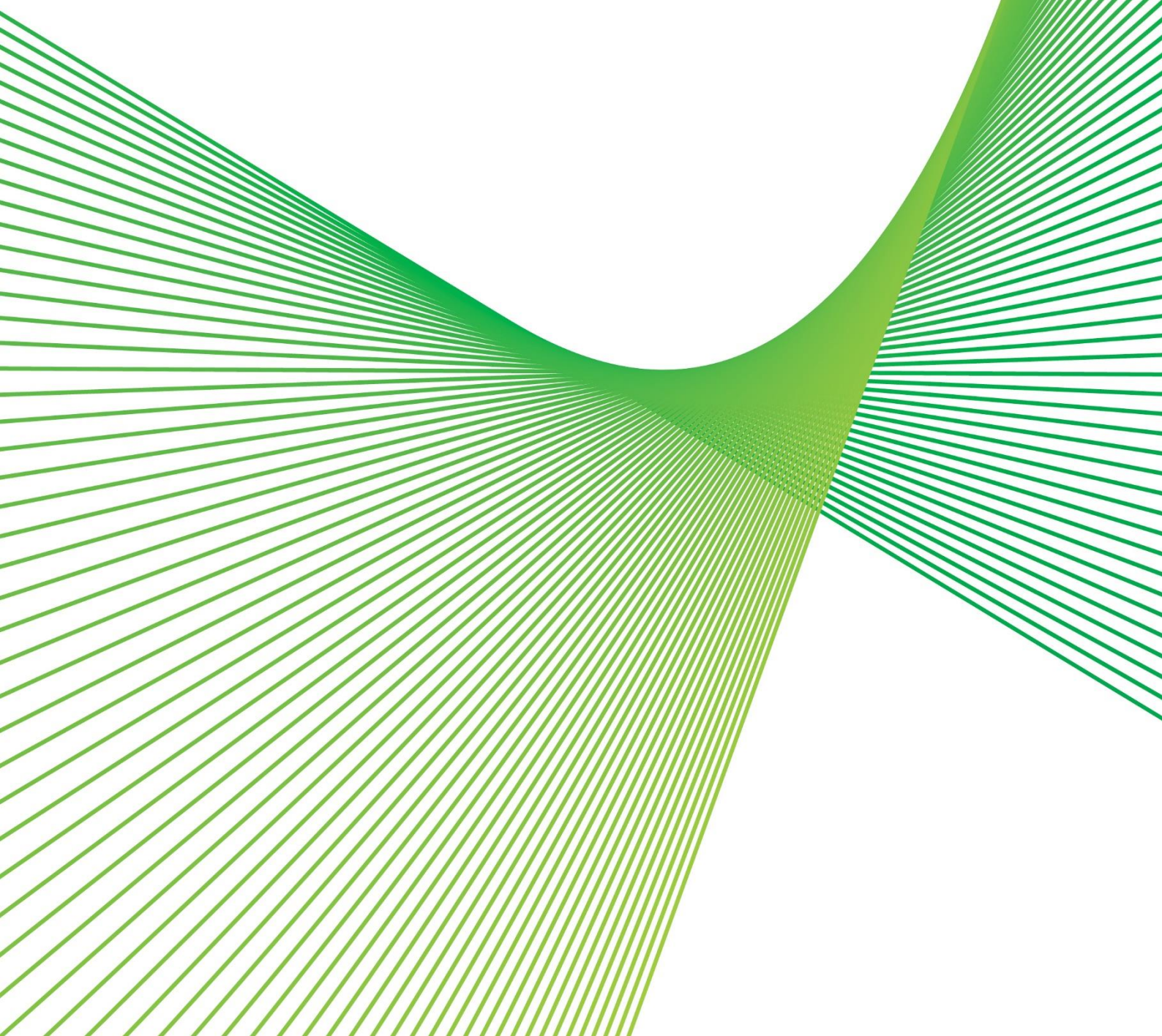


Summary: Meeting demand growth and reliability requirements in the Parkes area

RIT-T Project Assessment Conclusions Report

Area: Central West NSW

Date of issue: 27 March 2025



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Summary

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 Assessment Conclusions Report (PACR) is the final 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 32 MW by 2035.
- **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, to be supplied at 132 kV. 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).

No submissions received in response to the Project Specification Consultation Report

We published a Project Specification Consultation Report (PSCR) on 19 December 2024 and invited written submissions on the material presented within the document. No submissions were received in response to the PSCR.

No material developments since publication of the PSCR

No additional credible options were identified during the consultation period following publication of the PSCR. In addition, no material changes have occurred since the PSCR that have made an impact on the preferred option.

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.¹ 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

No submissions received in relation to non-network options

In the PSCR, we noted that 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 because the extent of unserved energy and the relatively low cost of the preferred network option suggested that non-network options at the scale required are unlikely to be cost competitive compared to network options. We invited parties to make written submissions regarding the potential of non-network options to satisfy, or contribute to satisfying, the identified need for this RIT-T. No submissions were received in response to the PSCR in relation to non-network options.

¹ As per clause 5.15.2(a) of the NER.

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.²

On a weighted basis, where each scenario is weighted equally, Option 1 achieves net economic benefits of approximately \$16,218 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 \$32,157 million (in \$2024/25). We note that the net benefit is lower than what we published in the PSCR (though still positive). This is because we have updated our value of customer reliability (VCR) to reflect the new estimates published by the AER as part of its 2024 VCR review.³ On a statewide basis, the VCR values are lower than what we had used in the PSCR.

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.

Conclusion

This PACR 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).

Next steps

This PACR represents the final step of the consultation process in relation to the application of the RIT-T process undertaken by Transgrid. It follows a PSCR released on 19 December 2024. No submissions were received in response to the PSCR.

The second step of the RIT-T process, production of a Project Assessment Draft Report (PADR), was not required as Transgrid 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

² The sensitivity results which include the load for Sunrise Energy Metals are not part of the EUE values provided in Figure 2-3

³ See: <https://www.aer.gov.au/industry/registers/resources/reviews/values-customer-reliability-2024>.

- 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.

Parties wishing to raise a dispute notice with the AER may do so prior to 6 May 2025 (30 days after publication of this PACR). Any dispute notices raised during this period will be addressed by the AER within 40 to 100 days, after which the formal RIT-T process will conclude. Further details on the RIT-T can be obtained from Transgrid's Regulation team via regulatory.consultation@transgrid.com.au. In the subject field, please reference 'Supply to Parkes area PACR'.