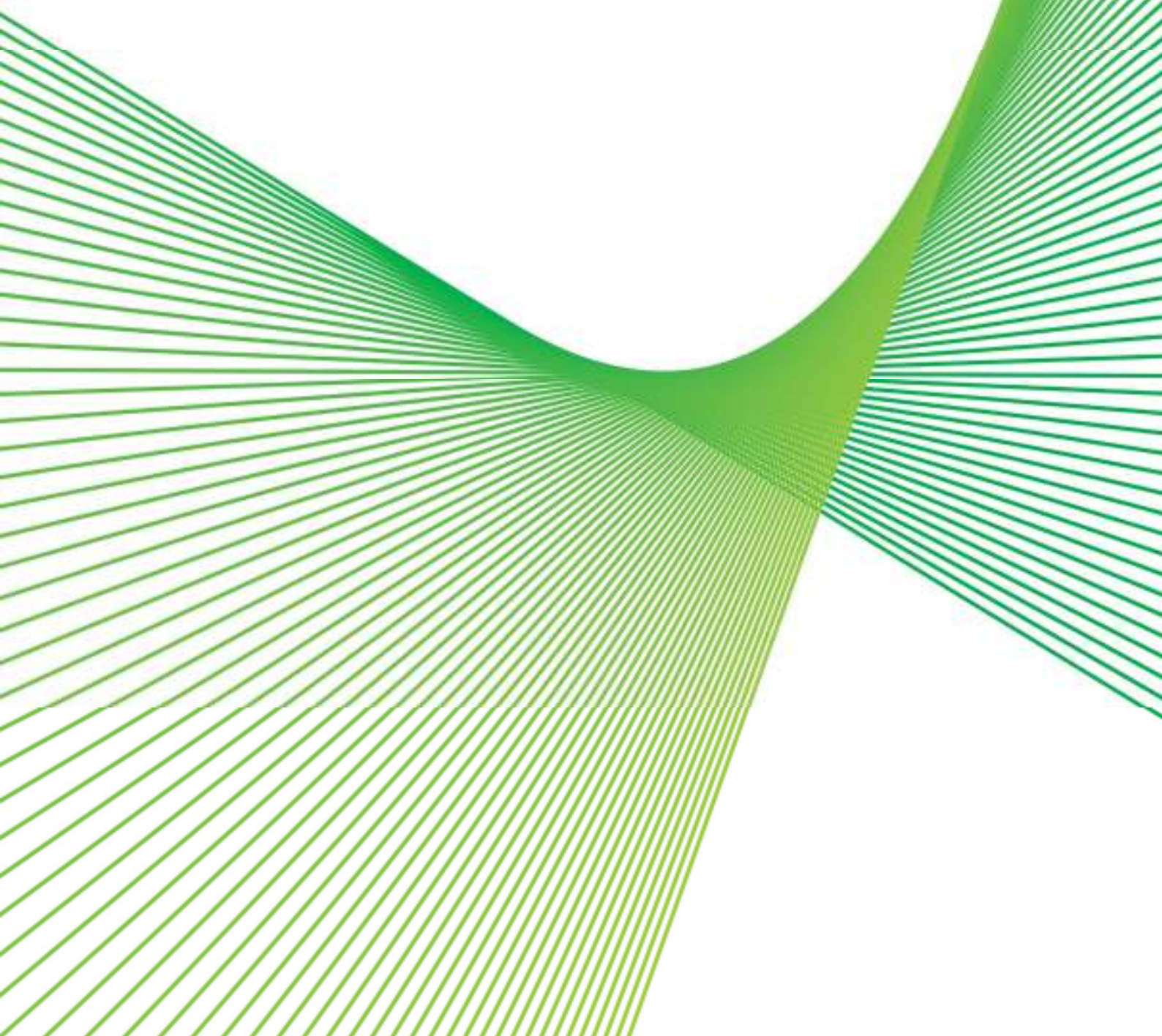


Summary: Meeting demand growth and reliability requirements in the Parkes area

RIT-T Project Specification Consultation Report

Area: Central West NSW

Date of issue: 19 December 2024



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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 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 MW², 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.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

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 **Error! Reference source not found.**, 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 **Error! Reference source not found.**

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.

¹ 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.² 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.

² 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.