EYRE PENINSULA UPGRADE

Project Specification Consultation Report

DECEMBER 2023

ElectraNet

Company Information

ElectraNet Pty Ltd (ElectraNet) is the principal electricity transmission network service provider (TNSP) in South Australia.

For information about ElectraNet visit www.electranet.com.au.

Contact

For enquiries about this report please contact:

Bradley Harrison
Manager Network Planning
ElectraNet
52-55 East Terrace
Adelaide SA 5000

harrison.bradley@electranet.com.au

Copyright and Disclaimer

Privacy notice

ElectraNet is bound by the Privacy Act 1988 (Cth). In making submissions in response to this consultation process, ElectraNet will collect and hold your personal information such as your name, email address, employer and phone number for the purpose of receiving and following up on your submissions.

Under the National Electricity Law, there are circumstances where ElectraNet may be compelled to provide information to the Australian Energy Regulator (AER). ElectraNet will advise you should this occur.

ElectraNet's Privacy Policy sets out the approach to managing your personal information. It explains how you may seek to access or correct the personal information held about you, how to make a complaint about a breach of our obligations under the Privacy Act, and how ElectraNet will deal with complaints. You can access the Privacy Policy here.

Executive Summary

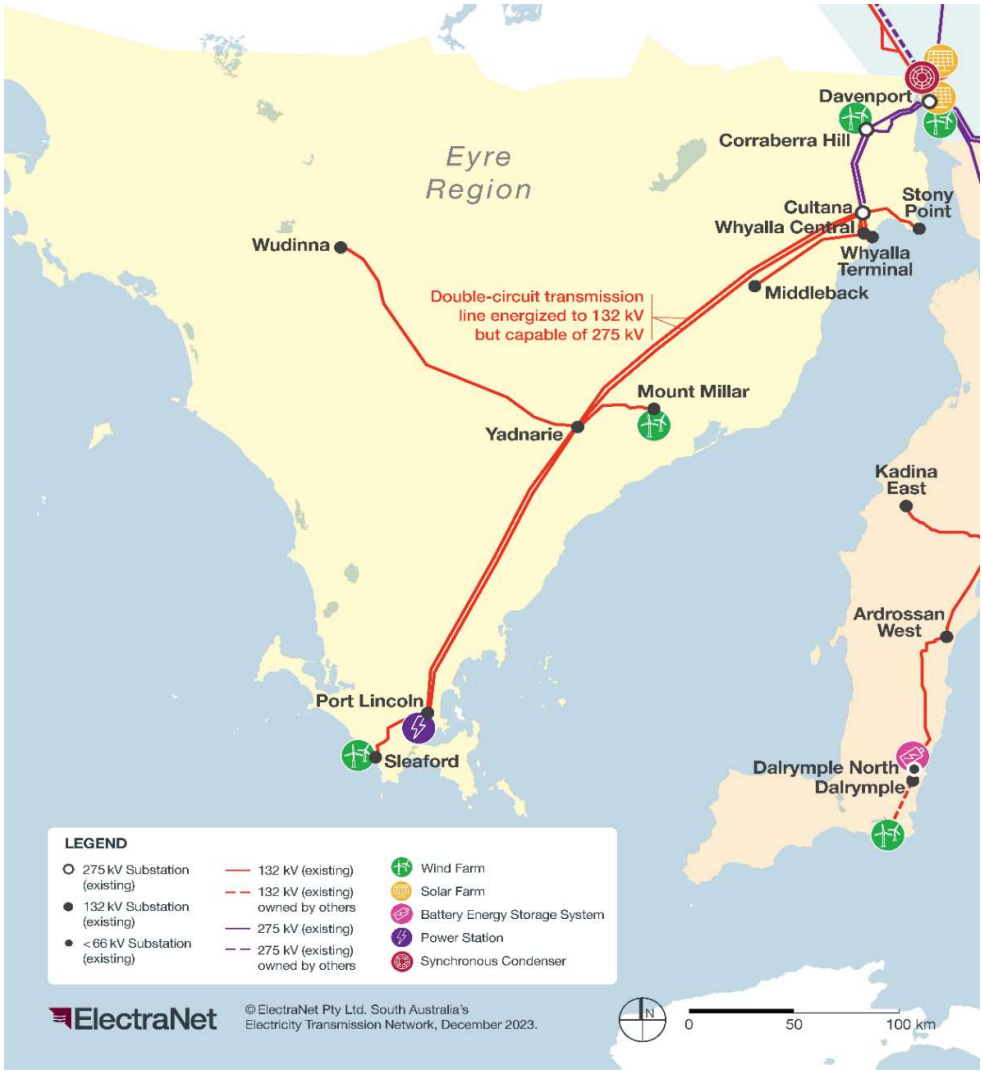
South Australia's Eyre Peninsula has the potential to experience high levels of economic growth and associated growth in electricity demand over the coming years.

Some of this growth was anticipated when ElectraNet conducted the Regulatory Investment Test for Transmission (RIT-T) analysis of the recently completed *Eyre Peninsula Link* project. The likelihood of further substantial load growth was also recognised in the AER's April 2023 Determination ("the Determination") of ElectraNet's revenue for the 2023-2028 period by the inclusion of the Eyre Peninsula Upgrade contingent project.

Both of those processes recognised the likelihood that electricity transmission capacity on the Eyre Peninsula would need to be upgraded to supply anticipated load growth, but the timing was uncertain.

Figure 1 summarises the existing supply arrangements for the Eyre Peninsula.

Figure 1 - Existing supply arrangements for the Eyre Peninsula



During the last 12 months, ElectraNet engaged closely with proponents of several potential load developments on the Eyre Peninsula. That engagement has led us to conclude that the anticipated expansion in network capacity will soon be required. We consider that parts of the transmission network will soon become constraints on the growth of both new and existing loads on the Eyre Peninsula.

To prevent these constraints from coming to fruition, we are commencing a RIT-T process to assess options available to meet the anticipated load growth on the Eyre Peninsula to deliver a long run solution that manages affordability, reliability, and timely delivery of transmission services for all customers in a manner which maximises net benefits.

While new loads, would ultimately need to meet the requirements for being considered “committed” for a contingent project application to be submitted to the Australian Energy Regulator (AER) by ElectraNet, this RIT-T forms a precursor to this process and is intended to identify the preferred option if sufficient load becomes committed.

Identified need: meeting customer electricity demand growth

The identified need to be addressed is to efficiently meet customer electricity demand growth on the Eyre Peninsula transmission network connected to Davenport.

The scope of network development required will depend on the size, timing, and location of new customer demand.

Key network limitations on the Eyre Peninsula are likely to be the:

a) Cultana 275/132 kV transformers which have a thermal limit of 200 MVA; or

b) Davenport to Cultana 275 kV transmission lines which have a thermal limit of 597 MVA.

Credible options

We have identified **five credible network options** to meet the identified need, depending on the location of load growth on the Eyre Peninsula.

Three of these options are alternatives to each other to provide additional capacity between Yadnarie North and Cultana, ie:

- **Option 1**: Develop the Yadnarie North substation now to enable upgrading of the transmission lines between Yadnarie and Cultana to 275 kV operation
- **Option 2**: Add a third 200 MVA transformer at Cultana and develop the Yadnarie North substation later, thereby deferring the upgrade of the lines between Yadnarie and Cultana or
- **Option 3**: Replace the transformers at Cultana with 300 MVA rated transformers and develop the Yadnarie North substation later, thereby deferring the upgrade of the lines between Yadnarie and Cultana

We have also identified two further options that could be implemented in combination with Options 1, 2 or 3 to accommodate further additional load, namely:

- **Option 4**: Duplicate the Davenport to Cultana 275 kV circuits and
- **Option 5**: Duplicate the Cultana to Yadnarie 275 kV circuits (which would require Option 4 to also be developed).

Options 1, 2 and 3 would address the possible overloading of the transformers at Cultana and augment the transmission capacity between Cultana and Yadnarie.

Option 4 would address the possible future overload of the link between Davenport and Cultana.

Option 5 would address a large load increase on the Eyre Peninsula south of Whyalla.

Various combinations of the options above will be assessed based on expectations around the location, timing and quantum of load that may connect in the Eyre Peninsula to determine the option (or combination of options) that provide the greatest net benefit to consumers.

ElectraNet has not identified any non-network solution that could help address the identified need at this stage of the RIT-T. Submissions from proponents of non-network options are sought in response to this Project Specification Consultation Report (PSCR).

Reliability Corrective Action

This RIT-T is a reliability corrective action as defined NER 5.10.2, as the objective is to meet the regulatory obligations and service standards contained in schedule 5.1 of the NER and within the applicable regulatory instrument of the Essential Services Commission of South Australia's (ESCOSA) Electricity Transmission Code (ETC).

Submissions and next steps

The purpose of this PSCR is to set out the identified need, present credible options that address the identified need, and invite interested parties to make submissions and provide input to the RIT-T assessment.

We welcome written submissions on the information contained in this PSCR by 19 March 2024. Submissions are sought on any matter, but in particular on:

- the options presented,
- whether there are other options that could address the identified need
- the status of spot load developments on the Eyre Peninsula
- the materiality of market benefits flowing from the options presented in this PSCR or the alternatives proposed.

We especially welcome submissions from potential customers planning to connect to the Eyre Peninsula that can help to clarify the size and timing of additional load that may connect. Evidence on the likelihood of individual projects going ahead will be very useful for our analysis.

For example, demonstrating when the key elements for a load to satisfy the applicable commitment criteria (as set out in the RIT-T) have been, or are expected to be, met would be useful, namely:

- planning consents, construction approvals and licenses have been obtained, including any required environmental impact statement;
- construction has commenced or a firm commencement date has been set;
- land has been purchased/settled/acquired, or legal proceedings to acquire land have commenced for the purposes of construction;
- contracts for supply and construction of major plant and equipment are in place; and
- necessary financing arrangements, including any debt plans, are in place.

Submissions should be emailed to consultation@electranet.com.au.

In the subject field, please reference ‘Eyre Peninsula Upgrade - PSCR feedback’. Submissions will be published unless a proponent marks their submission (or part of it) as confidential at the time of the submission. This may include for example commercially sensitive information or project details.

The Project Assessment Draft Report (PADR), which is the second stage of the RIT-T process, will include a full options analysis. We expect to publish the PADR by the end of 2024.

.

Contents

Tables

Figures

Appendices

1. Introduction

1.1. Background

In February 2023, following two years of construction and over five years of planning, ElectraNet energised a new high-voltage power line on the Eyre Peninsula and upgraded five electricity substations. This new line, referred to as 'Eyre Peninsula Link',[1] replaced the previous line, which had been in service for more than 50 years and was near the end of its operational life.

The decision to build Eyre Peninsula Link and upgrade the associated substations followed assessment under a Regulatory Investment Test for Transmission (RIT-T) undertaken over 2017-2018. That earlier RIT-T noted that future load growth was likely on Eyre Peninsula, but that the timing was uncertain.

Considering that uncertainty, ElectraNet concluded that the most efficient way to provide a reliable supply to the Eyre Peninsula was to configure Eyre Peninsula Link as:[2]

- a new double-circuit line from Cultana to Yadnarie that is initially energised at 132 kV, but which has the option to be energised at 275 kV if required in the future, and
- a new 132 kV double-circuit line from Yadnarie to Port Lincoln.

