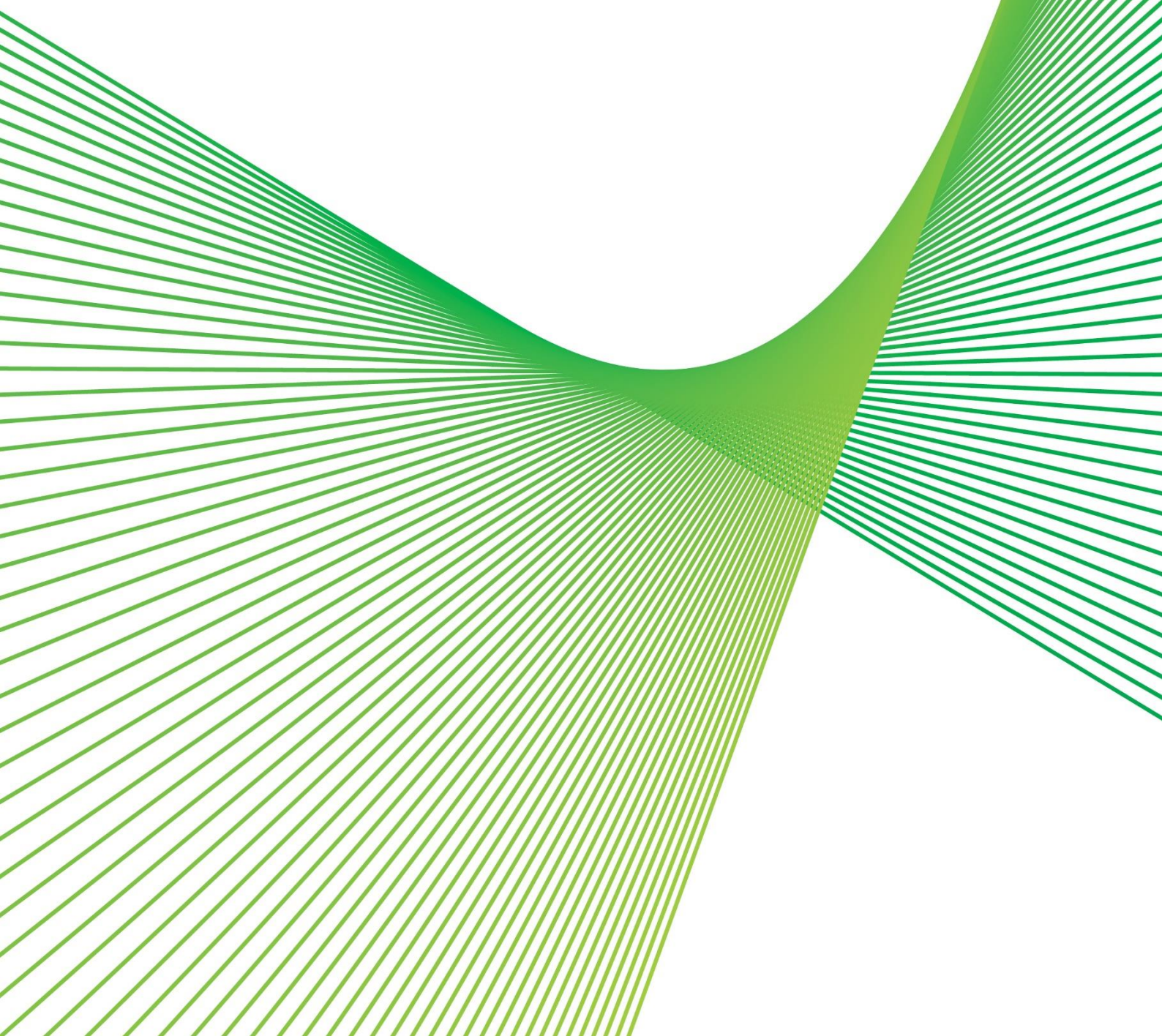


# Meeting demand growth and reliability requirements in the Parkes area

RIT-T Project Specification Consultation Report

Area: Central West NSW

Date of issue: 19 December 2024



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## Executive summary

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Two large spot loads are proposed to connect in the Parkes area: the Parkes Special Activation Precinct (Parkes SAP) and Sunrise Energy Metals. The distribution network in the Parkes area is operated by Essential Energy and is supplied through Transgrid's Parkes 132 kV/66 kV substation. Essential Energy has indicated that it is unable to meet the expected load requirements for Parkes SAP and the Sunrise Energy Metals without augmenting its distribution network in the Parkes area. To supply the proposed loads would require the development of a new 132 kV switchbay and a bus section circuit breaker (CB) at Transgrid's Parkes 132 kV/66 kV substation which will, in turn, supply the proposed 132 kV Essential Energy's Brolgan Rd 132/11 kV zone substation (ZS). This ZS will also provide N-1 supply to existing and future Parkes loads. In the absence of investment, there is a risk of unserved energy since the expected load from Parkes SAP and Sunrise Energy Metals will exceed network capacity in the region.

We are applying the Regulatory Investment Test for Transmission (RIT-T) to options that allow Transgrid to meet expected demand and connection point reliability requirements in the Parkes area. Publication of this Project Specification Consultation Report (PSCR) is the first step in the RIT-T process. As investment is needed to meet externally imposed regulatory obligations and service standards, we consider this a reliability corrective action RIT-T.

### Identified need: maintain reliable supply to the Parkes area

The identified need for this RIT-T analysis is to meet demand for electricity and connection point reliability requirements in the Parkes area.

Two large spot loads are proposed to connect in the Parkes area:

- the **Parkes SAP** – this development is a business hub initiated by the NSW Government's Regional Growth Development Corporation and will be located a few km west of Parkes. It consists of multiple smaller developments that will connect to the 11 kV distribution network. The Parkes SAP is a committed development. The site will require electricity supply from 2026/27, with demand expected to increase to approximately 30MW by 2034. The demand forecasts for the Parkes SAP indicate an ultimate long term capacity requirement of more than 100 MVA; and
- **Sunrise Energy Metals** – this is a high-grade Nickel-Cobalt-Scandium project owned by Sunrise Energy Metals Ltd. This project is fully approved as a State Significant Development through the NSW Department of planning (DA374-11-00) and holds Major Project Status with the Federal Government's Department of Industry, Science and Resources. The grid connection for the project is currently in the approvals stage. It is an anticipated development. The current load application for the Mine Stage 1 is for 40.3 MW<sup>2</sup>, to be supplied at 132kV. The site is likely to require electricity supply from 2027/28.

The distribution network in the Parkes area is operated by Essential Energy. Essential Energy has recently indicated that, based on its latest demand forecasts for the Parkes region, its 66 kV network is unable to support an additional zone substation/s to facilitate the 11 kV reticulation for the Parkes SAP.

Essential Energy has also indicated that it cannot meet the expected demand requirements for Sunrise Energy Metals due to the proposed location of the mine and the expected size of the load. Sunrise Energy Metals may connect via developing a 132 kV feeder from the mine to Essential Energy's Brolgan Rd 132/11 kV ZS, off Transgrid's Parkes 132 kV/66 kV substation. In the absence of investment, there is a risk

of unserved energy since the expected load from Parkes SAP and Sunrise Energy Metals will exceed network capacity in the region.

We have commenced this RIT-T to assess options which will enable us to meet our reliability requirements in the Parkes area in view of the significant increase in forecast demand. We consider this a ‘reliability corrective action’ under the RIT-T as the proposed investment is for the purpose of meeting externally imposed regulatory obligations and service standards, i.e., Schedule 5.1.4 of the National Electricity Rules (NER).

### One credible network option has been identified

We have identified one credible network option to meet the identified need from a technical, commercial, and project delivery perspective.<sup>1</sup> This option is summarised in Table E-1 below.

Table E-1 Summary of the credible options

Option	Description	Capital costs (\$M, 2024-25)	Operating costs (\$/yr, 2024-25)
Option 1	Installation of new 132 kV switchbay and a bus section circuit breaker (CB) at Transgrid’s Parkes substation	9.61	\$100,000

### Non-network solutions are not expected to meet the identified need

We consider non-network options unlikely to be commercially feasible to assist with meeting the identified need for this RIT-T for the reasons presented in section 4, notably the extent of unserved energy and the relatively low cost of the preferred network option suggests that non-network options at the scale required are unlikely to be cost competitive compared to network options.

Nonetheless, we invite any prospective proponents that wish to propose a non-network option that can meet the identified need, in whole or in part, to provide a submission to this PSCR. Details on how submissions should be provided are provided in section 1.3.

### Option 1 delivers positive net economic benefits and will meet NER requirements

Our cost benefit analysis focuses primarily on the Parkes SAP as this is a committed project. Since Sunrise Energy Metals is still in its approval stage, we have included this spot load through a separate sensitivity analysis.

On a weighted basis, where each scenario is weighted equally, Option 1 achieves net economic benefits of approximately \$25,259 million (in \$2024/25) from meeting expected unserved energy at Parkes SAP. Including the expected load from the Sunrise Energy Metals will increase the net economic benefits of Option 1 to approximately \$26,245 million (in \$2024/25).

The substantial size of each scenario’s avoided involuntary load shedding benefit can be attributed to the base case not meeting any commercial and industrial forecast load in the Parkes area due to the absence of a switchbay.

<sup>1</sup> As per clause 5.15.2(a) of the NER.

## Draft Conclusion

This PSCR finds that Option 1 is the preferred option to address the identified need. Option 1 involves the installation of a new 132 kV switchbay and a bus section CB at Transgrid's Parkes 132 kV/66 kV substation.

The capital cost of this \$9.61m (in \$2024-25). The work will be undertaken over a three-year period with all works expected to be completed by 2026/27. Routine operating and maintenance costs are estimated as 1% of the total capital cost at approximately \$100,000 per annum (in \$2024-25).

## Exemption from preparing a Project Assessment Draft Report

Subject to additional credible options being identified during the consultation period, publication of a Project Assessment Draft Report (PADR) is not required for this RIT-T as we consider its investment in relation to the preferred option to be exempt from that part of the process under NER clause 5.16.4(z1). Production of a PADR is not required due to:

the estimated capital cost of the proposed preferred option being less than \$54 million;  
the PSCR states:

- the proposed preferred option, together with the reasons for the proposed preferred option
- the RIT-T is exempt from producing a PADR; and
- the proposed preferred option and any other credible option will not have a material market benefit for the classes of market benefit specified in clause 5.15A.2(b)(4), with the exception of market benefits arising from changes in voluntary and involuntary load shedding;
- the RIT-T proponent considers that there were no PSCR submissions identifying additional credible options that could deliver a material market benefit; and
- the PACR must address any issues raised in relation to the proposed preferred option during the PSCR consultation.

