



Maintaining Reliability of Supply and Addressing Condition Risks at Townsville South and Townsville East

Summary Project Specification Consultation Report



Summary

Identified Need

Townsville South Substation was established in 1977 to provide an injection point into the Ergon Energy distribution network (part of the Energy Queensland Group) to supply power to southern and eastern Townsville. The substation is also a transfer point for enabling the flow of electricity between Clare to the south and Townsville to the north. Townsville East Substation was established in 2008 to supply Townsville central business district and port. Planning studies confirm there is an enduring need for both Townsville South and Townsville East Substations to maintain the supply of electricity to the Townsville area and meet legislative requirements.

The secondary systems at these substations have been identified as being in poor condition or at the end of their technical service lives with identified obsolescence issues and condition risks.

Secondary systems are the control, protection and communications equipment that are necessary to operate the transmission network and prevent damage to primary systems when faults on the network occur. Under the National Electricity Rules (NER), Powerlink is required to provide sufficient secondary systems, including redundancy, to ensure the transmission system is adequately protected.

Powerlink must therefore take action to avoid the increasing likelihood of loss of power arising from failure of the aging secondary systems equipment at Townsville South and Townsville East Substations. In doing so, this ensures customers are provided with a reliable and safe supply of electricity.

Powerlink is required to apply the Regulatory Investment Test for Transmission

The estimated capital cost of the most expensive credible option to address this need meets the minimum threshold (currently \$8 million) to apply the Regulatory Investment Test for Transmission (RIT-T). As the identified need for the proposed investment is to meet reliability and service standards specified within Powerlink's Transmission Authority, guidelines and standards published by the Australian Energy Market Operator (AEMO), and Powerlink's ongoing compliance with Schedule 5.1 of the NER, it is classified as a reliability corrective action under the NER. The preferred option may therefore have a net economic cost.

Powerlink will adopt the expedited process for this RIT-T, as the estimated capital cost of the preferred option is below \$54 million – the upper threshold for applying the expedited process. The credible options are unlikely to result in any material market benefits other than those arising from a reduction in involuntary load shedding. This is included in the monetised risk modelling and represented in the economic analysis of the options.

Powerlink has developed a non-credible base case against which to compare credible options

Powerlink has modelled a non-credible option where the asset condition issues are managed via operational maintenance or operational measures only. This would result in an increase in overall risk levels due to continuing deterioration of asset condition and increasing failure rectification timeframes due to obsolescence issues. These increasing risk levels are assigned a monetary value and added to the ongoing maintenance costs to form the base case.

Powerlink has developed one credible network option to address the identified need

The table below details the credible network option and shows that it has a positive Net Present Value (NPV) relative to the base case.

Summary of Credible Option

Option	Description	Total Costs (\$m, 2026)	NPV relative to non-credible base case (\$m)	Ranking
1	Replace all secondary systems within the existing control building at Townsville East by June 2028.	7.76	190.75	1
	Replace all secondary systems within the existing control building at Townsville South by June 2028.	15.60		

Note: Total costs exclude risk and contingency.

Powerlink welcomes the potential for non-network options to form part or all of the solution

Powerlink welcomes submissions from proponents who consider they could offer a potential non-network option that is both economically and technically feasible, on an ongoing basis.

For Townsville South substation, to mitigate the impact of a single 132 kilovolt feeder outage, a non-network solution would need to provide supply to major customers in the area of up to a peak of 70 megawatts (MW), and up to a peak of 1160 megawatt hours (MWh) per day on a continuous basis. To maintain supply to major customers in the area and the Ergon Energy distribution network, a non-network solution would need to provide up to a peak of 150MW, and up to a peak of 2,700MWh per day on a continuous basis.

For Townsville East substation, to maintain supply to the Ergon Energy distribution network, a non-network solution would need to provide up to a peak of 52MW, and up to a peak of 379MWh per day on a continuous basis.

Lodging a submission with Powerlink

Powerlink seeks written submissions on this Project Specification Consultation Report (PSCR), on or before **22 October 2026**, particularly on the credible option presented in this PSCR. Submissions should be addressed to:

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