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Submission by email to: consultation@electranet.com.au

**South Australian Energy Transformation
RIT-T: Project Specification Consultation Report and Market Modelling Approach and
Assumptions Report**

Dear Hugo

Snowy Hydro Limited has a significant interest in investment within transmission businesses. We appreciate the important role networks play in delivering competitive priced, reliable and safe energy to Australian consumers and the need to ensure the regulatory settings provide incentives to deliver efficient network investment and operation. As such, we are supportive of investment in interconnectors where it is clearly demonstrated that the investment is efficient and customers will realise a benefit.

Any new interconnector into South Australia should provide additional diversity of supply, although this could be limited by either upstream or downstream network limitations. However, it should be noted that interconnector options can take a very long time to deliver (up to 7 years). As noted in Electranet's consultation paper the National Electricity Market (NEM) is in a rapidly changing environment driven by a move to lower carbon emissions, evolving technologies, and changing consumer preferences. This rapidly changing environment can therefore affect the feasibility of network augmentation options throughout planning, construction and operation.

One of the difficulties in evaluating the scope and needs of interconnector options is the lack of clarity around what intra-regional transmission constraints will be after the completion of the project. This is because of the fact the NEM is a regional designed electricity market where electricity is priced at the each region's Regional Reference Node (RRN). The full benefits of the interconnector upgrade cannot be claimed if there are intra-regional constraints that prevent the transportation of electricity from the South Australian RRN to each of the New South Wales (NSW), Victoria (Vic), Tasmania, and Queensland (QLD) RRNs. Snowy Hydro would like to see transparency in the Project Assessment Draft Report (PADR) that fully attributes the augmentation costs required to alleviate any relevant intra-regional constraint that prevents the transfer of electricity between the South Australia RRN and other Regions RRN.

The benefits of interconnection are subject to the spare generation capacity being available in the neighbouring regions. As highlighted in Table 1 under the “Neutral economic growth with COP21” there are supply adequacy shortfalls for South Australia from 2019-20, Victoria from 2024-25, and NSW from 2025-26. Assuming a 7 year lead time is required to plan, build, and commission a new interconnector, the expected date for operation of the new interconnector would be in 2024.

In 2024 there is forecasted to be supply shortfalls in both South Australia and Victoria with NSW shortfalls expected in 2025. This leaves very little spare generation capacity to be shared amongst South Australia and the other NEM regions. Hence for all of the augmentation options identified in the consultation paper the costs and benefits would need to be thoroughly assessed across a wide range of supply and demand scenarios across all NEM regions to ensure there is spare supply that can be utilised across Regions.

Table 1 Summary of projected supply adequacy shortfalls

Region	Includes announced generation capacity withdrawals and additional modelled withdrawals based on COP21 commitment assumptions					
	Weak economic growth, with COP21		Neutral economic growth, with COP21		Strong economic growth, with COP21	
	Timing	Shortfall	Timing	Shortfall	Timing	Shortfall
NSW	Beyond 2025–26	N/A	2025–26	0.0031%	2022–23	0.0095%
QLD	Beyond 2025–26	N/A	Beyond 2025–26	N/A	2022–23	0.0029%
SA	2020–21	0.0021%	2019–20	0.0028%	2018–19	0.0029%
TAS	Beyond 2025–26	N/A	Beyond 2025–26	N/A	Beyond 2025–26	N/A
VIC	Beyond 2025–26	N/A	2024–25	0.0021%	2023–24	0.0026%

Table 1: Source: AEMO, Electricity Statement of Opportunities, August 2016. Truncated Table 1.

