

# Network Capability Incentive Parameter Action Plan (2014-2019)

<b>Project Number</b>	1
<b>Project Priority</b>	16
<b>Transmission Circuit / Injection Point</b>	Knights Rd–Huon River–Kermandie 110kV Transmission Circuit
<b>Project</b>	Castle Forbes Bay Tee Switching Station disconnecter upgrade
<b>Scope of works</b>	Replace manual 110kV disconnecter at Castle Forbes Bay Tee with a remotely operable 110kV disconnecter.
<b>Reasons to undertake the project</b>	<p>A manually operated disconnecter is located at Castle Forbes Bay Tee to facilitate the disconnection and reconnection of the Huon Valley Spur to the Knights Rd – Kermandie 110kV transmission circuit.</p> <p>Any time planned work is required on the Huon River Spur, Transend must open the circuit breaker at Knights Road substation, interrupting supply to not only the Huon River Spur (2 MW), but also to Kermandie Substation (6 MW). At the same time Transend sends a field crew to the Tee to facilitate the disconnection of the Spur, upon which the circuit breaker at Knights Road Substation can be closed. This lack of switching flexibility results in undesirable outages impacting on customers supplied from Kermandie Substation.</p> <p>Also, in the event of a fault outage on the Huon River Spur (a line that passes through forestry plantations and is highly susceptible to wind borne debris), the circuit breaker at Knights Road Substation will trip open. As Transend is currently unable to remotely open the disconnecter at Castle Forbes Bay tee, a field crew is dispatched to the Tee to open the disconnecter, upon which the circuit breaker at Knights Road can be closed, restoring supply to customers supplied from Kermandie Substation. The fault outage duration under these circumstances is significantly longer than would be the case if the disconnecter at Castle Forbes Bay Tee was remotely operable. Furthermore, upon rectifying the fault a second Knights Road circuit breaker operation is required in order to facilitate closing of the disconnecter back to its normal configuration, causing a second interruption to customers connected to Kermandie Substation.</p>
<b>Current value of the limit</b>	Transend is unable to remotely open or close the disconnecter of the Castle Forbes Bay Tee–Huon River 110 kV circuit located at Castle Forbes Bay Tee.
<b>Target limit</b>	Provide the capability for Transend's control room staff to perform remote switching at Castle Forbes Bay Tee.
<b>Priority project improvement target</b>	<p>Reduce the number of planned outages unnecessarily affecting customers supplied from Kermandie Substation. It is estimated that this could prevent at least one planned outage per year from impacting on customers supplied from Kermandie Substation.</p> <p>Reduce the duration of unplanned outages for customers supplied from Kermandie and Huon River substations, where the cause of the outage is on the Huon River Spur. In the event of wind borne debris causing a sustained fault outage on the Huon River Spur, it is reasonable to expect that the supply restoration time for customers supplied from Kermandie Substation could be reduced by up to 90 minutes.</p>
<b>Completion date</b>	June 2017
<b>Capital cost</b>	\$250k
<b>Operational cost</b>	\$0
<b>Market benefit</b>	<p>It is estimated that this project could prevent up to one planned outage per year from impacting on customers supplied from Kermandie Substation.</p> <p>In the event of a sustained fault on the Huon River Spur, the supply restoration time for customers supplied from Kermandie Substation could be reduced by up to 90 minutes.</p> <p>It is estimated that this project will provide an annual market benefit of approximately \$31,000.</p>