

18 August 2017

Nathan Petrus
Director Consumer Protection and Pricing
Essential Services Commission
GPO Box 2605
ADELAIDE SA 5001

By email: escosa@escosa.sa.gov.au

Dear Nathan

re: Inquiry into the reliability and quality of electricity supply on the Eyre Peninsula

ElectraNet welcomes the opportunity to provide a submission in response to the Draft Report published by the Essential Services Commission (“the Commission”) in May 2017 as part of its inquiry into the reliability and quality of electricity supply on the Eyre Peninsula.

Our comments in the attachment focus on the following aspects of the Commission’s draft report:

- Reliability and quality of supply on the Eyre Peninsula – the existing transmission line servicing the Eyre Peninsula requires significant work over the coming years to maintain reliability and this provides the opportunity to explore broader options for electricity supply to the Eyre Peninsula;
- Options for improving reliability of supply – ElectraNet is exploring a number of transmission options as part of its Eyre Peninsula Electricity Supply Options RIT-T that are expected to deliver a broader range of market benefits over and above the reliability benefits highlighted in the draft report and may displace some generation options proposed by SA Power Networks; and
- Transmission planning regulatory framework – ElectraNet disagrees with the Commission’s draft finding that there “may be insufficient incentive for distribution and transmission businesses to undertake effective joint planning” and believes that overall the draft report and its conclusions fail to recognise a number of key features of the economic regulatory arrangements that apply in South Australia.

We look forward to continuing to contribute to the Commission's inquiry.

Please contact me on 08 8404 7983 if you would like to discuss any aspect of this submission.

Yours sincerely



Rainer Korte
Executive Manager Asset Management

Inquiry into the reliability and quality of electricity supply on the Eyre Peninsula

ElectraNet submission

18 August 2017

General

ElectraNet understands the importance of a reliable electricity transmission supply to the regional areas of South Australia such as the Eyre Peninsula, and the contribution it makes to the ongoing economic development of the wider South Australian economy.

ElectraNet welcomes the opportunity to provide a submission in response to the Draft Report published by the Essential Services Commission (“the Commission”) in May 2017 as part of its inquiry into the reliability and quality of electricity supply on the Eyre Peninsula.

We provide our feedback in the following sections, which correspond with the last three sections of the Commission’s draft report.

Reliability and quality of supply on the Eyre Peninsula

ElectraNet agrees with the Commission’s analysis that reliability of electricity supply on the Eyre Peninsula was relatively stable between 2006-07 and 2015-16, but that there has been a significant deterioration in reliability performance during 2016-17, due to the severe weather events on 9 September 2016, 28 September 2016 and 23 December 2016.

The Eyre Peninsula is served by a radial single circuit 132 kV transmission line which runs from Cultana to Yadnarie to Port Lincoln (refer to Figure 1). A radial single circuit 132 kV line also extends from Yadnarie to Wudinna to supply the West Coast. The original line to Port Lincoln was established in 1967. Our most recent assessment of the line condition indicates that components of the line are nearing the end of their functional life and will require replacement in the next few years.

Our assessment is that transmission system reliability outcomes on the Eyre Peninsula will deteriorate in future years, if action is not taken to address the deteriorating condition of significant sections of the conductor on the 132 kV lines between Cultana, Yadnarie, and Port Lincoln.

For this reason, ElectraNet is actively exploring options to improve the reliability of supply to Port Lincoln, including options to replace or upgrade the transmission lines serving the lower Eyre Peninsula, in our Eyre Peninsula Electricity Supply Options Regulatory Investment Test for Transmission (RIT-T)¹.

¹ The Project Specification Consultation Report (PSCR) for this RIT-T was published on 28 April 2017, and is available from www.electranet.com.au.

Options for improving reliability of supply

ElectraNet, SA Power Networks, and Eye Energy have each proposed a number of options for improved supply reliability as part of ESCOSA's inquiry into the reliability and quality of electricity supply on the Eyre Peninsula.