Lessons from past Regulatory Test experiences

From Snowy Hydro's past experience with other Regulatory Investment Test - Transmission (RIT-T) consultations we wish to raise a number of points which should assist Electranet conducting a robust regulatory process where Stakeholder views are satisfactorily taken into consideration. These major issues are:

- The timeframe for the analysis and reliance of distant benefits
Project costs are known upfront whereas benefits associated with the interconnector augmentation may be reliant on distant or long term benefits. We advocate where the benefits are distant and therefore more uncertain that these benefits are appropriately discounted.
- The use of the most recent demand forecasts in modelling scenarios
The RIT-T should utilise the most recent demand forecasts. There has been a paradigm change in electricity demand since 2008, with substantial shifts in consumer behaviour in response to rising prices, structural changes in the economy, increased adoption of energy efficiency technologies and the uptake of decentralised generation (roof top photovoltaics and solar hot water systems).

In recent years we have witnessed further absolute declines in demand across all NEM regions with the exception of Queensland. There is no concrete evidence that the recent history of declining demand will plateau and recover. Should these changes in demand persist, it calls into question the need for further substantial capital expenditure on large scale transmission augmentations.
- The lack of detail on a number of key modelling assumptions and sensitivities
Transparency of information and assumptions is vital to ensure the credibility of the RIT-T analysis and the conclusions reached.

Quantitative Modelling Considerations

Central to the outcome of the RIT-T quantitative modelling to assess each of the credible transmission options are four key issues that Snowy Hydro believes should be given detailed consideration. These are:

1. The differential between South Australian and Vic/NSW/QLD gas prices

Gas prices in other NEM regions have been historically lower than in South Australia due to a range of market factors.

In recent years the east coast gas market has experienced significant changes in the market price for gas reflecting increased demand and constrained supply. Furthermore, as Australia exports more gas from Queensland it is expected that demand for gas will intensify. This could lead to significantly higher gas prices across the eastern states.

As a consequence Snowy Hydro believes that the modelling scenarios considered should be tested to determine the likely benefits of the additional South Australia interconnector in the event that the differential between South Australia and other NEM Region's gas prices narrow. For example in a scenario where rising NSW demand is met by additional gas supplies from Victoria.

2. Related network investment not costed in the modelling

Any additional network developments which may impact electricity flows over the new SA interconnector must have its capital costs included in the SA interconnector augmentation costs. Snowy Hydro considers that the RIT-T should appropriately apportion the costs of these projects if they are necessary to facilitate power transfers on the additional SA interconnector.

In the current NEM with high levels of uncertainty it is difficult to foresee the patterns of electricity flows in the future or what fuel source generators may utilise. Snowy Hydro would welcome further analysis of scenarios which include the costs of upgrading all relevant transmission infrastructure that impacts on flows across the South Australia region.

3. Carbon price modelling

The consultation paper states that one of the benefits of the additional interconnector into South Australia is that it would facilitate lower emissions and new technology. However the approach to climate change policy and carbon emissions pricing is very uncertain. Interconnectors are long lived assets and it is unclear the basis of attributing benefits associated facilitating lower emissions and new technology when the climate change policy is subject to change.

Moreover, without long term bi-partisan political support for a carbon price it would also appear reasonable to model scenarios with a zero price on carbon after July 2020 (when the Emission Reduction Fund is scheduled to close).

4. Identification of Competition Benefits

The assessment competition benefits relies heavily of a set of assumed bid structures by generators deemed as strategic. Electranet should be transparent on assumptions on strategic generators and their bid structures used in the modelling. This detail should be published for comment and review prior to the commencement of modelling for the PADR.

With regards to any bidding assumptions, ultimately Snowy Hydro would view them as inherently unreliable. The market structure and bidding patterns are subject to various unpredictable drivers including the disposition of generation assets to new owners over time. For example, the future potential sale of Ergon Energy, CS Energy and Stanwell.

Snowy Hydro appreciates the opportunity to participate in this RIT-T assessment process. I can be contacted on kevin.ly@snowyhydro.com.au to discuss our submission.

Yours sincerely

A handwritten signature in black ink, appearing to read 'K. Ly', with a horizontal line underneath.

Kevin Ly
Head of Wholesale Regulation