



Powerlink Queensland

# Summary of Project Specification Consultation Report

26 September 2018

## **Maintaining reliability of supply to the Rockhampton area**

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## Summary

The Egans Hill to Rockhampton transmission line is a 132kV double circuit line commissioned in 1963 that forms part of the connection between Powerlink's Bouldercombe and Rockhampton substations. It provides a critical link into the Rockhampton Substation which is a major injection point for the Rockhampton and surrounding area distribution network.

Under the Electricity Act 1994, Powerlink is required to operate, maintain (including repair and replace if necessary) and protect its transmission grid to ensure the adequate, economic, reliable and safe transmission of electricity. The transmission line between Egans Hill and Rockhampton is nearing the end of its technical service life, with the majority of structures on the transmission line having reached the end of their technical service life and exhibiting signs of degradation.

Specifically, loss of the galvanising on members, the onset of early corrosion to nuts, bolts and hardware, and the decay of grillage foundations, all increase the risk of mechanical failure of components of the transmission line, particularly in storm and cyclonic conditions.

The condition of the transmission line between Egans Hill and Rockhampton presents Powerlink with a range of safety, reliability of supply and compliance risks requiring resolution.

### Powerlink is required to apply the RIT-T to this investment

This investment is driven by an obligation in the Rules, and is classified as a 'reliability corrective action' under the RIT-T.

### Four credible options have been identified to address the identified need

Table 1: Summary of credible options

Option	Description	Indicative capital cost (\$million, 2018/19)	Indicative annual O&M costs (\$million, 2018/19)
Base Option: Partial refit by December 2020. Rebuild by December 2030	Minimalist refit of line without painting by December 2020*	8.08	0.112
	Rebuild entire line by December 2030 <sup>†</sup>	24.85	
Option 1: Staged life extension by December 2020 and December 2030. Rebuild by December 2044	Refit and paint northern section of the line by December 2020*	9.98	0.071
	Refit without painting the southern section by December 2020*		
	Minimalist refit and paint of the southern section by December 2030 <sup>†</sup>	2.30	
Option 2: Life extension by December 2020. Rebuild by December 2044.	Rebuild entire line by December 2044 <sup>†</sup>	24.85	
	Refit and paint entire line by December 2020*	12.48	0.041
Option 3: Partial rebuild and life extension by December 2020. Rebuild of balance by December 2044.	Rebuild southern section of the line by December 2020*	14.49	0.015
	Refit and paint northern section of the line by December 2020*		
	Rebuild northern section of line by December 2044 <sup>†</sup>	16.02	

\* Proposed RIT-T project

<sup>†</sup> Modelled project

The Base Option reflects a conventional approach to ensuring continued compliance with the Rules' obligations and has been selected to serve as the basis of comparison between options. The current line would be partially refitted by 2020, maintained for 10 years and then replaced with a new line in 2030.

This option has then been compared with three other options where rebuilding of the complete line is deferred until 2044 under a number of interim strategies. This latest date for the replacement of the transmission line is determined by the expected end of service life of the conductors of the transmission line.

Powerlink has also considered whether non-network options could address the identified need. A non-network option that avoids retaining the line would need to replicate the support that Rockhampton Substation provides Powerlink and Ergon Energy in meeting their obligations on an enduring basis at a cost lower than the network options under consideration.

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

### Submissions

Powerlink welcomes written submissions on this *Project Specification Consultation Report*. Submissions are particularly sought on the credible options presented.

Submissions are due on or before Monday 24 December 2018.

Please address submissions to:

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