By retaining the ability to upgrade the Cultana to Yadnarie section of Eyre Peninsula Link to 275 kV, ElectraNet ensured that it is 'future proof' – having the ability to be upgraded at relatively low cost to supply the loads that were anticipated but uncertain at the time.

Consistent with this approach and considering the continuing potential for substantive load growth on the Eyre Peninsula in the near term, the potential upgrade of the Cultana to Yadnarie section of the Eyre Peninsula Link to 275 kV, together with the potential for further augmentation of the network to Davenport, was recognised as a contingent project by the AER in its revenue determination for our 2023-2028 regulatory control period.

That contingent project will be triggered if:

1. There is commitment for additional load from one or more customers to connect to the transmission network with aggregate load sufficient to cause the:

   a) Cultana 275/132 kV transformers to exceed their thermal limit of 200 MVA; or

   b) Whyalla Central 132/33 kV transformers to exceed their thermal limit of 120 MVA; or

   c) Whyalla Central to Cultana 132 kV lines to exceed their thermal limit of 121 MVA; or

   d) Cultana to Stony Point 132kV line to exceed its thermal limit of 145 MVA; or

   e) Davenport to Cultana 275 kV lines to exceed their thermal limit of 597 MVA

   causing a need for the upgrade of the 132 kV Eyre Peninsula Link between Cultana and Yadnarie to 275 kV and/or augmentation of power transfer capacity between Davenport and Cultana and/or Cultana and Whyalla and/or Cultana and Stony Point.

[1] AEMO, *Appendix 5. Network investments - Appendix to the 2022 ISP for the National Electricity Market*, June 2022, p 11.

[2] All RIT-T documentation for this previous RIT-T is available at: https://www.electranet.com.au/what-we-do/network/regulatory-investment-test/

2. The AER is satisfied that ElectraNet has successfully completed a RIT-T, including an assessment of credible options, showing the upgrade of the 132 kV Eyre Peninsula Link between Cultana and Yadnarie to 275 kV and/or augmentation of power transfer capacity between Davenport and Cultana and/or between Cultana and Whyalla and/or Cultana and Stony Point is the preferred option:

   a) demonstrating positive net market benefits; and/or

   b) addressing a reliability corrective action.

3. The ElectraNet Board commits to proceed with the project subject to the AER amending the revenue determination pursuant to the Rules.

Over the last 12 months, ElectraNet has been engaging closely with proponents of several potential load developments on the Eyre Peninsula. This leads us to expect that the Cultana 275 kV transformers and Davenport to Cultana 275 kV circuits are likely to be overloaded, much sooner than as forecasted by SA Power Networks, which looks only at the underlying growth.

We are commencing this RIT-T in the light of the reasonable likelihood that these overloads will occur soon.

1.2. Role of this report

This Project Specification Consultation Report (PSCR) is the first step in the RIT-T process.

The purpose of the PSCR is to:

- set out the reasons why ElectraNet proposes that action be undertaken (that is, the ‘identified need’)
- present credible network options that can address the identified need
- sets out the technical characteristics that a non-network option would be required to deliver to address the identified need, and
- invite interested parties to make submissions and provide input to the RIT-T assessment.

The next stage of this RIT-T is the quantitative assessment of the net benefit to the National Electricity Market (NEM) associated with different investment options, and the publication of a Project Assessment Draft Report (PADR) for stakeholder comment.

The entire RIT-T process is detailed in Appendix C. The next steps for this RIT-T assessment are discussed further below.

1.3. Submissions and next steps

We welcome written submissions on the information contained in this PSCR by 19 March 2024. Submissions are sought on any matter, but in particular on:

- the options presented,
- whether there are other options that could address the identified need
- the status of spot load developments on the Eyre Peninsula

- the materiality of market benefits flowing from the options presented in this PSCR or the alternatives proposed.

We especially welcome submissions from potential customers planning to connect to the Eyre Peninsula that can help to clarify the size and timing of additional load that may connect. Evidence on the likelihood of individual projects going ahead will be very useful for our analysis. For example, demonstrating when the key elements for a load to satisfy the applicable commitment criteria (as set out in the RIT-T) have been, or are expected to be, met would be useful, namely:

- planning consents, construction approvals and licenses have been obtained, including any required environmental impact statement;
- construction has commenced or a firm commencement date has been set;
- land has been purchased/settled/acquired, or legal proceedings to acquire land have commenced for the purposes of construction;
- contracts for supply and construction of major plant and equipment are in place; and
- necessary financing arrangements, including any debt plans, are in place.

Submissions should be emailed to consultation@electranet.com.au.

In the subject field, please reference 'Eyre Peninsula Upgrade - PSCR feedback'. Submissions will be published on the ElectraNet website unless a proponent marks their submission (or part of it) as confidential at the time of the submission. This may include for example commercially sensitive information or project details.

A PADR, including full options analysis, is expected to be published by the end of 2024.

2. Context

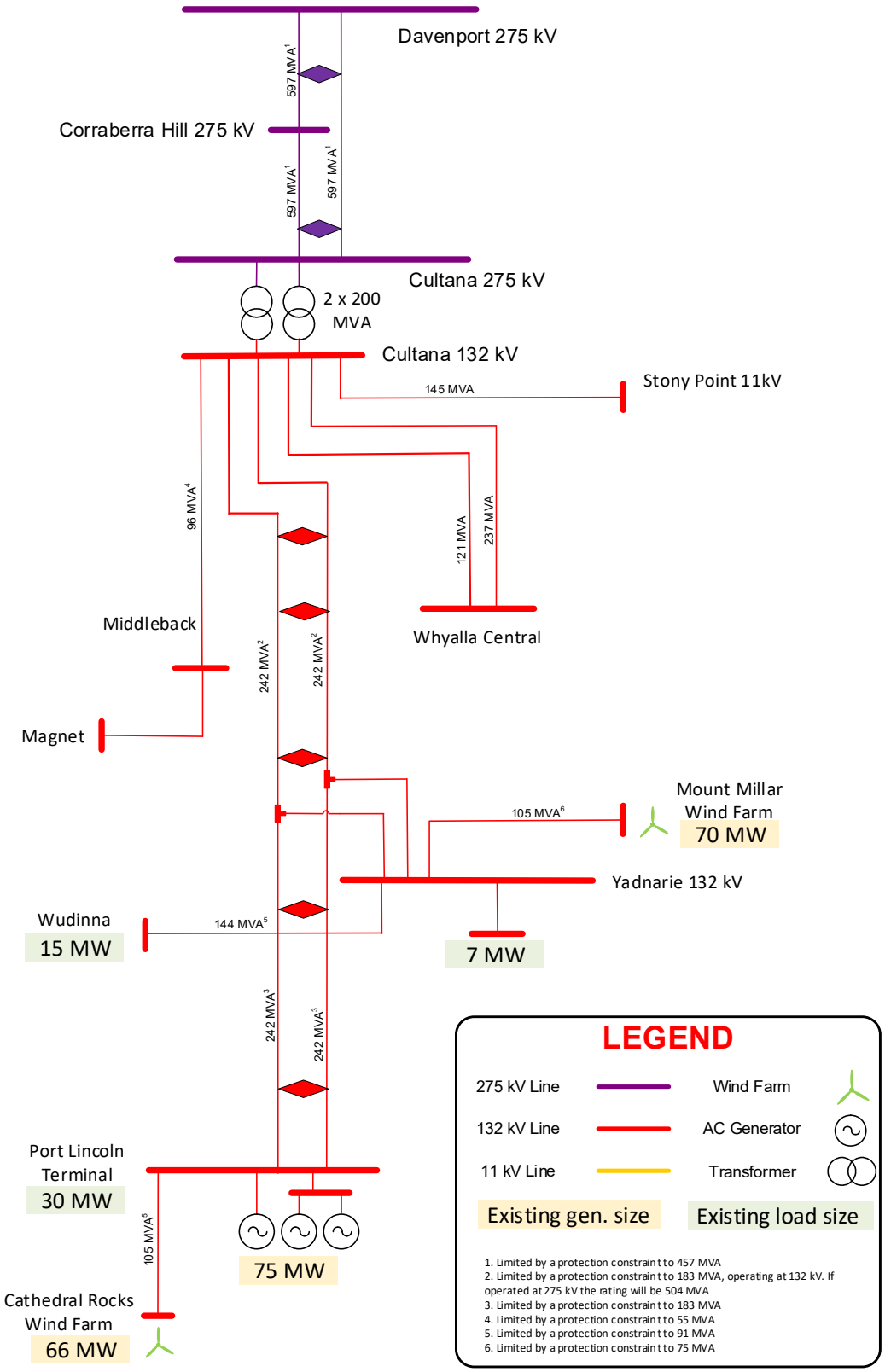
This section provides an overview of the existing electricity supply arrangements on the Eyre Peninsula, as well as the significant potential load developments and renewable energy opportunities which may become committed over the next few years.

2.1. Existing supply arrangements

Figure 2 shows a geographical representation of the existing supply arrangements for the Eyre Peninsula, which are centred on Eyre Peninsula Link. Figure 3 shows a simplified single line diagram of the same electrical network. Figure 3 identifies more clearly the main assets mentioned in different sections of this RIT-T.

Figure 2 - Existing supply arrangements

Figure 3 – Existing loads on Eyre Peninsula



Key ratings relating to supply in this region include:

- The existing rating of the double-circuit line from Davenport to Cultana is approximately 600 MVA[3] per circuit.
- The double-circuit line between Cultana to Yadnarie operating at 132 kV has a design rating of 242 MVA[4] per circuit. If operated at 275 kV the rating would be approximately 500 MVA per circuit.
- The double-circuit 132 kV line from Yadnarie to Port Lincoln has a rating of approximately 240 MVA[4] per circuit and the 275/132 kV transformers at Cultana each have a rating of 200 MVA.

The existing load on the Eyre Peninsula is all fed via the Cultana 275/132 kV transformers. It consists of:

- Around 115 MW in the Northern Eyre Peninsula (including SA Power Networks and direct connect loads in the vicinity of Whyalla), and
- Around 50 MW in the Southern Eyre Peninsula (including all loads in the vicinity of Yadnarie or connected from the south and west via Yadnarie).