We consider the investment in relation to Option 1 meets these criteria and therefore that we are exempt from producing a PADR under NER clause 5.16.4(z1).

In accordance with NER clause 5.16.4(z1)(4), the exemption from producing a PADR will no longer apply if we consider that an additional credible option that could deliver a material market benefit is identified during the consultation period. Accordingly, if we consider that any additional credible options are identified, we will produce a PADR which includes an NPV assessment of the net market benefit of each additional credible option.

Should we consider that no additional credible options were identified during the consultation period, we intend to produce a PACR that addresses all submissions received, including any issues in relation to the proposed preferred option raised during the consultation period, and presents our conclusion on the preferred option for this RIT-T.

## Submissions and next steps

We welcome written submissions on materials contained in this PSCR. Submissions are due on 26 March 2025 and should be emailed to our Regulation team via [regulatory.consultation@transgrid.com.au](mailto:regulatory.consultation@transgrid.com.au).<sup>2</sup> In the subject field, please reference 'Supply to Parkes area PSCR'.

At the conclusion of the consultation process, all submissions received will be published on our website. If you do not wish for your submission to be made public, please clearly specify this at the time of lodgement. Subject to additional credible options being identified during consultation, we anticipate publication of a PACR by May 2025.

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<sup>2</sup> We are bound by the *Privacy Act 1988 (Cth)*. In making submissions in response to this consultation process, we 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. If you do not wish for your submission to be made public, please clearly specify this at the time of lodgement. See Privacy Notice within the Disclaimer for more details.

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# 1. Introduction

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Two large spot loads are proposed to connect in the Parkes area: the Parkes Special Activation Precinct (Parkes SAP) and Sunrise Energy Metals. The distribution network in the Parkes area is operated by Essential Energy and is supplied through Transgrid's Parkes substation. Essential Energy has indicated that it is unable to meet the expected load requirements for Parkes SAP and Sunrise Energy Metals without augmenting its distribution network in the Parkes area. To supply the proposed loads would require the development of a new 132kV switchbay and a bus section CB at the Transgrid's Parkes 132 kV/66 kV substation which will, in turn, supply Essential Energy's 132 kV new 132 kV Essential Energy Broilgan Rd 132/11 kV zone substation (ZS). This ZS will also provide N-1 supply to existing and future Parkes loads. In the absence of investment, there is a risk of unserved energy since the expected load from Parkes SAP and Sunrise Energy Metals will exceed network capacity in the region.

We are applying the Regulatory Investment Test for Transmission (RIT-T) to options that allow Transgrid to meet expected demand and connection point reliability requirements in the Parkes area. Publication of this Project Specification Consultation Report (PSCR) is the first step in the RIT-T process. As investment is needed to meet externally imposed regulatory obligations and service standards, we consider this a reliability corrective action RIT-T.

## 1.1 Purpose of this report

The purpose of this PSCR<sup>3</sup> is to:

- set out the reasons why Transgrid proposes that action be taken (the 'identified need')
- present the options that Transgrid currently considers may help to address the identified need
- outline the technical characteristics that non-network options would need to provide
- summarise how we have assessed the options for addressing the identified need
- present the cost benefit assessment of all options for meeting the identified need
- identify the preferred option under the RIT-T assessment, and
- allow interested parties to make submissions and provide input to the RIT-T assessment.

## 1.2 Exemption from producing a Project Assessment Draft Report

Subject to the identification of additional credible options during the consultation period, publication of a Project Assessment Draft Report (PADR) is not required for this RIT-T as we consider that the conditions in clause 5.16.4(z1) of the NER exempting RIT-T proponents from providing a PADR have been met.

Specifically, production of a PADR is not required because:

- the estimated capital cost of the preferred option is less than \$54 million;<sup>4</sup>
- we have identified in this PSCR our preferred option and the reasons for that option, and noted that we will be exempt from publishing the PADR for our preferred option; and

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<sup>3</sup> See Appendix A for the National Electricity Rules requirements.

<sup>4</sup> Varied from \$46m to \$54m based on the [AER Final Determination: Cost threshold review](#), November 2024.

- we consider that the preferred option and any other credible options will not have a material market benefit (other than benefits associated with changes in voluntary load curtailment and involuntary load shedding).

### 1.3 Submissions and next steps

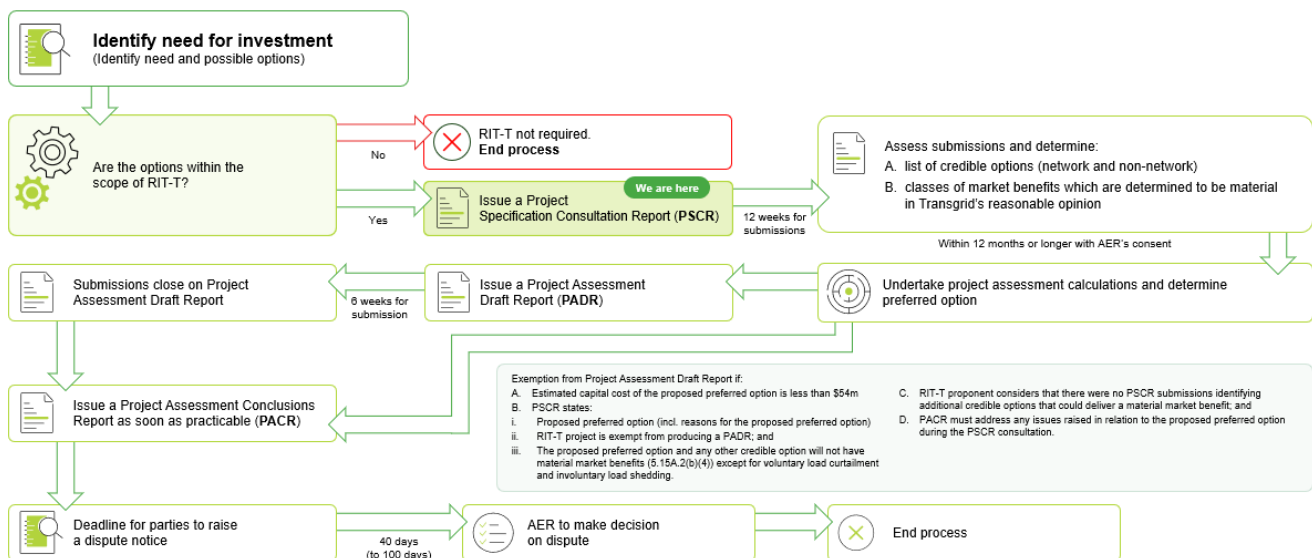
We welcome written submissions on materials contained in this PSCR. Submissions are particularly sought on the credible options presented and from potential proponents of non-network options that could meet the technical requirements set out in this PSCR. Submissions are due by 26 March 2025.

Submissions should be emailed to Transgrid’s Regulation team via [regulatory.consultation@Transgrid.com.au](mailto:regulatory.consultation@Transgrid.com.au).<sup>5</sup> In the subject field, please reference ‘Supply to Parkes area PSCR.’

At the conclusion of the consultation process, all submissions received will be published on our website. If you do not wish for your submission to be made public, please clearly specify this at the time of lodgement.

Should we consider that no additional credible options were identified during the consultation period, we intend to produce a Project Assessment Conclusions Report (PACR) that addresses all submissions received including any issues in relation to the proposed preferred option raised during the consultation period. Subject to no additional credible options being identified, a PACR is expected to be published by May 2025.

Figure 1-1 This PSCR is the first stage of the RIT-T process



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## 2. The identified need

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### 2.1 Background to the identified need

Two large spot loads are proposed to connect in the Parkes area:

- the **Parkes SAP** – this development is a business hub initiated by the NSW Government’s Regional Growth Development Corporation and will be located 3km west of Parkes. It consists of multiple smaller developments that they will connect to the 11 kV distribution network. The Parkes SAP is a committed development. The site will require electricity supply from 2026/27, with demand expected to increase to approximately 30MW by 2034. The demand forecasts for the Parkes SAP indicate an ultimate long term capacity requirement of more than 100 MVA; and
- **Sunrise Energy Metals** – this is a high-grade Nickel-Cobalt-Scandium project that is currently in the approval stage. Sunrise Energy Metals is an anticipated development. The current load application for the Mine Stage 1 is for 40.3 MW,<sup>6</sup> to be supplied at 132 kV. The site requires electricity supply from 2027/28.

The distribution network in the Parkes area is operated by Essential Energy. Essential Energy has recently indicated that based on its latest demand forecasts for the Parkes region, its 66 kV network is unable to supply an additional zone substation/s to facilitate the 11 kV reticulation for the Parkes SAP. Essential Energy has also indicated that it cannot meet the expected demand requirements for Sunrise Energy Metals due to the proposed location of the mine and the expected size of the load. Sunrise Energy Metals has proposed developing a 132 kV feeder from the mine to Essential Energy’s 1new Brolgan Rd 132/11 kV ZS off Transgrid’s Parkes 132 kV/66 kV substation.

