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21 November 2008

Ms. Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
900 Howe Street, Sixth Floor
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

**Re: British Columbia Transmission Corporation (BCTC)
Application to Amend the Open Access Transmission Tariff (OATT)**

Please find attached British Columbia Transmission Corporation's (BCTC) Application to Amend the Open Access Transmission Tariff (OATT or Tariff) pursuant to sections 58, 59 and 60 of the *Utilities Commission Act*, R.S.B.C. 1996, c. 473 (UCA).

There are four components of this Application, which are as follows:

(a) FERC Order No. 890 Amendments

Part 3 of the Application contains BCTC's proposed amendments to its OATT to maintain consistency with FERC's pro forma tariff as revised by FERC's Order No. 890, Order No. 890-A and Order No. 890-B.

(b) Housekeeping Amendments

Part 4 of the Application contains BCTC's proposals for a number of miscellaneous amendments to the OATT to address minor issues that have arisen in the course of BCTC's application of the OATT, to provide clarification to terms or conditions, or to otherwise update the OATT.

(c) Short-Term Rate Design

Part 5 of the Application contains BCTC's proposed changes to the rate design for its discounted Short-Term Point-to-Point ("ST PTP") service in the OATT. This part of the Application is filed in accordance with BCTC's agreement to file a rate design for its ST PTP service, an agreement which BCTC made as part of the negotiated settlement of its F2009 and F2010 Transmission Revenue Requirement Application, as approved by Commission Order No. G-105-08.

(d) Firm Transmission Sales to Alberta

Part 6 of this Application contains BCTC's Tariff proposal to address issues relating to the release of additional Firm Available Transfer Capability (ATC) on the British Columbia to Alberta path ("BC>AB Path"). This Tariff proposal is made in accordance with the directions given to BCTC in Commission Order G-110-08, which approved BCTC's application to temporarily suspend the release of Firm ATC on the BC>AB Path. Part 6 also represents BCTC's response to the Complaint filed by TransCanada Energy Ltd. dated 9 October 2008, as indicated in BCTC's letter to the Commission dated 31 October 2008.

Please note that BCTC is seeking an interim order pursuant to section 89 of the UCA and section 15 of the *Administrative Tribunals Act*, R.S.B.C. 2004, c. 45, in respect of Firm Transmission Sales to Alberta. The interim order sought, and the basis for it, is described in Parts 6.1.4 and 6.7.2. BCTC is respectfully requesting the interim order by 11 December 2008, for the reasons set out in those Parts of the Application.

Sincerely,

Original signed by

Janet L. Fraser
Director, Regulatory Affairs

APPLICATION TO AMEND THE OPEN ACCESS TRANSMISSION TARIFF

21 November 2008

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ACRONYMS

Acronym	Definition
AESO	Alberta Electric System Operator
APS	Arizona Public Service
ATA	Administrative Tribunals Act
ATC	Available Transfer Capability
BC>AB Path	British Columbia to Alberta path
BC Hydro	British Columbia Hydro & Power Authority
BCTC	British Columbia Transmission Corporation
BPA	Bonneville Power Administration
CBM	Capacity Benefit Margin
FERC	Federal Energy Regulatory Commission
ILM	Interior to Lower Mainland
ILRAS	Import Load Remedial Action Schemes
LTF PTP	Long-Term Firm Point-to-Point
MISO	Midwest ISO
NAESB	North American Energy Standards Board
NERC	North American Electric Reliability Corporation
NBSO	New Brunswick System Operator
NF PTP	Non-Firm PTP
NITS	Network Integration Transmission Service
NYPP	New York Power Pool
OATT	BCTC's Open Access Transmission Tariff
OASIS	Open Access Same-Time Information System
POD	Point of Interconnection
POR	Point of Receipt
PTP	Point-to-Point
SERC	Southeastern Electric Reliability Council
SGIP	Standard Generator Interconnection Procedures
STF PTP	Short-Term Firm Point-to-Point
ST PTP	Short-Term Point-to-Point
UCA	Utility Commission Act
TCE	TransCanada Energy Ltd.
TRM	Transmission Reliability Margin
TTC	Total Transfer Capacity
WECC	Western Electricity Coordinating Council

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1.0 INTRODUCTION AND APPLICATION

1.1 Introduction

British Columbia Transmission Corporation (BCTC) files this Application to Amend the Open Access Transmission Tariff (OATT or Tariff) pursuant to sections 58, 59 and 60 of the *Utilities Commission Act*, R.S.B.C. 1996, c. 473 (the UCA).

BCTC is a provincial Crown Corporation that began operations on 1 August 2003. Under the terms of the Master Agreement between British Columbia Hydro and Power Authority (BC Hydro) and BCTC, dated 12 November 2003, and designated by Order in Council, BCTC is responsible for operating, managing, planning, and maintaining BC Hydro's transmission system. BCTC is also responsible for designing, developing and applying to the British Columbia Utilities Commission (BCUC or the Commission) for approval of the OATT. The Commission approved BCTC's initial application for an OATT on 20 June 2005.¹ BCTC's OATT is modeled on a pro forma tariff established by Order No. 888 (the pro forma tariff) of the Federal Energy Regulatory Commission (FERC).²

1.2 Contact Information

Communications with respect to this Application should be sent to:

British Columbia Transmission Corporation
PO Box 49260
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street
Vancouver BC, V7X 1V5

Attention: Janet Fraser, Director, Regulatory Affairs

Phone: 604-699-7328
Fax: 604-699-7229
Email: janet.fraser@bctc.com

¹ *British Columbia Transmission Corporation Application for An Open Access Transmission Tariff and British Columbia Hydro and Power Authority Application for Interconnected Operations Services to British Columbia Transmission Corporation*, (20 June 2005) Order No. G-58-05 (BCUC) [the 2005 OATT Decision].

² *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, 75 FERC ¶ 61,080 (1996) (Order No. 888), order on reh'g, 78 FERC ¶ 61,220 (March 14, 1997) (Order No. 888-A), order on reh'g, 81 FERC 61,248 (1997) (Order No. 888-B), order on reh'g, 82 FERC ¶ 61,046 (1998) (Order No. 888-C) [hereinafter "Order No. 888"].

1 **1.3 Legal Counsel for the Applicant**

2 BCTC has retained outside legal counsel to support internal resources for the
3 preparation of this Application and any associated proceeding.

4 Fasken Martineau DuMoulin LLP
5 Suite 2900
6 550 Burrard Street
7 Vancouver BC, V6C 0A3

8 Attention: Peter Feldberg

9 Phone: 604-631-3291
10 Fax: 604-632-3291
11 Email: pfeldberg@fasken.com

12 **1.4 The Application**

13 There are four components of this Application, which are as follows:

- 14 (a) **FERC Order No. 890 Amendments.** Part 3 of this Application contains BCTC's
15 proposed amendments to its OATT to maintain consistency with FERC's pro
16 forma tariff as revised by FERC's Order No. 890, Order No. 890-A and Order
17 No. 890-B (collectively, Order No. 890 unless otherwise specified).³
- 18 (b) **Housekeeping Amendments.** Part 4 of this application contains BCTC's
19 proposals for a number of miscellaneous amendments to the OATT to address
20 minor issues that have arisen in the course of BCTC's application of the OATT,
21 to provide clarification to terms or conditions, or to otherwise update the OATT.
- 22 (c) **Short-Term Rate Design.** Part 5 of this Application contains BCTC's proposed
23 changes to the rate design for its discounted Short-Term Point-to-Point (ST
24 PTP) service in the OATT. This part of the Application is filed in accordance with
25 BCTC's agreement to file a rate design for its ST PTP service, an agreement
26 which BCTC made as part of the negotiated settlement of its F2009 and F2010

³ *Preventing Undue Discrimination and Preference in Transmission Service*, FERC Stats & Regs. ¶ 31,241 (Feb. 16, 2007) (Order No. 890), order on reh'g, 121 FERC ¶ 61297 (Jan. 16, 2008) (Order No. 890-A), order on reh'g, 123 FERC ¶ 61,299 (June 23, 2008) (Order 890-B).

1 Transmission Revenue Requirement Application, as approved by Commission
2 Order No. G-105-08.⁴

3 (d) **Firm Sales to Alberta.** Part 6 of this Application contains BCTC's Tariff
4 proposal to address issues relating to the release of additional Firm Available
5 Transfer Capability (ATC) on the British Columbia to Alberta path (BC>AB
6 Path). This Tariff proposal is made in accordance with the directions given to
7 BCTC in Commission Order G-110-08 (the Suspension Order), which approved
8 BCTC's application to temporarily suspend the release of Firm ATC on the
9 BC>AB Path.⁵ Part 6 also presents BCTC's response to the complaint filed by
10 TransCanada Energy Ltd. (TCE) dated 9 October 2008 (the Complaint), as
11 indicated in BCTC's letter to the Commission dated 31 October 2008.

12 **1.5 Orders Sought**

13 In this Application, BCTC seeks from the Commission:

14 (a) an order pursuant to sections 58, 59 and 60 of the UCA approving the
15 amendments to BCTC's OATT described in this Application and set out in the
16 redlined OATT in Appendix A to this Application; and

17 (b) an order pursuant to section 83 of the UCA dismissing the Complaint.

18 A draft form of the orders sought by BCTC is provided as Appendix B to this
19 Application.

20 BCTC is also seeking an interim order by 11 December 2008 pursuant to section 89
21 of the UCA and section 15 of the *Administrative Tribunals Act*, R.S.B.C. 2004, c. 45
22 (ATA) as described in Section 6.7.2 of the Application.

23 **1.6 Suggested Process**

24 Based on the consultation that BCTC has undertaken in developing this Application,
25 BCTC believes that the vast majority of the proposed amendments are not
26 controversial. Part 6 of this Application, however, is controversial, as is apparent from

⁴ Application by British Columbia Transmission Corporation for Approval of Rates Effective April 1, 2008 and April 1, 2009 (June 26, 2008) Order No. G-105-08 (BCUC), Appendix 1, at para. 26.

⁵ Application by British Columbia Transmission Corporation for Approval to Temporarily Suspend the Release of Firm Available Transfer Capacity on the BC to Alberta Path (July 3, 2008) Order No. G-110-08 (BCUC).

the Complaint filed by TCE. As mentioned previously, Part 6 of the Application represents BCTC's response to the Complaint as well as BCTC's Tariff proposal for addressing Firm transmission sales to Alberta.

Accordingly, BCTC proposes that Parts 1 to 5 of this Application be resolved through a written hearing process and that Part 6 and the Complaint be heard at the same time, on the same evidentiary record, by way of an oral hearing. BCTC suggests the following regulatory timetable, which assumes, among other things, that intervenors will be filing evidence, for the review of the Application and Complaint.

Table 1-1. Suggested Regulatory Timetable

		Parts 1 to 5 (written proceeding)	Part 6 and Complaint (oral proceeding)
1	Monday, December 15	Procedural Conference	
2	Friday, January 16	BCUC IRs to BCTC	BCUC IRs to BCTC and TCE
3	Friday, January 23	Intervenor IRs to BCTC	Intervenor and TCE IRs to BCTC Intervenor and BCTC IRs to TCE
4	Friday, February 13	BCTC Responses to IR-1	BCTC and TCE Responses to IR-1
5	Friday, February 20	Intervenor Evidence	Intervenor Evidence
6	Friday, February 27	IRs on Intervenor Evidence	IRs on Intervenor Evidence
7	Friday, March 6	Responses to IRs on Intervenor Evidence	Responses to IRs on Intervenor Evidence
8	Friday, March 13	Rebuttal Evidence	Rebuttal Evidence
9	Friday, March 27	BCTC Final Submissions on OATT	
10	Monday, March 30		Oral Hearing
11	Friday, April 10	Intervenor Final Submissions on OATT	
12	Friday, April 17		BCTC (and TCE) Final Submissions on Part 6 (and Complaint)
13	Friday, April 24	BCTC Reply Submissions on OATT	
14	Friday, May 1		Intervenor Final Submissions on Part 6 and Complaint
15	Friday, May 8		
16	Friday, May 15		BCTC (and TCE) Reply Submissions on Part 6 (and Complaint)

1.7 Implementation

Attached as Appendix C is BCTC's implementation schedule for the proposed amendments. As indicated in Appendix C, there are three stages of implementation for the proposed amendments.

BCTC estimates that it will be able to implement the housekeeping amendments set out in Part 4 of this Application within one month.

To implement the majority of the proposed amendments related to Order No. 890 and the short-term rate design in Part 5 of the Application, BCTC will need, *inter alia*, to develop business practices, revise its internal processes and make additions to its internet website. In the case of the short-term rate design, BCTC will also need to upgrade the current Transmission Scheduling System at an estimated cost of \$150K. BCTC estimates that it will take six months to complete these requirements.

A number of the Order No. 890 amendments, however, cannot be implemented until the completion of BCTC's Market Operations and Development Business Systems Upgrade Project. BCTC is seeking approval for the Market Operations and Development Business Systems Upgrade Project as part of its next Capital Plan filing with the Commission. The Market Operations and Development Business Systems Upgrade Project is scheduled to be complete by 31 March 2011, at which time the amendments contingent on it may be implemented.

BCTC is therefore requesting approval of the proposed amendments with a staged implementation as reflected in Appendix C, which would see the housekeeping amendments implemented approximately one month after approval, the majority of the Order No. 890 related amendments and the short term rate design changes implemented approximately six months after approval is granted and the other amendments implemented upon the completion of the Market Operations and Development Business Systems Upgrade Project.

2.0 AN OVERVIEW OF ORDER NO. 890 REFORM

This Part has been included for background and is generally BCTC's summary of FERC commentary, except for Section 2.1.2 which is a summary of BCTC's tariff history.

2.1 Background and Procedural History

2.1.1 Open Access Developments in the United States from 1980s

2.1.1.1 Legislative and Regulatory Acts Prior to Order No. 888

Historically, many vertically integrated utilities did not allow independent power suppliers to use their transmission systems. Two pieces of legislation played a significant role in bringing about open access to the transmission systems in the United States: the Public Utilities Regulatory Policies Act of 1978 (PURPA) and the Energy Policy Act of 1992 (EPAcT 1992).

PURPA required electric utilities to interconnect with, and offer to purchase power from, qualifying cogeneration and small power production facilities at avoided cost rates set by state regulatory authorities. It gave FERC limited authority to order wholesale transmission on a case-by-case basis, upon application by an eligible entity. A consequence of PURPA was the emergence of a new class of power generators that were independent of traditional utilities.⁶

EPAcT 1992 allowed independent and affiliate generators to more easily enter the market to compete at wholesale and it expanded FERC's authority to order a transmitting utility to provide wholesale power transmission service, upon application on a case-by-case basis, to anyone selling power at wholesale. By the mid-1990s, FERC found that ordering wholesale transmission services case-by-case did not adequately address problems with undue discrimination in transmission access, which limited opportunities for wholesale power competition.⁷

To address the disparity in transmission service that utilities provided to third parties in comparison to their own uses of the transmission system,⁸ FERC began requiring

⁶ Order No. 890, para. 14.

⁷ Order No. 890, para. 16.

⁸ Order No. 888, p. 5.

1 transmission providers to “offer third parties access on the same or comparable basis,
2 and under the same or comparable terms and conditions, as the transmission
3 provider's uses of its system.”⁹ FERC applied this comparability standard in a variety
4 of contexts, culminating in a declaration that comparable services must be provided
5 through “open access” tariffs rather than only on a contract-by-contract basis. FERC
6 set for hearing 44 open access tariffs to determine what constituted comparable
7 service, all of which became subject to Order No. 888.¹⁰

8 **2.1.1.2 Order No. 888**

9 On 24 April 1996, FERC issued Order No. 888, which stated that it was designed “to
10 remove impediments to competition in the wholesale bulk power marketplace and to
11 bring more efficient, lower cost power to the Nation’s electricity consumers.” Order
12 No. 888 further stated that “[t]he legal and policy cornerstone of these rules is to
13 remedy undue discrimination in access to the monopoly owned transmission wires
14 that control whether and to whom electricity can be transported in interstate
15 commerce.”¹¹ To achieve its objective, Order No. 888 mandated that transmission
16 providers file open access transmission tariffs with “minimum terms and conditions of
17 non-discriminatory service” and offering Network, load-based service, point-to-point,
18 contract-based service, and ancillary services.¹² The pro forma tariff was “the basic
19 mechanism implementing the requirements of comparable open access
20 transmission.”¹³

21 Order No. 888 also required public utilities to “functionally unbundle” their wholesale
22 generation and transmission services.¹⁴ Functional unbundling meant that
23 transmission providers took transmission service under the same tariff as other
24 transmission users (the comparability standard); separated rates for wholesale
25 generation, transmission, and ancillary services; and relied on the same Open
26 Access Same-Time Information System (OASIS) that its transmission customers

⁹ Order No. 888, p. 37, citing *American Electric Power Service Corporation*, 64 FERC ¶ 61,279 (1993), reh'g granted, 67 FERC ¶ 61,168; clarified 67 FERC ¶ 61,317 (1994).

¹⁰ Order No. 888, pp. 35-41.

¹¹ Order No. 888, p. 1.

¹² Order No. 888, p. 4 to 5.

¹³ Order No. 888-A, p. 21.

¹⁴ Order No. 888, p. 57.

1 relied on to obtain information about prices and available capacity of the transmission
2 system.

3 **2.1.2 Development in BC**

4 **2.1.2.1 Wholesale Transmission Services (WTS) Tariff Decision**

5 In February 1997, BC Hydro filed a revised application to the Commission for WTS,
6 outlining terms and conditions of its transmission services. BC Hydro modeled the
7 WTS tariff on the Order No. 888 pro forma tariff.¹⁵

8 In the 1998 WTS Decision, the Commission approved BC Hydro's application for a
9 tariff comparable to FERC's pro forma tariff (Tariff Supplement No. 30) as the tariff
10 applicable for providing open-access transmission service on BC Hydro's
11 transmission system. BCTC began its operations on 1 August 2003. From 1 August
12 2003 to 31 March 2005, BCTC administered the WTS tariff on BC Hydro's behalf. On
13 1 April 2005, BCTC began operating as a fully regulated independent utility offering
14 wholesale transmission services under interim tariff terms and conditions approved by
15 Commission Order G-25-05. The interim tariff "rolled over" the terms and conditions of
16 the WTS tariff, with the necessary changes to reflect the fact that BCTC, not BC
17 Hydro, was the transmission service provider.¹⁶

18 **2.1.2.2 The Commission's 2005 Approval of BCTC's OATT**

19 BCTC filed its first OATT application on 3 August 2004, seeking to replace BC
20 Hydro's WTS tariff as the tariff applicable for the provision of open access
21 transmission service on BC Hydro's transmission system. BCTC's proposed OATT
22 remained comparable to the pro forma tariff to ensure consistency with other regional
23 transmission providers. The proposed OATT included Point-to-Point (PTP)
24 transmission service, Network Integration Transmission Service (NITS), and ancillary
25 services and adopted, with adjustments to suit the BC market, most of the provisions
26 of FERC's Standard Generator Interconnection Procedures (SGIP). In June 2005, the
27 Commission approved BCTC's proposed OATT, subject to some modifications and
28 directions.

¹⁵ *British Columbia Hydro and Power Authority, Wholesale Transmission Services* (April 23, 1998) (BCUC) at p. 30 [hereinafter, the "1998 WTS Decision"].

¹⁶ *Application by British Columbia Transmission Corporation for Approval to Amend F2006 Rates* (March 8, 2005) Order G-25-05 (BCUC).

1 On 2 February 2006, BCTC submitted a compliance filing, containing an OATT
2 incorporating changes that resulted from the Commission's 2005 decision. The
3 Commission approved the OATT tariff, which became effective 1 March 2006.

4 Since 1 March 2006, BCTC has made various other filings for amendments to the
5 OATT, including filings related to restrictions on Network Economy service
6 (Attachment Q) and the introduction of dynamic scheduling (Attachment O).

7 **2.2 Order No. 890**

8 In the years following Order No. 888, the electric industry continued to undergo
9 economic and regulatory changes, such as the creation of Regional Transmission
10 Organizations under FERC Order No. 2000 and Standard Generator Interconnection
11 Procedures under FERC Order No. 2003.¹⁷

12 On 16 September 2005, FERC issued a Notice of Inquiry seeking comments on the
13 appropriate reforms of Order No. 888. Based on the comments received, FERC
14 concluded that reform of the pro forma OATT was necessary to reduce the potential
15 for undue discrimination and provide clarity in the obligations of transmission
16 providers and customers.¹⁸ Following the Notice of Inquiry, FERC issued a Notice of
17 Proposed Rulemaking, in which it set out a proposal to remedy the flaws of Order No.
18 888, and then Order No. 890 itself.¹⁹

19 Order No. 890 was issued on February 16, 2007 amending the pro forma tariff for the
20 stated purposes of (1) strengthening the pro forma tariff to remedy opportunities for
21 undue discrimination, (2) providing greater specificity to facilitate FERC's enforcement
22 and monitoring; and (3) increasing the transparency of the rules for planning and use
23 of the transmission system.²⁰

24 While more of the details of the Order No. 890 reforms are discussed in Part 3 of this
25 Application, the following outlines some of the key changes.

¹⁷ Order No. 890, paras. 19-21 and para. 26.

¹⁸ Order No. 890, paras. 23-25.

¹⁹ Order No. 890, para. 1.

²⁰ Order No. 890, cover page summary.

2.2.1 Consistency and Transparency of ATC Calculation

Order No. 890 directs public utilities, working through the North American Electric Reliability Corporation (NERC) and North American Energy Standards Board (NAESB), to establish standards and business practices that ensure industry-wide consistency in ATC calculation components, calculation frequency, data inputs and exchange, and modeling assumptions. To increase transparency of ATC calculation, Order No. 890 requires that each transmission provider describe its ATC calculation methodology in Attachment C to its OATT.²¹ This aspect of Order No. 890 will be considered further in Section 3.1 of this Application.

2.2.2 Coordinated Open and Transparent Transmission Planning

Order No. 890 requires transmission providers to have a coordinated, open, and transparent transmission planning process on both local and regional levels and to describe that process clearly in an Attachment K to the OATT.²² The stated rationale for this requirement is to reduce opportunities for discrimination in transmission planning and to respond to declining transmission investment and increasing transmission congestion. This aspect of Order No. 890 will be considered further in Section 3.2 of this Application.

2.2.3 Energy and Generation Imbalances

Order No. 890 standardizes charges for generation and energy imbalance services by adopting a three-tired, graduated deviation band approach, based on incremental cost, accounting for the limited ability of intermittent resources to schedule precisely in advance, and providing an incentive for accurate scheduling. The standardized approach is designed to achieve more consistency amongst transmission providers in the application of energy imbalance charges and to provide the appropriate incentives to transmission customers. This aspect of Order No. 890 will be considered further in Section 3.3.1 of this Application.

2.2.4 Credits for Network Customer Owned Facilities

Order No. 890 establishes that to receive credits for its facilities, a transmission customer needs to demonstrate that its facilities are integrated into the operations of,

²¹ Order No. 890, paras. 207-210.

²² Order No. 890, para. 437, fn. 246

1 and provide benefits to, the transmission provider's grid. Prior to Order No. 890,
2 Network Customers were able to receive credits for their new facilities only if the
3 facilities were jointly planned with the transmission provider.²³ Order No. 890
4 determines that the link between credits for new facilities and joint planning needs to
5 be severed as it could act as a disincentive to coordinated planning, that is, to
6 discourage a transmission provider from denying coordinated planning in order to
7 avoid granting credits for customer-owned transmission facilities. This aspect of Order
8 No. 890 will be considered further in Section 3.3.2 of this Application.

9 **2.2.5 Capacity Reassignment Pricing**

10 Order No. 890 lifts the price cap on reassignments of transmission capacity. Order
11 No. 890 found that the price cap had served to reduce transmission options, impairing
12 the development of a secondary market for transmission capacity.²⁴ Lifting the price
13 cap is designed to develop the secondary market and give market participants
14 additional options for acquiring transmission. This aspect of Order No. 890 will be
15 considered further in Section 3.3.3 of this Application.

16 **2.2.6 Operational Penalties**

17 Order No. 890 specifies some circumstances when "operational penalties" will be
18 assessed, including when a transmission customer uses transmission service that it
19 has not reserved and when a transmission provider routinely fails to meet due
20 diligence deadlines prescribed in the pro forma tariff.²⁵ Although Order No. 890 does
21 not prescribe specific penalties or develop formulas for different violations in OATT,
22 FERC's authority to assess civil penalties and fashion other remedies for OATT
23 violations on a case-by-case basis is repeatedly asserted,²⁶ and revocation of an
24 entity's market-based rate authority based upon a finding of specific factual nexus
25 between an OATT violation and the entity's market-based rate authority is mentioned

²³ Order No. 890, para. 729.

²⁴ Order No. 890, para. 779.

²⁵ See Order No. 890, paras. 834 and 1340.

²⁶ See Order No. 890, para. 1714. For instance, Order No. 890 states that it would evaluate the appropriateness of civil penalties in addition to unreserved use penalties on a case-by-case basis (Order No. 890, para. 842).

1 as an available remedy.²⁷ This aspect of Order No. 890 will be considered further in
2 Section 3.3.4 and 3.5.2 of this Application.

3 **2.2.7 Planning Redispatch and Conditional Firm Service**

4 Order No. 890 requires that transmission providers make available both a planning
5 redispatch service and conditional firm service to long-term firm PTP service
6 customers. Order No. 890 found that techniques involved in providing the service
7 were used under certain conditions to serve native load and therefore comparable
8 service should be available to transmission customers to avoid undue
9 discrimination.²⁸ This aspect of Order No. 890 will be considered further in Section
10 3.4 of this Application.

11 **2.2.8 Reform of Rollover Rights**

12 Order No. 890 extends the contract term eligible for the rollover right from one year to
13 five years and increases the notice period for rollover from 60 days to one year before
14 the expiration of contract. This aspect of Order No. 890 will be considered further in
15 Section 3.5.1 of this Application.

16 **2.2.9 Reservation Priority**

17 To improve the overall functioning of the pro forma tariff, Order No. 890 amends and
18 clarifies aspects of reservation priority provisions.

19 For example, Order No. 890 establishes the priority of pre-confirmed requests for
20 transmission service to support the objective of efficient utilization of the transmission
21 system by giving priority to customers that are committed to purchase service as well
22 as by encouraging longer-term uses of the transmission system.²⁹

23 As another example, Order No. 890 requests the transmission providers to propose a
24 window period within which transmission service requests the transmission provider
25 receives would be deemed to have been submitted simultaneously.³⁰

²⁷ Order No. 890, para. 1743.

²⁸ Order No. 890, para. 911.

²⁹ Order No. 890, para. 1401.

³⁰ Order No. 890, para. 1418.

1 This aspect of Order No. 890 will be considered further in Section 3.5.3 of this
2 Application.

3 **2.2.10 Designation of Network Resources**

4 Order No. 890 places new requirements on the qualification, documentation and
5 undesignation of Network Resources by Network Customers so that future
6 designations would be made in a more consistent, transparent manner. This aspect
7 of Order No. 890 will be considered further in Sections 3.5.5, 3.5.6 and 3.5.7 of this
8 Application.

9 **2.2.11 Creditworthiness**

10 Order No. 890 amends the pro forma tariff creditworthiness provisions and requires
11 that they be included within a new Attachment L. The attachment is required to
12 describe procedures and minimum information needed for a transmission provider to
13 review the creditworthiness of its customers, including procedures to determine levels
14 of secured and unsecured credit, types of acceptable collateral and security,
15 procedures for providing notice of changes in credit levels, a procedure for providing
16 customers written explanations of changes in credit determinations, and a reasonable
17 opportunity for customers to post additional collateral or cure a lack of
18 creditworthiness.³¹ This aspect of Order No. 890 will be considered further in Section
19 3.5.10 of this Application.

³¹ Order No. 890, paras. 1656-1658.

3.0 BCTC’S PROPOSED CHANGES IN RESPONSE TO ORDER NO. 890

BCTC proposes to adopt most Order No. 890 reforms. BCTC proposes to modify or not to adopt some particular reforms of Order No. 890, where this is warranted by BCTC’s particular context or past decisions of the Commission.

BCTC held two consultation sessions on its proposed amendments to the OATT in response to Order No. 890. The first consultation session was held on 30 April 2008 and the second on 14 July 2008. Attached as Appendix D are the documents related to BCTC’s consultation process, including BCTC’s consultation presentations, a record of the written comments received and BCTC’s responses to those comments.

Attached as Appendix A to this Application is a redlined version of BCTC’s OATT showing BCTC’s proposed amendments to the OATT. Tables 1 and 3 in Appendix A are provided to assist in identifying amendments that are being proposed in accordance with Order No. 890, other amendments that are being proposed by BCTC, and the text of Order No. 890 amendments that BCTC is not proposing to adopt.

In this section, BCTC will detail BCTC’s proposed responses to the specific reforms and requirements of Order No. 890.

3.1 ATC Consistency and Transparency

With exception to the matters referenced in Part 6 of this Application, BCTC proposes to defer any amendments to Attachment C of its OATT, which describes its methodology for calculating ATC, until the completion and approval by FERC of the NERC and NAESB standards and business practices currently under development.

Order No. 890 directed public utilities, working through the NERC and NAESB, to produce standards and business practices that ensure industry-wide consistency in ATC calculation components, calculation frequency, data inputs and exchange and modeling assumptions. Order No. 890 then directed each transmission provider to file a revised Attachment C to its OATT to incorporate any changes associated with the revised reliability standards and business practices within 60 days of completion of the NERC and NAESB processes. In accordance with Order No. 890-B, the revised

Attachment C filings are due 60 days after the date on which the relevant reliability standards or business practices take effect.

The NERC Board of Trustees has adopted the following standards: Available Transfer Capability, Transmission Reliability Margin Calculation Methodology, Area Interchange Methodology, and Rated System Path Methodology. Those standards have been filed with FERC.³² The NERC Board of Trustees has deferred action on the violation risk factors for these standards, pending further analysis.³³

BCTC will analyze relevant ATC calculation standards once they are all approved by FERC. BCTC will revise its ATC methodology in accordance with the relevant ATC calculation standards and file a revised Attachment C with the Commission for approval.

3.2 Transmission Planning

BCTC proposes a new Attachment K to its OATT that describes the planning process for the development of growth capital transmission projects.

BCTC’s proposed Attachment K planning process has four phases.

The initiation phase provides for the exchange of information between stakeholders and BCTC. Stakeholders will be provided with BCTC’s planning information so that they can participate in an informed way in the planning process. Customers will be asked to provide good faith estimates of their transmission service requirements for the 10 year planning horizon. Stakeholders may also submit requests for economic planning studies and other information that may be useful for BCTC’s planning, such as potential non-wires solutions to transmission investments.

The second phase is a study plan development phase in which BCTC develops a study plan for its growth capital projects. This is done in consultation with stakeholders, including a consultation meeting and an opportunity for stakeholders to provide written comments on a draft study plan.

³² NERC, ATC/TTC/AFC and CBM/TRM Revisions (Project 2006-07), <http://www.nerc.com/filez/standards/MOD-V0-Revision.html>.

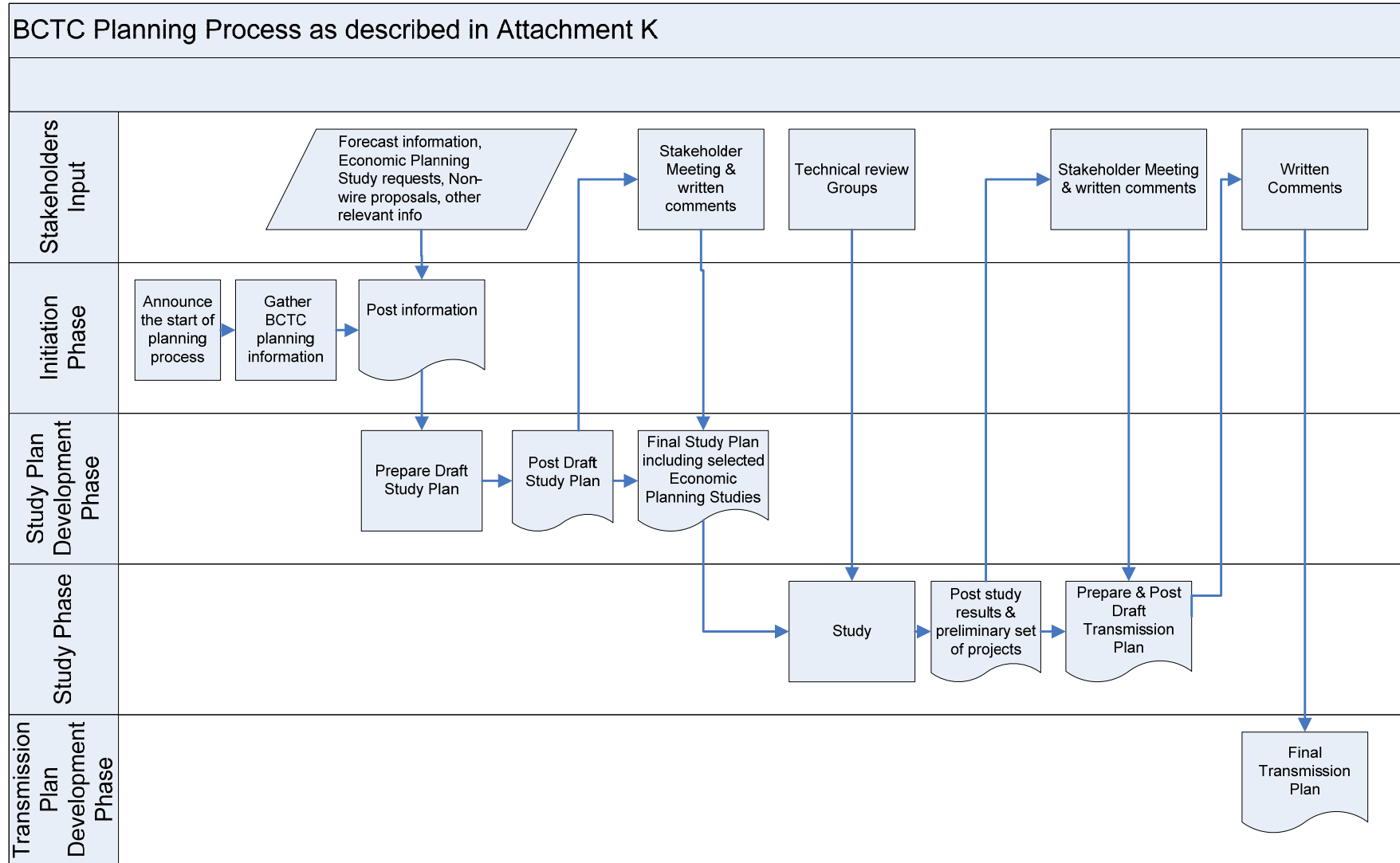
³³ *Ibid.*

1 The third phase is a study phase in which stakeholders may participate in technical
2 review groups looking at particular projects of interest. This phase ends with a second
3 consultation meeting to discuss and provide opportunities for comment on study
4 results.

5 The final phase is a transmission plan development phase, in which BCTC develops
6 and stakeholders may comment on a transmission plan, which is a collection of
7 growth capital transmission projects in various stages of development that are
8 designed to meet the potential needs and requirements of the transmission system as
9 identified in the planning process. From this transmission plan, BCTC chooses
10 projects for inclusion in its growth capital portfolio to be submitted to the Commission
11 as part of its Capital Plan Application.

12 Figure 3-1 is a schematic diagram which outlines the planning process in BCTC’s
13 proposed Attachment K.

1 **Figure 3-1. BCTC Planning Process in Proposed Attachment K**



3.2.1 Accompanying Amendments

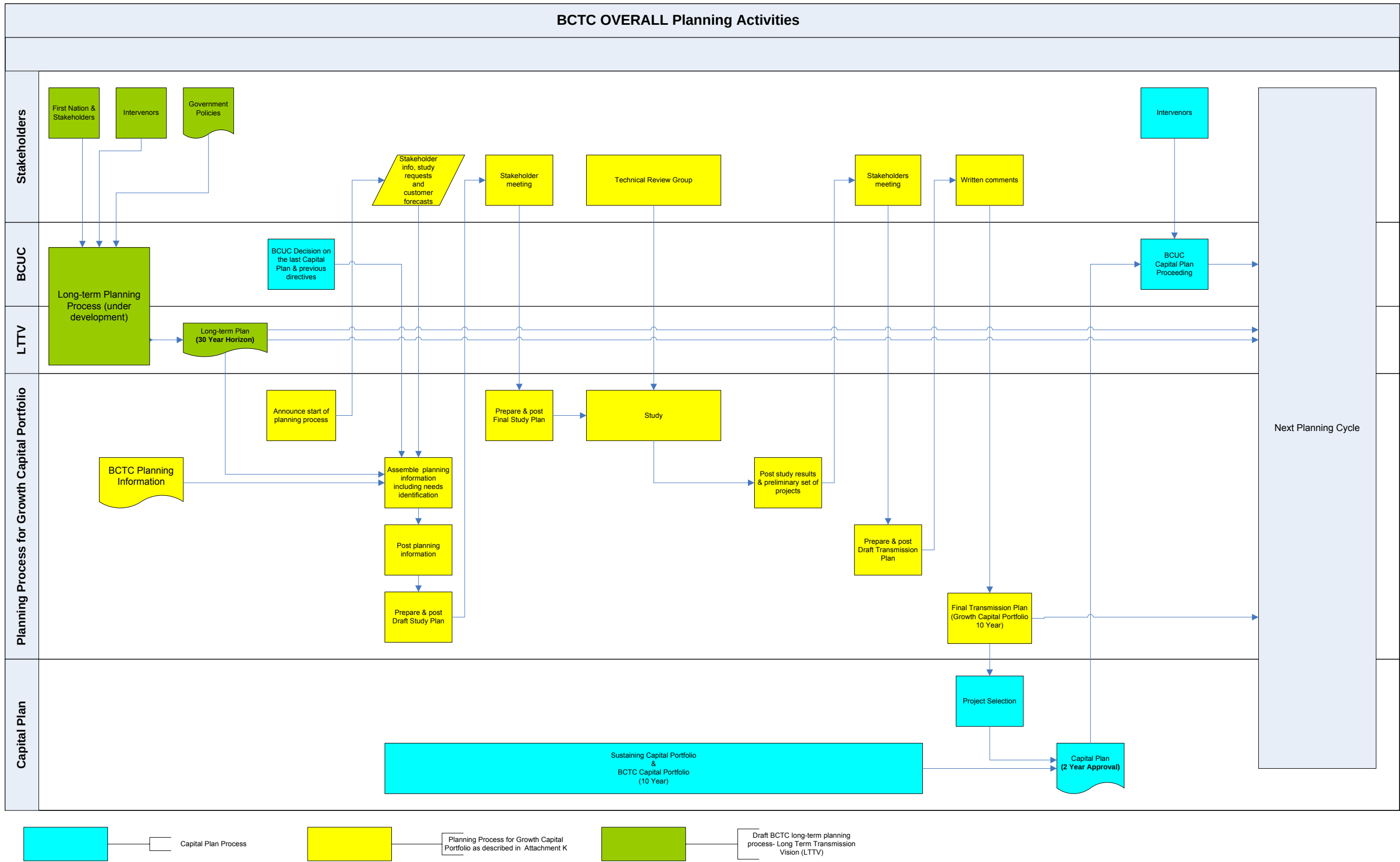
In accordance with Order No. 890, BCTC is proposing to amend its OATT to include references to the requirements of Attachment K. These amendments occur in sections 15.4, 16.1(e), 17.2(j), 28.2, 29.2(i), and 31.6 and are included in Appendix A to this Application. A number of these amendments require PTP and NITS customers to provide the information required by Attachment K as part of their requests for service.

3.2.2 Coordination with Other Planning Requirements

The Attachment K planning process operates on a biennial schedule to coordinate with BCTC’s biennial filing of its capital plan with the Commission pursuant to section 44.2 and 45(6) of the UCA. As described above, the Attachment K planning process will produce a list of growth capital projects, out of which BCTC will select projects to be included in its BCTC’s Growth Capital Portfolio in the Capital Plan. Concurrent with the Attachment K planning process, BCTC will also be preparing its Sustaining and BCTC Capital Portfolios for inclusion in the Capital Plan.

Figure 3-2 is a diagram showing how the Attachment K process coordinates with BCTC’s other planning processes.

Figure 3-2. BCTC Overall Planning Activities



3.2.3 Order No. 890 Planning Principles and BCTC's Attachment K

BCTC’s proposed Attachment K responds to the requirement of Order No. 890 that each transmission provider must participate in and submit a coordinated and regional planning process that complies with nine planning principles: Coordination, Openness, Transparency, Information Exchange, Comparability, Dispute Resolution, Regional Participation, Economic Planning Studies, and Cost Allocation for New Projects. Order No. 890 requires the planning process to be documented in an attachment to the transmission provider’s OATT.³⁴

The following summarizes the requirements of Order No. 890’s nine planning principles and reviews how BCTC’s proposed Attachment K satisfies each of the principles.

3.2.3.1 Principle 1 – Coordination

3.2.3.1.1 Order No. 890 Requirements

In order to satisfy the coordination principle, transmission providers must provide customers and other stakeholders with the opportunity to participate fully in the planning process. The purpose of the coordination requirement is to eliminate the potential for undue discrimination in planning by opening appropriate lines of communication between transmission providers, their transmission-providing neighbours, affected state authorities, customers, and other stakeholders. The planning process must provide for the timely and meaningful input and participation of customers and other stakeholders regarding the development of transmission plans, allowing customers and other stakeholders to participate in the early stages of development. In its planning process, each transmission provider must clearly identify the details of how its planning process will be coordinated with affected parties. While transmission providers must provide a reasonable and meaningful opportunity to meet, the number of meetings and the scope and format of such meetings are up to the transmission provider to determine. Affected parties must be given an opportunity to participate in the planning process to voice their concerns, not to “vote” on the transmission plan.³⁵

³⁴ Order No. 890, para. 437.

³⁵ See Order No. 890, paras. 445-454, and Order No. 890-A, paras 182-191.

3.2.3.1.2 BCTC's Attachment K

BCTC's proposed Attachment K meets the coordination requirement in the following manner:

1. BCTC's proposed process provides an appropriate line of communication that allows parties to participate and provide input into the planning process.
 - a) BCTC initiates its planning process by making an announcement on its public website as well as e-mailing the announcement to stakeholders. The stakeholder mailing lists will consist of stakeholders who have participated or have expressed interest in BCTC's consultation processes as well as neighbouring transmission providers and the Commission. In the announcement, BCTC will include:
 - i. descriptions of the planning process, including milestones and anticipated schedules; and
 - ii. instructions to stakeholders for providing planning information to BCTC and submitting requests for economic planning studies.
 - b) BCTC will post its own and customer-provided planning information on its website, subject to confidentiality requirements. This information exchange takes place at the initiation of the planning process so that BCTC may take into account views expressed in developing its transmission plan and so that customers may participate in an informed manner.
 - c) The planning process includes two consultation meetings and, in addition, working groups that allow parties to provide input and written comments at each stage of the planning process.
 - i. One consultation meeting will be held during the Study Plan Development Phase. Prior to this consultation meeting, BCTC will provide stakeholders with a Draft Study Plan, which BCTC develops based on information exchanged earlier in the planning

process, so that stakeholders will be able to make an informed contribution to the finalization of the Study Plan.

- ii. During the Study Phase, BCTC will engage stakeholders impacted by specific issues by grouping them into subgroups, called Technical Working Groups, so that stakeholders can participate in a more detailed review of specific projects of interest.
- iii. A second consultation meeting will be held at the completion of the Study Phase. Prior to this consultation meeting, BCTC will provide stakeholders with the results of studies performed in the Study Phase, including the results of Economic Planning studies. Stakeholders can comment on the results in the consultation meeting as well as provide written comments after the meeting.
- iv. Stakeholders will also have the opportunity to comment on a draft transmission plan, which is a collection of growth capital projects in various stages of development that are designed to meet the potential needs and requirements of the transmission system as identified in the planning process.

- d) BCTC will designate a “Point of Contact” as the single window for customers and stakeholders wishing to communicate with BCTC. This will ensure all inquiries from stakeholders will be dealt with efficiently.

- 2. As discussed further below, BCTC will coordinate on a regional basis through the Western Electricity Coordinating Council’s (WECC) regional planning processes. In the proposed Attachment K, BCTC commits to provide information to stakeholders with respect to their participation in these processes.

3.2.3.2 Principle 2 – Openness

3.2.3.2.1 Order No. 890 Requirements

In order to satisfy the openness principle under Order No. 890, transmission planning meetings must be open to all affected parties including, but not limited to, all

transmission and interconnection customers, state commissions and other stakeholders. Order No. 890 recognizes that it may be appropriate in certain circumstances, such as at a particular meeting of a sub-regional group, to limit participation to a relevant subset of these entities. But, as stressed by Order No. 890, the overall development of the plan must remain open. While the process must be open, confidential and security sensitive information must be managed through the use of confidentiality agreements or password-protected access.³⁶

3.2.3.2.2 BCTC’s Attachment K

BCTC’s proposed Attachment K meets the openness principle in the following ways:

1. The planning process is open to all affected parties, such as transmission and interconnection customers. This means that all affected parties may access transmission planning information, participate in consultation meetings and technical review groups, and provide written comments to BCTC.
2. BCTC will protect confidential and security sensitive information through the use of confidentiality agreements. BCTC will develop a procedure for the submitting and receiving of confidential information as indicated in Section 9 of Attachment K.

3.2.3.3 Principle 3 – Transparency

3.2.3.3.1 Order No. 890 Requirements

In order to satisfy the transparency principle, transmission providers must disclose to all customers and other stakeholders the basic criteria, assumptions, and data that underlie their transmission system plans. Order No. 890 concludes that this information should enable customers, other stakeholders, or an independent third party to replicate the results of planning studies and thereby reduce the incidence of after-the-fact disputes regarding whether planning has been conducted in an unduly discriminatory fashion. Among other things, Order No. 890 requires transmission

³⁶ See Order No. 890, paras. 455-460, and Order No. 890-A, paras. 192-194.

providers to make available information regarding the status of upgrades identified in their transmission plans in addition to the underlying plans and related studies.³⁷

3.2.3.3.2 BCTC’s Attachment K

BCTC’s proposed Attachment K meets the transparency principle in the following ways:

1. BCTC will post available planning information on its public web site. This information will include BCTC’s “Planning Manual,” which is a document BCTC will prepare to include its basic methodology, criteria and assumptions for its planning process.
2. Planning information that is subject to confidentiality or is security sensitive will only be released under protection of a confidentiality agreement.
3. In addition to providing stakeholders information on BCTC’s planning methodologies and criteria, BCTC will engage interested stakeholders in the Study Phase as part of the Technical Review Groups so that interested stakeholders may understand how BCTC arrives at the study results.

3.2.3.4 Principle 4 – Information Exchange

3.2.3.4.1 Order No. 890 Requirements

In order to satisfy the information exchange principle in Order No. 890, transmission providers must develop guidelines and a schedule for the submittal of information in consultation with their Network and PTP customers. Order No. 890 stresses that information collected by transmission providers to provide transmission service to their native load customers must be transparent and that equivalent information must be provided by transmission customers to ensure effective planning and comparability. PTP customers are also required to submit any projections that they have of a need for service over the planning horizon. The information exchanged should focus on system planning, not on studies in response to interconnection or transmission service requests.³⁸

³⁷ See Order No. 890, paras. 461-479, and Order No. 890-A, paras. 195-202.

³⁸ See Order No. 890, paras. 480-488, and Order No. 890-A, paras. 203-207.

3.2.3.4.2 BCTC’s Attachment K

BCTC’s proposed Attachment K meets the information exchange principle in the following ways:

1. As part of announcing the initiation of the planning process, BCTC will provide a schedule for
 - (a) customers to provide planning information, including a forecast of loads and resources from Network Customers and a projection of the need and usage of PTP service from PTP customers; and
 - (b) customers and other stakeholders to provide additional information, including information on non-wires solutions that may defer or offset transmission investments.
2. BCTC makes its own planning information available to customers through its public web site.
3. BCTC will develop procedures in its business practices for customers and stakeholders for submitting information to BCTC, including data submission forms, to facilitate the exchange of information electronically.
4. BCTC will review with stakeholders in the initial consultation meeting how this information is used for planning.

3.2.3.5 Principle 5 – Comparability

3.2.3.5.1 Order No. 890 Requirements

Under the comparability principle, transmission providers must develop, after considering the data and comments supplied by customers and other stakeholders, a transmission system plan that meets the specific service requests of their transmission customers and otherwise treats similarly-situated customers (e.g., Network and retail native load) comparably in transmission system planning. Order No. 890 also requires that, where appropriate, customer demand resources be

considered on a comparable basis to the service provided by comparable generation resources.³⁹

3.2.3.5.2 BCTC’s Attachment K

BCTC’s Attachment K meets the comparability principle in the following ways:

1. Requests for specific PTP transmission service, Network service, and interconnection service will be treated in accordance with the OATT. The proposed Attachment K does not change these service request processes.
2. All customers are required to provide information over the same 10-year planning horizon.
3. All customers will be provided the same opportunities to participate in the planning process.
4. Non-wires solutions proposed by customers or stakeholders will be considered on a comparable basis to the service provided by comparable transmission alternatives. BCTC proposes to develop criteria and to document the criteria in the Planning Manual on how these resources will be treated on a comparable basis.

3.2.3.6 Principle 6 – Dispute Resolution

3.2.3.6.1 Order No. 890 Requirements

In order to satisfy the dispute resolution principle, transmission providers must have a dispute resolution process to manage disputes that arise from the planning process. Order No. 890 states that the dispute resolution process must address both procedural and substantive planning issues, as the purpose for including a dispute resolution process is to provide a means for parties to resolve all disputes related to the planning process before turning to FERC.

Order No. 890 encourages the development of a three-step dispute resolution process consisting of negotiation, mediation, and arbitration. If appropriate,

³⁹ See Order No. 890, paras. 489-495, and Order No. 890-A, paras. 208-216.

transmission providers may rely on existing dispute resolution processes already contained in their OATT.⁴⁰

3.2.3.6.2 BCTC’s Attachment K

BCTC does not propose to provide an additional dispute resolution process related to the Attachment K planning process. BCTC notes that the legislative framework in British Columbia, and the role of the Commission within that framework, provides a more efficient forum than may exist in the United States, where FERC has jurisdiction over wholesale transmission but state regulators maintain an important role in ensuring resource adequacy. BCTC believes that if there are any disputes arising from the planning process that cannot be resolved informally between stakeholders and BCTC, then any stakeholder may raise the issue to the Commission in the context of a review of a BCTC capital plan, or by way of the Commission’s complaint process. BCTC believes that this process is preferable to a three-stage arbitration process, which could potentially delay or otherwise affect BCTC’s capital planning processes and thereby interfere with BCTC’s ability to comply with the planning requirements in the UCA .

3.2.3.7 Principle 7 – Regional Participation

3.2.3.7.1 Order No. 890 Requirements

In order to satisfy the regional participation principle, transmission providers must coordinate with interconnected systems (1) to share system plans to ensure that they are simultaneously feasible and otherwise use consistent assumptions and data, and (2) to identify system enhancements that could relieve congestion or integrate new resources. FERC explained that the specific features of the regional planning effort should take account of and accommodate, where appropriate, existing institutions, as well as physical characteristics of the region and historical practices.⁴¹

3.2.3.7.2 BCTC’s Attachment K

BCTC’s Attachment K meets the regional planning principle as follows:

⁴⁰ See Order No. 890, paras. 496-503, and Order No. 890-A, paras. 217-221.

