



Addressing Network Constraints on the Southern Outer Metro Loop

Options Screening Report

21 September 2022

SA Power Networks

www.sapowernetworks.com.au

Disclaimer

This Options Screening Report (OSR) has been prepared in accordance with clause 5.17.4(e) of the National Electricity Rules (NER) for the purpose of demonstrating why SA Power Networks believes there may be credible non-network options available on a standalone basis or significant part of a credible option to address the identified need.

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1 Introduction

The Southern Outer Metro (SOM) 66-kilovolt (kV) loop is an integral part of SA Power Networks' southern suburbs network, providing supply to approximately 51,500 customers comprising a mixture of residential and commercial load, plus some industrial load. It is the sole 66kV line source for the McLaren Flat, Willunga, Aldinga and Seaford substations within the Metro South region while also providing supply to the Fleurieu radial 66kV network including the regions of Goolwa, Victor Harbor, Yankalilla and Kangaroo Island.

The Outer South and Fleurieu regions are forecast for additional load growth over the next 10 years. Load growth can be attributed to the forecast of additional dwellings and ongoing infrastructure expansion (eg, shopping precincts) to support the increase in local population. Details of expected dwelling increases can be found in the Land Supply Report for Greater Adelaide, published June 2021, by the Government of South Australia.¹

SA Power Networks has identified that components of the SOM loop – for example the Morphett Vale East to McLaren Flat to Willunga and Port Noarlunga to Seaford to Aldinga 66kV lines – as being overloaded following an outage of the other (ie, under N-1 conditions) during probability of exceedance (POE) 10 conditions. That is, the Morphett Value East to McLaren Flat to Willunga line is overloaded in the absence of the Port Noarlunga to Seaford to Aldinga line and vice versa. Failure to address this constraint risks customers losing supply from unplanned outages. This report focusses on these two most significant N-1 overloads (refer to Section 2.2 Table 1 for all N-1 overloads).

This risk is present in the summer period when demand in the region is highest reflecting its status as a holiday destination. SA Power Networks considers the identified need for this RIT-D to be reliability corrective action because the potential unserved energy risks breaching SA Power Networks' network reliability performance standards under the Electricity Distribution Code. This reflects that the constraint was identified as a result of SA Power Networks' planning criteria, which incorporates the objectives of maintaining compliance with all applicable regulatory and legal requirements.

Investment in additional electricity infrastructure or alternative non-network solutions is required to address this constraint and mitigate the risk of unserved energy. SA Power Networks has therefore initiated this Regulatory Investment Test for Distribution (RIT-D) to investigate, and consult on, how to alleviate this network constraint most efficiently. This Options Screening Report (OSR) sets out the reasons why SA Power Networks considers that a non-network option could form a potential credible option on a standalone basis, or form a significant part of a potential credible option for the SOM loop RIT-D. It also sets out the characteristics that a non-network option would need to meet in forming a credible option for this RIT-D. Further, it explains why SA Power Networks considers that a stand-alone power system (SAPS) option could not form a potential credible option on a standalone basis, or that could form a significant part of a potential credible option.

This OSR represents the first formal stage in the RIT-D process and will be followed by a Draft Project Assessment Report (DPAR) that will include a full net present value (NPV) economic assessment of all credible options (including any identified through this OSR). SA Power Networks expected date for the publication of the DPAR is February 2023.

1.1 Invitation for submissions

SA Power Networks invites submissions from interested parties, particularly from proponents of non-network solutions, in response to this report. SA Power Networks is interested in exploring all potential non-network solutions with proponents.

Proponents may require information in addition to that provided in this report. Proponents seeking additional information are encouraged to contact SA Power Networks as early as possible to ensure

¹ https://plan.sa.gov.au/_data/assets/pdf_file/0003/830982/Land_Supply_Report_for_Greater_Adelaide_-_Background_and_Context.pdf

that adequate time is available to fully assess feasible network and non-network potential solutions. Further engagement will also be possible following the submissions due date. It is critical that any solutions presented by proponents is done so in a manner that provides sufficient time for their evaluation and any necessary clarifications.

Submissions are due on or before Wednesday, 21 December 2022. Submissions and any subsequent response by SA Power Networks may be published.

If you have any comments or enquiries regarding this report please send to the following email: requestforproposals@sapowernetworks.com.au.

1.2 Next steps

Following consideration of submissions made in response to this OSR, SA Power Networks will prepare the DPAR. The DPAR will present a detailed assessment of all credible options to address the identified need, and will also include a summary and commentary on submissions received to this report.

SA Power Networks expected date for the publication of the DPAR is February 2023.

2 Description of the identified need

This section sets out the 'identified need' for this RIT-D, as well as the key assumptions that underpin it. These assumptions have been used by SA Power Networks to determine that a non-network option could form a potential credible option on a standalone basis, or form a significant part of a potential credible option for this RIT-D. They have also been used to determine that a SAPS option could not form a potential credible option on a standalone basis, or form a significant part of a potential credible option for this RIT-D. The assumptions are provided to assist proponents in preparing any solutions in response to this OSR.

2.1 Relevant area of SA Power Networks' distribution network

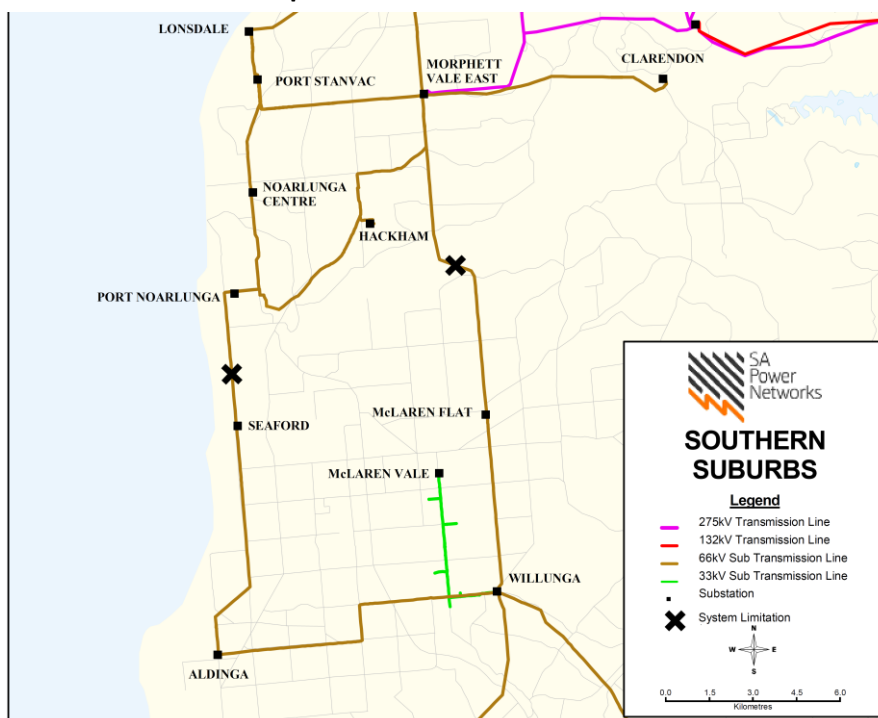
The SOM loop represents an integral part of SA Power Networks' southern suburbs network, providing supply to approximately 51,500 customers comprising a mixture of mostly residential and commercial load, plus some industrial load. It is the sole 66kV line source for the McLaren Flat, Willunga, Aldinga and Seaford substations within the Metro South region while also providing supply to the Fleurieu radial 66kV network including the regions of Goolwa, Victor Harbor, Yankalilla and Kangaroo Island.

