

Network Capability Incentive Parameter Action Plan (2014-2019)

Project Number	21
Project Priority	19
Transmission Circuit / Injection Point	PM-HA 1 &2 220 kV Transmission Circuits PM-SH 220 kV Transmission Circuit SH-BU 1 220 kV Transmission Circuit
Project	Installation of modern fault location functionality for more accurate fault location on the identified transmission circuits
Scope of works	Install modern fault location functionality on the following circuits: <ul style="list-style-type: none"> • PM-HA 1 &2 220 kV Transmission Circuits • PM-SH 220 kV Transmission Circuit • SH-BU 1 220 kV Transmission Circuit
Reasons to undertake the project	No fault location relay capability on the identified transmission circuits as the protection schemes on the identified transmission circuits have relays that do not support the distance to fault functionality
Current value of the limit	No fault location relay capability on the identified transmission circuits
Target limit	Fault location relay capability on the identified transmission circuits
Priority project improvement target	Reduce emergency response time for transmission line repair crews to inspect lines for faults to reduce return to service time of the transmission circuit. The distance to fault relays will output distance figures that will be communicated back to Transend's Network Operation and Control System so that the network operators can communicate these to field staff.
Completion date	June 2016
Capital cost	\$120K
Operating cost	\$14K
Market Benefit	Reduced return to service times following a fault outage and increased likelihood of determining the cause of unplanned transmission line outages, reducing the likelihood of future unplanned outages. It is estimated that this project will result in a net market benefit of \$8,500 per annum.