⁴¹ See Order No. 890, paras. 504-528, and Order No. 890-A, paras. 222-227.

- 1 1. BCTC’s regional planning activities include coordination with interconnected
2 systems through its participation in WECC and through direct engagement of
3 neighbouring systems. As a system in the corner of the WECC interconnected
4 system, BCTC has not found it necessary to join any subregional planning
5 groups, although BCTC will coordinate with such subregional planning groups
6 through WECC or individually when necessary.

- 7 2. The majority of BCTC’s regional planning activity will be through WECC.
8 BCTC will participate in WECC’s (1) Regional Planning Project Review, (2)
9 Project Rating Review, (3) Progress Reports and (4) Transmission Planning
10 Protocol. A brief description of each of these procedures is provided below.

11 (a) WECC’s Regional Planning Review process encompasses the initial
12 development phase of a project in which regional interest is expressed.
13 This process addresses how transmission project sponsors should
14 work and interact with other parties when developing a project that has
15 or may have a significant regional benefit or impact. Through this
16 process, WECC members cooperate to identify transmission
17 expansion projects that may be beneficial to the region.

18 (b) WECC’s Project Rating Review process is intended to ensure that new
19 projects meet NERC/WECC planning standards and are integrated
20 into the existing system with a WECC accepted rating, while
21 recognizing the protected ratings of other facilities.

22 (c) WECC’s Progress Report entails a process by which project sponsors
23 report potential significant additions and changes to the interconnected
24 system and WECC members are provided the opportunity to review
25 and comment on these additions or changes. It provides the policies
26 and procedures for notification and reliability assessment requirements
27 related to all projects planned within the WECC electric system. The
28 intent of these policies and procedures is to encompass all generation
29 and transmission projects that may have a significant impact on the
30 reliability of the Western Interconnection.

(d) The Transmission Planning Protocol of WECC’s Transmission Expansion Planning Policy Committee (TEPPC) supports and coordinates Economic Planning Studies on a regional basis. TEPPC’s role includes preparing and making available a transmission economic planning database, conducting transmission economic planning studies as part of a Western Interconnection synchronized study cycle, and facilitating collaborative efforts among subregional planning groups within the Western Interconnection. TEPPC prioritizes Economic Planning Studies and identifies the party (i.e., TEPPC, a subregional group or individual transmission provider) best able to conduct the study.

3. BCTC’s other regional planning initiatives are done through direct interaction with neighbouring systems.

4. As stated in Section 11 of Attachment K, BCTC will post on its public website information on its regional planning activities, including its coordination with WECC and bilateral planning meetings. BCTC will also review its regional planning activities with stakeholders at consultation meetings, including any opportunities for stakeholders to participate in such activities.

3.2.3.8 Principle 8 – Economic Planning Studies

3.2.3.8.1 Order No. 890 Requirements

The economic planning studies principle in Order No. 890 requires transmission providers to take into account both reliability and economic considerations in their planning processes. The purpose of this principle is to ensure that customers may request studies that evaluate potential upgrades and other investments that could reduce congestion or integrate new resources and loads on an aggregated or regional basis. Customers should be permitted to choose the studies that are of the greatest value to them, directing transmission providers to develop a means to allow the transmission provider and stakeholders to cluster or batch requests for economic planning studies so that the transmission provider may perform the studies in the most efficient manner. Customers must be given the right to request a defined number of studies annually, the costs of which will be recovered as a part of the

1 overall pro forma tariff cost of service. Order No. 890, however, is clear that
2 transmission providers are not obligated to provide service as a result of the request
3 for economic planning studies or to fund economic projects.

4 Order No. 890 requires that a transmission provider clearly describe the process by
5 which economic planning studies can be requested and how they will be prioritized.
6 Additionally, it requires customers, stakeholders and merchants to provide economic
7 data.⁴²

8 **3.2.3.8.2 BCTC’s Attachment K**

9 BCTC’s Attachment K meets the economic planning studies principle in the following
10 ways:

- 11 1. In the initiation phase of the process, stakeholders have the opportunity to
12 submit requests for economic planning studies, which will be posted on
13 BCTC’s Internet website.
- 14 2. In its draft study plan, BCTC will provide its proposed selection criteria for the
15 requested economic planning studies. At the initial consultation meeting,
16 BCTC will review the selection criteria with customers and determine if any
17 economic planning studies can be combined and the number of studies to be
18 performed.
- 19 3. Customers will have the opportunity to provide written comments on BCTC’s
20 selection criteria before BCTC selects the economic planning studies to be
21 performed.
- 22 4. The economic planning studies will be performed at the same time as other
23 studies so that consistent assumptions and data are used.
- 24 5. BCTC will present the results of the economic studies, but has no obligation to
25 fund, assign cost responsibility, or otherwise determine whether any economic
26 project should be implemented.

⁴² See Order No. 890, paras. 529-551, and Order No. 890-A, paras. 228-240.

6. BCTC will participate in WECC’s Transmission Expansion Protocol for the coordination of economic planning studies on a regional basis. The Transmission Expansion Protocol is open to stakeholder participation.

7. The results of Economic Planning Studies will be considered under BCTC’s Transmission Expansion Policy.

3.2.3.9 Principle 9 – Cost Allocation for New Projects

3.2.3.9.1 Order No. 890 Requirements

In order to satisfy the cost allocation principle in Order No. 890, transmission providers must develop cost allocation methodologies for projects that are not identified through transmission or interconnection service requests. Order No. 890 does not impose a particular allocation methodology for such projects; instead, it identifies three factors to be considered upon review of cost allocation proposals. These factors are:

1. whether a cost allocation proposal fairly assigns costs among participants, including those who cause them to be incurred and those who otherwise benefit from them;
2. whether a cost allocation proposal provides adequate incentives to construct new transmission; and
3. whether the proposal is generally supported by state authorities and participants across the region.⁴³

3.2.3.9.2 BCTC’s Attachment K

BCTC’s Attachment K meets the cost allocation principle in the following ways:

1. BCTC will recover the costs of projects required for meeting service requests and system improvements in accordance with the provisions in BCTC’s OATT.
2. BCTC is not obliged to expand the system based on the results of Economic Planning Studies. Where BCTC decides to construct facilities based on the

⁴³ See Order No. 890, paras. 552-561, and Order No. 890-A, paras. 241-254.

1 results of one or more Economic Planning Studies, it will do so in accordance
2 with its transmission expansion policy, subject to Commission approval. In
3 these cases, BCTC will apply the cost allocation principles of the applicable
4 transmission expansion policy under which the project is developed, subject to
5 Commission approval.

6 **3.2.4 Consultation**

7 BCTC consulted customers and stakeholders on its approach to Attachment K and
8 provided a draft Attachment K for comments by customers and stakeholders, which
9 are described in Appendix D. Customers’ comments were generally supportive of
10 BCTC’s Attachment K proposal.

11 **3.3 Transmission Pricing**

12 **3.3.1 Energy and Generator Imbalance Service**

13 BCTC proposes not to adopt the Order No. 890 amendments related to Energy and
14 Generator Imbalance service. Instead, BCTC proposes to retain its current energy
15 imbalance service rate design as approved by the Commission. In reviewing the
16 current wording of the rate schedule for Energy Imbalance Service, BCTC identified
17 some opportunities to simplify the wording and these minor changes are reflected in
18 Schedule 06 of the redlined OATT in Appendix A. In principle, BCTC’s Commission-
19 approved energy imbalance rate design complies with Order No. 890. The following
20 summarizes Order No. 890’s requirements, reviews BCTC’s current provisions
21 related to energy imbalance service, and explains BCTC’s rationale for not adopting
22 Order No. 890’s requirements.

23 **3.3.1.1 Order No. 890 Energy and Generator Imbalance Service**

24 Order No. 890 intends to standardize energy and generator imbalance service in
25 order to provide overall consistency in the provision of service, to improve the
26 incentive for accurate scheduling, and to relate imbalance charges to the cost of
27 providing such service. The new imbalance provisions in Order No. 890 are based on
28 three principles:

- 29 (a) The charges for service must be based on incremental cost or some multiple
30 thereof;

1 (b) The charges for service must provide an incentive for accurate scheduling, such
2 as by increasing the percentage of the adder above (and below) incremental
3 cost as the deviations become larger; and

4 (c) The provisions must account for special circumstances presented by
5 intermittent generators and their limited ability to precisely forecast or control
6 generation levels, such as waiving the more punitive adders associated with
7 higher deviations.⁴⁴

8 Based on these principles, Order No. 890 requires that:

9 (a) Each transmission provider propose new OATT language that clearly specifies
10 the method by which it will calculate incremental costs,⁴⁵ as well as the method
11 it will use to obtain each component of the calculation.⁴⁶ Transmission providers
12 can include in the calculation of incremental cost those start-up costs that are
13 incurred in an hour different from the hour of excess imbalance, provided that
14 the costs are in fact associated with providing the imbalance service.⁴⁷
15 Transmission providers may propose to assess regulation charges to
16 generators selling in the Balancing Authority Area, as well as generators selling
17 outside the Balancing Area.⁴⁸

18 (b) Imbalances of less than or equal to 1.5% of the scheduled energy (or 2 MW,
19 whichever is larger) should be netted monthly and settled at 100 percent of the
20 incremental or decremental cost (Tier 1). Imbalances between 1.5% and 7.5%
21 of the scheduled energy (or between 2 – 10MW, whichever is larger) must be
22 settled at 90% of the decremental cost for over-scheduling or 110% of the
23 incremental cost for under-scheduling (Tier 2). Imbalances greater than 7.5%

⁴⁴ Order No. 890, para. 635.

⁴⁵ Order No. 890, para. 687, defines “incremental cost” as “the transmission provider’s actual average hourly cost of the last 10 MW dispatched to supply the transmission provider’s native load, based on the replacement cost of fuel, unit heat rates, start-up costs, incremental operation and maintenance costs, and purchased and interchange power costs and taxes, as applicable.”

⁴⁶ Order No. 890, paras. 687, 689; Order No. 890-A, paras. 309-310.

⁴⁷ Order No. 890-A, para. 312.

⁴⁸ Order No. 890-A, para. 313.

(or 10MW, whichever is larger) are settled at 75% of the decremental cost for overscheduling or 125% of the incremental cost for underscheduling (Tier 3).⁴⁹

(c) Intermittent resources be exempted from Tier 3. Such resources are only required to pay Tier 2 charges for all deviations of 1.5% or larger. Order No. 890 defines an “Intermittent Resource” as an electric generator that is not dispatchable and cannot store its fuel source and therefore cannot respond to changes in system demand or respond to transmission security constraints.

While expressing a concern that allowing netting and crediting of imbalances may undermine any incentive to adhere to scheduling, Order No. 890 allows netting and crediting of imbalances within the Tier 1 deviation band.⁵⁰ The order specifies that netting should be done on a megawatt-hour basis, rolling over the month. Imbalances remaining at the end of the month should be settled at the load weighted average of the hourly incremental costs during that month. Transmission providers may propose a more granular approach to netting within the first tier, subject to showing that it is necessary under the circumstances.⁵¹

3.3.1.2 BCTC’s Current Energy Imbalance Service

BCTC currently offers Energy Imbalance Service pursuant to Schedule 6 of Attachment L of BCTC’s OATT.⁵² Order No. 890 contemplates both generator and energy imbalance services. While BCTC does not offer generator imbalance service explicitly, Schedule 6 defines positive imbalances as occurring when actual generation is greater than scheduled or actual load is less than scheduled, and defines negative imbalances as occurring when actual generation is less than scheduled and/or actual load is greater than scheduled. Imbalances are calculated hourly based on deviations from scheduled generation and load. Pursuant to Schedule 6, depending on the size of the imbalance as described below, imbalances are settled at either:

⁴⁹ Order No. 890, para. 664.

⁵⁰ Order No. 890, paras. 715-716.

⁵¹ Order No. 890-A, para. 325.

⁵² BCTC proposes to remove its rate schedules from Attachment L and include them as separate schedules to the OATT.

(a) BCTC’s Energy Imbalance Price, defined as the average of BC Hydro’s hourly buy price and BC Hydro’s hourly sell price. The hourly buy price and hourly sell price are the hourly rates that BC Hydro buys or sells for electricity, respectively, pursuant to BC Hydro Rate Schedule 3011; or

(b) BC Hydro’s applicable hourly buy price or sell price. Positive energy imbalances are settled at BC Hydro’s hourly buy price and negative energy imbalances are settled at BC Hydro’s hourly sell price.

Specifically,

(a) energy imbalances that do not exceed 20 MWh over an Energy Imbalance Period, are settled at BCTC’s hourly Energy Imbalance Price for the amount of the imbalance that does not exceed 4 MW in any hour, and at BC Hydro’s applicable hourly buy or sell price for the amount of the imbalance in any hour that exceeds 4 MW. “Energy Imbalance Period” means one of three 8 hour periods defined as HE23-6, HE7-14 or HE15-22; and⁵³

(b) energy imbalances that exceed 20 MWh over an Energy Imbalance Period are settled at BC Hydro’s applicable hourly buy or sell price over that Energy Imbalance Period.

3.3.1.3 BCTC Proposal

As indicated above, BCTC proposes not to adopt the Order No. 890 amendments to the pro forma tariff related to energy and generator imbalance service.

BCTC’s current design for energy imbalance service is based on a joint proposal between BCTC and BC Hydro that the Commission has determined is a practical design, striking a balance between the interests of the OATT customers and financial implications for BC Hydro’s ratepayers.⁵⁴

BCTC’s current design for energy imbalance service protects BC Hydro’s ratepayers from negative financial implications resulting from arbitrage. Order No. 890 allows

⁵³ HE23-6 means 23:00 hours through to 7:00 hours. HE7-14 means 7:00 hours through to 15:00 hours. HE15-22 means 15:00 hours through to 23:00 hours.

⁵⁴ 2005 OATT Decision, p. 84.

monthly netting of imbalances within the Tier 1 deviation band, which will expose BC Hydro ratepayers to arbitrage risk. This risk is mitigated under BCTC’s current provision of Energy Imbalance Service due to the calculation of imbalances hourly based on deviations from scheduled generation and load and the opportunity cost pricing provisions in BC Hydro Rate Schedule 3011.

BCTC’s current rate design for energy imbalance service under Schedule 6 of the OATT aligns with the three principles that drive the revisions to energy and generator imbalance service under Order No. 890. The following table compares the three Order 890 principles for energy and generator imbalance and BCTC’s current design:

Table 3-1. Alignment of BCTC’s Energy Imbalance Service with Order No. 890

	Order No. 890 Principles	BCTC’s Current Design
1	The charges for service must be based on incremental cost or some multiple thereof.	The charge for imbalances reflects a “buy/sell” spread based on BC Hydro’s opportunity costs to buy and sell electricity, as applicable.
2	The charges for service must provide an incentive for accurate scheduling, such as by increasing the percentage of the adder above (and below) incremental cost as the deviations become larger.	Deviation bands based on both hour and Energy Imbalance Period provide an incentive for accurate scheduling.
3	The provisions must account for special circumstances presented by intermittent generators and their limited ability to precisely forecast or control generation levels, such as waiving the more punitive adders associated with higher deviations.	The design width of the deviation bands for the first tier (i.e. Energy Imbalance Price) facilitates access by smaller customers, such as intermittent renewable generators, that cannot easily control their transmission usage, thereby eliminating unnecessary penalties for such customers.

The decision to not adopt Order No. 890 requirements was made after BCTC’s consultation efforts on Order No. 890 implementation. BCTC proposed during consultation to defer any consideration of energy imbalance service and did not receive any comments. However, after further consideration of Order No. 890 and BCTC’s existing service, BCTC concluded that it would simply retain its existing service. No energy imbalance service was purchased from BCTC in F2007 and F2008.

1 BCTC’s energy imbalance service is applicable to both generation and load, and it is
2 therefore unnecessary for BCTC to consider separately Order No. 890’s energy and
3 generator imbalance service provisions.

4 **3.3.2 Credits for Network Customers**

5 BCTC proposes to adopt the Order No. 890 requirements regarding credits for
6 Network Customers.

7 Section 30.9 of BCTC’s OATT currently provides that a Network Customer may be
8 eligible to receive credits against its transmission service charges if it demonstrates
9 that the transmission facilities that it owns are jointly planned and installed in
10 coordination with the transmission provider.

11 BCTC proposes to adopt the Order No. 890 amendments to Section 30.9 of the pro
12 forma tariff to require that the transmission provider provide credits for Network
13 Customer facilities that are integrated into the operations of the transmission
14 provider’s facilities. To be integrated, new facilities must provide additional benefits to
15 the transmission grid in terms of capability and reliability and be able to be relied
16 upon by the transmission provider for the operation of the grid. As the Order No. 890
17 amendments indicate, a customer’s transmission facilities will be presumed to be
18 integrated if the facilities, if owned by the transmission provider, would be eligible for
19 inclusion in the transmission provider’s annual transmission revenue requirement.⁵⁵

20 The amendments related to credits for Network Customers are not applicable to any
21 customer at this time because BCTC’s only Network Customer, BC Hydro, is also the
22 owner of BCTC’s transmission facilities. If a new Network Customer were added,
23 BCTC would develop the implementation requirements and business practice to
24 govern credits for Network Customers. BCTC would consult with its customers on any
25 proposed automatic adjustment clause for recovering the costs associated with
26 transmission credits prior to applying to the Commission for such a provision.

⁵⁵ Order No. 890, para. 753. Order No. 890-A (at paras. 351-353) clarifies that the presumption of integration is rebuttable as applied to both the transmission provider and the Network Customer. A Network Customer may justify application of the presumption by reference to the existing facilities in the transmission provider’s rates; that is, by showing that its new facilities are similar in design and purpose to facilities owned by the transmission provider that are included in rates.

1 No comments were received from customers and stakeholders during consultation on
2 this proposal.

3 **3.3.3 Capacity Reassignment**

4 BCTC proposes to adopt the Order No. 890 requirements with respect to capacity
5 reassignment.

6 Section 23.1 of BCTC’s OATT provides that a transmission customer (a “reseller”) may sell, assign, or transfer all or a portion of its rights under its Service Agreement
7 or Umbrella Agreement to another eligible customer (an “assignee”). Under the OATT,
8 compensation to the reseller shall not exceed the higher of: (i) the original rate paid
9 by the reseller; (ii) the transmission provider’s maximum rate on file at the time of the
10 assignment; or (iii) the reseller’s opportunity cost capped at the transmission
11 provider’s cost of expansion.
12

13 Order No. 890 states that the purpose of removing the price cap is to foster the
14 development of a more robust secondary market for transmission capacity, by
15 providing PTP transmission customers with an increased incentive to make their
16 service available to others that place a higher value on it, thereby sending more
17 accurate signals that promote efficient use of the system.⁵⁶ Without a price cap,
18 transmission customers with rights to firm PTP transmission capacity will be able to
19 resell that capacity at a negotiated rate that exceeds the maximum rate.

20 Order No. 890-A provides that the price cap will be removed only until 1 October
21 2010. This date will allow FERC to assess the development of the secondary market
22 under the new rules and to determine whether it is appropriate to continue
23 reassignments of capacity above the price cap beyond that date.⁵⁷ BCTC will review
24 FERC’s assessment and file the appropriate changes to the OATT with the
25 Commission if necessary.

26 Consistent with Order No. 890, BCTC proposes to modify Section 23.3 of the OATT
27 to establish that all sales or assignments of capacity must be conducted through, or

⁵⁶ Order No. 890, paras. 808-809; see also Order No. 890-B, para. 77.

⁵⁷ Order No. 890-A, para. 390.

1 otherwise posted on, the transmission provider’s OASIS on or before the date the
2 reassigned service commences.⁵⁸

3 BCTC also proposes to amend Rate Schedule 01 to reflect that neither the discount
4 rule nor the price ceilings otherwise stated in BCTC’s OATT will apply to
5 reassignments of capacity.⁵⁹

6 Finally, in accordance with Order No. 890:

7 (a) BCTC will require that a Service Agreement or Umbrella Agreement for
8 assignments be executed prior to the date on which the reassigned service
9 commences, in order to commit the assignee to abide by the terms and
10 conditions of the OATT.⁶⁰

11 (b) BCTC will accept as sufficient that an assignee could execute a Service
12 Agreement or Umbrella Agreement generally and complete a particular
13 assignment through OASIS.⁶¹

14 (c) BCTC will credit or charge the reseller for the difference in price in the
15 respective Service Agreements of the reseller and the assignee.⁶²

16 No comments were received from customers and stakeholders in consultation on this
17 proposal.

18 **3.3.4 Unreserved Use Penalties**

19 BCTC proposes to adopt the Order No. 890 amendments to Sections 3, 13.4 and
20 30.4 of the pro forma tariff related to unreserved use penalties. BCTC also proposes
21 a penalty charge and method for the distribution of such penalties consistent with the
22 principles found in Order No. 890.

⁵⁸ Order No. 890, para. 815.

⁵⁹ Order No. 890-A, para. 426. BCTC’s rate schedules are currently in Attachment L of BCTC OATT.

⁶⁰ Order No. 890, para. 816.

⁶¹ Order No. 890-A, paras. 422-423.

⁶² See amendments to Section 23.1 of the OATT as set out in Appendix A to this Application.

3.3.4.1 Overview of Proposed Amendments

BCTC’s current penalty charges for unreserved use of Firm and Non-Firm PTP transmission service are found in Rate Schedules 01 and 02 of the Attachment L of the current OATT. BCTC applies a penalty charge at the rate of 125 percent of the Reserved Capacity Charge for all unauthorized usage of Long-Term Firm Point-to-Point (LTF PTP) service and STF PTP service. BCTC applies a penalty charge at the rate of 125 percent of the maximum monthly delivery charge for all unauthorized usage of Short-Term Non-Firm PTP service.

As stated by Order No. 890, a transmission customer will be subject to unreserved use penalties in any circumstance where the transmission customer uses transmission service that it has not reserved. For instance, the penalty will be imposed where a transmission customer has a transmission service reservation, but uses transmission service in excess of its reserved capacity, or where the transmission customer uses transmission service where it does not have a transmission service reservation.⁶³ Further, all unreserved uses of a transmission provider’s system are to be considered firm PTP uses, even if the customer is taking NITS or Non-Firm PTP service.⁶⁴

Consistent with Order No. 890, BCTC proposes the following:

- (a) Amendments to Section 13.4 and 30.4 OATT to facilitate the application of penalties by providing that a customer that takes unreserved PTP transmission service and that has not executed a Service Agreement will be deemed to have executed a Service Agreement.⁶⁵
- (b) Amendments to Section 3 of the OATT to clarify that the charges for any associated ancillary services to support unreserved use are also to be applied based only on the period of unreserved use. Charges for ancillary services costs to support unreserved use are to be based on actual cost, and not subject to the penalty rate.⁶⁶

⁶³ Order No. 890, para. 834.

⁶⁴ Order No. 890-A, para. 454.

⁶⁵ Order No. 890, para. 840.

⁶⁶ Order No. 890-A, para. 463.

(c) Amendment to Rate Schedule 01 to state that “... a penalty charge will be applied to all unauthorized usage at a rate of 125 percent of the maximum hourly delivery charge.”

3.3.4.2 Proposed Penalty Charges

BCTC proposes to maintain the penalty charge at 125 percent of the maximum rate for PTP transmission service.

While Order No. 890 gives transmission providers discretion as to the level of penalty charges for unreserved use, it does state that an unreserved use penalty up to twice the applicable rate is acceptable and the transmission provider should set the penalty charge large enough to create the appropriate incentive for transmission customers to purchase the correct amount of transmission service. Order No. 890 also requires the assessment of the charge to escalate based on the repeated occurrence of unreserved use of a given duration.

During consultation BCTC received one comment from a customer who suggested a 200 percent penalty charge. However, BCTC’s OATT has included a penalty charge of 125 percent since 2003 and BCTC has experienced minimal unauthorized usage. BCTC therefore sees no reason to change its penalty charge.

3.3.4.3 Distribution of Penalties

Consistent with Order No. 890,⁶⁷ BCTC proposes to distribute all unreserved use penalties that it collects to all non-offending transmission customers in the same monthly billing cycle in which the unreserved use occurred. The allocation of unreserved use penalties to such customers will be pro rata based on the total MW amount of reservations of each customer in that monthly billing cycle. BCTC will credit

⁶⁷ Order No. 890 requires transmission providers to distribute all unreserved use penalties to all non-offending transmission customers and requires transmission providers to propose a mechanism to identify non-offending customers and to allocate unreserved use penalties among them (Order No. 890, paras. 861-862). Order No. 890-A (at para. 473) clarifies that the mechanism should not necessarily be based on a calendar year; rather, a case-by case basis may be used to identify the period to be used to identify non-offending customers.

1 the account to such customers, as applicable, in the monthly billing cycle that follows
2 assessment of the unreserved use penalty.⁶⁸

3 As contemplated by Order No. 890, BCTC proposes to establish a minimum penalty
4 amount of \$1,000 for distribution.⁶⁹ BCTC considers this amount to be a reasonable
5 threshold that will allow it to avoid the administrative burden associated with
6 distributing smaller amounts of penalty revenue.

7 **3.3.5 Other Ancillary Services**

8 BCTC proposes to adopt Order No. 890 amendments to allow ancillary services to be
9 provided by resources other than generation resources.

10 The ancillary services in BCTC’s OATT are Reactive Supply and Voltage Control,
11 Regulation and Frequency Response, Energy Imbalance, Spinning Reserves, and
12 Supplemental Reserves. BCTC proposes to revise Rate Schedules 04 to 08
13 accordingly, as set out in Appendix A.

14 Order No. 890 states that the supply of these ancillary services by load resources on
15 a comparable basis to service provided by generation resources is consistent with
16 FERC’s existing policy to encourage and facilitate demand response participation by
17 customers in energy, capacity and ancillary service markets.⁷⁰ BCTC believes that the
18 Commission is supportive of similar policies in B.C. However, BCTC plans to defer
19 the implementation of any load-management options until BCTC can coordinate them
20 with BC Hydro.

21 **3.4 Planning Re-Dispatch and Conditional Firm Service**

22 **3.4.1 Introduction**

23 Order No. 890 required transmission providers to provide both planning redispatch
24 and conditional firm service. Aimed to improve access to and utilization of an
25 occasionally congested grid, planning redispatch offers capacity relief by altering the

⁶⁸ Order No. 890 allows a transmission provider to credit penalties to its transmission revenue requirement so long as it demonstrates assurance that the offending customer does not benefit from this allocation (Order No. 890, para. 862).

⁶⁹ Order No. 890-A provides transmission providers with the flexibility to establish a minimum threshold for distributions of unreserved use penalties in order to avoid an administrative burden for small amounts of penalty revenue (Order No. 890-A, para. 475).

⁷⁰ Order No. 890, para. 888.

1 dispatch order of the provider's own resources. The relieved capacity can then help
2 meet a customer's request for LTF PTP service. As planning redispatch may be
3 insufficient to meet a customer's full request, the transmission provider may also offer
4 conditional firm service (CFS) as (a) a bridge service, until new capacity becomes
5 available to the customer's full MW request for LTF PTP service; or (b) a substitute
6 service if the customer can accept a curtailment priority level below the firm services'
7 level.⁷¹ A CFS customer gives the transmission provider the right but not the
8 obligation to curtail its transmission use based on certain preset curtailment
9 conditions.

10 Order No. 890 recognizes that both planning redispatch and CFS present reliability
11 concerns, as they may affect transmission use by other customers. Hence, Order No.
12 890 provides that both services must be reassessed by the transmission provider
13 every two years.

14 **3.4.2 Planning Redispatch**

15 BCTC proposes to adopt all of the planning redispatch reforms of Order No. 890 with
16 which BCTC is capable of complying. Since BCTC does not own any generation or
17 demand-side resources, it cannot offer a mandatory redispatch service. However,
18 whenever new facilities are required to provide long term service, BCTC will evaluate
19 the availability and cost of planned redispatch service to the extent possible as part of
20 the System Impact Study at the customer's request. In addition, to the extent that
21 customers believe that the service would facilitate transactions, BCTC intends to post
22 or notify its customers of available redispatch quantities or prices from those qualified
23 to offer the service.

24 With regard to amending its tariff, BCTC proposes not to adopt the Order No. 890
25 amendments to the pro forma tariff that require transmission providers to offer
26 planning redispatch from their own resources, but BCTC proposes to adopt, with
27 minor modifications, other Order No. 890 amendments related to planning redispatch
28 service that could be facilitated by either BCTC studies or posting of information and
29 offered on a voluntary basis within its balancing authority area.

⁷¹ Order No. 890, para. 914.

1 Order No. 890 requires transmission providers to provide planning redispatch, which
2 offers capacity relief by altering the dispatch order of the transmission provider's own
3 resources.⁷² The relieved capacity would then help meet a customer's request for LTF
4 PTP service. The text of the Order No. 890 amendments to Section 15.4(b) of the pro
5 forma tariff (see Appendix A to this Application) states:

6 If the Transmission Provider determines that it cannot accommodate a
7 Completed Application for Firm Point-To-Point Transmission Service
8 because of insufficient capability on its Transmission System, the
9 Transmission Provider will use due diligence to provide redispatch
10 from its own resources...

11 BCTC believes that this general language recommended by Order No. 890 could be
12 interpreted to mean that planning redispatch service would be mandatory. Therefore,
13 BCTC believes that it cannot adopt these Order No 890 amendments. BCTC
14 proposes, however, to adopt two other Order No. 890 changes to the OATT regarding
15 the facilitation of voluntary planning redispatch service.

16 (a) BCTC proposes to adopt with some modification the Order No. 890
17 amendments to the system impact study procedures for LTF PTP and Network
18 service in Sections 19.1, 19.3 and 32.3 of the OATT. According to these
19 proposed amendments, when requested by an interested customer, BCTC will
20 evaluate planning redispatch's availability based on generators in its Balancing
21 Authority Area as part of the System Impact Study for the service requested.
22 While the current OATT indicates that a System Impact Study will identify
23 redispatch options, the proposed amendments state that the System Impact
24 Study will identify “redispatch options, (when requested by an Eligible
25 Customer) including [*to the extent it is voluntarily provided by the resource*
26 *owner,*] an estimate of the cost of redispatch.” BCTC proposes to modify the
27 Order No. 890 pro forma text with the words “to the extent it is voluntarily
28 provided by the resource owner,” as indicated. This is to reflect the fact that
29 BCTC has no authority to demand generators to provide a cost estimate for
30 redispatch. Further amendments to Section 19.3 specify the content of the study

⁷² Planning redispatch is not the same as “reliability dispatch” which is the subject of Sections 30.5 and 33.2 of the OATT. See Order No. 890, footnote 67.

1 with respect to redispatch and amendments to Section 19.1 indicate the
2 customer’s obligation to notify the transmission provider if it wishes redispatch
3 to be studied. These amendments do not significantly alter the existing
4 requirements of the OATT, but do add more clarity to the obligations of the
5 transmission provider and customer with respect to redispatch.

6 (b) BCTC also proposes to adopt the Order No. 890 amendments to Section
7 15.4(b) of the pro forma tariff which state that “[a] Transmission Provider shall
8 not unreasonably deny self-provided redispatch or redispatch arranged by the
9 Transmission Customer from a third party resource.” BCTC believes that self
10 provided redispatch, if available, should not be denied to customers.

11 BC Hydro was the only customer to comment on redispatch during consultation. It
12 noted that there may be other generation resources in the province that are not
13 owned by BC Hydro and which may be available for long-term redispatch.

14 **3.4.3 Conditional Firm Service (CFS)**

15 BCTC is proposing to replace the current Shaped Service with CFS by adopting the
16 Order No. 890 amendments to Section 15.4(c), as well as amendments to Sections
17 13.4, 13.6, 14.7, 19.1 and 19.3, of the pro forma tariff, with modifications related to
18 curtailment conditions.

19 **3.4.3.1 Overview of CFS**

20 Consistent with Order No. 890, BCTC’s proposed CFS is a form of partial⁷³ LTF PTP
21 service that is offered when there is insufficient firm ATC to meet a customer’s full
22 request for LTF PTP service. CFS will be curtailed before firm services under pre-
23 specified conditions. CFS serves as a bridge service until the completion of
24 committed Network Upgrades, or as a substitute service for customers who can
25 accept a lower curtailment priority level than that of firm services.⁷⁴

26 The CFS described in FERC Order No. 890 has the following attributes:

⁷³ Partial service terms and conditions are set out in Section 19.7 of BCTC’s OATT.

⁷⁴ Order No. 890, para. 914.

- 1 (a) **Curtailment Conditions.** CFS may be curtailed prior to other firm services
2 under pre-specified curtailment conditions. A CFS customer must choose one of
3 the two options for curtailment conditions:
- 4 i. System Condition Option, which gives the transmission provider the right
5 to curtail based on specified system conditions that will occur or are
6 anticipated to occur; or
- 7 ii. Number of Hours Option, which gives the transmission provider the right
8 to curtail for a specific number of hours to resolve any reliability events
9 that will occur or are anticipated to occur.
- 10 (b) **Biennial Reassessment and Termination of Service.** CFS is subject to
11 biennial reassessment, unless the transmission customer is using CFS as a
12 bridge service prior to obtaining LTF PTP service. The reassessment can lead
13 to more stringent curtailment conditions, in which case the transmission
14 customer will have the choice to accept the service under the new conditions or
15 to discontinue the service. Unless the reassessment results in curtailment
16 conditions that are more stringent than those in the executed Service
17 Agreement, both the transmission customer and the transmission provider will
18 remain contractually bound to continue the service until the next reassessment
19 or the Service Agreement terminates, whichever comes first.
- 20 (c) **Rollover Right.** CFS customers have the same rollover rights as LTF PTP
21 customers. If there is no competing request, the CFS customer may rollover or
22 renew its service, subject to the reassessment provisions set forth above. If
23 there is a competing request, the CFS customer has the right of first refusal to
24 match the competing request.
- 25 (d) **Award of Short-Term Capacity.** Short-term firm ATC (i.e. hourly, daily, weekly
26 or monthly) will be awarded to CFS customers as it becomes available and prior
27 to being offered to the market.
- 28 (e) **Pricing.** CFS customers pay the LTF PTP rate.
- 29 (f) **Off-System Network Resource.** CFS qualifies as firm service that supports the
30 designation of Network Resources imported from other regions.

(g) **Redirect and Resale.** CFS has the same redirect and resale rights as LTF PTP service.

BCTC is proposing to adopt the attributes for CFS described above with the exception of curtailment conditions. BCTC’s proposals regarding curtailment conditions are as follows:

(a) **BCTC’s Proposed Curtailment Conditions.** Under Order No. 890’s version of CFS, the entire service is subject to curtailment in the event that a system condition occurs or the maximum number of curtailment hours have not been reached. BCTC believes that it can offer a higher quality service that combines its existing Shaped Service and FERC’s CFS. Under BCTC’s proposed version of CFS:

i. BCTC would replace the “System Conditions” and “Number of Hours” curtailment conditions described in the Order No. 890 version of CFS with monthly path-specific curtailment priorities. This proposed change would enable BCTC to offer a CFS with unconditional periods where CFS has the same curtailment priority as other firm services and conditional periods where CFS can be curtailed prior to other firm services. Customers taking CFS would sign a Service Agreement in which BCTC would specify both the unconditional periods, the conditional periods, and the level of capacity the service can be curtailed to.⁷⁵

ii. If curtailment is required to relieve a constraint in a conditional period, non-firm service will be curtailed first; and, if the constraint is not relieved after non-firm services are curtailed, CFS and Secondary Service, as described in Section 28.4 of the OATT, will be curtailed on a pro-rata basis before firm services. This is consistent with FERC’s proposed version of CFS.

BCTC will monitor NAESB’s effort in the development of business practice for CFS. Specifically, BCTC will consult with customers on the procedure and timing for the

⁷⁵ BCTC has considered a minimum service level requirement such that CFS would not be offered if the number of months that require curtailment exceeds a certain threshold value. BCTC believes, however, that such a limitation is not required because curtailment conditions would be developed based on forecast conditions which may or may not be realized.

1 release to the market of short-term firm ATC over and above that which is required for
2 CFS.

3 **3.4.3.2 Implementation of BCTC's CFS**

4 BCTC proposes to use the same reliability criteria for studying requests for LTF PTP
5 service to determine curtailment conditions for CFS. In accordance with Section 19.3,
6 Attachment J and Attachment D of the current OATT, BCTC will use the following
7 assumptions to identify facilities, including Network Upgrades, required to provide
8 LTF PTP service:

- 9 (a) Load Information. BCTC will use the system peak forecast for the period of
10 service requested.
- 11 (b) Resource Plan and Generation Dispatching Pattern. Generation plants in BC
12 Hydro's resource forecast are modeled to serve local load or provincial load for
13 the period of the service request.⁷⁶
- 14 (c) Confirmed contracts. This includes NITS, all confirmed LTF PTP and other
15 wheeling obligations.
- 16 (d) Transmission System Configurations. This includes major reinforcements
17 proposed in BCTC's most current Capital Plan and scheduled equipment
18 outages.

19 Since the above assumptions can change over time, it is difficult to pre-determine a
20 set of curtailment conditions that can remain meaningful over a period of years. This
21 difficulty is exacerbated by the System Impact Study methodology in Attachment D of
22 the OATT that does not estimate the length or frequency of reliability violation in the
23 absence of the required Network Upgrades. Finally, it is potentially costly to
24 incorporate curtailment criteria in real-time operating procedures to accommodate
25 curtailment conditions that may be different and unique for different CFS Service
26 Agreements.

⁷⁶ For example, a System Impact Study for request of LTF PTP service from north-east to south-west would model generation plants in Lower Mainland (LM) and Vancouver Island (VI) to serve the areas' local load and plants elsewhere to serve provincial load.

1 BCTC proposes to comply with the requirement for curtailment conditions in FERC
2 Order No. 890 by adopting an approach similar to the one used by BCTC for
3 determining short-term firm ATC. BCTC believes this approach will obviate the
4 specification of system conditions and estimation of number of hours.

5 In responding to a request for LTF PTP service, BCTC will determine whether a
6 System Impact Study is required in accordance with the tariff. If BCTC determines
7 that there is insufficient ATC to meet a customer’s request, BCTC will tender the
8 customer a System Impact Study agreement together with partial Service
9 Agreements for partial block, partial term and/or CFS as appropriate. The customer
10 requesting the LTF PTP service shall execute these agreements in accordance with
11 the tariff and business practices.

12 BCTC proposes to use the following approach to determine the availability of CFS.

13 Step 1 Use BCTC’s monthly firm ATC, which BCTC posts daily on OASIS, as
14 estimates of the first year's monthly firm transfer capabilities available
15 for CFS. The monthly firm ATC is determined by using BC Hydro's
16 forecast monthly loads, forecast monthly generation dispatching
17 pattern, and transmission system configuration. The resulting 12
18 monthly firm transfer capabilities are the monthly transfer capabilities
19 available after allowing for the requirement of BC Hydro domestic
20 customers and other committed use.

21 Step 2 Use the values obtained in Step 1 as estimates for the second year's
22 monthly firm transfer capabilities available for CFS.

23 Step 3 To mitigate uncertainty risk in forecasting BC Hydro’s requirements for
24 domestic customers, BCTC proposes to adjust the monthly firm
25 transfer capabilities available for CFS for the BC to US path⁷⁷ as
26 follows:

27 (a) Set the monthly firm transfer capabilities available for CFS for
28 the months of November, December, January and February to

⁷⁷ This path is used for services from the interior of BC to the BC-US intertie. This includes the use of ILM path.

1 zero to account for the uncertain timing of the weather
2 dependent system peak. Generally, because the system peak
3 occurs in only one of those months and for a small number of
4 hours, the requirement for curtailment is limited.

- 5 (b) Reduce the monthly firm transfer capabilities available for CFS
6 in the second year based on BC Hydro’s projected growth rate
7 for integrated system demand.⁷⁸

8 Adjustment to other paths is not necessary because power flow
9 under BC Hydro’s NITS is generally from the Interior to the
10 Lower Mainland.

11 As an example, using monthly firm ATC values in Table E-1 of
12 Appendix E, monthly firm transfer capacities available for CFS
13 for various paths are determined by applying Steps 1 to 3
14 described above and shown in Table 3-2.⁷⁹

15 Step 4 Evaluate the availability of CFS

16 Using the calculated monthly firm transfer capacities available for CFS
17 in Table 3-2, BCTC will make path-specific CFS offers. The amounts of
18 CFS available on BC to US and AB to US paths are inter-dependent
19 because service taken on one path may reduce the ATC on the other
20 path, and similarly for the US to BC and US to AB paths.

21 Using the values in Table 3-2, BCTC may offer CFS on the BC to US
22 path as illustrated by the following hypothetical service requests:

- 23 (a) A LTF PTP service request of 100 MW from September 2008
24 to August 2010. BCTC will tender the customer a System
25 Impact Study agreement and a Service Agreement for 100 MW

⁷⁸ Order No. 890 allows transmission provider to add a risk factor to account for uncertainties in forecasting domestic use (Order No. 890, para. 1067). In lieu of the risk factor, BCTC proposes to use the projected growth rate for integrated system demand in BC Hydro’s high load forecast. The 5 year growth rate in 2007 BC Hydro, High Load Forecast before DSM and Rate Impacts is 2.5% (Table A3.7, Appendix D to BC Hydro’s 2008 LTAP).

⁷⁹ The second year firm monthly ATC for the BC to US path is reduced by 2.5%.

1 of CFS. The CFS will be subject to the curtailment condition
2 that CFS can be curtailed, prior to other firm services, to 0 MW
3 in the months of November, December, January and February.

4 (b) A LTF PTP service request of 1000 MW from September 2008
5 to August 2010. BCTC will tender the customer a System
6 Impact Study agreement and a Service Agreement for CFS of
7 1000 MW. The CFS can be curtailed prior to other firm services
8 to the monthly specific levels below:

- 9 i. in November, December, January and February to 0 MW;
10 ii. in September 2008 to 586 MW;
11 iii. in March 2009 to 827 MW;
12 iv. in September 2009, to 571 MW; and
13 v. in March 2010 to 806 MW.
14

Table 3-2. Monthly Firm Transfer Capacities Available for CFS for Various Paths

Month	BC to US	US to BC	BC to AB	AB to BC	AB to US (Min of AB-BC & BC-US)	US to AB (Min of US-BC & BC-AB)
Sep 2008	586	83	0	0	0	0
Oct 2008	1050	0	0	136	136	0
Nov 2008	0	0	0	136	0	0
Dec 2008	0	0	0	0	0	0
Jan 2009	0	0	0	0	0	0
Feb 2009	0	113	0	115	0	0
Mar 2009	827	113	0	136	136	0
Apr 2009	1280	113	0	136	136	0
May 2009	1280	113	0	136	136	0
Jun 2009	1280	113	0	136	136	0
Jul 2009	1280	113	0	136	136	0
Aug 2009	1212	8	0	136	136	0
Sep 2009	571	83	0	0	0	0
Oct 2009	1024	0	0	136	136	0
Nov 2009	0	0	0	136	0	0
Dec 2009	0	0	0	0	0	0
Jan 2010	0	0	0	0	0	0
Feb 2010	0	113	0	115	0	0
Mar 2010	806	113	0	136	136	0
Apr 2010	1248	113	0	136	136	0
May 2010	1248	113	0	136	136	0
Jun 2010	1248	113	0	136	136	0
Jul 2010	1248	113	0	136	136	0
Aug 2010	1182	8	0	136	136	0

3.4.3.3 Impact on Existing Firm Services

During the customer consultation on CFS,⁸⁰ customers expressed concern on the potential impact of CFS on existing LTF PTP service holders. BCTC believes the impact of CFS on existing firm service would be the same as Shaped Service. In addition, if there were no CFS or Shaped Service, monthly ATC would be released for

⁸⁰ BCTC consulted with customers and stakeholders on the characteristics of CFS on 30 April 2008 and 14 July 2008. Customer and stakeholder comments and BCTC's responses to those comments are included in the Report on Firm Sales to Alberta and Conditional Firm Service, 8 August 2008. That report is attached as Appendix H to this Application.

1 short-term firm services in the normal pre-schedule day for monthly firm service, thus
2 resulting in the same impact on existing firm services.

3 BCTC also believes there are sufficient mitigating measures in its CFS proposal that
4 help to reduce the impact of CFS on BC Hydro’s NITS service. The impact of CFS on
5 existing firm services by path is shown in the following analysis.

6 (a) **BC to US Path**⁸¹

7 As described above, BCTC’s methodology for calculating short-term transfer
8 capabilities for this path has taken into account the requirement of BC Hydro’s
9 NITS for domestic load customers. That is, the ATC shown in Table 3-2 for the
10 BC to US path is ATC over and above BC Hydro’s NITS requirement.

11 During the conditional period, CFS will be curtailed prior to other firm services.
12 In the unconditional periods, curtailment may occur under two scenarios:

13 i. ATC reduced due to constraint on the BC-US intertie.

14 Under this scenario, CFS would be curtailed on a pro-rata basis with BC to
15 US exports and Alberta to US wheel-through service. BC Hydro’s NITS
16 would not be curtailed because such curtailment would not relieve the
17 constraint (Section 13.6 of the OATT).

18 ii. ATC reduced due to constraints on the Interior-to-Lower Mainland (ILM)
19 path

20 Under this scenario, CFS would be curtailed with BC Hydro’s NITS and
21 Alberta to US wheel-through service on a pro-rata basis. However, ATC
22 on the AB to US is generally much lower than the ATC on the BC to US
23 path during the unconditional period of March to October. Together with
24 the provision on biennial assessment, BCTC believes the risk of
25 curtailment to BC Hydro’s NITS caused by BCTC’s proposed CFS is
26 minimal.

⁸¹ This path is used for services from the interior of BC to the BC-US intertie. It includes the use of ILM path.

1 (b) **AB to BC Path**

2 During conditional periods, CFS will not impact existing firm services because
3 CFS will be curtailed prior to other firm services.

4 If curtailment is required during unconditional periods, existing firm services
5 including Alberta to BC import and Alberta to US wheel-through service, will be
6 curtailed with CFS on a pro-rata basis. CFS on this path will not affect BC
7 Hydro's NITS.

8 (c) **AB to US Path**

9 CFS on this path uses both the AB to BC and BC to US paths. The same
10 conclusions for the above two paths apply.

11 (d) **US to BC Path**

12 During conditional periods, CFS will not impact existing firm services because
13 CFS will be curtailed prior to other firm services.

14 If curtailment is required during unconditional periods, existing firm services
15 including US to BC import, US to Alberta wheel-through service, will be curtailed
16 with CFS on a pro-rata basis.

17 (e) **BC to AB Path and US to AB Path**

18 During conditional periods, CFS will not impact existing firm services because
19 CFS will be curtailed prior to other firm services.

20 If curtailment is required during unconditional periods, existing firm services
21 including BC to AB export, will be curtailed with CFS on a pro-rata basis.

22 **3.4.3.4 Shaped Service**

23 BCTC proposes to replace its Shaped Service with its modified form of CFS because
24 BCTC believes that its proposed CFS can better serve its customers than Shaped
25 Service. BCTC's belief is based on the following reasons. First, CFS is similar to
26 BCTC's Shaped Service, as both services are designed to provide customer access
27 to the system when a full LTF PTP service request cannot be accommodated.

Second, a comparison of BCTC’s proposed CFS with Shaped Service provided in Table E-2 of Appendix E indicates that BCTC’s proposed CFS is an improvement of the Shaped Service. When compared to Shaped Service, BCTC’s proposed CFS enables customers to have service in months where Shaped Service is forecasted to be unavailable. Finally, the proposed CFS reduces the risk to BC Hydro’s NITS, as curtailment conditions can be reassessed biennially to reflect more current conditions.

3.4.3.5 Transition from Shaped Service to CFS

Notwithstanding that no customer was taking Shaped Service at the time this Application was filed with the Commission, BCTC proposes to continue to offer Shaped Service until the Commission approves BCTC’s proposal to offer CFS and withdraw Shaped Service from the OATT. BCTC proposes that any Shaped Service contracts in effect on the implementation date of CFS will be converted to CFS as follows:

(a) A shaped Service contract that is in effect after the implementation date of CFS and has no rollover right will be terminated at the termination date of the Service Agreement.

(b) A Shaped Service contract that is in effect after the implementation date of CFS and has rollover right will be converted to CFS on the date the service is rolled over or renewed. BCTC will replace the Shaped Service with CFS as follows:

For the first 2 years after the Shaped Service is converted to CFS, the shape of the service will be maintained. That is, the months where Shaped Service is available will be considered as unconditional periods and months where Shaped Service is unavailable will be considered as conditional periods. At the end of the 2nd year, the converted service will be reassessed in accordance with the terms and conditions of BCTC’s proposed CFS.

For clarity, consider the following example of a Shaped Service contract that specifies the monthly-varying firm MW available:

	Month	MW
1	January	0
2	February	0
3	March	50
4	April	100
5	May	100
6	June	100
7	July	100
8	August	100
9	September	100
10	October	100
11	November	0
12	December	0

This Shaped Service would be converted to CFS with a 100 MW reservation. The CFS can be curtailed prior to other firm services to 0 MW in November, December, January and February and to 50 MW in March. April to October are unconditional periods.

3.4.3.6 Conclusion

The preceding analysis indicates that BCTC’s proposed CFS is comparable and superior to the form of CFS described in FERC Order No. 890 as applied to BC. It is also superior to BCTC’s existing Shaped Service. For these reasons, BCTC seeks the Commission’s approval of its proposed CFS that will replace the existing Shaped Service.

3.5 Other Non-Rate Terms And Conditions

3.5.1 Rollover Rights

BCTC proposes to adopt the Order No. 890 amendments to Section 2.2 of the pro forma tariff.

In accordance with Section 2.2 of the OATT, existing firm service customers with a contract term of one year or more have the right to continue to take transmission service when the contract expires, rolls over or is renewed. Subject to the provisions in Section 3 of Attachment J of the OATT, this transmission reservation priority is an

1 ongoing right that may be exercised at the end of all contract terms of one year or
2 longer.

3 Consistent with Order No. 890, BCTC is proposing to amend Section 2.2 of the OATT
4 to require a five-year minimum contract term for a customer to be eligible for rollover
5 rights. In order to be eligible for subsequent rollover rights under the proposed
6 Section 2.2, a transmission customer must provide at least one year’s notice prior to
7 the end of the contract term and agree to another five-year minimum contract term or
8 match a longer-term competing request.⁸² This is a change from the current 60 days
9 notice required in respect of contract terms of one year or longer.

10 As stated by Order No. 890, the purpose of this reform is to ensure that the rights and
11 obligations of the customer are better aligned with the planning and construction
12 obligations of the transmission provider.⁸³

13 Order No. 890-A provides guidance on the transition to the new rules in Section 2.2 of
14 the pro forma tariff:

15 Service agreements subject to a right of first refusal entered into prior to [the
16 date of the transmission provider’s filing adopting the reformed rollover
17 language herein in compliance with Order No. 890] or associated with a
18 transmission service request received prior to July 13, 2007, unless
19 terminated, will become subject to the five year/one year requirement on the
20 first rollover date after [the date of the transmission provider’s filing adopting
21 the reformed rollover language herein in compliance with Order No. 890];
22 provided that, the one year notice requirement shall apply to such Service
23 Agreements with five years or more left in their terms as of [the date of the
24 transmission provider’s filing adopting the reformed rollover language herein in
25 compliance with Order No. 890].⁸⁴

26 BCTC proposes to adopt this pro forma language in a new Section 2.2.1 of the OATT.
27 The applicable date would be the date new rate schedules adopting the reformed
28 rollover language are made effective by the Commission (the Effective Date).

⁸² Order No. 890, para. 1231.

⁸³ Order No. 890, paras. 1231, 1245.

