Network Capability Incentive Parameter Action Plan (2014-2019)

Project Number	14
Project Priority	7
Transmission Circuit / Injection Point	All Transmission circuits whose flow is controlled by AEMO constraint equations
Project	Review and optimisation of operational margins for Transend limit equations
Scope of works	The project will involve tasking a system analyst with gathering all instances of where thermal constraints have been binding or violating and then comparing the actual flows with the raw limit and determining if it is possible to relax the operating margin without unreasonably increasing the probability of exceeding the rating of the circuit. It is essentially an exercise in capturing and analysing historical data. The deliverable from this project will be the submission of an updated Transend operational margins paper to AEMO for implementation.
Reasons to undertake the project	The thermal limit equations are intended to ensure that circuits are not operated beyond their thermal rating post-contingency. The operational uncertainties that affect the thermal equations are limited flow controllability, environmental changes, and SCADA measurement errors. The default limit in all thermal constraints is 11 %
Current value of the limit	Currently the thermal limit on affected circuits is (*rating X 0.89*) The default operating margin is 11 % which is used on all circuits except for Gordon – Chapel Street 220 kV circuits which have an operational margin of 7% .
Target limit	Identify one or more circuits where operating margins can be reduced below 11 per cent.
Priority project improvement target	Medium
Completion date	June 2015
Capital cost	$0
Operational cost	$ 35K
Market benefit	On some circuits it is anticipated that up to a 2 per cent improvement will be achieved for one or more circuits (there is also a small risk that some circuits may have their margins slightly increased but this risk is small as any instances of sustained violating constraints are investigated on a monthly basis). The annualised market benefit of this project is between $79,200 and $396,000, depending on how many lines are identified for constraint optimisation.