

31st August 2018

ElectraNet
52-55 East Terrace
ADELAIDE SA 5000

Submitted via e-mail to: consultation@electranet.com.au

Dear Sir/Madam,

South Australian Energy Transformation Project Assessment Draft Report

The Australian Energy Council (the “**Energy Council**”) welcomes the opportunity to make a submission in response to ElectraNet’s *SA Energy Transformation RIT-T Project Assessment Draft Report* dated 29th June 2018.

The Energy Council is the industry body representing 21 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia and sell gas and electricity to over ten million homes and businesses.

Discussion

The object of a Regulatory Investment Test for Transmission (“**RIT-T**”) is to satisfy an “identified need”, as that term is defined in Chapter 10 of the National Electricity Rules. The Project Specification Consultation Report (“**PSCR**”), and subsequently the Project Assessment Draft Report (“**PADR**”), outlined the following identified needs:

- lowering dispatch costs, initially in South Australia, through increasing access to supply options across regions;
- facilitating the transition to a lower carbon emissions future and the adoption of new technologies, through improving access to high quality renewable resources across regions; and
- enhancing security of electricity supply, including management of inertia, frequency response and system strength in South Australia.

The Energy Council would argue that not only must the identified needs be met, but a nett market benefit must be proven. To that end the second identified need would seem to fall outside the proper consideration of whether the RIT-T is passed or not, unless it forms part of the path to long-term lower resource costs. Along with the assessment of the extent to which the needs will be satisfied, consideration must also be given as to whether the costs are reasonable and unlikely to vary significantly under the most likely scenarios.

As shown through the Australian Energy Market Operator’s Integrated System Plan (“**ISP**”), major transmission and interconnector investment over coming years is likely to be economically justifiable. This heightened focus on transmission strengthening requires that the assessment processes used are transparent, clear and informed by the best and most recently available information. On behalf of its members, the Energy Council advocates in favour of robust and clear assessment frameworks. This will support the best projects being developed, can minimise modelling uncertainties, and can ensure that projects only proceed where there is a clear nett social benefit.

The Energy Council does not have the expertise to comment on the costs outlined in the report and will leave these more technical assessments to its members. Taken at face value, the projected cost of \$1.5b is considerable, and this suggests that significant scrutiny should be undertaken to ensure that (a) the expected cost is correct; and (b) should the project be commissioned, the “as-built” cost is close to the expected cost on which the cost-benefit analysis has been based. In addition, there will undoubtedly be material operations & maintenance costs involved in maintaining the assets over their lives, therefore these costs need to be identified and scrutinised to ensure that consumers are not left with a long-term impost.

The preferred option, Option C.3i (“**RiverLink**”), nominally satisfied the identified needs and recorded the highest nett present value through the PADR, but it should be noted that the ISP reports that despite newly installed synchronous condensers and RiverLink, SA may require further remedial action to keep system strength and inertia within acceptable limits.^{1,2} The Energy Council submits that this is reinforced by the PADR’s modelling,³ which has Torrens Island Power Station A retiring in 2021 and Torrens Island Power Station B retiring in 2023, right at the time RiverLink will be commissioned. This suggests that following the retirement of these two major system security providers, which have a combined nominal capacity of 1,280MW, the identified need of security may not be fully satisfied by the project, and is reinforced by the PADR’s own statement that, “... the development of new policies and responses that directly manage system security means that the importance of this element has reduced”.⁴

The PADR also speaks of “facilitating the transition to a lower carbon emissions future” as one of the identified needs which will be satisfied by the preferred project.⁵ The preferred project should be appropriately investigated to consider the impact on sectoral emissions. For example, much of the benefit ascribed to the project is due to the reduction of SA gas-fired generation and its replacement with lower cost generation from NSW and Victoria. While there are well-known and expected plans for coal-fired generation to retire at the end of its technical life, in the short-term it is likely that this highly-emissive generation will displace SA’s gas-fired generation. The Energy Council also notes that any increases in emissions in one region will need to be offset elsewhere in the market in order to achieve Australia’s international commitments. The Energy Council encourages ElectraNet to conduct in-depth analysis of these interrelated factors to assess the likely impact on the emissions intensity of the sector.

It is worth noting that the National Electricity Market has undergone significant change since the PSCR was first published in 2016, with substantially more change possible. Over the coming five years, until the expected commissioning between 2022 and 2024, there may also be:

- governmental policy changes (either at state or federal level);
- market changes such as increased distributed generation;
- declining technology costs; and
- regulatory environment changes (such as outcomes from the Australian Energy Market Commission’s Generator Technical Performance Standards Rule Change, Reliability Frameworks Review, Frequency Control Frameworks Review, etc.).

These potential market changes justify the need for appropriate caution in embracing any transmission network solution, particularly as market forecasts out to 2040 are likely to be very uncertain, and affected by major market changes such as the introduction of five minute settlement. This need for prudence should skew the preferred option to cheaper solutions which don’t expose so much capital to the risk of the future not playing out as forecast, or encourage the assessment of investment options which are staged to allow a smaller network investment in the short-term, with the flexibility to upgrade at reduced cost later, once the future becomes more certain, as suggested by the *Regulatory Investment Test for Transmission Application Guidelines*.⁶ In addition, the Energy Council questions whether the “Least Cost Non-Interconnector Option in SA” is directly comparable with the other interconnector options considered, given it does not meet the desired minimum system performance levels.⁷

Market Benefits

Comparing the preferred option, C3i, across the different scenarios in Figure 12 on page 85 of the PADR, there is little difference between the Central and Low scenarios. However the High case reports a value about six times the value for the Central case. This has the effect of skewing the Weighted case appreciably towards the High Scenario’s outcome. A review of the assumptions in the High Scenario suggests that, although capital costs have been conservatively assumed to increase by 15%, other parameters such as a more stringent Rate of Change of Frequency (“**RoCoF**”) limit and higher gas prices have resulted in an unrealistic outcome being