⁸⁴ Also see Order No. 890-A, paras. 691, 693, 695.

1 The following practices, consistent with Order No. 890,⁸⁵ define in more detail the
2 transition rules that BCTC proposes to implement in the intervening period prior to
3 when all firm transmission service customers will be governed by the same rollover
4 rights.

5 (a) Customers with long term firm transmission service requests in BCTC’s
6 transmission queue as of the Effective Date that subsequently execute
7 contracts of one year or longer have a right to rollover their service for any
8 number of years (subject to the applicable conditions in BCTC’s existing
9 business practices governing rollover rights). The customer must rollover its
10 Service Agreement for a minimum of five years and meet any of the other
11 requirements of the reformed rollover right in order to retain a rollover right
12 going forward.

13 (b) Customers with existing LTF PTP transmission service as of the Effective Date
14 have a right to rollover their service for any number of years provided that BCTC
15 had determined at the time of the initial request that there was sufficient
16 capacity available to accommodate the request beyond the term of the initial
17 service request. The following conditions apply to the rollover of such services:

18 i. Any customer with an existing contract that has less than five years left in
19 its term as of the Effective Date that intends to exercise its roll-over right is
20 required to give 60-days notice prior to the end of the contract term of its
21 Service Agreement.

⁸⁵ Order No. 890-A also clarifies the following with respect to rollover rights.

A transmission provider must allow a rollover, even where a transmission customer changes power suppliers, so long as there is no substantial change in the location or direction of the power flows imposed on the transmission provider’s system. Transmission providers must permit rollover of a Network Resource by another user if it would accord itself rollover of the resource if it served the transmission provider’s load. (Order No. 890-A, para. 647.)

Both Network Customers and point-to-point customers may rollover a portion of their service, provided that they will only obtain a subsequent rollover right if they agree to another five-year term, or match any longer term competing request, for that portion of capacity. (Order No. 890-A, para. 651.)

A Network Customer seeking rollover of its Network service for a designated resource should be able to match a competing point-to-point request by extending its Network service agreement rather than the power contract supporting the Network Resource designation. A customer exercising a rollover right is only required to match a bona fide competing commitment to take service, evidenced for example by a pre-confirmed transmission request or the execution of a contingent service contract. (Order No. 890-A, para. 666.)

In cases where a rollover customer loses service to a longer-duration competing request for a lesser quantity, the rollover of the original request should only be displaced by the quantity needed to fulfill the longer-term request for a lesser quantity. In such instances, the transmission provider should grant service to the competing customer and reduce the amount of capacity available for roll over by the original customer accordingly. (Order No. 890-A, para. 669.)

1 ii. Any customer with an existing contract that has five or more years left in
2 its term as of the Effective Date that intends to exercise its roll-over right is
3 required to give one year’s notice prior to the to the end of the contract
4 term of its Service Agreement.

5 iii. Whether an existing LTF PTP transmission customer is required to give
6 60-days or one-year’s notice when exercising its rollover right under its
7 existing contract, the customer must enter into a minimum of five years of
8 service and meet any of the other requirements of the reformed rollover
9 right in order to retain a rollover right going forward.

10 iv. Any existing LTF PTP transmission customer that has given 60-days
11 notice prior to the Effective Date to begin its rollover of service subsequent
12 to the Effective Date will retain its rollover right on service of one year or
13 longer (subject to the applicable conditions in BCTC’s existing business
14 practices governing rollover rights). For such customers, the five-year
15 contract commitment requirement and one-year notice will not apply until
16 the next applicable rollover date associated with the service.

17 No comments were received from customers and stakeholders in consultation on this
18 proposal.

19 **3.5.2 Performance Metrics and Penalties**

20 Subject to three modifications, BCTC proposes to adopt the Order No. 890
21 amendments to the pro forma tariff related to performance metrics and penalties as
22 set out in new Sections 19.9 and 32.5. The modifications BCTC proposes are: (1) to
23 apply performance metrics and penalties on a comparable basis for both affiliate and
24 non-affiliate customers; (2) to establish with the Network Customer due diligence
25 timelines for the study of NITS requests, as necessary on a case-by-base basis; and
26 (3) to allocate penalties on the basis of customer studies directly impacted by the late
27 study of requests.

28 **3.5.2.1 Performance Metrics**

29 Sections 19.3 and 19.4 of the OATT require transmission providers to use due
30 diligence to complete system impact studies and facilities studies for LTF PTP service

1 requests within 60 calendar days. Likewise, Sections 32.3 and 32.4 of the OATT
2 require transmission providers to use due diligence to complete system impact
3 studies and facilities studies for NITS requests within 60 calendar days.

4 Consistent with Order No. 890, BCTC proposes to adopt new Sections 19.9 and 32.5
5 of the OATT, which require BCTC to track its performance in processing system
6 impact studies and facilities studies for transmission service requests⁸⁶ and to post
7 certain performance metrics on its OASIS site.

8 Order No. 890 requires the following set of performance metrics to be posted on a
9 quarterly basis: (1) processing time from initial service request to offer of a system
10 impact study agreement; (2) system impact study processing time; (3) service
11 requests withdrawn from system impact study queue; (4) process time from
12 completed system impact study to offer of facilities study agreement; (5) facilities
13 study processing time; and (6) service requests withdrawn from the facilities study
14 queue. Examples of the specific information required under each of these metrics
15 information to be posted include: (1) the number of system impact study agreements
16 executed; (2) the number of system impact studies completed; (3) the number of
17 requests withdrawn from the system impact study queue; (4) the average cost of
18 recommended upgrades; and (5) the average time from receipt of an executed
19 facilities study agreement to the date when a completed facilities study is available to
20 the customer.⁸⁷

21 As stated in Order No. 890, the posting requirements are intended to enhance the
22 transparency of the study process and to provide an indication of whether
23 transmission providers are processing request studies in a non-discriminatory
24 manner.⁸⁸

25 **3.5.2.2 Notification Filings and Additional Metrics**

26 Under the proposed Sections 19.9 and 32.5, BCTC will be required to submit a
27 notification filing with the Commission in the event BCTC completes more than 20%

⁸⁶ The posting of performance metrics only applies to transmission service requests, and not interconnection service requests. (Order No. 890, para. 1311.)

⁸⁷ Order No. 890, para. 1310.

⁸⁸ Order No. 890, para. 1308.

1 of system impact studies and facilities studies, in aggregate, outside of the due
2 diligence study completion deadlines for two consecutive quarters.

3 As indicated in Order No. 890, BCTC proposes that it may explain in its notification
4 filing any extenuating circumstances that prevented it from meeting the due diligence
5 deadlines. BCTC proposes, consistent with Order No. 890,⁸⁹ that the Commission
6 may waive penalties if BCTC establishes that the delay is the result of factors or
7 events beyond its control, including delays by the transmission customer. Thus, as
8 Order No. 890-A states, as a practical matter late study penalties should only be
9 applied when a transmission provider is unable to justify repeated failure to meet
10 deadlines.⁹⁰

11 Consistent with Order No. 890,⁹¹ BCTC also proposes that, in the quarter following a
12 notification filing, BCTC must post the following additional metrics: (1) the average of
13 the employee hours expended per completed system impact study; (2) the average of
14 the employee hours expended per completed facilities study; and (3) the number of
15 employees dedicated to processing each type of study. BCTC will also report on any
16 external resources devoted to completing studies. As stated in Order No. 890, these
17 additional metrics will serve to shed light on the transmission provider’s resource
18 commitment, enhance the transparency of the study process, and increase the
19 transmission provider’s incentive to staff its study function appropriately.⁹²

20 **3.5.2.3 Penalties for Late Studies**

21 Consistent with Order No. 890, BCTC’s proposed Sections 19.9 and 32.5 of the
22 OATT will subject BCTC to penalties when it fails to meet the due diligence deadlines.
23 However, as discussed in the following section, BCTC proposes to amend the due
24 diligence deadline for studies for the Network Customer.

25 In accordance with the new Sections 19.9 and 32.5 of the OATT, BCTC will be
26 subject to penalties if, in each of the two quarters following the notification filing, it
27 completes 10 percent or more of studies outside of the study completion deadlines.⁹³

⁸⁹ Order No. 890, paras. 1342-1343.

⁹⁰ Order No. 890-A, para. 742.

⁹¹ Order No. 890, at para. 1320.

⁹² *Ibid.* para. 1321.

⁹³ *Ibid.* para. 1340.

1 Penalties will be assessed on a quarterly basis, starting with the quarter following the
2 notification filing and continuing until the transmission provider completes at least 90
3 percent of all studies within the deadlines.⁹⁴

4 The penalty, when triggered, will equal \$500 for each day BCTC takes to complete
5 the study beyond 60 days. Thus, as BCTC interprets Order No. 890, penalties will be
6 assessed as follows, assuming that a notification filing has been triggered:

7 (a) If 10 percent or more of studies are completed late in each of the third and
8 fourth quarter, the total amount of penalties will be based on the total number of
9 days that studies were completed late in the third quarter; and

10 i. If 10 percent or more of studies are completed late in the fifth quarter, the
11 total amount of additional penalties will be based on the total number of
12 days that studies were completed late in the fourth quarter; etc.

13 ii. Penalties will continue to be assessed based on the number of late days in
14 the prior quarter until the percent of studies completed late in the current
15 quarter is less than 10 percent, after which the tracking of notification and
16 penalty requirements will be reset.

17 (b) If 10 percent or more of studies are completed late in the third quarter and less
18 than 10 percent of studies are completed late in the fourth quarter, no penalties
19 will be assessed and the tracking of notification and penalty requirements will be
20 reset.

21 In accordance with Order No. 890,⁹⁵ BCTC proposes that for any study that is still
22 pending at the end of the quarter and that has been in the study queue for more than
23 60 days, the penalty will equal \$500 for each day the study has been in the study
24 queue beyond 60 days.

⁹⁴ *Ibid.* para. 1340. Order No. 890-A clarifies that the due diligence period starts on the day the transmission study agreement is executed, unless the transmission provider and customer agree on an alternate day for the transmission provider to begin the study. The transmission provider and customer may not alter the length of the study period, just the date the study is due to begin. (Order No. 890-A, para. 747.)

⁹⁵ Order No. 890, para. 1340.

3.5.2.4 Treatment of Affiliates

Order No. 890’s performance metrics and penalties apply differently to the performance of studies for affiliates versus non-affiliates. Order No. 890 requires that metrics should be tracked separately for affiliates and non-affiliates and penalties only be assessed against the transmission provider’s performance vis-à-vis studies for non-affiliates.

BCTC, however, proposes to treat affiliate and non-affiliate requests on an equal basis. As an independent transmission provider, rather than the transmission division of a vertically integrated utility, BCTC does not believe that there is any reason to measure its performance differently based on whether or not a customer meets Order No. 890’s definition of “affiliate”.

Accordingly, BCTC is proposing not to incorporate the reference to “non-affiliates” in Section 19.9 of the pro forma tariff.

During consultation, BCTC received comments from two customers on this aspect of the proposal. These customers were divided as to whether or not BCTC should treat studies for affiliates differently.

3.5.2.5 NITS Request Study Completion Deadlines

BCTC studies NITS requests in accordance with Section 32 of the OATT. In accordance with Attachment J, BCTC studies the impact of the Contingency Resource Plans (CRPs) of the Network Customer as a component of its study of NITS requests, as applicable. This requirement, approved in the 2005 OATT Decision, is an additional requirement to the system impact study and facilities study procedures contemplated in the pro forma tariff.

In light of these additional study requirements, BCTC proposes to negotiate the due diligence study completion deadlines with its Network Customer, as necessary, on a case-by-case basis. BCTC will post on OASIS any negotiated due diligence deadlines and the justification for any variance to the 60-day deadlines. This approach will allow BCTC to implement the reforms of Order No. 890 in a non-discriminatory and transparent manner, while providing it with the means to establish due diligence deadlines that align with the expected time and resource commitments

1 to complete studies of NITS requests and CRPs. Any studies completed beyond
2 negotiated due diligence deadlines will be included in the triggers for notification
3 filings and penalties, as a matter of course.

4 Therefore, BCTC proposes to amend Section 32.4 of the OATT to state that the
5 Transmission Provider will use due diligence to complete the required System Impact
6 or Facilities Study within a sixty (60) Calendar Day period “or as otherwise agreed to
7 with the Network Customer”. Consistent with this, BCTC proposes not to adopt
8 references to the “60-day” due diligence periods in Sections 32.5 and 19.9 of the pro
9 forma tariff.

10 This proposal was developed in consultation with BC Hydro.

11 **3.5.2.6 Distribution of Penalties**

12 BCTC proposes to allocate penalties on a quarterly basis as a credit to study costs
13 and allocated to studies that either: (1) were completed late; or (2) were in the study
14 queue for over 60 days at the time that penalties were triggered. Consistent with
15 Order No. 890,⁹⁶ BCTC proposes not to recover penalties through rates.

16 BCTC’s proposal is different than Order No. 890, which requires the transmission
17 provider to distribute penalties for late studies to all non-affiliated transmission
18 customers. In support of this distribution principle, Order No. 890 states that a
19 transmission provider that is not processing studies on a timely basis potentially
20 harms all transmission customers, not just those with requests in the study queue. As
21 an example, Order No. 890 reasons that a transmission customer may decide against
22 requesting service that it believes will require a system impact study if the
23 transmission provider is not processing transmission service requests on a timely
24 basis.⁹⁷

25 Notwithstanding Order No. 890, BCTC considers it fair and appropriate to allocate
26 penalties only to those customers directly affected by the late study of requests that
27 triggered such penalties. BCTC questions how it could be appropriate for other
28 customers to be compensated when they have no requests under study or in the

⁹⁶ *Ibid.* para. 1357.

⁹⁷ Order No. 890, para. 1351.

1 queue. In addition, the rationale of Order No. 890 in support of its distribution principle
2 relies on the assumption that one late study will lead to a subsequent late study,
3 when this may not necessarily be the case. Indeed, with the penalty regime in place,
4 it will provide an incentive for this not to be the case. Further, the rationale of Order
5 No. 890 suggests that the penalty distribution should rightly extend to parties that
6 have not yet even registered as new Eligible Customers, illustrating further that in
7 BCTC’s view the distribution principle of Order No. 890 can not be fairly and
8 reasonably implemented.

9 BCTC received no comments during consultation on this aspect of its proposal.

10 **3.5.3 Reservation Priority**

11 The following sections review BCTC’s proposed amendments to the OATT with
12 respect to Order No. 890 reforms to reservation priority provisions. These include
13 provisions associated with pre-confirmed requests, price as a tiebreaker, the five-
14 minute simultaneous submission window and the administration of the right of first
15 refusal for short-term service requests. Each of these will be addressed below.

16 **3.5.3.1 Pre-Confirmed Requests**

17 BCTC proposes to adopt the Order No. 890 amendments to Sections 1.39, 13.2(b),
18 14.2(b), 17.2 and 18.2 of the pro forma tariff regarding reservation priority for pre-
19 confirmed requests.

20 In accordance with Order No. 890, BCTC proposes to amend the OATT to establish
21 the priority of pre-confirmed requests for transmission service. These conditions are
22 intended to support the objective of efficient utilization of the transmission system by
23 giving priority to customers that are committed to purchase service as well as by
24 encouraging longer-term uses of the transmission system. Consistent with Order No.
25 890,⁹⁸ the proposed amendments will establish that:

- 26 (a) Pre-confirmed requests for short-term service will not have priority over long-
27 term service requests that have not been confirmed;

⁹⁸ *Ibid.* paras. 1401-1405.

- 1 (b) Longer duration requests for transmission service will continue to have priority
2 over shorter duration requests for transmission service, with pre-confirmation
3 serving as a tie-breaker for requests of equal duration;
- 4 (c) A pre-confirmed request for transmission service will not pre-empt an equal
5 duration request that has already been confirmed;
- 6 (d) Customers will be prohibited from withdrawing pre-confirmed non-firm and
7 short-term firm PTP transmission service requests prior to when the
8 transmission customer is offered service; and
- 9 (e) BCTC will be allowed to invalidate a pre-confirmed request at the request of the
10 transmission customer in the very near term following submittal of the request,
11 in the event the transmission customer makes an inadvertent error in submitting
12 its request.

13 As clarified by Order No. 890⁹⁹ and Order No. 890-A,¹⁰⁰ BCTC proposes the following:

- 14 (a) A new pre-confirmed request for transmission service will pre-empt a request of
15 equal duration that has been accepted by the transmission provider but not yet
16 confirmed by the transmission customer.
- 17 (b) Regarding the application of the right of first refusal for eligible customers with
18 requests for service over multiple days, a competing request must exceed the
19 total term of service in order to trigger the right of first refusal.
- 20 (c) All eligible customers have the opportunity to pre-confirm short-term firm and
21 non-firm reservations pursuant to Sections 1.39, 17.2, and 18.2 of the pro forma
22 tariff.

23 No customer or stakeholder comments were received in consultation on this proposal.

⁹⁹ *Ibid.* para. 1407.

¹⁰⁰ Order No. 890-A, paras. 787, 789-790.

3.5.3.2 Price as a Tiebreaker

BCTC proposes to adopt the Order No. 890 revisions to Sections 13.2(b) and 13.2(c) of the pro forma tariff regarding using price as a tiebreaker to determine reservation priority.

In the event a later queued short-term request for transmission service pre-empts a conditional confirmed short-term request for transmission service based on price, then the conditional confirmed request has a right to match the price offer of the later queued request.¹⁰¹

No customer or stakeholder comments were received in consultation on this proposal.

3.5.3.3 Five-Minute Simultaneous Submission Window for Requests

BCTC proposes to adopt a simultaneous submission window consistent with Order No. 890 requirements.

BCTC believes that the simultaneous window improves on the first-come, first-serve policy by helping to ensure that transmission service is not awarded in an arbitrary fashion and that less sophisticated customers with fewer financial resources have equal access to transmission service. Under the current provisions of BCTC's OATT, one customer may receive service over another due to the fact that one request is received by the transmission provider seconds ahead of another request because one customer's computer is faster than another customer's computer. BCTC agrees with Order No. 890 that there is no meaningful difference between such requests and that transmission capacity should not be awarded on that basis.¹⁰² The simultaneous submission window is a means by which to avoid that result.

BCTC proposes to adopt a simultaneous submission window in accordance with Order No. 890, which indicates the following:

(a) The simultaneous submission window should be open for at least 5 minutes.¹⁰³

¹⁰¹ Order No. 890, para. 1410.

¹⁰² *Ibid.* para. 1419.

¹⁰³ Order No. 890, para. 1420.

(b) It is logical that the window begin on the first minute of the “no earlier than” time period for each service.¹⁰⁴

(c) Transmission providers are given the discretion to determine which transmission services will be subject to the simultaneous submission window.

(d) Requests submitted within a specified window should not be publicly available until the window has closed in order to prevent competitors from requesting the same service simply to disrupt the transmission service procurement process.¹⁰⁵

(e) Each transmission provider has discretion to determine how its submittal window will be implemented, including the point at which the window goes into effect.¹⁰⁶

(f) Transmission providers should propose a method for allocating transmission capacity if sufficient capacity is not available to meet all requests submitted within the specified time period.¹⁰⁷

Order No. 890 gives transmission providers discretion in how the simultaneous submission window is implemented. BCTC’s proposals for implementation are discussed below.

3.5.3.3.1 BCTC’s Design of the Simultaneous Submission Window

BCTC proposes to implement a 5 minute simultaneous submission window, beginning immediately at the start of the no-earlier submission time for each of Monthly, Weekly, Daily and Hourly (Pre-Schedule) short-term firm and non-firm PTP services. Section 5 of BCTC’s existing business practices establish “no-earlier” submission times for short-term firm and non-firm PTP service, as follows:

Monthly:	60 calendar days before the start of service
Weekly:	14 calendar days before the start of service

¹⁰⁴ Order No. 890, para. 1419.

¹⁰⁵ *Ibid.* para. 1421.

¹⁰⁶ Order No. 890-A, para. 804.

¹⁰⁷ Order No. 890, para. 1422.

Daily: 2 working days before the start of service
(subject to extended windows)

Hourly (Pre-Schedule): 1 working day before the start of service (subject
to extended windows)

BCTC’s proposal to apply the simultaneous submission window to both firm and non-firm PTP transmission service¹⁰⁸ is intended as a consistent approach to meet the principle of open and non-discriminatory access. During its consultation, one customer supported and another customer did not support BCTC’s proposal to apply the simultaneous submission window to both firm and non-firm PTP transmission services. No other customer or stakeholder comments were received in consultation on this aspect of BCTC’s proposal.

3.5.3.3.2 Allocation Method

BCTC proposes the following method to allocate transmission capacity when insufficient capacity is available to meet all requests submitted within the simultaneous submission window (an example of how this allocation method will work is provided in BCTC’s consultation materials, pages 74 to 76 of Appendix D):

- (a) Sort all requests received during the window into separate and equal priority groupings, based on duration, pre-confirmation status, and price;
- (b) Randomly assign a customer pick-order for repeated draws from each priority grouping, beginning with the highest priority grouping in sequence;
- (c) Conduct an iterative customer pick of individual transmission service requests from each priority grouping until no transmission service requests remain in that priority grouping;
- (d) When no transmission service requests remain in a given priority grouping, proceed to next highest priority grouping, as applicable, conducting the iterative customer pick of individual transmission service requests using the same customer pick-order in sequence, from the point left off in the prior grouping;

¹⁰⁸ Order No. 890 does not require the application of a simultaneous submission window for non-firm service (Order No. 890-A, para. 802, footnote 303).

1 (e) Allocate ATC based on the resulting priority sequence of transmission service
2 requests; and

3 (f) Counteroffer the transmission service request in the sequence, for which the
4 remaining ATC is insufficient, with a service agreement for the remaining ATC
5 that is available.

6 BCTC has revised Sections 13.2(e) and 14.2 of the OATT to incorporate the following
7 tariff provision in support of its proposed allocation method:

8 Where the Transmission Provider’s business practices establish an
9 earliest time at which requests for ... [Short-Term Firm or Non-Firm] ...
10 Point-to-Point Transmission Service may be submitted, any requests
11 for such service that are submitted within a 5 minute window following
12 such earliest time shall be deemed to have been submitted
13 simultaneously during such window. The otherwise applicable priorities
14 shall apply to the allocation of transfer capability to such requests,
15 except that transfer capability will not be allocated based on a first-
16 come, first-served or chronological basis. To allocate transfer
17 capability amongst requests of equal priority, the Transmission
18 Provider will create a randomly determined pick order from the list of
19 Eligible Customers that have submitted requests within the 5 minute
20 window. In accordance with the pick order, the Transmission Provider
21 will grant one request at a time out of the pool of requests of equal
22 priority until all requests in the pool are granted or all available transfer
23 capability is exhausted. If all available transfer capability is exhausted,
24 any remaining requests of equal priority in the pool will not be granted.

25 BCTC believes that its proposed allocation method is fair to all customers, does not
26 result in a disproportionate allocation of ATC relative to the MW amounts of the
27 requests received during the window, and is consistent with the principles that require
28 implementation of a simultaneous submission window.

29 BCTC considered two other options to allocate ATC.

1 One alternative is to allocate ATC in equal proportion to all applicable transmission
2 service requests (that is, pro rata by request), without exceeding the request amount
3 of any one request. This method is not preferred because it could result in an
4 allocation of partial (unusable) MW amounts if the number of requests is greater than
5 the total MW amount of ATC available. Further, it could result in a disproportionate
6 allocation of ATC to customers relative to amounts requested.

7 Another alternative is to allocate ATC pro rata based on the MW volume of all
8 applicable requests. This method is not preferred because it may result in customers
9 inflating the quantity of service that they request relative to the quantity of service that
10 they actually desire. It may also result in redundant requests. In sum, it would appear
11 to risk an outcome that would diverge from the principle underlying establishment of
12 the simultaneous submission window; that is, improving the fairness in transmission
13 access across customers that differ in size and sophistication in market access.

14 In its written comments, one customer stated that the allocation method that BCTC is
15 recommending to adopt seems the most fair. However, the customer expressed a
16 concern, also noted during BCTC’s first consultation session, that a company can
17 increase its chances of being selected first by submitting requests using different
18 affiliate names. The customer added that the possibility of this happening needs to be
19 addressed in BCTC’s business practices. BCTC acknowledges this concern, but
20 notes that such possibilities are not unique to its proposed allocation method. For
21 example, as summarized in Order No. 890, a pro rata allocation in general may allow
22 customers with multiple affiliates to be able to secure more usable blocks of capacity
23 by pooling their requests through reassignment.¹⁰⁹

24 BCTC believes its ATC allocation method merits implementation, relative to the
25 alternatives. Upon implementation, BCTC will monitor its application of the
26 simultaneous submission window and any evidence of abuse of the ATC allocation
27 method will be addressed in a business practice, if necessary.

28 No further customer or stakeholder comments were received on this proposal.

¹⁰⁹ See Order No. 890-A, para. 797.

3.5.3.4 Administration of the Right of First Refusal for Short-term Service Requests

BCTC proposes to adopt the Order No. 890 amendments to Section 13.2(c) of the pro forma tariff regarding the administration of the right of first refusal for short-term service requests.

In accordance with Order No. 890, BCTC’s proposal stipulates the following:

- (a) When a longer-term request seeks capacity allocated to multiple shorter-term requests, the shorter-term customers will have simultaneous opportunities to exercise the right of first refusal. Duration, price, and time of response will then be used to determine which of the shorter term requests will be able to exercise the right of first refusal. In concert with this requirement, a pre-empting longer-term request must be for a fixed capacity over the term of the request in order to minimize the potential for gaming.¹¹⁰
- (b) A competing request for these purposes includes one that overlaps with only part of another existing transmission service request since both requests cannot be granted simultaneously. It may therefore also include a transmission service request for which transmission capacity cannot be accommodated without pre-empting one or more existing transmission reservations.¹¹¹
- (c) An eligible customer may retain its original reservation by matching the competing service request’s cost or duration terms exactly or by exceeding one or more of the terms of a competing transmission service request (see Section 13.2 and 14.2).¹¹²
- (d) With regard to reassignments of capacity in the secondary market, the associated right of first refusal, under Sections 13.2 and 14.2, to match a competing transmission service request applies to the primary transmission service, not the reassignment of scheduling rights.¹¹³

¹¹⁰ *Ibid.* para. 1430.

¹¹¹ Order No. 890-A, para. 817.

¹¹² Order No. 890-A, para. 818.

¹¹³ Order No. 890-A, para. 819.

1 The following example illustrates a scenario that this reform intends to mitigate.
2 Consider that 50 MW of ATC is available for 3 months, and the following three
3 requests are received:

4 (a) Customer A Request = 50 MW 1 month, then

5 (b) Customer B Request = 50 MW 2 months, then

6 (c) Customer C Request = 50 MW 3 months.

7 In this example, Customer A would have the right to match the duration of Customer
8 B’s request. The customer that wins that competition would then have the right to
9 match the duration of Customer C’s request. However, if Customer A matches the
10 duration of Customer B, but then refuses to match the duration of Customer C, while
11 Customer B would have matched the duration of Customer C, Customer B would no
12 longer have the opportunity to match Customer C. Through the provision for
13 simultaneous administration of the right of first refusal, Customer B should retain the
14 opportunity to match Customer C in the above scenario, rather than be excluded from
15 the opportunity created by Customer A not matching the duration of Customer C’s
16 request.

17 This provision presents a technical challenge to provide some means for
18 “simultaneous notification” to all competing customers of their opportunity to exercise
19 their right of first refusal. BCTC is monitoring NAESB development of standards and
20 business practices that respond to these requirements.

21 No customer or stakeholder comments were received in consultation on this proposal.

22 **3.5.4 Extensions for Commencement of Service**

23 BCTC proposes to adopt the Order No. 890 revisions to Section 17.7 of the pro forma
24 tariff regarding extensions for commencement of service.

25 Section 17.7 of the OATT allows a transmission customer to obtain up to five one-
26 year extensions of the commencement of service, subject to paying a non-refundable
27 annual reservation fee equal to one-month’s charge for firm transmission service.

1 In accordance with Order No. 890-A,¹¹⁴ BCTC proposes to amend Section 17.7 of the
2 OATT:

- 3 (a) to require a transmission customer to pay the required reservation fee within 15
4 days of notifying the Transmission Provider that it would like to extend the
5 commencement of service;¹¹⁵ and
- 6 (b) to make the extension “subject to availability” in order to allow the Transmission
7 Provider the opportunity to consider its ability to provide service in the event of
8 an extension of service.

9 No customer or stakeholder comments were received in consultation on this proposal.

10 **3.5.5 Designation of Network Resources – Qualification**

11 BCTC proposes to adopt the Order No. 890 revisions to Section 29.2(e) of the pro
12 forma tariff regarding the qualification of Network Resources.

13 The intended benefit of these revisions is to improve the transmission provider’s
14 ability to determine the effects on ATC of designating Network Resources.

15 In accordance with Order No. 890, BCTC proposes to amend Section 29.2(e) of the
16 OATT to obligate a Network Customer to provide the following information on OASIS
17 when designating any off-system resources:¹¹⁶

- 18 (a) identification of the resource as an off-system resource;
- 19 (b) amount of power to which the customer has rights;¹¹⁷
- 20 (c) identification of the balancing authority area(s) from which the power will
21 originate;
- 22 (d) delivery point(s) to the transmission provider’s transmission system; and

¹¹⁴ Order No. 890-A, paras. 773-775.

¹¹⁵ Otherwise, the customer will lose its option to extend its transmission service start date.

¹¹⁶ Order No. 890, para. 1476.

¹¹⁷ Order No. 890 clarifies that a Power Purchase Agreement (PPA) with a “make whole” liquidated damages provision that reimburses for replacement power can qualify for Network Resource designation. Other liquidated damages provisions that cap penalties or set a fixed-dollar amount do not qualify for Network Resource designation because they create incentives that undermine the firmness of the PPA. (Order No. 890, paras. 1452-1454.)

(e) transmission arrangements on the external transmission system(s).¹¹⁸

Also in accordance with Order No. 890, BCTC proposes to revise Section 29.2(e) of the OATT to require that the following information be provided with designations of off-system Network Resources, although this information will be masked on OASIS to prevent the release of commercially sensitive information:

(a) any operating restrictions (periods of restricted operation, maintenance schedules, minimum loading level of resource, normal operating level of resource); and

(b) approximate variable generating cost (\$/MWH) for redispatch computations.¹¹⁹

In order to implement these changes, BCTC will be required to develop OASIS functionality to:

(a) allow all of the information required for a request to designate Network Resources to be provided electronically;

(b) mask information about operating restrictions and generating cost on OASIS; and

(c) allow for queries of all information provided with designation requests in accordance with section 37.6 of the Commission’s regulations regarding OASIS for transmission providers.¹²⁰

No customer or stakeholder comments were received in consultation on this proposal.

3.5.6 Designation of Network Resources – Documentation

BCTC proposes to adopt the Order No. 890 revisions to Sections 29.2 and 30.2 of the pro forma tariff related to the documentation of Network Resources.¹²¹

¹¹⁸ Order No. 890-A clarifies that the requirement in Section 29.2(e) to identify the transmission arrangements on external systems applies to the transmission leg from the resource being designated to the transmission provider’s transmission system. If an off-system power purchase is sufficiently firm to satisfy designation requirements, then the transmission provider need not be concerned with the upstream transmission leg(s) from the generator(s) to the point where the buyer takes title of the firm power. (Order No. 890-A, ¶ 867.)

¹¹⁹ Order No. 890, para. 1476.

¹²⁰ Order No. 890, para. 1477 (citing 18 CFR 37.6).

1 When designating a Network Resource, a Network Customer is required to
2 demonstrate certain facts pursuant to Sections 30.1 and 30.7 of the current OATT,
3 including that (i) it owns or has committed to purchase generation pursuant to an
4 executed contract or (ii) execution of a contract is contingent upon the availability of
5 transmission service in order to designate a generating resource.¹²² Order No. 890
6 concludes that transmission providers should not be responsible for verifying that the
7 generating units and power purchase agreements that Network Customers designate
8 as Network Resources satisfy these requirements.¹²³ Instead, Order No. 890 adopts
9 an attestation requirement as the means by which the Network Customer can make
10 this demonstration.

11 BCTC proposes to amend Sections 29.2 and 30.2 of the OATT in accordance with
12 Order No. 890 which requires Network Customers to include a statement with each
13 application for Network service, or when designating a new Network Resource, that
14 attests, for each Network Resource identified, that:

15 ... (1) the Network Customer owns the resource, has committed to purchase
16 the generation pursuant to an executed contract, or has committed to
17 purchase generation where execution of a contract is contingent upon the
18 availability of transmission service under Part III of the Tariff; and (2) the
19 Network Resources do not include any resources, or any portion thereof, that
20 are committed for sale to non-designated third party load or otherwise cannot
21 be called upon to meet the Network Customer’s Network Load on a non-
22 interruptible basis; ...

23 In accordance with Order No. 890,¹²⁴ BCTC’s proposal is that the Network Customer
24 should include this attestation in the customer’s comment section of the request when
25 it confirms the request on OASIS.

26 In accordance with the current procedures in Section 29.2 of BCTC’s OATT, BCTC
27 will be required to notify the Network Customer within 15 days of confirmation if its

¹²¹ BCTC proposes only one minor modification: for consistent referencing within the OATT, BCTC proposes to capitalize the reference to “Network Resources” in the preamble to the attestation requirement in Section 29.2(h) of the OATT.

¹²² Order No. 890-B, para. 182.

¹²³ *Ibid.* para. 1521.

¹²⁴ *Ibid.* para. 1521.

1 request is deficient with respect to the attestation. Whenever possible, BCTC will
2 attempt to remedy deficiencies in the request through informal communications with
3 the Network Customer. If such efforts are unsuccessful, BCTC will terminate the
4 Network Customer’s request.¹²⁵

5 Only BC Hydro submitted comments on this proposal. In response to concerns
6 expressed by BC Hydro, BCTC notes the following with respect to the new provisions:

7 (a) Network Customers will only need to attest to the portion of output in a split-bid
8 Electricity Purchase Agreement (EPA) that is designated as a Network
9 Resource, as such could be called upon to meet the Network Customer’s
10 Network Load on a non-interruptible basis. Thus, if only 50 MW of a 100 MW
11 contract is designated as a Network Resource, it is only the 50 MW portion that
12 requires an attestation that the resource meets the requirements of Section 29.2
13 or Section 30.2, as applicable.

14 (b) BCTC will abide by Order No. 890-B’s clarification that attestations can be
15 submitted at the time a resource designation is confirmed, which should
16 alleviate any concern that Network Customers are required to attest to forecast
17 resources that are not yet under contract and designated.¹²⁶

18 BCTC will finalize a business practice to set out, in part, that: (1) attestations can be
19 submitted at the time a resource designation is confirmed; (2) the Network Customer
20 is required to attest only to that portion of a contract with a third party that it has
21 designated as a Network Resource; and (3) forecast generation resources that are
22 not (yet) designated as Network Resources do not need to be attested to.

23 **3.5.7 Designation of Network Resources – Undesignation**

24 BCTC proposes to defer adopting the Order No. 890 amendments to Section 30.3 of
25 the pro forma tariff regarding the undesignation of Network Resources. As explained
26 below, BCTC proposes to await developments with respect to the completion and

¹²⁵ *Ibid.* para. 1522. BCTC is proposing in section 4 of this Application that there be a limit of 15 Calendar Days to resolve such deficiencies.

¹²⁶ Attestations would be required at the same time as any pre-confirmed applications. (Order No. 890, para. 1531.)

1 approval by FERC of the NERC and NAESB standards and business practices with
2 respect to a methodology for calculating ATC.

3 **3.5.7.1 Overview of Order No. 890 Regarding Undesignating Network Resources**

4 Order No. 890 amends Section 30.3 of the pro forma tariff, which requires Network
5 Customers to undesignate Network Resources or portions thereof in order to make
6 certain firm, third-party sales from those resources.

7 According to the amendments, requests to undesignate Network Resources that are
8 submitted concurrently with a request to redesignate those Network Resources at a
9 specific point in time will be considered temporary terminations. Any change in ATC
10 that is determined by BCTC to have resulted from the temporary termination will be
11 required to be posted on OASIS during the temporary period. However, temporary
12 undesignations will not result in the Network Customer permanently forfeiting rights to
13 use this ATC.

14 Conversely, according to the amendments, requests to undesignate Network
15 Resources submitted without any concurrent request to redesignate those Network
16 Resources are to be considered a request for indefinite termination. In this case, the
17 Network Customer will have no continuing rights to the use of the resource as a
18 designated Network Resource and will lose the ATC associated with the resource.
19 Subsequent to an indefinite termination of a Network Resource, future requests to
20 designate the Network Resource should be processed in accordance with Section
21 30.2 of the OATT as a designation of a new Network Resource.¹²⁷

22 Order No. 890 directs transmission providers to develop OASIS functionality and,
23 working through NAESB, business practice standards describing the procedural
24 requirements for submitting both temporary and indefinite terminations, including the
25 identification of any related transmission service requests to be evaluated
26 concomitantly with a request for temporary termination.¹²⁸

27 Order No. 890 also revises Section 30.3 of the pro forma tariff to require that, for
28 undesignations in support of third-party sales, notice of such undesignations must be

¹²⁷ Order No. 890, paras. 1540, 1549.

¹²⁸ *Ibid.* para. 1540.

1 made before the firm day-ahead scheduling deadline. As Order No. 890 states, this
2 provision was included as a means to ensure that the appropriate set of Network
3 Resources is included in the associated ATC calculations. Order No. 890 concludes
4 that this provision strikes an appropriate balance by allowing undesignated capacity
5 to be acquired on a non-firm basis while not creating an undue adverse effect on
6 third-party sales.¹²⁹

7 Subsequent to Order No. 890, numerous parties filed requests for rehearing and
8 clarification, with arguments, in part, that the minimum lead-time requirement will
9 harm the liquidity and efficiency of power markets and could adversely impact
10 regional reliability by restricting the availability of firm power in real time. In response,
11 FERC convened a technical conference on 30 July 2007, to address issues
12 associated with the designation and undesignation of Network Resources.

13 Upon consideration of the concerns that were raised during the technical conference
14 and in written comments following the technical conference, on 7 September 2007,
15 FERC issued a Notice granting an extension of the effective date of the minimum
16 lead time requirement in Order No. 890.¹³⁰ FERC defers the effectiveness of the
17 phrase “...but not later than the firm scheduling deadline for the period of termination”
18 in Section 30.3 of the pro forma tariff pending a future order. In its notice, FERC notes
19 that:

20 During this extension, the pro forma tariff will not specify the time by
21 which Network Customers are required to terminate their Network
22 Resources. To the extent a transmission provider wishes to establish a
23 minimum lead-time for undesignating Network Resources, it would be
24 reasonable in this instance for the transmission provider to specify that
25 deadline in its business practices, pending a further order in this
26 proceeding.¹³¹

27 A final rule from FERC is pending on this issue.

¹²⁹ Order No. 890, para. 1557.

¹³⁰ Notice Granting Extension of Effective Date, 120 FERC ¶ 61,222 (Sept. 7, 2007).

¹³¹ 120 FERC ¶ 61,222, p. 2, footnote 2.

3.5.7.2 Concerns Due to Hydro-Based System

During consultation BC Hydro expressed concern that, because of the complexity of the hydro-based system and because operational decisions are often made in real-time, a lengthy notification period and onerous process for temporary termination of Network Resources could reduce the ability to optimize the system in real-time and could result in lost revenue to BC Hydro and its customers and could possibly impact reliability.

In subsequent discussions, BCTC and BC Hydro considered the acceptance by FERC, on 8 May 2008, of tariff revisions proposed in a joint application by a group of Pacific Northwest utilities that responded in large part to concerns similar to BC Hydro’s.¹³² In response to this application, FERC accepted tariff filings that stipulated in amendments to Section 30.2 and 30.3 of their respective OATTs that for purposes of temporary undesignations to support firm third-party sales, all or part of generation owned, purchased, or leased by the Network Customer associated with an OASIS-registered Point of Receipt (POR), behind which there are no transmission constraints that could affect offerings of transmission service to other customers, should be treated as a single generating unit.

For a group of Network Resources associated with a given OASIS-registered POR, behind which there are no transmission constraints that could affect offerings of transmission service to other customers, ATC will not be affected by the selection of any particular generating unit behind the POR that the Network Customer might choose to support the third-party sale. ATC will be affected only by the total capacity from all units scheduled out from a POR along a particular path. Although the step of undesignating a Network Resource may increase ATC, that increase occurs regardless of which Network Resource might be undesignated. All the generation within the unconstrained area is essentially interchangeable for ATC calculation purposes.

This approach to temporary undesignations will reduce an unnecessary accounting and operational burden related with unit by unit undesignations. The Pacific

¹³² Avista Corp. et al (Docket Nos. ER08-706-000, ER08-707-000, ER08-708-000, ER08-709-000, ER08-710-000, and ER08-711-000) (FERC, March 25, 2008).

1 Northwest utilities argued that this approach will also mitigate an associated reliability
2 impact to the extent that it avoids any reallocation of undesignated quantities that
3 may be required within a short-time frame prior to or after scheduling deadlines,
4 under certain circumstances. The Pacific Northwest utilities noted that the approach
5 was necessary to accommodate the way in which western utilities are already
6 operating while fully implementing Order Nos. 890 and 890-A. In particular, the
7 Pacific Northwest utilities noted that the approach is designed around some of the
8 unique characteristics of the regional Pacific Northwest markets including well-defined
9 trading hubs, substantial jointly-owned and contracted-for generation, and the
10 dominance of often remote hydroelectric generation.

11 The Pacific Northwest utilities argued that the approach is consistent with or superior
12 to the pro forma tariff in so far as Network Resources can be undesignated in a
13 manner that does not create any adverse effect on ATC calculations or transmission
14 scheduling, and does not jeopardize the efficient functioning of the market.

15 BCTC believes that the approach proposed by the Pacific Northwest utilities, which
16 was accepted for filing by FERC, would address BC Hydro’s concerns and is
17 appropriate in the context of B.C.’s hydro-based system.

18 However, until the ATC methodology currently being developed by NERC is approved
19 by FERC, there is uncertainty with respect to a number of relevant matters, including
20 what constitutes a transmission constraint in respect of ATC calculations and the
21 associated determination of Network Resource groupings behind which there are no
22 transmission constraints that could affect offerings of transmission service to other
23 customers.

24 BCTC therefore proposes not to adopt the FERC Order No. 890 amendments to
25 Section 30.3 of the pro forma tariff and, instead, to continue its evaluation of the
26 undesignation of Network Resources once FERC approves the ATC methodology
27 being developed by NERC and NAESB.

28 **3.5.8 Network Economy**

29 BCTC proposes to adopt the Order No. 890 amendments to sections 28.4 and 28.6 of
30 the pro forma OATT related to secondary service, otherwise known as Network
31 Economy.

1 The amendment to section 28.4 clarifies that Network Economy service does not
2 require the filing of a service agreement for NITS.

3 The amendment to section 28.6 indicates that the transmission provider must specify
4 any terms and conditions related to the use of NITS or secondary service to facilitate
5 a wholesale sale that does not serve a Network Load. In this regard, BCTC proposes
6 to amend section 28.6 to reference to the terms and conditions related to Network
7 Service in Attachment Q (proposed to be renamed Q-2) and Tariff Supplement No. 3,
8 as approved by the Commission.

9 **3.5.9 Standardization of Business Practices**

10 BCTC proposes to adopt the requirements of Order No. 890 and to incorporate the
11 revisions to Section 4 of the OATT.

12 Specifically, BCTC proposes to amend Section 4 of the OATT in accordance with
13 Order No. 890 that requires:

14 (a) the transmission provider post on its public website all rules, standards, and
15 practices that relate to transmission service and to provide a link to these rules,
16 standards, and practices on OASIS.¹³³

17 (b) the transmission provider post on its public website, with a corresponding link to
18 OASIS, a statement of the process by which it will amend its rules, standards,
19 and practices, including a mechanism to provide reasonable notice of any
20 proposed changes to a posted business practice and the respective effective
21 date of such change.¹³⁴

22 These requirements are intended to facilitate a transparent process for making
23 amendments to rules, practices and standards previously posted by a transmission
24 provider.

25 BCTC currently posts its business practices on its website with a link to its OASIS
26 site.¹³⁵ BCTC proposes the following process by which BCTC amends its Business

¹³³ Order No. 890, paras. 1652-1653.

¹³⁴ *Ibid.* para. 1655.

¹³⁵ BCTC’s Business Practices set out the business rules and procedures to implement the Terms and Conditions of the OATT in a manner consistent with the BC Utility Commission’s June 20, 2005 OATT Decision at pages 93-

1 Practices, including a mechanism to provide reasonable notice of any proposed
2 changes and the effective dates of such changes.

3 When BCTC develops a new Business Practice or amends an existing Business
4 Practice, it will post the Business Practice on its website and establish a consultation
5 period open to all customers and stakeholders. BCTC will notify its customers and
6 stakeholders of the consultation period.

7 The consultation period will typically consist of a two-week review and comment
8 period, followed by a consultation session or workshop, if the comments received
9 suggest the necessity of a workshop. After any consultation or workshop if required,
10 BCTC will finalize the Business Practice and post it on its website.

11 No comments were received from customers and stakeholders in consultation on this
12 proposal.

13 **3.5.10 Creditworthiness**

14 BCTC proposes to adopt the creditworthiness requirements of Order No. 890 and has
15 drafted a new Attachment L, included in the red-lined OATT in Appendix A to this
16 Application. BCTC proposes to supplement Attachment L with its Credit Policy,
17 currently posted on its public website.

18 BCTC’s proposal is consistent with the requirement of Order No. 890 that
19 transmission providers include their creditworthiness and security requirements in a
20 new Attachment L to the OATT. The requirement is developed, in part, to ensure that
21 a transmission provider’s OATT contains sufficient information about its credit
22 process and requirements so that customers can understand the information required
23 to demonstrate creditworthiness and to determine for themselves the general amount
24 and type of security they may need to provide in order to receive service. In turn, this

95. In that Decision, the BCUC concluded that BCTC should endeavor to put as much specificity in the tariff as practicable, without being so prescriptive that the tariff becomes unworkable, and that it must have the authority and latitude to make decisions regarding the implementation of the tariff and the appropriate Business Practices to do so. Similarly, Order No. 890 adopts a continuation of FERC policy to require only those rules, standards and practices that significantly affect transmission service to be incorporated into a transmission provider’s OATT, as determined using FERC’s “rule of reason” test. According to that test, utilities are excused from filing policies or practices that deal only with matters of practical insignificance to serving customers. Otherwise requiring all rules, standards, and practices in the OATT would be impractical and potentially administratively burdensome. (Order No. 890, paras. 1649, 1651)

1 requirement will improve transparency and serve to prevent undue discrimination. In
2 concert with the requirement for a new Attachment L, Order No. 890 deletes the
3 creditworthiness provisions of Section 11 of the pro forma tariff.¹³⁶ BCTC accordingly
4 proposes to amend Section 11 of its OATT to refer to Attachment L.

5 BCTC’s Attachment L was designed to meet the requirement of Order No. 890 that a
6 new Attachment L set forth the quantitative and qualitative criteria to be utilized by the
7 transmission provider to determine the level of credit extended to customers.
8 According to the pro forma Attachment L, a transmission provider’s creditworthiness
9 procedures must contain the following elements¹³⁷:

- 10 (a) a summary of the procedure for determining the level of secured and unsecured
11 credit;
- 12 (b) a list of the acceptable types of collateral/security;
- 13 (c) a procedure for providing customers with reasonable notice of changes in credit
14 levels and collateral requirements;
- 15 (d) a procedure for providing customers, upon request, a written explanation for any
16 change in credit levels or collateral requirements;
- 17 (e) a reasonable opportunity to contest determinations of credit levels or collateral
18 requirements; and
- 19 (f) a reasonable opportunity to post additional collateral, including curing any non-
20 creditworthy determination.

21 Order No. 890 allows a transmission provider to supplement its Attachment L with a
22 credit guide or manual to be posted on OASIS. Order No. 890 contemplates that
23 because Attachment L requires only a summary of credit requirements and other
24 information, the need to revise Attachment L will occur infrequently.¹³⁸

¹³⁶ Order No. 890, para. 1656.

¹³⁷ *Ibid.* para. 1657.

¹³⁸ *Ibid.* paras. 1657 and 1658.

Table 3-3 provides a list of concordance between the items required under the Order No. 890 pro forma Attachment L and BCTC’s proposed Attachment L.

Table 3-3. Concordance Between Order No. 890 Pro Forma Tariff and Proposed Attachment L

	Order No. 890 Pro Forma Attachment L	BCTC Proposed Attachment L
1	General requirement for quantitative and qualitative criteria	Section 3: Creditworthiness Section 4: Creditworthiness Criteria
2	Item 1: Summary of procedure for determining level of secured and unsecured credit	Section 3: Creditworthiness Section 4: Creditworthiness Criteria Section 5: Requirements for Customers not meeting Creditworthiness Criteria
3	Item 2: A list of the acceptable types of collateral/security	Section 5: Requirements for Customers not meeting Creditworthiness Criteria
4	Item 3: A procedure for providing customers with reasonable notice of changes in credit levels and collateral requirements.	Section 6: Changes in Creditworthiness Status Section 7: Suspension of Service Section 8: Notice of Change in Creditworthiness Status and Security Requirements
5	Item 4: A procedure for providing customers, upon request, a written explanation for any change in credit levels or collateral requirements.	Section 9: Written Explanation for any Change in Creditworthiness Status and Security Requirements
6	Item 5: A reasonable opportunity to contest determinations of credit levels or collateral requirements.	Section 10: Contesting Determinations of Creditworthiness Status and Security Requirements
7	Item 6: A reasonable opportunity to post additional collateral, including curing any non-creditworthy determination.	Section 6: Changes in Creditworthiness Status

BCTC’s proposed Attachment L incorporates revisions suggested by BC Hydro during consultation. No other parties submitted comments on this proposal.

3.5.11 OATT Definitions

The following sections describe new or amended definitions under Order No. 890 that support the reforms to, or otherwise clarify the requirements of, the pro forma tariff.

3.5.11.1 Affiliate

Order No. 890 adds the following definition to FERC’s pro forma tariff:

With respect to a corporation, partnership or other entity, each such corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

BCTC proposes to adopt the definition of Affiliate in its OATT, which will inform the meaning of the word “affiliate” as it occurs in Sections 3 and 6 of BCTC’s OATT. No customer or stakeholder comments were received in consultation on this proposal.

3.5.11.2 Good Utility Practice

Order No. 890 incorporates into the definition of “good utility practice” in the pro forma tariff the definition of reliable operation from FPA section 215 to ensure that reliability standards ultimately developed by the ERO and approved by FERC are reflected in the pro forma tariff.

While BCTC cannot adopt the specific reference to the FPA, BCTC proposes to incorporate the following addition (as underlined) to the definition of “Good Utility Practice” in its OATT to incorporate reliability standards adopted by the Commission:

... Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including any reliability standards adopted by the Commission pursuant to section 125.2 of the British Columbia Utilities Commission Act.

BCTC proposes to make the same change to the definition as it occurs in the SGIP.

3.5.11.3 Network Resource

BCTC proposes to amend the definition of Network Resource in accordance with Order No. 890 to clarify that resources committed for the purpose of a reserve-sharing program may still be designated as a Network Resource. Examples of such reserve sharing programs are BC Hydro’s obligation to provide emergency power to Alberta or its obligations to the Northwest Power Pool. Since these programs are not

1 approved by the Commission as such, BCTC will not adopt the words “Commission-
2 approved” which occur in the Order No. 890 pro forma tariff.