An overview of the SOM loop is provided in

figure 2.1 and comprises four 66kV lines:

- Morphett Vale East to McLaren Flat to Willunga line;
- Morphett Vale East to Hackham to Port Noarlunga line;
- Port Noarlunga to Seaford to Aldinga line; and
- Aldinga to Willunga line.

Figure 2.1: Overview of the SOM loop



2.2 Key assumptions underpinning the identified need

The identified need for this RIT-D arises from network constraints in the SOM loop. In particular, SA Power Networks has identified that the Morphett Vale East to McLaren Flat to Willunga and Port Noarlunga to Seaford to Aldinga 66kV lines are overloaded following an outage of the other (ie, under N-1 conditions) during POE10 conditions. That is, the Morphett Vale East to McLaren Flat to Willunga line is overloaded in the absence of the Port Noarlunga to Seaford to Aldinga line and vice versa. A summary of all overloaded 66kV line sections and their corresponding 66kV line outage (N-1) within the SOM loop are summarized in table 1.

Table 1: SOM Loop summary of all N-1 overloads

Overloaded 66kV Line Section	66kV Line Contingent Event (loss of)
Port Noarlunga to Seaford	Morphett Vale-East to McLaren Flat
Seaford to Aldinga	Morphett Vale-East to McLaren Flat
Port Noarlunga to Seaford	McLaren Flat to Willunga
Morphett Vale-East to McLaren Flat	Port Noarlunga to Aldinga
Seaford to Aldinga	McLaren Flat to Willunga
Willunga to McLaren Flat	Port Noarlunga to Aldinga
Willunga to Aldinga	Morphett Vale-East to McLaren Flat

The potential unserved energy (discussed in greater detail below) risks breaching SA Power Networks’ network reliability performance standards under the Electricity Distribution Code. SA Power Networks therefore considers the identified need for this RIT-D to be reliability corrective action. This reflects that the constraint was identified as a result of SA Power Networks’ planning criteria, which incorporates the objectives of maintaining compliance with all applicable regulatory and legal requirements.

The analysis presented in this OSR focuses on the worst-case scenarios contained in table 1 above. These are the:

- Port Noarlunga to Seaford 66kV line (under the initial loss of Morphett Vale East to McLaren Flat to Willunga 66kV line); and
- Morphett Value East to McLaren Flat 66kV line (under the initial loss of Port Noarlunga to Seaford to Aldinga 66kV line).

Focusing on these worst-case contingent conditions enables SA Power Networks to clearly convey to potential non-network proponents the maximum network support that may be required for this identified need. SA Power Networks notes that for a non-network option to be credible it will need to cover all possible contingencies to avoid or defer network investment. However, non-network solutions that can provide the required network support in the most severe contingencies should be able to provide the required network support in the other contingencies. SA Power Networks also notes that all 66kV line contingent events will be considered in the NPV analysis presented in the DPAR.

The remainder of this section sets out the key assumptions that underpin the identified need.

2.2.1 Demand forecast scenarios

SA Power Networks’ planning criteria for N-1 66kV line constraints utilises the POE10 central summer forecast. For the purpose of this assessment, demand scenarios have been based on the POE10 central forecast including a plus 20 per cent (high) and minus 20 per cent (low) margins.

Figure 2.2 and figure 2.3 below shows the POE10 coincident demand forecast from 2021/22 to 2041/42 on the Port Noarlunga to Seaford to Aldinga and Morphett Vale East to McLaren Flat to Willunga 66kV lines (respectively) under N-1 conditions under these demand scenarios. It shows that each of the lines would be overloaded relative to their emergency rating during the outage of the other. As a result, there will be significant unserved energy during the summer period under contingent conditions if action is not taken (discussed in greater detail in section 2.2.3).

Figure 2.2: POE10 N-1 coincident summer demand forecast for the SOM loop from 2021/22 to 2041/42 under low, central and high scenarios (Port Noarlunga to Seaford 66kV line)

