

PROJECT DATA

Backup Network Control System Protection Scheme



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| CLIENT | Transend Networks Pty Ltd |
| PROJECT LOCATION | Palmerston, Hadspen, Sheffield, Farrell, Gordon and Hadspen substations |
| DATE OF PROJECT | 10/14/2005 - 12/1/2004 |
| SERVICES PROVIDED | <ul style="list-style-type: none">• Concept design of equipment, project management, secondary design, logic programming, procurement, assembly• Factory test, outage planning, installation and commissioning |

The backup NCSPS scheme is designed to protect Transend assets by detecting pre-determined transmission network conditions and take corrective actions that include tripping generation to maintain the reliability of the transmission network and minimise the possibility of damage to transmission network assets. In addition, the backup scheme is responsible for preserving system integrity in case of an NCSPS failure (ie. partial failure or total failure), or following a critical multiple contingency, which could significantly impinge system security.

The backup NCSPS is required to be independent from the main NCSPS to avoid common modes of failure. In some situations if the thermal overload of transmission line(s) persist after taking corrective actions (ie generator tripping), the overloaded circuit is intentionally tripped since this is the absolute last form of resort to protect Transend assets.



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