3 **3.5.11.4 Non-Firm Sale**

4 Order No. 890 incorporates the following definition of “Non-Firm Sale” into the pro
5 forma tariff:

6 An energy sale for which receipt or delivery may be interrupted for any reason
7 or no reason, without liability on the part of either the buyer or seller.

8 This definition is adopted under Order No. 890 to clarify the treatment of such sales
9 under Section 30.4 of the pro forma tariff. Network Customers may use Network
10 Resources for third party sales only if the sale is on a non-firm basis. Order No. 890
11 states that this ensures that the Network Resource is available to serve Network Load
12 on an uninterruptible basis.

13 For the same reasons, BCTC proposes to adopt the definition of Non-Firm Sale in its
14 OATT. No customer or stakeholder comments were received in consultation on this
15 proposal.

16 **3.5.11.5 Pre-Confirmed Application**

17 Order No. 890 incorporates the following definition of “pre-confirmed application” in
18 the pro-forma tariff:

19 An Application that commits the Eligible Customer to execute a Service
20 Agreement upon receipt of notification that the Transmission Provider can
21 provide the requested Transmission Service.

22 The definition of Pre-Confirmed Application is adopted under Order No. 890
23 coincident with the reforms to the queue priority for pre-confirmed requests. Similarly,
24 BCTC proposes to adopt the definition of Pre-Confirmed Application in its OATT. No
25 customer or stakeholder comments were received in consultation on this proposal.

26 **3.5.11.6 Working Day**

27 BCTC is proposing to amend the definition of Working Day to reference the days
28 specified in its Business Practices, rather than as specified on OASIS.

1 **3.5.11.7 \$ or Dollar**

2 BCTC is proposing to add a definition for \$ or Dollar in order to clarify that all dollar
3 amounts in BCTC's OATT are in Canadian dollars.

4.0 HOUSEKEEPING AMENDMENTS

In this Application, BCTC is also seeking the Commission's approval for various “housekeeping” amendments to its OATT. All of these amendments are reflected in BCTC’s Redline OATT at Appendix A. Table 3 of the Redline OATT indicates the sections where BCTC has initiated a change to its OATT. In this section, BCTC provides an explanation of the amendments that are material.

4.1 Reordering of Attachments

Over the years, a number of attachments have been added to the OATT. As the Order No. 890 amendments include the addition of two new attachments (proposed Attachment K and L), BCTC proposes to take this opportunity to reorganize the attachments to the OATT in a more logical manner that is consistent with the industry standard pro forma tariff. As part of this reordering, BCTC proposes to make its rate schedules stand alone documents instead of being included in a single attachment (currently Attachment L).

BCTC's reordering of the attachments to the OATT is summarized in Table 2 of Appendix A and reflected in the red line OATT in Appendix A.

4.2 Rollover Rights

BCTC is proposing to add language to the beginning of Section 2.2 of the OATT to indicate that BCTC may limit the rollover rights of customers in the initial Service Agreement in accordance with Section 5 of Attachment B of the OATT. Attachment B is the form of LTF PTP service agreement, which presently includes language to this effect. This amendment is designed simply to clear any potential ambiguity on this issue and is in accordance with FERC precedent on rollover rights.¹³⁹

BCTC is also proposing to amend the language in Section 5 of Attachment B to clarify that when BCTC determines that it cannot provide a rollover right in the initial Service Agreement, then the customer will not have a rollover right even if capacity becomes available by the end of the term of the Service Agreement.

¹³⁹ See, e.g. Order No. 890 at paragraph 95.

1 A rollover right obliges BCTC to include the service agreement obligations in its long-
2 term planning of the system. BCTC therefore believes there should be no ambiguity
3 in the OATT surrounding when it does and when it does not have that obligation.

4 **4.3 Export Permits and Licences**

5 BCTC proposes to add a Section 5.3 to the OATT that will provide BCTC with
6 authority to require customers who request BCTC to wheel electricity from Canada to
7 the U.S. border to produce an export permit or license issued by the National Energy
8 Board (NEB) authorizing the export.

9 BC Hydro and BCTC are currently subject to a directive from the NEB under export
10 permits EPE-126 and EPE-127 to ensure that customers have valid export permits
11 prior to facilitating the export of electricity.¹⁴⁰ The proposed Section 5.3 is modeled on
12 the language of this directive and designed to ensure that BCTC can abide by this
13 direction from the NEB. BCTC also notes that Manitoba Hydro has similarly adopted
14 such language in its Tariff to ensure that it can comply with directions from the
15 NEB.¹⁴¹

16 BCTC currently requires customers to provide an export permit or licence in its
17 business practices. Accordingly, the addition of the proposed Section 5.3 will not
18 have any new impact on customers. It will, however, provide BCTC with the proper
19 authority in its OATT to ensure that it can abide by current and future directions from
20 the NEB with respect to export permits and licences.

21 **4.4 Dispute Resolution Procedures**

22 BCTC proposes to amend its dispute resolution procedures in Section 12 of its OATT
23 in order to allow the consolidation of arbitrations related to the allocation of transfer
24 capability.

25 A dispute related to the allocation of transfer capability will likely involve multiple
26 parties claiming the right to the same transfer capability on the system. The current

¹⁴⁰ Permits EPE-126 and EPE-127 direct BC Hydro and BCTC to “obtain from any person in Canada seeking to wheel electricity over facilities owned or operated by BC Hydro a copy of the export permit or license issued by the National Energy Board to the exporter, prior to providing transmission facilities to facilitate the export”. These permits are issued pursuant to the National Energy Board Act, R.S.C. 1996, C. N-7.

¹⁴¹ See section 16.1(f) of Manitoba’s Hydro’s OATT, available at <http://oasis.midwestiso.org/OASIS/MHEB>.

dispute resolution procedures do not provide a method for BCTC to ensure that such disputes are consolidated and resolved together, with the result that multiple parties can each pursue arbitration separately on essentially the same issue. If such disputes were not consolidated, BCTC and its customers could face multiple and conflicting arbitral decisions with respect to the same allocation of transfer capability. Under the current OATT, BCTC may incur legal costs and delay in seeking the consolidation of disputes under the Commercial Arbitration Act of British Columbia.¹⁴²

In order to address this issue, the proposed amendments to Section 12 require the consolidation of disputes “related to the same transfer capability, including the same portion of transfer capability.” In such a situation, if there is party to whom such transfer capability was granted, that party is given the right to become a party to the dispute. The amendments contain provisions about choosing and paying for an arbitrator in this situation. BCTC submits that the proposed amendments to Section 12 will provide for a more efficient and cost-effect dispute resolution procedure and are therefore just and reasonable.

4.5 Pre-Emption

BCTC is proposing minor amendments to section 13.2(a), (b) and (c) to clarify the language in the OATT. In particular, BCTC wishes to make it clear that:

- (a) LTF PTP service requests will pre-empt all conditional STF PTP reservations;
- (b) pre-confirmed applications will receive priority over earlier submitted requests of equal duration *that are conditional*; and
- (c) there is a conditional reservation deadline for hourly service specified in BCTC’s business practices.

4.6 Filing of Service Agreements

BCTC proposes to delete the provisions in Sections 13.4, 14.4 and 29.5 of the OATT that require BCTC to file service agreements with the Commission. This language has been carried over from FERC’s pro forma tariff. The Commission, however, does not require BCTC to file all service agreements.

¹⁴² R.S.B.C., c. 55.

4.7 Resolving Deficient Applications

In Sections 17.4 and 29.2 of the OATT, BCTC proposes to add a deadline of 15 calendar days, within which the parties can attempt to resolve any minor deficiencies in applications.

The OATT requires BCTC to attempt to remedy minor deficiencies in an application through informal communications with a customer. The OATT, however, does not specify when BCTC can stop attempting to remedy such deficiencies and consider an application incomplete. BCTC believes that unreasonable amounts of time should not be spent trying to finalize an application since during this time the functioning of the queue is delayed. BCTC believes that the proposed amendment provides an incentive for parties to complete applications in an efficient manner and help ensure that other requests in the queue are processed without unreasonable delays.

4.8 Tendering Service Agreements

BCTC is proposing a number of minor amendments to clarify when it is required to tender service agreements to customers requesting PTP and Network transmission service. These amendments reflect BCTC's practice and what BCTC considers to be the intent of the OATT.

In Section 32.1 of the OATT, BCTC proposes to specify that if it determines that a system impact study is not required for a NITS request, then it will tender a service agreement to the eligible customer within 30 calendar days of receiving the completed application. Currently, the OATT only specifies the procedure for offering a service agreement to a Network Customer if BCTC determines that a system impact study is required. With this amendment, it will be clear that an eligible customer applying for NITS will be tendered either a service agreement or a system impact study agreement within 30 days of submitting a completed application.

BCTC also proposes to delete the phrase "including a Service Agreement" from Section 29.2 of the OATT. Section 29 describes application procedures for Network service, and the last paragraph of Section 29.2 states that BCTC must acknowledge the receipt of an application and "indicate a date by which a response, including a Service Agreement, will be sent to the Eligible Customer." The procedures in the OATT, however, do not make it possible for the transmission provider to provide a

1 firm date by which a service agreement will be tendered. This will depend, for
2 instance, on whether a system impact study is required and whether the customer
3 executes a facilities study. Moreover, if the customer fails to execute the system
4 impact study agreement or facilities study agreement, should they be required, then
5 the request will be considered withdrawn and no service will ever be tendered.
6 Accordingly, BCTC believes that the phrase “including a Service Agreement” in
7 Section 29.2 only adds confusion to the terms of the OATT and should be deleted.

8 In addition, BCTC proposes to clarify Sections 19.4 and 32.4 to indicate that BCTC
9 will tender a service agreement to the customer when a facilities study is complete
10 and that it is from that time that the customer has 30 calendar days to execute the
11 service agreement. The current wording of the OATT is silent on when BCTC should
12 tender the service agreement upon the completion of a facilities study and when the
13 customer’s time to execute a service agreement commences. The proposed
14 amendments reflect BCTC’s practice of offering a service agreement at the time it
15 completes the facilities study.

16 **4.9 Security from BC Hydro**

17 BCTC proposes to amend Section II. D. 2. (a) of BCTC’s current Attachment K
18 (proposed to be changed to Attachment O) to indicate that the transmission owner
19 (i.e. BC Hydro) is not required to provide BCTC with a letter of credit or other form of
20 security for facilities built in response to transmission and interconnection service
21 requests.

22 Sections 19 and 32 of the OATT provide study procedures in response to a request
23 for PTP service and NITS, respectively. After a facilities study is complete, the
24 customer is required to provide a letter of credit or other form of security for the cost
25 of the required facilities and to sign a service agreement. Article 11.5 of the Standard
26 Generator Interconnection Agreement (Appendix 5 of the SGIP) requires similar
27 security requirements for interconnection customers.

28 BC Hydro is a unique transmission customer in that it is the owner of the transmission
29 system and all facilities built by BCTC to service BC Hydro are also owned by
30 BC Hydro. It is inefficient and unnecessary for BCTC to require BC Hydro to offer
31 security to secure the cost of its own facilities. For this reason, BCTC submits that the

1 OATT should recognize that BC Hydro is not required to provide security for building
2 its own facilities.

3 The proposed amendments are applicable solely to BC Hydro and not to any other
4 customers that apply for service. BCTC believes that it is not discriminatory for it to
5 seek security from other customers, but not from BC Hydro, because of BC Hydro's
6 unique status of being the owner of the transmission system assets.

7 **4.10 The SGIP and CEAP Tariff**

8 BCTC proposes several minor amendments to the Standard Generator
9 Interconnection Procedures (the "SGIP") (proposed Attachment M-1) and the
10 Transmission Service and Interconnection Service Procedures for CEAPs (the "CEAP
11 Tariff") (proposed Attachment M-2).

12 BCTC proposes to amend Sections 7.1 and 8.1 of the SGIP to require the provision
13 of the good-faith estimates for interconnection studies within 5 business days of the
14 deadline for meeting with the customer to discuss the previous study results. If there
15 is no meeting, these amendments result only in 2 additional business days to the
16 timelines in the SGIP. This amendment will provide BCTC with a total of 15 business
17 days to provide an interconnection customer with a non-binding good faith estimate of
18 the cost and timeframe for completing a combined study or an interconnection
19 facilities study. BCTC works with its service providers such as SNC Lavalin who
20 perform the studies in order to determine an estimate of study cost and timeframe.
21 The process involves review of project scope, definition of study deliverables and
22 authorization by BCTC. BCTC believes this limited extension in time is necessary so
23 that interconnection customer can have a realistic cost estimate before committing
24 further in the interconnection process.

25 BCTC also proposes to amend the SGIP to state that the technical information from
26 interconnection customers, which is specified in the attachments to Appendix 1 of the
27 SGIP, is required at the time the interconnection customer submits its interconnection
28 request. Section 6 of the current SGIP states that the technical data must be provided
29 on or before the return of the executed Interconnection Feasibility Study Agreement.
30 BCTC, however, requires the data at the time of the interconnection request to
31 determine what it needs to consider in the interconnection feasibility study for the

1 customer. This has been the practice since the SGIP was implemented. As a
2 consequence of this change, BCTC is also amending Section 3.1 to provide that the
3 customer may modify the point(s) of interconnection designated in the interconnection
4 request on or before the return of the executed Interconnection Feasibility Study
5 Agreement. Otherwise, Section 4.4 of the SGIP could limit the customer's ability to
6 make that change, which is clearly contemplated by the latter half of Section 3.1.

7 BCTC also proposes to revise the technical information required from interconnection
8 customers set out in Attachment 1 to Appendix 1 of the SGIP. The proposed revisions
9 to Attachment 1 to Appendix 1 of the SGIP outline the information requirements. The
10 technical information is described in the document entitled, "60 kV to 500 kV
11 Technical Interconnection Requirements For Power Generators, October 2008" which
12 is posted on BCTC's public web site. This document was developed with customer
13 consultation. The actual data forms to be completed by interconnection customers,
14 however, are provided in BCTC's Business Practices. These data forms are "living
15 documents" that BCTC needs to update and change from time to time to meet study
16 requirements. Accordingly, BCTC submits that it is more appropriate for these forms
17 to be outside of the OATT and that the revision will make the OATT less
18 cumbersome.

19 BCTC also proposes to eliminate Appendix 1 to the CEAP Tariff regarding the
20 interconnection request and technical information for generators interconnecting
21 under a CEAP. As a result, all generators will use Appendix 1 of the SGIP for the
22 interconnection requests. This change reflects the reality that the technical
23 information required by generators is the same whether or not it is submitted through
24 a CEAP process. BCTC submits that the proposed amendments have no negative
25 impact on customers and reduce the complexity of the tariff.

26 BCTC believes that the proposed amendments to the SGIP and CEAP Tariff simplify
27 and clarify the interconnection procedures with no detrimental impact on customers.

4.11 Dynamic Scheduling

BCTC is proposing to amend its current Attachment O¹⁴³ regarding Dynamic Scheduling to enable BCTC to serve as an Intermediary Balancing Authority Area. This change was requested by the Alberta Electric System Operator (the “AESO”) and will facilitate the dynamic scheduling of energy from Alberta to the United States and vice-versa.

BCTC is also proposing to delete the “Revert Back” provision in Section 5(a) since transmission customers now reserve dynamic scheduling through e-tags, with the result that there is no need for the ability to revert back to normal transmission service.

The Commission approved BCTC’s dynamic scheduling service in Commission Order No. G-12-06, dated 2 February 2006.

4.12 Security Default

The OATT requires customers to provide security for transmission study costs and Network Upgrades that BCTC is required to build to facilitate a transmission or service request. This security, such as a letter of credit, must be in a form acceptable to BCTC or issued by a financial institution acceptable to BCTC. BCTC’s proposed Attachment L (currently Section 11 of the OATT) addresses the security requirements for transmission study costs, whereas BCTC’s Attachment K (proposed to be renamed Attachment O) addresses security for Network Upgrades.

BCTC is proposing to add provisions to its proposed Attachment L and Attachment O to address the situation that the form of security or the issuer of the letter of credit provided by a transmission customer ceases to be acceptable to BCTC. The proposed provisions would require the customer to provide a new form of security acceptable to BCTC within 30 calendar days of being notified of the deficient security.

4.13 Rate Schedule 01

BCTC is proposing to make two minor amendments to Rate Schedule 01 regarding PTP transmission service. First, BCTC proposes to clarify the language with respect

¹⁴³ BCTC proposes to change the name of Attachment O to Attachment Q-1. See Appendix A to this Application.

1 to the Maximum Reserved Capacity Charge, which is \$48,111/MW of reserved
2 capacity per year. Second, BCTC proposes to delete the provision for a penalty
3 charge for unauthorized LTF PTP service. Since any unauthorized usage is, by its
4 nature, ST PTP service, it is only necessary to include a penalty provision in the rates
5 for Short-Term service.

6 Other changes to Rate Schedule 01 are canvassed in Part 5 of this Application.

5.0 SHORT-TERM RATE DESIGN

In this Application, BCTC is also seeking the Commission's approval for amendments to its OATT to implement a new design for its discounted short-term rate. These amendments are to Rate Schedules 01 and 02 of the OATT and are reflected in the Redline OATT at Appendix A. In this Part, BCTC provides an explanation of its rate design proposal.

5.1 Introduction

On 20 December 2006, BCTC filed its OATT Compliance Filing – Rate Design Report (2006 Rate Design Report)¹⁴⁴ to the Commission in compliance with the 2005 OATT Decision and other subsequent Commission orders and letters. On 24 January 2007, the Commission issued a Letter (Log. No. 17391), accepting BCTC's compliance filing.

On 26 June 2008, the Commission issued Order No. G-105-08, approving the negotiated settlement for BCTC's F2009 and F2010 Transmission Revenue Requirement Application. As part of the settlement, BCTC indicated that it was considering changes to its ST PTP rate design,¹⁴⁵ and agreed to file, by 31 December 2008, a rate design for its ST PTP service.

After providing further background on BCTC's current ST PTP rate design, as approved by the 2005 OATT Decision, the design's history, and ST PTP reservations and revenue since the current design was put in place, this section of the Application will provide an analysis of the existing design by answering two questions. Briefly, they are:

- (a) Is the pricing formula underlying the existing design sufficiently accurate for ST PTP pricing? Based on wholesale market prices during 01/01/2003-12/31/2005, the 2006 Rate Design Report (Chapter 6) concluded that the pricing formula does not accurately predict trading gains on the day of power flow. Using more

¹⁴⁴ Available at: <http://www.bctc.com/NR/rdonlyres/19014948-340F-4AFA-BF38-4DDC856114B4/0/BCTCRateDesignReport20Dec2006.pdf>

¹⁴⁵ *Application by British Columbia Transmission Corporation for Approval of Rates Effective April 1, 2008 and April 1, 2009* (June 26, 2008) Order No. G-105-08 (BCUC), Appendix 1, at para. 26.

1 recent wholesale market price data for the period of 07/23/2006-07/22/2008, the
2 analysis herein affirms this conclusion.

- 3 (b) Given the formula's poor prediction performance and the resulting decline in ST
4 PTP service revenues that BCTC has experienced, what are the alternatives to
5 the existing formula based design? Alternatives include: (i) adding a price floor
6 to the existing design; or (ii) replacing the existing design with fixed rates, which
7 may be differentiated by a time-of-use (TOU) period. An evaluation indicates
8 that adding a floor can increase ST PTP revenues, but that the TOU fixed rate
9 designs will also restore higher revenue, without blocking more trades than
10 formula-based designs.¹⁴⁶

11 Based on the above findings, BCTC seeks the Commission's approval to replace the
12 current ST PTP rate design with a design that will:

- 13 (a) Include a fixed rate of \$3/MWh for the Heavy Load Hour (HLH) period (06:00-
14 22:00, Monday - Saturday, excluding NERC holidays) and a fixed rate of
15 \$1/MWh for the Light Load Hour (LLH) period (remaining hours and days);
- 16 (b) Discontinue directional pricing;
- 17 (c) Eliminate the \$55 minimum scheduling fee; and
- 18 (d) Eliminate the current \$1/MWh price difference between firm and non-firm
19 service.

20 The proposed TOU rates will apply to hourly and daily services. Weekly and monthly
21 services will be charged at the undiscounted ST PTP firm rates set out in BCTC's rate
22 schedules.

¹⁴⁶ BCTC's Rate Design policy is to maximize utilization of the system as stated in section 4.6(e) of the Master Agreement between BC Hydro and BCTC, dated November 12, 2003, provided that customers make positive contributions to fixed costs.

5.2 Background

5.2.1 Current Design

BCTC's current ST PTP rate design was established by the 2005 OATT Decision. It has a price floor of \$0/MW and a price ceiling based on the hourly price derived from the per MW-year rate for LTF PTP service. The daily-varying discounted rate is equal to one-quarter of an estimated transmission value, reflecting an equal allocation of the value among the seller (e.g., a generator in the US), two transmission providers (e.g., Bonneville Power Authority and BCTC), and the buyer (e.g., a load-serving entity in Alberta).

BCTC uses a formula to estimate a daily transmission value. This estimate is the price difference, adjusted for line losses, between the Mid-Columbia (Mid-C) Hub in Washington State and the Alberta Pool.¹⁴⁷ The per MWh ST PTP rate is then set to 25% of the value estimate, subject to a current price floor of \$0/MWh and a price ceiling based on the hourly price derived from the per MW-year rate for LTF PTP service. Scheduling considerations require that the discounted rate be posted one day ahead of power flow. Since the Mid-C price for any day is posted on the day after, the formula in effect uses two-day old price data to estimate the trading gain on the day of power flow.

Prior to the 2005 OATT Decision, the ST PTP discounted rate was based on the *absolute value* of the difference between the electricity price index at the California and Oregon Border (COB) and a proxy for the value of electricity in Alberta, based on an assumed heat rate and the price of natural gas at the AECO pricing point. The discounted rate had a minimum price of \$2/MWh for firm service and \$1/MWh for non-firm service.

The 2005 OATT Decision approved changes that led to the current design: (1) the ST PTP discounted rate became based on the *positive* difference between the Mid-C price and the AESO pool price; (2) the price floor was reduced from \$2/MWh to \$0/MWh, implying that reservations with an estimated value of less than zero, i.e. reservations in the direction of reverse flow, were free; (3) a \$55 minimum scheduling

¹⁴⁷ The per MWh value of a transmission path A → B is the sale price at region B less (a) the purchase price at region A and (b) the line loss of transmitting power from A to B. Should the difference be negative, the value would be set to zero for ST PTP pricing purpose.

1 fee was added to collect the revenue loss due to the price floor reduction; and (4) the
2 non-firm price was set \$1/MWh less than the firm price.

3 In the 2005 OATT Decision, the Commission directed BCTC, among other things, to
4 explore alternative cost-based transmission rate designs that promote efficient use of,
5 and competitive access to, BC Hydro's transmission system, and to evaluate the
6 directional aspect of short-term service price discounting.

7 **5.2.2 2006 Rate Design Report**

8 In compliance with the 2005 OATT Decision, BCTC filed the 2006 Rate Design
9 Report, providing an analysis of wholesale market price data during 01/01/2003-
10 12/31/2005, and suggesting that "actual trading opportunities are different from, and
11 likely more complex than, the contemporaneous arbitrage assumption that underlies
12 the ST PTP rate formula."¹⁴⁸ Moreover, the formula only correctly predicts the two-
13 day-ahead direction of transmission value only about 70% of the time.¹⁴⁹ Its prediction
14 performance worsens as the number of days ahead increases. Finally, the 2006 Rate
15 Design Report concluded that "a floor of \$0.50/MWh on the ST PTP rate would
16 recover substantially more than \$100,000 of incremental revenue so the elimination
17 of the minimum scheduling fee will have no financial impact on BCTC."¹⁵⁰

18 **5.2.3 2007 Customer Consultation**

19 BCTC conducted a customer consultation session on 5 March 2007, seeking
20 customer input on: (a) whether to replace the \$55 minimum scheduling fee with a
21 \$1/MWh price floor; (b) whether to discontinue reservations beyond one day at
22 discounted rates; and (c) whether to continue directional pricing of ST PTP service.

23 The \$1/MWh price floor proposal put forth by BCTC for consultation was due in part
24 to the revenue decrease that BCTC experienced since the current design was put in
25 place. While the volume of all ST PTP reservations in F2007 was about 20% higher
26 than F2006, total ST PTP revenue declined by about 45%, from approximately \$36
27 million to approximately \$20 million, mainly because almost 50% of total ST PTP
28 reservations were made at zero-price. In F2008, the volume increased by roughly

¹⁴⁸ 2006 Rate Design Report, p.6.83.

¹⁴⁹ 2006 Rate Design Report, p.6.85.

¹⁵⁰ *Ibid.* at p.6.88.

18% over F2006 amounts. However, ST PTP total revenue declined by roughly 60% to \$15 million because 68% of total reservations were made at zero-price.

Following the consultation session, BCTC requested customers to complete a questionnaire, eliciting their comments on a proposal of replacing the minimum scheduling fee with a \$1/MWh price floor. While customers were generally supportive of the proposal, they expressed reservations, including that: (a) the \$1/MWh floor was seen as arbitrary; (b) the \$1/MWh price floor would shift cost from small users to large users; and (c) the price floor would block trade that would otherwise occur under the current design. In addition, some customers opined that there should be a price differential between firm and non-firm service, and that the multiple-day reservation system should be preserved. Finally, customers were concerned with required changes to their information and trading processes, and requested BCTC to consider combining ST PTP rate changes with its anticipated OATT tariff changes due to Order No. 890.

A record of these consultation activities is attached as Appendix F to this Application.

5.3 Evaluation of the Existing Design

5.3.1 Prediction Performance of the Pricing Formula

BCTC's examination of the predictive value of the current design's transmission value formula concludes that the formula has poor prediction accuracy and is therefore unsuitable for its continued use in ST PTP ratemaking.

The examination follows a two-step process:

Step 1: Compute the price differences between Mid-C and AESO by TOU period.¹⁵¹

Step 2: Compare the price difference on day $(t-i)$ for $i = 2, 3, 4, 5, 6, 7$ to the difference on day t . If both price differences are positive (negative), the price difference on day $(t-i)$ is said to be directionally accurate in predicting the price difference on day t .

¹⁵¹ BCTC's assessment of the accuracy of the formula in predicting transmission value uses daily Mid-C and AESO market prices by TOU period for the 2-year period of 07/23/2006-07/22/2008. The daily Mid-C HLH and LLH prices come from Platts. The daily AESO TOU prices are the daily equally-weighted averages of hourly prices by TOU period.

The results of the examination are shown in Tables 5-1.A and 5-1.B below, which affirm the finding in the 2006 Rate Design Report (Chapter 6). When it is two days ahead ($i = 2$), the pricing formula is only accurate about 70% of the time during LLH hours and just over 60% of the time during HLH hours.¹⁵² The formula's accuracy declines when the number of days ahead increases. This lack of prediction accuracy makes the usefulness of a formula-based rate design for pricing BCTC's ST PTP service questionable, especially for multiple-day reservations.

Table 5-1. Prediction Performance for the HLH Period Based on Data from 07/23/2006-07/22/2008

	Variable	i=2	i=3	i=4	i=5	i=6	i=7	i=8
1	Number of Days	731	731	731	731	731	731	731
2	Day t and Day t-i Same Direction	460	436	425	417	412	425	405
3	Day t and Day t-i Opposite Direction	271	295	306	314	319	306	325
4	Percent of Days with Correct Direction	63%	60%	58%	57%	56%	58%	55%

Table 5-2. Prediction Performance for the LLH Period Based on Data from 07/23/2006-07/22/2008

	Variable	i=2	i=3	i=4	i=5	i=6	i=7	i=8
1	Number of Days	731	731	731	731	731	731	731
2	Day t and Day t-i Same Direction	566	543	537	529	541	535	534
3	Day t and Day t-i Opposite Direction	165	188	194	202	190	196	197
4	Percent of Days with Correct Direction	77%	74%	73%	72%	74%	73%	73%

5.3.2 Evaluation of Alternative Designs

Given the formula's poor prediction performance, what are the alternatives to the existing design? A reasonable alternative design is one that can restore ST PTP revenue as a reasonable contribution to fixed costs, without causing a significant decline in energy trading or the value of that trading.

¹⁵² For example, Table 5-1 shows that even for a transaction that is only two days ahead, which is shown in the first column of the table labeled "i=2", there were 271 days of the 460 days tested (63%) where the predicted estimate of transmission value was in the opposite direction of the actual recorded data. The prediction error increases as the forecast period increases from 2 to 8 days ahead.

The evaluation process has the following steps:

Step 1: Develop alternative designs. These designs fall into three categories:¹⁵³

- (a) Category 1: Designs 2 to 7 in Table 5-3 below are each formed by adding a price floor to the existing design. Design 2 has a \$0.50/MWh price floor and was considered in the 2006 Rate Design Report. Design 3 has a \$1.00/MWh price floor and is the same design on which customers commented after the 5 March 2007 Customer Consultation Session. To explore time-varying discounting, Designs 4 to 7 have TOU price floors: \$0.50/MWh or \$1/MWh for LLH and \$2/MWh or \$3/MWh for HLH, respectively.
- (b) Category 2: Design 8, which offers discounting, subject to a \$1/MWh price floor, to hourly non-firm service only.
- (c) Category 3: Designs 9 to 12 in Table 5-4 below, which have fixed rates that do not vary by service reliability (i.e., firm vs. non-firm). Design 9 has a fixed \$0.50/MWh rate that applies to both HLH and LLH periods. Designs 10 to 12 are formed by combining a LLH rate that can be \$1/MWh or \$1.50/MWh with a HLH rate that can be \$2/MWh or \$3/MWh.

Step 2: Estimate the percent of hours in which trades would be blocked.¹⁵⁴ A path-specific transaction is said to be blocked by the applicable transmission rate when the transmission rate exceeds the sum of (a) the hourly wholesale market price difference (i.e., gross gain from trade), (b) the value of transmission losses, and (c) applicable non-BCTC transmission charges.

Step 3: Estimate the effect of each alternative design on the *value* of transmission reservations. This effect is estimated as the percentage change in the total value of trades under the alternative design, relative to the current design. In this calculation, the value of a trade is defined as the hourly wholesale market price difference, net of

¹⁵³ Some of these designs were tested in the 2006 Report (p.6.91, Table 6.13).

¹⁵⁴ Two types of trade are considered here: (1) the contemporaneous buy and sell in the same TOU period (e.g., BPA export through BC to Alberta); and (b) the inter-temporal buy in the LLH period and sell in the HLH period (e.g., BC import from BPA or Alberta in the LLH period for export to BPA or Alberta in the HLH period).

1 line losses and transmission costs.¹⁵⁵ The total value of trades is the sum of the
2 values during all hours in which trades are not blocked.

3 Step 4: Provide a rough, but comparable, estimate of each alternative design's
4 revenue effect. The revenue effect is calculated by applying the new pricing designs
5 to reservation data from F2007 and F2008, and reducing the calculated revenues by
6 the percentage increase in blocking relative to the status quo design. An estimate of
7 this effect is the *incremental* revenue collected (or lost) from reservations under an
8 alternative design, divided by the total revenue collected from reservations under the
9 current status quo design.

¹⁵⁵ If the value is negative, the trade should not occur and thus should have a zero value.

Table 5-3. Blocking and Revenue Effect by Formula-based Rate Design

Design Number	Description	Path	Percent of Trade Blocked	Value Effect of Trade Blocked	Revenue Effect
1. Status Quo	All hours, all types: Formula, \$0 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.3% 5.8% 4.44% 12.02% 11.43%	+ 0% + 0% + 0% + 0% + 0%	+ 0% + 0% + 0% + 0% + 0%
2. \$0.50 Floor	All hours, all types: Formula, \$0.50 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.8% 6.76% 5.26% 14.01% 13.29%	- 0.2% - 2.1% - 1.6% - 0.5% - 0.6%	+ 12% + 5% + 10% + 54% + 42%
3. \$1 Floor	All hours, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	9.8% 7.9% 6.35% 15.93% 15.13%	- 0.4% - 4.2% - 3.2% - 0.9% - 1.3%	+ 23% + 10% + 19% + 109% + 84%
4. \$1 LLH/\$2 HLH Floor	HLH, all types: Formula, \$2 floor, \$5.30 ceiling LLH, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	10.7% 9.46% 7.53% 19.91% 18.82%	- 0.7% - 6.1% - 5.1% - 1.5% - 2.1%	+ 38% + 17% + 30% + 172% + 134%
5. \$0.50 LLH/\$3 HLH Floor	HLH, all types: Formula, \$3 floor, \$5.30 ceiling LLH, all types: Formula, \$0.50 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	11.72% 10.91% 8.46% 24.47% 23.04%	- 1.1% - 6.8% - 6.3% - 1.9% - 2.6%	+ 50% + 21% + 38% + 209% + 163%
6. \$1 LLH/\$3 HLH Floor	HLH, all types: Formula, \$3 floor, \$5.30 ceiling LLH, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	11.98% 11.27% 8.83% 25.06% 23.60%	- 1.1% - 8.0% - 7.1% - 2.1% - 2.9%	+ 55% + 24% + 43% + 226% + 176%
7. \$1 LLH Floor	HLH, all types: \$5.30 LLH, all types: Formula, \$1 Floor	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	15.2% 15.2% 12.65% 31.85% 30.07%	- 2.1% - 12.4% - 11.9% - 3.7% - 4.9%	+ 94% + 41% + 72% + 352% + 277%
8. Non-firm Hourly Discounting Only	All hours, Non-Firm Hourly Reservations: Formula, \$1 floor, \$5.30 ceiling All hours, Firm Reservations and Daily Non-Firm: \$5.30	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	9.98% 11.89% 13.29% 27.36% 24.87%	Not calculated because all transactions are assumed to be of the same type for this analysis	+ 15% + 20% + 401% + 284% + 259%

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission charge ÷ Total hours with non-zero transmission value
Value effect = 1- (Total value of unblock trades under an alternative design ÷ Total value of unblocked trades the status quo design)
Revenue effect = Revenue collected under an alternative design ÷ Revenue collected under the status quo design

Table 5-3 shows that raising the price floor increases blocking and ST PTP revenue. For example, Design 3, which modifies the existing rate by including a \$1/MWh floor, increases both the ST PTP revenues by 84% and the blocked hours from an estimated 11.4% to 15.1%. However, blocking typically occurs during low-value hours with small wholesale market price differences. Thus, the value of transactions under Design 3 is only 1.3% less than that of the status quo design.¹⁵⁶

Alternatively, Design 6 has a \$3/MWh floor for HLH and \$1/MWh floor for LLH. This design blocks 23.6% of hours, which is 12.2% higher than the current design's 11.4%. However, the design decreases the value of the transactions by only 2.9%, even though the design generates an additional 176% of revenue relative to the status quo design.

When discounting only applies to hourly non-firm service under Design 8, the blocking is 24.8% of total hours and the revenue effect is an additional 259% of the status quo design's level. Design 8's value effect cannot be computed because the value analysis makes use of differences in the price of firm power by location. That is, it is impossible to determine from the historical market prices an appropriate value discount to apply to non-firm service relative to firm service.

¹⁵⁶ To measure performance differences between fixed price alternatives, which tend to block relatively more low value trades, and formula rates which tend to block more higher value trades due to prediction errors, BCTC has added estimates of what it calls "blocked value" to its estimates of blocked hours and trades.

Table 5-4. Blocking and Revenue Effect by Fixed Rate Design

Design Number	Description	Path	Percent of Trade Blocked	Value Effect of Trade Blocked	Revenue Effect
1. Status Quo	All hours, all types: Formula, \$0 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.3% 5.8% 4.44% 12.02% 11.43%	+ 0% + 0% + 0% + 0% + 0%	+ 0% + 0% + 0% + 0% + 0%
9. Fixed Price \$0.50	All hours, all types: \$0.50	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	1.74 % 1.83% 1.60% 3.98% 3.75%	+ 1.9% + 3.0% + 6.9% + 2.3% + 2.9%	- 73% - 80% - 77% - 19% - 34%
10. Fixed Price – Medium Low	HLH, all types: \$2 LLH, all types: \$1	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	5.8% 6.3% 5.31% 13.62% 12.83%	+ 0.6% - 2.8% + 0.3% + 0.3% + 0.2%	- 14% - 48% - 25% + 138% + 94%
11. Fixed Price – High-Low	HLH, all types: \$3 LLH, all types: \$1	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.27% 8.65% 7.0% 19.32% 18.17%	- 0.1% - 5.6% - 3.3% - 0.8% - 1.2%	+ 19% - 36% + 4% + 208% + 152%
12. Fixed Price – High-Medium	HLH, all types: \$3 LLH, all types: \$1.50	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.75% 9.29% 7.53% 20.8% 19.55%	- 1.1% - 10.9% - 8.5% - 2.5% - 3.4%	+ 26% - 25% + 10% + 227% + 168%

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission charge ÷ Total hours with non-zero transmission value
Value effect = 1- (Total value of unblock trades under an alternative design ÷ Total value of unblocked trades the status quo design)
Revenue effect = Revenue collected under an alternative design ÷ Revenue collected under the status quo design

Table 5-4 shows that fixed rate designs can produce more revenue than the status quo design, without significantly causing more blocking. For example, Design 10 with a \$2/MWh HLH fixed rate and a \$1/MWh LLH fixed rate blocks 12.8% of hours and causes little change in the total value of trade. However, the design yields 94% more revenue than the status quo design.

Increasing the TOU fixed rates as under Designs 11 and 12 blocks more hours and trades but yields more revenue. For example, the HLH rates of Designs 10 and 11 are 2 and 3 \$/MWh, respectively, while both their LLH rates are \$1 MWh. Replacing Design 10 by Design 11 results in a \$1/MWh HLH rate increase, which raises the estimate of trades blocked from 12.8% to 18.2%, even though the change in the value of unblocked trades is only -1.2%. The increase in the estimate of trades blocked of 6.7% in Design 11 relative to the status quo design is further

- 1 disaggregated into 4.4% in zero price hours and 2.3% in non-zero price hours. The
- 2 1\$/MWh increase also alters the additional revenue from a 94% to a 152% increase
- 3 of the status quo design's level.

Figure 5-1. Tradeoff Between Trade Blocking and Revenue Effect by Design

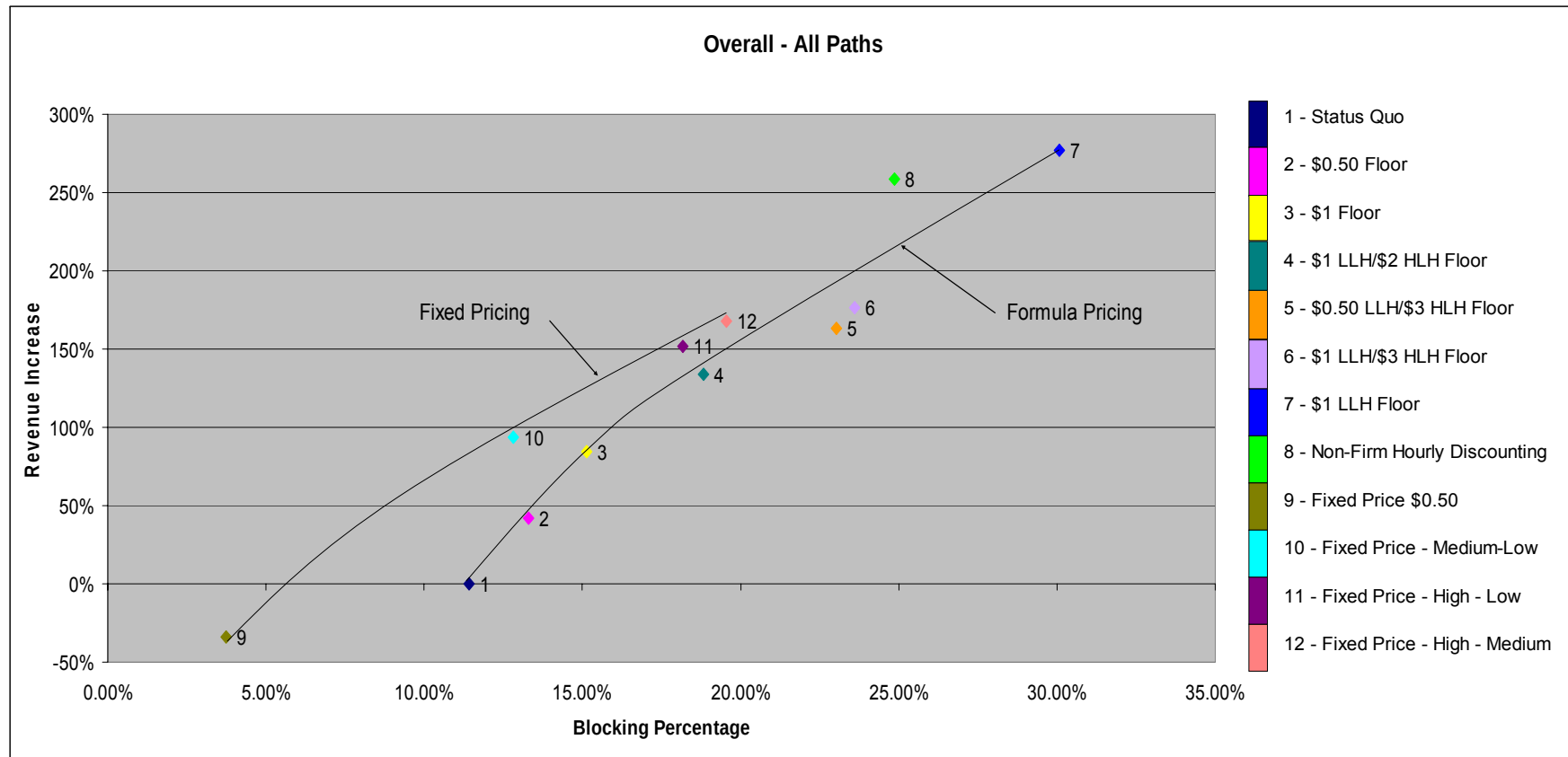


Figure 5-1 provides a graphic summary of the results in Tables 5-3 and 5-4. The horizontal axis measures blocking and the vertical axis measures revenue effect. Each point in the figure indicates a particular design's revenue effect for its calculated blocking percentage. The figure has two lines, with each line forming the revenue effects and blocking percentages of a set of designs. For example, the top line formed by Designs 9, 10, 11 and 12 indicates the maximum revenue that a fixed-price design may collect for a given level of blocking. The bottom line is formed by the blocking and revenue effects of formula-based designs. A comparison of these two lines indicates that TOU fixed rate designs are reasonable candidates to replace the status quo design.

5.4 Consultation

BCTC posted its short-term rate design proposal for comment on 6 October 2008. BCTC's consultation proposal and customer comments are attached as Appendix G to this Application.

Comments were received from four customers: Candela Energy Corp. (Candela), NorthPoint Energy Solutions (NorthPoint), Powerex and BC Hydro (BC Hydro), and TransCanada Energy Ltd. (TransCanada). Comments were also received from Cascade Pacific Power Corporation (Cascade) who has used NorthPoint's service to schedule energy through BCTC's system.

Candela indicated that the proposed changes would not hinder its trading activities and NorthPoint indicated that it was generally in agreement with BCTC's proposal.

BC Hydro, TransCanada and Cascade offered alternative designs with which BCTC has serious concerns. BC Hydro's proposal of displacement by price was rejected in the 2005 OATT Decision. TransCanada proposed that BCTC retain an index design, which has been demonstrated to be inaccurate and ineffective. Cascade proposes a design consisting of a floor price and a variable fee based on electricity price, but offers no rationale for why BCTC should accept electricity price risk and how BCTC should determine the risk premium.

In summary, the comments received do not provide any compelling reasons for BCTC to revise its proposal on short-term rate design.

5.5 BCTC's Proposed ST PTP Design

Based on the analysis presented in Section 5.3, BCTC seeks to replace the existing design with a simple TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate for the following reasons:

- (a) The proposed TOU design strikes the right balance between the competing goals of assuring that all transmission customers make positive contributions to fixed costs while continuing to promote economically-efficient levels of trade.
- (b) The proposed TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate provides for a more balanced cost contribution across all paths than would a \$2/MWh HLH rate and a \$1/MWh LLH rate.
- (c) The proposed TOU design creates stable ST PTP rates that are not formula-based, or connected to Alberta energy prices that have recently become extremely volatile. Although it is conceptually appealing to charge more for transmission during high-value hours, BCTC's assessment of its formula-based design indicates that it is difficult to do so in practice.
- (d) Since the firm vs. non-firm service distinction is meaningful only in the presence of a capacity shortage, and the discounted TOU rates are only available at times where capacity is available, the proposed simple TOU design does not vary between firm and non-firm service. BCTC should not be offering ST PTP discounting during times of capacity shortages.
- (e) Finally, a TOU design is easier to understand than formula-based rates and can be readily implemented on BCTC's system.

6.0 FIRM TRANSMISSION SALES TO ALBERTA

6.1 Introduction and Overview

6.1.1 Introduction

On 3 June 2008, BCTC applied to the Commission (the Suspension Application) to suspend the release for sale of additional Firm ATC on the BC>AB Path¹⁵⁷ and the Facilities Study relating to requests for additional service on the BC>AB Path, pending further consultation with customers on the issue of whether BCTC should sell additional Firm PTP service up to the WECC path rating of 1200 MW,¹⁵⁸ when constraints in Alberta currently limit imports into Alberta to a level below the WECC path rating.

Under BCTC's OATT a customer can request LTF PTP service. BCTC is required to make that service available on a non-discriminatory (first-come, first serve) basis if it has the Firm ATC available.¹⁵⁹ Firm ATC is determined in accordance with Attachment C of BCTC's OATT, modeled on the transmission capability of BCTC's Transmission System.¹⁶⁰ BCTC determines Firm ATC mathematically as the Firm Total Transfer Capacity (TTC), less the sum of existing transmission commitments, Transmission Reliability Margin (TRM) and Capacity Benefit Margin (CBM). The transmission capability of adjoining transmission systems is not taken into account in this calculation. In the case of the BC>AB Path, BCTC's Firm TTC is 850 MW, from which TRM of 65 MW is deducted, for a total of 785 MW available for sale. BCTC's Firm TTC could be equal to the WECC path rating of 1200 MW if certain Network Upgrades were to be undertaken by BCTC at the request of a LTF PTP customer. This would increase the amount of Firm transmission capacity available for sale on the BC>AB Path.

¹⁵⁷ The focus of this Part is on exports from BC to Alberta, not on imports from Alberta.

¹⁵⁸ The WECC path rating of the BC>AB Path is 1200 MW. The most recent assessment of that path by WECC identified the seasonal Operating Transfer Capability (OTC) as 1160 MW. See WECC Path Rating Catalogue dated October 31, 2008.

¹⁵⁹ OATT, Section 13.2

¹⁶⁰ Attachment C of BCTC's OATT, which sets out BCTC's ATC methodology, refers to conditions on the "Transmission System", which is defined in section 1 of the OATT as "[t]he facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under Part II and Part III of the Tariff". These are all facilities that are operated by BCTC, as Transmission Provider, and are on the BC side of the BC/Alberta intertie.

The temporary suspension order granted by the Commission on 3 July 2008 (the Suspension Order)¹⁶¹ has had the effect of temporarily maintaining the amount of Firm transmission available for sale on the BC>AB Path at 785 MW. In granting the Suspension Order, the Commission directed BCTC to address the issue outlined in BCTC's Suspension Application in the context of BCTC's next OATT Application or Rate Design review, whichever came first. BCTC was also directed to provide a Tariff provision to address the issue. The Commission also indicated that it "expects BCTC to report to the Commission as to how other OATT system operators have addressed situations involving the resolution of cross-jurisdictional capacity issues. This information will inform any further direction on resolution of the BC>AB Path issue."¹⁶²

This Part considers whether BCTC's OATT should be amended to provide for limits on Firm transmission sales on the BC>AB Path based on current system limitations in Alberta, and if so, how amendments to the OATT should be made. Section 6.6 also summarizes the results of BCTC's survey of other OATT system operators, as directed by the Commission.

Part 6 also addresses TransCanada Energy Ltd.'s (TCE) complaint dated 9 October 2008 (the Complaint), which seeks an order "to prioritize its firm capacity retroactive to December 1, 2007, i.e., to give priority to the Firm capacity of TCE over those users that subsequently acquired incremental Firm capacity, until such time as the appropriate system structural changes are made which would accommodate all Firm capacity holders."¹⁶³ BCTC's response to the facts alleged in the Complaint is contained throughout the Application. TCE's proposed relief is discussed in the context of the Options Analysis in Section 6.5 (TCE's proposal is a variant of BCTC's Option 2). Much of TCE's Complaint is argument, and will be addressed in that phase of the proceeding.¹⁶⁴ BCTC responds directly to TCE's comments on BCTC's motives in Section 6.3.

¹⁶¹ *In re Application by the British Columbia Transmission Corporation for Approval to Temporarily Suspend the Release of Firm Available Transfer Capacity on the BC to Alberta Path*, BCTC Order G-110-08 (3 July 2008).

¹⁶² *Ibid.*, p.4

¹⁶³ Complaint, para. 12

¹⁶⁴ The Commission should not take BCTC's silence on specific matters raised in the TCE Complaint as its agreement with TCE's assertions.

6.1.2 Tariff Options

Through the course of consultation with stakeholders and its own analysis, BCTC has identified three Tariff options for addressing the issues specific to the BC>AB Path. In basic terms, these options are:

- (1) Continue to offer the full amount of Firm ATC based on BCTC's Transmission System conditions, up to the WECC path rating of the BC>AB Path. This option reflects the existing OATT.
- (2) Limit the amount of Firm transmission service sold under the existing terms and conditions of service on the BC>AB Path to 785 MW.¹⁶⁵ Any service provided above 785 MW would be sold as a newly created long-term service with a higher curtailment priority than Non-firm service, but lower priority than Firm service.¹⁶⁶ The relief sought by TCE in the Complaint is one possible variant of this option.
- (3) Limit the amount of Firm sales based on the existing terms and conditions of service on the BC>AB Path to 785 MW. Any service provided above 785 MW will be sold as Non-firm transmission service, and will not trigger Network Upgrades. This option reduces the amount of LTF PTP service on the BC>AB Path from what would otherwise be available under the existing OATT or Option 1, without creating a new type of transmission service (as would be required under Option 2).

In each of these options, BCTC continues to co-ordinate with the AESO at both planning and operational levels to increase the imports into Alberta over time.

These options are discussed in Section 6.5.

6.1.3 Overview of BCTC's Analysis

BCTC continues to believe that, consistent with the current practice throughout the Western Interconnection,¹⁶⁷ the WECC path rating should generally remain the appropriate upper limit for sales of Firm transmission capacity on all of BCTC's paths,

¹⁶⁵ Existing LTF PTP customers have proposed lower levels.

¹⁶⁶ Additional long-term service, no matter what priority, would require investments in Network Upgrades on the BCTC Transmission System, which could ultimately permit this lower priority service to be converted to the higher priority LTF PTP.

¹⁶⁷ See survey results discussed in Part 6.6

including the interties. Under normal circumstances, BCTC should continue to accept LTF PTP requests, make the necessary Network Upgrades to increase Firm TTC on its own facilities, and provide Firm transmission service up to the WECC path rating. BCTC also believes that the OATT should continue to require that Firm TTC be determined with reference to conditions on the "Transmission System" (i.e. BCTC's transmission system), and without reference to variable system conditions in adjoining transmission systems, over which BCTC has no control. This approach promotes market access to all transmission capacity that is not already reserved within each operator's control area.