### 2.2 Description of the identified need

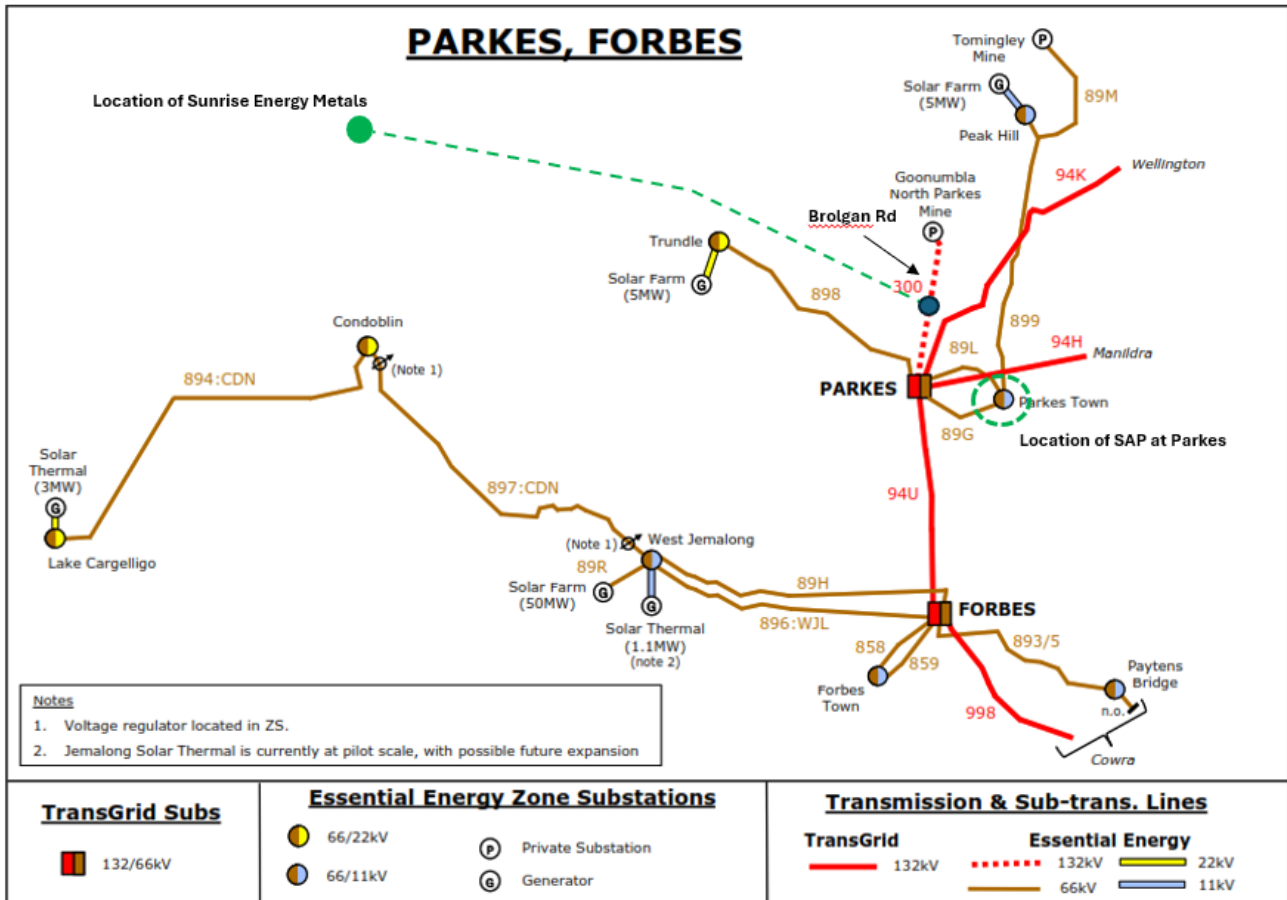
The identified need for this RIT-T analysis is to meet demand for electricity and connection point reliability requirements in the Parkes area.

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<sup>6</sup> 40.3MW is required from the grid in the first two years of operation. Following that, Sunrise Energy Metals is expecting to install on-site generation, to power approximately 50-60% of its demand.



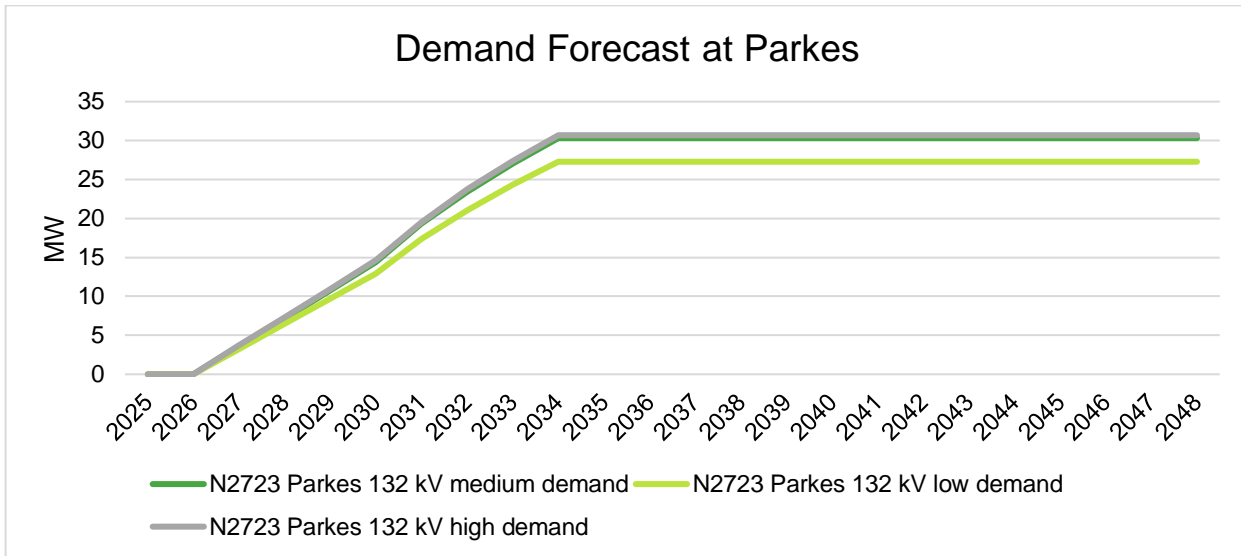
Figure 2-1 Existing sub-transmission network with proposed loads in Parkes area<sup>7</sup>



The demand forecast for the Parkes SAP has been provided by Essential Energy and set out in Figure 2-2 below.

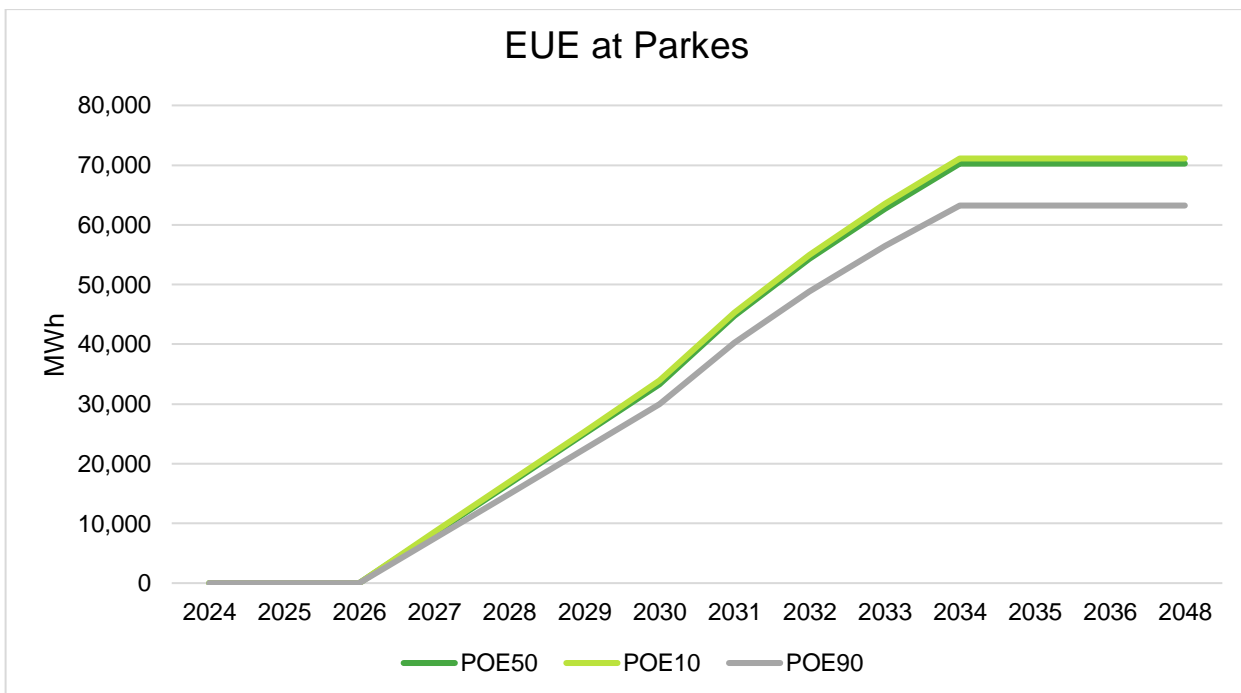
<sup>7</sup> This diagram is a mark-up of Essential Energy's Distribution Annual Planning Report (DAPR) 2023 diagram with indicative location and connection of proposed developments (from the website).

Figure 2-2 Demand forecast at Parkes



In Figure 2-3, we set out the expected unserved energy in the Parkes area because of the increased demand from the Parkes SAP. We have modelled the expected unserved energy at Parkes using demand traces from Beaconsfield as a reference point. Note that this does not take into account the anticipated load from the Sunrise Energy Metals.

Figure 2-3 EUE at Parkes



In the absence of investment, under our central demand forecast (POE50 demand forecast), demand from the Parkes SAP is expected to exceed the capacity of the existing network by 30.7 MW by 2034. Based on our representative load profile, this is expected to result in 70,252MWh of unserved energy at Parkes SAP from 2034 onwards. Furthermore, the entire load at Sunrise Energy Metals would not be able to be supplied.

There is a requirement for us to meet this forecast increase in demand in the Parkes area. Leaving this need unaddressed would substantially increase the risk of unserved energy.

We have commenced this RIT-T to assess options which will enable us to meet our reliability requirements in the Parkes area. We consider this a 'reliability corrective action' under the RIT-T as the proposed investment is for the purpose of meeting externally imposed regulatory obligations and service standards, i.e., Schedule 5.1.4 of the NER.

## 2.3 Assumptions underpinning the identified need

### 2.3.1 Demand forecasts

Essential Energy have provided us with the expected demand forecasts for Parkes SAP and Sunrise Energy Metals. These demand forecasts serve as the basis for determining the amount of unserved energy that will occur in the absence of investment.

### 2.3.2 Existing capacity

Essential Energy have informed us that there is insufficient capacity on its existing 66 kV distribution network to meet the forecast load from Parkes SAP. The transformers at Parkes BSP are rated at 60MVA and Essential Energy's 66 kV distribution network has an N-1 rating of 43MVA. In the Parkes area, Essential Energy currently supplies Parkes Town, Peak Hill, Trundle and Tomingley Mine using its 66kV distribution network. Essential Energy have indicated that forecast demand for these areas is expected to be approximately 60MVA, and that the addition of load from Parkes SAP would therefore exceed the current 66 kV infrastructure for the Parkes area.

We understand that Essential Energy have considered the option of supplying Parkes SAP by augmenting its 66 kV distribution network. This would require the development of an additional 66 kV line, and additional bays and transformers at Parkes BSP. Essential Energy have indicated that the cost of this option is expected to be significantly greater than utilising the current 132 kV connection point and additional 132 kV connection at Parkes BSP to meet the forecast load from Parkes SAP.

