

Network Capability Incentive Parameter Action Plan (2014-2019)

Project Number	28
Project Priority	11
Transmission Circuit / Injection Point	Waddamana-Palmerston No.2 110 kV transmission circuit
Project	Restricting P1 bay conductor at Palmerston Substation
Scope of works	Restricting P1 bay conductor at Palmerston Substation on Waddamana-Palmerston No.2 110 kV transmission circuit
Reasons to undertake project	The summer and winter rating limit of Waddamana-Palmerston No.2 110 kV transmission circuit is 725 A. The transmission circuit capability is limited to 725 A by P1 bay conductor at Palmerston Substation.
Current value of the limit	Waddamana-Palmerston No.2 110 kV transmission circuit summer and winter ratings are limited by bay conductor limit of 725 A
Target limit	Waddamana-Palmerston No.2 110 kV transmission circuit winter rating of 800 A and summer rating of 736 A
Priority project improvement target	Increase winter rating limit of Waddamana-Palmerston No.2 110 kV transmission circuit to 800 A and summer rating to 725 A
Completion date	January 2015 (Note this circuit may subsequently be affected by the Waddamana-Palmerston 220 kV Security Augmentation Project).
Capital cost	\$50k
Operating cost	\$0
Market Benefit	Removal of the bay conductor limit at Palmerston Substation to allow increased transmission circuit capability. This project increases the winter rating by 14 MVA. Increases North-South (and vice-versa) N-1 transfer capability. At 20°C these loops are limiting the line by 58 Amps, or conversely the rating at 20°C could be improved by 8%. It is estimated that this project will result in an annual market benefit of approximately \$25,000.