2.2. Potential new load developments

The three sections below outline the outlook for load growth on the Eyre Peninsula in:

- SA Power Networks demand forecasts – section 2.2.1
- Near and medium-term developments – section 2.2.2
- Long-term developments – section 2.2.3

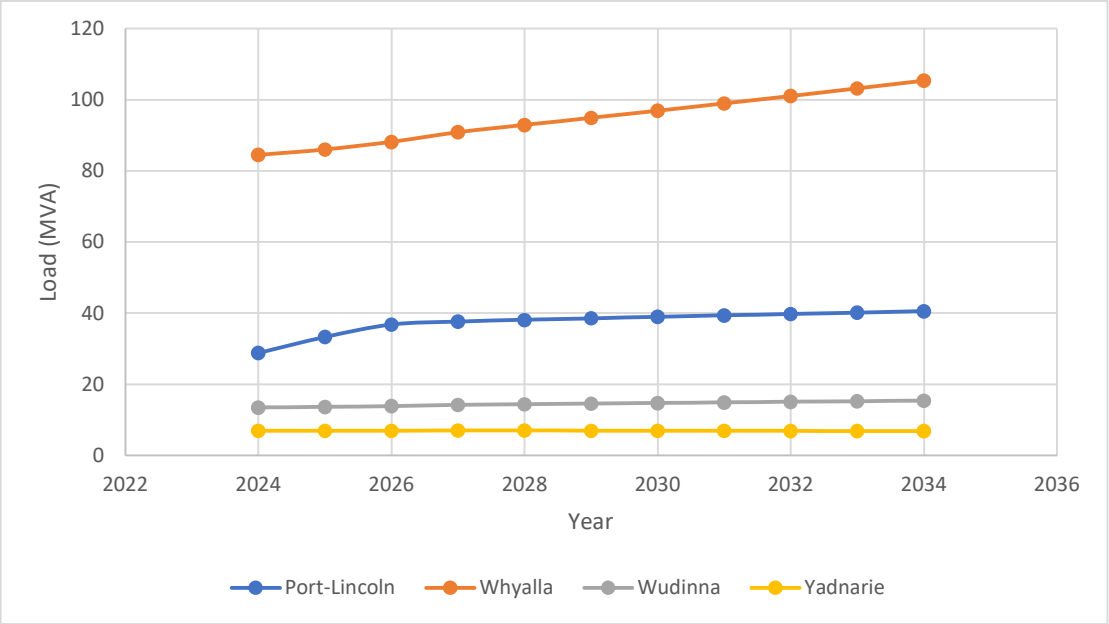
SA Power Networks Demand forecastsFigure 4 shows the non-coincident SA Power Networks demand forecasts for the Eyre Peninsula. The traces show modest increases in demand at Port Lincoln, Wudinna and Yadnarie, with a slightly larger expected increase at Whyalla. These small increases are based mainly on the load underlying growth rates. They indicate that based only on distribution load forecasts, there would not be any overload of the transmission network on the Eyre Peninsula in the short or medium term[5].

[3] The line is currently constrained by a protection limit to 457 MVA

[4] The line is currently constrained by a protection limit to 183 MVA

[5] SA Power Networks forecast estimates the Cultana transformers will start overloading from 2043.

Figure 4 – SA Power Networks annual maximum demand forecasts



2.2.1. Near and medium-term load developments

ElectraNet has received significant interest in large new load connections to the transmission network on the Eyre Peninsula. Connection of these loads would be limited by the existing network capability.

This interest was documented in our May 2023 update[6] to our 2022 Transmission Annual Planning Report and our October 2023 Transmission Annual Planning Report[7]. These reports identified the potential for 850 MW of new load at or south of Whyalla on the Eyre Peninsula.

Table 1 provides a summary of potential near- and medium-term load developments on the Eyre Peninsula. As the table shows, these are a mixture of commercial and industrial developments.

Given the confidential nature of these developments the table does not provide details of the proponent and load sizes are approximate.

Table 1 - Summary of potential near- and medium-term load developments on the Eyre Peninsula in ElectraNet's May 2023 Update 2022 Transmission Annual Planning Report

Customer	Approximate Load (MW)	Load Type
Customer 3	<50 MW	Electrification
Customer 5	150 MW	Data centre
Customer 8	100 MW	Mine

6 May 2023 Update 2022 Transmission Annual Planning Report – Pages 11-15

7 2023 Transmission Annual Planning Report - Pages 20, 32, 55-62

SA Government	250 MW	Hydrogen
Customer 12	200 MW	Electrification
SA Government	100 MW	Desalination

** To maintain confidentiality, we have not revealed the customers and have used the same naming convention applied in our May 2023 TAPR Update. Note that some rows represent projects across multiple sites.*

In addition to the potential spot loads set out in Table 2-1, we are also aware of other potential spot loads on the peninsula (e.g. Iron Road's Central Eyre Iron Project), which are currently at a less certain level of development, but which would also contribute to the need for investment if they were to proceed.

Figure 5 summarises the locations and magnitude of the potential spot loads from Table 1 on the Eyre Peninsula.

2.2.2. Longer-term load developments

Over the longer-term, there is the potential for much more load to connect on the Eyre Peninsula associated with the development of green hydrogen facilities at Port Bonython and Cape Hardy. This would increase the required network capacity in the Northern Eyre Peninsula.

For example, in April 2023 Amp Energy announced that it had signed an agreement to develop green hydrogen at scale on the Cape Hardy Port Precinct in conjunction with Iron Road.[8] While the project is in the early stages of development, it is expected to involve up to 5 GW of load[9] and has received support from governments, including direct support in the form of receiving a $25 million commitment from the Federal Government for the development of the deep-sea port[10] and indirect support via the South Australian Government's plans to fast-track hydrogen and renewable energy project development in the state[11].

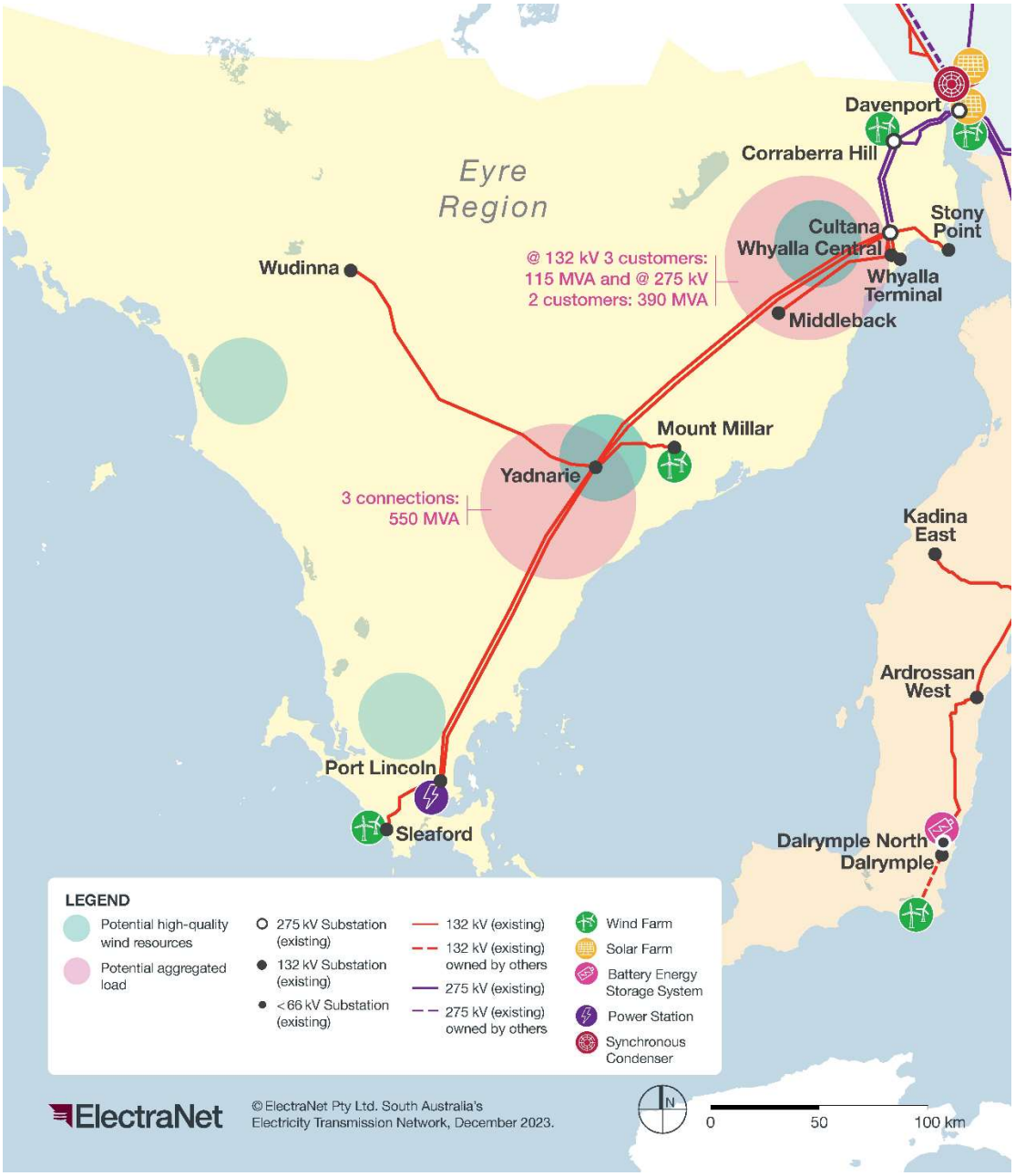
8 https://www.amp.energy/news/amp-secures-rights-to-develop-green-hydrogen-at-scale-in-south-australia

9 https://www.premier.sa.gov.au/media-releases/news-items/green-hydrogen-project-enters-next-phase

10 https://www.premier.sa.gov.au/media-releases/news-items/green-hydrogen-project-enters-next-phase

11 In May 2023, the South Australian Government released a draft *Hydrogen and Renewable Energy Act* for consultation that proposes a range of measures to streamline the process for the development of large-scale wind and solar and commercial hydrogen production projects in South Australia. See: https://yoursay.sa.gov.au/hrebill

Figure 5 - Potential spot load developments



The addition of load of such a magnitude would be expected to require further augmentation of the transmission network on the Eyre Peninsula, over and above the upgrades assessed in this RIT-T, and independent of the preferred option for this RIT-T

2.3. Supply requirements

All potential loads are expected to be 'Category 1' level of reliability in terms of the South Australian Electricity Transmission Code (ETC).

This means that ElectraNet must provide equivalent line capacity for at least 100 percent of each load's agreed maximum demand for the exit point without redundancy. Put another way, should any

critical network element be out of service the agreed maximum demand may not be able to be fully served.[12]

2.4. Potential renewable generation

The Eyre Peninsula, like a lot of South Australia, has significant, high-quality, wind and solar resources.

ElectraNet has received significant interest in new generator connections to the transmission network on the Eyre Peninsula. Therefore, there are potential renewable generation developments on the Eyre Peninsula that may interact with any upgrade of the current network capacity.

At this stage, if there is no upgrade to the network on the Eyre Peninsula and these generators connect, we expect that their output may be constrained at times. Consideration of a full range of market benefits may influence the outcome of this RIT-T.

ElectraNet will consider the development status of these potential new generation projects at the time of the PADR analysis and will investigate the materiality of any such constraints to the RIT-T outcome.

2.5. Potential overloads of congestion on Eyre Peninsula network

The elements considered most likely to overload in the near term include:

a) Cultana 275/132 kV transformers, which may exceed their thermal limit of 200 MVA; and

b) Davenport to Cultana 275 kV lines which may exceed their thermal limit of 597 MVA.

[12] The ETC is made by the Essential Services Commission of South Australia (ESCOSA) and specifies required reliability standards at transmission network connection points, including on the Eyre Peninsula. The definition of Category 1 can be found at: https://www.escosa.sa.gov.au/ArticleDocuments/21717/20210624-Electricity-TransmissionCode-V9.4.pdf.aspx?Embed=Y

3. Identified need

This section provides a description of the identified need for this RIT-T as well as outlining the assumptions used in assessing the identified need and why ElectraNet considers that reliability corrective action is necessary.