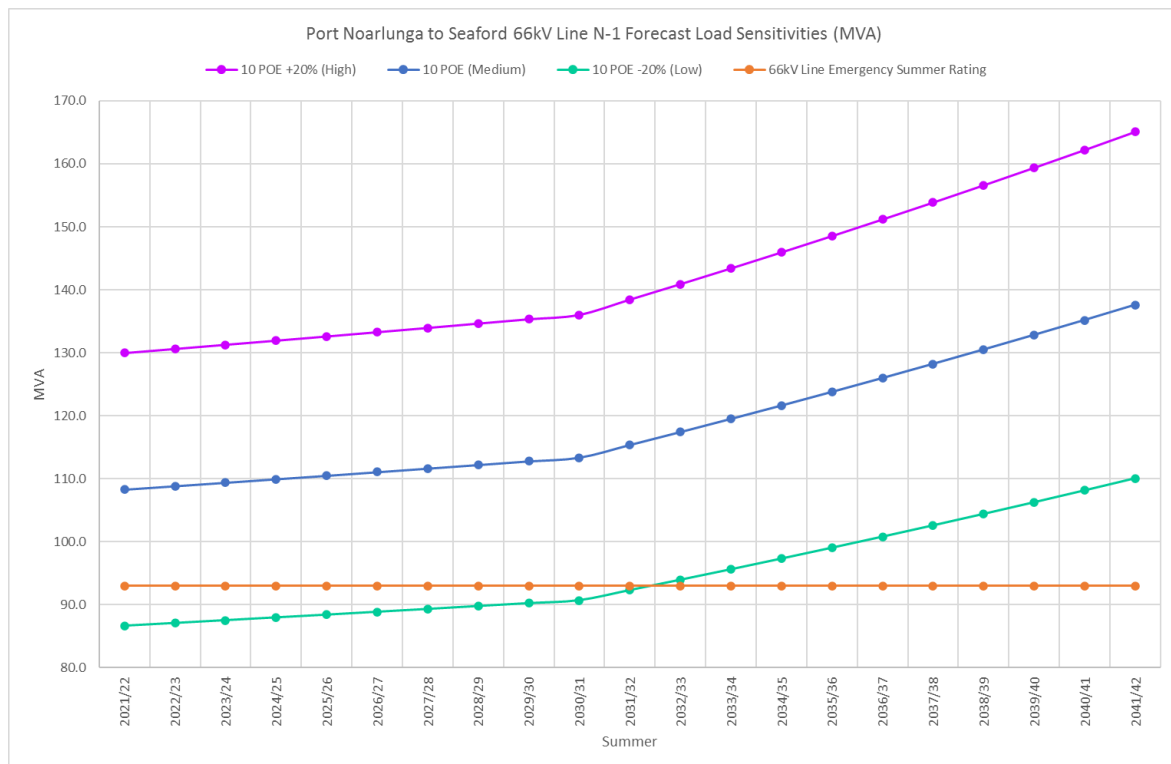
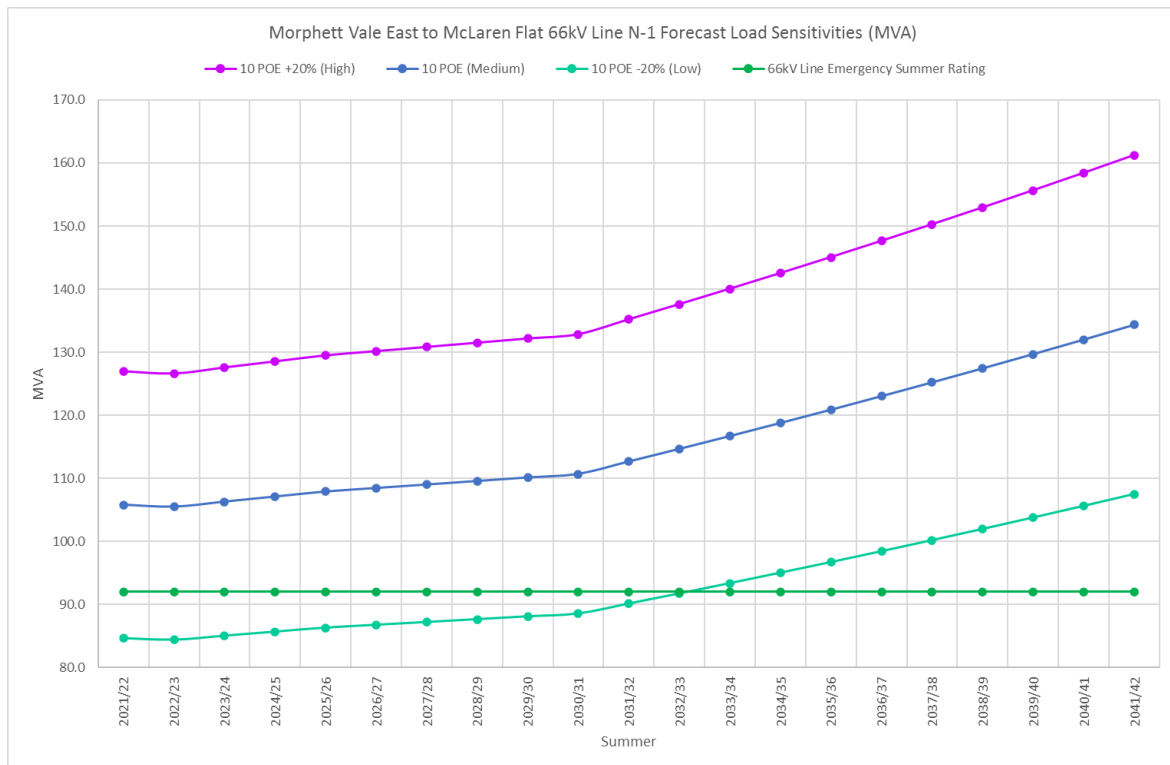


Figure 2.3: POE10 N-1 coincident summer demand forecast for the SOM loop from 2021/22 to 2041/42 under low, central and high scenarios (Morphett Value East to McLaren Flat 66kV line)



2.2.2 Expected pattern of load use

Figure 2.4 shows the normalized load duration curves for measured actual load and estimated native load for the SOM loop. The intention is to use estimated native load for all upcoming analysis.

Figure 2.4: Normalised load duration curve for the SOM loop

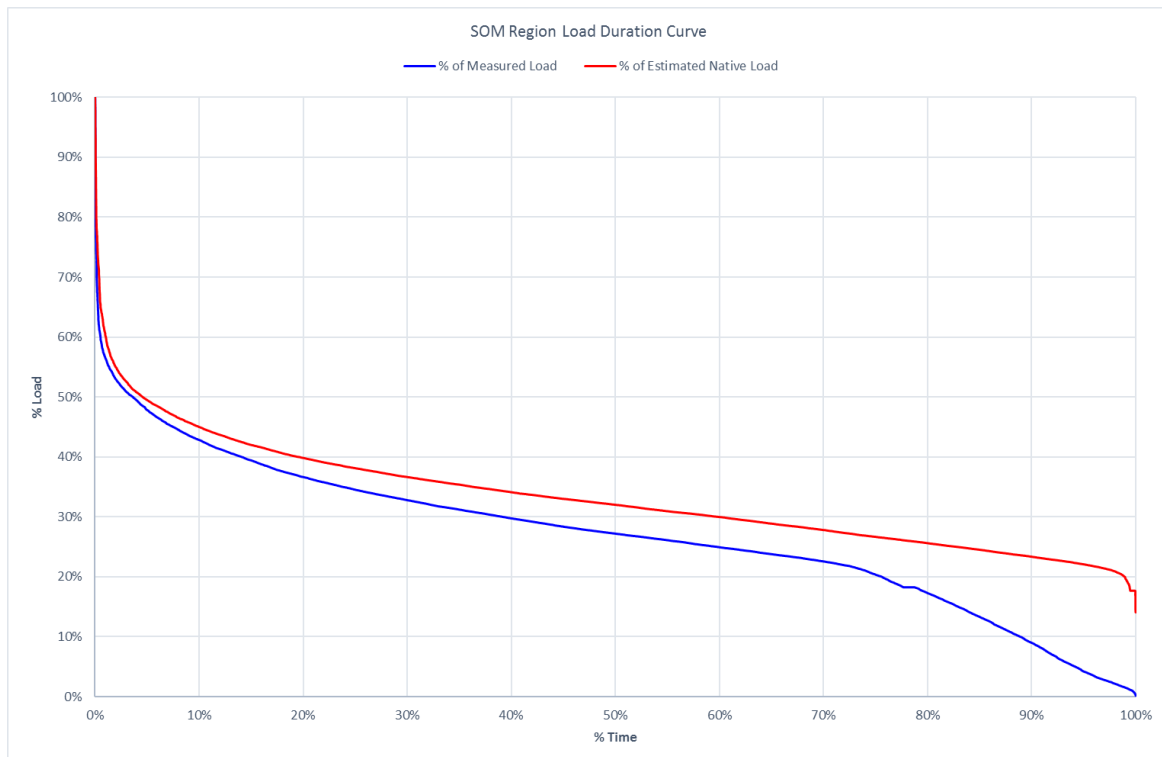


Figure 2.5 shows the peak summer day profile and estimated native for the SOM loop.

