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Ms Audrey Zibelman
Chief Executive Officer
Australian Energy Market Operator
Level 22, 530 Collins Street
Melbourne VIC 3000

Submitted via email: ISP@aemo.com.au

Dear Ms Zibelman,

RE Integrated System Plan – Remaining Questions for Consultation

TasNetworks welcomes the opportunity to make a second submission to the Australian Energy Market Operator (**AEMO**) on the December 2017 Integrated System Plan (**ISP**) Consultation Paper.

As the Transmission Network Service Provider (**TNSP**), Distribution Network Service Provider (**DNSP**) and jurisdictional planner in Tasmania, TasNetworks is focused on delivering safe and reliable electricity network services while achieving the lowest sustainable prices for Tasmanian customers. This requires the prudent, safe and efficient management and development of the Tasmanian power system. In this regard, TasNetworks is supportive of AEMO's proposed framework for developing a strategic integrated system plan for the National Electricity Market (**NEM**) as recommended in the Finkel report.

This submission focuses on questions 2.1 to 4.4 of the consultation document. TasNetworks supports Energy Networks Australia's (**ENA**) submission on these questions and would like to make several further comments with a particular focus on the Tasmanian context. The key points in this submission are:

- TasNetworks considers that it is only through engagement and consultation with stakeholders within each Renewable Energy Zone (**REZ**) that the full value of each REZ can be reliably realised. That is, AEMO's strategic analysis and insight must be partnered with local network expertise and understanding in order that appropriate and timely signalling for the funding of generation investment results.
- In evaluating REZ benefits the applicability of existing cost recovery and revenue regimes must be appropriately considered. For example, the development of Tasmanian REZs would have NEM-wide benefits including firming and energy security benefits far beyond those directly attributable to Tasmania. However, with a relatively small customer base in Tasmania, the optimal balance between energy security, reliability and customer affordability needs to be found.

- TasNetworks fully supports a transparent, accountable and robust process for justifying scale efficient network augmentation that aligns with a strategic network development plan. In light of significant energy market transformation, TasNetworks contends that the regulatory framework could evolve to enable more appropriate assessment for strategic energy infrastructure projects. In this regard, TasNetworks considers that information, analysis and insights from the ISP would be best utilised as inputs to supplement and streamline the Regulatory Investment Test for Transmission (**RIT-T**) process.
- TasNetworks considers that the clarity and transparency of ISP planning outcomes are key elements to their adoption and implementation by stakeholders. For this reason, TasNetworks supports the development, use and publication of a project prioritisation assessment framework and associated assumptions book that underpins the evaluation of REZ projects.
- TasNetworks notes that development of the Tasmanian North-West transmission corridor and upgrade of the Sheffield to Palmerston transmission line have been omitted from the major transmission options identified within the ISP. In conjunction with the second Bass Strait interconnector and Hydro Tasmania's Battery of the Nation initiative, these options have the potential to provide more than double the current, total on-island wind resource to the rest of the NEM. The quality of the wind resource is world class and would provide significant NEM-wide benefits encompassing energy security, firming services, emission reductions, generation diversification and peak demand management benefits. However, these benefits are unlikely to be realised without the second Bass Strait interconnector. For these reasons, TasNetworks considers it critical that the North-West transmission corridor and Sheffield to Palmerston transmission upgrade are included along with the additional Bass Strait interconnection project within the ISP.

TasNetworks responses to individual questions are provided below and we welcome the opportunity to discuss this submission further with you. Should you have any questions, please contact Tim Astley, Team Leader NEM Strategy and Compliance, via email (tim.astley@tasnetworks.com.au) or by phone on (03) 6271 6151.

Yours sincerely,

Wayne Tucker

General Manager Strategic Asset Management

Q2.1 - What key factors can enable generation and transmission development to be more coordinated in future?

Outside of those factors identified in ENA's submission, TasNetworks considers the following factors would enhance the future coordination of generation and transmission asset development:

- Clarity and alignment of national and state Government energy and climate policies.
- Improved provision of information to the energy market participants, especially generation proponents, about opportunities within a REZ. For example, greater certainty on the viability, costs and technical performance standards of transmission options may enhance investment signalling.
- Further consideration of the effects on distribution networks and the role they have to play in the efficient planning and development of network infrastructure. For example, the impact of Distributed Energy Resources (**DER**) developments and the visibility of electricity injected into the distribution and transmission networks.

Q3.1 - Does this analysis capture the full range of potential REZs in eastern Australia?

TasNetworks considers that the Tasmanian REZs identified in the ISP are appropriate at this time. TasNetworks, however, notes that tidal generation opportunities may be a useful future inclusion to the ISP. In this regard, the Australian Renewable Energy Agency (**ARENA**) project to better map Australia's tidal energy resources, which is being led by researchers at the University of Tasmania's Australian Maritime College, may be insightful.