3.1. The identified need is to efficiently facilitate the connection of load

The identified need to be addressed is to efficiently meet customer electricity demand growth on the Eyre Peninsula transmission network connected to Davenport.

This RIT-T is a reliability corrective action as the objective as defined in NER 5.10.2 is to meet the regulatory obligations and service standards contained in schedule 5.1 of the NER and within the applicable regulatory instrument of the Essential Services Commission of South Australia's (ESCOSA) Electricity Transmission Code (ETC).

3.2. Assumptions made in relation to the identified need

Ultimately, accommodation of additional load on the Eyre Peninsula is expected to require an upgrade or upgrades of the Davenport to Cultana to Yadnarie line.

A key focus of this RIT-T is investigating what conditions would need to hold to require an upgrade but also to determine the conditions which would defer the timing of an upgrade, i.e., under what conditions would it make sense to undertake a lower cost investment initially to efficiently defer more costly upgrades. We are also investigating whether additional upgrades may be required.

Since the need for the line upgrade is dependent on the amount, timing and location of new load connecting on Eyre Peninsula, key assumptions for this RIT-T relate to the connection of forecast load.

We therefore propose to adopt scenarios for the RIT-T assessment that vary in terms of the amount and timing of forecast spot load development. We propose to adopt scenarios designed to test whether the line upgrade is required, and whether it can be efficiently deferred through an initial lower cost investment.

The scenarios we use will be further refined as we progress through the RIT-T and are expected to be informed by submissions to this PSCR.

We are interested in submissions from proponents of new loads. These submissions would most usefully identify the size of additional load that may connect and its timing and location and should be accompanied by evidence that can support an assessment of the likelihood of the project going ahead (by reference to the commitment criteria set out in the RIT-T – as set out in section 1.3).

This will assist in developing both scenarios for the PADR assessment and the weightings applied to each scenario.

4. Credible options to address the identified need

This section provides a description of five credible options that ElectraNet has identified at this stage of the RIT-T process to address the identified need, depending on the location of the load growth on the Eyre Peninsula, as well as a description of the base case against which these options will be addressed.

Three of the options identified are alternatives to each other to provide additional capacity between Yadnarie North and Cultana, ie:

- **Option 1**: Develop the Yadnarie North substation now to enable upgrading of the transmission lines between Yadnarie and Cultana to 275 kV operation
- **Option 2**: Add a third 200 MVA transformer at Cultana and develop the Yadnarie North substation later, thereby deferring the upgrade of the lines between Yadnarie and Cultana or
- **Option 3**: Replace the transformers at Cultana with 300 MVA rated transformers and develop the Yadnarie North substation later, thereby deferring the upgrade of the lines between Yadnarie and Cultana.

We have also identified two further options that could be implemented in combination with Option 1, 2 or 3 to accommodate further additional load, namely:

- **Option 4**: Duplicate the Davenport to Cultana 275 kV circuits, and
- **Option 5**: Duplicate the Cultana to Yadnarie 275 kV circuits (which would require Option 4 to also be developed).

These options will be further refined in terms of their cost estimates and confirmed in the PADR for this RIT-T. Estimated costing blocks used for the options can be found in section 4.9.

The required characteristics for network support options are set out in section 5. At this stage ElectraNet considers it unlikely that network support options could form a credible option for this RIT-T but will consider any submissions received from proponents of non-network solutions.

4.1. Base case ‘do nothing’ option

Consistent with the RIT-T requirements, the assessment undertaken in the PADR will compare the costs and benefits of each option to a base case ‘do nothing’ option. The base case is the (hypothetical) projected case if no action is taken, ie:[13]

> *“The base case is where the RIT-T proponent does not implement a credible option to meet the identified need, but rather continues its 'BAU activities'. 'BAU activities' are ongoing, economically prudent activities that occur in absence of a credible option being implemented”*

Under the base case, the existing shared transmission infrastructure on the Eyre Peninsula is assumed not to change going forward. While this RIT-T has been initiated to be able to accommodate future load increases, the assessment is required to use a “do nothing” base case as a common point of reference when estimating the net benefits of each credible option.

We propose to adopt a base case assumption that new spot loads on the peninsula would connect to the existing network at lowest cost to the proponent and there will be the potential for unserved energy because of insufficient network capacity.

[13] AER, *Regulatory Investment Test for Transmission Application Guidelines,* August 2020, p. 21.

4.2. Option 1 – Upgrade the Cultana to Yadnarie section to 275 kV

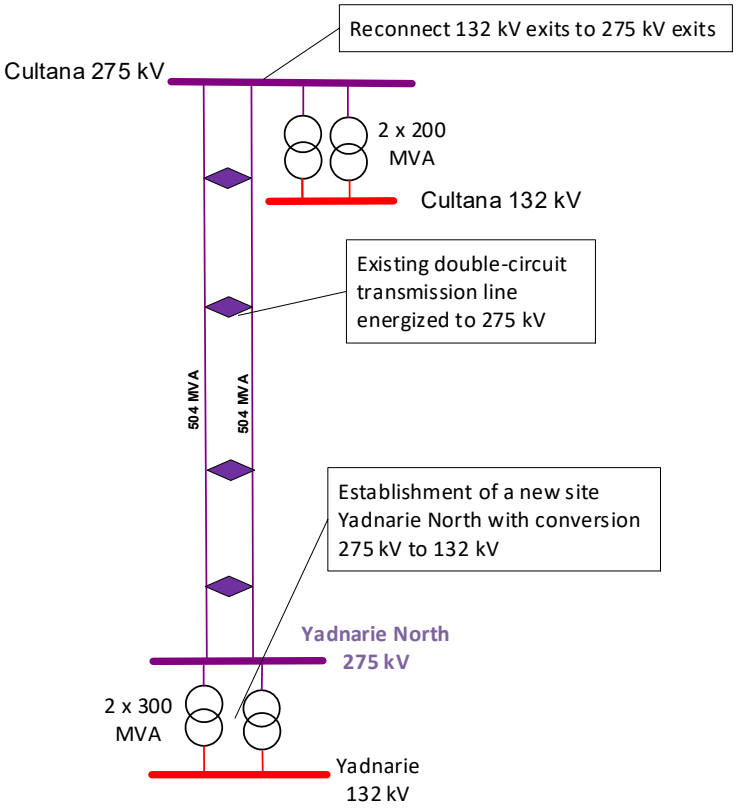
Option 1 is to upgrade the Cultana to Yadnarie section of the Eyre Peninsula Link from its current operation at 132 kV to 275 kV.[14]

Specifically, Option 1 involves:

- constructing a new Yadnarie North substation;
- introducing 132 kV transformation at the Yadnarie North substation; and
- reconnecting the 132 kV exits at the existing Cultana substation on the 275 kV side.

Figure 6 presents a simplified network diagram for the substation works under Option 1. A more detailed diagram can be found in Appendix D.

Figure 6 - Network diagram for the works under Option 1



The capital works associated with moving from 132 kV operation to 275 kV operation are expected to cost approximately $120 million and take two years to complete. This is more than expected when the previous PACR was prepared reflecting conditions across the National Electricity Market where capital prices have increased due to a range of factors such as supply chain bottle necks and skilled resource shortages.

[14] This is the second stage of the preferred option from the 2017-18 RIT-T. It was referred to as 'option 4D' in the PACR for that earlier RIT-T

4.3. Option 2 – Install a third transformer at Cultana and defer the upgrade of the lines between Yadnarie and Cultana

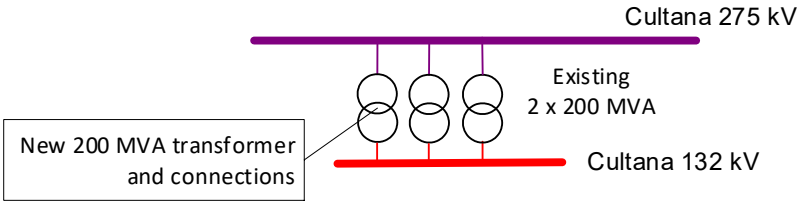
Option 2 involves installing a third transformer at Cultana initially and deferring the upgrade of the Cultana to Yadnarie section of the Eyre Peninsula Link from its existing 132 kV operation to 275 kV.

Specifically, the scope of Option 2 involves, in the immediate term:

- a third transformer in one of the existing 275 kV exits at the Cultana substation; and
- a new 132 kV cable from the new transformer to the 132 kV Cultana bus.

Figure 7 presents a simplified network diagram for the substation works under option 2. A more detailed diagram can be found in Appendix D.

Figure 7 - Network diagram for substation works under option 2



The capital works associated with the third transformer are estimated to cost $14 million and to take 6 months to complete (after the transformer has been procured). It is expected that this will provide an additional 200 MVA of network capacity.

While the additional transformer is only expected to require 6 months to install, given current procurement lead-times due to supply chain tightness, we expect that the total time to procure and commission the transformer to be the same as for upgrading the line under Option 1. Therefore, we do not expect that Option 2 will deliver benefits sooner than either Option 1 or Option 3.

As discussed above, a third transformer at Yadnarie will defer the need to upgrade the Cultana to Yadnarie section of the Eyre Peninsula Link to 275 kV but may not prevent it entirely. Whether, and when the future upgrade is required will depend on future load and generation growth.

Analysis of Option 2 will include an analysis of the value of the deferment made possible by installing a third transformer and the estimated value of higher losses on the 132 kV network. To the extent that this option also involves the (later) upgrade of the line itself the analysis will be based on the same assumptions made for Option 1.

We expect to also assume that the third transformer would remain at Cultana even after the Cultana to Yadnarie section is upgraded to 275 kV, as the cost of removing/relocating it is expected to be prohibitively high. The third transformer would have no impact on the capacity of the line south of Cultana after the upgrade, but it would increase the capacity back to Whyalla. This impact will be considered in the analysis.

Depending on the location of new loads and generation, there is a possibility the third transformer will become a stranded asset with no used capacity after the upgrade.

A drawback of this option is that it would use one of the remaining exits at the Cultana substation. It is already likely that all the current available exits may be needed to accommodate future network expansion, including the upgrade of the Cultana-Yadnarie line. This might be required to meet load growth in the broader area (including potentially to accommodate the Port Bonython hydrogen export hub near Whyalla) increasing the costs of those future developments.

4.4. Option 3 – Replace the Cultana transformers and defer the upgrade of the lines between Yadnarie and Cultana

Option 3 is similar to option 2 in that additional transformer capacity is used in the first instance to defer the ultimate upgrade of the Cultana to Yadnarie section of the Eyre Peninsula Link from 132 kV to 275 kV. The difference is that Option 3 involves replacing the two existing 200 MVA transformers at Cultana with two 300 MVA transformers, rather than adding a third transformer.

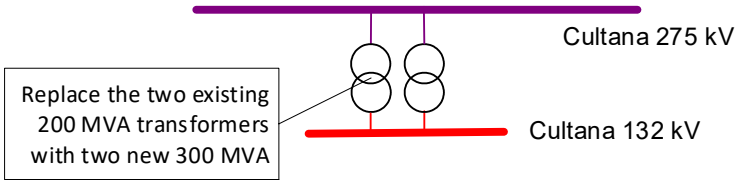
Figure 8 presents a simplified network diagram for the substation works under Option 2. A more detailed diagram can be found in Appendix D.

