmission extensions are not required in the immediate term to connect REZs to the existing network. In this context, and given the primary importance of progressing the ISP framework, Energy Networks Australia is not persuaded that any specific changes need to be made at this time to address matters relating to the connection of REZs, but suggests this be considered in the ongoing evolution of the ISP implementation framework.

Treatment of electricity storage

Energy Networks Australia welcomes the AEMC's analysis of the issues surrounding the treatment of electricity storage, including the registration and TUOS charging issues. The question posed by the AEMC is whether the characteristics of large scale storage warrant a separate class of registration and particular TUOS charging arrangements.

The Options Paper develops an argument to treat large scale storage as both a generator and a load, in which case it would be subject to TUOS charging. However, it is reasonable to regard storage as fundamentally different from a load customer, as the primary purpose of grid-connected energy storage is to store and then produce energy at the time it is needed rather than to simply consume energy.

Energy Networks Australia maintains its earlier view that large scale storage, such as Tasmania's proposed Battery of the Nation project and ElectraNet's ESCRI project, should not be subject to TUOS charges if it is centrally dispatched and cannot drive transmission network augmentation. For this reason, pumped storage is currently not subject to TUOS charging and should remain so. However, should such a facility wish to have its demand included in forecasts for network planning purposes as a load customer, in return for paying TUOS, it should be free to choose to do so. Energy Networks Australia is also mindful that investors in storage capacity need clarity on transmission charging arrangements if efficient investment is not to be stymied. We therefore support a speedy resolution of this issue.

If your staff would like to discuss any points raised in this submission, please contact Verity Watson on (03) 9103 0407 or via email at vwatson@energynetworks.com.au

Yours sincerely

Andrew Dillon

Chief Executive Officer

Energy Networks Australia's submission - Coordination of generation and transmission investment – Options Paper

1. Introduction

This submission addresses the key issues in the Options Paper. It follows the structure of the Options Paper, as follows:

- Section 2 discusses the arrangements for delivering an actionable ISP.
- Section 3 discusses the RIT-T.
- Section 4 comments on REZs.
- Section 5 discusses congestion.
- Section 6 discusses the treatment of storage.

2. Integrated System Plan

Better customer outcomes

Energy Networks Australia reiterates its strong support for an ISP that facilitates the efficient coordination of generation and national, strategic transmission investment for the benefit of customers. The Finkel Review called for this initiative, having identified the transformational changes that are taking place in the electricity industry. There is no doubt that the effectiveness of the ISP in facilitating efficient investment depends on making appropriate changes to the current regulatory framework.

The ISP should have standing in the regulatory framework and be subject to sufficient consultation to ensure that all stakeholders have confidence that the transmission investments have been appropriately tested at a NEM level and will deliver net benefits to the market. There should also be a formal role for Governments to provide input to the ISP in relation to national infrastructure and policy objectives, such as network resilience and regional security requirements.

Energy Networks Australia's members are focused on delivering the best outcome for customers, which is likely to include a mix of network and non-network investments at a transmission and distribution level. In this context, it is essential that generators, customers and other stakeholders are actively engaged in the development of the ISP through effective consultation. The transmission investments identified in the ISP should be national, strategic projects that have been assessed on a coordinated basis by AEMO at a NEM level. This approach avoids the difficulty and inefficiency of assessing individual projects on a piecemeal basis in the absence of a national perspective.

Roles and responsibilities

In terms of roles and responsibilities, it is appropriate that AEMO is responsible for identifying the preferred national, strategic transmission projects in the ISP, while TNSPs remain wholly accountable for regional transmission projects that meet their regional planning objectives and network service obligations. This demarcation of

responsibilities is warranted in terms of the skills, knowledge and resourcing of the respective organisations. Furthermore, it is essential that jurisdictions have confidence that regional security, resilience, reliability and congestion issues remain the accountability of a single, regionally-based TNSP.

Energy Networks Australia notes that the TNSPs and AEMO have developed a strong, collaborative working relationship through long-standing joint planning processes. While the respective roles of the parties in developing and actioning the ISP need to be reflected in the Rules to formalise arrangements, TNSPs and AEMO will continue to work collaboratively in developing the ISP and progressing efficient, 'least regret' transmission projects from their initial identification through to implementation.

Energy Networks Australia supports changes to the regulatory framework that establish a seamless process in which the ISP narrows down the range of options that may be subject to further detailed option analysis and consultation by TNSPs. The ISP should provide confidence to stakeholders that the preferred options have a high likelihood of regulatory approval, leading to the implementation of efficient network or non-network solutions, or combinations thereof.

AEMO's project identification and evaluation process should make extensive use of existing planning information processes, including the TAPRs. It is appropriate to review the timeframes for inputs and outputs from these current processes to facilitate the most appropriate flow of information. In this regard it may be appropriate for the ISP to be published every two years, rather than annually. These are important matters that need to be settled in order to provide a streamlined and efficient planning process that incorporates the ISP and is underpinned by effective engagement with stakeholders.