Q3.2 - What other factors should be considered in determining how to narrow down the range of potential REZs to those which should be prioritised for development?

TasNetworks considers that the factors identified by AEMO are appropriate for narrowing down the range of potential REZs. In addition to these, TasNetworks supports an approach that adopts engagement and consultation with stakeholders within each REZ so that the full value of each REZ can be reliably realised. Local knowledge concerning transmission planning, generation intentions, connection enquiries, the scope and breadth of existing network development, state and local government development initiatives along with expert understanding on relevant local hydrological and wind characteristics are all critical factors that could help inform AEMO assessments. For example, NEM wide benefits such as improved energy security and firming services can be provided from Tasmanian generation using existing transmission corridors. The value of these efficiencies needs to be reflected within ISP planning.

TasNetworks recognises that the final selection of REZs will require AEMO to exercise its judgement and will involve trade-offs amongst factors. TasNetworks considers that the clarity and transparency of this process is critical to ensure impartial and efficient investment outcomes. For example, the weightings that apply to each factor should be consistent across REZs. To this end, TasNetworks supports a project prioritisation assessment framework for REZ projects that is transparent and developed in partnership with jurisdictional network planners.

TasNetworks considers that the publication of a national assumptions book that underpins such a framework, including reasons for departure from any standard assumptions, would also be beneficial. TasNetworks acknowledges such a book would need regular updating to reflect economic, regulatory, political and energy market developments. In this respect, TasNetworks considers the AEMO Executive Joint Planning Committee (**EJPC**) are uniquely placed to provide guidance here.

Q3.3 - What are the potential barriers to developing REZs, and how should these be addressed?

TasNetworks supports the comments in ENA's submission. With respect to state versus national priorities, TasNetworks considers it is imperative to understand the real cost of state based renewable energy targets on generation and network infrastructure development. For example, the subsidies resulting from the Queensland and Victorian Renewable Energy Target schemes may distort the comparison amongst alternative network developments. TasNetworks assumes these factors have been incorporated within the current ISP and will be further refined in future iterations of the ISP.

Q4.1 - Have the right transmission options been identified for consideration in the ISP?

TasNetworks considers the inclusion of additional Bass Strait interconnection as an identified transmission option within the ISP is appropriate. However, TasNetworks notes that development of the North-West Tasmanian transmission corridor and upgrade of the Sheffield to Palmerston transmission line has been omitted. The quality of wind resource in this area is world class. Moreover, developments to unlock this resource can utilise existing transmission lines. It should, therefore, come as no surprise that development applications to date run to more than double the current, total on-island wind resource. As a result, and as detailed further in TasNetworks 2019-2024 Regulatory Proposal, TasNetworks has more than $270 million in contingent projects directly attributable to this corridor.

As already highlighted in the ISP consultation document, AEMO has found that major transmission upgrades are more economic when combined with other transmission upgrades that help create a more interconnected NEM. In this regard, it is imperative to understand that the NEM-wide energy security, firming services, emission reductions, generation diversification and peak demand management benefits, which would accrue from development of the North-West Tasmanian transmission corridor and Sheffield to Palmerston line, would only be realised if the second Bass Strait interconnector is also developed. Moreover, these benefits will only grow when considered in conjunction with Hydro Tasmania's Battery of the Nation initiative. For these reasons, TasNetworks considers it critical that development of the North-West Tasmanian transmission corridor and upgrade of the Sheffield to Palmerston line be included in the ISP along with the additional Bass Strait interconnection option.

Q4.2 - How can the coordination of regional transmission planning be improved to implement a strategic long-term outcome?

TasNetworks considers that increased collaboration and consultation with regional stakeholders, will lead to improved regional planning outcomes. Interaction with generators, Network Service Providers (**NSPs**), landowners along with state and local officials will only promote better understanding of projects with strategic, national import. Particularly, when combined with a model of national planning prioritisation and associated planning assumption book mentioned above.

Further to this, TasNetworks contends that the applicability of existing cost recovery and revenue regimes must be appropriately considered to ensure the accurate identification and optimal development of "least-regret" transmission options. For example, the development of the North-West Tasmanian transmission corridor in conjunction with a second Bass Strait interconnector and Hydro Tasmania's Battery of the Nation initiative would have NEM-wide benefits far beyond those directly attributable to Tasmania. However, with a relatively small customer base in Tasmania, the optimal balance between energy security, reliability and customer affordability needs consideration. In this regard, TasNetworks acknowledges the crucial role the ISP has to play in terms of investment

signalling, via the provision of appropriate and timely strategic system planning information, to generation proponents, state and national governments, merchant interconnectors and other investment stakeholders.