### 2.3.3 Expected Unserved Energy

We have used the demand forecasts in combination with information about existing capacity at Parkes to calculate expected unserved energy. The Parkes SAP is a business hub, predominantly providing opportunities in logistics and exports with its rail access.<sup>8</sup> We have used load traces from Beaconsfield as a representation of a commercial load shape throughout the year. We have scaled the Beaconsfield load profile down to the expected peak load at Parkes, to estimate expected unserved energy. With this as a basis, we calculate the benefits from avoided unserved energy as the difference between the expected load shedding under the base case and the expected load shedding under the credible option.

### 2.3.4 Sunrise Energy Metals considered as a sensitivity

Sunrise Energy Metals is an additional anticipated load that we have considered in this RIT-T. Since Sunrise Energy Metals is still in its approval stage, we have included this spot load through a separate sensitivity analysis. Essential Energy has provided us with the expected load forecasts for Sunrise Energy Metals if it proceeds.

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<sup>8</sup> NSW Government, 2020, *Parkes SAP Master Plan*

### 3. Options that meet the identified need

In this RIT-T, we consider credible options as those that would meet the identified need from a technical, commercial, and project delivery perspective.<sup>9</sup> This will include any credible options that are put forward by proponents in response to this PSCR.

Transgrid considers that there is one credible network option to meet the identified need. This option is summarised in Table 3-1.

Table 3-1 Summary of the credible options

Option	Description	Estimated capex (\$M, 2024-25)	Expected commission date
1	Installation of new 132 kV switchbay and a bus section circuit breaker (CB) at Transgrid's Parkes Station	\$9.61	2026/27

#### 3.1 Base case

Consistent with the RIT-T requirements, the assessment undertaken in this PSCR compares the costs and benefits of each credible option to a 'do nothing' base case. The base case is the (hypothetical) projected case if no action is taken, i.e.,<sup>10</sup>

*"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"*

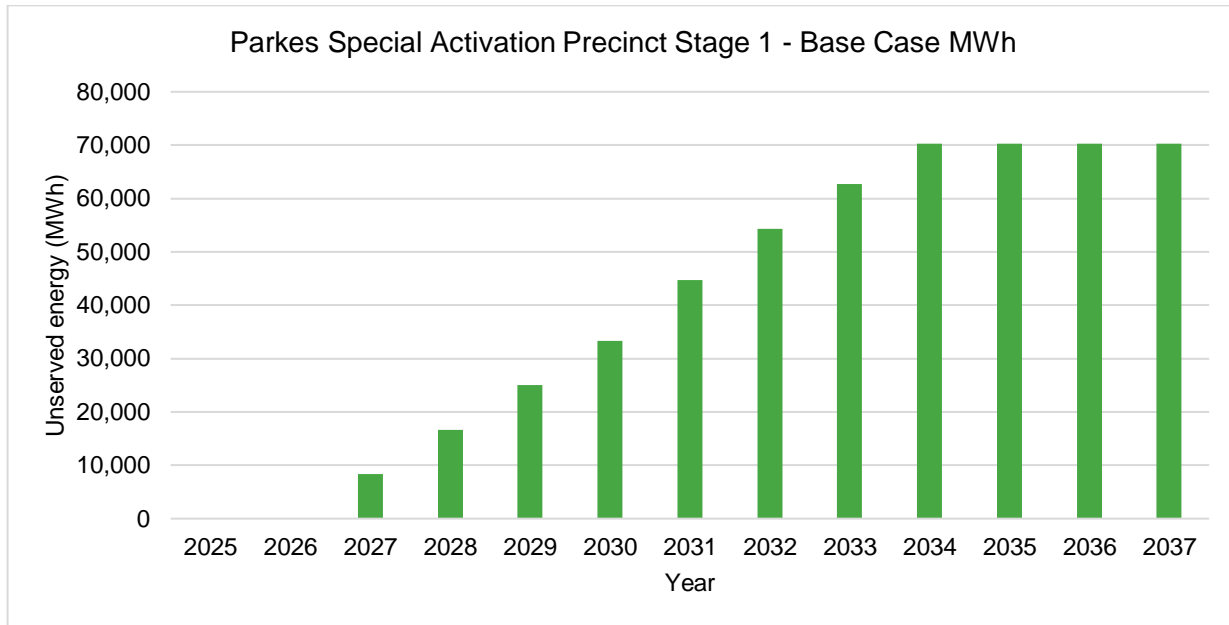
Under the base case, there is no network development to address the identified need. The Sunrise Energy Metals would not be able to be supplied, and only up to 8 MVA of SAP Stage 1 load could connect from extended Essential Energy 66 kV network.

In this scenario, the unserved energy for not supplying the Parkes SAP is set out in Figure 3-1 below.

<sup>9</sup> As per clause 5.15.2(a) of the NER.

<sup>10</sup> AER, *Regulatory Investment Test for Transmission Application Guidelines*, November 2024, p. 22.

Figure 3-1 Unserved energy for Parkes Special Activation Precinct Stage 1 (MWh)<sup>11</sup>



While this is not a situation we plan to encounter, and this RIT-T has been initiated specifically to avoid it, the assessment is required to use this base case as a common point of reference when estimating the net benefits of each credible option.

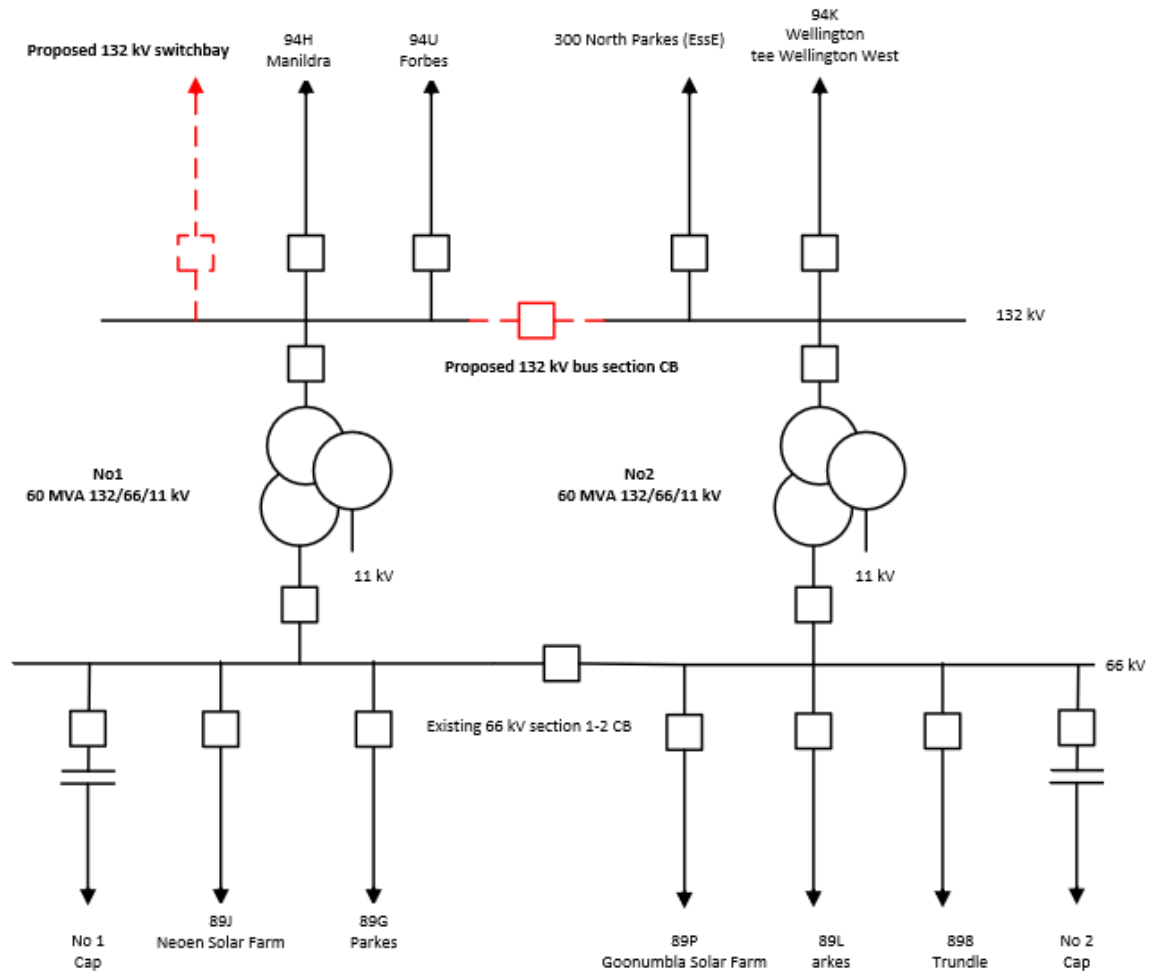
### 3.2 Option 1 – Install a new 132 kV switchbay and bus section CB at Parkes substation

Option 1 involves installing a new 132 kV switchbay a bus section CB at Transgrid’s existing Parkes 132 kV substation, for connection of Essential Energy’s new Brolgan Rd 132/11 kV ZS.

<sup>11</sup> The figure depicts the value of unserved energy for Stage 1 only (10.4MVA). The forecast load for Stage 2 is 54.4MVA.



Figure 3-2 Proposed connection arrangement of new 132 kV switchbay and a bus section circuit breaker (CB) at Parkes substation



The estimated capital cost for the option is approximately \$9.61m (FY 24-25). This expenditure is comprised of:

- \$4.13 million in labour costs;
- \$1.44 million in materials costs; and
- \$4.03 million in expenses

Table 3-2 shows the expected expenditure profile of this option. This option is expected to take three years to complete, with commissioning possible in 2026-27.

Table 3-2 Option 1 expenditure profile

Item	Capital expenditure (\$Real, \$2024-25)
FY24	1.05
FY25	2.37

Item	Capital expenditure (\$Real, \$2024-25)
FY26	6.19
<b>Total capital costs</b>	<b>9.61</b>

Maintenance costs are expected to be equal to 1% of total capital costs.

### 3.3 Options considered but not progressed

We have also considered whether other options could meet the identified need. Reasons these options were not progressed are summarised in Table 3-3.

Table 3-3 Options considered but not progressed

Option	Reason(s) for not progressing
Essential Energy 66 kV supply	<p>Parkes Town, Peak Hill, Trundle and Tomingley gold forecast is just under 60MVA. Transgrid's transformers at Parkes BSP are rated at 60MVA and the associated 66kV EE infrastructure has N-1 of 43MVA. The addition of 40MVA of 11kV Parkes SAP load and additional High Voltage customer load greatly exceed the current 66kV infrastructure for the Parkes Area.</p> <p>Additionally, the cost of additional bays and transformers for Transgrid along with new 66kV line infrastructure is greater than utilising the current 132kV connection point and additional 132kV connection at Parkes BSP to meet the demands of Parkes Special Activation Precinct, Quorn Park Hybrid Plant and North Parkes Mine future expansion.</p>
Non-network solutions	We do not consider non-network options to be commercially and technically feasible to assist with meeting the identified need for this RIT-T for the reasons presented in section 4.