Figure 2.5: Peak summer day profile for the SOM loop

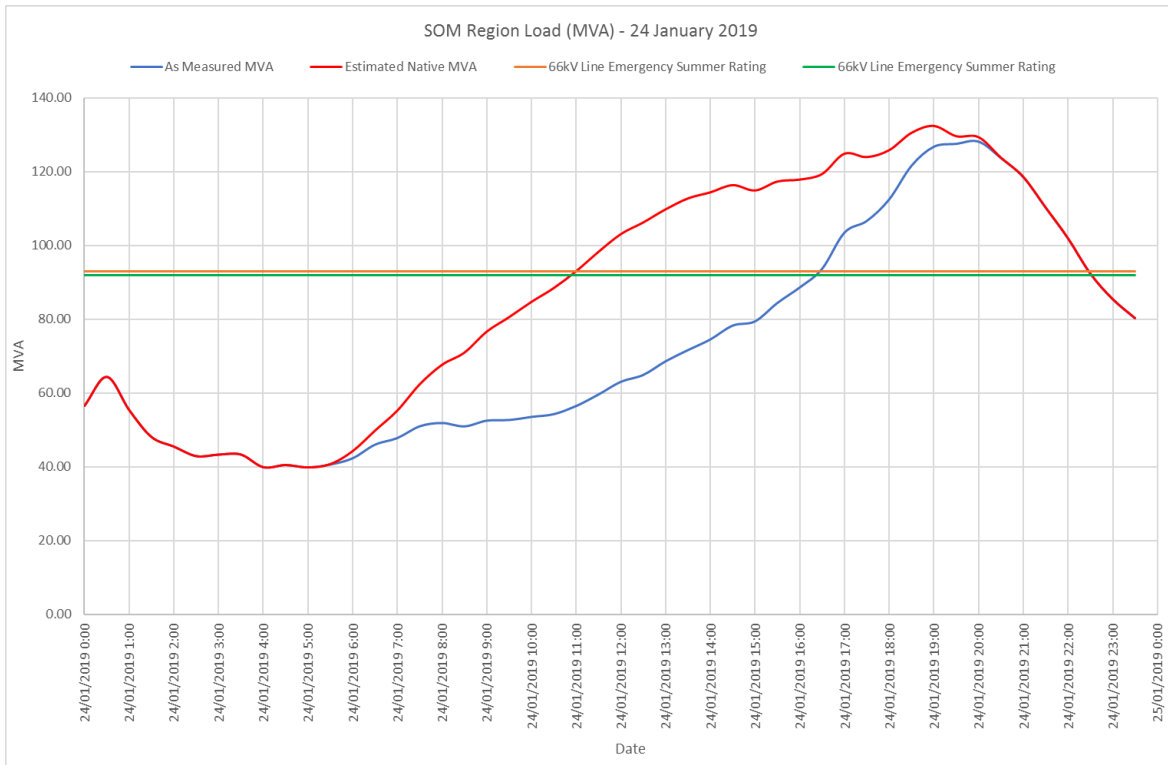


Figure 2.6 and figure 2.7 present the assumed 2021-22 summer day native load profiles representing POE levels for the Port Noarlunga to Seaford 66kV line and Morphett Vale East to McLaren Flat 66kV line under worse N-1 condition, respectively. These profiles provide an indication of when a non-network solution may be required to operate to alleviate the network constraint.

Figure 2.6: Assumed native 2021/22 summer day POE profiles for Port Noarlunga to Seaford 66kV line (N-1)