Q4.3 - What are the biggest challenges to justifying augmentations which align to an over-arching long-term plan? How can these challenges be met?

TasNetworks fully supports a transparent, accountable and robust process for justifying scale efficient network augmentation that aligns with a strategic network development plan. However, TasNetworks considers that as a complete methodology for such justification, the RIT-T has several drawbacks. As noted by The Clean Energy Finance Corporation (**CEFC**), The House of Representatives Standing Committee on the Environment and Energy (**HRSCEE**) and The Council of Australian Government's (**COAG**) Energy Council amongst others, these include:

- Categories of required market benefits and externalities are narrow. For instance, the benefits from reduced carbon emissions and grid security are not required to be considered.
- Reliability benefits are assessed purely as a function of unserved energy (**USE**) without considering other reliability benefits such as the provision of inertia, fault level and FCAS services.
- Results do not fully consider the option value to future network developments. Outcomes, therefore, tend to favour incremental and small scale investments.
- The process can be lengthy owing to the disputes process with the result that network investment tends to lag generation investment.
- The single-asset focus means the joint benefits of coordinated augmentations, such as a more interconnected NEM, are not considered.

The role of additional Tasmanian interconnection within the NEM is a pertinent example in this respect. Previous assessments of additional Tasmanian interconnection have not shown market benefits exceeding costs in typical scenarios. However, these studies have suffered from several constraints that have downplayed and/or excluded the strategic benefits to additional interconnection e.g. the optionality afforded to future NEM developments and energy security benefits.

Beyond increasing energy security both state and NEM-wide, further Tasmanian interconnection could be matched to generator retirement schedules to defer and/or delay the need for additional mainland capacity. Moreover, by facilitating the development of additional uncorrelated wind and pumped-hydro resources, additional Tasmanian interconnection would allow for flexible and efficient peaking management across the entire NEM. Ultimately, these outcomes would mean a lower cost, more diversified and more secure power system which would benefit customers, both locally in Tasmania and nationally.

These sentiments have been echoed by the HRSCEE. In its recently released *Inquiry into Modernising Australia's Electricity Grid*, it was argued that:[1]

> "…the introduction of additional interconnectors would change the way the grid responds in times of crisis. More interconnectors would enable the grid to take advantage of significant energy resources and infrastructure in remote parts of Australia"

[1] p. 67.

Further, that:[2]

> "A revitalised RIT-T and RIT-D may drive innovative solutions in the NEM, such as increased transmission lines from the roaring forties where wind power could be harnessed off the North West coast of Tasmania"

As a result, TasNetworks does not consider that subjecting each component of the ISP to a traditional RIT-T will best promote integrated and efficient network investment. Instead, TasNetworks considers that the most efficient investment outcomes are likely to occur when incentives and risks are aligned, and facilitate clear investment signals, at both a regional and national level.

TasNetworks considers that AEMO is ideally suited to offering strategic, national level analysis and insight whilst TNSPs are uniquely placed to understand the optimal transmission options applicable to each REZ. TasNetworks contends that combining these strengths within a streamlined RIT-T process strongly merits further consideration. As one example of how this might work in practice, REZ generation potential identified by AEMO could be used as an independent input into a RIT-T in the form of a committed generation estimate.

TasNetworks contends that integrating the ISP and RIT-T in this manner could be achieved via consultation processes already underway without a need for formal rule changes. For example, as part of the Australian Energy Regulator's (**AER**) current review of the RIT-T Guidelines. Aside from helping to speed up policy implementation, TasNetworks considers that benefits to such integration will include:

- reducing consultation fatigue;
- speeding up development timelines;
- avoiding analysis duplication;
- providing appropriate transparency and accountability;
- leading to much more efficient network infrastructure development; and
- most importantly, lowering electricity costs for customers NEM wide.

In this regard, TasNetworks welcomes the opportunity to offer expertise in whatever capacity may be required so that the specialised characteristics of the Tasmanian power system, and the unique benefits to additional Bass Strait interconnection and the North-West Tasmanian transmission corridor, are best captured via such a process.

Q4.4 - Is the existing regulatory framework suitable for implementing the ISP?

As above, TasNetworks does not consider that the existing regulatory framework is entirely suitable for implementing the ISP. Instead, TasNetworks contends that, in light of significant energy market transformation, the regulatory framework could evolve to enable a more appropriate regulatory assessment for strategic energy infrastructure projects. For instance, by having the outputs of the ISP integrated into the RIT-T process. In this regard, TasNetworks looks forward to participating in, and contributing to, AER's recently released review of the RIT-T Guidelines.

[2] p. 121.