### 3.4 No material inter-network impact is expected

Transgrid has considered whether the credible options listed above is expected to have material inter-regional impact<sup>12</sup>. A 'material inter-network impact' is defined in the NER as:

*"A material impact on another Transmission Network Service Provider's network, which impact 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."*

AEMO's suggested screening test to indicate that a transmission augmentation has no material inter-network impact is that it satisfies the following<sup>13</sup>:

- a decrease 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 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

<sup>12</sup> As per clause 5.16.4(b)(6)(ii) of the NER.

<sup>13</sup> 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. Accessed 6 November 2024. [https://aemo.com.au/-/media/files/electricity/nem/network\\_connections/transmission-and-distribution/170-0035-pdf.pdf](https://aemo.com.au/-/media/files/electricity/nem/network_connections/transmission-and-distribution/170-0035-pdf.pdf)

- an increase in fault level by less than 10 MVA at any substation in another TNSP's network; and
- the investment does not involve either a series capacitor or modification in the vicinity of an existing series capacitor.

We consider that each credible option satisfies these conditions as it does not modify any aspect of transmission assets and will only have localised effects around Parkes/Central West region. By reference to AEMO's screening criteria, there is no material inter-network impacts associated with any of the credible options considered.

### **3.5 Community engagement**

Social licence costs can be reduced through early and continued engagement with communities and stakeholders who are reasonably expected to be affected by the project.

Transgrid is not proposing to undertake specific community engagement (in addition to the publication of the RIT-T consultation reports) in relation to this project. The proposed project relates to an augmentation to infrastructure within an existing substation, and as such there will be no additional impact on communities located close to the current transmission infrastructure, apart from construction activities. Transgrid will ensure that all construction works associated to the project are conducted in a manner that causes the least disruption to communities and notes that the construction activities will be subject to separate environmental approval.

As a result, Transgrid does not consider that there is a need for additional community engagement as part of this RIT-T process. We will still engage with community as part of our project's construction works notifications and welcome any submissions from community members to this PSCR.

## 4. Technical characteristics for non-network options

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We do not consider non-network options to be commercially and technically feasible to assist with meeting the identified need for this RIT-T. This is driven by several considerations:

- a non-network option would effectively need to be able to meet the load that would be otherwise unserved on a continuous basis, 24 hours a day over its life at a cost that is lower than the network option.
- the extent of unserved energy and the relatively low cost of the preferred network option (\$9.61 million) suggests that non-network options at the scale required are unlikely to be cost competitive compared to network options (ie, non-network options are unlikely to be economically feasible).

Nonetheless, we invite any prospective proponents that wish to propose a non-network option that can meet the identified need, in whole or in part, to provide a submission to this PSCR. Details on how submissions should be provided are provided in section 1.3.

Please note that the identified need for this PSCR (meeting demand growth and reliability requirements in the Parkes area) is separate to the need identified in the Maintaining Reliable Supply to the Bathurst, Orange and Parkes RIT-T process previously published. Solutions applied as a result of that RIT-T process will not impact the need identified in this PSCR and similarly, the potential solutions for this need will not affect the circumstances of the Maintaining Reliable Supply to the Bathurst, Orange and Parkes RIT-T.

## 5. Materiality of market benefits

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The PSCR is required to set out the classes of market benefit that the TNSP considers are not likely to be material for a particular RIT-T assessment.<sup>14</sup> This section outlines the categories of market benefits prescribed in the NER and whether they are considered material for this RIT-T and whether they are material.

### 5.1 Avoided unserved energy is material

We consider that changes in involuntary load shedding are expected to be material for this RIT-T assessment. Under the base case, there is no network development to address the identified need. The mining project would not be able to be supplied, and no SAP Stage 1 load could connect from extended Essential Energy 66 kV network.

The credible option can reduce the amount of expected load shedding that would occur in all scenarios. The avoided unserved energy for the credible option is calculated as the difference between the expected load shedding under the base case and the expected load shedding under the credible option.

### 5.2 Wholesale electricity market benefits are not material

The AER has recognised that if the credible options will not have an impact on the wholesale electricity market, then a number of classes of market benefits will not be material in the RIT-T assessment, and so do not need to be estimated.

Transgrid determines that the credible options in this RIT-T will not affect network constraints between competing generating centres and are therefore not expected to result in any change in dispatch outcomes and wholesale market prices. Transgrid therefore considers that the following classes of market benefits are not material for this RIT-T assessment:

- changes in fuel consumption arising through different patterns of generation dispatch
- changes in voluntary load curtailment (since there is no impact on pool price)
- changes in costs for parties other than the Transgrid
- changes in ancillary services costs
- competition benefits

### 5.3 No other categories of market benefits are material

In addition to the classes of market benefits listed above, NER clause 5.16.1(c)(4) requires us to consider the following classes of market benefits, listed in Table 5-1, arising from each credible option. Transgrid considers that none of the classes of market benefits listed are material for this RIT-T assessment for the reasons in Table 5-1.

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<sup>14</sup> NER clause 5.16.4(b)(6)(iii).



Table 5-1 Reasons non-wholesale electricity market benefits categories are considered not material

Market benefits	Reason
Changes in costs for parties, other than the RIT-T proponent due to differences in timing of new plant, capital costs and operating and maintenance costs	The change in costs for other parties is not expected to be material in this RIT-T assessment.
Differences in the timing of unrelated network expenditure	The credible option considered is designed to meet required reliability requirements and is unlikely to affect decisions to undertake unrelated expenditure in the network. Consequently, material market benefits will neither be gained nor lost due to changes in the timing of expenditure from this credible option.
Changes in network losses	There is not expected to be any material difference in transmission losses between options.
Changes in ancillary services costs	There is not expected to be any material change in costs of ancillary services as a result of this RIT-T.
Competition benefits	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. As this is a reliability corrective action, we do not expect there to be any competition benefits.
Option value	<p>Option value is likely to arise where there is uncertainty regarding future outcomes, the information that is available is likely to change in the future, and the credible options considered by the TNSP are sufficiently flexible to respond to that change.</p> <p>We note that no credible option identified is sufficiently flexible to respond to change or uncertainty. Additionally, a significant modelling assessment would be required to estimate the option value benefit but it would be disproportionate to potential additional benefits for this RIT-T. Therefore, we have not estimated any additional option value benefit.</p>
Changes in Australian greenhouse gas emissions	This RIT-T's credible option is not expected to affect the dispatch of generation in the wholesale market. No other material source of a change in Australian emissions has been identified. Accordingly, this benefit and has not been estimated.

## 6. Overview of the assessment approach

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This section outlines the approach that Transgrid has applied in assessing the net benefits associated with each of the credible options against the base case.

### 6.1 Assessment against the base case

As outlined in section 3.1, all costs and benefits considered have been measured against a base case where no network development is undertaken to address the identified need and electricity supply in the Parkes area will continue to be supplied by the existing capacity of the Parkes substation.

Given that the Sunrise Energy Metals is still in its approval stage, we have excluded this Sunrise Energy Metals load in all three demand scenarios for our analysis. In section 7.4, we present an additional scenario analysis that recalculates the net economic benefits after including the expected load from the Sunrise Energy Metals.

### 6.2 Assessment period and discount rate

A 25-year assessment period from 2023/24 to 2047/48 has been adopted for this RIT-T analysis. This period takes into account the size, complexity and expected asset life of the options.

Where the capital components of the credible options have asset lives extending beyond the end of the assessment period, the NPV modelling includes a terminal value to capture the remaining asset life. This ensures that the capital cost of long-lived options over the assessment period is appropriately captured, and that all options have their costs and benefits assessed over a consistent period, irrespective of option type, technology or asset life. The terminal values are calculated as the undepreciated value of capital costs at the end of the analysis period.

A real, pre-tax discount rate of 7 per cent has been adopted in all scenarios presented in this PSCR, consistent with AEMO's 2023 Inputs, Assumptions and Scenarios Consultation Report (IASR).<sup>15</sup> The RIT-T requires that sensitivity testing be conducted on the discount rate and that the regulated weighted average cost of capital (WACC) be used as the lower bound. We have therefore tested the sensitivity of the Central scenario results to a lower bound discount rate of 3.3 per cent.<sup>16</sup> We have also adopted an upper bound discount rate of 10.5 per cent (i.e., AEMO's 2023 Inputs, Assumptions and Scenarios Report).<sup>17</sup> We also tested the sensitivity of the Central scenario results including in relation to the capital costs, operating and maintenance costs and VCRs.

### 6.3 Approach to estimating option costs

We have estimated the capital costs of the options based on the scope of works necessary together with costing experience from previous projects of a similar nature.

The cost estimates are developed using our 'MTWO' cost estimating system. This system utilises historical average costs, updated by the costs of the most recently implemented project with similar scope. All

<sup>15</sup> AEMO '2023 Inputs, Assumptions and Scenarios Report', July 2023, p 123.

<sup>16</sup> This is equal to WACC (pre-tax, real) in the latest final decision for a transmission business in the NEM (TasNetworks) as of the date of this analysis, see: <https://www.aer.gov.au/industry/registers/determinations/tasnetworks-determination-2024-29/final-decision>

<sup>17</sup> AEMO '2023 Inputs, Assumptions and Scenarios Report', July 2023, p 123.

estimates in MTWO are developed to deliver a 'P50' portfolio value for a total program of works (i.e., there is an equal likelihood of over- or under-spending the estimate total).<sup>18</sup>

We estimate that actual costs will be within +/- 25 per cent of the central capital cost estimate. An accuracy of +/-25 per cent for cost estimates is consistent with industry best practice and aligns with the accuracy range of a 'Class 4' estimate, as defined in the Association for the Cost Engineering classification system.

All cost estimates are prepared in real, 2024-25 dollars based on the information and pricing history available at the time that they were estimated. The cost estimates do not include or forecast any real cost escalation for materials.

On 21 November 2024, the requirements set out in the Australian Energy Regulator's Regulatory Investment Test for Transmission (RIT-T) Application Guidelines were amended. The amended guidelines now expect a RIT-T proponent to explicitly consider community engagement and social licence during the RIT-T process.

The amended guidelines mean that Transgrid must consider social licence principles in the identification of credible options. This may affect how we determine the most likely cost and delivery timeline for an option.

