



Office of the Commissioner for Kangaroo Island

23 January 2017

Australian Energy Regulator
ATT: Paula Conboy, Chair
GPO Box 520
Melbourne VIC 3001
Email: paula.conboy@aer.gov.au

Dear Ms Conboy,

RE: Regulatory Test for Distribution – Kangaroo Island submarine cable

In response to SA Power Networks' Final Project Assessment Report (FPAR) for the Kangaroo Island Submarine Cable project, we submit to the AER a Dispute Notice on behalf of the Commissioner for Kangaroo and the Kangaroo Island Council as representatives of Kangaroo Island energy consumers. The notice is submitted in line with the dispute resolution requirements of the AER's Regulatory investment test for distribution - Application Guidelines¹.

Please note that given the timing of the release of the FPAR (Friday 23 December 2016) and availability of stakeholders over the Christmas and new year break, we have not been able to engage further with SAPN on these matters but are lodging this notice in order to meet the requirement to submit a dispute within 30 days of FPAR publication.

The basis of this dispute notice relates to our view that SAPN has not given full consideration to the community's preferred option (option 8: install new 66kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018), particularly in regards to the option value and reduction in losses that a larger capacity cable would provide. SAPN's decision to nominate an option (option 1: install new 33kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018) that has a different technical specification to that presented in their 2015-20 Regulatory Proposal has also generated concern amongst stakeholders. There is also some ambiguity around the costing of the project and the allocation of benefits under the Capital Expenditure incentive scheme. The rationale supporting this argument is outlined in the following pages.

Attached to this notice is a copy of SAPN's FPAR containing our joint submission to SAPN's Draft Project Assessment Report and a copy of the Related Council Resolution. A copy of this letter has also been sent to SA Power Networks in line with the requirements of the AER's RIT-D Application Guidelines

Yours Sincerely

Wendy Campana
Commissioner for Kangaroo Island

Peter Clements
Mayor Kangaroo Island

CC: KI Energy Security Focus Group,
SA Power Networks requestforproposals@sapowernetworks.com.au

¹ AER 2013, *Better Regulation, Regulatory investment test for distribution – Application Guidelines*, <https://www.aer.gov.au/system/files/AER%20-%20Final%20RIT-D%20application%20guidelines%20-%202023%20August%202013.pdf>.

Background and Rationale for Dispute

SA Power Networks released the FINAL Project Assessment Report on December 23rd 2016 and follows the DRAFT Report released on November 2nd 2016.

The FINAL adds to the DRAFT by responding to submissions to the DRAFT and adding the option of a cable rated at 66kV (and capable of twice the power transfer of the 33kV option).

SA Power Networks preferred and recommended solution is to install a new 33kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018 (Option 1). The total project cost of this recommended option is estimated to be \$25.6 million in present value terms. The \$25.6 million cost is based on a competitive tender process and it excludes corporate business overheads, contingencies, pre-project decision cost and GST.

The Office of the Commissioner for KI and KI Council made a submission to the DRAFT (copy attached). The only other submission was from "The South Australian Renewable Energy Policy Group" and Solar Citizens. None of the proponents of alternatives in response to the Non-Network Option Report made formal submissions to the DPAR.

In response to the KI submission, SA Power Networks stated:

- The initial project estimate of \$45.6 million was based on budget estimates from five major cable suppliers received in 2014 via an external consultant on behalf of SA Power Networks and includes SA Power Networks line costs, business costs, equipment spares and pre-project decision costs.
- The broad range of installation prices received in 2014 reflected the large number of uncertainties and variables surrounding the cable installation. The risks associated with such a unique project is one of the main reasons why budget quotes potentially vary from those values received during a competitive tender process, along with changes in exchange rate and world competition.
- Subsequently, SA Power Networks has performed a preliminary evaluation of six formal tenders received for the supply and installation of the proposed cable. Based on the average prices received as a result of this competitive tender process, the average total cost for the supply and installation of a 33kV submarine cable is estimated to be \$25.6 million in present value terms.
- Further savings were achieved by modifying the technical specification of the submarine cable to reflect the future forecast growth requirements on Kangaroo Island. The cost is consistent and within the range of the potential network capital cost that was published in the Non- Network Options Report (NNOR) for Kangaroo Island of \$45 million (+10%, - 50%).
- Seventy percent (70%) of any savings are passed back to customers and 30% are retained by SA Power Networks. In conclusion, the cost reduction for the supply and installation of the proposed cable is a significant advantage to all South Australian customers, if it assists SA Power Networks in reducing total capital spend in the 2015-20 regulatory period.
- AEMO is now forecasting a 20-year decline in the state-wide demand forecast based on the impact of population growth, appliance growth, appliance efficiency, industry conversion from manufacturing to commercial, and the forecast uptake of solar and storage technology. Taking this demand forecast into account, a range of customer demand growth scenarios for Kangaroo Island were considered in the evaluation, including flat growth, positive growth and potential large spot loads.
- Under all customer demand scenarios, including future local development projects considered, the proposed 33kV cable is sufficient to supply Kangaroo Island for the next 30 years.
- SA Power Networks considers that the range of assumptions adopted in the reasonable scenarios used for this analysis adequately addresses future uncertainties including different growth scenarios, and ensures that the investment decision is robust across potential different futures.

Rationale for Dispute

Kangaroo Island stakeholders have indicated a preference for Option 8 over Option 1. These options are described below:

[page 20] Option 1: Install new 33kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018

This option includes:

1. Installing a new 33kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018 including management cost (\$21.9 million). Note: Capital cost used for 33kV cable supply and installation is the average tender price from six turn-key contract tenders received in July 2016 including network management cost.
2. Termination site upgrades at Fishery Beach and Cuttlefish Bay in 2018 to provide fast switching between both cables (\$3.47 million).
3. Raise the design temperature of the 33kV American River to MacGillivray line from 50°C to 60°C in 2023 to provide adequate line thermal capacity (\$0.4 million).
4. Installing a 20MVA 33kV voltage regulator at Penneshaw Substation in 2036 to provide voltage support (\$1.76 million).

Total Cost [page 46] = \$25.629 million.

[page 24] Option 8: Install new 66kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018 (added since publication of DPAR)

This option includes:

1. Installing a new 66kV submarine cable from Fishery Beach to Cuttlefish Bay in 2018 including management cost (\$23.8 million) but energised at 33kV initially. Note: Capital cost used for 66kV cable supply and installation is based on the average tender price from six turn-key contract tenders received in July 2016 including network management cost.
2. Termination site upgrades at Fishery Beach and Cuttlefish Bay in 2018 to provide fast switching between both cables (\$3.47 million).
3. Raise the design temperature of the 33kV American River to MacGillivray line from 50°C to 60°C in 2023 to provide adequate line thermal capacity (\$0.4 million).
4. Installing a 20MVA 33kV voltage regulator at Penneshaw Substation in 2036 to provide voltage support (\$1.76 million).

Total Cost [page 46] = \$27.404 million.

Stakeholders have a preference for Option 8 over Option 1 but, as can be seen, the difference in cable purchase costs between the two options is \$23.8m – \$21.9m = \$1.9m. SA Power Networks analysis does not ascribe any additional benefits of the 66kV cable over the 33kV cable and hence Option 1 is their preferred option over Option 8.

The benefits to be considered are listed at Clause 5.17.1 (c) (4) of the National Electricity Rules (NER). Benefits relevant to the two options include:

- Any additional option value with the likely future investment needs on the National Electricity Market (subclause vi)
- Electrical losses (subclause vii)
- Other Market benefits (subclause viii)

SA Power Networks has not assigned any 'option value' to the larger capacity cable and has not assigned any reduction in losses to the larger capacity cable. Further, SA Power Networks has assumed that the larger cable would not result in materially different behaviour in the wholesale market since the KI load is so small compared to the existing generation in the state or national markets. Local market benefits have not been included.

The marginal cost of the additional capacity (\$1.9m for 20MVA) is \$95 per kVA compared to \$1,065 per kVA for the first 20MVA indicating a relatively modest 'option cost': double the capacity for less than 10% additional cost.