Specifically, the scope of Option 3 involves:

- replacing the existing Cultana 200 MVA transformers with 300 MVA transformers; and
- replace connecting equipment for these transformers to accommodate the higher capacity transformers.

The capital works associated with the replacing the two existing transformers are estimated to cost $20 million and to take 6 months to complete (after the transformers have been procured). It is expected that this will provide an additional 100 MVA of network capacity.

Figure 8 - Network diagram for the substation works under Option 2



As with Option 2, given current procurement lead-times we expect that the total time to procure and commission the two new transformers would be the same as for upgrading the line under Option 1. Therefore, we do not expect that Option 3 would deliver benefits sooner than either Option 1 or Option 2.

As discussed above, replacing the transformers at Cultana is likely to defer the need to upgrade of the Cultana to Yadnarie section of the Eyre Peninsula Link to 275 kV, but not prevent it entirely. Whether and when the future upgrade is required will depend on the future load growth.

Therefore, as with Option 2, analysis of Option 3 amounts to analysis of the value of the deferment made possible by upgrading the two existing transformers at Cultana. To the extent that this option also involves the (later) upgrade of the line itself, the analysis will be based on the same assumptions made for Option 1. Once the line is upgraded there will be a surplus of transformation capacity, as the load at 125 kV will be reduced.

While Option 3 is more expensive than Option 2 it has the advantage of keeping all the current spare exits at the Cultana substation available for future network developments.

4.5. Option 4 – Duplicate Davenport to Cultana 275 kV

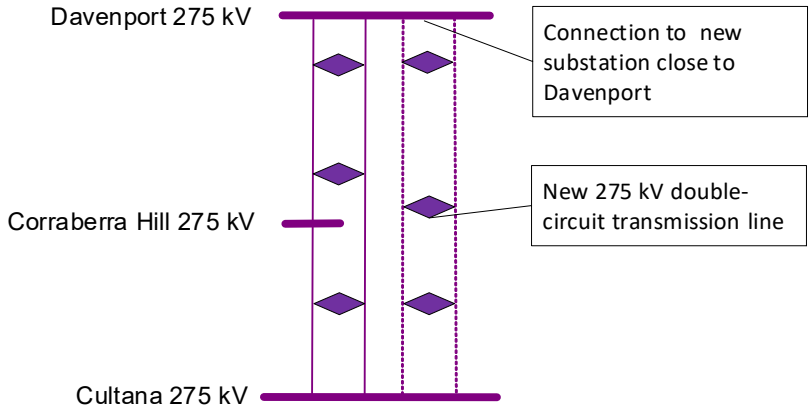
Option 4 is to upgrade the Davenport to Cultana section of the Eyre Peninsula Link to deliver more power from Davenport to Cultana. This option may be required in conjunction with others or by itself depending on the location of new load.

Specifically, the scope of Option 4 involves, in the immediate term:

- Expansion\connection to a new site close to Davenport[15];
- Expansion of Cultana at 275 kV; and
- a new double circuit 275 kV overhead line of approximately 100 km[16] and rated at around 600 MVA[17] or higher.

Figure 9 presents a simplified network diagram for the substation works under option 4. A more detailed diagram can be found in Appendix D.

Figure 9 - Network diagram for the works under Option 4



The capital works associated with this option are around $310m and this project would have a lead time of around 4 years from the time the RIT-T is concluded and Final Investment Decision (FID) is made.

This project would increase the amount of power than can be delivered to Cultana from 600 MW to around 1,800 MW from Davenport

4.6. Option 5 – Duplicate Cultana to Yadnarie 275 kV

Option 5 is to upgrade the Cultana to Yadnarie section of the Eyre Peninsula Link to deliver more power from Cultana to Yadnarie. This option assumes than the new Yadnarie North site has been established and the Eyre Peninsula Link is operating at 275 kV between Cultana and Yadnarie North.

---

[15] The existing Davenport site cannot be extended. Here, we assume a new site has been established close to Davenport before the construction of option 4.

[16] Note this is longer than the existing Davenport to Cultana circuits to avoid a further gulf crossing.

[17] Capacity is limited to the rating of the existing Davenport - Cultana circuits.

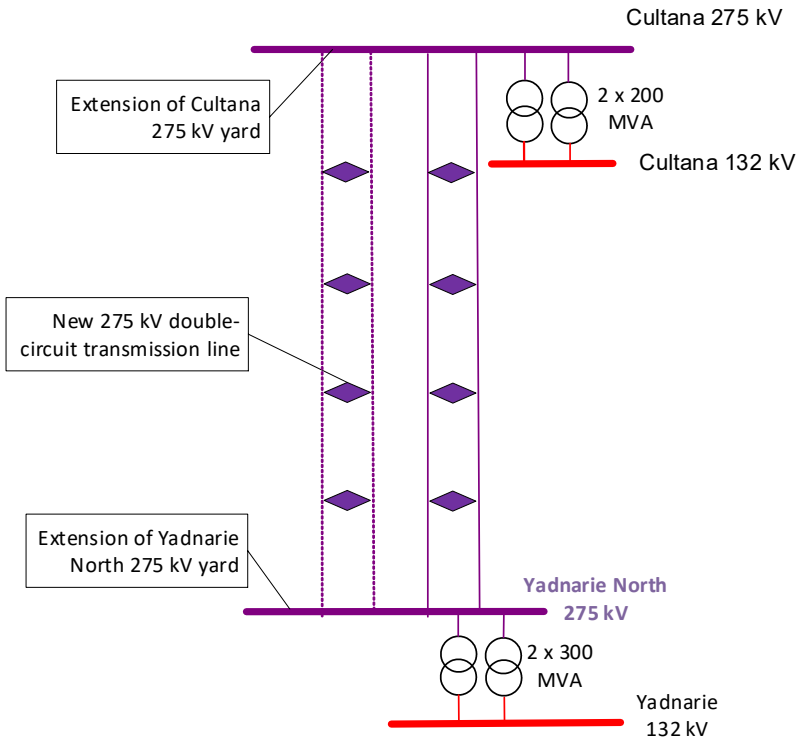
For this option to be viable it would also need to be implemented together with option 4, to be able to transport the large amount of power to Cultana in the first instance.

Specifically, the scope of Option 5 involves, in the immediate term:

- Expanding the Cultana substation;
- Expanding the Yadnarie North substation; and
- a new double circuit 275 kV overhead line of approximately 130 km and rated at around 600 MVA[18] or higher.

Figure 10 presents a simplified network diagram for the substation works under option 5. A more detailed diagram can be found in Appendix D.

Figure 10 - Network diagram for works under Option 5



The capital works associated with this option are around $330m and the project would have a lead time of around 4 years from the time the RIT-T is concluded and FID is made.

This project would increase the amount of power than can be delivered to Yadnarie from 600 MW to around 1,200 MW from Davenport.

[18] Capacity is limited to the rating of the existing Cultana - Yadnarie circuits

4.7. Options considered but not progressed

We have also considered a range of other options but have not progressed these on the grounds that they are not considered feasible, and therefore are not credible options. These options cannot resolve the identified need satisfactorily. A summary of these options is provided in the table below.

Table 2 - Summary of options considered but not progressed

Option	Overview	Reason(s) it has not been progressed
Only install the third transformer at Cultana	Option 2 but without the ultimate line upgrade to 275 kV.	A third transformer alone would not provide sufficient capacity to meet the identified need for most new connections. It would therefore involve additional costs without commensurately reducing expected unserved energy base case and losses for Eyre Peninsula generators, and so is not considered economically feasible.
Only upgrading the Cultana transformers	Option 3 but without the ultimate line upgrade to 275 kV.	Upgrading the Cultana transformers alone would not provide sufficient capacity in order to meet the identified need for most new connections. It would therefore involve additional costs without commensurately reducing expected connection costs in the base case and losses for Eyre Peninsula generators, and so is not considered economically feasible.
Commission a new 132 kV double-circuit line between Cultana and Yadnarie	Duplicate the existing 132 kV line, or parts of it.	This would cost orders of magnitude more than the any of the five credible options outlined above but would not provide any additional market benefits. This option is therefore not considered economically feasible. Additionally, it will require the addition of more transformer capacity at Cultana.

4.8. Material inter-regional impact

A 'material inter-network impact' is defined in the NER as: [19]

> *"A material impact on another Transmission Network Service Provider's network, which may include (without limitation): (a) the imposition of power transfer constraints within another Transmission Network Service Provider's network; or (b) an adverse impact on the quality of supply in another Transmission Network Service Provider's network."*

[19] As per clause 5.16.4(b)(6)(ii) of the NER.

AEMO's suggested screening test to indicate that a transmission augmentation has no material inter-network impact is that it satisfies the following:[20]

- a decrease in power transfer capability between transmission networks or in another Transmission Network Service Provider's (TNSP's) network of no more than the minimum of 3 per cent of the maximum transfer capability and 50 MW
- an increase in power transfer capability between transmission networks or in another TNSP's network of no more than the minimum of 3 per cent of the maximum transfer capability and 50 MW
- an increase in fault level by less than 10 MVA at any substation in another TNSP's network
- the investment does not involve either a series capacitor or modification in the vicinity of an existing series capacitor.

AEMO's screening criteria indicate that there are no material inter-network impacts associated with the credible options included in this PSCR.

4.9. Approach to estimating cost

ElectraNet has prepared cost estimates reflecting the AACE cost estimate classification system using class 5 for the five network options in this PSCR. The class 5 estimates are +100%/-50%.

Cost estimates has been derived from high level desktop review of required scope prepared by asset engineering team or single line diagrams prepared by network planning team. Single line diagrams can be found in appendix D.

No explicit contingency allowance has been added to the estimates, though we note that estimates are accurately interpreted as ranges rather than the point estimates.

In each option the estimated cost were based on the costing blocks shown in Table 3

Table 3 - Estimated costing blocks

Component	Estimated range ($ million)
New substation 275/132 kV with 2 x 200 MVA transformers, 2 x 275 kV diameters and 3 x 132 kV diameters	100 - 120
Extension 1 diameter 275 kV with 2 line exits and 3 circuit breakers	9.5 - 12.5
200 MVA - 275 kV/132 kV transformer in new position with associated switchgear	12 – 15
132 kV cable per meter	0.01 - 0.02
Replace 200 MVA TF with 300 MVA – 275 kV/132 kV transformer in existing position with existing switchgear	9 - 11

[20] Inter-Regional Planning Committee. *"Final Determination: Criteria for Assessing Material Inter-Network Impact of Transmission Augmentations."* Melbourne: Australian Energy Market Operator, 2004. Appendix 2 and 3, available at: https://www.aemo.com.au/-/media/Files/PDF/170-0035-pdf.pdf

New 275 kV switchyard with 3 diameters, 6 line exits and 9 circuit breakers	38 - 44
275 kV double circuit transmission line per km	2.0 – 2.4

Appendix E provides further information on ElectraNet's cost estimation approach.

5. Required characteristics of non-network options

This section sets out the required technical characteristics for a non-network option to assist by deferring the line upgrade in a low spot load demand state of the world. ElectraNet would be happy to discuss these requirements further with any potential proponents of network support solutions, and to receive submissions from any proponents who consider they could meet these requirements.