Transgrid believes building relationships and trust is how we can gain and grow social licence. Through engagement with affected communities, we identify prudent and efficient investment opportunities that can build and gain community acceptance for our options. Costs associated with social licence include those associated with engagements, community benefits, minor route adjustments and legislated additional landholders' payments, as applicable.

We acknowledge this important change to the RIT-T guidelines. However, due to nature of these works being an augmentation to infrastructure within an existing substation, and therefore low impact on community, we do not anticipate the need to provide additional costs to address social licence considerations (as outlined in section 3.5).

Routine operating and maintenance costs are based on works of similar nature.

## 6.4 Approach to estimating VCR

We have applied a NSW-wide VCR value based on the estimates developed and consulted on by the AER.<sup>19</sup> Since we are only assessing one credible option, the value of the VCR is not considered to be material to this RIT-T, i.e., it does not have any impact on the identification of the preferred option.

The estimated VCR for 2025 is \$51.93/kWh.

## 6.5 The options have been assessed against three reasonable scenarios

The RIT-T must include any of the ISP scenarios from the most recent IASR that are relevant unless:<sup>20</sup>

<sup>18</sup> For further detail on our cost estimating approach refer to section 7 of our [Augmentation Expenditure Overview Paper](#) submitted with our 2023-28 Revenue Proposal.

<sup>19</sup> AER, *Values of Customer Reliability, Final Report on VCR Values*, December 2019. Escalated to September 2024 values using ABS CPI inflation data.

<sup>20</sup> AER, *Regulatory Investment Test for Transmission Application Guidelines*, November 2024, p. 43

the RIT-T proponent demonstrates why it is necessary to vary, omit or add a reasonable scenario to what was in the most recent IASR, and the new or varied reasonable scenarios are consistent with the requirements for reasonable scenarios set out in the RIT-T instrument.

The AER's RIT-T Guidelines clarifies that the number and choice of reasonable scenarios must be appropriate to the credible options under consideration, and that the choice of reasonable scenarios must reflect any variables or parameters that are likely to affect the ranking or sign of the net benefit of any credible option.<sup>21</sup>

For the purposes of this RIT-T, we consider that the ISP scenarios are not relevant. The key input parameter that is likely to affect the ranking or sign of the net market benefits of the credible options is expected maximum demand in the Parkes area. This input is independent from the assumptions underpinning the ISP scenarios, which are much broader in scope and do not adequately account for the highly localised identified need in this RIT-T. It follows that adopting the ISP scenarios would not be consistent with adopting scenarios that reflect parameters that could reasonably change the ranking or sign of the net market benefits of the credible options.

In line with the RIT-T Guideline, we have constructed reasonable alternative scenarios. To do this, we developed a **Central Scenario** which reflects our best estimate of each of the modelling parameters, including maximum demand, and capital and operating costs. This was based on local demand forecasts provided by Essential Energy that are able to capture the significant growth in demand driven by the SAP and the Sunrise Energy Metals.

As indicated above, we consider that the key input parameter that is likely to affect the ranking or sign of the net market benefits is the maximum demand in the Parkes area. We do not consider that variations in other parameters of the Central Scenario are likely to affect the outcome of the RIT-T assessment. In view of this, we have developed additional reasonable scenarios that reflect variations in maximum demand while holding other parameters the same as the Central Scenario.

In summary, we have developed the following scenarios:

- 'Central scenario' - assumes POE50 demand to be able to reflect our best estimate of maximum demand in the Parkes area.
- 'Low demand' scenario - assumes POE90 demand estimates to investigate a lower bound of maximum demand in the Parkes area.
- 'High demand' scenario - assumes POE10 demand estimates to investigate an upper bound of maximum demand in the Parkes area.

We note that in all three scenarios above, we have made the conservative assumption to exclude the anticipated load from Sunrise Energy Metals. This is because it has not been confirmed at this stage. In the subsequent sensitivity analysis, we assess the NPV results of the credible option with the Sunrise Energy Metals load included.

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<sup>21</sup> AER, *Regulatory Investment Test for Transmission Application Guidelines*, November 2024, p. 44

The NPV results in this PSCR are reported for each scenario, as well as on a weighted basis. As we have no evidence or rationale for assigning a higher probability for one reasonable scenario over another, we have weighted each reasonable scenario equally.<sup>22</sup>

A summary of the key variables in each scenario is presented in the table below.

Table 6-1 Summary of scenarios

Variable / Scenario	Central scenario	Low demand scenario	High demand scenario
Scenario weighting	1/3	1/3	1/3
Discount rate	7.00%	7.00%	7.00%
Value of Customer Reliability (VCR) (\$2024-25 m)	\$51.93/kWh	\$51.93/kWh	\$51.93/kWh
Minimum demand forecast	ParkeS SAP POE50	ParkeS SAP POE90	ParkeS SAP POE10
Network capital costs	Base estimate	Base estimate	Base estimate
Operating and maintenance costs	Base estimate	Base estimate	Base estimate
Avoided load shedding	Base estimate	Low demand forecast	High demand forecast

In addition to the scenario analysis, we undertook sensitivity analysis on key variables under the Central scenario, including in relation to capital costs, the discount rate, and the inclusion of Sunrise Energy Metals.

<sup>22</sup> As per: AER, *Regulatory Investment Test for Transmission Application Guidelines*, November 2024, p. 56-57



## 7. Assessment of credible options

This section outlines the assessment Transgrid has undertaken of the credible options. The assessment compares the costs and benefits of the option to a base case 'do nothing' option, where no network development is undertaken to address the identified need and electricity supply in the Parkes area will continue to be supplied by the existing capacity of the Parkes BSP.

### 7.1 Estimated gross benefits

The table below summarises the gross benefit estimated for each of the options relative to the base case in present value terms for the assessment period. The sole benefit included in this assessment is avoided involuntary load shedding.

Table 7-1 PV of gross economic benefits relative to the base case (\$2024-25 m)

Option	Central scenario	Low demand scenario	High demand scenario	Weighted scenario
<i>Scenario weighting</i>	1/3	1/3	1/3	
Option 1	26,024	23,421	26,358	25,268

### 7.2 Estimated costs

The table below summarises the capital costs, and the operating and maintenance costs, of each option relative to the base case in present value terms for the assessment period.

Table 7-2 PV of capital and operating costs relative to the base case (\$2024-25 m)

Option	Central scenario	Low demand scenario	High demand scenario	Weighted scenario
<i>Scenario weighting</i>	1/3	1/3	1/3	
Option 1	9.60	9.60	9.60	9.60

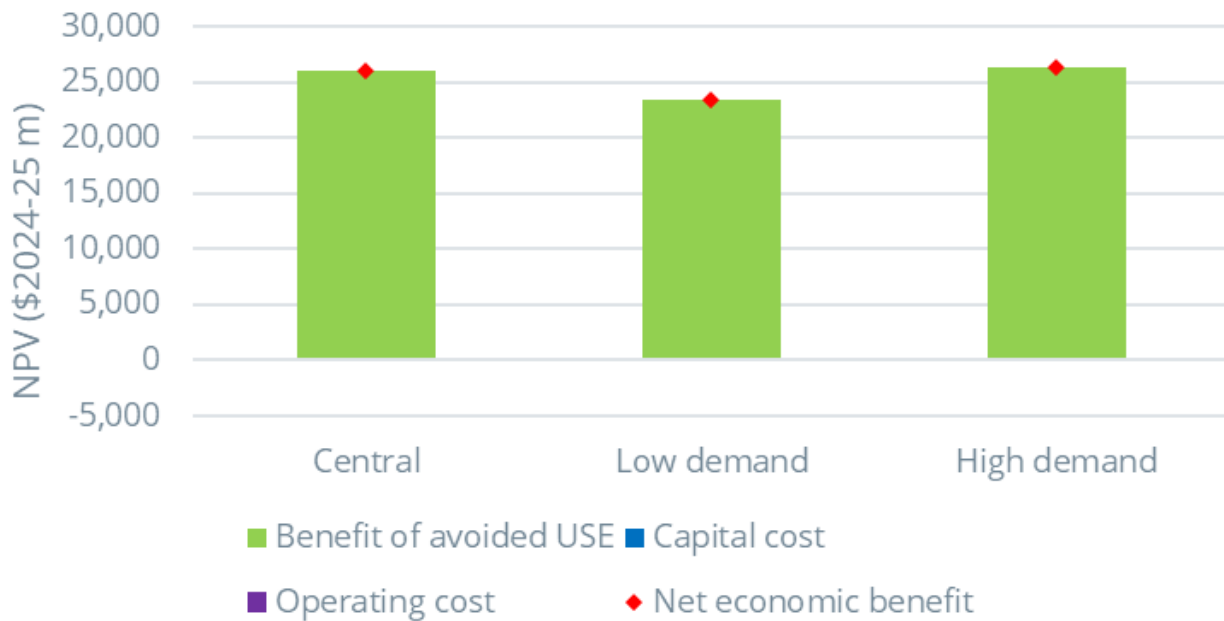
### 7.3 Estimated net economic benefits

The net economic benefits are the estimated gross benefits less the estimated costs. The table below summarises the present value of the net economic benefits for each credible option across the three scenarios, and on a weighted basis. Since we only identified one credible option, Option 1 has the greatest net market benefits and is therefore our preferred option.

Table 7-3 PV of net economic benefits relative to the base case (\$2024-25 m)

Option	Central scenario	Low demand scenario	High demand scenario	Weighted scenario
<i>Scenario weighting</i>	1/3	1/3	1/3	
Option 1	26,016	23,413	26,348	25,259

Figure 7-1 PV of net economic benefits (\$2024-25 m)



The substantial size of each scenario’s avoided involuntary load shedding benefit can be attributed to the base case not meeting any commercial and industrial forecast load in the Parkes area due to the absence of a switchbay.

Overall, the figure above shows that Option 1 has a positive net economic benefit in all demand scenarios.

## 7.4 Sensitivity testing

We have considered the robustness of the RIT-T assessment by undertaking a range of sensitivity testing. The purpose of this testing is to examine how the net economic benefit of the credible options changes with respect to changes in key modelling assumptions. The factors tested as part of the sensitivity analysis for this PSCR are:

- Scenario weights
- Higher or lower VCRs
- Higher or lower network capital costs of the credible options
- Higher or lower operating and maintenance costs of the credible options
- Alternate commercial discount rate assumptions
- Inclusion of Sunrise Energy Metals.

The sensitivity testing was undertaken against the Central scenario. Specifically, we individually varied each factor identified above and estimated the net economic benefit in that scenario relative to the base case while holding all other assumptions under the Central scenario constant. The results of the sensitivity tests are set out in the sections below.