However, BCTC's LTF PTP customers have expressed concerns regarding the seams created by the differential between Firm TTC on BCTC's Transmission System and the AESO's variable hourly import limit. BCTC has the capacity to deliver more power to the BC-Alberta border on Firm transmission than the AESO can accept in most hours, requiring curtailments in hours when energy schedules on BCTC's Transmission System exceeds the hourly Alberta import limit.

The operating orders governing the intertie require the Path Operator (currently the AESO) to provide BCTC with the option to curtail its transmission reservation in real time to match Alberta's hourly import limits.¹⁶⁸ The practice has been for BCTC to curtail the transmission reservation, rather than the AESO curtailing energy schedules to effect the necessary curtailments on the Alberta system. BCTC's curtailments are, in essence, made by BCTC on behalf of the AESO.

As the Commission noted in the Suspension Order, upgrades to provide an increase of Firm capacity on the BCTC Transmission System, in the absence of further upgrades on the Alberta system, would only lead to expenditures in BC without providing further import capability into Alberta. The AESO appears to have no near-term plans to increase its maximum hourly import limit to the WECC path rating. Moreover, as a power pool operator, the AESO does not use an OATT tariff with a comparable LTF PTP service. Unlike OATT jurisdictions, import customers cannot trigger Network Upgrades in Alberta making it more difficult for customers to coordinate transmission service between British Columbia and Alberta. As a result, a

¹⁶⁸ AESO Operating Policies and Procedures OPP 301 "Interconnection", posted at [http://www.aeso.ca/downloads/OPP_301_FILED \(clean\).pdf](http://www.aeso.ca/downloads/OPP_301_FILED%20(clean).pdf)

majority of BCTC's LTF PTP customers have expressed opposition to the sale of additional LTF PTP transmission on the BC>AB Path.

Although BCTC believes that the best longer term solution on the BC>AB Path is Option 1, in the current circumstances BCTC believes that the most practical way to proceed is to amend the OATT to permit BCTC to limit Firm sales to 785 MW and to sell transmission service above 785 MW as Non-firm (i.e. Option 3). Neither upgrades on the Alberta system, nor the implementation of bid-based curtailments by the AESO¹⁶⁹ appears likely to proceed in the short term. As the Commission noted in the Suspension Order, the Firm TTC of the Transmission System on the BC>AB Path cannot currently be expanded without Network Upgrades and potentially significant capital expenditures by BCTC. Option 3 represents an immediate response to the current seams issues, without requiring BCTC to determine the Firm TTC with reference to third party system constraints or requiring amendments to existing LTF PTP Service Agreements.

6.1.4 Orders Sought

With this Application, BCTC seeks an order amending Attachment C of the Tariff by adding the following sentence at the end of the Attachment:

"Notwithstanding any other provision in this Tariff, the Transmission Provider shall limit sales of Firm Point-to-Point Transmission Service on the BC>AB path to 785 MW."

This reflects Option 3 discussed in this Part of the Application. The proposed Tariff amendment is reflected in the red-lined OATT attached as Appendix A to this Application.

BCTC is also respectfully requesting, pursuant to section 89 of the UCA and section 15 of the ATA, an interim order that BCTC, in processing the rollover requests on BC Hydro Service Agreements dated 30 November 2007¹⁷⁰ and 17 October 2007¹⁷¹, and

¹⁶⁹ Bid-based curtailments by the AESO would produce a more efficient means by which the AESO could manage congestion on its system, rather than BCTC curtailing transmission reservations in British Columbia. This is explained in Part 6.2.5.

¹⁷⁰ OASIS Transmission Request No. 70999095 for 50 MW

¹⁷¹ BCHydro Service Agreement dated 17 October 2007. OASIS Transmission Request No. 71630197 for 120 MW

also queued requests for Firm ATC coming available on the BC>AB Path on 1 January 2009, indicate on the new Service Agreements that:

"This Service Agreement is subject to a further order of the British Columbia Utilities Commission in the matter of the 'British Columbia Transmission Corporation Application to Amend the Open Access Transmission Tariff' filed on 21 November 2008."

The rationale for the interim order is explained more fully in Section 6.7.2, but is summarized below.

The Suspension Order had the effect of limiting the Firm capacity available for sale on the BC>AB Path at 785 MW (850 MW less TRM of 65 MW). All of that capacity has been sold to existing customers. There are two LTF PTP transmission Service Agreements held by BC Hydro (for 120 MW¹⁷² and 50 MW¹⁷³) that expire on 31 December 2008, with rollover rights.¹⁷⁴ A third BC Hydro Service Agreement expiring 31 December 2008, for 180 MW, has no rollover rights.¹⁷⁵

Applying BCTC's Tariff and Business Practices in the normal course, BCTC will roll over the 120 MW and 50 MW Service Agreements as per BC Hydro's requests, and release 180 MW Firm ATC for sale, as of 1 January 2009. In other words, BCTC will continue to offer for sale Firm transmission up to the 785 MW specified in the Suspension Order.

However, BCTC recognizes that, while it is proposing to limit Firm sales on the BC>AB Path to 785 MW, some of its customers may want to argue that a lower limit should apply. Should the Commission conclude in its final order in this Application that the limit on Firm transmission sales on the BC>AB Path should be less than 785 MW, this would have potential ramifications for the rolled-over 120 MW and 50 MW Service Agreements, as well as Service Agreement(s) in respect of the Firm capacity released on 1 January 2009.

¹⁷² BCHydro Service Agreement dated 17 October 2007. OASIS Transmission Request No. 71630197

¹⁷³ BC Hydro Service Agreement dated 30 November 2007. OASIS Transmission Request No. 70999095

¹⁷⁴ BCTC OATT Business Practice, Section 16: Rollover Rights for Long Term Service, available on BCTC's web site at http://www.bctc.com/transmission_scheduling/business_practices/

¹⁷⁵ BC Hydro Service Agreement dated 28 December 2007. OASIS Transmission Request No. 71088297

By way of explanation, under section 2.2 of the OATT, when a Service Agreement is rolled over, and there is insufficient ATC to serve all competing requests in the queue, the customer rolling over the Service Agreement must match the duration of longer competing requests in the queue. If the 180 MW had not been available as of the date the 50 MW and 120 MW contracts rolled over (i.e. 1 January 2009), there would have been insufficient ATC on the BC>AB Path to accommodate the rollovers and competing requests in the queue. The OATT would then have required that the BC Hydro 50 MW and 120 MW Service Agreements with rollover rights be made subject to competition from longer competing requests in the queue. BC Hydro would have had to match the duration of the competing requests.¹⁷⁶

The interim order sought will permit BCTC to proceed in the ordinary course with processing the 50 MW and 120 MW rollover requests, allow the Commission to consider the above issues in the context of the Application, and require BCTC to highlight on the rolled-over Service Agreements and any new Service Agreements on the BC>AB Path that the Commission may make further orders with respect to the Service Agreements as part of its final disposition of this Application. BCTC recognizes that the Commission has the power under the Act to change Service Agreements even without granting the interim relief, but BCTC believes that the order requested will assist in making the potential for that outcome as transparent as possible.

BCTC respectfully requests the interim order by 11 December 2008 to allow BCTC sufficient time to process the Service Agreements prior to 1 January 2009.

6.2 Background

6.2.1 Relevant OATT Provisions

BCTC's OATT was modeled on the FERC Order No. 888 pro forma tariff and was approved by the Commission on 20 June 2005.¹⁷⁷ When entering into a Service Agreement with BCTC for LTF PTP transmission service, customers agree to be

¹⁷⁶ BCTC OATT Business Practice, Section 16

¹⁷⁷ Order No. G-58-05. Prior to that order, BCTC was using BC Hydro's Wholesale Transmission Tariff which was similarly modeled on the pro forma tariff. See Parts 2.1.2.2 and 2.1.2.3 of this Application for more discussion.

bound by the terms and conditions of service as set out in the OATT.¹⁷⁸ The OATT provides for, among other things, the calculation of Firm ATC, the relative priority of LTF PTP transmission service, curtailment, and the release of Firm ATC. The relevant OATT provisions have not changed since 2005.

Unless otherwise stated, the references to BCTC's OATT in this Part of the Application are to the existing Commission-approved terms and conditions, not the proposed redline OATT in Appendix A.

When a transmission customer reserves LTF PTP transmission service from BCTC under section 13 of the OATT, it uses BCTC's OASIS to specify a POR at which energy is received by BCTC and a POD at which BCTC delivers the energy.¹⁷⁹ The POR and POD define the transmission "path" of service. Transmission "paths" are defined, in simple terms, as all of the transmission facilities that permit power to be moved from one area of the Transmission System to another area. There are numerous paths within the BCTC Transmission System, including the BC>AB Path which has a POR within BC and a POD at the BC-Alberta border.

Under the OATT, BCTC's ability to grant requests for LTF PTP service depends on the existence of Firm ATC, generally expressed in megawatts (MW). Firm ATC measures the Firm transfer capability remaining in the physical transmission network for further commercial activity above already committed uses. The Firm ATC on a path is calculated in accordance with the methodology prescribed in Attachment C of the OATT and BCTC's published Business Practices. Mathematically, ATC is defined as the TTC less the sum of the TRM, the CBM and the sum of existing transmission commitments. Attachment C states,

BCTC will assess the capability of the Transmission System to provide the services requested using its published criteria, standards and procedures.

¹⁷⁸ BCTC's standard Service Agreement contained in Attachment B of the OATT provides in part: "6. The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Firm Point-To-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement." And "12. The Tariff and the attached Specifications for Long Term Firm Point-To-Point Transmission Service is incorporated herein and made a part hereof."

¹⁷⁹ OATT, Part II Preamble

In determining the level of transmission capacity that is available to meet new Transmission Service requests, BCTC will exclude from the total transfer capability of the Transmission System that capacity needed to reliably meet:

- 1. the current and reasonably forecasted load of Network Customers;*
- 2. existing firm Point-To-Point Transmission Services;*
- 3. previously received pending Applications for firm Point-To-Point Transmission Service; and*
- 4. existing contractual obligations under other tariffs, rate schedules and contracts.*

Attachment C is augmented by BCTC's published Business Practices, which similarly provide that, mathematically, ATC is defined as the TTC less the TRM, less the CBM and less the sum of existing transmission commitments.¹⁸⁰

TTC, which is the starting point for determining ATC under the above methodology, is a concept rooted in system reliability. It is defined as the amount of electric power (MW) that can be moved or transferred reliably from one area to another area of the Transmission System via transmission paths between those areas under specified system conditions.¹⁸¹ A transmission path will have a Firm and Non-Firm TTC. The issues described in this Part of the Application relate to Firm TTC, not Non-Firm TTC.

TRM, as its name suggests, is an allowance that is intended to help ensure system reliability. TRM is defined in BCTC's Business Practices as the amount of TTC necessary to ensure that the interconnected transmission network is secure under a possible range of uncertainties in system conditions.¹⁸² In plain terms, TRM provides the margin that assures that the actual flows on a particular path are maintained in real time at or below BCTC's TTC. TRM is not properly used to account for the differences in transfer capability between two transmission systems, contrary to what is suggested by TCE in paragraph 71(b) of its Complaint.

¹⁸⁰ Business Practice, Section 2 TTC/ATC, at p.7

¹⁸¹ Business Practice, Section 2 TTC/ATC

¹⁸² Business Practice, Section 2.3.1

BCTC's Business Practices define CBM as the amount of transmission transfer capability reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements. For the reasons stated in BCTC Business Practice, section 2.3.2 CBM is always zero.¹⁸³

The ATC methodology outlined in Attachment C and augmented by the Business Practices makes no reference to accounting for constraints on neighboring systems in determining Firm TTC or Firm ATC. To the contrary, Attachment C requires BCTC to "assess the capability of the Transmission System". "Transmission System" is defined in section 1.49 of the OATT as "The facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under Part II and Part III of the Tariff". The "facilities owned, controlled or operated by the Transmission Provider" are the transmission facilities that are operated by BCTC, the "Transmission Provider", within BC. To determine Firm TTC and Firm ATC on any path,¹⁸⁴ including the BC>AB Path, BCTC has consistently assessed the capability of the facilities under its control, within BC, without regard to the capability, from time to time, of other transmission systems in neighbouring jurisdictions.¹⁸⁵

The current BCTC OATT requires that Firm ATC be made available on request to LTF PTP customers on a first come, first serve basis.¹⁸⁶ Customers purchasing LTF PTP transmission service from BCTC under the OATT are, in effect, purchasing a priority right relative to Non-Firm Point-to-Point transmission services ("NF PTP"). LTF PTP transmission service is "Firm" service in the sense that it has priority over NF PTP transmission service,¹⁸⁷ and is not subject to curtailments for economic reasons.

¹⁸³ Business Practice, Section 2.3.2

¹⁸⁴ Other than in real-time, as discussed in Part 6.2.5 below.

¹⁸⁵ The assessment of Firm TTC, which occurs without reference to third party system conditions, should not be confused with what happens in real time (hour by hour). In real-time the hourly TTC on BCTC's Transmission System must always match the import limits on neighbouring transmission systems, and vice versa, or there will be reliability issues. BCTC has operating orders in place, as do BPA and the AESO, which govern how this is accomplished. It is the readjustment of TTC/import limits between jurisdictions in real-time that can lead to curtailments if the scheduled energy during that hour exceeds the import limit of the neighbouring jurisdiction.

¹⁸⁶ OATT, section 13.2

¹⁸⁷ See Order Adopting Electric Quarterly Report Data Dictionary, 120 FERC 61,270, 24 September 2007, Order No. 2001-G (Appendix 1), which created the *Electric Quarterly Report Data Dictionary, Version 1.0*. The Dictionary included definitions of Firm and Non-Firm contracts. The definition of Firm contracts is: "For transmission sales, a service or product that always has priority over non-Firm service. For power sales, a service or product that is not interruptible for economic reasons." The definition of Non-Firm contracts is: "For transmission sales, a service that is reserved and/or scheduled on an as-available basis and is subject to curtailment or interruption at a lesser priority compared to Firm service. For an energy sale, a service or product

LTF PTP transmission service is, however, expressly subject to curtailment for reliability reasons.¹⁸⁸

When a customer requests LTF PTP transmission service, BCTC is required to perform a System Impact Study to determine whether the transmission service request can be accommodated (i.e. whether there is sufficient Firm ATC). If the Firm transmission capacity is available, BCTC accepts the request, presents the customer with a Service Agreement, and provides the service on a non-discriminatory basis.¹⁸⁹ If the transmission service cannot be provided without a Network Upgrade, BCTC is required to conduct a Facilities Study to determine the required Transmission System modifications, cost estimate and schedule.¹⁹⁰ Under the OATT, BCTC funds Network Upgrades. Customers triggering a Network Upgrade post a letter of credit or equivalent security that is drawn down upon as payment for future transmission service.¹⁹¹

6.2.2 WECC Path Rating

BCTC is a member of WECC, as is the AESO and other transmission providers within the Western Interconnection.

WECC assigns path ratings for paths throughout the Western Interconnection.¹⁹² A WECC path rating is the result of a consultative, collaborative process among WECC members that assures reliable operation. A rated path is fully peer reviewed, directly usable in operations for both scheduled and actual flows, and recognized in future planning studies. By virtue of having a WECC path rating, the transmission provider is afforded "some protection against erosion of established capacity of this facility when

for which delivery or receipt of the energy may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller."

¹⁸⁸ BCTC OATT section 13.6

¹⁸⁹ BCTC OATT section 19.1.

¹⁹⁰ BCTC OATT section 19.4.

¹⁹¹ BCTC OATT section 27 and the existing Attachment K (in the proposed redlined OATT, Attachment K is now Attachment O)

¹⁹² WECC's path rating catalogue can be found at http://www.wecc.biz/documents/library/reports/2008/Path2008_Final_0208.pdf. A person must be a registered user with WECC to access the document.

further expansion of the interconnection is proposed or new limitations are discovered.¹⁹³

As discussed in Section 6.6, the WECC path rating is the basis upon which the surveyed OATT transmission providers in the Western Interconnection establish the upper limit of TTC. The WECC path ratings are “Maximum Transfer Capabilities”¹⁹⁴, and do not define the FTTC of the path. The FTTC cannot exceed the path rating.

6.2.3 BC>AB Path

The BC>AB Path has a POR inside BC and a POD at the Alberta border. Both the POD and POR for this service are on BCTC’s Transmission System. BCTC does not sell transmission rights, or arrange for transmission, on the Alberta system.¹⁹⁵

The WECC path rating of the BC>AB Path is 1200 MW. However, the Firm TTC of the Transmission System on the BC>AB Path is currently 850 MW, which is the current Firm capability of the BCTC system absent further Network Upgrades. After TRM of 65 MW,¹⁹⁶ this leaves 785 MW of Firm capacity available for sale to customers, either as LTF PTP service or STF PTP service. BCTC has sold 785 MW of Firm service on the BC>AB Path pursuant to the OATT under ten LTF PTP contracts to four customers: BC Hydro, TCE, NorthPoint Energy Solutions Inc. (NorthPoint), and Cargill Power Markets, LLC (Cargill). All of the Service Agreements have rollover rights, except for the 180 MW contract held by BC Hydro (discussed previously in the context of the interim order sought) which expires on 31 December 2008.

Table 6.1 below identifies the customers who currently hold Service Agreements for LTF PTP transmission service on the BC>AB Path, the amount of LTF PTP transmission service they currently hold, the service start date in the original Service Agreement, the contract date of the most recent (rolled over) Service Agreement, in-

¹⁹³ WECC, “Overview of Policies and Procedures for Regional Planning Project Review, Project Rating Review and Progress Reports” (revised April 2005), p.6. The report is found on the WECC web site www.wecc.biz.

¹⁹⁴ See WECC Path Rating Catalogue dated October 31, 2008.

¹⁹⁵ BCTC OATT section 21

¹⁹⁶ BCTC has established 65 MW as a fixed value for TRM for the BC>Alberta intertie in its Business Practice, Section 2.3.1. The AESO’s TRM varies depending on system conditions, but is 65 MW under normal conditions (AESO Operating Policies and Procedures OPP 304).

service and end dates for each current Service Agreement, and whether the current Service Agreement has a rollover right.

Table 6-1. Current LTF PTP Service Agreements on BC>AB Path

	Customer	Firm Capacity (MW)	First Service Start Date on BC>AB Path (Under Initial Service Agreement)	Contract Date of Current Service Agreement	Service Start Date Under Current Service Agreement	Service End Date ¹⁹⁷ Under Current Service Agreement	Rollover Right
1	BC Hydro	50	1 Jan 2000	24 May 2007	1 July 2007	31 Dec 2008	Yes
2	BC Hydro	160	1 July 2001	27 May 2008	1 July 2008	31 July 2012	Yes
3	BC Hydro	120	1 Dec 2006	17 Oct 2007	1 Dec 2007	31 Dec 2008	Yes
4	BC Hydro	50	1 Dec 2007	30 Nov 2007	1 Dec 2007	31 Dec 2011	Yes
5	BC Hydro	50	1 Dec 2007	30 Nov 2007	1 Dec 2007	31 Dec 2011	Yes
6	BC Hydro	180	1 Jan 2008	28 Dec 2007	1 Jan 2008	31 Dec 2008	No
7	TCE	100	1 Sep 2004	18 Dec 2006	1 Jan 2007	29 Feb 2012	Yes
8	NorthPoint	25	1 Jan 2006	21 Dec 2006	1 Jan 2007	31 Dec 2008 ¹⁹⁸	Yes
9	NorthPoint	25	1 Jan 2006	21 Dec 2006	1 Jan 2007	31 Dec 2008 ¹⁹⁹	Yes
10	Cargill	25	1 Dec 2007	30 Nov 2007	1 Dec 2007	31 July 2009	Partial Service under Study
11	Total	785					

There are currently 31 requests from six customers in the queue for LTF PTP transmission service on the BC>AB Path and US>AB path²⁰⁰, with requests totaling 2650 MW. These requests are summarized in the table attached to the end of this Part as Attachment 6-1.

BCTC's System Impact Study dated 3 April 2007 determined that there is 850 MW of transfer capability on the BC>AB Path.²⁰¹ BCTC's most recent System Impact Study dated 1 November 2007 indicated the potential to increase the Firm TTC on the BC>AB Path above 850 MW, and hence make available additional Firm ATC, if

¹⁹⁷ Service End Date means service end at hour 23:59:59 on the date indicated.

¹⁹⁸ Service has already been rolled-over under Service Agreement dated 24 January 2008 from 1 January 2009 to 31 December 2011.

¹⁹⁹ Service has already been rolled-over under Service Agreement dated 24 January 2008 from 1 January 2009 to 31 December 2011.

²⁰⁰ The BC>AB Path is one "leg" of the US>AB path.

²⁰¹ BCTC's System Impact Studies are available at:

http://www.bctc.com/transmission_system/engineering_studies_data/studies/interregional.htm

certain Network Upgrades are undertaken.²⁰² These studies, like all of BCTC's previous studies, only accounted for conditions on BCTC's Transmission System.

In paragraph 25 of the Complaint TCE maintains that BCTC's System Impact Study published in November 2007 "was founded on the erroneous assumption that the [Alberta Integrated Electric System] could accept wheeled power without restriction. This assumption led to the incorrect conclusion that a Firm TTC of 850 MW was possible without system upgrade, despite BCTC's acknowledgement elsewhere that this is not possible." This is not an "erroneous assumption". This assumption is made in all BCTC studies because it is the Transmission System that is studied. As indicated above, BCTC has never considered third party system constraints in the determination of long-term Firm TTC. The System Impact Study conducted by BCTC in response to TCE's original request for LTF PTP transmission service²⁰³ on the BC>AB Path considered only constraints on the Transmission System.²⁰⁴

As discussed previously in the context of BCTC's Tariff, LTF PTP customers can request such Network Upgrades under the OATT. BCTC has received requests pursuant to the OATT to perform a Facilities Study on behalf of five customers to determine costs and timelines for constructing the proposed Network Upgrades to increase the Firm TTC to 1200 MW, equal to the WECC path rating. This would represent the upper limit of Firm sales on the BC>AB Path, beyond which there would need to be a re-rating of the path through WECC's path rating process. The Facilities Study is temporarily suspended following the Commission's Suspension Order.

6.2.4 Current Operating Conditions in Alberta

The AESO operates Alberta's interconnected electric system and the wholesale electricity market in Alberta. In contrast to British Columbia, which uses an OATT to facilitate bilateral trading with physical transmission rights, Alberta is a power pool that treats an import transaction as a schedule with a zero price bid into the pool. It is not possible for a customer to purchase unbundled transmission service from the

²⁰² The System Impact Study dated 15 November 2007 concluded at p.10: "Under single contingency criteria, the existing BCTC system can transfer up to 850 MW to BC Alberta border without system upgrade. For transfers higher than 850 MW, reactive reinforcement at Cranbrook area or series compensation in 5L92 and 5L94 is required."

²⁰³ TCE's Original Service Agreement, dated 13 July 2004

²⁰⁴ System Impact Study dated 17 June 2004. BCTC's System Impact Studies are available at: http://www.bctc.com/transmission_system/engineering_studies_data/studies/interregional.htm

AESO so as to permit it to schedule energy acquired from a third party on those transmission reservations (which would be referred to as a physical capacity transmission tariff). The nature of the market in Alberta means that the AESO does not offer a transmission service similar to BCTC's LTF PTP transmission service.

At an operational level on the BC-Alberta intertie, the AESO sets a maximum hourly import limit from British Columbia into Alberta. The AESO's maximum hourly import limit is currently set at 780 MW in system normal conditions. The hourly limit varies with Alberta internal load levels.²⁰⁵ In real time, actual limits on imports from BC into Alberta are recalculated hourly. As illustrated by the data provided in Appendix I in any given hour, the import limits can vary further and be less than 780 MW (to values as low as zero) as system conditions in Alberta change. Fluctuations in the hourly import capability of the Alberta system are dependent on load levels in Alberta, units in service, the availability of Import Load Remedial Action Schemes (ILRAS),²⁰⁶ and other factors.

The data demonstrates the difficulty in defining a long-term physical transmission right on the BC>AB Path that is contingent on the hourly import limit of the AESO pool. Alberta's hourly import limit has tended to be progressively lower over the past three years, and can vary significantly depending on Alberta system conditions.

6.2.5 Real Time Operations on the BC-Alberta Intertie

The differential between the amount of Firm transmission service capable of being offered by BCTC and the amount of energy capable of being accepted by the AESO from hour to hour is creating a "seams" issue on the BC>AB Path that cannot immediately be addressed.

Alberta legislation requires the AESO to "make rules respecting the preparation of needs identification documents for, and the planning and processing of, enhancements or upgrades to transmission facilities that existed on August 12, 2004, for the purpose of providing transmission capacity to import or export electricity to or

²⁰⁵ AESO Operating Policies and Procedures OPP 304.

²⁰⁶ ILRAS is an automated scheme that sheds load whenever a specific contingency occurs. As applied to the BC>Alberta intertie, an ILRAS would automatically shed load to minimize system disturbance that would occur if the intertie were to trip during a period of high import. The availability of ILRAS at any given time depends on contractual arrangements between the AESO and Alberta loads.

from Alberta in excess of the path ratings that existed on August 12, 2004”.²⁰⁷ Nevertheless, BCTC has concluded that this solution does not appear to be achievable in the near future. The AESO's current 10 Year Transmission System Plan does not provide any information in this regard. BCTC does not currently believe that the Alberta system will be capable of receiving exports from British Columbia, at or near the WECC path rating, in the near future.

The current market rules in Alberta require imports to be "price takers" with a bid into the pool at zero, so that energy schedules above import limits are not curtailed based on price. Curtailment based on price is referred to in this document as "bid-based curtailment". Bid-based curtailment is used, for instance, on the interface between TransEnergie and the New York Power Pool (NYPP).²⁰⁸ The AESO does not yet have the Energy Management System (EMS) software capability to implement bid-based curtailments on their side of the interface. The introduction of bid-based curtailment by the AESO would efficiently resolve any differences in the energy schedules submitted on reserved transmission on the BC>AB Path and the AESO's import capability. During times when there is a shortage of import capacity, suppliers bidding into a competitive market, acting rationally, would be expected to bid their opportunity costs, which would be used together with bids from internal suppliers to minimize costs of meeting load service requirements. In discussions with BCTC, the AESO has indicated that it would be no earlier than late 2009 before the EMS system is upgraded, and that bid-based curtailment might follow sometime thereafter.

The operation of the BC-Alberta intertie in real-time is administered in accordance with operating orders that have been in place for a number of years.²⁰⁹ Under the operating orders that govern the operation of the BC-Alberta intertie the AESO dispatches all import energy schedules up to and above its own maximum import levels. The AESO notifies BCTC whenever the AESO's import capability is less than BCTC's export schedules into the AESO system processed by BCTC. BCTC curtails

²⁰⁷ *Alberta Transmission Regulation* (AR 86/2007), Section 15(1)(g). BCTC understands the reference to "path ratings that existed on August 12, 2004" to refer to the 1200 MW WECC path rating on the import path within Alberta.

²⁰⁸ TransEnergie sells LTF PTP rights on its DC interties into the NYPP that are higher than the TTC posted by the NYPP. Competing suppliers of power are economically curtailed by the NYPP using their bid prices. Because the pool's TTC is lower than the TTC posted by TransEnergie, the scheduled energy from the LTF PTP users is always less than TransEnergie's TTC.

²⁰⁹ AESO Operating Policies and Procedures OPP 301, and BCTC Operating Order 7T-17

transmission pursuant to the priority under the OATT, meaning that Non-firm service is cut first, followed by pro-rata reductions in Firm service. It is only if BCTC does not curtail to the lower Alberta import levels in a particular hour that the AESO curtails energy schedules, doing so on a last-in/first-out basis.²¹⁰

The AESO and BCTC operating orders harmonize the hourly TTC on the BC>AB Path with the AESO's hourly import limit on an hour-by-hour basis, but result in BCTC limiting use of its own Transmission System without there being any operating constraints on its own facilities.

6.2.6 New Customer Demand and Incumbent Customer Concerns

The System Impact Study relating to the BC>AB Path, dated 3 April 2007, indicated that the Firm TTC on the BC>AB Path on a long-term basis is 850 MW, which provides 785 MW for sale, after allowances for TRM. There are currently LTF PTP commitments on the BC>AB Path totaling 785 MW. The most recent System Impact Study relating to the BC>AB Path dated 15 November 2007 indicated that Firm TTC on the BC>AB Path could be increased to the full WECC path rating of 1200 MW with the addition of certain Network Upgrades.

The potential release of more LTF PTP transmission for sale on the BC>AB Path in the face of Alberta system constraints, however, has increased concerns among BCTC's existing LTF PTP customers. Their concern, as expressed to BCTC, is that due to system constraints in Alberta, releasing additional Firm transmission capacity for sale would affect the frequency and extent of real-time pro-rata curtailments, which, in turn, would "devalue" their LTF PTP transmission service. They have urged BCTC to take Alberta's existing system conditions (i.e. the hourly import limit) into account when determining Firm TTC on the BC>AB Path to limit curtailments of their existing LTF PTP transmission service.²¹¹

In contrast, some potential new customers in BCTC's queue for LTF PTP transmission service have urged BCTC to continue to sell LTF PTP service on the BC>AB Path as Firm ATC becomes available on the Transmission System. Selling additional LTF PTP service as it becomes available on the Transmission System

²¹⁰ AESO Operating Policies and Procedures OPP 301

²¹¹ August 8 Report, found at Appendix H to the Application.

would, in the view of these potential customers, improve access to transmission services in BC and give these customers the opportunity to bring power to the BC-Alberta interface on a Firm priority basis. Customers in BCTC's queue have requested that BCTC undertake a Facilities Study to determine the Network Upgrades that would be required to increase the Firm TTC of the Transmission System on the BC>AB Path to the WECC path rating. Under the OATT, the cost of the Facilities Study is borne by those customers.²¹²

6.2.7 Suspension Application

BCTC applied to the Commission on 3 June 2008 to suspend the release for sale of additional Firm ATC on the BC>AB Path and the Facilities Study relating to requests for the additional service, pending further consultation with its customers on whether BCTC should sell additional Firm service on the BC>AB Path up to the WECC path rating of 1200 MW. The Commission granted BCTC's Suspension Application on 3 July 2008, directing BCTC to consult with customers, file the August 8 Report, and address the issues in this Application.

6.2.8 Consultation and 8 August 2008 Report

BCTC consulted with its customers at a 14 July 2008 Tariff consultation session. A number of customers were present at the consultation session.²¹³ At the consultation session, BCTC identified three potential options for discussion to address future sales of Firm transmission service on the BC>AB Path.²¹⁴ BCTC invited written comments following the consultation session. Five customers responded to BCTC's invitation for comments, including NorthPoint, TransAlta Energy Marketing (US) Inc., (TransAlta), TCE, BC Hydro for itself and Powerex (BC Hydro/Powerex), and Candela Energy Corporation (Candela).²¹⁵

BCTC included the customer comments, and provided a response to them, in the August 8 Report. The August 8 Report is attached to this Application as Appendix H.

²¹² August 8 Report, found at Appendix H to the Application.

²¹³ NorthPoint Energy Solutions Inc., TransAlta Energy Marketing (Canada) Inc., TransCanada Corporation, BC Hydro for itself and Powerex, Candela Energy Corporation, ecoPHASER Energy Corp., EPCOR, Plutonic Power Corporation, and Sek C Consulting Ltd.

²¹⁴ The options presented during consultation have since been refined based on customer input and further analysis for inclusion in this Application.

²¹⁵ The comments filed by each of these parties were appended to the 8 August 2008 Report. The Report can be found at Appendix H to this Application.

6.3 TCE Complaint

BCTC's response to the facts alleged in the Complaint is contained throughout Part 6. TCE's proposed relief is discussed in the context of the Options Analysis in Section 6.5 (TCE's proposal is a variant of Option 2). Much of TCE's Complaint is argument, and will be addressed in that phase of the proceeding.²¹⁶ However, BCTC wishes to respond directly to TCE's suggestion that BCTC acted improperly in increasing the Firm TTC on the Transmission System. TCE suggests, for instance, that the conduct of both BCTC and Powerex be explored on the basis that Powerex is an affiliate of BCTC and "it is clear that Powerex has received a benefit from BCTC's decision to increase Firm capacity".²¹⁷ In a similar vein, TCE identifies as a "broader implication and public interest consideration" that BCTC's conduct has impaired the future marketability of Firm transmission service offered by BCTC.²¹⁸ BCTC rejects the suggestion that it has acted improperly. BCTC has followed the OATT in conducting System Impact Studies without reference to operating constraints in Alberta. BCTC has awarded capacity on the BC>AB Path in accordance with the OASIS queue. Powerex, as an existing customer, has expressed concerns during consultation regarding the release for sale of further Firm transmission service on the BC>AB Path.²¹⁹

6.4 Tariff Options

BCTC considers the Tariff options to address the issues relating to Firm sales on the BC>AB Path to be as follows:

- (1) Continue to offer the full amount of Firm ATC based on BCTC's Transmission System conditions, up to the WECC path rating of the BC>AB Path. This option reflects the existing OATT.
- (2) Limit the amount of Firm transmission service sold under the existing terms and conditions of service on the BC>AB Path to 785 MW.²²⁰ Any service provided

²¹⁶ The Commission should not take BCTC's silence on specific matters raised in the TCE Complaint as its agreement with TCE's assertions.

²¹⁷ Complaint, paras. 57 and 58

²¹⁸ Complaint, paras. 55 and 56

²¹⁹ August 8 Report, Tab E BC Hydro/Powerex Comment Letter dated 24 July 2008. The August 8 report can be found at Appendix H to the Application

²²⁰ Existing LTF PTP customers have proposed lower levels.

1 above 785 MW would be sold as a newly created long-term service with a higher
2 curtailment priority than Non-firm service, but lower priority than Firm service.²²¹
3 The relief sought by TCE in the Complaint is one possible variant of this option.

4 (3) Limit the amount of Firm sales based on the existing terms and conditions of
5 service on the BC>AB Path to 785 MW. Any service provided above 785 MW will
6 be sold as Non-firm transmission service, and will not trigger Network Upgrades.
7 This option reduces the amount of LTF PTP service on the BC>AB Path from
8 what would otherwise be available under the existing OATT or Option 1, without
9 creating a new type of transmission service (as would be required in Option 2).

10 In each of these options, BCTC continues to co-ordinate with the AESO at both
11 planning and operational levels to increase the imports into Alberta over time.

12 **6.5 Analysis of Tariff Options**

13 The above options were canvassed in the August 8 Report. After undertaking
14 consultation and further analysis, BCTC proposes to adopt Option 3 for the reasons
15 discussed below.

16 **6.5.1 Option 1: Status Quo**

17 Option 1 is to continue to offer the full amount of Firm ATC based on BCTC's
18 Transmission System conditions, up to the WECC path rating of the BC>AB Path.
19 This option reflects the existing OATT. BCTC continues to co-ordinate with the AESO
20 at both planning and operational levels to increase the imports into Alberta over time.

21 As set out in the August 8 Report, Option 1 has some clear advantages over Option 2
22 and 3, when compared against tariff principles. It provides greater access to the
23 BCTC Transmission System, encourages timely and economic upgrades, and treats
24 all LTF PTP customers (i.e. both existing customers and customers in the queue) on
25 a comparable basis.

26 As Option 1 retains the current Tariff provisions, it would require BCTC to upgrade the
27 Transmission System to accommodate requests for LTF PTP transmission service on

²²¹ Additional long-term lower priority service would require investments in Network Upgrades on the BCTC Transmission System, which could ultimately permit this lower priority service to be converted to the higher priority LTF PTP.

the BC>AB Path up to the WECC path rating. As indicated previously, BCTC has received requests pursuant to the OATT to perform a Facilities Study in furtherance of such Network Upgrades, but the Facilities Study has been suspended by virtue of the Suspension Order.

Under normal circumstances, the WECC path rating would be the appropriate limit to TTC on the BC>AB Path. The WECC path rating for the BC>AB Path was developed in accordance with a WECC path rating process. The use of the WECC path rating as the upper limit of TTC on the BC>AB Path is consistent with Order No. 890's focus on coordination between and among transmission providers to achieve "consistent applications" of ATC components. Order No. 890 endorsed three ATC calculation methodologies under development by NERC -- contract or rating path ATC, network ATC, and network Available Flowgate Capacity²²² -- because "[i]f all of the ATC components and certain data inputs and assumptions are consistent, the three ATC calculation methodologies being finalized by NERC through the reliability standards development process will produce predictable and sufficiently accurate, consistent, equivalent, and replicable results."²²³ FERC noted that the "contract or rating path" approach "examines TTC for every A-to-B path on the system in concert with all others, reduces ATC by path for existing transmission commitments, TRM, and CBM, as appropriate, and produces ATC for each path."²²⁴ The WECC path rating exemplifies the "contract or rating path" approach.

Since Order No. 890, FERC has acknowledged "that reliability regions have historically calculated transfer capability using different approaches, and we agree that regional differences should be respected". FERC noted that this is exemplified by

²²² The contract path process examines TTC for every A to B path on the system in concert with all others, reduces ATC by path for Existing Transmission Commitments (ETC), TRM and CBM, as appropriate, and produces ATC for each path. The "network ATC" method uses a simulator to look not at each path, but at each transmission element (line, substation, etc.) and runs first contingency simulations to establish ATC on a network basis, rather than a path basis. The third method, "network Available Flowgate Capacity (AFC)", uses a simulator to examine critical flowgates over a wider area, then requires a second step to convert AFC values to particular path ATC values. *Mandatory Reliability Standards for the Bulk-Power System*; 16 March 2007; FERC Docket No. RM06-16-000 (Order 693), at para. 1030, n 331.

²²³ Order No. 890, at para. 210 ("The Commission instead concludes that use of the ATC calculation methodologies included in reliability standards currently being developed by NERC is acceptable").

²²⁴ Order No. 890, para. 210, n. 149.

WECC's "documented open process for establishing TTC for the Western Interconnection".²²⁵

Despite these advantages, BCTC has proposed Option 3 (i.e. to suspend further Firm sales) in response to the seams issues associated with the BC>AB Path, and the resulting incremental curtailments of existing LTF PTP transmission service, that are incapable of immediate resolution. This is discussed further in the context of the analysis of Option 3.

6.5.2 Option 2: Provide New Lower Priority Service to New LTF PTP Customers

Option 2 involves limiting the amount of Firm transmission service sold under the existing terms and conditions of service on the BC>AB Path to 785 MW. Any service provided above 785 MW will be sold as a newly created long-term service with a higher curtailment priority than Non-firm service, but lower priority than Firm service.²²⁶ BCTC would continue to co-ordinate with the AESO at both planning and operational levels to increase the imports into Alberta over time.

BC Hydro/Powerex and, to some extent, TCE, proposed a variation of this option during consultation by creating two classes of LTF PTP customers based on the date that LTF PTP service was obtained, with "old customers" having priority over "new customers" regardless of the system condition that causes a curtailment. Building on this concept, TCE's Complaint seeks an order "to prioritize its Firm capacity retroactive to December 1, 2007". As TCE is a current customer of BCTC holding 100 MW LTF PTP transmission service on the BC>AB Path that it rolled over for five years on 1 January 2007,²²⁷ this would establish it as one of the "old" customers whose transmission service retains the existing terms and conditions of LTF PTP transmission service. Other customers that obtained service after TCE's proposed cut-off date would no longer be eligible for transmission service that retains the existing terms and conditions of LTF PTP transmission service.

²²⁵ Order No. 693, 16 March 2007, para. 1051

²²⁶ Additional long-term lower priority service would require investments in Network Upgrades on the BCTC Transmission System, which could ultimately permit this lower priority service to be converted to the higher priority LTF PTP.

²²⁷ Service Agreement dated 18 December 2006

Option 2, like Option 3, insulates existing customers from more frequent and deeper curtailments associated with the sale of additional Firm transmission above 785 MW in the absence of upgrades to the Alberta system. Option 2 differs from Option 3 in that Option 2 requires the creation of a new class of service.

Also, unlike Option 3, the new class of customers could trigger Network Upgrades; however, the fact that the lower priority service is likely to be curtailed when transmission service is most valuable would tend to discourage timely upgrades of the BCTC system. Customers would be less prepared to post security for Network Upgrades to the BCTC Transmission System under Attachment K of the OATT²²⁸ if the service that they receive is a lower priority service than they would receive under Option 1. If that support cannot be obtained, it may make it more difficult to co-ordinate overall development of the intertie to provide greater export capacity from British Columbia and greater import capacity into Alberta over time.

There are two further problems with Option 2. First, it would require choosing an arbitrary cut off date to distinguish between “old” and “new” reliability-differentiated classes of service. Similar concerns exist with establishing the cut-off date by reference to variable hourly import limits into Alberta, as exist with setting Firm TTC on that basis (see the discussion in section 6.2.4). Second, if that cut-off date is before the date of any Service Agreements²²⁹, those Service Agreements would have to be amended to convert them from LTF PTP transmission service to a new, lower priority, long-term service. Table 6-1, which summarizes the existing Service Agreement dates, shows that establishing a cut off date of 30 November 2007 or earlier would affect existing Service Agreements.

The TCE Complaint proposes that the division between “old” and “new” customers be 1 December 2007. The main significance of that date appears to be that TCE will retain its existing LTF PTP priority, but that Service Agreements after that date would not. Although TCE has referenced Alberta system conditions in its Complaint, there is no magic to the level of service provided as of 1 December 2007 in the context of Alberta hourly system conditions. Customers who received LTF PTP service on

²²⁸ Now Attachment O in the proposed redlined OATT.

²²⁹ BCTC is referring to the reference date on the Service Agreement, which will typically be before the service start date.

1 BCTC's Transmission System prior to that date were awarded service based on
2 studies of the BCTC Transmission System alone, just as customers after that date
3 have been, and there has always existed a risk of curtailment of LTF PTP service
4 based on system conditions in Alberta. The level of curtailment that TCE has seen
5 subsequent to 2004 has fluctuated and is not necessarily an indication of what will
6 occur in future years.

7 For other customer positions regarding potential dates or conditions to establish the
8 division between "old" and "new", please see customer comments attached to the
9 August 8 Report, which is Appendix H to this Application.²³⁰

10 **6.5.3 Option 3: Stop Selling New LTF PTP**

11 Option 3 is BCTC's preferred option in light of the current impediments to pursuing
12 Option 1 that are incapable of immediate resolution. Option 3 will limit the amount of
13 Firm sales based on the existing terms and conditions of service on the BC>AB Path
14 to 785 MW. Any service provided above 785 MW will be sold as Non-firm
15 transmission service, and will not trigger Network Upgrades. This option reduces the
16 amount of LTF PTP service on the BC>AB Path than would otherwise be available
17 under the existing OATT or Option 1, without creating a new service (unlike Option 2).
18 BCTC will continue to co-ordinate with the AESO at both planning and operational
19 levels to increase the imports into Alberta over time.

20 As noted in the August 8 Report,²³¹ BCTC recognizes that Option 3 removes an
21 option inherent in the existing Tariff for customers to support upgrades to develop the
22 Transmission System, to provide requested service, and to take advantage of
23 increased import capacity in Alberta as it arises. This is reflected in the comments of
24 TransAlta appended to, and summarized in, the August 8 Report.

25 BCTC also recognizes that Option 3 results in differing treatment of existing and
26 potential LTF PTP customers and has some of the same characteristics as Option 2,
27 with two main differences. First, it avoids the problem identified by the Commission in
28 the Suspension Order that upgrades to provide an increase of Firm capacity on the
29 BCTC system, in the absence of further upgrades on the Alberta system, would only

²³⁰ In particular, comments of NorthPoint and Powerex/BC Hydro.

²³¹ See Appendix H

lead to expenditures in BC, without providing further import capability into Alberta.²³² As a power pool operator, the AESO does not use an OATT tariff with a comparable LTF PTP service. This makes it more difficult for customers to coordinate transmission service between British Columbia and Alberta, and to increase that import capability on the Alberta system, than it would be between two OATT jurisdictions where a LTF PTP customer can trigger Network Upgrades on both systems.

Second, Option 3 addresses the concerns expressed by a number of BCTC's customers who have existing LTF PTP Service Agreements that have expressed concerns regarding the seams created by the differential between Firm TTC on BCTC's Transmission System and the hourly import limits in Alberta. It does so while avoiding amending existing LTF PTP Service Agreements.

Thus, while BCTC believes that the best longer term solution is Option 1, in the current circumstances BCTC believes that the most practical way to proceed is to amend the OATT to permit BCTC to limit Firm sales to 785 MW. Neither upgrades on the Alberta system, nor the implementation of bid-based curtailments by the AESO appears likely to proceed in the short term. Option 3 represents an immediate response to the current seams issues, without requiring BCTC to determine the Firm TTC with reference to third party system constraints or requiring amendments to existing LTF PTP Service Agreements.

6.6 Utility Survey

BCTC conducted a survey of North American Transmission Providers in response to the Commission's direction to report to the Commission as to how other OATT system operators have addressed situations involving the resolution of cross-jurisdictional capacity issues.²³³

The survey covered ten transmission providers throughout North America in both Canada and the US. The Canadian transmission providers surveyed were SaskPower, Manitoba Hydro, Hydro Quebec, and New Brunswick System Operator

²³² BCTC recognizes that under section 27 and Attachment K (now Attachment O in the proposed redlined OATT) of the OATT, although BCTC funds Network Upgrades, customers triggering a network upgrade post a letter of credit or equivalent security that is drawn down upon as payment for future transmission service.

²³³ Suspension Order, Decision p.4

(NBSO); the US providers were Arizona Public Service (APS), Bonneville Power Administration (BPA), Duke Energy Carolinas, Nevada Energy, PacifiCorp, and Progress Energy (North Carolina). The Transmission Providers surveyed were selected based on meeting the following criteria, employed so as to most closely approximate the nature of the interface between BC and Alberta:

- (a) The Transmission Provider has a tariff based on the Order No. 888 Pro Forma OATT, and
- (b) The Transmission Provider interfaces with a pool system (i.e. systems with bid-based energy dispatch operated by an ISO or RTO, as opposed to offering physical transmission rights under an OATT).²³⁴

The ten Transmission Providers surveyed represent all of the Transmission Providers meeting these criteria within the Western Interconnection, and includes several of the major Transmission Providers that meet these criteria elsewhere in North America.

In conducting the survey of these Transmission Providers, BCTC asked the following questions:

- i) *Do their studies/calculations of TTC take into account system conditions of neighbouring jurisdictions? If yes, how?*
- ii) *Do their studies/calculations of long term Firm ATC take into account system conditions of neighbouring jurisdictions? If yes, how?*
- iii) *If no, do they deny long term service when there is ATC on their own system, if system conditions on the neighbouring system would not permit delivery of all capacity that would be reserved?*
- iv) *How do they resolve shortages when the neighbouring pool's hourly import capacity is less than schedules?*

²³⁴ APS interface with California ISO; BPA interface with California ISO; Nevada Energy interface with California ISO; SaskPower interface with AESO; Duke interface with PJM; Progress interface with PJM; Manitoba Hydro interface with Midwest ISO; Hydro Quebec interface with NYISO, ISO-NE and Ontario IMO; NBSO interface with Hydro Quebec and ISO-NE.

v) *Do they have any special protocols for managing schedules across seams?*

Prior to conducting phone interviews, BCTC examined the OATT Tariff of each of the ten Transmission Providers, including Attachment C (Methodology for Assessing Available Transmission Capability) and Attachment D (Method for Completing a System Impact Study). Additional information required to address the questions identified above was available in various documents on the web sites of the respective Transmission Providers. The Transmission Providers also posted materials on their Business Practices, which addressed some of the issues around their TTC and ATC methods. In some cases, published System Impact Study Reports and Facility Study Reports provided additional insights into the methodologies used by the Transmission Providers. In cases where the documents were ambiguous, BCTC followed up by e-mail or directly by phone with the Transmission Providers. The phone interviews were particularly useful for gathering information about the last two questions (iv and v), which focus on operations and are not frequently described in tariff language or contained in system impact studies.

6.6.1 Responses to Questions 1-3: Accounting for Neighbouring System Conditions in TTC/ATC

BCTC determined that the surveyed Transmission Providers in the Western Interconnection, with the exception of SaskPower, do not account for system conditions of neighbouring jurisdictions in studies/calculations of TTC or long term Firm ATC and would not deny service on that basis.²³⁵ SaskPower appears to have initiated a policy change in favour of accounting for neighbouring system conditions in late-Summer 2008;²³⁶ prior to that time SaskPower appears to have operated in a similar manner to BCTC and the other surveyed Transmission Providers in the Western Interconnection who share an interface with the California ISO. SaskPower's new policy has not been consistently reflected in the tariff and business practices available on its website.

²³⁵ The specific entities to which BCTC refers are: Arizona Public Service, Nevada Energy (consisting of Sierra Pacific Power and Nevada Power), and PacifiCorp. There was insufficient information available on BPA.

²³⁶ "Long Term Requests – Requirement for Coordination for Transmission Service Studies With an Adjacent Transmission Provider", undated Report with original posting notice dated 26 August 2008. Found at the "Long Term Study Coordination" link in the "Transmission" sub-folder, in the "Business Practices" folder on www.oatioasis.com/spc/

The tariffs of the three surveyed entities within Western Interconnection that share an interface with the California ISO²³⁷ also indicate that these Transmission Providers make use of the WECC path ratings when determining their Firm TTC.

With respect to entities outside the Western Interconnection, Hydro Quebec takes a similar approach to BCTC, and it appears that Progress Energy does as well. Among the entities outside the Western Interconnection, the Hydro Quebec to NYISO or NE-ISO interfaces appear to be the most similar to the BCTC to AESO interface. For example, the ATC is lower on the pool side of the Hydro Quebec to NE-ISO interface and is affected by a number of pool operating conditions outside of Hydro Quebec's own system. While there are no constraints inside Quebec, the NE-ISO may curtail transactions with Quebec to address constraints inside its pool.

Beyond the SaskPower case, there were three additional entities that expressly consider neighbouring system conditions in determining TTC or long term Firm ATC. The first is Manitoba Hydro, who is a member of the Midwest ISO ("MISO"). The MISO conducts system planning studies on behalf of its members, a fact which differentiates these entities from BCTC and all the other entities surveyed. The second entity is Duke Energy Carolinas, who is not a member but uses MISO to calculate its TTC that is coordinated among members of the Southeastern Electric Reliability Council ("SERC").

The third entity is New Brunswick who shares an interface with NE-ISO. New Brunswick provides an example of a Canadian transmission provider with a stated goal of "harmonizing" TTC with its neighbouring transmission operators, but the process is not yet complete. Their intent is to identify an ATC rating that more accurately reflects the conditions available across the borders. However, once the new rating is established, there would be no attempt to make adjustments to ATC based on shorter term changing conditions in neighbouring jurisdictions.

²³⁷ The specific entities to which BCTC refers are: Arizona Public Service, Nevada Energy (consisting of Sierra Pacific Power and Nevada Power), and PacifiCorp.

6.6.2 Response to Question 4: Resolution of Shortages When Pool's Hourly Import Limit is Less Than Schedules

In response to how a transmission provider resolved shortages when the neighbouring pool's hourly import limit was less than schedules, all providers said that the pooled transmission provider makes the needed curtailments. For example, Hydro Quebec indicated that it has inconsistent ATC on its paths into both the New England and New York power pools, but both pools complete their own curtailments of exports from Quebec. Since Hydro Quebec ATC's are higher than those posted by the pool jurisdictions, the actual schedules received by Hydro Quebec are always less than their ATC.

6.6.3 Response to Question 5: Protocols for Managing Schedules at Seams

Only one transmission provider noted special protocols for managing schedules across seams. SaskPower curtails its own ATC first and Alberta makes further curtailments if necessary. All other transmission providers responded that they had no special protocols. SaskPower was the only provider that curtailed its schedules based on the varying hourly import limit of the neighboring pool jurisdiction.

