



Powerlink Queensland

Summary of Project Assessment Conclusions Report

18 September 2018

Addressing the secondary systems condition risks at Dan Gleeson Substation

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Summary

Located in south-west Townsville, Dan Gleeson Substation is a major injection point into the Ergon Energy distribution network. Planning studies have confirmed there is an enduring need for the substation to maintain the supply of electricity in the Townsville area.

Several secondary systems at the Dan Gleeson Substation are reaching the end of their technical service life and are increasingly at risk of failure. These secondary systems are also now obsolete or becoming obsolete, i.e. they are no longer supported by the manufacturer and have no spares available.

This presents Powerlink with operational and compliance issues, requiring resolution. Since consideration for this investment is driven by an obligation in the National Electricity Rules (the Rules), it is a 'reliability corrective action' under the Regulatory Investment Test for Transmission (RIT-T).

This Project Assessment Conclusions Report (PACR) represents the final step of the RIT-T process prescribed under the Rules undertaken by Powerlink to address the condition risks arising from ageing secondary systems at Dan Gleeson Substation. It contains the results of the planning investigation and cost-benefit analysis of credible options. In accordance with the RIT-T, the credible option that maximises the present value of net economic benefits is recommended for implementation.

Credible options considered

Powerlink identified three credible network options to address the identified need, as presented in Table 1.

Table 1: Summary of credible options

Option	Description	Indicative capital cost (\$million, 2017/18)	Indicative average annual operating and maintenance costs (\$million, 2017/18)
Base option: Staged in-situ replacement	Staged replacement of obsolete secondary system components within existing panels. Stages would be completed by December 2020 and December 2025	5.6	0.017
Option 1: Full replacement	Replace all secondary systems using a modular prefabricated building with new secondary systems installed. Beginning early 2019 and completed by December 2020	5.4	0.016
Option 2: Staged full replacement	Staged replacement of secondary systems using a modular prefabricated building with new secondary systems installed. Stages would be completed by December 2020 and December 2025	6.0	0.017

Evaluation and conclusion

The RIT-T requires that the proposed preferred option maximises the present value of net economic benefit, or minimise the net cost, to all those who produce, consume and transport electricity in the market compared to other credible options.

In accordance with the expedited process for this RIT-T, the PSCR made a draft recommendation to implement Option 1, full replacement with prefabricated building by December 2020. The estimated capital cost of the proposed preferred option is \$5.4 million in 2017/18 prices. Powerlink is the proponent of the proposed network project.

There were no submissions received in response to the PSCR.

As the outcomes of the economic analysis contained in this PACR remain unchanged from those published in the PSCR, the draft recommendation has been adopted without change as the final recommendation, and will now be implemented.



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