To be able to assist with meeting the identified need, network support solutions would need to be able to meet the gap between the expected spot load and the existing spare capacity on the transmission network on the peninsula.

New loads are generally large industrial loads that tend to have near continuous 24 hour a day operation and given the potential connections could be hundreds of megawatts more than existing network capability. Non-network options should expect to be large and have continuous operation, 24 hours a day over a period of years.

Demand response would need to come from existing customers and to be of a quantity that could delay augmentation caused by industrial load customers, in the order of several hundred megawatts at either Yadnarie, Cultana or both maybe required. This can be expected to be a very significant percentage or all the existing load on the Eyre Peninsula network.

A network support solution from energy storage or generation would also be required to be on a continuous basis, 24 hours a day over a period of years (i.e., until the line upgrade is commissioned). Such solutions can also expect to be several hundred megawatts in size.

6. Materiality of market benefits for this RIT-T assessment

The section outlines the categories of market benefits prescribed in the NER and discusses whether they are likely to be material for this RIT-T.

The NER requires that all categories of market benefit identified in relation to the RIT-T are included in the RIT-T assessment unless the NSP can demonstrate that they are unlikely to be material in relation to the RIT-T assessment for a specific option.

At this stage, we consider that all categories of market benefit identified in the RIT-T have the potential to be material except for changes in ancillary services costs and competition benefits.

Given the expected interaction between the options and existing and potential generators on the Eyre Peninsula, the ISP scenarios will also be relevant. These will feed into any market modelling undertaken for the load scenarios. Where we conclude that wholesale market modelling is proportionate and material to the outcome of the RIT-T assessment, we propose to use the final assumptions, scenarios and optimal development path (ODP) from the draft 2024 ISP and 2023 IASR.

6.1. Market benefits that are likely to be material for this RIT-T

We consider that the following classes of market benefits are likely to be material for this RIT-T assessment:

- changes in costs for other parties;
- changes in network losses;
- wholesale market benefits; and
- option value.

We discuss each of these benefit classes further below.

6.1.1. Changes in costs for other parties

As discussed in section 4.1, the proposed base case assumed for the purposes of this RIT-T assessment is that the forecast spot load would connect at lowest cost and likely exceed the capability of the network to supply the load, this will result in unserved energy. An alternative may be to incur additional costs as the customers connect further back into the network. Augmentation as outlined in the options presented in this PSCR may then result in less costs to the new load.

A potential benefit from progressing an option under this RIT-T is therefore that these additional costs will be avoided. This benefit comes under the RIT-T category of ‘changes in costs for other parties’.

6.1.2. Changes in network losses

The connection of additional load with no upgrade on the Eyre Peninsula Link would increase the level of losses experienced by generation on the peninsula. Upgrading the network would prevent this increase in losses, which is expected to be a material market benefit associated with some of the options under consideration in this RIT-T.

6.1.3. Wholesale market benefits

Changes in the transmission network on the Eyre Peninsula and the addition of new spot load can be expected to have an impact on wholesale market outcomes, due to both the existing generation on the peninsula and expected future generation development that may be constrained in the absence of network development.

We will consider the materiality of wholesale market benefits to the RIT-T outcome as part of the PADR process, but at this stage we consider these benefits may well be material, and that consequently this RIT-T assessment will need to include market modelling to estimate:

- changes in generation and storage investment (ie, 'costs to other parties')
- changes in fuel consumption in the NEM arising through different patterns of generation dispatch;
- changes in involuntary load curtailment; and
- changes in voluntary load curtailment.

6.1.4. Option value will be captured using scenarios

Option value arises where there is uncertainty regarding future outcomes, the information that is available is likely to change in the future, and the credible options being considered are sufficiently flexible to respond to that change.

The extent of future spot load is a key uncertainty for this RIT-T. Option 2 and Option 3 outlined in this PSCR exhibit flexibility in terms of their ability to defer the upgrade of the Cultana to Yadnarie line until a time that sufficient future load becomes committed. We intend to capture the option value of this flexibility implicitly through considering a scenario in which the network upgrade is not required or can be substantially deferred.

This approach is consistent with the AER guidance on the treatment of option value. We consider that a wider option value modelling exercise would be disproportionate to any option value that may be identified for this specific RIT-T assessment.

6.1.5. Differences in the timing of unrelated transmission investment

Development of the northern end of Eyre Peninsula may influence the timing and need for additional network investment around the mid-north of South Australia. Further information on the potential options that may be influenced by these options can be found in ElectraNet's Transmission Annual Planning Report.

6.2. Market benefits that are not expected to be material for this RIT-T

The following market benefits are not expected to be material for this RIT-T:

- changes in ancillary services costs
- competition benefits.

ElectraNet does not consider that investment under this RIT-T will affect any other transmission investment, and so there will be no impact on the timing of other transmission investment.

While the cost of Frequency Control Ancillary Services (FCAS) may change marginally because of changed generation dispatch patterns and changed generation development following expanded transfer capacity between the Eyre Peninsula and the rest of the NEM, we consider that FCAS costs are relatively small compared to the total market benefits. Changes in the cost of FCAS are therefore not likely to be materially different between options and are unlikely to be material in the selection of the preferred option.

There is no expected change to the costs of Network Support Control Ancillary Services (NSCAS), or System Restart Ancillary Services (SRAS) because of the options being considered. These costs are therefore not considered material to the outcome of the RIT-T assessment.

Competition benefits under the RIT-T relate to net changes in market benefits arising from the impact of the credible option on the bidding behaviour of market participants in the wholesale market. These benefits are not expected to be material in this RIT-T given the modest impact on generation in South Australia under each option and the fact that South Australia has multiple generation service providers.

The calculation of competition benefits also requires substantial additional market modelling and we consider that this modelling exercise would be disproportionate to any competition benefits that may be identified for this specific RIT-T assessment, particularly the difference between options in terms of competition benefits.

City West Substation

Appendices

ElectraNet

Appendix A Compliance table

This appendix sets out a checklist which demonstrates the compliance of this PSCR with the requirements of the National Electricity Rules version 204.

Rules clause	Summary of requirements	Relevant section
5.16.4 (b)	A RIT-T proponent must prepare a report (the project specification consultation report), which must include:	–
	1. a description of the identified need;	3.1
	2. the assumptions used in identifying the identified need (including, in the case of proposed reliability corrective action, why the RIT-T proponent considers reliability corrective action is necessary);	3.2
	3. the technical characteristics of the identified need that a non-network option would be required to deliver, such as: a. the size of load reduction of additional supply; b. location; and c. operating profile;	5
	4. if applicable, reference to any discussion on the description of the identified need or the credible options in respect of that identified need in the most recent National Transmission Network Development Plan;	NA
	5. a description of all credible options of which the RIT-T proponent is aware that address the identified need, which may include, without limitation, alterative transmission options, interconnectors, generation, demand side management, market network services or other network options;	4
	6. for each credible option identified in accordance with subparagraph (5), information about: a. the technical characteristics of the credible option; b. whether the credible option is reasonably likely to have a material inter-network impact; c. the classes of market benefits that the RIT-T proponent considers are likely not to be material in accordance with clause 5.16.1(c)(6), together with reasons of why the RIT-T proponent considers that these classes of market benefit are not likely to be material; d. the estimated construction timetable and commissioning date; and e. to the extent practicable, the total indicative capital and operating and maintenance costs.	4 & 6

Appendix B Definitions

All laws, regulations, orders, licences, codes, determinations and other regulatory instruments (other than the Rules) which apply to Registered Participants from time to time, including those applicable in each participating jurisdiction as listed below, to the extent that they regulate or contain terms and conditions relating to access to a network, connection to a network, the provision of network services, network service price or augmentation of a network.

A comprehensive list of applicable regulatory instruments is provided in the Rules.

Applicable regulatory instruments	
AEMO	Australian Energy Market Operator
Base case	A situation in which no option is implemented by, or on behalf of the transmission network service provider.
Commercially feasible	An option is commercially feasible if a reasonable and objective operator, acting rationally in accordance with the requirements of the RIT-T, would be prepared to develop or provide the option in isolation of any substitute options. This is taken to be synonymous with 'economically feasible'.
Costs	Costs are the present value of the direct costs of a credible option
Credible option	A credible option is an option (or group of options) that: 1. address the identified need; 2. is (or are) commercially and technically feasible; and 3. can be implemented in sufficient time to meet the identified need.
Economically feasible	An option is likely to be economically feasible where its estimated costs are comparable to other credible options which address the identified need. One important exception to this Rules guidance applies where it is expected that a credible option or options are likely to deliver materially higher market benefits. In these circumstances the option may be "economically feasible" despite the higher expected cost. This is taken to be synonymous with 'commercially feasible'
Identified need	The reason why the Transmission Network Service Provider proposes that a particular investment be undertaken in respect of its transmission network.

Applicable regulatory instruments	
Market benefit	Market benefit must be: 1. the present value of the benefits of a credible option calculated by: a. comparing, for each relevant reasonable scenario: i. the state of the world with the credible option in place to ii. the state of the world in the base case, And b. weighting the benefits derived in sub-paragraph (i) by the probability of each relevant reasonable scenario occurring. 2. a benefit to those who consume, produce and transport electricity in the market, that is, the change in producer plus consumer surplus.
Net market benefit	Net market benefit equals the market benefit less costs.
Preferred option	The preferred option is the credible option that maximises the net economic benefit to all those who produce, consume and transport electricity in the market compared to all other credible options. Where the identified need is for reliability corrective action, a preferred option may have a negative net economic benefit (that is, a net economic cost).
Reasonable Scenario	Reasonable scenario means a set of variables or parameters that are not expected to change across each of the credible options or the base case.

Appendix C Process for implementing the RIT-T

For the purposes of applying the RIT-T, the NER establishes a typically three stage process, ie: (1) the PSCR; (2) the PADR; and (3) the PACR. This process is summarised in the figure below (in gold).