Like BCTC, SaskPower has both inconsistent estimates of ATC on either side its boundary with Alberta and seams issues caused by the operations of the Alberta pool. In this instance, SaskPower posts a preliminary ATC every hour, and curtails schedules where necessary to meet that ATC. Shortly thereafter, Alberta reviews the posted ATC and has the option to further curtail schedules if the ATC on Alberta's system is less than that posted by SaskPower. SaskPower has advised that, because of inconsistent and unpredictable impacts on its customers, SaskPower introduced a "provisional Firm" service approximately six years ago in response to problems with ATC at the Alberta seam. Provisional service cannot be requested, but rather can be offered by SaskPower in response to a request for Firm power on a line where SaskPower would like to verify existing posted ATC. This service is an interim service only and is terminated when study results are reached.

Table 6-2 below summarizes the results of BCTC's survey.

Table 6-2. Summary of Survey Results

Transmission Provider	Question 1: Is neighbour's system TTC taken into account	Question 2: Is neighbour's ATC taken into account?	Question 3: Is service denied due to neighbour's constraints?	Question 4: How do you resolve shortages when neighbouring pool's hourly import limit is less than schedules?	Question 5: Do you have any special protocols for managing schedules at border across seams?
Arizona Public Service	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
BPA	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
Duke Energy Carolinas (PJM)	Yes, TTC of neighbours is taken into account.	Yes, ATC of neighbours is taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
Hydro Quebec	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No, but ties are DC so they are directional and controllable
Manitoba Hydro	Yes, TTC of neighbours is taken into account if in MISO. Unclear if outside MISO.	Yes, ATC of neighbours is taken into account if in MISO. Unclear if outside MISO	Yes, service is denied based on neighbour's constraints if in MISO. Unclear if outside MISO.	Pool performs curtailments.	No.
Nevada Energy	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
New Brunswick (NBSO)	Yes, it will be as part of current harmonization study.	Yes, it will be as part of current harmonization study	No. Once the current harmonization study is completed, the new ATC is set and service will not be denied based on neighbour's constraints.	Pool performs curtailments.	No.
PacifiCorp	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
Progress Energy Carolina (PEC)	No, it is not taken into account.	No, it is not taken into account.	No, service is not denied based on neighbour's constraints.	Pool performs curtailments.	No.
SaskPower	Yes, TTC of neighbours is taken into account.	Yes, ATC of neighbours is taken into account.	Yes, service is denied based on neighbour's constraints.	Combination. First SP performs curtailments, then pool performs curtailments if necessary.	Yes, SaskPower does the first curtailment down to their ATC, and Alberta does the next if they have a lower ATC

In sum, the utility survey conducted by BCTC confirmed that BCTC's determination of TTC and long-term ATC without regard to neighbouring system constraints is consistent with other similarly situated Transmission Providers in the Western Interconnection. The most common solution to the neighbouring pool's hourly import limit being lower than the utility's TTC was having the neighbouring pool perform necessary curtailments.

The Hydro Quebec to NY or NE-ISO seam is probably the most similar to the BCTC to AESO seam. The ATC is lower on the pool side and is subject to a number of pool operating conditions outside of Hydro Quebec's own system. The main difference is that both pools do their own rationing.

6.7 Orders Sought

6.7.1 Tariff Provision Reflecting Option 3

The Commission, in its decision on the Suspension Application, directed BCTC to include in BCTC's next OATT Application or Rate Design review, whichever came first, a Tariff section which formally establishes, consistent with general OATT principles, and the FERC-890 guidelines, provisions for how BCTC will handle future situations, similar in nature to that addressed in the Suspension Application. BCTC supports the inclusion of Tariff language to address the unique circumstances faced on the BC>AB Path, as opposed to extending the Suspension Order, as a Tariff provision will make the proposed limitation on Firm transmission sales to Alberta more transparent to users of the Transmission System.

Based on BCTC's conclusion that it is appropriate at the present time to limit the sale of Firm transmission service to existing levels, BCTC proposes to amend Attachment C of the Tariff by adding the following sentence at the end of the Attachment:

"Notwithstanding any other provision in this Tariff, the Transmission Provider shall limit sales of Firm Point-to Point Transmission Service on the BC>AB path to 785 MW."

If adopted, this proposed Tariff provision would preclude BCTC from selling further Firm transmission service above 785 MW on the BC>AB Path.

6.7.2 Interim Order

BCTC is also respectfully requesting, pursuant to section 89 of the UCA and section 15 of the ATA, an interim order that BCTC, in processing the rollover requests on BC Hydro Service Agreements dated 30 November 2007²³⁸ and 17 October 2007²³⁹, and also queued requests for Firm ATC coming available on the BC>AB Path on 1 January 2009, indicate on the new Service Agreements that:

"This Service Agreement is subject to a further order of the British Columbia Utilities Commission in the matter of the 'British Columbia Transmission Corporation Application to Amend the Open Access Transmission Tariff' filed on 21 November 2008."

The rationale for the interim order is explained below.

The Suspension Order had the effect of limiting the Firm capacity available for sale on the BC>AB Path at 785 MW (850 MW less TRM of 65 MW). All of that capacity has been sold to existing customers. There are two LTF PTP transmission Service Agreements held by BC Hydro (for 120 MW²⁴⁰ and 50 MW²⁴¹) that expire on 31 December 2008, with rollover rights.²⁴² A third BC Hydro Service Agreement expiring 31 December 2008, for 180 MW, has no rollover rights.²⁴³

Applying BCTC's Tariff and Business Practices in the normal course, BCTC will roll over the 120 MW and 50 MW Service Agreements as per BC Hydro's requests, and release 180 MW Firm ATC for sale, as of 1 January 2009. In other words, BCTC will continue to offer for sale Firm transmission up to the 785 MW specified in the Suspension Order.

However, BCTC recognizes that, while it is proposing to limit Firm sales on the BC>AB Path to 785 MW, some of its customers may want to argue that a lower limit should apply. Should the Commission conclude in its final order in this Application

²³⁸ OASIS Transmission Request No. 70999095 for 50 MW

²³⁹ BCHydro Service Agreement dated 17 October 2007. OASIS Transmission Request No. 71630197 for 120 MW

²⁴⁰ BCHydro Service Agreement dated 17 October 2007. OASIS Transmission Request No. 71630197

²⁴¹ BC Hydro Service Agreement dated 30 November 2007. OASIS Transmission Request No. 70999095

²⁴² BCTC OATT Business Practice, Section 16: Rollover Rights for Long Term Service, available on BCTC's web site at http://www.bctc.com/transmission_scheduling/business_practices/

²⁴³ BC Hydro Service Agreement dated 28 December 2007. OASIS Transmission Request No. 71088297

that the limit on Firm transmission sales on the BC>AB Path should be less than 785 MW, this would have potential ramifications for the rolled-over 120 MW and 50 MW Service Agreements, as well as Service Agreement(s) in respect of Firm capacity released on 1 January 2009.

By way of explanation, under section 2.2 of the OATT, when a Service Agreement is rolled over, and there is insufficient ATC to serve all competing requests in the queue, the customer rolling over the Service Agreement must match the duration of longer competing requests in the queue. If the 180 MW had not been available as of the date the 50 MW and 120 MW contracts rolled over (i.e. 1 January 2009), there would have been insufficient ATC to accommodate the rollovers and competing requests in the queue. The OATT would then have required that the BC Hydro 50 MW and 120 MW Service Agreements with rollover rights be made subject to competition from longer competing requests in the queue. BC Hydro would have had to match the duration of the competing requests.²⁴⁴

NorthPoint is the first customer in the queue, with two requests for 25 MW of LTF PTP transmission service. Were the 180 MW no longer available as of 1 January 2009, its requests would have been considered competing requests to BC Hydro's 50 MW and 120 MW rollovers by virtue of being longer in duration. Pursuant to section 2.2 of the OATT, BC Hydro would have had to match the duration of NorthPoint's requests in order to exercise the roll over right on the 50 MW and 120 MW Service Agreements.

The interim order sought will permit BCTC to proceed in the ordinary course with processing the 50 MW and 120 MW rollover requests, allow the Commission to consider the above issues in the context of the Application, and require BCTC to highlight on the rolled-over Service Agreements and any new Service Agreements in respect of the BC>AB Path that the Commission may make further orders with respect to the Service Agreements as part of its final disposition of this Application. BCTC recognizes that the Commission has the power under the Act to change Service Agreements even without granting the interim relief, but BCTC believes that

²⁴⁴ BCTC OATT Business Practice, Section 16

1 the order requested will assist in making the potential for that outcome as transparent
2 as possible.

3 BCTC respectfully requests the interim order by 11 December 2008 to allow BCTC
4 sufficient time to process the Service Agreements prior to 1 January 2009.

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Attachment 6-1. Queue Requests on US – AESO and BC – AESO

OASIS	Customer	Path	Status	Capacity	Time Stamp	Start Time	Stop Time	Term (years)	Comments
70974668	Cargill	BPAT - AESO	PARTIAL	25.00	28-Aug-06	01-Jan-07	01-Jan-11	4	Partial to 1-Aug-09. Study suspended per BCUC ruling 8-July-08 (note 1)
71086993	NorthPoint	BPAT - AESO	STUDY	25.00	09-Nov-06	01-Jan-09	01-Jan-11	2	Study suspended per BCUC ruling 8-July-08
71086996	NorthPoint	BPAT - AESO	STUDY	25.00	09-Nov-06	01-Jan-09	01-Jan-11	2	Study suspended per BCUC ruling 8-July-08
71087026	BC Hydro	BPAT - AESO	STUDY	200.00	09-Nov-06	01-Jan-09	01-Jan-19	10	Study suspended per BCUC ruling 8-July-08
71087057	BC Hydro	BCTC - AESO	STUDY	200.00	09-Nov-06	01-Jan-11	01-Jan-21	10	Study suspended per BCUC ruling 8-July-08
71088297	BC Hydro	BCTC - AESO	PARTIAL	200.00	10-Nov-06	01-Jan-08	01-Jan-11	3	Partial to 1-Jan-09, 180 MW. Study suspended 8-July-08 (note 2)
71133341	Cargill	BPAT - AESO	STUDY	50.00	07-Dec-06	01-Jan-09	01-Jan-10	1	Study suspended per BCUC ruling 8-July-08
71133343	Cargill	BPAT - AESO	STUDY	50.00	07-Dec-06	01-Jan-09	01-Jan-10	1	Study suspended per BCUC ruling 8-July-08
71133348	Cargill	BPAT - AESO	STUDY	50.00	07-Dec-06	01-Jan-10	01-Jan-11	1	Study suspended per BCUC ruling 8-July-08
71133351	Cargill	BPAT - AESO	STUDY	50.00	07-Dec-06	01-Jan-10	01-Jan-11	1	Study suspended per BCUC ruling 8-July-08
71145601	TCE	BPAT - AESO	RECEIVED	100.00	15-Dec-06	01-Mar-12	01-Mar-13	1	N/A
71145604	TCE	BPAT - AESO	RECEIVED	100.00	15-Dec-06	01-Mar-12	01-Mar-14	2	N/A
71145605	TCE	BPAT - AESO	RECEIVED	100.00	15-Dec-06	01-Mar-12	01-Mar-17	5	N/A
71145606	TCE	BPAT - AESO	RECEIVED	100.00	15-Dec-06	01-Mar-12	01-Mar-15	3	N/A
71150644	Cargill	BPAT - AESO	STUDY	50.00	19-Dec-06	01-Jan-11	01-Jan-12	1	Study suspended per BCUC ruling 8-July-08
71150650	Cargill	BPAT - AESO	STUDY	50.00	19-Dec-06	01-Oct-11	01-Oct-17	6	Study suspended per BCUC ruling 8-July-08

6 – Firm Transmission Sales to Alberta

OASIS	Customer	Path	Status	Capacity	Time Stamp	Start Time	Stop Time	Term (years)	Comments
71505520	NorthPoint	BPAT - AESO	STUDY	25.00	18-Jul-07	01-Jan-09	01-Jan-16	7	Study suspended per BCUC ruling 8-July-08
71505525	NorthPoint	BPAT - AESO	STUDY	25.00	18-Jul-07	01-Jan-09	01-Jan-16	7	Study suspended per BCUC ruling 8-July-08
71512624	Candela	BPAT - AESO	STUDY	25.00	23-Jul-07	01-Jan-08	01-Jan-10	2	Study suspended per BCUC ruling 8-July-08
71657256	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jul-08	01-Jul-13	5	Study suspended per BCUC ruling 8-July-08
71657257	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jul-08	01-Jul-13	5	Study suspended per BCUC ruling 8-July-08
71657258	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jul-08	01-Jul-13	5	Study suspended per BCUC ruling 8-July-08
71657259	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-09	01-Jan-14	5	Study suspended per BCUC ruling 8-July-08
71657260	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-09	01-Jan-14	5	Study suspended per BCUC ruling 8-July-08
71657261	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-09	01-Jan-14	5	Study suspended per BCUC ruling 8-July-08
71657262	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-10	01-Jan-15	5	Study suspended per BCUC ruling 8-July-08
71657263	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-10	01-Jan-15	5	Study suspended per BCUC ruling 8-July-08
71657264	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-10	01-Jan-15	5	Study suspended per BCUC ruling 8-July-08
71657265	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-11	01-Jan-16	5	Study suspended per BCUC ruling 8-July-08
71657266	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-11	01-Jan-16	5	Study suspended per BCUC ruling 8-July-08
71657267	TransAlta	BPAT - AESO	STUDY	100.00	12-Oct-07	01-Jan-11	01-Jan-16	5	Study suspended per BCUC ruling 8-July-08
			Total:	2650.00					

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2 Note 1: Same as request on line 10 of Table 6-1.

3 Note 2: Same as request on line 6 of Table 6-1.

Appendix A

Red-Lined OATT

BRITISH COLUMBIA TRANSMISSION CORPORATION (“BCTC”)

REDLINE OPEN ACCESS TRANSMISSION TARIFF (“OATT”) FOR CONSULTATION

This document shows BCTC’s proposed amendments to its OATT. Attachments to the OATT for which no significant changes¹ are proposed are not included in this document.

To assist readers with understanding the proposed amendments reflected in this document, the following three tables have been included for reference. Table 1 explains the types of changes as marked by the various colours and styles within the document. Table 2 indicates the proposed and existing letter assigned to the Attachments of the OATT. Table 3 is a concordance of the proposed amendments to the OATT, which indicates whether the new tariff language is

- (1) BCTC changes unrelated to Federal Energy Regulatory Commission (“FERC”) Order No. 890;
- (2) Order No. 890 changes adopted by BCTC;
- (3) Order No. 890 changes adopted by BCTC with BCTC modifications or where Order No. 890 did not specify specific tariff language; or
- (4) Order No.890 changes not adopted or deferred by BCTC.

¹ Insignificant changes are, e.g., changes due to the relettering of attachments.

TABLE 1: Types of Changes to Current BCTC OATT

<u>Text imported verbatim from FERC Order 890 amended Pro Forma OATT</u>
<u>Text deleted verbatim per FERC Order 890</u>
<u>Text appearing in existing BCTC OATT that has been moved from this location</u>
<u>Text appearing in existing BCTC OATT that has been moved to this location</u>
<u>Order No. 890 additions or deletions not adopted</u>
<u>BCTC initiated additions or deletions. These changes are either (i) a BCTC addition or deletion unrelated to Order 890, as identified in the first column of the Concordance Table 3, or (ii) they are associated with an Order 890 reform, but where FERC did not specify tariff language. These latter types of changes are referenced, as applicable, in the third column of Concordance Table 3.</u>

TABLE 2: Proposed Reorganization of OATT Attachments

Proposed Attachments		Existing Attachments	Comments
	Terms & Conditions		
	Rate Schedules	L	
A	Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service	A	
A-1	Form of Service Agreement for the resale and Reassignment or transfer of Short-Term Firm PTP Transmission Service		
B	Form Of Service Agreement for Long-Term Firm Point-to-Point Transmission Service	B	
B-1	Form of Service Agreement for the resale and Reassignment or transfer of Long-Term Firm PTP Transmission Service		
C	Methodology to access ATC	C	
D	Methodology for Completing a SIS	D	
E	Index of PTP Transmission Service Customers	E	
F	Service Agreement For NITS	F	
G	Network operating Agreement	G	
H	Annual TRR For NITS	H	
I	Index of NITS Customers	I	
J	Procedures for Addressing Parallel Flows		
K	Transmission Planning Process		
L	Credit Worthiness Provision		
M-1	SGIP	M	
M-2	CEAP	P	
N	Deferral Credit	N	
O	Recovery of New Facilities Costs	K	
P	CRP & Release of capacity not required by NITS	J	
Q-1	Dynamic Scheduling Service	O	
Q-2	Network Economy Service	Q	
Q-3	Spinning Reserve and Contingency Reserve Service	R	
Q-4	Mixed Class Wheel Through Service	S	

*Note: a number of housekeeping amendments are required to Terms and Conditions to address cross references to Attachments and Schedules.

TABLE 3: Concordance of Amendments²

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
1.1	Affiliate		√		
1.15	Good Utility Practice			√	
1.26	Network Resource			√	
1.29	Non-firm Sale		√		
1.39	Pre-Confirmed Application		√		
1.46	System Condition				√
1.55	Working Day	√			
1.56	\$ or Dollar	√			
2.2 and 2.2.1	Reservation Priority and Transition			√	
3.0	Ancillary Services		√		√
4.0	Business Practices and OASIS		√		
5.3	Export Permits or Licence	√			
6.0	Reciprocity			√	
11.0	Creditworthiness			√	
12.2.1	Consolidation of Arbitrations related to the Allocation of Transfer Capability	√			
12.3	External Arbitration Procedures	√			

² This concordance does not include changes to the letters assigned to Attachments or to the change in terminology from “transmission capacity” to “transfer capability”.

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
12.5(c)	Arbitration Costs	√			
13.2(a)	LT FIRM PTP Reservation Priority	√			
13.2(b)	ST Firm PTP Reservation Priority	√	√		
13.2(c)	ST Firm PTP Reservation Priority		√		
13.2(e)	Reservation Priority within Simultaneous Window			√	
13.4	Service Agreements			√	
13.4	Filing of Service Agreements	√			
13.5	Redispatch costs			√	
13.6	Curtailement of Conditional Service			√	
13.7(c)	Classification of Firm Service		√		
14.2	Non-firm Reservation Priority		√		
14.2	Non-Firm Reservation Priority within Simultaneous Window			√	
14.4	Filing of Service Agreements	√			
14.7	Curtailement		√		
15.4(a)	Obligation to Provide		√		

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
	Service				
15.4(b)	Redispatch			√	
15.4(c)	Conditional Curtailment			√	
16.1(e)	Customer responsibilities		√		
17.1	Application	√			
17.2(a)	Contact Information	√			
17.2(i)	Pre-confirmation statement for Firm PTP Completed Application		√		
17.2(j)	Pre-confirmation statement for Firm PTP Completed Application		√		
17.3	Deposit	√			
17.4	Notice of Deficient Application	√			
17.6	Execution of Service Agreement	√			
17.7	Extensions for commencement of service		√		
18.2(h)	Pre-confirmation for Non-firm Completed Application		√		
19.1	Notice of need for SIS: Redispatch or Conditional Service		√		
19.3	SIS study procedures			√	
19.4	Facilities Study Procedures	√			

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
19.7	Shaped Service	√			
19.9	Penalties for failure to meet study deadlines			√	
23.1	Assignment or Transfer of Service		√		
23.2	Limitations on Assignment or Transfer of Service		√		
23.3	Information on Assignment or Transfer of Service		√		
27.0	Compensation for New Facilities and Redispatch costs		√		
28.2	TP Responsibility		√		
28.4	Secondary Service		√		
28.6	Restrictions on Use of Service			√	
29.2(a)	Contact Information	√			
29.2(e)	Application Procedures		√		
29.2(h)	Application Procedures		√		
29.2(i)	Application Procedures		√		
29.2 (final paragraph)	Application Procedures	√			
29.5	Filing of Service Agreements	√			
30.2	Designation of New Network Resource		√		
30.3	Termination of Network				√ (deferred)

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
	Resource				
30.4	Operation of Network Resources		√		
30.9	Network Customer owned T facilities			√	
31.6	Load and Resource Updates		√		
32.1	Need for System Impact Study	√			
32.3	System Impact Study Procedures			√	
32.4	Facilities Study Procedures	√		√	
32.5	Penalties for failure to meet study deadline		√		
35.2	Network Operating Agreement				√
Attachment A	Umbrella Agreement for Short-Term Service	√			
Attachment A-1	Service Agreement for resale/reassignment of ST Firm PTP service		√		
Attachment B	Service Agreement for LT Firm PTP Service	√			
Attachment B-1	Service Agreement for resale/reassignment of LT FIRM PTP service		√		
Attachment C	ATC methodology	√			Deferred
Attachment D	SIS Methodology	√			
Attachment K	Planning Process		√		

OATT Section	Title or Subject	BCTC Change	FERC Order 890 Change adopted by BCTC	FERC Order 890 change with modifications or where there is no pro forma language	FERC Order 890 Change Not Adopted by BCTC (or Deferred, where indicated)
Attachment L	Creditworthiness Procedures		√		
Attachment M-1	SGIP	√			
Attachment M-2	CEAP Tariff	√			
Attachment O	Recovery of New Facilities Costs	√			
Attachment Q-1	Dynamic Scheduling	√			
Schedule 01	Charges for LT and ST Firm PTP	√	√		
Schedule 02	Charges Non-Firm PTP	√			
Schedule 04	Reactive Supply and Voltage Control		√		
Schedule 05	Regulation and Frequency Response		√		
Schedule 06	Energy Imbalance Service			√	
Schedule 07	Operating - Spinning Reserve		√		
Schedule 08	Operating - Supplemental Reserve		√		
FERC Schedule 9	Generator Imbalance Service				√

BRITISH COLUMBIA TRANSMISSION CORPORATION**Open Access Transmission Tariff (OATT)****I. COMMON SERVICE PROVISIONS****1. Definitions**

1.1 ~~Affiliate:~~ With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.2 ~~1.1~~ **Ancillary Services:** Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.3 ~~1.2~~ **Annual Transmission Costs:** The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H until amended by the Transmission Provider or modified by the Commission.

1.4 ~~1.3~~ **Application:** A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.4.1 ~~1.3.1~~ **Business Day:** Monday through Friday, excluding Statutory Holidays.

1.4.2 ~~1.3.2~~ **Calendar Day:** Any day including Saturday, Sunday or a Statutory Holiday.

1.5 ~~1.4~~ **Commission:** The British Columbia Utilities Commission.

1.6 ~~1.5~~ **Completed Application:** An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

1.7 ~~1.6~~ **Control Area:** An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to:

- (a) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- (b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- (c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and
- (d) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.8 ~~1.7~~ **Curtailment:** A reduction in firm or non-firm transmission service in response to a ~~transmission capacity~~[transfer capability](#) shortage as a result of system reliability conditions.

1.9 ~~1.8~~ **Delivering Party:** The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.10 ~~1.9~~ Designated Agent: Any entity that performs actions or functions on behalf of the Transmission Provider, an Eligible Customer, or the Transmission Customer required under the Tariff.

1.11 ~~1.10~~ Direct Assignment Facilities: Facilities or portions of facilities that are constructed by the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and may require Commission approval.

1.11.1 ~~1.10.1~~ Direct Damages: Direct damage or loss excluding loss of profit, loss of revenue, loss of production, loss of earnings, loss of contract or any other incidental, consequential, punitive, special, exemplary, or indirect loss or damage whatsoever.

1.12 ~~1.11~~ Eligible Customer: (i) Any electric utility (including the Transmission Provider and any power marketer or U.S. Federal power marketing agency), or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in Canada, the United States or Mexico; however, such entity is not eligible for transmission service that would be prohibited by Section 212(h)(2) of the U.S. Federal Power Act; and (ii) Any retail customer taking unbundled transmission service for all or part of its energy purchase pursuant to a provincial requirement that the Transmission Provider offer the transmission service, or pursuant to a voluntary offer of such service by the Transmission Provider, is an Eligible Customer under the Tariff.

1.12.1 ~~1.11.1~~ Energy Resource Interconnection Service: An Interconnection Service that allows the Interconnection Customer to connect its Generating

Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or non-firm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey Transmission Service.

1.13 ~~1.12~~–Facilities Study: An engineering study conducted by the Transmission Provider to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service.

1.14 ~~1.13~~–Firm Point-To-Point Transmission Service: Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.15 ~~1.14~~–Good Utility Practice: Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including any reliability standards adopted by the Commission pursuant to section 125.2 of the British Columbia Utilities Commission Act, ~~including those practices required by Federal Power Act section 215(a)(4).~~

1.16 ~~1.15~~ Interruption: A reduction in non-firm transmission service due to economic reasons pursuant to Section 14.7.

1.17 ~~1.16~~ Load Ratio Share: Ratio of a Network Customer's monthly Network Load to the Transmission Provider's monthly Transmission System load computed in accordance with Sections 34.2 and 34.3 of the Network Integration Transmission Service under Part III of the Tariff and calculated on a monthly basis.

1.18 ~~1.17~~ Load Shedding: The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part III of the Tariff.

1.19 ~~1.18~~ Long-Term Firm Point-To-Point Transmission Service: Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one (1) year or more.

1.20 ~~1.19~~ Reserved:

1.21 ~~1.20~~ Network Customer: An entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff.

1.22 ~~1.21~~ Network Integration Transmission Service: The transmission service provided under Part III of the Tariff.

1.23 ~~1.22~~ Network Load: The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer's Network Load shall include all load served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network

Load. If a Network Customer designates only part of the load at a discrete Point of Delivery, the Network Customer and the Transmission Provider must agree on a metering procedure to separate the part of load that is served by the Network Customer's NITS and the part of load that is served by a separate Point-To-Point Transmission Service. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

1.24 ~~1.23~~ **Network Operating Agreement:** An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

1.25 ~~1.24~~ **Network Operating Committee:** A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

1.26 ~~1.25~~ **Network Resource:** Any designated generating resource owned, purchased or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a Commission-approved reserve sharing program.

1.26.1 ~~1.25.1~~ Network Resource Interconnection Service: An Interconnection Service that allows the Interconnection Customer to integrate its Generating Facility with the Transmission Provider's Transmission System in the same manner as all other Network Resources. Network Resource Interconnection Services in and of itself does not convey Transmission Service.

1.27 ~~1.26~~ Network Upgrades: Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System.

1.28 ~~1.27~~ Non-Firm Point-To-Point Transmission Service: Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one (1) hour to less than one (1) year.

1.29 ~~1.28~~ Non-Firm Sale: An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

1.30 ~~1.29~~ Open Access Same-Time Information System ("OASIS"): An information system operated by or for the Transmission Provider that satisfies North American industry standards (including those prescribed for U.S. electric utilities by the Federal Energy Regulatory Commission ("FERC")) and all Commission requirements (including standards of conduct).

1.31 ~~1.29~~ **Part I:** Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

1.32 ~~1.30~~ **Part II:** Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.33 ~~1.31~~ **Part III:** Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.34 ~~1.32~~ **Parties:** The Transmission Provider and the Transmission Customer receiving service under the Tariff.

1.35 ~~1.33~~ **Point(s) of Delivery:** Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.36 ~~1.34~~ **Point(s) of Receipt:** Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.37 ~~1.35~~ **Point-To-Point Transmission Service:** The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

- 1.38** ~~1.36~~ **Power Purchaser:** The entity that is purchasing the capacity and energy to be transmitted under the Tariff.
- 1.39** **Pre-Confirmed Application:** An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.
- 1.40** ~~1.37~~ **Receiving Party:** The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.
- 1.41** ~~1.38~~ **Regional Transmission Group (“RTG”) :** A voluntary organization of transmission owners, transmission users and other entities formed to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.
- 1.42** ~~1.39~~ **Reserved Capacity:** The maximum amount of capacity of energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider’s Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.
- 1.43** ~~1.40~~ **Service Agreement:** The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for Long-Term Firm Point-To-Point or Network Integration Transmission Service under the Tariff, and any requests for Short-Term Firm or Non-Firm Point-To-Point Transmission Service made pursuant to an Umbrella Agreement and confirmed over the Transmission Provider’s OASIS.
- 1.44** ~~1.41~~ **Service Commencement Date:** The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service

Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 15.3 or Section 29.1 under the Tariff.

1.45 ~~**1.42**~~ **Short-Term Firm Point-To-Point Transmission Service:** Firm Point-To-Point Transmission Service under Part II of the Tariff with a minimum term of one (1) hour and a maximum term of less than one (1) year.

1.46 ~~**System Condition:** A specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.~~ **Reserved.**

1.47 ~~**1.43**~~ **System Impact Study:** An assessment by the Transmission Provider of: (i) the adequacy of the Transmission System to accommodate a request for either Firm Point-To-Point Transmission Service or Network Integration Transmission Service; and (ii) whether any additional costs may be incurred in order to provide transmission service.

1.48 ~~**1.44**~~ **Third-Party Sale:** Any sale for resale to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service.

1.49 ~~**1.45**~~ **Transmission Customer:** Any Eligible Customer (or its Designated Agent) that: (i) executes a Service Agreement; (ii) receives service under an Umbrella Agreement; or (iii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This

term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II and Part III of this Tariff.

1.49.1 ~~**1.45.1**~~ **Transmission Owner:** The British Columbia Hydro and Power Authority.

1.50 ~~**1.46**~~ **Transmission Provider:** The British Columbia Transmission Corporation (BCTC) or its Designated Agent.

1.51 ~~**1.47**~~ **Transmission Provider's Monthly Transmission System Peak:** The maximum firm usage expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis, of the Transmission Provider's Transmission System in a calendar month.

1.52 ~~**1.48**~~ **Transmission Service:** Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis and Network Integration Transmission Service provided under Part III of the Tariff.

1.53 ~~**1.49**~~ **Transmission System:** The facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under Part II and Part III of the Tariff.

1.54 ~~**1.50**~~ **Umbrella Agreement:** An agreement between the Transmission Provider and an Eligible Customer which provides all the information necessary to enable such Eligible Customer to receive Short-Term Firm or Non-Firm Point-To-Point Transmission Service under this Tariff without the necessity of first executing a Service Agreement. A form of Umbrella Agreement is attached as Attachment A.

1.55 ~~**1.51**~~ **Working Day:** Any day in the week excluding weekends and ~~statutory~~ holidays ~~as posted on OASIS~~ as specified in the Transmission Provider's business practices.

1.56 **\$ or Dollar:** All dollar amounts in the Tariff are in Canadian dollars unless otherwise specified.

2. Renewal Procedures

2.1 Reserved:

2.2 Reservation Priority For Existing Firm Service Customers: Unless stated otherwise in the initial Service Agreement in accordance with Section 5 of Attachment B, ~~E~~existing firm service customers with a contract term of ~~one year~~five years or more, have the right to continue to take transmission service from the Transmission Provider when the contract expires, rolls over or is renewed. If at the end of the contract term, the Transmission Provider's Transmission System cannot accommodate all of the requests for transmission service, the existing firm service customer must agree to accept a contract term at least equal to a competing request by any new Eligible Customer and to pay the current just and reasonable rate, as approved by the Commission, for such service~~;~~ provided that, the firm service customer shall have a right of first refusal at the end of such service only if the new contract is for five years or more. The existing firm service customer must provide notice to the Transmission Provider whether it will exercise its right of first refusal no less than one year prior to the expiration date of its transmission service agreement. Subject to Attachment ~~J~~P this transmission reservation priority for existing firm service customers is an ongoing right that may be exercised at the end of all firm contract terms of ~~one year~~five years or longer.

~~1.1.1~~2.2.1 **Transition:** Service agreements subject to a right of first refusal entered into prior to [the date new rate schedules of the Transmission Provider's ~~filing~~ adopting the reformed rollover language herein are made effective by the Commission~~in compliance with Order No. 890~~] or associated with a transmission service request received prior to [the date new rate schedules of the Transmission Provider's ~~filing~~ adopting the reformed rollover language herein are made effective by the Commission~~in compliance with Order No. 890~~], unless terminated, will become subject to the five year/one year requirement on the first rollover date after [the date new rate schedules of the Transmission Provider's ~~filing~~ adopting the reformed rollover language herein are made effective by the Commission~~in compliance with Order No. 890~~]; provided that, the one-year notice requirement shall apply to such service agreements with five years or more left in their terms as of the [the date new rate schedules of the Transmission Provider's ~~filing~~ adopting the reformed rollover language herein are made effective by the Commission~~in compliance with Order No. 890~~].

3. Ancillary Services

Ancillary Services are needed with transmission service to maintain reliability within and among the Control Areas affected by the transmission service. The Transmission Provider is required to provide, and the Transmission Customer is required to purchase, the following Ancillary Services: (i) Scheduling, System Control and Dispatch; and (ii) Reactive Supply and Voltage Control from Generation or other Sources.

The Transmission Provider is required to offer to provide the following Ancillary Services only to the Transmission Customer serving load within the Transmission Provider's Control Area: (i) Regulation and Frequency Response; (ii) Energy

Imbalance; (iii) Operating Reserve - Spinning; and (iv) Operating Reserve – Supplemental, ~~and (v) Generator Imbalance~~. The Transmission Customer serving load within the Transmission Provider's Control Area is required to acquire these Ancillary Services, whether from the Transmission Provider, from a third party, or by self-supply.

~~The Transmission Provider is required to provide (or offer to arrange with the local Control Area Operator as discussed below), to the extent it is physically feasible to do so from its resources or from resources available to it, Generator Imbalance Service when Transmission Service is used to deliver energy from a generator located within its Control Area. The Transmission Customer using Transmission Service to deliver energy from a generator located within the Transmission Provider's Control Area is required to acquire Generator Imbalance Service, whether from the Transmission Provider, from a third party, or by self-supply.~~

The Transmission Customer may not decline the Transmission Provider's offer of Ancillary Services unless it demonstrates that it has acquired the Ancillary Services from another source. The Transmission Customer must inform the Transmission Provider which Ancillary Services it will purchase from the Transmission Provider prior to the commencement of service requested. A Transmission Customer that exceeds its firm reserved capacity at any Point of Receipt or Point of Delivery or an Eligible Customer that uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved is required to pay for all of the Ancillary Services identified in this section that were provided by the Transmission Provider associated with the unreserved service. The Transmission Customer or Eligible Customer will pay for Ancillary Services based on the amount of transmission service it used but did not reserve.

The Transmission Provider shall specify the rate treatment and all related terms and conditions in the event of an unauthorized use of Ancillary Services by the

Transmission Customer in the applicable Transmission Provider Rate Schedule 103 through Rate Schedule 109.

The specific Ancillary Services, prices and/or compensation methods are described on the Schedules that are attached to and made a part of the Tariff. Three principal requirements apply to discounts for Ancillary Services provided by the Transmission Provider in conjunction with its provision of transmission service as follows: (i) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS; (ii) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an ~~affiliate~~[Affiliate](#)'s use) must occur solely by posting on the OASIS; and (iii) once a discount is negotiated, details must be immediately posted on the OASIS. A discount agreed upon for an Ancillary Service must be offered for the same period to all Eligible Customers on the Transmission Provider's system. Sections 3.1 through 3.6 below list the six ~~seven~~ Ancillary Services.

- 3.1 Scheduling, System Control and Dispatch Service:** The rates and/or methodology are described in Transmission Provider Rate Schedule 103 and are also set out in Schedule 03 ~~of Attachment L~~. The Transmission Provider will provide dynamic scheduling in accordance with Attachment ~~EQ-1~~.
- 3.2 Reactive Supply and Voltage Control from Generation or Other Sources Service:** The rates and/or methodology are described in Transmission Provider Rate Schedule 104 and are also set out in Schedule 04 ~~of Attachment L~~.
- 3.3 Regulation and Frequency Response Service:** Where applicable the rates and/or methodology are described in Transmission Provider

Rate Schedule 105 and are also set out in Schedule 05 ~~of Attachment L~~.

3.4 Energy Imbalance Service: Where applicable the rates and/or methodology are described in Transmission Provider Rate Schedule 106 and are also set out in Schedule 06 ~~of Attachment L~~.

3.5 Operating Reserve - Spinning Reserve Service: Where applicable the rates and/or methodology are described in Transmission Provider Rate Schedule 107 and are also set out in Schedule 07 ~~of Attachment L~~.

3.6 Operating Reserve - Supplemental Reserve Service: Where applicable the rates and/or methodology are described in Transmission Provider Rate Schedule 108 and are also set out in Schedule 08 ~~of Attachment L~~.

~~**3.7 Generator Imbalance Service:** Where applicable the rates and / or methodology are described in Schedule 9.~~

4. Open Access Same-Time Information System (“OASIS”)

The Transmission Provider will follow North American industry standard terms and conditions (including those prescribed for U.S. electric utilities by the FERC) and Commission requirements (including standards of conduct) in implementing, operating or utilizing the OASIS. In the event available [transmission transfer](#) capability as posted on the OASIS is insufficient to accommodate a request for firm transmission service, additional studies may be required as provided by this Tariff pursuant to Sections 19 and 32.³

³ [N.B.: FERC Order No. 890 makes changes to this section that are not reflected here as they are inapplicable.]

The Transmission Provider shall post on OASIS and its public website an electronic link to all rules, standards and practices that (i) relate to the terms and conditions of transmission service, (ii) are not subject to a North American Energy Standards Board (NAESB) copyright restriction, and (iii) are not otherwise included in this Tariff. The Transmission Provider shall post on OASIS and on its public website an electronic link to the NAESB website where any rules, standards and practices that are protected by copyright may be obtained. The Transmission Provider shall also post on OASIS and its public website an electronic link to a statement of the process by which the Transmission Provider shall add, delete or otherwise modify the rules, standards and practices that are not included in this tariff. Such process shall set forth the means by which the Transmission Provider shall provide reasonable advance notice to Transmission Customers and Eligible Customers of any such additions, deletions or modifications, the associated effective date, and any additional implementation procedures that the Transmission Provider deems appropriate.

5. Jurisdiction

5.1 Applicable Law: This Tariff shall be governed by and construed in accordance with the laws of the Province of British Columbia.

5.2 Modification of the Tariff: The rates, terms and conditions of this Tariff are subject to decisions, orders, rules and regulations of the Commission and may be amended from time to time.

5.3 Export Permits or Licence: The Transmission Provider may refuse to provide Transmission Service to facilitate the export of electricity from Canada if BCTC has not been supplied with a copy of the exporter's permit or licence issued by the National Energy Board.

6. Reciprocity

A Transmission Customer receiving transmission service under this Tariff agrees to provide comparable transmission service that it is capable of providing to the Transmission Owner on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate ~~affiliates~~Affiliates. A Transmission Customer that is a member of, or takes transmission service from, a power pool~~—or~~, Regional Transmission Group, Regional Transmission Organization (RTO), Independent System Operator (ISO) or other transmission organization ~~approved by the Commission for the operation of transmission facilities~~ also agrees to provide comparable transmission service to the transmission-owning members of such power pool and Regional Transmission Group, RTO, ISO or other transmission organization on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate ~~affiliates~~Affiliates.

This reciprocity requirement applies not only to the Transmission Customer that obtains transmission service under the Tariff, but also to all parties to a transaction that involves the use of transmission service under the Tariff, including the power seller, buyer and any intermediary, such as a power marketer. This reciprocity requirement also applies to any Eligible Customer that owns, controls or operates transmission facilities that uses an intermediary, such as a power marketer, to request transmission service under the Tariff. If the Transmission Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the requirements of this provision.

The requirements of this Section may be waived by the Transmission Provider for good cause shown.

7. Billing and Payment

7.1 Billing Procedure: Within a reasonable time after the first day of each month, the Transmission Provider shall submit an invoice to the Transmission Customer for the charges for all services furnished under the Tariff during the preceding month. The invoice shall be paid by the Transmission Customer within twenty (20) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the Transmission Provider, or by wire transfer to a bank named by the Transmission Provider.

7.2 Interest on Unpaid Balances: Interest on any unpaid amounts (including amounts placed in escrow) shall be calculated based on the average prime rate of the Transmission Provider's lead bank plus two (2) percent for the applicable period. Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment. When payments are made by mail, bills shall be considered as having been paid on the date of receipt by the Transmission Provider.

7.3 Customer Default: In the event the Transmission Customer fails, for any reason other than a billing dispute as described below, to make payment to the Transmission Provider on or before the due date as described in Section 7.1, and such failure of payment is not corrected within thirty (30) Calendar Days after the Transmission Provider notifies the Transmission Customer to cure such failure, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, the Transmission Provider may suspend service to the customer in accordance with [Section 11.5 Attachment L](#). In the event of a billing dispute between the Transmission Provider

and the Transmission Customer, the Transmission Provider will continue to provide service under the Service Agreement or Umbrella Agreement as long as the Transmission Customer (i) continues to make all payments not in dispute, and (ii) pays into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Transmission Customer fails to meet these two requirements for continuation of service, then the Transmission Provider may provide notice to the Transmission Customer of its intention to suspend service in sixty (60) Calendar Days.

8. Reserved

8.1 Reserved:

8.2 Reserved:

9. Regulatory Filings

Nothing contained in the Tariff or any Service Agreement shall be construed as affecting in any way the right of the Transmission Provider to unilaterally make application to the Commission for a change in rates, terms and conditions, charges, classification of service, Service Agreement, rule or regulation pursuant to the British Columbia Utilities Commission Act and the Commission's decisions, orders, rules and regulations promulgated thereunder.

Nothing contained in the Tariff or any Service Agreement shall be construed as affecting in any way the ability of any Party receiving service under the Tariff to exercise its rights under the British Columbia Utilities Commission Act and pursuant to the Commission's decisions, orders, rules and regulations promulgated thereunder.

10. Force Majeure, Indemnification, and Limitation of Liability

10.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any Curtailment, order, regulation or restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither the Transmission Provider nor the Transmission Customer will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff.

10.2 Indemnification: The Transmission Customer shall at all times indemnify, defend, and save the Transmission Provider and Transmission Owner harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, legal fees, and all other obligations by or to third parties, arising out of or resulting from the Transmission Provider's performance of its obligations under this Tariff on behalf of the Transmission Customer, except in cases of gross negligence or intentional wrongdoing by the Transmission Provider or Transmission Owner. If the Transmission Provider engages in negligence or intentional wrongdoing, but the Transmission Owner does not, that will not affect the indemnification of the Transmission Owner(s) under this Section 10.2 and vice-versa.

10.3 Limitation of Liability:

- (a) The Transmission Owner shall not be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise for any damages whatsoever, including, without limitation, Direct Damages, incidental, consequential, punitive, special, exemplary or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the Transmission Owner is found liable for gross negligence or intentional misconduct, in which case the Transmission Owner's liability will be limited to Direct Damages. Nothing in this section, however, is intended to affect obligations otherwise provided in agreements between the Transmission Provider and Transmission Owner.

- (b) The Transmission Provider shall not be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, for any damages whatsoever, including, without limitation, Direct Damages, incidental, consequential, punitive, special, exemplary or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the Transmission Provider is found liable for gross negligence or intentional misconduct, in which case the Transmission Provider's liability will be limited to Direct Damages. Nothing in this section, however, is intended to affect obligations otherwise provided in agreements between the Transmission Provider and Transmission Owner.

- (c) Neither the Transmission Owner nor the Transmission Provider shall be liable for damages arising out of services provided under this Tariff, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, occurring as a result of conditions or circumstances beyond the control of the Transmission Owner or Transmission Provider, as applicable, or resulting from electric system design common to the domestic electric utility industry or electric system operation practices or conditions common to the domestic electric utility industry.

11. Creditworthiness

~~11.1 Credit Review: For the purpose of determining the ability of the Transmission Customer to meet its obligations related to service hereunder, the Transmission Provider may apply reasonable credit review procedures. The credit review procedures shall consist of an evaluation of the Transmission Customer's ability to meet the creditworthiness criteria set out in the Transmission Provider's credit policy. A credit review shall be conducted for each Transmission Customer not less than annually, or upon reasonable request by the Transmission Customer~~

~~11.2 Creditworthiness Criteria: A Transmission Customer that meets either requirement described in Section 11.2(i) or Section 11.2(ii) shall not be required to provide any form of security against the risk of nonpayment for any type of service, including deposits that otherwise would be required pursuant to Sections 17.3, 19.1, 19.4, 29.2, 32.1 and 32.4.~~

~~(i) The Transmission Customer~~

~~(a) is not in default of its payment obligations under Section 7.3 of this Tariff, and~~

~~(b) — meets the criteria set out in the Transmission Provider's credit policy;~~

~~or~~

~~(ii) — The Transmission Customer's parent company meets the criteria set out in the Transmission Provider's credit policy and the parent company provides a written guarantee that the parent company will be unconditionally responsible to the Transmission Provider for all financial obligations associated with the transmission service subscribed by the Transmission Customer.~~

~~11.3 — Requirements for Customers Not Meeting Creditworthiness Criteria:~~

~~A Transmission Customer that does not meet the creditworthiness criteria set out in 11.2 above shall comply with one of the following:~~

~~(i) — Providing Security~~

~~The Transmission Customer shall provide security for the lesser of (i) the total charge for service or (ii) the charge for ninety (90) days of service by the later of five (5) Business Days prior to the commencement of service or the time when it makes the request for transmission service. The security will be either an unconditional and irrevocable letter of credit or an alternative form of security acceptable to the Transmission Provider and consistent with commercial practices established under the laws of Canada and the Province of British Columbia that protects the Transmission Provider against the risk of non-payment.~~

~~or~~

~~(ii) — Pre-paying service~~

~~(a) — For service of one month or less, the Transmission Customer shall pay the total charge for service by the later of five (5) Business Days prior to the commencement of service or the time when it makes the request for transmission service.~~

~~(b) — For service of greater than one month, the Transmission Customer shall pay for each month's service not less than five (5) Business Days prior to the beginning of that month. For Network Integration Transmission Service customers, the advance payment for each month shall be based on a reasonable estimate by the Transmission Provider of the charge for that month.~~

~~The Transmission Provider will not provide transmission service requested by the customer unless one of the conditions described in Section 11.3(i) and 11.3(ii) is met.~~

~~**11.4 — Changes in Creditworthiness Status:** If a Transmission Customer fails to meet the requirements of Section 11.2 at any time after transmission service is requested, the Transmission Customer will, within 5 days of notification by the Transmission Provider, either (a) pay in advance for the thirty (30) Calendar Days of transmission service or (b) provide an unconditional and irrevocable letter of credit or alternative form of security acceptable to the Transmission Provider in an amount equal to the charge for thirty (30) Calendar Days of transmission service. Within thirty (30) Calendar Days of such notification the Transmission Customer shall meet the requirements of Section 11.3.~~

~~11.5 — **Suspension of Service:** The Transmission Provider may suspend service to a Transmission Customer who does not meet the creditworthiness criteria of Section 11.2 under the following circumstances;~~

- ~~(i) — If the Transmission Customer qualifies for service pursuant to Section 11.3 as a result of providing a letter or credit or alternative form of security, and it does not pay its bill within twenty (20) Calendar Days of receipt as required by Section 7.1, and it has not initiated a billing dispute in accordance with Section 7.3, the Transmission Provider may suspend service thirty (30) Calendar Days after written notice to the Transmission Customer and the Commission that the service will be suspended unless the Transmission Customer pays its bills.~~
- ~~(ii) — If the Transmission Customer qualifies for service as a result of committing to prepay for service pursuant to Section 11.3 (ii), and it fails to prepay for service as provided in such section, the Transmission Provider may suspend service immediately upon written notice to the Transmission Customer and the Commission.~~
- ~~(iii) — If the Transmission Customer loses its creditworthy status as a result of circumstances other than a default of its payment obligations and it fails to meet the credit security requirements of Section 11.4, but it either pays its bills within the time period provided in Section 7.1 or initiates a billing dispute in accord with Section 7.3, the Transmission Provider may suspend service thirty (30) Calendar Days after written notice to the Transmission Customer and the Commission that the service will be suspended unless the Transmission Customer meets the credit security requirements of Section 11.3.~~

~~(iv) If the Transmission Customer loses its creditworthy status because it is in default of its payment obligations under Section 7.3 and it fails to meet the requirements of Section 11.4, the Transmission Provider may suspend service five (5) Business Days after written notice to the Transmission Customer and the Commission that service will be suspended if the Transmission Customer does not meet the requirements of Section 11.4.~~

~~The suspension of service shall continue only for as long as the circumstances that entitle the Transmission Provider to suspend service continue. A Transmission Customer is not obligated to pay for Transmission Service that is not provided as a result of a suspension of service.~~

The Transmission Provider's ~~will specify its~~ Creditworthiness procedures are specified in Attachment L.

12. Dispute Resolution Procedures

12.1 Dispute Resolution Procedures (RTG Members): Any dispute between the Transmission Provider and a Transmission Customer who is a member in a common RTG with the Transmission Provider and that involves Transmission Service under this Tariff (excluding Applications for rate changes or other changes to this Tariff, or to any Service Agreement or Umbrella Agreement under this Tariff, which shall be presented directly to the Commission for resolution) shall be resolved pursuant to the provisions of the applicable RTG Governing Agreement.

12.2 Internal Dispute Resolution Procedures (Non-RTG Members): Any dispute between the Transmission Provider and a Transmission Customer who is not a member in a common RTG with the

Transmission Provider and involving transmission service under the Tariff (excluding applications for rate changes or other changes to the Tariff, or to any Service Agreement or Umbrella Agreement entered into under the Tariff, which shall be presented directly to the Commission for resolution) shall be referred to a designated senior representative of the Transmission Provider and a senior representative of the Transmission Customer for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) Calendar Days or such other period as the Parties may agree upon by mutual agreement, such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

12.2.1 Consolidation of Arbitrations related to the Allocation of Transfer

Capability: All disputes related to the calculation, allocation, sale or award of the same transfer capability, including the same portion of transfer capability, on the Transmission System shall be consolidated into a single arbitration. In the case of such a dispute, if the transfer capability at issue has been allocated to a Transmission Customer, that Transmission Customer may become a Party to the arbitration.

12.3 External Arbitration Procedures (Non-RTG Members):

- (a)** Any arbitration initiated under the Tariff between Transmission Provider and a Transmission Customer who is not a member in a common RTG with the Transmission Provider shall be conducted in British Columbia before a single neutral arbitrator appointed by the Parties.

(b) In the case of a non-consolidated arbitration, if the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the referral of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel.

(c) In the case of a consolidated arbitration, if the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the referral of the dispute to arbitration, the Parties will provide a notice to the British Columbia International Commercial Arbitration Centre in Vancouver, British Columbia (the “Centre”) to appoint an arbitrator pursuant to the Domestic Commercial Arbitration Rules of Procedure of the Centre as amended from time to time.

(d) ~~12.3 External Arbitration Procedures (Non-RTG Members):~~
~~Any arbitration initiated under the Tariff between Transmission Provider and a Transmission Customer who is not a member in a common RTG with the Transmission Provider shall be conducted in British Columbia before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the referral of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel.~~ In either case, the arbitrator(s) shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall conduct the arbitration in British Columbia and shall provide each

of the Parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Act of British Columbia.

12.4 Arbitration Decisions: Unless otherwise agreed or, in the case where Transmission Provider and Transmission Customer are members in a common RTG except as otherwise provided in an applicable RTG Governing Agreement, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and any Service Agreement or Umbrella Agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards of the Commercial Arbitration Act of British Columbia. The final decision of the arbitrator must also be filed with the Commission if it affects the Transmission Provider's rates, terms and conditions of service or facilities.