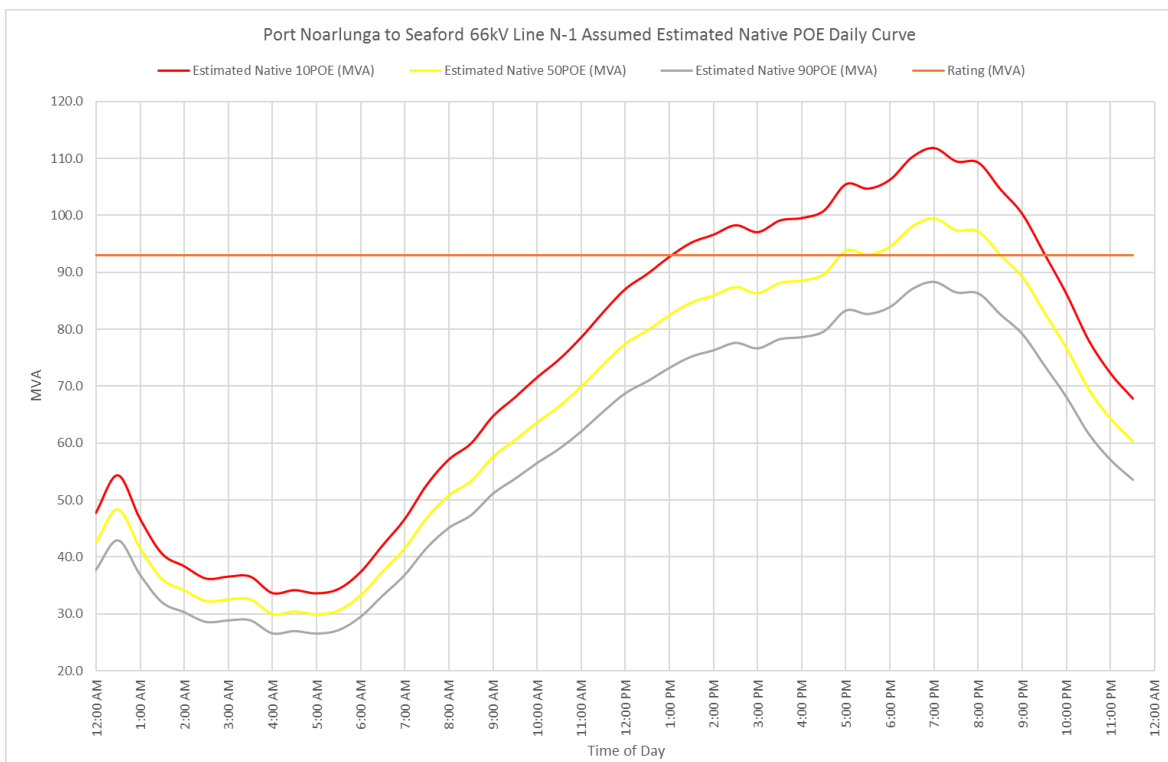
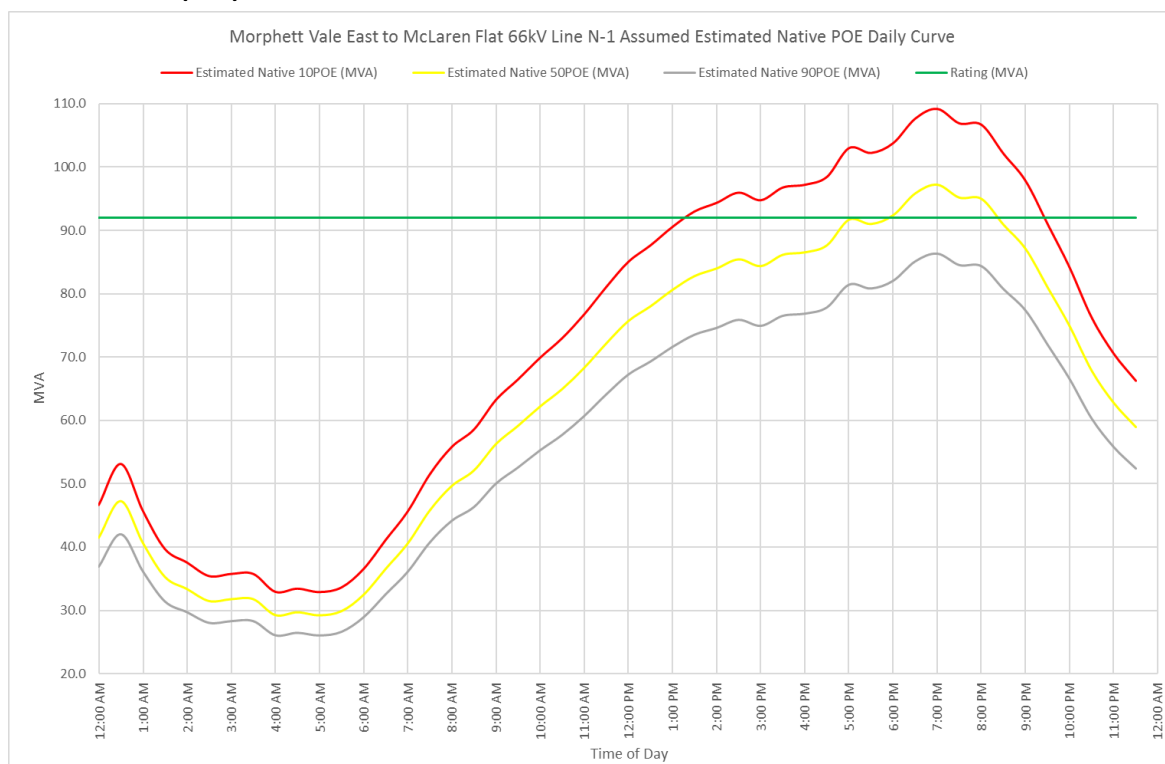


Figure 2.7: Assumed native 2021/22 summer day POE profiles for Morphett Value East to McLaren Flat 66kV line (N-1)



2.2.3 Expected unserved energy

The Morphett Vale East to McLaren Flat to Willunga and Port Noarlunga to Seaford to Aldinga 66kV lines are overloaded following an outage of the other (ie, under N-1 conditions) during POE10 conditions. That is, the Morphett Value East to McLaren Flat to Willunga line is overloaded in the absence of the Port Noarlunga to Seaford to Aldinga line and vice versa. Failure to address this constraint risks customers losing supply from unplanned outages (ie, load shedding). It follows that, absent network augmentation or a non-network solution, there will be significant unserved energy in the next few years.

For the purpose of this assessment, the demand scenarios have been based on the POE10 central forecast including a plus 20 per cent (high) and minus 20 per cent (low) margins.

Figure 2.8 and figure 2.9 present the ‘native estimated’ unserved energy if no action is taken under each of the central, high and low scenarios. Note that these estimates are raw unserved energy and not expected unserved energy (ie, accounting for the probability of the contingency occurring). Expected unserved energy will be used in the NPV analysis presented in the DPAR. However, for the purpose of soliciting potential non-network solutions, the analysis in this OSR presents the actual unserved energy that would arise in the contingent conditions.

Figure 2.8: Unserved energy (native) for the Port Noarlunga to Seaford 66kV line under worst-case N-1 contingency