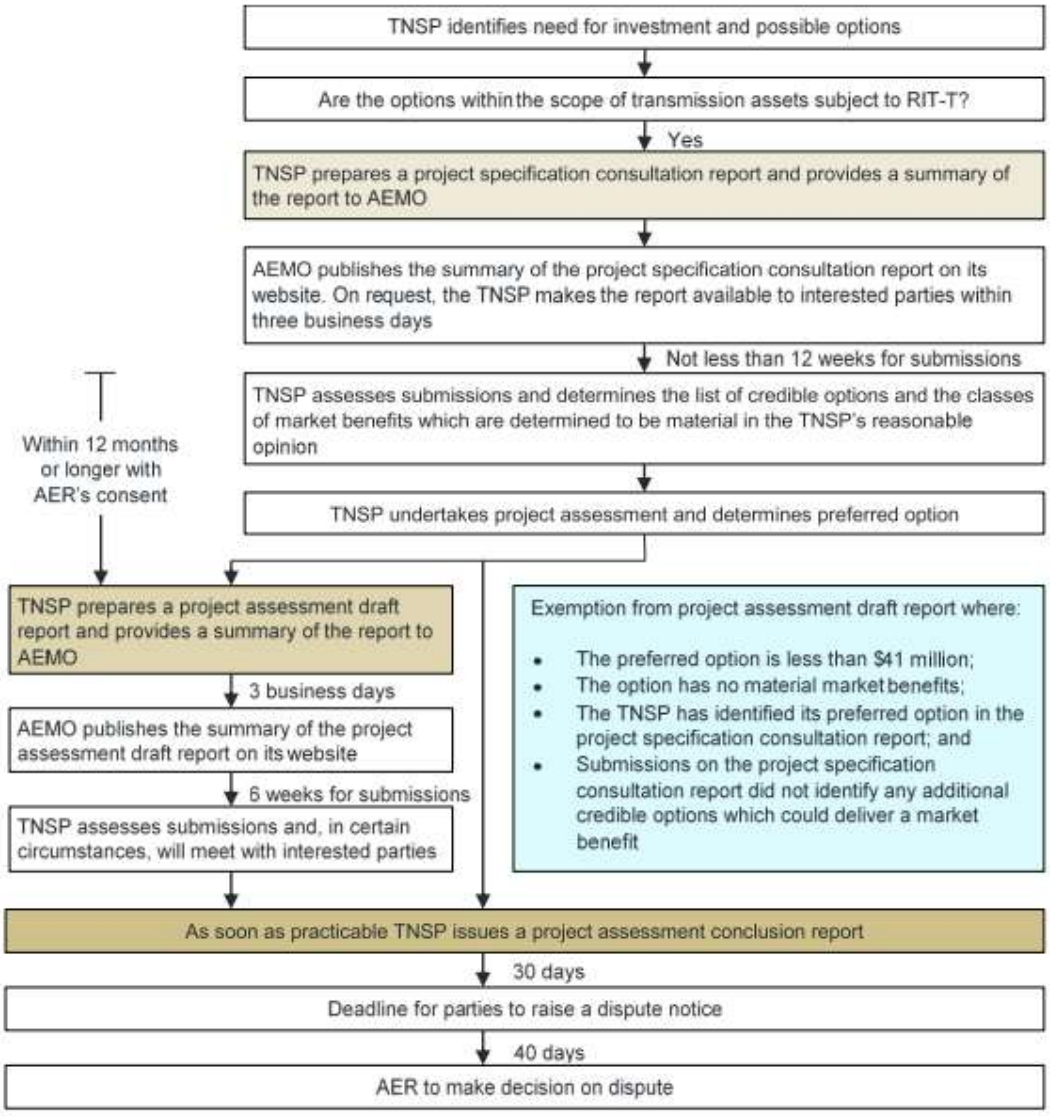
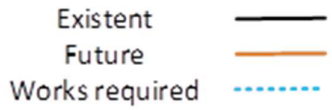


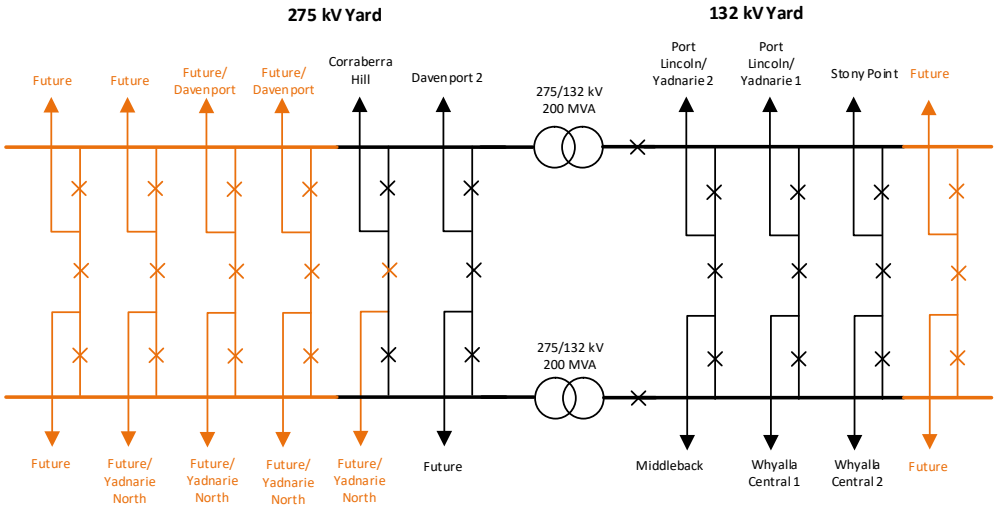
Figure 11 – The RIT-T assessment and consultation process

Appendix D Simplified SLDs illustrating scope of works for the different options.

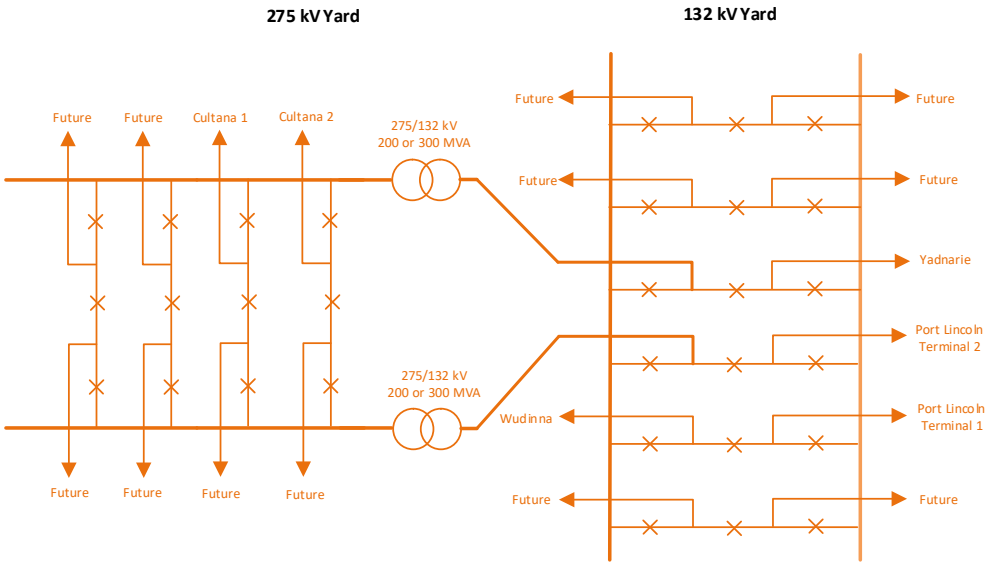
Key



Cultana site - existent and ultimate simplified single line diagram



Yadnarie North site - ultimate simplified single line diagram[21]

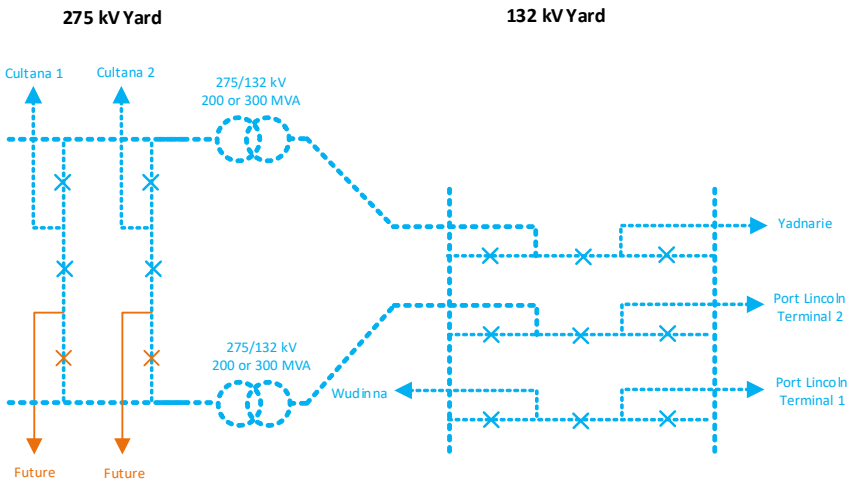


[21] The existing Yadnarie site is fully utilised and there will be the need to establish a new site (Yadnarie North) for the upgrade of the Eyre Peninsula Link

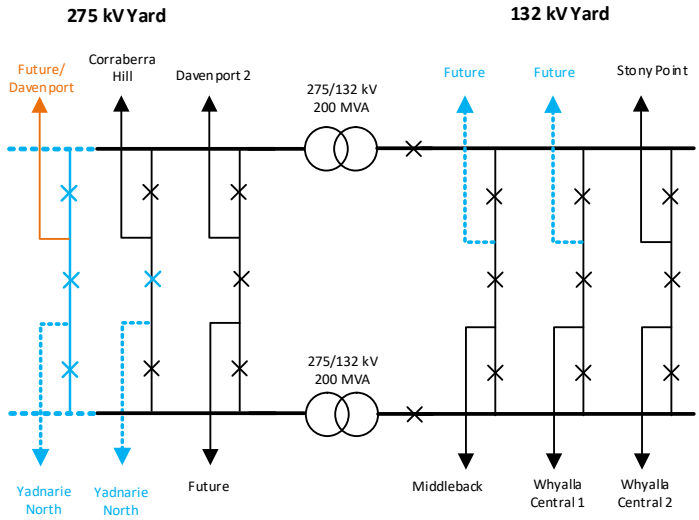
Option 1 - Upgrade the Cultana to Yadnarie section to 275 kV

Scope of works consists of:

- Constructing a new Yadnarie North substation
- Introducing 132 kV transformation at the new Yadnarie North substation



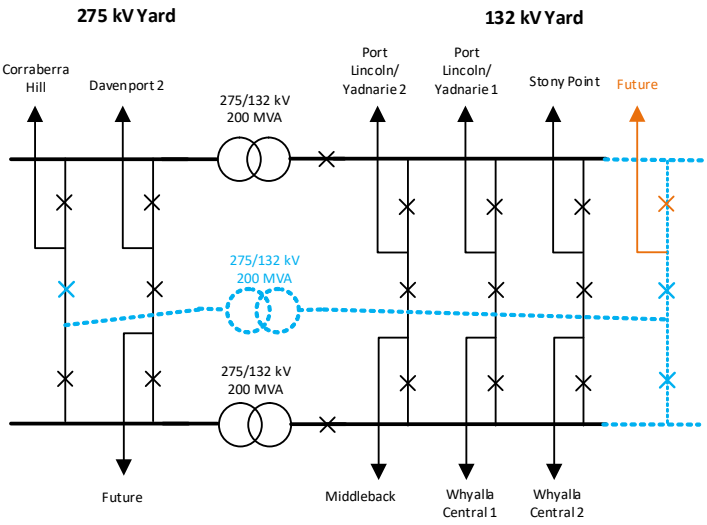
- Reconnecting the 132 kV exits at the existing Cultana substation on the 275 kV



Option 2 - Install a third transformer at Cultana and deferring the upgrade of the lines between Yadnarie and Cultana

Scope of works consists of:

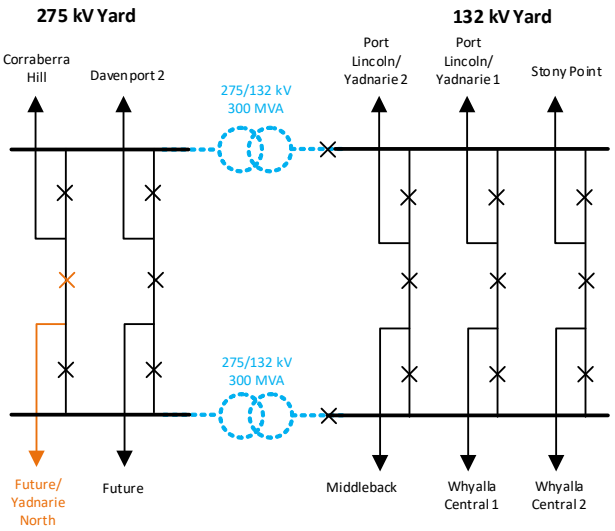
- A third transformer in one of the existing 275 kV exits at the Cultana substation
- A new 132 cable from the transformer to the 132 kV Cultana bus



Option 3 - Replacing the Cultana transformers and deferring the upgrade of the lines between Yadnarie and Cultana

Scope of works consists of:

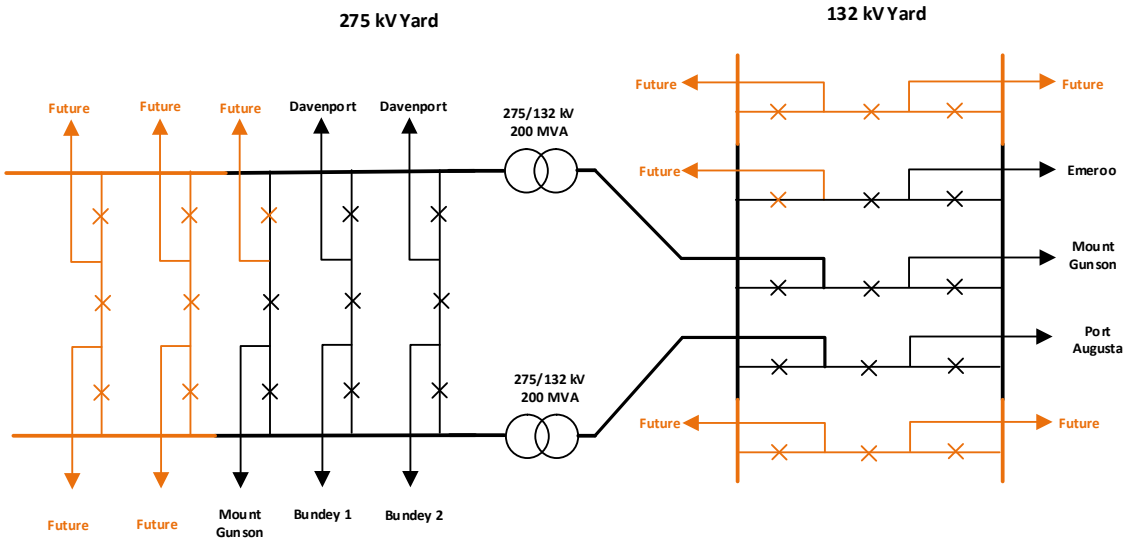
- Replacing the existing Cultana 200 MVA transformers with 300 MVA transformers
- Replace connecting equipment for these transformers to accommodate the higher capacity transformers.



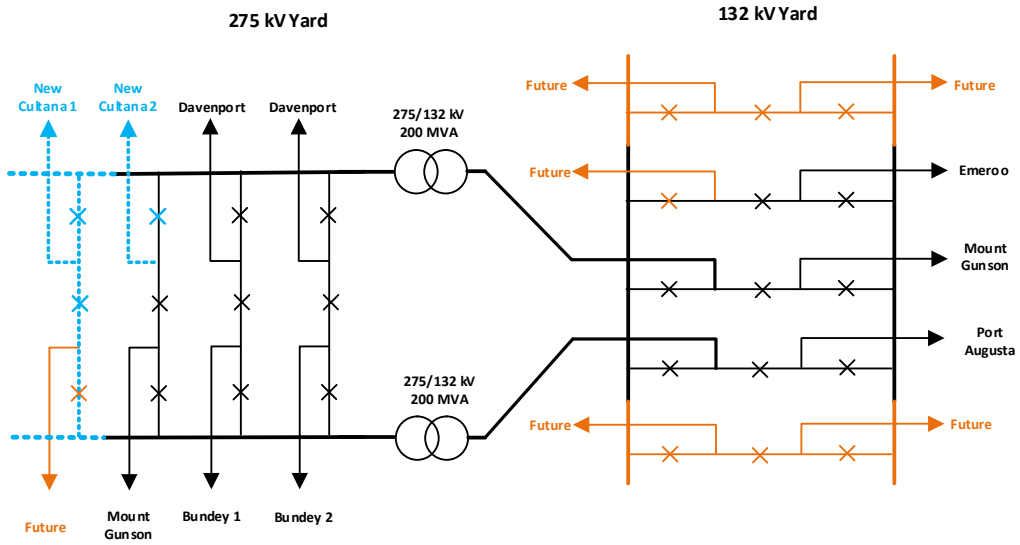
Option 4 – Duplicate Davenport to Cultana 275 kV

Scope of works consists of:

- Expansion/ connection to a new site close to Davenport[22] (We assume the ultimate for the new substation is similar to the one for Yadnarie North and this new site has been established before this option is constructed). Hence, the ultimate and the configuration of the substation before option 4 could be similar to the single line diagram below

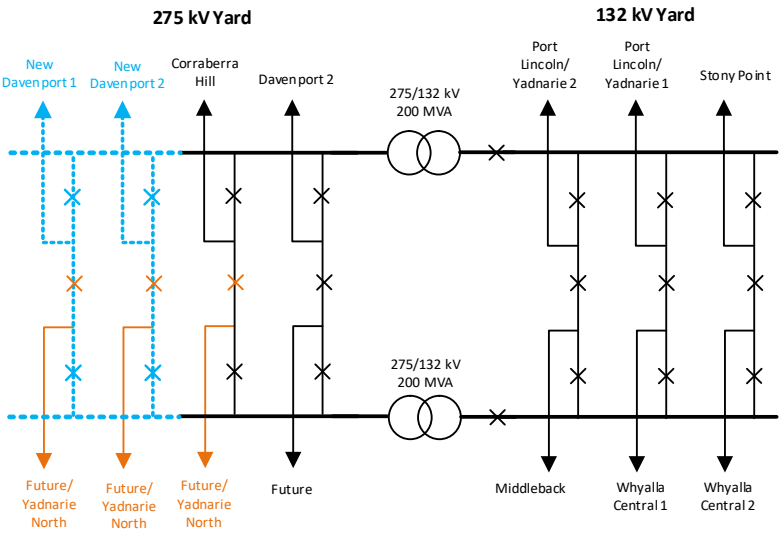


And the works required for the new transmission line would be



[22] The existing Davenport site cannot be extended. Here, we assume a new site has been established close to Davenport before the construction of option 4.

- Expansion of Cultana 275 kV

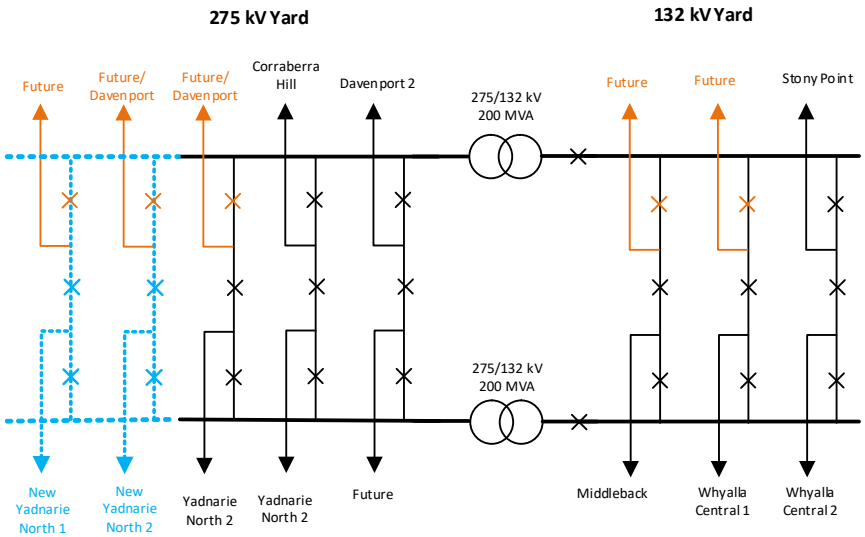


- And a new double circuit 275 kV overhead line of approximately 100 km[23] and rated at around 600 MVA[24] or higher

Option 5 – Duplicate Cultana to Yadnarie 275 kV

Scope of works consists of:

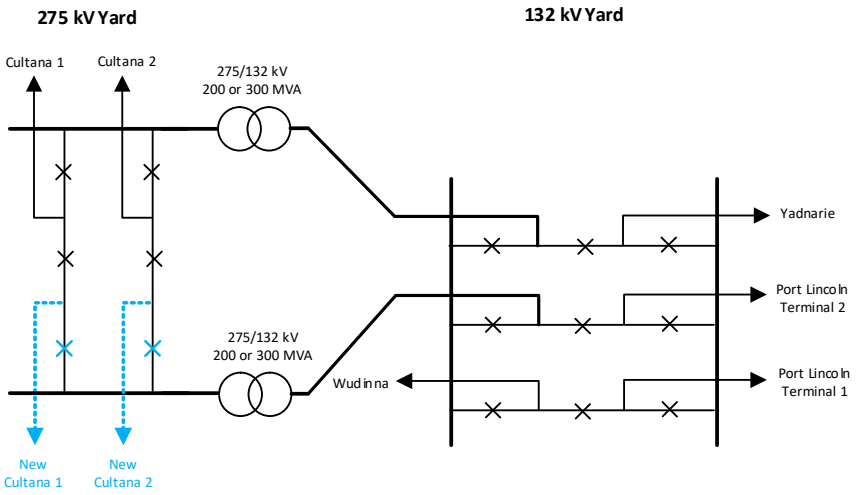
- Expanding the Cultana substation



[23] Note this is longer than the existing Davenport to Cultana circuits to avoid a further gulf crossing.

[24] Capacity is limited to the rating of the existing Davenport - Cultana circuits.

- Expanding the Yadnarie North substation



- A new double circuit 275 kV overhead line of approximately 130 km and rated at around 600 MVA[25] or higher.

[25] Capacity is limited to the rating of the existing Cultana - Yadnarie circuits

Appendix E Approach to cost estimation for different AACE classes.

The table below provides additional detail on ElectraNet's cost estimation approach.

Estimate Class	Level of Project Definition	Low expected	High expected	Scope Requirements
Class 5	0-2%	-50% %	+100%	Single Line Diagram, length and voltage of Transmission Line, Transformer rating, Bench size of Substation (number of diameter), reference benchmark of recent similar project.
Class 4	1-15%	-30%	+50%	Scope document that includes single line diagram sketches and defined scope for Infrastructure, Primary plant, Secondary systems, Line, Telecommunications.
Class 3	10-40%	-20%	+30%	Full set of Contract drawings and ECS's (as sent to our Contractors for pricing)
Class 2	30-75%	-15%	+20%	Copy of the preferred Contractors construction or supply bids. Copy of free issue ordered or to be ordered. ElectraNet Actuals to date. Forecast of internal cost and support until project completion. Project Contingency.
Class 1	65-100%	-10%	+15%	All information required for Capitalisation of Project Assets.

ElectraNet