12.5 Costs: Except as may be otherwise provided in an RTG Governing Agreement applicable to the Transmission Provider and a Transmission Customer who is a member in a common RTG with the Transmission Provider, each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

- (a) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen;

~~or~~

- (b) one half the cost of the single arbitrator jointly chosen by the Parties; or

- (c) in a consolidated arbitration, an equal share of the cost of the single arbitrator jointly chosen by the Parties or appointed by the Centre.

12.6 Rights Under The British Columbia Utilities Commission Act:

Nothing in this section shall restrict the rights of any party to file a Complaint with the Commission under relevant provisions of the British Columbia Utilities Commission Act.

II. POINT-TO-POINT TRANSMISSION SERVICE

Preamble

The Transmission Provider will provide Firm and Non-Firm Point-To-Point Transmission Service pursuant to the applicable terms and conditions of this Tariff. Point-To-Point Transmission Service is for the receipt of capacity and energy at designated Point(s) of Receipt and the [transmissiontransfer](#) of such capacity and energy to designated Point(s) of Delivery. Customers taking Point-To-Point Transmission Service must obtain Ancillary Services pursuant to Section 3.

13. Nature of Firm Point-To-Point Transmission Service

13.1 Term: The minimum term of Firm Point-To-Point Transmission Service shall be one hour and the maximum term shall be specified in the Service Agreement.

13.2 Reservation Priority:

(a) [Subject to Section 15.8 and Section 15.9, Long-Term Firm Point-To-Point Transmission Service shall be available on a first-come, first-served basis i.e., in the chronological sequence in which each Transmission Customer has reserved service. If available transfer capability is insufficient to satisfy all requests and reservations, reservations for Long-Term Firm Point-To-Point Transmission Service will pre-empt all conditional Short-Term Firm Point-to-Point reservations.](#)

(b) [Reservations for Short-Term Firm Point-To-Point Transmission Service will be conditional based upon the length of the requested transaction or reservation. However, Pre-Confirmed Applications for Short-Term Point-to-Point Transmission Service will receive priority over earlier-submitted conditional requests that are not](#)

Pre-Confirmed and that have equal or shorter duration. Among requests or reservations with the same duration and, as relevant, pre-confirmation status (pre-confirmed, confirmed, or not confirmed), priority will be given to an Eligible Customer's request or reservation that offers the highest price, followed by the date and time of the request or reservation.

- (c) **Reservation Priority:** ~~Subject to Section 15.8 and Section 15.9, Long Term Firm Point To Point Transmission Service shall be available on a first come, first served basis i.e., in the chronological sequence in which each Transmission Customer has reserved service. Reservations for Short Term Firm Point To Point Transmission Service will be conditional based upon the length of the requested transaction.~~ If the Transmission System becomes oversubscribed, requests for ~~longer term~~ service may preempt ~~requests for shorter term service~~competing reservations up to the following conditional reservation deadlines: one ~~Calendar Day~~day before the commencement of daily service, one week before the commencement of weekly service, and one ~~calendar~~ month before the commencement of monthly service. The conditional reservation deadline for hourly service will be specified in the Transmission Provider's Business Practices. Before the conditional reservation deadline, if available ~~transmission~~transfer capability is insufficient to satisfy all ~~Applications~~requests and reservations, an Eligible Customer with a reservation for shorter term service or equal duration service and lower price has the right of first refusal to match any ~~subsequent~~ longer term ~~reservation~~request or equal duration service with a higher price before losing its reservation priority. A longer term competing request for Short-Term Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the

competing request within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in ~~Section 13.8 or as determined by the Transmission Provider~~section 13.8) from being notified by the Transmission Provider of a longer-term competing request for Short-Term Firm Point-To-Point Transmission Service. When a longer duration request preempts multiple shorter duration reservations, the shorter duration reservations shall have simultaneous opportunities to exercise the right of first refusal. Duration, price and time of response will be used to determine the order by which the multiple shorter duration reservations will be able to exercise the right of first refusal. After the conditional reservation deadline, service will commence pursuant to the terms of Part II of the Tariff. ~~Firm Point-To-Point Transmission Service will always have a reservation priority over Non Firm Point-To-Point Transmission Service under the Tariff. Reservation priority for Long-Term Firm Point-To-Point Transmission Service will be determined on the same basis as Network Customers. Reservation priorities for existing firm service customers are provided in Section 2.2.~~

(d) Firm Point-To-Point Transmission Service will always have a reservation priority over Non-Firm Point-To-Point Transmission Service under the Tariff. Reservation priority for Long-Term Firm Point-To-Point Transmission Service will be determined on the same basis as Network Customers. Reservation priorities for existing firm service customers are provided in Section 2.2.

(e) Where the Transmission Provider's business practices establish an earliest time at which requests for Firm Point-to-Point Transmission Service may be submitted, any requests for such service that are submitted within a 5 minute window following such earliest time

shall be deemed to have been submitted simultaneously during such window. The otherwise applicable priorities shall apply to the allocation of transfer capability to such requests, except that transfer capability will not be allocated based on a first-come, first-served or chronological basis. To allocate transfer capability amongst requests of equal priority, the Transmission Provider will create a randomly determined pick order from the list of Eligible Customers that have submitted requests within the 5 minute window. In accordance with the pick order, the Transmission Provider will grant one request at a time out of the pool of requests of equal priority until all requests in the pool are granted or all available transfer capability is exhausted.

13.3 Reserved:

13.4 Service Agreements: Subject to Attachment P,M-2, the Transmission Provider shall offer a standard form Long-Term Firm Point-To-Point Transmission Service Agreement (Attachment B) to an Eligible Customer when it submits a Completed Application for Long-Term Firm Point-To-Point Transmission Service. Subject to Attachment P,M-2, the Transmission Provider shall offer a standard form Umbrella Agreement (Attachment A) to an Eligible Customer when it first submits a Completed Application for Short-Term Firm Point-To-Point Transmission Service pursuant to the Tariff. ~~Executed Service Agreements and Umbrella Agreements that contain the information required under the Tariff shall be filed with the Commission.~~ An Eligible Customer that uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved and that has not executed a Service Agreement will be deemed, for purposes of assessing any appropriate charges and penalties, to have executed the appropriate Service Agreement. The Service Agreement shall, when

applicable, specify any conditional curtailment options selected by the Transmission Customer. Where the Service Agreement contains conditional curtailment options and is subject to a biennial reassessment as described in Section 15.4, the Transmission Provider shall provide the Transmission Customer notice of any changes to the curtailment conditions no less than 90 days prior to the date for imposition of new curtailment conditions. Concurrent with such notice, the Transmission Provider shall provide the Transmission Customer with the reassessment study and a narrative description of the study, including the reasons for changes to the curtailment conditions ~~number of hours per year or System Conditions under which conditional curtailment may occur.~~

- 13.5 Transmission Customer Obligations for Facility Additions or Redispatch Costs:** In cases where the Transmission Provider determines that the Transmission System is not capable of providing Long-Term Firm Point-To-Point Transmission Service without: (i) degrading or impairing the reliability of service to Network Customers and other Transmission Customers taking Long-Term Firm Point-To-Point Transmission Service; or (ii) interfering with the Transmission Provider's ability to meet prior firm contractual commitments to others, the Transmission Provider will be obligated to expand or upgrade its Transmission System pursuant to the terms of Section 15.4. The Transmission Customer must agree to compensate the Transmission Provider for any necessary transmission facility additions pursuant to the terms of Section 27. To the extent the Transmission Provider can relieve any system constraint ~~more economically~~ by procuring generation resources for redispatch ~~than through constructing Network Upgrades~~, it shall do so, provided that the Eligible Customer agrees to compensate the Transmission Provider pursuant to the terms of Section 27 ~~and agrees to either (i)~~

compensate the Transmission Provider for any necessary transmission facility additions ~~or (ii) accept the service subject to a biennial reassessment by the Transmission Provider of redispatch requirements as described in Section 15.4.~~ Any redispatch, Network Upgrade or Direct Assignment Facilities costs to be charged to the Transmission Customer on an incremental basis under the Tariff will be specified in the Service Agreement prior to initiating service.

- 13.6 Curtailment of Firm Transmission Service:** In the event that a Curtailment on the Transmission Provider's Transmission System, or a portion thereof, is required to maintain reliable operation of such system, Curtailments will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint. If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, the Transmission Provider will curtail service to Network Customers and Transmission Customers taking Firm Point-To-Point Transmission Service on an equal basis. All Curtailments will be made on a non-discriminatory basis, however, Non-Firm Point-To-Point Transmission Service shall be subordinate to Firm Transmission Service. Long-Term Firm Point-to-Point Service subject to conditions described in Section 15.4 shall be curtailed with secondary service, as described in Section 28.4, in cases where the conditions apply, but otherwise will be curtailed on a pro rata basis with other Firm Transmission Service. When the Transmission Provider determines that an electrical emergency exists on its Transmission System and implements emergency procedures to Curtail Firm Transmission Service, the Transmission Customer shall make the required reductions upon request of the Transmission Provider. However, the Transmission Provider reserves the right to Curtail, in whole or in part, any Firm Transmission Service provided under the Tariff when, in the Transmission Provider's sole discretion,

an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. The Transmission Provider will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments.

13.7 Classification of Firm Transmission Service:

- (a) Transmission Customer taking Firm Point-To-Point Transmission Service may: (i) change its Point(s) of Receipt and Point(s) of Delivery to obtain service on a non-firm basis consistent with the terms of Section 22.1; or (ii) request a modification of the Points of Receipt or Delivery on a firm basis pursuant to the terms of Section 22.2.
- (b) The Transmission Customer may purchase transmission service to make sales of capacity and energy from multiple generating units that are on the Transmission Provider's Transmission System. For such a purchase of transmission service, the resources will be designated as multiple Points of Receipt, unless the multiple generating units are at the same generating plant in which case the units would be treated as a single Point of Receipt.
- (c) The Transmission Provider shall provide firm deliveries of capacity and energy from the Point(s) of Receipt to the Point(s) of Delivery. Each Point of Receipt at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-To-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Receipt. Points of Receipt and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. Each Point

of Delivery at which firm ~~transmission capacity~~transfer capability is reserved by the Transmission Customer shall be set forth in the Long-Term Firm Point-To-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Delivery. Points of Delivery and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. The greater of either: (i) the sum of the capacity reservations at the Point(s) of Receipt; or (ii) the sum of the capacity reservations at the Point(s) of Delivery shall be the Transmission Customer's Reserved Capacity. The Transmission Customer will be billed for its Reserved Capacity, in accordance with the terms of Schedule 01 ~~of Attachment L~~ which combines the rates of the Transmission Owner under Rate Schedule 3001 and the rates of the Transmission Provider under Rate Schedule 101. The Transmission Customer may not exceed its firm capacity reserved at each Point of Receipt and each Point of Delivery except as otherwise specified in Section 22. In the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its firm reserved capacity at any Point of Receipt or Point of Delivery, the Transmission Customer shall pay to the Transmission Provider the applicable charges payable under the Transmission Provider's Rate Schedule 101 and the Transmission Owner's Rate Schedule 3001, as set out in Schedule 01 ~~of Attachment L~~, for the amount of capacity that exceeded the firm reserved capacity or uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved.

13.8 Scheduling of Firm Point-To-Point Transmission Service:
Schedules for the Transmission Customer's Firm Point-To-Point Transmission Service must be submitted to the Transmission Provider

no later than 10:00 a.m. or a reasonable time that is generally accepted in the region and is consistently adhered to by the Transmission Provider of the day prior to commencement of such service. Schedules submitted after 10:00 a.m. will be accommodated, if practicable. Hour-to-hour schedules of any capacity and energy that is to be delivered must be stated in increments of 1,000 kW per hour or a reasonable increment that is generally accepted in the region and is consistently adhered to by the Transmission Provider. Transmission Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their service requests at a common point of receipt into units of 1,000 kW per hour for scheduling and billing purposes. Scheduling changes will be permitted up to twenty (20) minutes or a reasonable time that is generally accepted in the region and is consistently adhered to by the Transmission Provider before the start of the next clock hour provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Transmission Provider will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Transmission Provider, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

14. Nature of Non-Firm Point-To-Point Transmission Service

14.1 Term: Non-Firm Point-To-Point Transmission Service will be available for periods ranging from one (1) hour to less than one (1)

year. A Purchaser of Non-Firm Point-To-Point Transmission Service will be entitled to reserve a sequential term of service (such as a sequential monthly term without having to wait for the initial term to expire before requesting another monthly term) so that the total time period for which the reservation applies is less than one (1) year subject to the requirements of Section 18.3.

14.2 Reservation Priority: Non-Firm Point-To-Point Transmission Service shall be available from ~~transmission~~[transfer](#) capability in excess of that needed for reliable service to Network Customers and other Transmission Customers taking Long-Term and Short-Term Firm Point-To-Point Transmission Service. A higher priority will be assigned [first](#) to [requests or](#) reservations with a longer duration of service [and second to Pre-Confirmed Applications](#). In the event the Transmission System is constrained, competing requests of [the same Pre-Confirmation status and](#) equal duration will be prioritized based on the highest price offered by the Eligible Customer for the Transmission Service. Eligible Customers that have already reserved shorter term service have the right of first refusal to match any longer term ~~reservation~~[request](#) before being preempted. A longer term competing request for Non-Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request: (i) immediately for hourly Non-Firm Point-To-Point Transmission Service after notification by the Transmission Provider; and (ii) within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in Section 14.6) for Non-Firm Point-To-Point Transmission Service other than hourly transactions after notification by the Transmission Provider. Transmission service for Network Customers from resources other than designated Network Resources will have a higher priority than any Non-Firm Point-To-Point

Transmission Service. Non-Firm Point-To-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have the lowest reservation priority under the Tariff.

Where the Transmission Provider's business practices establish an earliest time at which requests for Non-Firm Point-to-Point Transmission Service may be submitted, any requests for such service that are submitted within a 5 minute window following such earliest time shall be deemed to have been submitted simultaneously during such window. The otherwise applicable priorities shall apply to the allocation of transfer capability to such requests, except that transfer capability will not be allocated based on a first-come, first-served or chronological basis. To allocate transfer capability amongst requests of equal priority, the Transmission Provider will create a randomly determined pick order from the list of Eligible Customers that have submitted requests within the 5 minute window. In accordance with the pick order, the Transmission Provider will grant one request at a time out of the pool of requests of equal priority until all requests in the pool are granted or all available transfer capability is exhausted.

14.3 Reserved:

14.4 Umbrella Agreements: The Transmission Provider shall offer a standard form Umbrella Agreement (Attachment A) to an Eligible Customer when it first submits a Completed Application for Non-Firm Point-To-Point Transmission Service pursuant to the Tariff.

~~Executed Umbrella Agreements that contain the information required under the Tariff shall be filed with the Commission in compliance with applicable Commission regulations.~~

14.5 Classification of Non-Firm Point-To-Point Transmission Service:

Non-Firm Point-To-Point Transmission Service shall be offered under terms and conditions contained in Part II of the Tariff. The Transmission Provider undertakes no obligation under the Tariff to plan its Transmission System in order to have sufficient capacity for Non-Firm Point-To-Point Transmission Service. Parties requesting Non-Firm Point-To-Point Transmission Service for the transmission of firm power do so with the full realization that such service is subject to availability and to Curtailment or Interruption under the terms of the Tariff. In the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its non-firm capacity reservation, the Transmission Customer shall pay to the Transmission Provider the applicable charges payable under the Transmission Provider's Rate Schedule 102 and the Transmission Owner's Rate Schedule 3002, as set out in Schedule 02 ~~of Attachment L~~ for the amount of capacity that exceeded the non-firm Reserved Capacity. Non-Firm Point-To-Point Transmission Service shall include transmission of energy on an hourly basis and transmission of scheduled short-term capacity and energy on a daily, weekly or monthly basis, to a maximum term if less than one year for any one Application, in accordance with the terms of Schedule 02 ~~of Attachment L~~ which combines the rates of the Transmission Owner under its Rate Schedule 3002 and the rates of the Transmission Provider under its Rate Schedule 102.

14.6 Scheduling of Non-Firm Point-To-Point Transmission Service:

Schedules for Non-Firm Point-To-Point Transmission Service must be submitted to the Transmission Provider no later than 2:00 p.m. or a reasonable time that is generally accepted in the region and is consistently adhered to by the Transmission Provider of the day prior to commencement of such service. Schedules submitted after 2:00

p.m. will be accommodated, if practicable. Hour-to-hour schedules of energy that is to be delivered must be stated in increments of 1,000 kW per hour or a reasonable increment that is generally accepted in the region and is consistently adhered to by the Transmission Provider. Transmission Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their schedules at a common Point of Receipt into units of 1,000 kW per hour. Scheduling changes will be permitted up to twenty (20) minutes or a reasonable time that is generally accepted in the region and is consistently adhered to by the Transmission Provider before the start of the next clock hour provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Transmission Provider will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Transmission Provider, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

14.7 Curtailment or Interruption of Service: The Transmission Provider reserves the right to Curtail, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Tariff for reliability reasons when, an emergency or other unforeseen condition threatens to impair or degrade the reliability of its Transmission System. The Transmission Provider reserves the right to Interrupt, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Tariff for economic reasons in order to

accommodate: (i) a request for Firm Transmission Service; (ii) a request for Non-Firm Point-To-Point Transmission Service of greater duration; (iii) a request for Non-Firm Point-To-Point Transmission Service of equal duration with a higher price; ~~or~~ (iv) transmission service for Network Customers from non-designated resources; or, (v) transmission service for Firm Point-to-Point Transmission Service during conditional curtailment periods as described in Section 15.4.

The Transmission Provider also will discontinue or reduce service to the Transmission Customer to the extent that deliveries for transmission are discontinued or reduced at the Point(s) of Receipt. Where required, Curtailments or Interruptions will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint, however, Non-Firm Point-To-Point Transmission Service shall be subordinate to Firm Transmission Service. If multiple transactions require Curtailment or Interruption, to the extent practicable and consistent with Good Utility Practice, Curtailments or Interruptions will be made to transactions of the shortest term (e.g. hourly non-firm transactions will be Curtailed or Interrupted before daily non-firm transactions and daily non-firm transactions will be Curtailed or Interrupted before weekly non-firm transactions). Transmission service for Network Customers from resources other than designated Network Resources will have a higher priority than any Non-Firm Point-To-Point Transmission Service under the Tariff. Non-Firm Point-To-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have a lower priority than any Non-Firm Point-To-Point Transmission Service under the Tariff. The Transmission Provider will provide advance notice of Curtailment or Interruption where such notice can be provided consistent with Good Utility Practice.

15. Service Availability

15.1 General Conditions: The Transmission Provider will provide Firm and Non-Firm Point-To-Point Transmission Service over, on or across its Transmission System to any Transmission Customer that has met the requirements of Section 16.

15.2 Determination of Available [Transmission Transfer](#) Capability: A description of the Transmission Provider's specific methodology for assessing available [transmissiontransfer](#) capability posted on the Transmission Provider's OASIS (Section 4) is contained in Attachment C of the Tariff. In the event sufficient [transmissiontransfer](#) capability may not exist to accommodate a request for Long-Term Firm Service, the Transmission Provider will respond by performing a System Impact Study

15.3 Initiating Service in the Absence of an Executed Service Agreement or Umbrella Agreement: If the Transmission Provider and the Transmission Customer requesting Firm or Non-Firm Point-To-Point Transmission Service cannot agree on all the terms and conditions of the Point-To-Point Service Agreement or Umbrella Agreement, the Transmission Provider shall file with the Commission, within thirty (30) Calendar Days after the date the Transmission Customer provides written notification directing the Transmission Provider to file, an unexecuted Point-To-Point Service Agreement or Umbrella Agreement containing terms and conditions deemed appropriate by the Transmission Provider for such requested Transmission Service. The Transmission Provider shall commence providing Transmission Service subject to the Transmission Customer agreeing to: (i) compensate the Transmission Provider at whatever rate the Commission ultimately determines to be just and

reasonable; and (ii) comply with the terms and conditions of the Tariff including posting appropriate security deposits in accordance with the terms of Section 17.3.

15.4 Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System, Redispatch or Conditional Curtailment:

(a) If the Transmission Provider determines that it cannot accommodate a Completed Application for Long-Term Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, the Transmission Provider will use due diligence to expand or modify its Transmission System to provide the requested Long-Term Firm Transmission Service, consistent with its planning obligations in Attachment K, provided the Transmission Customer agrees to compensate the Transmission Provider for such costs pursuant to the terms of Section 27. The Transmission Provider will conform to Good Utility Practice and its planning obligations in Attachment K, in determining the need for new facilities and in the design and construction of such facilities. The obligation applies only to those facilities that the Transmission Provider has the right to expand or modify. The Transmission Provider is not obligated under this Tariff to expand or modify its Transmission System to provide Short-Term Firm Point-To-Point Service.

(b) If the Transmission Provider determines that it cannot accommodate a Completed Application for Long-Term Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, the ~~Transmission Provider will use due diligence to provide redispatch from its own resources until (i)~~

~~Network Upgrades are completed for the Transmission Customer,~~
~~(ii) the Transmission Provider determines through a biennial~~
~~reassessment that it can no longer reliably provide the redispatch, or~~
~~(iii) the Transmission Customer terminates the service because of~~
~~redispatch changes resulting from the reassessment. A~~
Transmission Provider shall not unreasonably deny self-provided
redispatch or redispatch arranged by the Transmission Customer
from a third party resource.

- (c) If the Transmission Provider determines that it cannot accommodate
a Completed Application for Long-Term Firm Point-To-Point
Transmission Service because of insufficient capability on its
Transmission System, the Transmission Provider will offer the Firm
Transmission Service with the condition that the Transmission
Provider may curtail the service prior to the curtailment of other
Firm Transmission Service under specified curtailment conditions
~~for a specified number of hours per year or during System~~
~~Condition(s).~~ If the Transmission Customer accepts the service, the
Transmission Provider will use due diligence to provide the service
until (i) Network Upgrades are completed for the Transmission
Customer, (ii) the Transmission Provider determines through a
biennial reassessment that it can no longer reliably provide such
service, or (iii) the Transmission Customer terminates the service
because the reassessment increased the number of hours per year of
~~conditional curtailment or changed the System C~~
curtailment
conditions.

15.5 Deferral of Service: The Transmission Provider may defer providing service until it completes construction of new transmission facilities or upgrades needed to provide Long-Term Firm Point-To-Point Transmission Service whenever the Transmission

Provider determines that providing the requested service would, without such new facilities or upgrades, impair or degrade reliability to any existing firm services.

15.6 Other Transmission Service Schedules. Eligible Customers receiving transmission service under other agreements on file with the Commission may continue to receive transmission service under those agreements until such time as those agreements may be modified by the Commission.

15.7 Real Power Losses: Real Power Losses are associated with all transmission service. The Transmission Provider is not obliged to provide Real Power Losses. The Transmission Customer is responsible for replacing losses associated with all transmission service as calculated by the Transmission Provider. The applicable Real Power Loss factors are set out in Transmission Provider Rate Schedule 110 and are also set out in [Rate Schedule 10 of Attachment L-10](#). The Transmission Customer may elect to self-supply losses on its transmission services or to purchase Loss Compensation Service from the Transmission Provider pursuant to its Rate Schedule 109. These Loss Compensation Service rate are also set out in [Rate Schedule 09 of Attachment L-109](#). A Transmission Customer who has elected to purchase Loss Compensation Service from the Transmission Provider will not be able to change its election.

A Transmission Customer who has elected to self-supply transmission losses, must submit a valid loss schedule with each energy schedule associated with its transmission service in accordance with the Transmission Provider's scheduling practices. If the Transmission Customer fails to submit a valid loss schedule with its energy schedule associated with its transmission reservation in

accordance with the Transmission Provider's scheduling practices and

- (i) if the Transmission Customer has failed to submit a valid loss schedule with its energy schedule fewer than three times, the Transmission Provider will charge the Transmission Customer for Loss Compensation Service pursuant to its Rate Schedule 109, and inform the Transmission Customer the number of times the Transmission Customer has failed to submit valid loss schedule with its energy schedule,

or

- (ii) if the Transmission Customer has been notified by the Transmission Provider that the Transmission Customer has failed to submit a valid loss schedule with its energy schedule three times, the Transmission Provider will (a) charge the Transmission Customer for Loss Compensation Service pursuant to its Rate Schedule 109, (b) the Transmission Customer will not be permitted to self supply losses; and (c) the Transmission Provider will notify the Transmission Customer of the commencement date for Loss Compensation Service.

15.8 Open Season: At the Transmission Provider's option, requests for Long-Term Firm Point-To-Point Service may be aggregated, studied, and accommodated together. If the Transmission Provider elects to study requests for long-term service together, all Completed Applications received within a period not to exceed one hundred and eighty (180) Calendar Days (the "Open Season Period") will be studied together provided that the Transmission Provider may study a Completed Application separately to the extent warranted by Good

Utility Practice based upon the electrical remoteness of the service required and the resulting impacts on the system. Notwithstanding the provisions of Section 13.2, but subject to the provisions of (c) below, all Eligible Customers who submit Completed Applications within the Open Season Period shall have equal reservation priority, behind Completed Applications submitted prior to the Open Season Period and ahead of Completed Applications submitted after the Open Season Period.

The Open Season Period shall have a fixed time interval based on fixed annual opening and closing dates. Any changes to the established Open Season Period shall be announced with a posting on the Transmission Provider's OASIS beginning at least one hundred and eighty (180) Calendar Days in advance of the change and continuing thereafter through the end date of the first Open Season Period that is to be modified.

The provisions of Section 19 apply to Completed Applications received within the Open Season Period except as set out in (a), (b) and (c) below.

- (a) The costs of the System Impact Study shall be allocated pro rata based on the capacity requested among the Eligible Customers who have submitted Completed Applications within the Open Season Period and the costs of the Facilities Study shall be allocated, pro rata, based on the capacity requested, among those Eligible Customers who subsequently execute a Facilities Study Agreement tendered by the Transmission Provider in accordance with Section 19.4.

- (b) Within fifteen (15) Calendar Days of the date on which the Transmission Provider delivers the Facilities Study or, where an Eligible Customer described in Section 15.9 makes an election pursuant to Section 15.9(c), on the first business day after the Transmission Provider has notified each Eligible Customer that has executed a Facilities Study Agreement of the election made, each Eligible Customer that has executed a Facilities Study Agreement shall indicate on OASIS whether it is willing to pay its applicable share of the good faith estimate of costs allocated in accordance with Attachment [KQ](#), contained in the Facilities Study. Within thirty (30) Calendar Days of the date on which the Transmission Provider delivers the Facilities Study, the Transmission Provider shall tender a Service Agreement to each Eligible Customer that has indicated that it is willing to pay its applicable share of those costs. Each Service Agreement shall be contingent on execution by each other Eligible Customer receiving a Service Agreement. Each Eligible Customer shall have fifteen (15) Calendar Days to execute its Service Agreement and provide the required letter of credit or other form of security. If any one or more Service Agreements are not executed or security not provided by the expiry of that fifteen-day period, the Transmission Provider shall, within fifteen (15) Calendar Days thereafter, reissue Service Agreements to those Eligible Customers that executed the previous Service Agreement apportioning the costs contained in the Facilities Study among those remaining Eligible Customers. Each of those remaining Eligible Customers shall have fifteen (15) Calendar Days to execute its Service Agreement and provide the required letter of credit or other form of security. If any one or more of those Service Agreements are not executed or security not provided,

then the Transmission Provider shall continue to reissue Service Agreements as provided for above until all issued Service Agreements are executed and security provided, or until the last Service Agreement tendered was tendered to a single Eligible Customer.

- (c) Subject to 15.9(a) and Attachment [P,M-2](#), any available transmission capability that can be provided to accommodate a request for service, in whole or in part, without modification or expansion of the Transmission Provider's Transmission System, shall be allocated to Eligible Customers on a first-come, first-serve basis, i.e., in the chronological sequence in which each has reserved service.

15.9 An Eligible Customer that has submitted a Completed Application before the Open Season Period described in Section 15.8 may elect, prior to execution of a Service Agreement or the filing of an unexecuted Service Agreement with respect to the requested Transmission Service, to participate in the Open Season process described in Section 15.8. If such an Eligible Customer elects to participate in the Open Season process, the provisions of Section 15.8 apply to that Eligible Customer as though it had submitted a Completed Application within the Open Season period, except as set out in (a), (b), (c) and (d) below:

- (a) Subject to Attachment [P,M-2](#), the Eligible Customer shall have priority to any available transmission capability to accommodate its request without modification or expansion of the Transmission Provider's Transmission System on a first-come, first-serve basis, i.e., in the chronological sequence in which it requested service before the open season period.

- (b) The Facilities Study shall include a good faith estimate of costs allocated to the Eligible Customer in accordance with Attachment [KO](#) on the basis that (i) the Eligible Customer's request was studied separately in accordance with its reservation priority and (ii) the Eligible Customer's request was studied as part of the Open Season process.
- (c) Within fifteen (15) Calendar Days of the date on which the Transmission Provider delivers the Facilities Study, the Eligible Customer shall indicate on OASIS whether it is willing to pay its applicable share of the good faith estimate of costs determined on the basis described in either (b)(i) or (b)(ii) above.
- (d) If the Eligible Customer indicates that it is willing to pay its applicable share of costs, as described in (c) above, the Transmission Provider shall, within thirty (30) Calendar Days of the date on which the Transmission Provider delivers the Facilities Study, tender a Service Agreement to the Eligible Customer in accordance with the Eligible Customer's election in (c) above.

16. Transmission Customer Responsibilities

16.1 Conditions Required of Transmission Customers: Point-To-Point Transmission Service shall be provided by the Transmission Provider only if the following conditions are satisfied by the Transmission Customer:

- (a) The Transmission Customer has submitted a Completed Application for service;

- (b) The Transmission Customer meets the creditworthiness criteria set forth in ~~Section 11.2~~[Appendix L](#);
- (c) The Transmission Customer will have arrangements in place for any other transmission service necessary to effect the delivery from the generating source to the Transmission Provider prior to the time service under Part II of the Tariff commences;
- (d) The Transmission Customer agrees to pay for any facilities constructed and chargeable to such Transmission Customer under Part II of the Tariff and provide security for any Network Upgrades in accordance with Attachment ~~K~~[Q](#), whether or not the Transmission Customer takes service for the full term of its reservation; ~~and~~
- (e) [The Transmission Customer provides the information required by the Transmission Provider's planning process established in Attachment K; and,](#)
- (f) ~~(e)~~ The Transmission Customer has executed a Point-To-Point Service Agreement or Umbrella Agreement or has agreed to receive service pursuant to Section 15.3.

16.2 Transmission Customer Responsibility for Third-Party Arrangements: Any scheduling arrangements that may be required by other electric systems shall be the responsibility of the Transmission Customer requesting service. The Transmission Customer shall provide, unless waived by the Transmission Provider, notification to the Transmission Provider identifying such systems and authorizing them to schedule the capacity and energy to be transmitted by the Transmission Provider pursuant to Part II of the

Tariff on behalf of the Receiving Party at the Point of Delivery or the Delivering Party at the Point of Receipt. However, the Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in making such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice.

17. Procedures for Arranging Firm Point-To-Point Transmission Service

17.1 Application: A request for Firm Point-To-Point Transmission Service for periods of one year or longer must contain an an written Application to: British Columbia Transmission Corporation Attention: Manager, Market Operations, at least sixty (60) Calendar Days in advance of the calendar month in which service is to commence. The Transmission Provider will consider requests for such firm service on shorter notice when feasible. Requests for firm service for periods of less than one year shall be made pursuant to an executed Umbrella Agreement. Request for Short-Term Firm Point-To-Point transmission service of less than one year shall be submitted no earlier than the number of Calendar Days specified by the Transmission Provider in its Business Practices before service is to commence. All Firm Point-To-Point Transmission Service requests must be submitted by entering the information listed below on the Transmission Provider's OASIS. If the Transmission Provider's OASIS is not functioning, a Completed Application may be submitted by: (i) transmitting the required information to the Transmission Provider by telefax; or (ii) providing the information by telephone over the Transmission Provider's time recorded telephone line. Each of these methods will provide a time-stamped record for establishing the priority of the Application.

17.2 Completed Application: A Completed Application shall provide all of the information listed below together with such other information as may be required by the Commission:

- (a) The identity, address, telephone number, email address and facsimile number of the entity requesting service;
- (b) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (d) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice or pursuant to RTG transmission information sharing agreements. The Transmission Provider shall treat this information consistent with its standards of conduct as approved by the Commission;
- (e) A description of the supply characteristics of the capacity and energy to be delivered;
- (f) An estimate of the capacity and energy expected to be delivered to the Receiving Party;
- (g) The Service Commencement Date and the term of the requested Transmission Service; ~~and~~

- (h) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Transmission Provider's Transmission System; customers may combine their requests for service in order to satisfy the minimum transmission capacity requirement;
- (i) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service; and,
- (j) Any additional information required by the Transmission Provider's planning process established in Attachment K.

The Transmission Provider shall treat this information consistent with its standards of conduct as approved by the Commission.

17.3 Deposit: A Completed Application for Firm Point-To-Point Transmission Service also shall include a deposit of either one month's charge for Reserved Capacity or the full charge for Reserved Capacity for service requests of less than one month. If the Application is rejected by the Transmission Provider because it does not meet the conditions for service as set forth herein, or in the case of requests for service arising in connection with losing bidders in a Request For Proposals ("RFP"), said deposit less any reasonable costs incurred by the Transmission Provider in connection with the review of the losing bidder's Application shall be refunded with interest on the refundable amount. The deposit less any reasonable costs incurred by the Transmission Provider will also be refunded with interest on the refundable amount if the Transmission Provider is unable to

complete new facilities needed to provide the service. If an Application is withdrawn or the Eligible Customer decides not to enter into a Service Agreement for Firm Point-To-Point Transmission Service, the deposit less reasonable costs incurred by the Transmission Provider to the extent such costs have not already been recovered by the Transmission Provider from the Eligible Customer shall be refunded with interest on the refundable amount. The Transmission Provider will provide to the Eligible Customer a complete accounting of all costs deducted from the refunded deposit, which the Eligible Customer may contest if there is a dispute concerning the deducted costs. ~~Deposits associated with construction of new facilities are subject to the provisions of Section 19.~~ If a Service Agreement for Firm Point-To-Point Transmission Service is executed, the deposit, with interest, will be returned to the Transmission Customer upon expiration or termination of the Service Agreement for Firm Point-To-Point Transmission Service. Applicable interest shall be computed at the average prime rate of Transmission Provider's lead bank for the applicable period, and shall be calculated from the day the deposit check is credited to the Transmission Provider's account based on the refundable amount. Deposits associated with construction of new facilities are subject to the provisions of Section 19.

- 17.4 Notice of Deficient Application:** Subject to Attachment P,M-2, if an Application fails to meet the requirements of the Tariff, the Transmission Provider shall notify the entity requesting service within fifteen (15) Calendar Days of receipt of the reasons for such failure. The Transmission Provider will attempt to remedy minor deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful fifteen (15) Calendar Days after notifying the entity requesting service of the

deficiencies, the Transmission Provider shall return the Application, along with any deposit, with interest. Upon receipt of a new or revised Application that fully complies with the requirements of Part II of the Tariff, the Eligible Customer shall be assigned a new priority consistent with the date of the new or revised Application.

17.5 Response to a Completed Application. Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider shall make a determination of available transmissiontransfer capability as required in Section 15.2. Subject to Attachment P,M-2, the Transmission Provider shall notify the Eligible Customer as soon as practicable, but not later than thirty (30) Calendar Days after the date of receipt of a Completed Application either: (i) if it will be able to provide service without performing a System Impact Study; or (ii) if such a study is needed to evaluate the impact of the Application pursuant to Section 19.1. Subject to Attachment P,M-2, responses by the Transmission Provider must be made as soon as practicable to all completed applications (including applications by its own merchant function) and the timing of such responses must be made on a non-discriminatory basis.

17.6 Execution of Service Agreement: Subject to Attachment P,M-2, whenever the Transmission Provider determines that a System Impact Study is not required and that the service can be provided, it shall notify the Eligible Customer as soon as practicable but no later than thirty (30) Calendar Days after receipt of the Completed Application. ~~Where a System Impact Study is required, the provisions of Section 19 will govern the execution of a Service Agreement.~~ Failure of an Eligible Customer to execute and return the Service Agreement or request the filing of an unexecuted service agreement pursuant to

Section 15.3, within fifteen (15) Calendar Days after it is tendered by the Transmission Provider will be deemed a withdrawal and termination of the Application and any deposit submitted shall be refunded with interest. Nothing herein limits the right of an Eligible Customer to file another Application after such withdrawal and termination. Where a System Impact Study is required, the provisions of Section 19 will govern the execution of a Service Agreement.

17.7 Extensions for Commencement of Service. The Transmission Customer can obtain, subject to availability, up to five (5) one-year extensions for the commencement of service. The Transmission Customer may postpone service by paying a non-refundable annual reservation fee equal to one-month's charge for Firm Transmission Service for each year or fraction thereof within 15 days of notifying the Transmission Provider it intends to extend the commencement of service. If during any extension for the commencement of service an Eligible Customer submits a Completed Application for Firm Transmission Service, and such request can be satisfied only by releasing all or part of the Transmission Customer's Reserved Capacity, the original Reserved Capacity will be released unless the following condition is satisfied. Within thirty (30) Calendar Days, the original Transmission Customer agrees to pay the Firm Point-To-Point transmission rate for its Reserved Capacity concurrent with the new Service Commencement Date. In the event the Transmission Customer elects to release the Reserved Capacity, the reservation fees or portions thereof previously paid will be forfeited.

18. Procedures for Arranging Non-Firm Point-To-Point Transmission Service

18.1 Application. Eligible Customers seeking Non-Firm Point-To-Point Transmission Service must submit a Completed Application to the

Transmission Provider. Applications must be submitted by entering the information listed below on the Transmission Provider's OASIS. If the Transmission Provider's OASIS is not functioning, a Completed Application may be submitted by: (i) transmitting the required information to the Transmission Provider by telefax; or (ii) providing the information by telephone over the Transmission Provider's time recorded telephone line. Each of these methods will provide a time-stamped record for establishing the service priority of the Application.

18.2 Completed Application. A Completed Application shall provide all of the information listed below, together with such other information as may be required by the Commission:

- (a) The identity, address, telephone number and facsimile number of the entity requesting service;
- (b) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) The Point(s) of Receipt and the Point(s) of Delivery;
- (d) The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and
- (e) The proposed dates and hours for initiating and terminating transmission service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, the Transmission Provider also may ask the Transmission Customer to provide the following:

- (f) The electrical location of the initial source of the power to be transmitted pursuant to the Transmission Customer's request for service; and
- (g) The electrical location of the ultimate load.

The Transmission Provider will treat this information in (f) and (g) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice, or pursuant to RTG transmission information sharing agreements. The Transmission Provider shall treat this information consistent with its standards of conduct as approved by the Commission.

(h) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

18.3 Reservation of Non-Firm Point-To-Point Transmission Service.

Requests for monthly service shall be submitted no earlier than sixty (60) Calendar Days before service is to commence; requests for weekly service shall be submitted no earlier than fourteen (14) Calendar Days before service is to commence, requests for daily service shall be submitted no earlier than two (2) Working Days before service is to commence, and requests for hourly service shall be submitted no earlier than noon the Working Day before service is to commence. Requests for service received later than 2:00 p.m. on the Working Day before service is scheduled to commence will be accommodated if practicable, or such reasonable times that are

generally accepted in the region and are consistently adhered to by the Transmission Provider.

18.4 Determination of Available [TransmissionTransfer](#) Capability.

Following receipt of a tendered schedule the Transmission Provider will make a determination on a non-discriminatory basis of available [transmissiontransfer](#) capability pursuant to Section 15.2. Such determination shall be made as soon as reasonably practicable after receipt, but not later than the following time periods for the following terms of service: (i) thirty (30) minutes for hourly service; (ii) thirty (30) minutes for daily service; (iii) four (4) hours for weekly service; and (iv) two (2) Calendar Days for monthly service, or such reasonable times that are generally accepted in the region and are consistently adhered to by the Transmission Provider.

19. Additional Study Procedures For Long-Term Firm Point-To-Point Transmission Service Requests

19.1 Notice of Need for System Impact Study. After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. Subject to Attachment [P,M-2](#), if the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. [Once informed, the Eligible Customer shall timely notify the Transmission Provider if it elects to have the Transmission Provider study redispatch or conditional curtailment as part of the System Impact Study. If notification is provided prior to tender of the System Impact Study Agreement, the Eligible Customer can avoid the costs associated with the study of these options.](#) Subject to

Attachment ~~M-2P~~, ~~in such cases~~, the Transmission Provider shall within thirty (30) Calendar Days of receipt of a Completed Application, tender a System Impact Study Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to the Transmission Provider with a refundable deposit of \$50,000 in accordance with ~~Section 11.2~~Attachment L, within fifteen (15) Calendar Days. If the Eligible Customer elects not to execute the System Impact Study Agreement or not to provide the required deposit in accordance with ~~Section 11.2~~Attachment L, its application shall be deemed withdrawn and its deposit, pursuant to Section 17.3, shall be returned.

19.2 System Impact Study Agreement and Cost Reimbursement

- (a) The System Impact Study Agreement will clearly specify the Transmission Provider's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.

- (b) If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for the Transmission Provider to accommodate the requests for service, the costs of that study shall be pro-rated among the Eligible Customers.
- (c) Reserved.

19.3 System Impact Study Procedures. Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a sixty (60) Calendar Day period. The System Impact Study shall identify (1) any system constraints and redispatch options, identified with specificity by transmission element or flowgate, (2) redispatch options, (when requested by an Eligible Customer) including, to the extent it is voluntarily provided by the resource owner, an estimate of the cost of redispatch, (3) conditional curtailment criteria~~options (when requested by an Eligible Customer) including the number of hours per year and the System Conditions during which conditional curtailment may occur, and~~ (4) additional Direct Assignment Facilities or Network Upgrades required to provide the requested service. For customers requesting the study of redispatch options, the System Impact Study shall (1) identify all resources located within the Transmission Provider's Control Area that can significantly contribute toward relieving the system constraint and (2) provide a measurement of each resource's impact on the system constraint. If the Transmission Provider possesses information indicating that any resource outside its Control Area could relieve the constraint, it shall identify each such resource in the System Impact Study. In the event that the Transmission Provider is unable to complete the required System Impact Study within such time period, it shall so notify the

Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer as soon as the System Impact Study is complete. The Transmission Provider shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) Calendar Days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement or request the filing of an unexecuted Service Agreement pursuant to Section 15.3, or the Application shall be deemed terminated and withdrawn.

19.4 Facilities Study Procedures. If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, the Transmission Provider, within thirty (30) Calendar Days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it with a refundable deposit of \$100,000 in accordance with Section 11.2 Attachment L to the Transmission Provider within fifteen (15) Calendar Days. If the Eligible Customer elects not to execute the Facilities Study Agreement or not to provide a deposit in accordance with Section 11.2 Attachment L, its application shall be deemed withdrawn and its

deposit, pursuant to Section 17.3, shall be returned. Upon receipt of an executed Facilities Study Agreement, the Transmission Provider will use due diligence to complete the required Facilities Study within a sixty (60) Calendar Day period. If the Transmission Provider is unable to complete the Facilities Study in the allotted time period, the Transmission Provider shall notify the Transmission Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of: (i) the cost of Direct Assignment Facilities to be charged to the Transmission Customer; (ii) the Transmission Customer's appropriate share of the cost of any required Network Upgrades as determined pursuant to the provisions of Part II of the Tariff; and (iii) the time required to complete such construction and initiate the requested service. As soon as the Facilities Study is complete, the Transmission Provider shall make a copy of the completed Facilities Study available and tender a Service Agreement to the Transmission Customer. The Transmission Customer shall provide the Transmission Provider with a letter of credit or other reasonable form of security acceptable to the Transmission Provider equivalent to the costs of new facilities or upgrades in accordance with Attachment KO and consistent with commercial practices as established under the laws of Canada and the Province of British Columbia. After being tendered with a Service Agreement, t~~The~~ Transmission Customer shall have thirty (30) Calendar Days to execute a Service Agreement or request the filing of an unexecuted Service Agreement and provide the required letter of credit or other form of security or the request will no longer be a Completed Application and shall be deemed terminated and withdrawn.

- 19.5 Facilities Study Modifications.** Any change in design arising from inability to site or construct facilities as proposed will require development of a revised good faith estimate. New good faith estimates also will be required in the event of new statutory or regulatory requirements that are effective before the completion of construction or other circumstances beyond the control of the Transmission Provider that significantly affect the final cost of new facilities or upgrades to be charged to the Transmission Customer pursuant to the provisions of Part II of the Tariff.
- 19.6 Due Diligence in Completing New Facilities.** The Transmission Provider shall use due diligence to add necessary facilities or upgrade its Transmission System within a reasonable time. The Transmission Provider will not upgrade its existing or planned Transmission System in order to provide the requested Firm Point-To-Point Transmission Service if doing so would impair system reliability or otherwise impair or degrade existing firm service.
- 19.7 Partial Interim Service.** If the Transmission Provider determines that it will not have adequate [transmissiontransfer](#) capability to satisfy the full amount of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider nonetheless shall be obligated to offer and provide the portion of the requested Firm Point-To-Point Transmission Service that can be accommodated without addition of any facilities and through redispatch. However, the Transmission Provider shall not be obligated to provide the incremental amount of requested Firm Point-To-Point Transmission Service that requires the addition of facilities or upgrades to the Transmission System until such facilities or upgrades have been placed in service.

~~Where this section applies to a Completed Application for Long Term Firm Point-to-Point Service, the Transmission Provider shall offer the following partial interim service options:~~

~~(a) — the maximum amount of Long Term Firm Point-to-Point Service that is available in the same quantity for each month of the term requested, or for a shorter term;~~

~~(b) — the maximum amount of Long Term Firm Point-to-Point Service that is available in varying monthly quantities.~~

~~An offer of partial interim service described in (b) above may only be made in annual increments of service, the minimum term of which must contain at least twelve months of Reserved Capacity in an amount greater than zero megawatts. Notwithstanding any other provision of this Tariff, the Reserved Capacity for which a Transmission Customer that has accepted an offer of partial interim service described in (b) above must pay in each month is the maximum amount reserved for that month. Section 2.2 applies to Transmission Customers with partial interim service as described in (b) above provided that in order for the Transmission Customer to exercise its rights under Section 2.2 to continue to take transmission service at the end of its contract term where the Transmission System cannot accommodate all of the requests for transmission service, the Transmission Customer must not only agree to accept a term at least equal to a competing request by any new Eligible Customer, but must also agree to accept a quantity of Long Term Firm Point To Point Service for each month of that term at least equal to the lesser of: (i) the maximum amount of Long Term Firm Point To Point Service that is available in the same quantity for each month of the term; and (ii) the quantity of Long Term Firm Point To Point Service requested by that new Eligible Customer in its competing request.~~

19.8 Expedited Procedures for New Facilities. In lieu of the procedures set forth above, the Eligible Customer shall have the option to expedite the process by requesting the Transmission Provider to tender at one time, together with the results of required studies, an “Expedited Service Agreement” pursuant to which the Eligible Customer would agree to compensate the Transmission Provider for all costs incurred pursuant to the terms of the Tariff. In order to exercise this option, the Eligible Customer shall request in writing an expedited Service Agreement covering all of the above-specified items within thirty (30) Calendar Days of receiving the results of the System Impact Study identifying needed facility additions or upgrades or costs incurred in providing the requested service. While the Transmission Provider agrees to provide the Eligible Customer with its best estimate of the new facility costs and other charges that may be incurred, such estimate shall not be binding and the Eligible Customer must agree in writing to compensate the Transmission Provider for all costs incurred pursuant to the provisions of the Tariff. The Eligible Customer shall execute and return such an Expedited Service Agreement within fifteen (15) Calendar Days of its receipt or the Eligible Customer’s request for service will cease to be a Completed Application and will be deemed terminated and withdrawn.

19.9 Penalties for Failure to Meet Study Deadlines:

Sections 19.3 and 19.4 require a Transmission Provider to use due diligence to meet 60 day study completion deadlines for System Impact Studies and Facilities Studies.

- (a) The Transmission Provider is required to file a notice with the Commission in the event that more than twenty (20) percent of

~~non-Affiliates'~~ System Impact Studies and Facilities Studies completed by the Transmission Provider in any two consecutive calendar quarters are not completed within the ~~60-day~~ study completion deadlines. Such notice must be filed within thirty (30) days of the end of the calendar quarter triggering the notice requirement.

- (b) For the purposes of calculating the percent of ~~non-Affiliates'~~ System Impact Studies and Facilities Studies processed outside of the ~~60-day~~ study completion deadlines, the Transmission Provider shall consider all System Impact Studies and Facilities Studies that it completes ~~for non-Affiliates'~~ during the calendar quarter. The percentage should be calculated by dividing the number of those studies which are completed on time by the total number of completed studies. The Transmission Provider may provide an explanation in its notification filing to the Commission if it believes there are extenuating circumstances that prevented it from meeting the ~~60-day~~ study completion deadlines.
- (c) The Transmission Provider is subject to an operational penalty if it completes ten (10) percent or more of ~~non-Affiliates'~~ System Impact Studies and Facilities Studies outside of the ~~60-day~~ study completion deadlines for each of the two calendar quarters immediately following the quarter that triggered its notification filing to the Commission. The operational penalty will be assessed for each calendar quarter for which an operational penalty applies, starting with the calendar quarter immediately following the quarter that triggered the Transmission Provider's notification filing to the Commission. The operational penalty will continue to be assessed each quarter until the Transmission Provider completes at least

ninety (90) percent of all ~~non-Affiliates~~ System Impact Studies and Facilities Studies within the ~~60-day~~ deadline.

(d) For penalties assessed in accordance with subsection ~~(iii)~~(c) above, the penalty amount for each System Impact Study or Facilities Study shall be equal to \$500 for each day the Transmission Provider takes to complete that study beyond the ~~60-day~~ deadline.

20. Procedures if the Transmission Provider is Unable to Complete New Transmission Facilities for Long-Term Firm Point-To-Point Transmission Service

20.1 Delays in Construction of New Facilities. If any event occurs that will materially affect the time for completion of new facilities, or the ability to complete them, the Transmission Provider shall promptly notify the Transmission Customer. In such circumstances, the Transmission Provider shall within thirty (30) Calendar Days of notifying the Transmission Customer of such delays, convene a technical meeting with the Transmission Customer to evaluate the alternatives available to the Transmission Customer. The Transmission Provider also shall make available to the Transmission Customer studies and work papers related to the delay, including all information that is in the possession of the Transmission Provider that is reasonably needed by the Transmission Customer to evaluate any alternatives.

20.2 Alternatives to the Original Facility Additions. When the review process of Section 20.1 determines that one or more alternatives exist to the originally planned construction project, the Transmission Provider shall present such alternatives for consideration by the Transmission Customer. If, upon review of any alternatives, the Transmission Customer desires to maintain its Completed

Application subject to construction of the alternative facilities, it may request the Transmission Provider to submit a revised Service Agreement for Long-Term Firm Point-To-Point Transmission Service. If the alternative approach solely involves Short-Term Firm or Non-Firm Point-To-Point Transmission Service, the Transmission Provider shall promptly tender an Umbrella Agreement for Short-Term Firm or Non-Firm Point-To-Point Transmission Service providing for the service. In the event the Transmission Provider concludes that no reasonable alternative exists and the Transmission Customer disagrees, the Transmission Customer may seek relief under the dispute resolution procedures pursuant to Section 12 or it may refer the dispute to the Commission for resolution.