### 7.4.1 Scenario weights

Option 1 has positive net economic benefits in all three scenarios. Therefore, there is no reasonable combination of scenario weights that would change the RIT-T outcome.

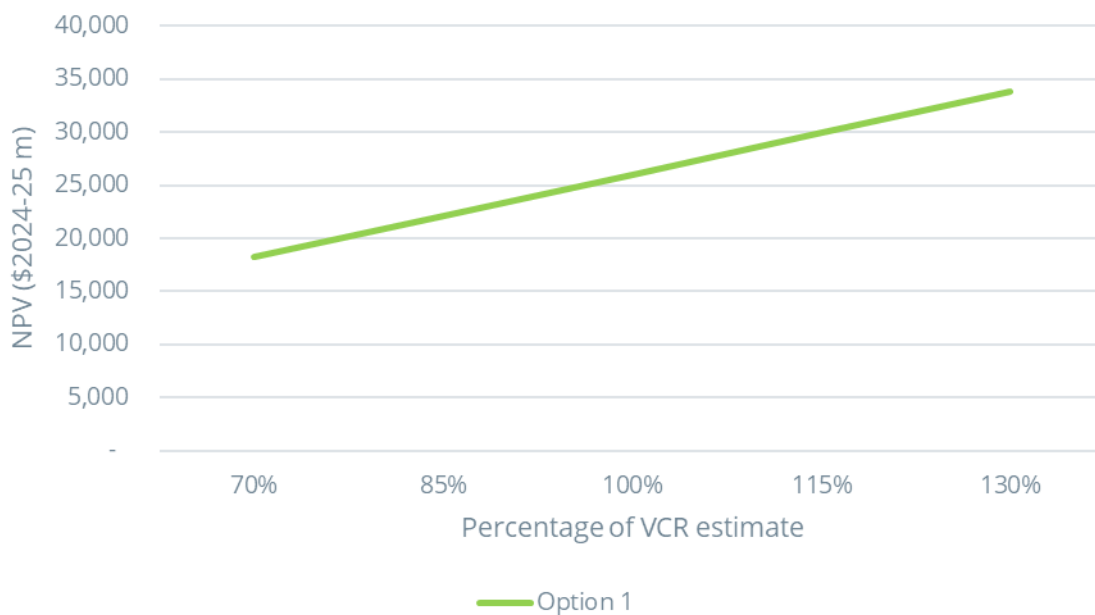
### 7.4.2 Value of customer reliability

We estimated the net economic benefit of each option by adopting a VCR that is 30% higher (the 'High VCR' scenario) and 30% lower (the 'Low VCR' scenario) than the estimate of VCR adopted in our Central scenario. The results of this analysis are presented in the table and figure below.

Table 7-4 PV of net economic benefits relative to the base case under a lower and higher VCR (\$2024-25 m)

Option/scenario	Low VCR	High VCR	Ranking
<i>Sensitivity</i>	<i>Central estimate - 30%</i>	<i>Central estimate + 30%</i>	
Option 1	18,209	33,823	1

Figure 7-2 PV of net economic benefits relative to the base case under a lower and higher VCR (\$2024-25 m)



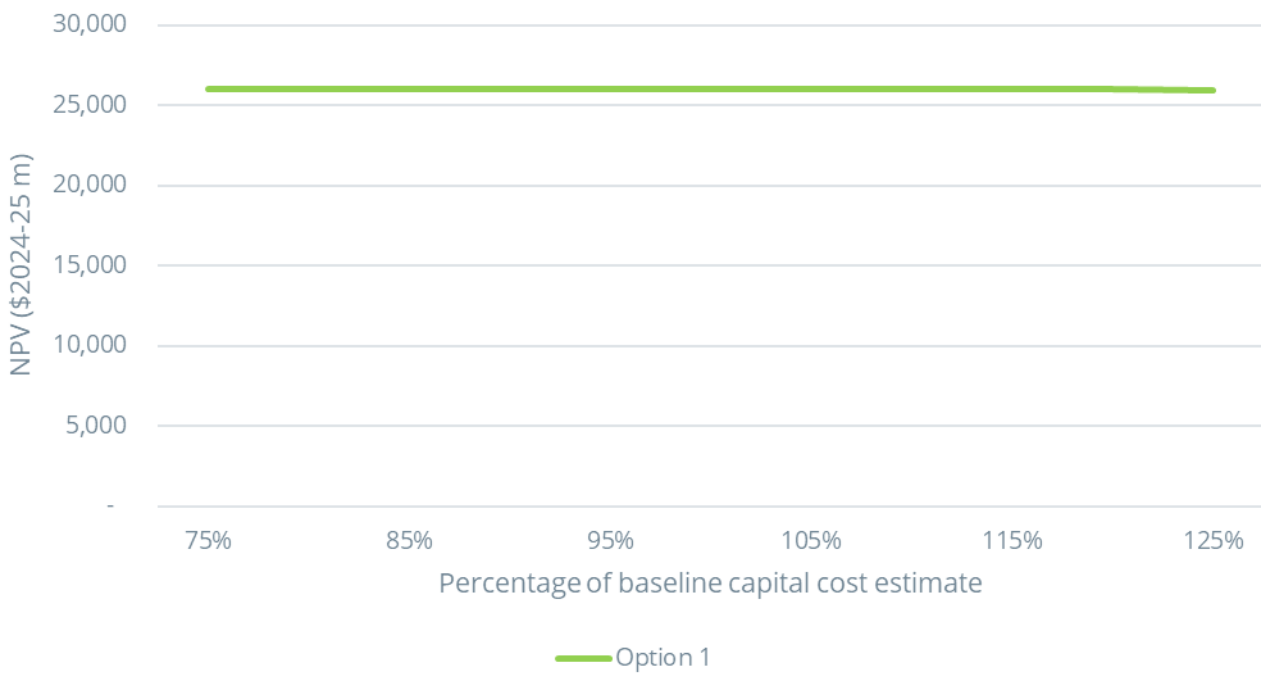
### 7.4.3 Network capital costs

We estimated the net economic benefit of each option by adopting capital costs for each option that are 25% higher (the 'High capex' scenario) and 25% lower (the 'Low capex' scenario) than the capital cost estimates in our Central scenario. Given that the capital costs are relatively minor compared to the benefits, the overall net economic benefits are insensitive to changes in capital costs. The results of this analysis are presented in the table and figure below.

Table 7-5 Net economic benefits relative to the base case under lower and higher capital costs (\$2024-25 m)

Option/scenario	Low capex	High capex	Ranking
<i>Sensitivity</i>	<i>Central estimate - 25%</i>	<i>Central estimate + 25%</i>	
Option 1	26,018	26,014	1

Figure 7-3 Net economic benefits relative to the base case under lower and higher capital costs (\$2024-25 m)



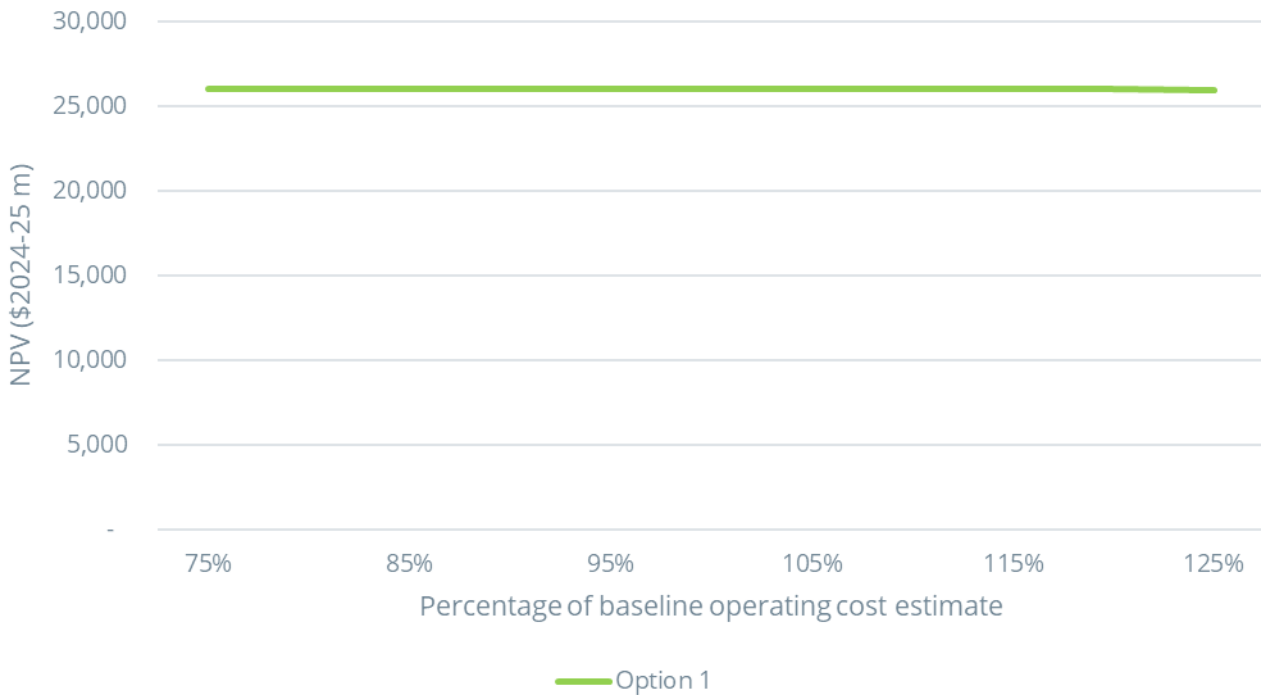
#### 7.4.4 Operating and maintenance costs

We estimated the net economic benefit of each option by adopting operating and maintenance costs for each option that are 25% higher (the 'High opex' scenario) and 25% lower (the 'Low opex' scenario) than the operating and maintenance cost estimates in our Central scenario. Given that the operating and maintenance costs are relatively minor compared to the benefits, the overall net economic benefits are insensitive to changes in operating and maintenance costs. The results of this analysis are presented in the table and figure below.

Table 7-6 Net economic benefits relative to the base case under lower and higher operating and maintenance costs (\$2024-25 m)

Option/scenario	Low opex	High opex	Ranking
<i>Sensitivity</i>	<i>Central estimate - 25%</i>	<i>Central estimate + 25%</i>	
Option 1	26,016	26,015	1

Figure 7-4 : Net economic benefits relative to the base case under lower and higher operating and maintenance costs (\$2024-25 m)



### 7.4.5 Discount rate

We estimated the net economic benefit of each option by adopting a low discount rate of 3.3% (the ‘Low discount rate’ scenario) and a high discount rate of 10.5% (the ‘High discount rate’ scenario). The results of this analysis are presented in the table and figure below.

