TRANSALTA - BC HYDRO

(INTERIM)

Path Name

☐ Accepted Rating

☐ Existing Rating

Location:	Southern Alberta and Southern British Columbia
Definition:	Sum of the flows on the following lines: Line — Meter End Langdon - Cranbrook 500 kV — Langdon Pocatera - Elco Mining 138 kV — Elco Mining Colman - Natal 138 kV — Natal
Transfer Limit:	East to West: 1000 MW West to East: 1200 MW
Critical Disturbance That Limits the Transfer Capability:	West to East: Loss of the Langdon - Cranbrook 500 kV line.
When:	The 1000 MW bi-directional path rating was established in Progress Reports during the period from 1978 to 1985. Studies were conducted jointly by B.C. Hydro (BCH) and TransAlta Utilities Corp. (TAUC). East to West: Studies conducted since that time, show that loss of the PDCI bi-pole at high transfers could cause separation between TransAlta and B.C. Hydro during high TAUC to BCH transfer. Subsequent studies done by BPA in 1994 show that separation still occurs with the COTP in service. TAUC accepts separation for loss of PDCI or for any N-1 outage. West to East: Internal studies conducted since the 1985 Progress Report indicate the transfer capability is 1200 MW.
System Conditions:	East to West: Typical flows are as high as 1000 MW and usually occur during light load hours. West to East: Typical flows are less that 100 MW although they can be as high as 400 MW and usually occur during peak load hours.
Study Criteria:	All facilities loaded within normal ratings under normal system conditions. All facilities loaded within emergency ratings under outage conditions. The maximum acceptable transient voltage dip is 0.85 p.u. for 0.5 seconds on the 500 kV system.
Remedial Actions Required:	Remedial actions are required to achieve the rated transfer capability. Most involve tripping the tie line for outages in the B.C. Hydro system. East to West: For high transfers, one of the units at Keephills may be tripped (up to 370 MW).
Formal Operating Procedure:	None.
Allocation:	All of the capacity is allocated to B.C. Hydro and TransAlta.
Interaction w\Other Transfers Paths:	1) A nomogram showing the relationship between the transfers on the BC Hydro - TransAlta Intertie and the PDCI was developed prior to the completion of COTP. Since TAUC now accepts separation of their intertie with B.C. Hydro for loss of PDCI or any N-1 outage, no nomogram is required. 2) A nomogram showing the relationship between the transfers on this path and the Northwest - Canada path has been developed and is posted on the B.C. Hydro Grid Operations website (http://www.bchydro.com/gridops).

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