ElectraNet agrees with the Commission's comment that there may be other market benefits that arise from each option, in addition to reliability benefits.

The options proposed by ElectraNet were presented in the Eyre Peninsula Electricity Supply Options PSCR. They are expected to deliver a broader range of market benefits, including:

- reliability benefits
- network support cost reduction
- maintenance cost reduction
- risk cost reduction (based on avoiding the escalating reliability and safety risks associated with defective conductor on the existing lines)
- wind farm constraint reduction
- transmission loss reduction
- future option value
- other market benefits, e.g. facilitation of increased market competition by the ability to connect additional low-cost generation on the Eyre Peninsula

Given the wider range of benefits that ElectraNet's proposed options are expected to provide, ElectraNet recommends that to avoid confusion table 4.5 in the Commission's draft report be split, to present ElectraNet's options separately from SA Power Networks' options.

Comparing the SA Power Networks and ElectraNet options only on the basis of improvements in reliability (minutes saved) and estimated cost will give the false impression that the SA Power Networks' options should be prioritised over the transmission options, which deliver a broader range of potential benefits. A limited comparison of options on this basis is not "comparing apples with apples" and this could be avoided by separating the options into separate tables. Also, especially for the transmission options, MWh of unserved energy reduction may be a better metric than the system minutes reliability metric. It is also recommended that an additional column be added to the summary table presenting the transmission options to describe the range of additional potential benefits being assessed as listed above.

The options proposed by SA Power Networks target reliability benefits, and are classified into three types:

- distribution network hardening options
- generation options
- SCADA options.

Of the three types, the distribution network hardening options and SCADA options appear to provide benefits that will be independent of the benefits that will be provided by the options that ElectraNet is investigating, as these are aimed primarily at reducing the impact of distribution outages.

In contrast, there may be significant interaction between SA Power Networks' generation options and the options that ElectraNet proposed. These interactions are summarised in the table on the next page.

Two options have been proposed by Eye Energy. These projects are each planned to be privately funded. Of the Eye Energy options, the proposal to install solar PV at Cleve and Wudinna, especially if combined with storage (e.g. large batteries), could interact with ElectraNet’s proposed options in a similar manner to SA Power Networks’ generation options 2 and 3.

ElectraNet options	SA Power Networks generation options		
	Option 1	Option 2	Option 3
	Upgrade SA Power Networks’ sub-transmission network to enable supply of the far west coast of Eyre Peninsula from Pt Lincoln power station when the transmission network north of Yadnarie is interrupted	Install generation at Wudinna and upgrade the 66 kV sub-transmission network	Install generation at Yadnarie ² , Ceduna and Streaky Bay substations and upgrade 66 kV sub-transmission network
Option 1 Continue network support at Port Lincoln and component replacement works on the existing 132 kV single-circuit transmission line by 2020	Options are complementary; however, the benefits of the SA Power Networks option would be reduced due to the improved Cultana to Yadnarie 132 kV line reliability delivered by the ElectraNet option		
Option 2 Double circuit 132 kV transmission line following a Cultana to Yadnarie to Port Lincoln route by 2020	The SA Power Networks option would not provide any significant benefits that are not provided by the ElectraNet options, as under these options Yadnarie will be supplied by an N-1 transmission configuration, and the network support service at Pt Lincoln would not continue	Options are complementary. However, the benefits of the SA Power Networks option would be reduced due to the improved transmission system reliability delivered by the ElectraNet option between Cultana and Pt Lincoln	Generation at Yadnarie would not provide any significant additional benefits that are not provided by the ElectraNet options, as under these options Yadnarie will be supplied by an N-1 transmission configuration. There may be additional local reliability benefits from installing generation at Ceduna and Streaky Bay.
Option 4 Double circuit 275 kV transmission line following a Cultana to Yadnarie to Port Lincoln route by 2021		A separate ElectraNet line route option via Wudinna would mean the SA Power Networks option would not provide any significant additional benefits over and above the ElectraNet option	
Option 3 Two single circuit 132 kV transmission lines following separated routes between Cultana and Port Lincoln by 2023			
Option 5 Two single circuit 275 kV transmission lines following separated routes between Cultana and Port Lincoln by 2023			

² Table 4.3 of ESCOSA’s draft report states “Wudinna” in the left hand column, but the right hand column of the same table refers to Yadnarie. The use of Yadnarie is consistent with the description provided in the overview.