¹ Australian Energy Market Operator, *Integrated System Plan*, July 2018, p.71

² *Ibid.*, p.81

³ ElectraNet, *SA Energy Transformation RIT-T Market Modelling Report*, 29th June 2018, pp.19-20

⁴ PADR, p.25

⁵ *Ibid.*, p.25

⁶ Australian Energy Regulator, *Regulatory Investment Test for Transmission Application Guidelines*, June 2010, p.36

⁷ Entura, *SA Energy Transformation RIT-T Consolidated Non-interconnector Option*, 5th June 2018, p.ii

reported. For example, the report's analysis of sensitivities shows that the RoCoF limit change adds approximately \$500m to Option C3's market benefits PV.⁸

The assessment of market benefits attributes value to the avoided costs associated with Renewable Energy Zones ("REZs"). In the case of the preferred option, this is in the order of \$300m. While REZs are a concept introduced by the Finkel Review,⁹ they have no present standing and their inclusion is speculative. The Energy Council believes it is inappropriate for their value to be included in the assumed market benefits.

The Energy Council also questions whether the quantitative assessment used is the most appropriate. Net Present Value ("NPV") is a measure to assess the profitability of a project by considering the project's discounted cash inflows and outflows over the term of the project. It does not consider the quantum of capital required to complete a project and in that sense there are other measures, such as the cost-benefit ratio, or profitability index, which serve better as an indicator of how efficiently the transmission network service provider's capital would be employed. For example, a \$200m 100MW project returning \$400m in benefits (hence NPV = \$200m) would be appreciably better for consumers than a \$500m 400MW project returning \$700m (again, with NPV = \$200m). To this end, the Energy Council believes it is important to consider the capital efficiency of the projects being proposed, not just the gross NPV returned.

This is reinforced by the findings of ACIL Allen's preliminary analysis of the potential impact on electricity prices, which found that, in nominal terms, over the first three years to 2026, annual residential customer bills would reduce by "up to about \$30 in South Australia and \$20 in New South Wales" for representative customers.¹⁰ Given annual customer bills for the customers modelled would be about \$1,727 (SA) and \$1,697 (NSW),¹¹ this represents a 1.7% (SA) and 1.2% (NSW) discount on their bills. While the transmission network cost impact of \$9 p.a. (SA) or \$5 p.a. (NSW),¹² could also be classed as negligible, the Energy Council suggests that the customer benefit (and its associated risk) does not assist in the justification for the project, particularly as it is more likely that these benefits are reduced upon implementation, rather than increased.

Despite ElectraNet conducting a Deep Dive Workshop, the Energy Council remains concerned about the lack of "a detailed description of the method used to quantify each class of material market benefit and cost".¹³ The Energy Council suggests that more information transparency be provided, such as that provided by the Climate Change Authority's *Modelling Illustrative Electricity Sector Emissions Reduction Policies*.¹⁴

Furthermore, reading through the Market Modelling Report, there are a number of assumptions which don't consider the current market situation, viz.,

1. SA Energy Security Target: ElectraNet has included the Queensland Renewable Energy Target and the Victorian Renewable Energy Target, yet has not included the SA Energy Security Target. While this is not a renewable energy scheme, it is a state-based scheme, the introduction of which will erode the likely outcomes from building RiverLink.
2. National Energy Guarantee Reliability Requirement: As a region-based scheme, the reliability requirement will force dispatchable capacity to be provided locally to the SA market to meet SA peak demand. Again, this requirement will diminish the identified benefits from the proposed interconnector.

In addition, the Energy Council questions the use of the ISP's real, pre-tax weighted average cost of capital of 6.0%. Such a rate is reflective of the returns expected from low-risk, regulated assets and is too low for assets such as generators which are exposed to market risk. Instead the Energy Council would submit that a figure 200 to 300 basis points higher is more appropriate to be used for the analysis.

⁸ PADR, Figure 15, p.89

⁹ Finkel *et al.*, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, 2017

¹⁰ ACIL Allen, *South Australia New South Wales Interconnector Preliminary Analysis of Potential Impact on Electricity Prices*, 3rd July 2018, p.10

¹¹ Australian Competition and Consumer Commission, *Restoring electricity affordability and Australia's competitive advantage: Retail Electricity Pricing Inquiry—Final Report*, June 2018, Figure 1.4, p.8

¹² ACIL Allen, Table 3.4, p.11

¹³ Australian Energy Regulator, *Regulatory Investment Test for Transmission Application Guidelines*, June 2010, p.46

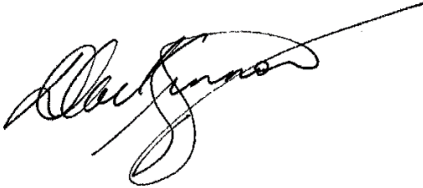
¹⁴ <http://www.climatechangeauthority.gov.au/reviews/special-review/modelling-illustrative-electricity-sector-policies>

Conclusion

In conclusion, the Energy Council has serious reservations about the need for the \$1.5b proposed interconnector. Not only has its case not been adequately demonstrated in the data presented, but the minimal benefits attributable to the project suggest that less expensive projects may give a comparable return to consumers while minimising the risk that capital expenditure is in excess of forecast, or benefits less than expected.

Any questions about this submission should be addressed to the writer, by e-mail to Duncan.MacKinnon@energycouncil.com.au or by telephone on (03) 9205 3103.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Duncan MacKinnon', with a long horizontal flourish extending to the right.

Duncan MacKinnon
Wholesale Policy Manager
Australian Energy Council