Table 7-7 Net economic benefits relative to the base case under a lower and higher discount rates (\$2024-25 m)

Option/scenario	Low discount rate	High discount rate	Ranking
<i>Sensitivity</i>	3.3%	10.5%	
Option 1	41,951	17,362	1

Figure 7-5 Net economic benefits relative to the base case under a lower and higher discount rates (\$2024-25 m)

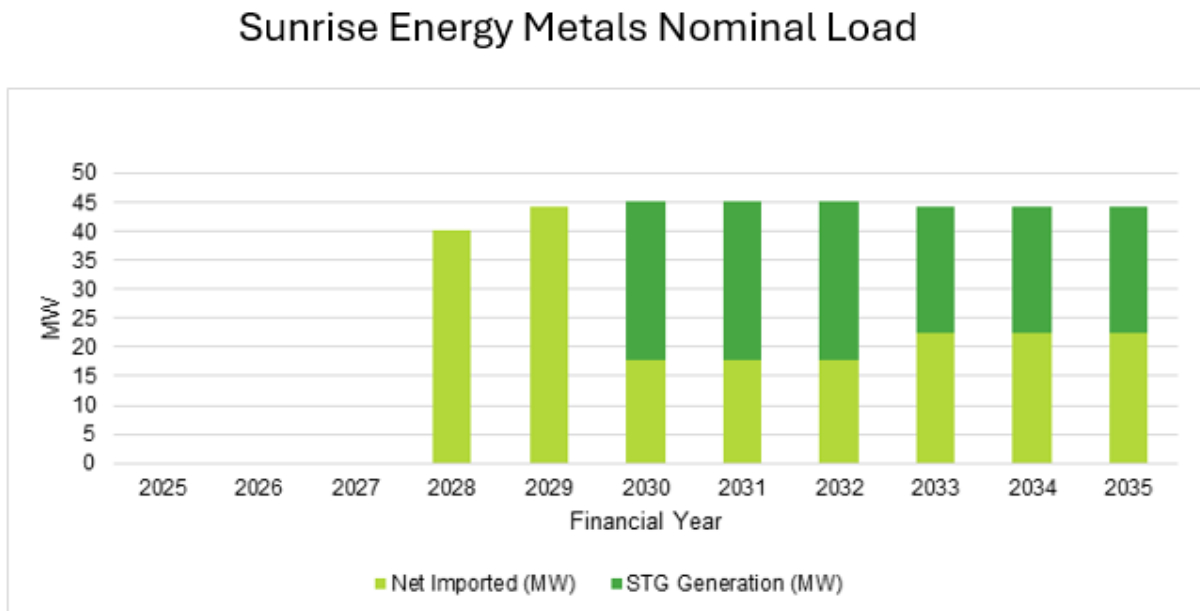


#### 7.4.6 Inclusion of the Sunrise Energy Metals Load

In our base case analysis above, we have excluded the load from the Sunrise Energy Metals as it is still in the anticipated stage. In this section, we perform a sensitivity analysis to test how the net economic benefits would change after including the unserved energy from Sunrise Energy Metals. We note that the proposed option to alleviate the identified need has the capacity to account for the Sunrise Energy Metals load.

Sunrise Energy Metals expects to generate a portion of its load on-site, with on-site generation coming online in 2028. The expected load from the Sunrise Energy Metals is set out in Figure 7-6 below.

Figure 7-6 : Expected load from Sunrise Energy Metals<sup>23</sup>



We have calculated the present value of the net economic benefits across the same three demand scenarios used in the base case but also include the medium expected Sunrise Energy Metals load imported from the grid. The results of this analysis are presented in the table below. The inclusion of the load from the Sunrise Energy Metals has the effect of increasing the value of unserved energy, driving up the net economic benefits in all three scenarios. In all three scenarios, the net economic benefits remain positive.

Table 7-8 PV of net economic benefits after including the central forecasted Sunrise Energy Metals load in each demand scenario (\$2024-25 m)

Option	Central Scenario with Sunrise Energy Metals	Low demand scenario with Sunrise Energy Metals	High demand scenario with Sunrise Energy Metals	Weighted scenario
<i>Scenario weighting</i>	1/3	1/3	1/3	
Option 1	52,260	49,658	52,593	51,504

#### 7.4.7 Threshold analysis

We have also undertaken a threshold analysis to identify whether a change in the discount rate would change the RIT-T outcome. Our approach involved solving for the discount rate that would result Option 1 not being the preferred option. Our results suggest that there is no reasonable discount rate that would change the RIT-T outcome.

<sup>23</sup> Forecast load prepared by the proponent.



## 8. Draft conclusion and exemption from preparing a PADR

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Implementation of Option 1, which involves installing a new 132 kV switchbay and a bus section CB at Transgrid's Parkes 132 kV/66 kV substation, is the preferred option at this stage of the RIT-T process.

The capital cost of this option is approximately \$9.61m (in \$2024-25). The work will be undertaken over a three-year period with all works expected to be completed by 2026/27. Routine operating and maintenance costs are estimated at approximately \$100,000 per annum (in \$2024-25).

Subject to the identification of additional credible options during the consultation period, publication of a Project Assessment Draft Report (PADR) is not required for this RIT-T as we consider that the conditions in clause 5.16.4(z1) of the NER exempting RIT-T proponents from providing a PADR have been met.

Specifically, production of a PADR is not required because:

- the estimated capital cost of the preferred option is less than \$54 million;<sup>24</sup>
- we have identified in this PSCR our preferred option and the reasons for that option, and noted that we will be exempt from publishing the PADR for our preferred option; and
- we consider that the preferred option and any other credible options do not have a material market benefit (other than benefits associated with changes in voluntary load curtailment and involuntary load shedding).

If an additional credible option that could deliver a material market benefit is identified during the consultation period, then we will produce a PADR that includes an NPV assessment of the net economic benefit of each additional credible option.

If no additional credible options with material market benefits are identified during the consultation period, then the next step in this RIT-T will be the publication of a PACR that addresses all submissions received, including any issues in relation to the proposed preferred option raised during the consultation period.<sup>25</sup>

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<sup>24</sup> Varied from \$46m to \$54m based on the [AER Final Determination: Cost threshold review](#), November 2024.

<sup>25</sup> In accordance with NER clause 5.16.4(z2).

## Appendix A Compliance checklist

This appendix sets out a checklist which demonstrates the compliance of this PSCR with the requirements of the National Electricity Rules version 222.

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;	2
	(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);	2
	(3) the technical characteristics of the identified need that a non-network option would be required to deliver, such as: <ul style="list-style-type: none"> <li>(i) the size of load reduction of additional supply;</li> <li>(ii) location; and</li> <li>(iii) operating profile;</li> </ul>	4
	(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 Integrated System 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, alternative transmission options, interconnectors, generation, system strength services, demand side management, market network services or other network options;	3
	(6) for each credible option identified in accordance with subparagraph (5), information about: <ul style="list-style-type: none"> <li>(i) the technical characteristics of the credible option;</li> <li>(ii) whether the credible option is reasonably likely to have a material inter-network impact;</li> <li>(iii) the classes of market benefits that the RIT-T proponent considers are likely not to be material in accordance with clause 5.15A.2(b)(6), together with reasons of why the RIT-T proponent considers that these classes of market benefits are not likely to be material;</li> <li>(iv) the estimated construction timetable and commissioning date; and</li> <li>(v) to the extent practicable, the total indicative capital and operating and maintenance costs.</li> </ul>	3 & 5

In addition, the table below outlines a separate compliance checklist demonstrating compliance with the binding guidance in the latest AER RIT-T guidelines.

Guidelines section	Summary of the requirements	Section in the PSCR
3.5A.1	<p>Where the estimated capital costs of the preferred option exceeds \$103 million (as varied in accordance with a cost threshold determination), a RIT-T proponent must, in a RIT-T application:</p> <ol style="list-style-type: none"> <li>i. outline the process it has applied, or intends to apply, to ensure that the estimated costs are accurate to the extent practicable having regard to the purpose of that stage of the RIT-T</li> <li>ii. for all credible options (including the preferred option), either           <ul style="list-style-type: none"> <li>• apply the cost estimate classification system published by the AACE, or</li> <li>• if it does not apply the AACE cost estimate classification system, identify the alternative cost estimation system or cost estimation arrangements it intends to apply, and provide reasons to explain why applying that alternative system or arrangements is more appropriate or suitable than applying the AACE cost estimate classification system in producing an accurate cost estimate</li> </ul> </li> </ol>	NA
3.5A.2	<p>For each credible option, a RIT-T proponent must specify, to the extent practicable and in a manner which is fit for purpose for that stage of the RIT-T:</p> <ol style="list-style-type: none"> <li>i. all key inputs and assumptions adopted in deriving the cost estimate</li> <li>ii. a breakdown of the main components of the cost estimate</li> <li>iii. the methodologies and processes applied in deriving the cost estimate (e.g. market testing, unit costs from recent projects, and engineering-based cost estimates)</li> <li>iv. the reasons in support of the key inputs and assumptions adopted and methodologies and processes applied</li> <li>v. the level of any contingency allowance that have been included in the cost estimate, and the reasons for that level of contingency allowance</li> </ol>	6.3
3.5.3	<p>The RIT-T proponent is required to provide the basis for any social licence costs in their RIT-T reports and may choose to refer to best practice from a reputable, independent and verifiable source.</p>	6.3
3.8.2	<p>Where the estimated capital cost of the preferred option exceeds \$103 million (as varied in accordance with an applicable cost threshold determination), a RIT-T proponent must undertake sensitivity analysis on all credible options, by varying one or more inputs and/or assumptions.</p>	NA
3.9.4	<p>If a contingency allowance is included in a cost estimate for a credible option, the RIT-T proponent must explain:</p> <ul style="list-style-type: none"> <li>• the reasons and basis for the contingency allowance, including the particular costs that the contingency allowance may relate to, and</li> <li>• how the level or quantum of the contingency allowance was determined.</li> </ul>	NA

4.1	<p>RIT-T proponents are required to describe in each RIT-T report</p> <ul style="list-style-type: none"> <li>• how they have engaged with local landowners, local council, local community members, local environmental groups or traditional owners and sought to address any relevant concerns identified through this engagement</li> <li>• how they plan to engage with these stakeholder groups, or</li> <li>• why this project does not require community engagement</li> </ul>	3.5
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