System Impact Study

For

The TCP 170 MW Wheel through on the BPAT - EAL Path

Report No: SPA2004-

17 June, 2004

Performance Analysis (NI&SI)

System Performance Assessment Department (NI&SI)

Executive Summary

BCTC has conducted System Impact Studies to address the following point-to-point requests.

OASIS#	Time Stamp	Amount	Term	Customer
485180	09-Aug-02	170 MW	5 year (Jan 2003-1 Jan 2008)	TCP

Based on the study terms of reference (Section 2) and system conditions (Section 3) BCTC has determined the following transmission capabilities.

Since BCTC transmission system has an additional 270 MW transfer capability from BC to Alberta, the BCTC system has the following wheel through (US via BC to AB) capability from now until Jan 1st, 2008 (OASIS#485180) based on the already committed transfers on BPAT x BCHA path and BCHA x EAL path while taking TRM into account.

2004	2005	2006	2007	2008
226 MW	185 MW	159 MW	162 MW	158 MW

By upgrading 5L52 in 2006, BCTC can accommodate the full 170MW wheel through from US to AB.

Table of Contents

1. Introduction

On August 9th, 2002, TransCanada Power (TCP) submitted a Wholesale Transmission Service Application for 170 MW of Long Term Firm Point-to-Point transmission service for wheel-through on the BPAT x EAL Path for the period of January 1st, 2003 to January 1st, 2008 (Oasis Request # 485180).

BCTC and TCP have signed the System Impact Study Agreement for this request.

This report has documented the finding of the studies on the BCTC transmission system capability of accommodating the above requests.

2. Terms of Reference

This SIS is based on the following documents:

- NERC/WECC Planning Standard
- System Impact Study for Power Supply NITS 2001
- BCTC existing System Operating Order 7T-64
- BCTC Transmission Investment Plan (2004-2014)

3. System Study Conditions

The SIS conditions for OASIS request # 485180 include:

- Existing GWA transfer rights.
- Prior Long Term Firm Point-to-Point commitments on the BPAT X BCHA Path including OASIS # 257654, OASIS # 490444
- Prior Long Term Firm Point-to-Point commitments on the BCHA X EAL Path 210 MW
- Prior Long Term Firm Point-to-Point commitments on the BCHA X BPAT Path including OASIS # 72623 (230 MW) and OASIS # 254221 (500 MW)
- BC Hydro Probable Peak Load Forest including Power Smart dated on 17 November 2003.
- The generation patterns used consisted of the Network Resources from NITS Agreements #39073, #39077 and #72625 adjusted per the most recent updates and balanced with the load."
- Transmission Reliability Margin (TRM) of 50 MW on the BC-US inter-ties.

- TRM of 65 MW on the BC-Alberta inter-ties.

- New projects in BCTC Transmission Investment Plan (2004-2014)

4. Resources for Transmission Request

US generation resources are the resources for TCP 170 MW wheel through from US to Alberta (OASIS # 485180).

5. Project and Transmission Service Risks

Content of this document contains some uncertainty in the plan, reinforcement, cost, and in service dates.

6. Conclusions

Applying NERC/WECC reliability criteria and based on the above system conditions, the study was conducted on the existing 2004/2005 and the planned 2007/2008 transmission systems. The following are the conclusions.

Since BCTC transmission system has an additional 270 MW transfer capability from BC to Alberta, the BCTC system has the following wheel through (US via BC to AB) capability from now until Jan 1st, 2008 (OASIS#485180) based on the already committed transfers on BPAT x BCHA path and BCHA x EAL path while taking TRM into account.

2004	2005	2006	2007	2008
226 MW	185 MW	159 MW	162 MW	158 MW

By upgrading 5L52 in 2006, BCTC can accommodate the full 170MW wheel through from US to AB.