1. Alberta - British Columbia

Accepted Rating ☐
Existing Rating ☒
Other ☐

Location:	Southern Alberta and Southern British Columbia
Definition:	Sum of the flows on the following lines: Line — Metered End Langdon-Cranbrook 500 kV — Langdon (Alta Link) Pocaterra-Fording Coal Tap 138 kV — Pocaterra (Alta Link) Coleman-Natal 138 kV — Natal (BCTC)
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 bidirectional path rating was established in Progress Reports during the period from 1978 to 1985. Studies were conducted jointly by B.C. Hydro and Power Authority (BCH) and TransAlta Utilities Corp. (TAUC). East to West: Studies conducted since that time show that loss of the PDCI dipole at high transfers could cause separation between Alberta and BC during high Alberta to BC transfer. Subsequent studies done by BPA in 1994 show that separation still occurs with the COTP in service. Alberta accepts separation for loss of PDCI or for any N-1 outage. West to East: Internal studies conducted since the 1985 Progress Report indicates the transfer capability is 1200 MW.
System Conditions:	East to West: Typical flows are 0 to 400 MW and usually occur during light load hours. West to East: Typical flows are 0 to 400 MW although they can be as high as 800 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 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). West to East: For transfer 400 MW or greater, interruptible load is armed based on system load.
Formal Operating Procedure:	BC Transmission Corporation System Operating Order 7T-17. Alberta Electric System Operator (AESO) OPP 303, 304 and 312.

Allocation:	BC Hydro owns but BC Transmission Corporation plans, operates, and manages the lines and associated facilities in British Columbia. Alta Link owns the lines and associated facilities in Alberta. The Alberta Electric System Operator (AESO) plans and administers operation of the lines and associated facilities in Alberta.
Interaction w/Other Transfer Paths:	A nomogram showing the relationship between the transfers on the BC-Alberta Intertie and the PDCI were developed prior to the completion of COTP. Since Alberta now accepts separation of their intertie with B.C. Hydro for loss of PDCI or any N-1 outage, no nomogram is required.
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