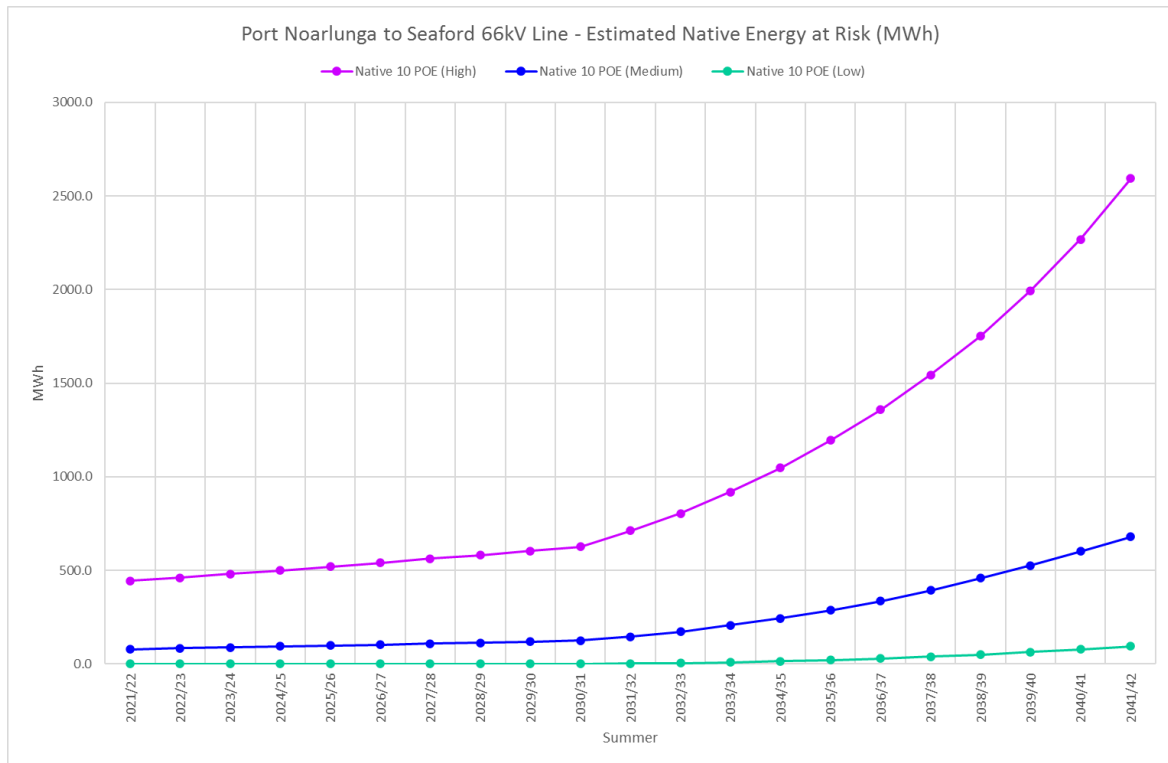
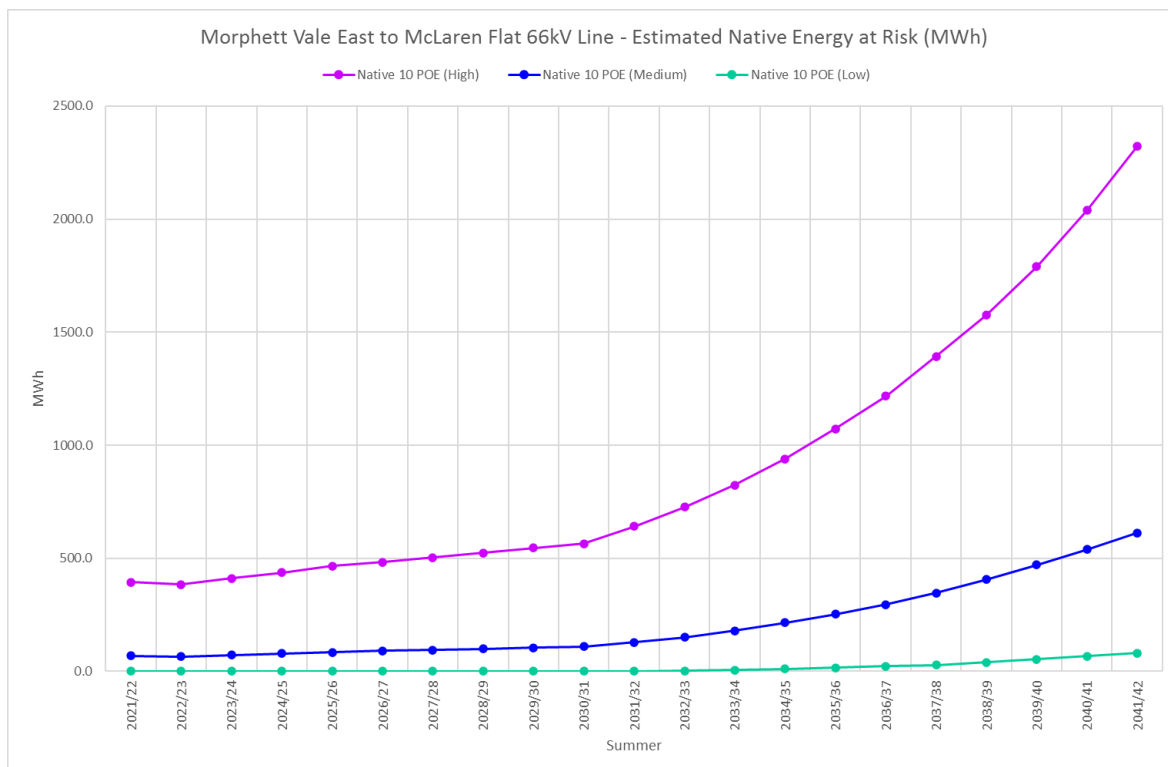


Figure 2.9: Unserved energy (native) for the Morphett Vale East to McLaren Flat 66kV line under worst-case N-1 contingency



SA Power Networks proposes to cap the expected future USE, in MWh, as part of the DPAR NPV assessment, because the uncapped value of USE will otherwise become unrealistically high (since, in reality, we would undertake investment to avoid widespread customer outages). Using the very

large uncapped USE values has the potential to distort the comparison of net market benefits between credible options. The approach of capping USE in the base case is in-line with other RIT-Ds (and RIT-Ts) and does not affect the ranking of the overall options.^{2,3}

2.2.4 Proposed scenarios for the forthcoming RIT-D NPV assessment

SA Power Networks proposes to assess three alternative future scenarios as part of the DPAR NPV assessment, including:

- a central scenario – consisting of assumptions that reflect a central set of estimates which reflects the most likely scenario;
- a high benefit scenario – reflecting an optimistic set of assumptions which reflect an upper bound of reasonably expected benefits; and
- a low benefit scenario – reflecting a number of assumptions that give rise to a lower bound NPV estimate for each credible option to represent a conservative future state of the world with respect to the benefits that could be realised under each potential option.

A summary of the key variables expected to be used for the scenarios is presented in table 2.2 below.

Table 2.2: Proposed scenarios for the forthcoming RIT-D NPV assessment

	Central	High benefits	Low benefits
Capex	Central estimates	-25%	+25%
Demand	Central demand forecast	Central demand forecast + 20%	Central demand forecast – 20%
VCR	Load-weighted AER VCR	+30%	-30%
Discount rate	5.5%	2.34%	7.5%
66kV line outage rate (outages / km / annum)	0.015	0.02	0.01

The above scenarios have been developed to comprehensively test the range of net benefits that can be expected from the credible options. We consider that this approach allows for a more robust test of the preferred option compared with adopting individual sensitivity tests because multiple inputs are changed together.

SA Power Networks currently proposes to apply the central scenario a weighting of 50 per cent in the NPV assessment since it reflects the most likely outcome, with the remaining two scenarios weighted equally at 25 per cent each.

Each credible option will be assessed over a 20 year assessment period for the DPAR NPV assessment.

² We note that this is also consistent with the approach proposed by Dr Biggar in his review of the Powering Sydney's Future RIT-T (see: Biggar, D., *An Assessment of the Modelling Conducted by TransGrid and Ausgrid for the "Powering Sydney's Future" Program*, May 2017, p. 27). While Dr Biggar suggests capping the 'congestion cost' (calculated as the unserved energy valued at the VCR) in such assessments, we consider it more intuitive to cap the underlying unserved energy, in MWh, and continue to value it at the appropriate VCR. This is the approach that has been adopted by other DNSPs and is effectively equivalent to the approach proposed by Dr Biggar.

³ See for example: Ausgrid, *Ensuring reliable supply for the Sydney Airport network area*, Final Project Assessment Report, 6 March 2020, p. 15.

