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Dear Sirs,

**RE: Clean Energy Council Submission to Heywood Interconnector RIT-T Project Assessment Draft Report**

The Clean Energy Council (CEC) welcomes the opportunity to contribute to the joint RIT-T draft report. In particular it is the CEC's view that South Australia has a crucial role to play in the continued expansion of renewable energy in Australia and the Vic-SA interconnection is critical piece of infrastructure to support this expansion.

The CEC is the peak body representing Australia's clean energy and energy efficiency industries. Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies
- develop effective legislation and regulation to improve energy efficiency
- work to reduce costs and remove all other barriers to accessing clean energy

The CEC works with over 550 member organisations and governments to identify and address the barriers to efficient industry development in the energy efficiency and stationary energy sector. The clean energy industry contributes to the generation of electricity using wind, hydro, solar, biomass, geothermal and marine energy as well as the emerging technologies and service providers in the energy efficiency sector including solar hot water and cogeneration.

The following sections outline our high level response to the joint AEMO – ElectraNet Project Assessment Draft Report (PADR)..

### ***Robustness of analysis***

The CEC recognises the importance of robust modelling applied to any RIT-T. Review of the PADR raised some points which raised some points that the CEC considers that AEMO and ElectraNet should consider in more detail in the development of the final report:

- Independent review of all network costs should be undertaken to ensure that the costs proposed by SP AusNet and ElectraNet remain efficient. As these parties have vested interests in any works undertaken as a result of this RIT-T any costs proposed by them should be subject to independent review and publication. Once a network upgrade is approved the cost of this is included as an increased *use of system* charge to consumers for very long time periods, accordingly, it is critical that costs included in the PADR reflect as accurately as possible the true costs of any network augmentation.
- Modelling inputs include technology market entry timings based on the draft report prepared by Worley Parsons for AEMO's 2012 NTNDP. This work has since been updated with significant revisions for the Federal Government's Energy White Paper. Some consideration should be made for any differences in the input data resulting from this update and costs should be applied at the time of commissioning based on this updated data.
- Where carbon capture and storage has been considered based on the Worley Parsons report the accompanying assumptions on carbon transport have not been provided.
- Also based on the White Paper consideration should be made for trends in gas prices and, considering that the White Paper has not recommended a mandated local reserve, the impact of parity with the international gas price.
- The demand and wind traces from 2009/10 were used as an input into the modelling. This period also aligns with El Nino indicating that atypical demand and wind profiles would have been recorded. Some comparison should be made with a typical or high demand and wind period to ensure that the modelling results are robust. In addition, whilst sensitivity cases were conducted using FY 2005/06 and 2007/08 load traces the proponents provide no explanation for why these years were chosen over other years. The CEC requests that the proponents provide detailed analysis as to why the 3 years used in the PADR were chosen.
- The CEC also notes that the majority of modelling scenarios do not use the latest AEMO published demand forecasts. The majority of scenarios apply 2009-10 load profiles adjusted upwards using the 2010 NTNDP and 2011 ESOO forecasts. In 2012 AEMO released its first NEM-wide National Electricity Forecasting Report (NEFR), applying a revised methodology and incorporating independent modelling assumptions. The NEFR revealed a substantial step change revision downwards of both peak demand and energy forecasts across all regions. The CEC believes that the 2013 NEFR will result in an additional revision to future demand forecasts and the Heywood RIT-T would benefit from the use of these updated demand forecasts.
- ElectraNet's potential expansion of the Eyre Peninsula system could provide opportunity for significant expansion of wind generation in SA. The PADR does not make clear whether this has been considered.
- Currently SP AusNet and ElectraNet apply different ratings to their respective sections of the 275kV Heywood – South East lines. Uniform ratings should be applied based on asset capability.

### ***Opportunities for refined outcomes***

The PADR provides a detailed comparison between Options 1b and 6b where the outcomes indicate that the two options present prima facie equivalent market benefits. The final recommendations are based on the perception of a reduce risk from Option 1b over Option 6b. While this risk should not be ignored, it needs to be quantified to some extent in the analysis to allow an accurate comparison between options.

An opportunity may also present by integrating a control scheme into the recommended Option 6b. At a high level this scheme could focus on the 132kV system in South East SA by tripping participant wind farms when necessary to allow non-firm operation of the Heywood transformers, prior to and following the installation of the third transformer.

Consideration should also be made for the interaction between a control scheme focused on the 132kV system and ElectraNet's communications infrastructure proposed as part of the current regulatory determination.

Further consideration should also be made to making full use of the existing 132kV assets by applying dynamic ratings and considering if low cost asset replacement within the South East 132kV substations could be undertaken for limiting assets.

The CEC expects that these actions could complement the proposed Option 1b by providing immediate benefits at a low cost. As the ultimate works would be as proposed in Option 1b the concerns over increased risk from Option 6b would be mitigated. The final outcome would be an enhanced Option 1b once completed.

It is not clear that the proponents have fully considered the long term reliability benefits of the introduction of a third transformer at Heywood. As the existing transformers age the increased risk of failure could be offset to some degree by the increased N-1 capacity at Heywood. In the absence of the third transformer the loss of one of the transformers represents a significant risk to market efficiency, which is very relevant to the current PADR.

### ***Contradictory position on cost benefit analysis***

The CEC recognises the importance of robust cost benefit analysis in identifying opportunities for efficient transmission investment. The analysis of Option 4 does provide a high level measure to alleviate constraints in South East SA and AEMO and ElectraNet identified that a separate RIT-T assessment would be needed to address particular intra-regional constraints such as this<sup>1</sup>.

This statement raises some concerns when considered in light of AEMO's position on wind farm licence conditions imposed by ESCoSA in SA<sup>2</sup>. The CEC refers to statements made by AEMO

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<sup>1</sup> p. 24.

<sup>2</sup> ESCoSA, 2010, *Licence Conditions for Wind Generators: Final Decision*, p-p. 41-49, available: [www.escosa.sa.gov.au](http://www.escosa.sa.gov.au).

recommending that ESCoSA retain stringent reactive power and fault ride through capabilities. AEMO's position is based on the expectation that the minimum access standard will prevail for all new connecting wind farms, therefore placing voltage stability at risk<sup>3</sup>.

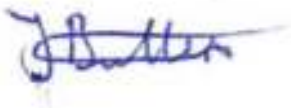
To date AEMO has not made available any material supporting a cost benefit analysis for this position, despite the significant cost burden it places on new wind developments in South Australia. No analysis has been undertaken to assess the costs or benefits of alternative arrangements, such as placing the necessary support close to load centres rather than at the wind farm gate. The CEC requests that AEMO undertakes, and makes public, this analysis as a matter of priority so that the wind industry can have confidence that their investments are efficient and consumers can have confidence that renewable energy is being developed efficiently.

### ***Closing***

In closing the CEC would like to reiterate the view that this RIT-T process is crucial for the ongoing expansion of renewable generation in South Australia and welcomes the final recommendation in the coming months.

Please do not hesitate to contact the undersigned for any queries regarding this submission.

Yours sincerely,



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<sup>3</sup> Ibid.