AEMC's Options

The Options Paper examines how the current RIT-T provisions could be allocated between AEMO and the TNSPs in relation to the appraisal of national, strategic transmission projects. The AEMC's options range from AEMO taking a very limited role in the investment process (Option 1) through to AEMO making the investment decision and procuring the required service (Option 5). Energy Networks Australia supports a balanced position, so that AEMO progresses project identification and assessment in accordance with its role as the national transmission planner.

Energy Networks Australia does not support Option 5, which would essentially convert AEMO from national planner to national TNSP, with responsibility for procuring network and non-network solutions. The implementation of an actionable ISP is not dependent on such a development. On the contrary, the consequential changes to the regulatory framework would be a significant distraction and place further demands on AEMO's resources, while diluting the clear accountability for regional transmission network service outcomes agreed by policy makers.

Energy Networks Australia notes that AEMO is currently developing a 'strawman' proposal largely based on Option 4 in the AEMC's Options Paper. The strawman will describe in more detail the processes that are required to deliver an actionable ISP. Energy Networks Australia notes that its TNSP members are working collaboratively with AEMO on its development.

In finalising these arrangements, Energy Networks Australia considers it important that the AER retains its responsibility as economic regulator, while AEMO is trusted as the independent national planner. In this regard, Energy Networks Australia does not consider it necessary or appropriate for the AER to have oversight of AEMO's planning inputs and analysis or cost benefit analysis within the ISP, nor equally for AEMO to determine questions of cost recovery. We note that both organisations engage widely with interested parties and stakeholders through their respective consultation processes. These consultation processes should be sufficient for AEMO and the AER to provide meaningful input to each other's deliberations.

Cost recovery arrangements

Energy Networks Australia notes that the cost recovery arrangements must also be appropriately addressed in the amended regulatory framework. It would not be appropriate for TNSPs to be required to undertake network investment without an opportunity for efficient cost recovery, in accordance with the pricing principles in the National Electricity Law. It is equally important that the cost recovery process, whether through the contingent project provisions or other mechanisms, does not create delays in project delivery. In this regard, consideration should be given to regulatory approval processes being appropriately streamlined, without compromising the robustness of the cost-benefit analysis that underpins the investment decision.

Energy Networks Australia notes that the contingent project provisions require the ISP projects to be identified and agreed with the AER at the time of each TNSP's revenue determination. As revenue setting is typically a 5 yearly process, it may not be possible to anticipate the ISP transmission projects. As an alternative cost recovery mechanism, it may be appropriate to develop a new cost pass through provision (without a materiality threshold) with an appropriate 'trigger' and AER approval process that allows efficient cost recovery for ISP projects. The arrangements should explicitly allow for cost recovery of expenditure that is incurred prior to formal AER approval in order to avoid project delays.

As successive ISPs are developed there should be sufficient time to identify, evaluate and deliver the required transmission projects. However, in circumstances where the target project timelines cannot be achieved, the Rules should provide for a shortened investment approval and cost recovery process, while still providing assurance that the investment is justified.

Transmission pricing

While not directly related to the investment decision process, alternative transmission pricing arrangements for ISP projects, particularly interconnector projects, may be appropriate. The current Modified Load Export Charge (MLEC) methodology allocates the "locational costs" between adjacent regions in a manner that may not reflect the true beneficiaries of the investment. Given the potentially growing importance of interconnector charging for electricity consumers, the TNSPs support the development of possible alternative arrangements, subject to stakeholder consultation and regulatory approval. The AEMC may want to consider this matter further in the next stage of its review.

3. Regulatory Investment Test

Energy Networks Australia reiterates its support for the application of a robust cost-benefit test to identify the network and non-network projects that ultimately deliver the best outcome for electricity customers. Our members are acutely aware of the challenges that customers face in relation to affordability. In this context, it is essential that the ISP employs robust cost-benefit analysis to identify national, strategic transmission projects that are demonstrably beneficial to electricity consumers in net present value terms by improving reliability and affordability outcomes.

In September 2018, Energy Networks Australia lodged a submission to the AER in relation to its draft RIT-T Application Guidelines. In that submission, we concurred with the AER that if the ISP framework is formalised, ISP inputs and assumptions should be treated as a default in subsequent RIT-T applications as opposed to a 'starting point', subject to NSPs retaining the flexibility to build on and refine those assumptions based on local or more up-to-date information. For example, TNSPs' local knowledge of local risks, capabilities and existing asset condition is relevant to co-optimising the scope and timing of related augmentation and replacement projects.

The above observations remain valid in considering the matters raised in the Options Paper. In particular, minimising the scope for delays and duplication in the planning and investment process requires that a TNSP should adopt AEMO's inputs, assumptions and scenarios in the ISP as a default. Similarly, a TNSP should also be able to rely on AEMO's quantification of the system-wide benefits in evaluating a proposed project.

Energy Networks Australia regards the RIT-T as an appropriate starting point for considering the steps that should be followed in conducting a robust cost-benefit test to identify and assess national, strategic transmission projects. However, it is less clear that the RIT-T in its current form, together with the AER's guidelines and the RIT-T consultation steps in the Rules, is necessarily appropriate for projects identified in the ISP, as explained below.