3 Potential network credible options

SA Power Networks has identified four credible network options to alleviate the network constraint that arises during N-1 contingency events, including:

- Option 1 – replace all SOM loop underrated 66kV conductor sections with a higher capacity All Aluminium Alloy Composite (AAAC) conductor;
- Option 2 – replace all SOM loop underrated 66kV conductor sections with a higher capacity High Temperature Low Sag (HTLS) conductor;
- Option 3 – replace all Port Noarlunga to Seaford to Aldinga underrated 66kV conductor with a higher capacity All Aluminium Alloy Composite (AAAC) conductor. Install a second 66kV circuit between Port Noarlunga and Aldinga using the same AAAC conductor and augment the Port Noarlunga and Aldinga substations to accommodate second circuit; and
- Option 4 – replace all Port Noarlunga to Seaford to Aldinga underrated 66kV conductor with a higher capacity High Temperature Low Sag (HTLS) conductor. Install a second 66kV circuit between Port Noarlunga and Aldinga using the same HTLS conductor and augment the Port Noarlunga and Aldinga substations to accommodate second circuit.

The four credible network options are discussed in turn in the sections below.

3.1 Option 1 – replace all SOM loop underrated 66kV conductor sections with a higher capacity AAAC conductor

Option 1 involves replacing all SOM loop underrated 66kV conductor sections with a higher capacity AAAC conductor. This replacement would occur on all relevant line sections between the Port Noarlunga, Seaford, Aldinga, Willunga, McLaren Flat and Morphett Vale East substations.

Practically, restringing the conductors in this way will require the replacement of existing poles with new 66kV poles as required.

The total cost of this option is expected to be \$13.5 million and construction would likely commence in 2024 with completion in 2025.

3.2 Option 2 – replace all SOM loop underrated 66kV conductor sections with a higher capacity HTLS conductor

Option 2 involves replacing all SOM loop underrated 66kV conductor sections with a higher capacity HTLS conductor. This replacement would occur on all relevant line sections between Port Noarlunga, Seaford, Aldinga, Willunga, McLaren Flat and Morphett Value East substations.

Practically, restringing the conductors in this way will require the replacement of existing poles with new 66kV poles as required.

The total cost of this option is expected to be \$12.5 million and construction would likely commence in 2024 with completion in 2025.

3.3 Option 3 – rebuild the Port Noarlunga to Seaford to Aldinga 66kV line as a hybrid double circuit using AAAC conductor

Option 3 involves the restringing of existing lines and the construction of a new double circuit. In particular, it would involve:

- replacing all Port Noarlunga to Seaford to Aldinga underrated 66kV conductor sections with a higher capacity AAAC conductor; and
- installing a second 66kV circuit between Port Noarlunga and Aldinga using the same AAAC conductor.

As under Options 1 and 2, replacement of existing poles with new 66kV poles will be undertaken as required.

Further, the construction of the new 66kV line would require reconfiguring and augmenting of Port Noarlunga and Aldinga substations so that the new 66kV line could be accommodated.

The total cost of this option is expected to be \$15.6 million and construction would commence in 2024 with completion and all substation commissioning in 2025.

3.4 Option 4 – rebuild the Port Noarlunga to Seaford to Aldinga 66kV line as a hybrid double circuit using HTLS conductor

Option 4 involves the restringing of existing lines and the construction of a new double circuit line. In particular, it would involve:

- replacing all Port Noarlunga to Seaford to Aldinga underrated 66kV conductor sections with a higher capacity HTLS conductor; and
- installing a second 66kV circuit between Port Noarlunga to Aldinga using the same HTLS conductor.

As under Options 1 and 2, replacement of existing poles with new 66kV poles will be undertaken as required. Further, similarly to Option 3, the construction of the new 66kV line would require reconfiguring and augmenting of Port Noarlunga and Aldinga substations so that the new 66kV line could be accommodated.

The total cost of this option is expected to be \$15.5 million and construction would commence in 2024 with commissioning in 2025.

3.5 Options considered but not proposed to be progressed to the DPAR

SA Power Networks considered two options to meet the identified need that are not currently proposed to be progressed to the DPAR. These are:

- establishing a widespread Virtual Power Plant (VPP) and other potential load control measures at individual NMI levels, which was determined as not being credible because of the magnitude of load control required; and
- thermal uprating of the lines comprising the SOM loop, which was determined as not being credible because all sections within the SOM loop are currently designed and constructed at their ultimate design temperature.

4 Required technical characteristics of non-network options

This section sets out the technical characteristics that a non-network option would be required to deliver to assist with meeting the identified need. The information is provided to enable proponents of non-network solutions to understand the identified need further and to tailor their proposals accordingly.

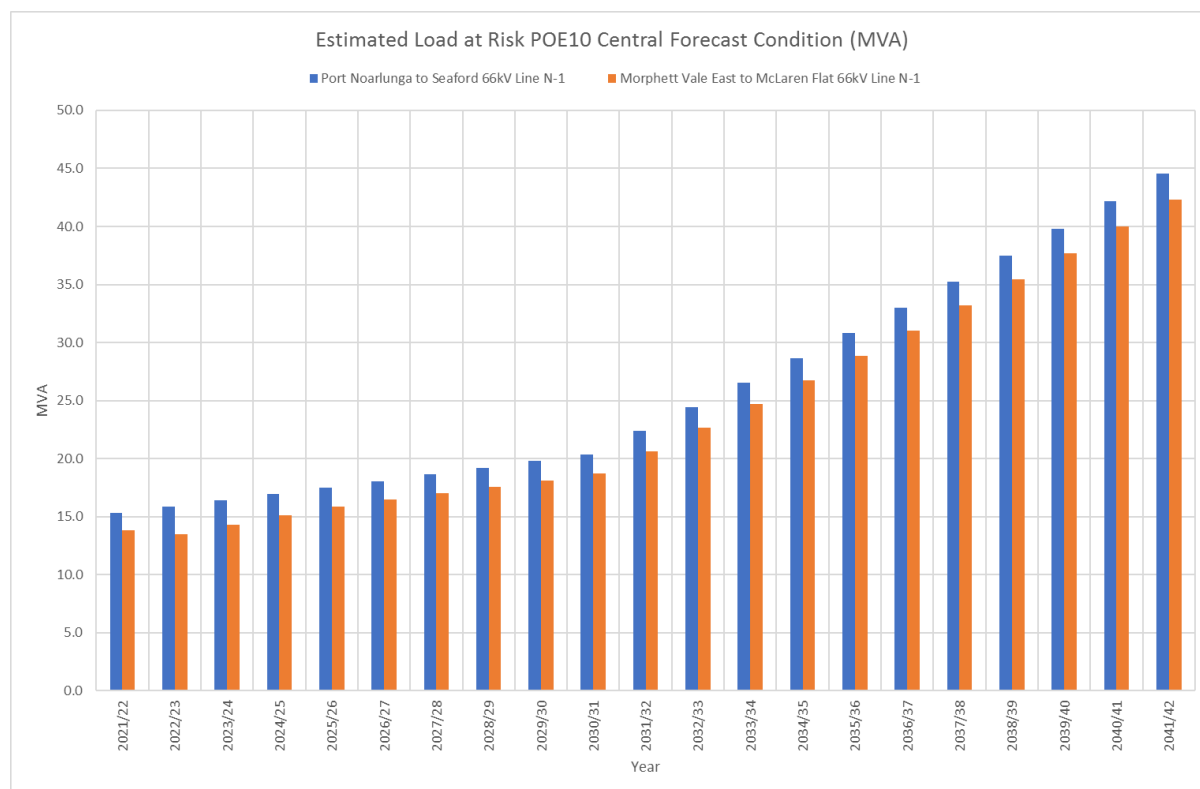
SA Power Networks is eager to explore all possible non-network solutions with proponents to deliver the most efficient overall option to satisfy the identified need. SA Power Networks welcomes submissions from potential proponents who consider that they could offer a credible non-network solution that is both commercially and technically feasible under the RIT-D.