Transmission Planning

ElectraNet disagrees with the Commission's draft finding that there "may be insufficient incentive for distribution and transmission businesses to undertake effective joint planning, as required under the NER".

ESCOSA suggests a potential solution based on New York experience which "includes the independent grid operator in the joint planning process". The draft report fails to recognise that this is already a feature of the National Electricity Rules planning and investment decision making framework, particularly in South Australia where AEMO has a specific planning oversight role.

ElectraNet undertakes a wide range of joint planning activities with both transmission and distribution entities, on both a regular and as-needed basis and through a range of forums. Historically and since market inception, ElectraNet has always worked very closely with SA Power Networks on every potential and realised development to ensure optimal solutions have always been fully investigated. Such joint planning activities also include significant engagement with AEMO (as both national planner and Victorian transmission planner), TransGrid, APA, AusNet Services, Powerlink, and major customers.

Overall the draft report and its conclusions fail to recognise a number of key features and checks and balances of the economic regulatory arrangements as they currently apply in South Australia. For example, in addition to AEMO's national planning oversight role, under the SA jurisdictional arrangements AEMO:

- reviews and reports to the SA Government on ElectraNet's Transmission Annual Planning Report;
- reviews all RIT-T assessments prior to the publication of reports by ElectraNet;
- reviews and reports publicly on network development projects in ElectraNet's capital expenditure forecast prior to lodgement of Revenue Proposal with the AER; and
- reports annually on the delivery of ElectraNet's capital program compared with the forecast program at the time of the applicable revenue determination.

The incentive framework under the NER is designed to reward efficient capital investment through the setting of an efficient allowance which the network service provider then operates within. This is further reinforced by the Capital Expenditure Sharing Scheme (CESS) which applies a further financial incentive to efficiently reduce capital expenditure.

The RIT-T provides a transparent and rigorous framework for transparently assessing efficient network options and non-network alternatives, including alternative transmission and distribution options where these exist.

ElectraNet has a track record of efficiently underspending its capex allowance and prudent deferral of network investment. For example, we proposed to the Commission that the Baroota upgrade to a higher reliability standard, as required by the Electricity Transmission Code, was no longer economic or in the best interests of customers based on an updated economic assessment and therefore should not proceed.

More widely, ElectraNet recognises that incentives within the current regulatory framework for transmission network service providers to consider and procure non-network solutions on an equal basis to network solutions can be improved.

Currently there is no commercial upside and considerable potential downside (through cost recovery risk, cash flow risk, and contractual risk and compliance risk) associated with procuring non-network solutions, which are subject to cost pass through under the current regulatory framework.

ElectraNet believes that reforms to the economic regulatory framework are needed to address this existing and potentially growing issue as the available range and economic viability of non-network options increases.

A review of the RIT-T undertaken by the COAG Energy Council published in February 2017 found that the RIT-T remains the appropriate mechanism to ensure new transmission infrastructure in the NEM is built in the long term interests of consumers. A number of refinements to improve its operation were also identified. These include reviewing the AER's RIT-T application guidelines to better reflect the net system benefits of option value created by transmission projects, including with respect to maintaining system security, and achieving renewable energy and emissions reduction goals.

ElectraNet supports such clarifications in the interests of ensuring the RIT-T remains sufficiently broad and fit for purpose in responding to the emerging challenges of the transitioning energy market.