In terms of the consultation process the economic analysis and stakeholder engagement underpinning the ISP may be expanded to take the place of a Project Specification Consultation Report in specifying an identified need, while going further to narrow down the range of options to be considered.

TNSPs would then become responsible for undertaking the more detailed options analysis and consultation, through more targeted assessments leading to the release of a draft and final report.

The current regulatory framework is not best suited to the application of joint RIT-Ts to strategic, inter-regional investments. Under the reforms above, the relevant TNSP and AEMO will each have a role in identifying and appraising ISP options. This raises questions about the scope of each party's role and their interface with one another – these questions do not arise in the ordinary application of the RIT-T.

One further consideration with the application of the current RIT-T framework is the assumption of a risk neutral approach to evaluating scenarios. That is, negative

outcomes are weighted the same as positive ones. In the current environment of significant change and uncertainty, and in keeping with a "least-regrets" philosophy, a reasonable approach may be to consider whether negative outcomes are weighted higher than positive outcomes, for instance, to account for High Impact Low Probability events.

Given the above observations, Energy Networks Australia notes that it may be appropriate to develop a specific process for applying an appropriate cost-benefit test to ISP projects. This approach is preferable to force-fitting the application of the current RIT-T framework to ISP projects.

4. Renewable Energy Zones

The Options Paper re-examines the analysis presented in the Discussion Paper on REZs, in light of the submissions received and the ISP options considered earlier in the paper.

Energy Networks Australia reiterates its earlier view that the different options canvassed for REZ development are not mutually exclusive and may be pursued in parallel, many of which are already available under the current Rules framework. However, options that rely on generation investment coordination are unlikely to facilitate more efficient transmission and generation development.

As noted in the Options Paper, practical experience illustrates that generators generally have strong commercial drivers that prevent effective coordination with prospective rivals. Having said that, it is also worth noting that generators have acted cooperatively in recent times to assist in achieving optimal and efficient outcomes to assist in address system strength and resilience issues.

Energy Networks Australia agrees with the Options Paper that facilitating REZs through enhanced information provision to the market can be pursued in conjunction with any of the ISP options described. AEMO's 2018 ISP has identified REZs that are close to existing transmission capacity, which means that the significance of some of the potential challenges in coordinating REZ development and transmission investment do not arise at this time.

Given the primary importance of progressing the ISP framework, the more complex framework issues associated with REZ developments do not need to be progressed in the short term. However, it is appropriate to maintain a watching brief in relation to these issues, particularly as further experience is gained in the implementation of the ISP framework.

As noted in Energy Networks Australia's earlier submission, confidentiality provisions in the Rules currently prevent TNSPs sharing information with multiple proponents seeking connection to the transmission network within a region. The confidentiality provisions act as a significant barrier to co-optimisation of transmission by multiple generation developments. Energy Networks Australia considers that the current confidentiality provisions should be given further consideration by the AEMC to promote the co-ordination of efficient generation and transmission investment.

5. Congestion

Energy Networks Australia welcomes the AEMC's recognition that congestion is a real and emerging issue in the NEM. This is reflected in the 2018 ISP, which identifies a need to increase the capability of the transmission system to reduce congestion and provide existing and new generators with cost-effective access to market.

Energy Networks Australia agrees with the principles outlined by the AEMC that efficient generation and transmission investment will be facilitated where:

- the combined costs of generation and transmission are taken into account in investment and operational decisions by generators and TNSPs
- parties that make investment decisions have a direct financial stake in the efficiency of outcomes resulting from these decisions.

Energy Networks Australia also agrees with the AEMC that priority should be given to establishing the ISP arrangements. Equally, however, congestion is an issue that will require further consideration following the conclusion of the AEMC's work in relation to the implementation of the ISP.

6. Treatment of Storage

In our submission to the Commission's Discussion Paper, Energy Networks Australia highlighted the growing importance of energy storage in the electricity sector. In this context, it is important that the regulatory arrangements regarding storage are properly understood and clarified. A prolonged period of uncertainty regarding the transmission charging arrangements will stymie efficient investment.

The Commission's Options Paper provides a detailed analysis of the competing arguments for whether storage should be subject to TUOS charging. Energy Networks Australia notes the arguments for regarding storage as being both a generator and a load customer.

However, where the purpose of the grid-connected storage is to act as a generator or provide support to a generator, it is more valid to regard it as fundamentally different from a load customer. The economics of such a storage device is that load will only arise during off-peak periods and it relies on non-firm network access for charging. As such, charging of grid scale storage should neither drive transmission augmentation nor adversely affect the provision of exit services to bona fide end use customers.

Energy Networks Australia maintains its earlier view that if transmission connected scale storage is centrally dispatched and cannot drive transmission network augmentation, transmission use of system charges should not be levied. Under this model, should such a facility wish to have its demand included in forecasts for network planning purposes as a load customer, in return for paying TUOS, it would still be free to choose to do so.