Proponents may require information in addition to that provided in this report. Proponents seeking additional information are encouraged to contact SA Power Networks as early as possible to ensure that adequate time is available to fully assess feasible network and non-network potential solutions. Further engagement will also be possible following the submissions due date. It is critical that any solutions presented by proponents is done so in a manner that provides sufficient time for their evaluation and any necessary clarifications.

4.1 Size of load reduction or additional supply

Figure 4.1 below presents the estimated load at risk under the POE10 central demand forecast.

Figure 4.1: Estimated load at risk on the SOM loop under the POE10 central demand forecast



The estimated load at risk represents the size of load reduction and/or additional supply that would be required from a non-network solution in each year under POE10 conditions to avoid one of the network options being commissioned (since each network option is designed to eliminate all load at risk).

We expect at this stage that non-network options may be able to credibly defer the commissioning of a network option by 20 years. On account of the size of the load at risk, we expect non-network solutions to be able to credibly form a standalone option without the need for network augmentation.

4.2 Location

The recommended location for the NNO is as around the Willunga region as illustrated in figure 4.2. Please note existing 33kV and 11kV networks do not have adequate remaining spare capacity for the foreseen power station sizing. Specifically, subject to detailed studies, SA Power Networks considers that:

- the maximum power station sizing is indicatively in the order of 30 to 40MVA;
- a battery solution will not be permitted to charge (i.e. take load) or will be constrained to a reduced charging rate depending on the amount of available spare 66kV network capacity;
- to prevent high 66kV network voltage levels, the power station may be subject to a runback scheme at times of light load;
- 66kV connection requires a 'loop in loop out' style 66kV switchyard that shall be owned, maintained and operated by SA Power Networks. Indicative land parcel size of 50m by 40m;
- 'tee off' style 66kV connection from an existing 66kV line will not be permitted;
- where present, spare land within existing SA Power Networks substation site will not be used to house proponent owned plant;
- power station connections greater than 4.9MVA will be subject to the process set out in Chapter 5 of the NER;

- separate Network Service Agreement (NSA) and Network Connection Agreement (NCA) will be provided, allowing the proponent to operate outside of SA Power Networks' required support times; and
- location of the NNO will determine the amount of 66kV network extension (including telecommunications). All extension costs will be included within the financial analysis regardless of if funded by the proponent or SA Power Networks.

Figure 4.2: Geographical location for proposed non-network option



4.3 Operating profile

Network support would be required to operate on very hot days over the summer period. SA Power Networks has identified that unserved energy is likely to be highest on days with high temperatures (typically over 43 degrees) due the impact this has on electricity demand (air conditioning load).

Table 4.1 sets out the key expected technical characteristics that a network support solution would need to exhibit under POE10 conditions.

Table 4.1: Non-network option technical characteristics under 10POE conditions

Objective	Target
Time of year	1 November to 31 March
Time of day	1:00pm through to 9:30pm Adelaide time
Season	Summer
Day type	Days above 43°C (typical) and minimal wind
Demand reduction required	Refer to figure 4.1

4.4 Contribution to power system reliability

Proposed services must be capable of reliably meeting electricity demand under a range of conditions and must meet all relevant National Electricity Rules (NER) requirements related to grid connection (if this is required as part of the solution).

SA Power Networks has obligations under the NER, its distributor's license and connection agreements to ensure supply reliability is maintained to its customers. Failure to meet these obligations may give rise to liability. Proponents of non-network options must also be willing to accept any liability that may arise from its contribution to a reliability of supply failure.

4.5 Contribution to power system fault levels

Non-network solutions are required to fully contribute to any issues in relation to increase in fault levels as part of this RIT-D. Subject to detailed studies, increase in fault level may result in upgrade works at SA Power Networks substations including earth grid, bus structure reinforcement, protection relay changes and telecommunications system changes.

4.6 Consideration of SAPS options

Recent changes to the NER, RIT-D and RIT-D application guidelines require SA Power Networks to consider whether a SAPS option can fully or partly address an identified need. In practice, this relates to consideration of whether an identified need could be fully or partly addressed by converting part of our distribution network forming part of the interconnected national electricity system to a regulated SAPS.⁴ Regulated SAPS are set out in section 6B of the National Electricity Law (NEL), which defines a SAPS as a system that:⁵

- generates and distributes electricity; and
- does not form part of the interconnected national electricity system.

SA Power Networks considers that there is not a SAPS option that could form a potential credible option on a standalone basis, or that could form a significant part of the credible option, in this RIT-D. In particular, the load requirements of the area supplied by the SOM loop are significant and therefore could not be supported by a network that is not part of the interconnected national electricity system with the ability to draw on grid-connected generation sources.

⁴ See definition of 'SAPS option' in the NER.

⁵ Section 6B(6) of the NEL.

A. Checklist of compliance clauses

This section sets out the compliance checklist that demonstrates the requirements for Options Screening Reports (formerly non-network options reports) in accordance with clause 5.17.4(e) of the National Electricity Rules version 178.

Table A 1: Checklist of compliance clauses

Clause 5.17.4(e) requirement	Section of this OSR
1. Description of the identified need	2
2. Assumptions used in identifying the identified need	2.2
3. Relevant annual deferred augmentation charge associated with the identified need	N/A
4. The technical characteristics of the identified need that a non-network option or SAPS option would be required to deliver, such as: (i) the size of load reduction or additional supply; (ii) location; (iii) contribution to power system security or reliability; (iv) contribution to power system fault levels as determined under clause 4.6.1; and (v) the operating profile	4
5. Summary of potential credible options to address the identified need, as identified by the RIT-D proponent, including network options and non-network options	3
6. For each potential credible option, the RIT-D proponent must provide information, to the extent practicable, on: (i) a technical definition or characteristics of the option; (ii) the estimated construction timetable and commissioning date (where relevant); and (iii) the total indicative cost (including capital and operating costs)	3
7. Information to assist non-network providers wishing to present alternative potential credible options including details of how to submit a non-network proposal for consideration by the RIT-D proponent	4