

27 February 2020

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By email: ISP@aemo.com.au

Dear Alex

Response to AEMO's consultation on the Draft 2020 Integrated System Plan (ISP)

ElectraNet welcomes the opportunity to comment on the Draft 2020 ISP ('Draft ISP') that is intended to chart a secure, reliable and low-cost pathway for the development of the national electricity grid as the electricity generation sector transforms to a low emissions future.

As development and implementation of the ISP transitions to a regulated requirement under the National Electricity Rules, transparent consultation will be important so that stakeholders can discuss, contribute and plan for the projects and opportunities that are needed to ensure Australia's future power system is developed at least cost and lowest regret to customers. For transmission businesses, the ISP will trigger regulatory processes for actionable ISP projects in the National Electricity Market (NEM).

ElectraNet supports AEMO's plan for a future least-regret power system as set out in the Draft ISP where, "[a]cross all scenarios, the NEM will evolve from a *centralised* coal-fired generation system, to a highly *diverse* portfolio dominated by DER and VRE, supported by enough dispatchable resources to ensure the power system can reliably meet demand at all times".¹

With the aim of making the roadmap presented in the ISP as robust and transparent as possible, ElectraNet makes the following recommendations to AEMO:

- Future ISPs should extend the modelling horizon to 2050 to adequately take into account likely future requirements for net zero carbon emissions and the 2020 ISP should minimise the risks of emissions intensive investments becoming stranded beyond 2040.
- The ISP should consider the impact of the early retirement of existing SA gas generation on the need for:
 - the development of Renewable Energy Zones (REZs) within SA

¹ AEMO, *Draft 2020 Integrated System Plan*, 12 December 2019, p.34.

- increased interconnection between SA and other NEM regions, and
- network investment in the SA Mid-North, which the Draft ISP identifies is required by 2036 in the Central scenario but could be required sooner upon early retirement of SA gas generation.
- The Mid-North, Eastern Eyre Peninsula and South East be considered as the most likely areas for the development of prospective REZs in SA.
- A joint ElectraNet and AEMO case study should be undertaken to investigate SA's recent islanding event.
- The identified need for actionable ISP projects should be clear and sufficiently detailed to allow RIT-T proponents to focus on addressing AEMO's intended objective and provide non-network proponents with greater confidence that proposed solutions will meet the identified need.

These recommendations are discussed in more detail in the remainder of this submission.

1. Transition to 2050

ElectraNet considers that to meet the COP21 Paris agreement, a growing consensus has emerged that annual emissions across the economy should be net zero by around 2050. It is highly likely that the NEM will decarbonise ahead of the rest of the economy and reach zero carbon emissions sometime before 2050.

To ensure appropriate decisions are made in the 2020s and 2030s, the modelling horizon should be extended to 2050 for future ISPs and, to the extent practical, the Final 2020 ISP should be cognisant that emissions intensive investments (gas and coal in particular) that are made in the 2020s and 2030s are not stranded beyond 2040. Investments at risk are new entrants as well as generator life extensions.

2. Early gas retirement

In South Australia, all in-state coal-fired generation has already retired and the market is currently predominantly supplied by gas-fired generation, variable renewable energy and peaking plant with balancing of supply and demand achieved by import and export across the interconnectors with Victoria.

Currently, Torrens Island B, Ladbroke Grove and Pelican Point generators have expected closure years of 2035 or 2037.

We request consideration of whether early retirement of all or some of the existing SA gas generators would impact the need for SA REZ zone development or provide a driver for further increased interconnection between SA and the rest of the NEM.

Significant investment in the Mid-North of South Australia has been identified by AEMO as linked to the retirement of the gas fleet, amongst other things. With existing retirement schedules and scenario descriptions, the timing of this investment in the Mid-North is scheduled between 2031 in the Fast Change scenario and 2036 in the Central scenario and beyond 2040 in the Slow Change scenario.

ElectraNet will submit a Revenue Proposal to the AER for the 2023 to 2028 regulatory period around the time AEMO is expected to publish the 2022 ISP.

Should the required timing of Mid-North investment be strongly linked to gas generation retirements, we recommend that AEMO include a Group 2 project to bring this investment to 'shovel ready' status to ensure efficient implementation if the need is triggered.

3. Prospective REZ developments

ElectraNet considers that the Mid-North, Eastern Eyre Peninsula and South East are the most likely REZs for major expansion in SA.

Expansion of Eyre Peninsula is supported by ElectraNet's Eyre Peninsula Electricity Supply Options project.² We consider developments in this area are more likely than developments around Roxby North, whilst developments immediately north of Davenport remain highly likely.

The Mid-North remains a world class resource of solar, wind and off-river pumped hydro developments and will be well linked to the minor load centres of Canberra and Adelaide. Future ISP projects such as HumeLink and VNI West will improve interconnection to the major load centres of Sydney and Melbourne.

There is ongoing interest in developments in the South East of SA and connection to Melbourne could be expanded at relatively low cost. Expansion of this REZ may be best served by consideration of expansion to Melbourne rather than Adelaide. Extending the 500 kV network from Heywood in Victoria to South East in SA would be possible at relatively low cost.

4. Islanded Operation of South Australia

As part of the Transmission Annual Planning Report, ElectraNet will be undertaking a case study on the operation of SA during the recent islanding event resulting in the unavailability of the Heywood Interconnector. ElectraNet considers a joint study on this with AEMO would be of value to stakeholders.

5. Identified Needs

The AER is currently consulting on the framing of the identified need for actionable ISP projects as it develops guidelines to make the ISP actionable. Appropriate characterisation of the identified need for these projects will be important in promoting effective interaction between the ISP assessment and the subsequent RIT-T analysis. The identified need specified in the ISP will influence the credible options considered, and possibly the scenarios adopted, by TNSPs as part of the RIT-T assessment.

We are mindful of current AER guidance that the identified need should be framed as an objective rather than as a means to an objective, consistent with promoting the fundamental principle of competitive neutrality. At the same time, we consider that the identified need should be clear and sufficiently detailed (and certainly more specific than maximising net economic benefits) to allow RIT-T proponents to focus their efforts on assessing options that directly address AEMO's intended objective in specifying the identified need.

A clear identified need will also help non-network proponents to tailor their solutions to meet these objectives and provide greater confidence that proposed solutions will meet the identified need. Under the new ISP framework, as currently proposed, the task of making an initial assessment as to whether a non-network proposal meets the identified need has been transferred from TNSPs to AEMO.

For example, if one of the objectives that AEMO is seeking to meet for a particular actionable ISP project is an increase in transfer capacity between Regions A and B, this should be included and clearly stated within the identified need.

² ElectraNet, [Eyre Peninsula Electricity Supply Options: Project Assessment Conclusions Report](#), 18 October 2018. On 11 April 2019, the Australian Energy Regulator (AER) published a [determination](#) confirming that the preferred option identified in ElectraNet's Project Assessment Conclusions Report satisfies the Regulatory Investment Test for Transmission.

6. ISP Documentation

Finally, as a minor matter of presentation, the Draft 2020 ISP Appendices might be more appropriately relabelled as a Supplementary Report, as a number of the appendices do not appear to be directly referenced in the Draft ISP.

ElectraNet appreciates this important opportunity to offer input to AEMO's Draft ISP consultation and looks forward to working with AEMO to address the matters raised above.

For any immediate queries, please contact Brad Harrison in the first instance on (08) 8404 7568.

Yours sincerely



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