20.3 Refund Obligation for Unfinished Facility Additions. If the Transmission Provider and the Transmission Customer mutually agree that no other reasonable alternatives exist and the requested service cannot be provided out of existing capability under the conditions of Part II of the Tariff, the obligation to provide the requested Firm Point-To-Point Transmission Service shall terminate and any refundable deposit made by the Transmission Customer shall be returned with interest calculated at a rate equal to the average prime rate of the Transmission Provider's lead bank for the applicable period. However, the Transmission Customer shall be responsible for all prudently incurred costs by the Transmission Provider through the time construction was suspended.

21. Provisions Relating to Transmission Construction and Services on the Systems of Other Utilities

21.1 Responsibility for Third-Party System Additions. The Transmission Provider shall not be responsible for making arrangements for any necessary engineering, permitting, and

construction of transmission on the system(s) of any other entity or for obtaining any regulatory approval for such facilities. The Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice.

21.2 Coordination of Third-Party System Additions. In circumstances where the need for transmission facilities or upgrades is identified pursuant to the provisions of Part II of the Tariff, and if such upgrades further require the addition of transmission facilities on other systems, the Transmission Provider shall have the right to coordinate construction on its own system with the construction required by others. The Transmission Provider, after consultation with the Transmission Customer and representatives of such other systems, may defer construction of its new transmission facilities, if the new transmission facilities on another system cannot be completed in a timely manner. The Transmission Provider shall notify the Transmission Customer in writing of the basis for any decision to defer construction and the specific problems which must be resolved before it will initiate or resume construction of new facilities. Within sixty (60) Calendar Days of receiving written notification by the Transmission Provider of its intent to defer construction pursuant to this section, the Transmission Customer may challenge the decision in accordance with the dispute resolution procedures pursuant to Section 12 or it may refer the dispute to the Commission for resolution.

22. Changes in Service Specifications

22.1 Modifications On a Non-Firm Basis. The Transmission Customer taking Firm Point-To-Point Transmission Service may request the

Transmission Provider to provide transmission service on a non-firm basis over Point(s) of Receipt and Point(s) of Delivery other than those specified in the Service Agreement or agreed on pursuant to an Umbrella Agreement (“Secondary Receipt and Delivery Points”), in amounts not to exceed its firm capacity reservation, without incurring an additional Non-Firm Point-To-Point Transmission Service charge or executing a new Service Agreement or Umbrella Agreement, subject to the following conditions.

- (a) Service provided over secondary Points of Receipt and Points of Delivery will be non-firm only, on an as-available basis and will not displace any firm or non-firm service reserved or scheduled by third-parties under the Tariff.
- (b) The sum of all Firm and Non-Firm Point-To-Point Transmission Service provided to the Transmission Customer at any time pursuant to this section shall not exceed the Reserved Capacity in the relevant Service Agreement or agreed on pursuant to an Umbrella Agreement under which such services are provided.
- (c) The Transmission Customer shall retain its right to schedule Firm Point-To-Point Transmission Service at the Point(s) of Receipt and Point(s) of Delivery specified in the relevant Service Agreement or agreed on pursuant to an Umbrella Agreement in the amount of its original capacity reservation.
- (d) Service over secondary Points of Receipt and Points of Delivery on a non-firm basis shall not require the filing of an Application for Non-Firm Point-To-Point Transmission Service under the Tariff. However, all other requirements of Part II of the Tariff (except as to

transmission rates) shall apply to transmission service on a non-firm basis over secondary Points of Receipt and Points of Delivery.

22.2 Modification On a Firm Basis. Any request by a Transmission Customer to modify Point(s) of Receipt and Point(s) of Delivery on a firm basis shall be treated as a new request for service in accordance with Section 17 hereof, except that such Transmission Customer shall not be obligated to pay any additional deposit if the capacity reservation does not exceed the amount reserved in the existing Service Agreement or agreed on pursuant to an Umbrella Agreement. While such new request is pending, the Transmission Customer shall retain its priority for service at the existing firm Point(s) of Receipt and Point(s) of Delivery specified in its Service Agreement or agreed on pursuant to an Umbrella Agreement.

23. Sale or Assignment of Transmission Service

23.1 Procedures for Assignment or Transfer of Service. Subject to Commission approval of any necessary filings, a Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Service Agreement or Umbrella Agreement, but only to another Eligible Customer (the “Assignee”). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement or Umbrella Agreement is hereafter referred to as the Reseller. Compensation to the Reseller shall not exceed the higher of: (i) the original rate paid by the Reseller; (ii) the Transmission Provider’s maximum rate on file at the time of the assignment; or (iii) the Reseller’s opportunity cost capped at the Transmission Provider’s cost of expansion; provided that, for service prior to October 1, 2010, -compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee.

The Assignee must execute a service agreement with the Transmission Provider governing reassignments of transmission service prior to the date on which the reassigned service commences. The Transmission Provider shall charge the Reseller, as appropriate, at the rate stated in the Reseller's Service Agreement with the Transmission Provider or the associated OASIS schedule and credit the Reseller with the price reflected in the Assignee's Service Agreement with the Transmission Provider or the associated OASIS schedule; provided that, such credit shall be reversed in the event of non-payment by the Assignee. If the Assignee does not request any change in the Point(s) of Receipt or the Point(s) of Delivery, or a change in any other term or condition set forth in the original Service Agreement or Umbrella Agreement, the Assignee will receive the same services as did the Reseller and the priority of service for the Assignee will be the same as that of the Reseller. ~~A Reseller should notify the Transmission Provider as soon as possible after any assignment or transfer of service occurs but in any event, notification must be provided prior to any provision of service to the Assignee.~~ The Assignee will be subject to all terms and conditions of this Tariff. If the Assignee requests a change in service, the reservation priority of service will be determined by the Transmission Provider pursuant to Section 13.2.

- 23.2 Limitations on Assignment or Transfer of Service.** If the Assignee requests a change in the Point(s) of Receipt or Point(s) of Delivery on a firm basis, the request shall be treated as a new request for service in accordance with Section 22.2. If the Assignee requests a change in any other specifications set forth in the original Service Agreement or Umbrella Agreement, the Transmission Provider will consent to such change subject to the provisions of the Tariff, provided that the

change will not impair the operation and reliability of the Transmission Provider's Transmission System. The Assignee shall compensate the Transmission Provider for performing any System Impact Study needed to evaluate the capability of the Transmission System to accommodate the proposed change and any additional costs resulting from such change. The Reseller shall remain liable for the performance of all obligations under the Service Agreement or Umbrella Agreement, except as specifically agreed to by the ~~Parties~~[Transmission Provider and the Reseller](#) through an amendment to the Service Agreement or Umbrella Agreement.

23.3 Information on Assignment or Transfer of Service. In accordance with Section 4, ~~Resellers may~~[all sales or assignments of capacity must be conducted through or otherwise posted on the Transmission Provider's OASIS on or before the date the reassigned service commences and are subject to Section 23.1. Resellers may also](#) use the Transmission Provider's OASIS to post transmission capacity available for resale.

24. Metering and Power Factor Correction at Point(s) of Receipt and Point(s) of Delivery

24.1 Transmission Customer Obligations. Unless otherwise agreed, the Transmission Customer shall be responsible for installing and maintaining compatible metering and communications equipment to accurately account for the capacity and energy being transmitted under Part II of the Tariff and to communicate the information to the Transmission Provider. Such equipment shall remain the property of the Transmission Customer.

24.2 Transmission Provider Access to Metering Data. The Transmission Provider shall have access to metering data, which may

reasonably be required to facilitate measurements and billing under the Service Agreement.

24.3 Power Factor. Unless otherwise agreed, the Transmission Customer is required to maintain a power factor within the same range as the Transmission Provider pursuant to Good Utility Practices. The power factor requirements are specified in the Service Agreement or Umbrella Agreement where applicable.

25. Compensation for Transmission Service

Rates for Firm and Non-Firm Point-To-Point Transmission Service are provided in Schedules 01 and 02, respectively, [of Attachment L](#). The rates in Schedules 01 and 02 [of Attachment L](#) are the rates payable by the Transmission Customer and are the combined rates of the Transmission Provider and the Transmission Owner for Firm and Non-Firm Point-To-Point Transmission Service, respectively. The Transmission Provider's rates for Firm and Non-Firm Point-To-Point Transmission Service are provided in the Transmission Provider's Rate Schedule 101 and 102, respectively. The Transmission Owner's rates for Firm and Non-Firm Point-To-Point Transmission Service are provided in the Transmission Owner's Rate Schedules 3001 and 3002, respectively.

26. Stranded Cost Recovery

The Transmission Provider may seek to recover stranded costs from the Transmission Customer pursuant to this Tariff in accordance with the terms, conditions and procedures approved by the Commission.

27. Compensation for New Facilities and Redispatch Costs

Whenever a System Impact Study performed by the Transmission Provider in connection with the provision of Firm Point-To-Point Transmission Service identifies the need for new facilities, the Transmission Customer shall be

responsible for such costs in accordance with Attachment ~~KO~~. Whenever a System Impact Study performed by the Transmission Provider identifies capacity constraints that may be relieved ~~more economically~~ by generation redispatch, ~~than by building new facilities or upgrading existing facilities to eliminate such constraints~~ the Transmission Provider shall use commercially reasonable efforts to procure generation resources for such redispatch and the Transmission Customer shall be responsible for the redispatch costs.

III. NETWORK INTEGRATION TRANSMISSION SERVICE

Preamble

The Transmission Provider will provide Network Integration Transmission Service pursuant to the applicable terms and conditions contained in the Tariff and Service Agreement. Network Integration Transmission Service allows the Network Customer to integrate, economically dispatch and regulate its current and planned Network Resources to serve its Network Load. Network Integration Transmission Service also may be used by the Network Customer to deliver economy energy purchases to its Network Load from non-designated resources on an as-available basis without additional charge. Transmission service for sales to non-designated loads will be provided pursuant to the applicable terms and conditions of Part II of the Tariff.

28. Nature of Network Integration Transmission Service

28.1 Scope of Service. Network Integration Transmission Service is a transmission service that allows Network Customers to efficiently and economically utilize their Network Resources (as well as other non-designated generation resources) to serve their Network Load located in the Transmission Provider's Control Area and any additional load that may be designated pursuant to Section 31.3 of the Tariff. The Network Customer taking Network Integration Transmission Service must obtain or provide Ancillary Services pursuant to Section 3.

28.2 Transmission Provider Responsibilities. The Transmission Provider will plan, construct, operate and maintain its Transmission System in accordance with Good Utility Practice [and its planning obligations in Attachment K](#) in order to provide the Network Customer with Network Integration Transmission Service over the Transmission Provider's Transmission System. The Transmission

Provider shall include the Network Customer's Network Load in its Transmission System planning and shall, consistent with Good Utility Practice [and Attachment K](#), and in accordance with Attachment [JP](#), endeavor to construct and place into service sufficient [transmission capacity transfer capability](#) to deliver the Network Customer's Network Resources to serve its Network Load.

28.3 Network Integration Transmission Service. The Transmission Provider will provide firm transmission service over its Transmission System to the Network Customer for the delivery of capacity and energy from its designated Network Resources to service its Network Loads.

28.4 Secondary Service. The Network Customer may use the Transmission Provider's Transmission System to deliver energy to its Network Loads from resources that have not been designated as Network Resources. Such energy shall be transmitted, on an as-available basis, at no additional charge. [Secondary service shall not require the filing of an Application for Network Integration Transmission Service under the Tariff. However, all other requirements of Part III of the Tariff \(except for transmission rates\) shall apply to secondary service.](#) Deliveries from resources other than Network Resources will have a higher priority than any Non-Firm Point-To-Point Transmission Service under Part II of the Tariff.

28.5 Real Power Losses. Real Power Losses are associated with all transmission service. The Network Customer is responsible for replacing losses associated with all transmission service as calculated by the Transmission Provider. The applicable Real Power Loss factors are set out in Transmission Provider's Rate Schedule 110 and are also set out in Schedule [10 of Attachment L.10](#).

28.6 Restrictions on Use of Service. The Network Customer shall not use Network Integration Transmission Service for: (i) sales of capacity and energy to non-designated loads; or (ii) direct or indirect provision of transmission service by the Network Customer to third parties. All Network Customers taking Network Integration Transmission Service shall use Point-To-Point Transmission Service under Part II of the Tariff for any Third-Party Sale which requires use of the Transmission Provider's Transmission System. The Transmission Provider shall specify any appropriate charges and penalties and all related terms and conditions applicable in the event that a Network Customer uses Network Integration Transmission Service or secondary service pursuant to Section 28.4 to facilitate a wholesale sale that does not serve a Network Load. All related terms and conditions are specified in Attachment Q-2 and Tariff Supplement No. 3 of the Transmission Provider.

29. Initiating Service

29.1 Condition Precedent for Receiving Service. Subject to the terms and conditions of Part III of the Tariff, the Transmission Provider will provide Network Integration Transmission Service to any Eligible Customer, provided that: (i) the Eligible Customer completes an Application for service as provided under Part III of the Tariff; (ii) the Eligible Customer and the Transmission Provider complete the technical arrangements set forth in Sections 29.3 and 29.4; (iii) the Eligible Customer executes a Service Agreement pursuant to Attachment F for service under Part III of the Tariff or requests in writing that the Transmission Provider file a proposed unexecuted Service Agreement with the Commission; and (iv) the Eligible Customer executes a Network Operating Agreement with the Transmission Provider pursuant to Attachment G.

29.2 Application Procedures. An Eligible Customer requesting service under Part III of the Tariff must submit an Application, which shall include a deposit approximating the charge for one month of service in accordance with [Section 11.2 Attachment L](#), to the Transmission Provider as far as possible in advance of the month in which service is to commence. Unless subject to the procedures in Section 2, Completed Applications for Network Integration Transmission Service will be assigned a priority according to the date and time the Application is received, with the earliest Application receiving the highest priority. Applications must be submitted by entering the information listed below on the Transmission Provider's OASIS. If the Transmission Provider's OASIS is not functioning, a Completed Application may be submitted by: (i) transmitting the required information to the Transmission Provider by telefax; or (ii) providing the information by telephone over the Transmission Provider's time recorded telephone line. Each of these methods will provide a time-stamped record for establishing the service priority of the Application. A Completed Application shall provide all of the information listed below together with such other information as may be required by the Commission:

- (a) The identity, address, telephone number, [email address](#) and facsimile number of the party requesting service;
- (b) A statement that the party requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) A description of the Network Load at each delivery point. This description should separately identify and provide the Eligible Customer's best estimate of the total loads to be served at each transmission voltage level, and the loads to be served from each

Transmission Provider substation at the same transmission voltage level. The description should include a ten (10) year forecast of summer and winter load and resource requirements beginning with the first year after the service is scheduled to commence;

- (d) The amount and location of any interruptible loads included in the Network Load. This shall include the summer and winter capacity requirements for each interruptible load (had such load not been interruptible), that portion of the load subject to interruption, the conditions under which an interruption can be implemented and any limitations on the amount and frequency of interruptions. An Eligible Customer should identify the amount of interruptible customer load (if any) included in the 10 year load forecast provided in response to (c) above;
- (e) A description of Network Resources (current and 10-year projection), ~~which shall include, for, For~~ each on-system Network Resource, such description shall include:
- Unit size and amount of capacity from that unit to be designated as Network Resource
 - VAR capability (both leading and lagging) of all generators
 - Operating restrictions
 - Any periods of restricted operations throughout the year
 - Maintenance schedules
 - Minimum loading level of unit
 - Normal operating level of unit

- Any must-run unit designations required for system reliability or contract reasons
- Approximate variable generating cost (\$/MWH) for redispatch computations
- Arrangements governing sale and delivery of power to third parties from generating facilities located in the Transmission Provider Control Area, where only a portion of unit output is designated as a Network Resource;

For each off-system Network Resource, such description shall include:

- Identification of the Network Resource as an off-system resource
- Amount of power to which the customer has rights
- Identification of the control area from which the power will originate
- Description of purchased power designated as a Network Resource including source of supply, Control Area location, transmission arrangements and delivery point(s) to the Transmission Provider's Transmission System
- Transmission arrangements on the external transmission system(s)
- Operating restrictions, if any
 - Any periods of restricted operations throughout the year
 - Maintenance schedules
 - Minimum loading level of unit

- Normal operating level of unit
- Any must-run unit designations required for system reliability or contract reasons
- Approximate variable generating cost (\$/MWH) for redispatch computations;

(f) Description of Eligible Customer's transmission system:

- Load flow and stability data, such as real and reactive parts of the load, lines, transformers, reactive devices and load type, including normal and emergency ratings of all transmission equipment in a load flow format compatible with that used by the Transmission Provider
- Operating restrictions needed for reliability
- Operating guides employed by system operators
- Contractual restrictions or committed uses of the Eligible Customer's transmission system, other than the Eligible Customer's Network Loads and Resources
- Location of Network Resources described in subsection (e) above
- 10 year projection of system expansions or upgrades
- Transmission System maps that include any proposed expansions or upgrades
- Thermal ratings of Eligible Customer's Control Area ties with other Control Areas; ~~and~~

- (g) Service Commencement Date and the term of the requested Network Integration Transmission Service. The minimum term for Network Integration Transmission Service is one (1) year;
- (h) A statement signed by an authorized officer from or agent of the Network Customer attesting that all of the Network Resources listed pursuant to Section 29.2(e) satisfy the following conditions: (1) the Network Customer owns the resource, has committed to purchase generation pursuant to an executed contract, or has committed to purchase generation where execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff; and (2) the Network Resources do not include any resources, or any portion thereof, that are committed for sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis; and
- (i) Any additional information required of the Transmission Customer as specified in the Transmission Provider's planning process established in Attachment K.

Subject to Attachment P,M-2, unless the Parties agree to a different time frame, the Transmission Provider must acknowledge the request within ten (10) Calendar Days of receipt. The acknowledgment must include a date by which a response, ~~including a Service Agreement~~, will be sent to the Eligible Customer. Subject to Attachment P,M-2, if an Application fails to meet the requirements of this section, the Transmission Provider shall notify the Eligible Customer requesting service within fifteen (15) Calendar Days of receipt and specify the reasons for such failure. Wherever possible, the Transmission Provider will attempt to remedy deficiencies in the Application through informal communications with the Eligible Customer.

If such efforts are unsuccessful fifteen (15) Calendar Days after notifying the Eligible Customer of the deficiencies, the Transmission Provider shall return the Application without prejudice to the Eligible Customer filing a new or revised Application that fully complies with the requirements of this section. The Eligible Customer will be assigned a new priority consistent with the date of the new or revised Application. The Transmission Provider shall treat this information consistent with its standards of conduct as approved by the Commission.

29.3 Technical Arrangements to be Completed Prior to Commencement of Service. Network Integration Transmission Service shall not commence until the Transmission Provider and the Network Customer, or a third party, have completed installation of all equipment specified under the Network Operating Agreement consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. Subject to Attachment P₅M-2, the Transmission Provider shall exercise reasonable efforts, in coordination with the Network Customer, to complete such arrangements as soon as practicable taking into consideration the Service Commencement Date.

29.4 Network Customer Facilities. The provision of Network Integration Transmission Service shall be conditioned upon the Network Customer's constructing, maintaining and operating the facilities on its side of each delivery point or interconnection necessary to reliably deliver capacity and energy from the Transmission Provider's Transmission System to the Network Customer. The Network Customer shall be solely responsible for constructing or installing all facilities on the Network Customer's side of each such delivery point or interconnection.

~~29.5 Filing of Service Agreement. The Transmission Provider will file Service Agreements with the Commission in compliance with applicable Commission regulations.~~

30. Network Resources

30.1 Designation of Network Resources. Network Resources shall include all generation owned, purchased or leased by the Network Customer designated to serve Network Load under the Tariff. Network Resources may not include resources, or any portion thereof, that are committed for sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis. Any owned or purchased resources that were serving the Network Customer's loads under firm agreements entered into on or before the Service Commencement Date shall initially be designated as Network Resources until the Network Customer terminates the designation of such resources.

30.2 Designation of New Network Resources. The Network Customer may designate a new Network Resource by providing the Transmission Provider with as much advance notice as practicable. A designation of a new Network Resource must be made [through the Transmission Provider's OASIS](#) by a request for modification of service pursuant to an Application under Section 29. [This request must include a statement that the new network resource satisfies the following conditions: \(1\) the Network Customer owns the resource, has committed to purchase generation pursuant to an executed contract, or has committed to purchase generation where execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff; and \(2\) The Network Resources do not include any resources, or any portion thereof, that are committed for](#)

sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis. The Network Customer's request will be deemed deficient if it does not include this statement and the Transmission Provider will follow the procedures for a deficient application as described in Section 29.2 of the Tariff.

30.3 Termination of Network Resources. The Network Customer may terminate the designation of all or part of a generating resource as a Network Resource ~~at any time but should provide by providing~~ notification to the Transmission Provider ~~through OASIS~~ as soon as reasonably practicable, ~~but not later than the firm scheduling deadline for the period of termination. Any request for termination of Network Resource status must be submitted on OASIS, and should indicate whether the request is for indefinite or temporary termination. A request for indefinite termination of Network Resource status must indicate the date and time that the termination is to be effective, and the identification and capacity of the resource(s) or portions thereof to be indefinitely terminated. A request for temporary termination of Network Resource status must include the following:~~

- ~~(a) Effective date and time of temporary termination;~~
- ~~(b) Effective date and time of redesignation, following period of temporary termination;~~
- ~~(c) Identification and capacity of resource(s) or portions thereof to be temporarily terminated;~~

- ~~(d) Resource description and attestation for redesignating the network resource following the temporary termination, in accordance with Section 30.2; and~~
- ~~(e) Identification of any related transmission service requests to be evaluated concomitantly with the request for temporary termination, such that the requests for undesignation and the request for these related transmission service requests must be approved or denied as a single request. The evaluation of these related transmission service requests must take into account the termination of the network resources identified in (e) above, as well as all competing transmission service requests of higher priority.~~

~~As part of a temporary termination, a Network Customer may only redesignate the same resource that was originally designated, or a portion thereof. Requests to redesignate a different resource and/or a resource with increased capacity will be deemed deficient and the Transmission Provider will follow the procedures for a deficient application as described in Section 29.2 of the Tariff.~~

30.4 Operation of Network Resources. The Network Customer shall not operate its designated Network Resources located in the Network Customer's or Transmission Provider's Control Area such that the output of those facilities exceeds its designated Network Load, plus ~~non-firm sales~~Non-Firm Sales delivered pursuant to Part II of the Tariff, plus losses, plus power sales under a Commission approved reserve sharing program. This limitation shall not apply to changes in the operation of a Transmission Customer's Network Resources at the

request of the Transmission Provider to respond to an emergency or other unforeseen condition, which may impair or degrade the reliability of the Transmission System. For all Network Resources not physically connected with the Transmission Provider's Transmission System, the Network Customer may not schedule delivery of energy in excess of the Network Resource's capacity, as specified in the Network Customer's Application pursuant to Section 29, unless the Network Customer supports such delivery within the Transmission Provider's Transmission System by either obtaining Point-to-Point Transmission Service or utilizing secondary service pursuant to Section 28.4. The Transmission Provider shall specify the rate treatment and all related terms and conditions applicable in the event that a Network Customer's schedule at the delivery point for a Network Resource not physically interconnected with the Transmission Provider's Transmission System exceeds the Network Resource's designated capacity, excluding energy delivered using secondary service or Point-to-Point Transmission Service.

30.5 Network Customer Redispatch Obligation. As a condition to receiving Network Integration Transmission Service, the Network Customer agrees to redispatch its Network Resources as requested by the Transmission Provider pursuant to Section 33.2. To the extent practical, the redispatch of resources pursuant to this section shall be on a least cost, non-discriminatory basis between all Network Customers, and the Transmission Provider.

30.6 Transmission Arrangements for Network Resources Not Physically Interconnected With The Transmission Provider. The Network Customer shall be responsible for any arrangements necessary to deliver capacity and energy from a Network Resource not physically interconnected with the Transmission Provider's

Transmission System. The Transmission Provider will undertake reasonable efforts to assist the Network Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other entity pursuant to Good Utility Practice.

30.7 Limitation on Designation of Network Resources. The Network Customer must demonstrate that it owns or has committed to purchase generation pursuant to an executed contract in order to designate a generating resource as a Network Resource. Alternatively, the Network Customer may establish that execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff.

30.8 Use of Interface Capacity by the Network Customer. There is no limitation upon a Network Customer's use of the Transmission Provider's Transmission System at any particular interface to integrate the Network Customer's Network Resources (or substitute economy purchases) with its Network Loads . However, a Network Customer's use of the Transmission Provider's total interface capacity with other transmission systems may not exceed the Network Customer's Load.

30.9 Network Customer Owned Transmission Facilities. The Network Customer that owns existing transmission facilities that are integrated with the Transmission Provider's Transmission System may be eligible to receive consideration either through a billing credit or some other mechanism. In order to receive such consideration the Network Customer must demonstrate that its transmission facilities are integrated into the plans or operations of the Transmission Provider to serve its power and transmission customers. For facilities

~~constructed~~added by the Network Customer subsequent to the Service Commencement Date under Part III of the Tariff~~[the date new rate schedules of the Transmission Provider implementing the proposed revisions herein are made effective by the Commission]~~ ~~[the effective date of a Final Rule in RM05-25-000]~~, the Network Customer shall receive credit ~~wherefor such transmission facilities added if~~ such facilities are ~~jointly planned and installed in coordination with integrated into the operations of~~ the Transmission Provider. ~~Calculation of the's facilities; provided however, the Network Customer's transmission facilities shall be presumed to be integrated if such transmission facilities, if owned by the Transmission Provider, would be eligible for inclusion in the Transmission Provider's annual transmission revenue requirement as specified in Attachment H.~~ Calculation of any credit under this subsection shall be addressed in either the Network Customer's Service Agreement or any other agreement between the Parties.

31. Designation of Network Load

31.1 Network Load. The Network Customer must designate the individual Network Loads on whose behalf the Transmission Provider will provide Network Integration Transmission Service. The Network Loads shall be specified in the Service Agreement.

31.2 New Network Loads Connected With the Transmission Provider. The Network Customer shall provide the Transmission Provider with as much advance notice as reasonably practicable of the designation of new Network Load that will be added to its Transmission System. A designation of new Network Load must be made by a request for a modification of service pursuant to a new Application under Section 29. The Transmission Provider will use due diligence to install any

transmission facilities required to interconnect a new Network Load designated by the Network Customer. The costs of new facilities required to interconnect a new Network Load shall be determined in accordance with the procedures provided in Section 32.4 and shall be charged to the Network Customer in accordance with Commission policies.

31.3 Network Load Not Physically Interconnected with the Transmission Provider. This section applies to both initial designation pursuant to Section 31.1 and the subsequent addition of new Network Load not physically interconnected with the Transmission Provider. To the extent that the Network Customer desires to obtain transmission service for a load outside the Transmission Provider's Transmission System, the Network Customer shall have the option of: (i) electing to include the entire load as Network Load for all purposes under Part III of the Tariff and designating Network Resources in connection with such additional Network Load; or (ii) excluding that entire load from its Network Load and purchasing Point-To-Point Transmission Service under Part II of the Tariff. To the extent that the Network Customer gives notice of its intent to add a new Network Load as part of its Network Load pursuant to this section the request must be made by a request for modification of service pursuant to a new Application under Section 29.

31.4 New Interconnection Points. To the extent the Network Customer desires to add a new delivery point or interconnection point between the Transmission Provider's Transmission System and a Network Load, the Network Customer shall provide the Transmission Provider with as much advance notice as reasonably practicable.

31.5 Changes in Service Requests. Under no circumstances shall the Network Customer's decision to cancel or delay a requested change in Network Integration Transmission Service (e.g. the addition of a new Network Resource or designation of a new Network Load) in any way relieve the Network Customer of its obligation to pay the costs of transmission facilities constructed by the Transmission Provider and charged to the Network Customer as reflected in the Service Agreement. However, the Transmission Provider must treat any requested change in Network Integration Transmission Service in a non-discriminatory manner.

31.6 Annual Load and Resource Information Updates. The Network Customer shall provide the Transmission Provider with annual updates of Network Load and Network Resource forecasts consistent with those included in its Application for Network Integration Transmission Service under Part III of the Tariff [including, but not limited to, any information provided under section 29.2\(i\) pursuant to the Transmission Provider's planning process in Attachment K.](#) The Network Customer also shall provide the Transmission Provider with timely written notice of material changes in any other information provided in its Application relating to the Network Customer's Network Load, Network Resources, its transmission system or other aspects of its facilities or operations affecting the Transmission Provider's ability to provide reliable service.

32. Additional Study Procedures For Network Integration Transmission Service Requests

32.1 Notice of Need for System Impact Study After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. After receiving a request for service, the Transmission

Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. Subject to Attachment M-2, if the Transmission Provider determines that a System Impact Study is not necessary, the Transmission Provider shall within thirty (30) Calendar Days of receipt of a Completed Application tender a Service Agreement and, within fifteen (15) Calendar Days of the tendering of the Service Agreement, the Eligible Customer must execute a Service Agreement or request the filing of an unexecuted Service Agreement, or the Application shall be deemed terminated and withdrawn.

Subject to Attachment P,M-2, if the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. Subject to Attachment P,M-2, in such cases, the Transmission Provider shall within thirty (30) Calendar Days of receipt of a Completed Application, tender a System Impact Study Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it with a refundable deposit of \$50,000 in accordance with Section 11.2 Attachment L to the Transmission Provider within fifteen (15) Calendar Days. If the Eligible Customer elects not to execute the System Impact Study Agreement or not to provide the required deposit in accordance with Section 11.2 Attachment L, its Application shall be deemed withdrawn and its deposit shall be returned pursuant to Section 17.3.

32.2 System Impact Study Agreement and Cost Reimbursement

- (a) The System Impact Study Agreement will clearly specify the Transmission Provider's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.
- (b) If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for the Transmission Provider to accommodate the service requests, the costs of that study shall be pro-rated among the Eligible Customers.
- (c) Reserved.

32.3 System Impact Study Procedures. Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a sixty (60) Calendar Day period or as otherwise agreed to with the Network Customer. The System Impact Study shall identify (1) any system constraints and redispatch options, identified with specificity by transmission element or flowgate, (2) redispatch options (when requested by an Eligible Customer) including, to the extent it is

voluntarily provided by the resource owner, an estimate of the cost of redispatch, (3) available options for installation of automatic devices to curtail service (when requested by an Eligible Customer), and (4) additional Direct Assignment Facilities or Network Upgrades required to provide the requested service. For customers requesting the study of redispatch options, the System Impact Study shall (1) identify all resources located within the Transmission Provider's Control Area that can significantly contribute toward relieving the system constraint and (2) provide a measurement of each resource's impact on the system constraint. If the Transmission Provider possesses information indicating that any resource outside its Control Area could relieve the constraint, it shall identify each such resource in the System Impact Study. In the event that the Transmission Provider is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer as soon as the System Impact Study is complete. The Transmission Provider shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) Calendar Days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement or request the filing of an unexecuted Service Agreement, or the Application shall be deemed terminated and withdrawn.

32.4 Facilities Study Procedures. If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, the Transmission Provider, within thirty (30) Calendar Days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it with a refundable deposit of \$100,000 in accordance with [Section 11.2 Attachment L](#) to the Transmission Provider within fifteen (15) Calendar Days. If the Eligible Customer elects not to execute the Facilities Study Agreement or not to provide the required deposit in accordance with [Section 11.2 Attachment L](#), its Application shall be deemed withdrawn and its deposit shall be returned pursuant to Section 17.3. Upon receipt of an executed Facilities Study Agreement, the Transmission Provider will use due diligence to complete the required Facilities Study within a sixty (60) Calendar Day period [or as otherwise agreed to with the Network Customer](#). If the Transmission Provider is unable to complete the Facilities Study in the allotted time period, the Transmission Provider shall notify the Eligible Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of: (i) the cost of Direct Assignment Facilities to be charged to the Eligible Customer; (ii) the Eligible Customer's appropriate share of the cost of any required Network Upgrades; and (iii) the time required to complete such construction and initiate the requested service. [As soon as the Facilities Study is complete, the Transmission Provider shall make a copy of the completed Facilities Study available and](#)

tender a Service Agreement to the Eligible Customer. The Eligible Customer shall provide the Transmission Provider with a letter of credit or other reasonable form of security acceptable to the Transmission Provider equivalent to the costs of new facilities or upgrades in accordance with Attachment ~~K~~O and consistent with commercial practices as established under the laws of Canada and the Province of British Columbia. After being tendered with a Service Agreement, ~~t~~The Eligible Customer shall have sixty (60) Calendar Days to execute a Service Agreement or request the filing of an unexecuted Service Agreement and provide the required letter of credit or other form of security or the request no longer will be a Completed Application and shall be deemed terminated and withdrawn.

32.5 Penalties for Failure to Meet Study Deadlines. Section 19.9 defines penalties that apply for failure to meet the ~~60-day~~ study completion due diligence deadlines for System Impact Studies and Facilities Studies under Part II of the Tariff. These same requirements and penalties apply to service under Part III of the Tariff.

33. Load Shedding and Curtailments

33.1 Procedures. Prior to the Service Commencement Date, the Transmission Provider and the Network Customer shall establish Load Shedding and Curtailment procedures pursuant to the Network Operating Agreement with the objective of responding to contingencies on the Transmission System. The Parties will implement such programs during any period when the Transmission Provider determines that a system contingency exists and such procedures are necessary to alleviate such contingency. The

Transmission Provider will notify all affected Network Customers in a timely manner of any scheduled Curtailment.

33.2 Transmission Constraints. During any period when the Transmission Provider determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission Provider's system, the Transmission Provider will take whatever actions, consistent with Good Utility Practice, that are reasonably necessary to maintain the reliability of the Transmission Provider's system. To the extent the Transmission Provider determines that the reliability of the Transmission System can be maintained by redispatching resources, the Transmission Provider will initiate procedures pursuant to the Network Operating Agreement to redispatch all Network Resources on a least-cost basis without regard to the ownership of such resources. Any redispatch under this section may not unduly discriminate among any Network Customer's use of the Transmission System to serve its designated Network Load.

33.3 Cost Responsibility for Relieving Transmission Constraints. Whenever the Transmission Provider implements least-cost redispatch procedures in response to a transmission constraint, the Network Customers will each bear a proportionate share of the total redispatch cost based on their respective Load Ratio Shares.

33.4 Curtailments of Scheduled Deliveries. If a transmission constraint on the Transmission Provider's Transmission System cannot be relieved through the implementation of least-cost redispatch procedures and the Transmission Provider determines that it is necessary to curtail scheduled deliveries, the Parties shall curtail such schedules in accordance with the Network Operating Agreement.

- 33.5 Allocation of Curtailments.** The Transmission Provider shall, on a non-discriminatory basis, curtail the transaction(s) that effectively relieve the constraint. However, to the extent practicable and consistent with Good Utility Practice, any curtailment will be shared by the Network Customers in proportion to their respective Load Ratio Shares.
- 33.6 Load Shedding.** To the extent that a system contingency exists on the Transmission Provider's Transmission System and the Transmission Provider determines that it is necessary for the Network Customer to shed load, the Network Customer shall shed load in accordance with previously established procedures under the Network Operating Agreement.
- 33.7 System Reliability.** Notwithstanding any other provisions of this Tariff, the Transmission Provider reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to curtail Network Integration Transmission Service without liability on the Transmission Provider's part for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations and facilities, and in cases where the continuance of Network Integration Transmission Service would endanger persons or property. In the event of any adverse condition(s) or disturbance(s) on the Transmission Provider's Transmission System or on any other system(s) directly or indirectly interconnected with the Transmission Provider's Transmission System, the Transmission Provider, consistent with Good Utility Practice, also may curtail Network Integration Transmission Service in order to: (i) limit the extent or damage of the adverse condition(s) or disturbance(s); (ii) prevent damage to generating or transmission facilities; or (iii) expedite restoration of service. The Transmission Provider will give the

Network Customer as much advance notice as is practicable in the event of such curtailment. The Transmission Provider shall specify the rate treatment and all related terms and conditions applicable in the event that the Network Customer fails to respond to established Load Shedding and Curtailment procedures.

34. Rates and Charges

The Network Customer shall pay the Transmission Provider for any Direct Assignment Facilities, Ancillary Services, and applicable study costs pursuant to this Tariff, along with the following:

34.1 Monthly Demand Charge. The Network Customer shall pay a monthly Demand Charge, which shall be determined by multiplying its Load Ratio Share times one twelfth ($1/12$) of the Transmission Provider's Annual Transmission Revenue Requirement specified in Attachment H.

34.2 Determination of Network Customer's Monthly Network Load. The Network Customer's monthly Network Load is its hourly load expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis (including its designated Network Load not physically interconnected with the Transmission Provider under Section 31.3) coincident with the Transmission Provider's Monthly Transmission System Peak.

34.3 Determination of Transmission Provider's Monthly Transmission System Load. The Transmission Provider's monthly Transmission System load is the Transmission Provider's Monthly Transmission System Peak minus the coincident peak usage of all Firm Point-To-Point Transmission Service customers pursuant to Part

II of this Tariff plus the Reserved Capacity of all Firm Point-To-Point Transmission Service customers.

34.4 Redispatch Charge. The Network Customer shall pay a Load Ratio Share of any redispatch costs allocated among the Network Customers pursuant to Section 33. To the extent that the Transmission Provider incurs an obligation to the Network Customer for redispatch costs in accordance with Section 33, such amounts shall be credited against the Network Customer's bill for the applicable month.

34.5 Stranded Cost Recovery. The Transmission Provider may seek to recover stranded costs from the Network Customer pursuant to this Tariff in accordance with the terms, conditions and procedures approved by the Commission.

35. Operating Arrangements

35.1 Operation under The Network Operating Agreement. The Network Customer shall plan, construct, operate and maintain its facilities in accordance with Good Utility Practice and in conformance with the Network Operating Agreement.

35.2 Network Operating Agreement. The terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Part III of the Tariff shall be specified in the Network Operating Agreement. The Network Operating Agreement shall provide for the Parties to: (i) operate and maintain equipment necessary for integrating the Network Customer within the Transmission Provider's Transmission System (including, but not limited to, remote terminal units, metering, communications equipment and relaying equipment);

(ii) transfer data between the Transmission Provider and the Network Customer (including, but not limited to, heat rates and operational characteristics of Network Resources, generation schedules for units outside the Transmission Provider's Transmission System, interchange schedules, unit outputs for redispatch required under Section 33, voltage schedules, loss factors and other real time data); (iii) use software programs required for data links and constraint dispatching; (iv) exchange data on forecasted loads and resources necessary for long-term planning; and (v) address any other technical and operational considerations required for implementation of Part III of the Tariff, including scheduling protocols. The Network Operating Agreement will recognize that the Network Customer shall either: (i) operate as a Control Area under applicable guidelines of the North American Electric Reliability Council ("NERC"), ~~Electric Reliability Organization (ERO) as defined in 18 C.F.R. § 39.1,~~ the Western Electricity Coordinating Council ("WECC") and the NorthWest Power Pool ("NWPP"); or (ii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with the Transmission Provider; or (iii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with another entity, consistent with Good Utility Practice, which satisfies NERC, WECC and NWPP requirements ~~the applicable reliability guidelines of the ERO.~~ The Transmission Provider shall not unreasonably refuse to accept contractual arrangements with another entity for Ancillary Services. The Network Operating Agreement is included in Attachment G.

35.3 Network Operating Committee. A Network Operating Committee ("Committee") shall be established to coordinate operating criteria for the Parties' respective responsibilities under the Network Operating Agreement. Each Network Customer shall be entitled to have at least

one representative on the Committee. The Committee shall meet from time to time as need requires, but no less than once each calendar year.

ATTACHMENT A**Umbrella Agreement for Short-Term Firm or
Non-Firm Point-To-Point Transmission Service**

1. This Agreement, dated as of _____, is entered into, by and between _____ (the “Transmission Provider” or “BCTC”), and _____ (the “Transmission Customer”).
2. This Agreement shall come into force upon execution by both Parties. From the time this Agreement comes into force, the Transmission Customer shall be entitled to arrange Short-Term Firm and Short-Term Non-Firm transactions over OASIS without executing a Service Agreement provided that such transactions do not exceed \$_____ in any calendar month. BCTC reserves the right to consent to larger monthly transactions on a case-by-case basis.
3. Identify any affiliates that own, control or operate any transmission facilities. If there are none, include a sworn statement pursuant to Section 6.0 of Transmission Provider’s OATT (the “Tariff”).

4. **Billing and Payment**
 - 4.1 BCTC will submit invoices to the Transmission Customer after the end of each month in which transactions were made.
 - 4.2 Canadian Transmission Customers will be invoiced in Canadian funds. U.S. Transmission Customers will be invoiced in U.S. funds, all using the

exchange rate as set by Transmission Provider's lead bank at noon eastern time on the last business day of each month in which transactions occurred.

- 4.3 Payment shall be remitted in accordance with the terms and conditions of the Tariff.
5. This Agreement shall remain in effect until terminated by either Party on at least thirty (30) Calendar Days written notice to the other. Notwithstanding termination, all commitments, transactions and payment liabilities incurred under this Agreement shall remain until satisfied.
6. Service under this Agreement shall be provided by the Transmission Provider upon request by an authorized representative of the Transmission Customer.
7. The Transmission Customer agrees to supply information the Transmission Provider deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.
8. The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Short-Term Firm or Non-Firm Point-To-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Agreement.
9. Any notice or request made to or by either Party regarding this Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Transmission Customer:

10. Miscellaneous

10.1 This Agreement shall be interpreted in accordance with the laws of the Province of British Columbia.

10.2 This Agreement shall be binding upon and shall inure to the benefit of the Parties and their respective successors.

10.3 This Agreement shall be subject to the Parties obtaining and maintaining any required regulatory approvals.

11. The signatories hereby represent that they have been appropriately authorized to execute this Agreement on behalf of the Party for whom they sign.

12. The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Transmission Customer:

By: _____
Name Title Date

ATTACHMENT A-1

Form Of Service Agreement For The Resale, Reassignment Or Transfer Of Short-Term Firm Point-To-Point Transmission Service

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between _____ (the Transmission Provider), and _____ (the Assignee).
- 2.0 The Assignee has been determined by the Transmission Provider to be an Eligible Customer under the Tariff pursuant to which the transmission service rights to be transferred were originally obtained.
- 3.0 The terms and conditions for the transaction entered into under this Service Agreement shall be subject to the terms and conditions of Part II of the Transmission Provider's Tariff, except for those terms and conditions negotiated by the Reseller of the reassigned transmission capacity (pursuant to Section 23.1 of this Tariff) and the Assignee, to include: contract effective and termination dates, the amount of reassigned capacity or energy, point(s) of receipt and delivery. Changes by the Assignee to the Reseller's Points of Receipt and Points of Delivery will be subject to the provisions of Section 23.2 of this Tariff.
- 4.0 The Transmission Provider shall credit the Reseller for the price reflected in the Assignee's Service Agreement or the associated OASIS schedule.
- 5.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Assignee:

6.0 The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By:

Name	Title	Date

Assignee:

By:

Name	Title	Date

ATTACHMENT B**Form of Service Agreement for
Long-Term Firm Point-To-Point Transmission Service**

1. This Service Agreement, dated as of _____, is entered into, by and between _____ (the “Transmission Provider” or “BCTC”), and _____ (the “Transmission Customer”).
2. The Transmission Customer has been determined by the Transmission Provider to have a Completed Application for Long-Term Firm Point-To-Point Transmission Service under the Transmission Provider’s OATT (the “Tariff”).
3. The Transmission Customer has provided to the Transmission Provider an Application deposit in accordance with the provisions of Section 17.3 of the Tariff or the Transmission Customer has satisfied the Creditworthiness Criteria as set out in Attachment L of the OATT.
4. Service under this agreement shall commence on the later of: (1) the requested service commencement date; or (2) the date on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed; or (3) such other date as it is permitted to become effective by the Commission. Service under this agreement shall terminate on such date as mutually agreed upon by the parties.
5. The Transmission Customer acknowledges that prior to entering this Service Agreement, the Transmission Provider has determined that at the end of the contract term of this Service Agreement,
 - (a) there is **sufficient** capacity to accommodate both the future rollover of this Service Agreement by the Transmission Customer and to provide service to Transmission Customers having earlier priority for transmission service.
 - (b) there is **insufficient** capacity to accommodate both the future rollover of this Service Agreement by the Transmission Customer and ~~to provide~~

transmission service to Transmission Customers having earlier priority ~~for~~
~~transmission service~~. Therefore, even if there is sufficient capacity at the
end of the contract term of this Service Agreement, the Transmission
Customer has no rollover rights with respect to this Service Agreement.

[one of (a) or (b) to be deleted prior to tender]

6. The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Firm Point-To-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement.
7. Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Transmission Customer:

8. No failure by BCTC or the Transmission Customer at any time or from time to time to enforce or require a strict observance of any of the provisions of this Service Agreement shall constitute a waiver of the provision or affect or impair such provisions or the right of BCTC or the Transmission Customer at any time to enforce such provisions or to avail itself of any remedy it may have.

9. (a) This Service Agreement shall be construed in accordance with the laws of the Province of British Columbia; and
- (b) BCTC and the Transmission Customer will promptly comply with all relevant laws and regulations and the relevant orders, rules and requirements of all authorities having jurisdiction.
10. Nothing contained in this Service Agreement shall restrict or limit either Party from establishing, altering or terminating interconnection points with any entity not a party to this Service Agreement or amending or entering into such agreements.
11. This Service Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors.
12. The Tariff and the attached Specifications for Long-Term Firm Point-To-Point Transmission Service is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Transmission Customer:

By: _____
Name Title Date

Specifications For Long-Term Firm Point-To-Point
Transmission Service

1. Term of Transaction: _____
Start Date: _____
Termination Date: _____
2. Description of capacity and energy to be transmitted by Transmission Provider including the electric Control Area in which the transaction originates.

3. Point(s) of Receipt: _____
Delivering Party: _____
4. Point(s) of Delivery: _____
Receiving Party: _____
5. Maximum amount of capacity and energy to be transmitted (Reserved Capacity):

6. Designation of party(ies) subject to reciprocal service obligation:

7. Name(s) of any Intervening Systems providing transmission service:

8. Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

8.1 Transmission Charge:

8.2 System Impact and/or Facilities Study Charge(s):

8.3 Direct Assignment Facilities Charge:

8.4 Ancillary Services Charges:

ATTACHMENT B-1

Form Of Service Agreement For The Resale, Reassignment Or Transfer Of Long-Term Firm Point-To-Point Transmission Service

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between _____ (the Transmission Provider), and _____ (the Assignee).
- 2.0 The Assignee has been determined by the Transmission Provider to be an Eligible Customer under the Tariff pursuant to which the transmission service rights to be transferred were originally obtained.
- 3.0 The terms and conditions for the transaction entered into under this Service Agreement shall be subject to the terms and conditions of Part II of the Transmission Provider's Tariff, except for those terms and conditions negotiated by the Reseller of the reassigned transmission capacity (pursuant to Section 23.1 of this Tariff) and the Assignee, to include: contract effective and termination dates, the amount of reassigned capacity or energy, point(s) of receipt and delivery. Changes by the Assignee to the Reseller's Points of Receipt and Points of Delivery will be subject to the provisions of Section 23.2 of this Tariff.
- 4.0 The Transmission Provider shall credit the Reseller for the price reflected in the Assignee's Service Agreement or the associated OASIS schedule.
- 5.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Assignee:

6.0 The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Assignee:

By: _____
Name Title Date

Specifications For The Resale, Reassignment Or Transfer of
Long-Term Firm Point-To-Point Transmission Service

1.0 Term of Transaction: _____

_____ Start Date: _____

_____ Termination Date: _____

2.0 Description of capacity and energy to be transmitted by Transmission Provider
including the electric Control Area in which the transaction originates.

3.0 Point(s) of Receipt: _____

_____ Delivering Party: _____

4.0 Point(s) of Delivery: _____

_____ Receiving Party: _____

5.0 Maximum amount of reassigned capacity: _____

6.0 Designation of party(ies) subject to reciprocal service
obligation: _____

7.0 Name(s) of any Intervening Systems providing transmission
service: _____

8.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

8.1 Transmission Charge:_____

8.2 System Impact and/or Facilities Study Charge(s):

8.3 Direct Assignment Facilities Charge:_____

8.4 Ancillary Services Charges:_____

9.0 Name of Reseller of the reassigned transmission capacity:

ATTACHMENT C

**METHODOLOGY TO ACCESS AVAILABLE ~~TRANSMISSION~~
~~CAPACITY~~ TRANSFER CAPABILITY**

~~BCTC~~ The Transmission Provider will assess the capability of the Transmission System to provide the services requested using its published criteria, standards and procedures.

In determining the level of ~~transmission capacity~~ transfer capability that is available to meet new Transmission Service requests, ~~BCTC~~ the Transmission Provider will exclude from the total transfer capability of the Transmission System that capacity needed to reliably meet:

1. the current and reasonably forecasted load of Network Customers;
2. existing firm Point-To-Point Transmission Services;
3. previously received pending Applications for firm Point-To-Point Transmission Service; and
4. existing contractual obligations under other Tariffs, rate schedules and contracts.

Notwithstanding any other provision in this Tariff, the Transmission Provider shall limit sales of Firm Point-to-Point Transmission Service on the BC>AB path to 785 MW.

ATTACHMENT D

METHODOLOGY FOR COMPLETING A SYSTEM IMPACT STUDY

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT E

INDEX OF POINT-TO-POINT TRANSMISSION SERVICE CUSTOMERS

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT F

FORM OF SERVICE AGREEMENT FOR NETWORK INTEGRATION TRANSMISSION SERVICE

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT G

NETWORK OPERATING AGREEMENT

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT H

ANNUAL TRANSMISSION REVENUE REQUIREMENT FOR NETWORK INTEGRATION TRANSMISSION SERVICES

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT I

INDEX OF NETWORK INTEGRATION TRANSMISSION SERVICE CUSTOMERS

This Attachment has not been included as BCTC is not proposing to make any change to this Attachment and Order No. 890 contemplates no changes to the corresponding part of the pro forma tariff.

ATTACHMENT J

RESERVED FOR PROCEDURES FOR ADDRESSING PARALLEL FLOWS

Attachment K

1. DESCRIPTION AND PURPOSE OF THE PLANNING PROCESS

This Attachment describes the Transmission Provider's biennial process for planning capital projects for the purpose of expanding the capability of the Transmission System to meet potential requirements and opportunities over a 10-year planning horizon. The Transmission Provider's Planning Process described in this Attachment begins with an Initiation Phase providing for the exchange of information between Stakeholders and the Transmission Provider. Over the course of the Planning Process, Stakeholders may make comments on draft plans, submit requests for Economic Planning Studies and participate in Consultation Meetings and Technical Review Groups. The Planning Process ends with the formation of a Transmission Plan, which is a collection of projects in various stages of development, from an initial study of the project to implementation, that are designed to meet the potential needs and requirements identified in the Planning Process.

After the completion of the Planning Process as described herein, the Transmission Provider in its sole discretion will select the projects in the Transmission Plan for inclusion in its Growth Capital Portfolio.

This Attachment K does not place obligations on the Transmission Provider to construct upgrades or facilities identified in a study or its Transmission Plan. This Attachment K supports, but does not replace the Transmission Provider's construction-related obligations in other portions of the Tariff. Point-to-Point Transmission Service, Network Integration Transmission Service and Interconnection Service requests are governed by and studied in accordance with other portions of the Tariff. Where possible, these study processes will be incorporated into the Planning Process in this Attachment K.

2. DEFINITIONS

"Consultation Meeting" means a meeting to provide information and to solicit input from Stakeholders on the Transmission Provider's planning of the Transmission System. Consultation Meetings are open to all Stakeholders. The Transmission Provider will announce Consultation Meetings via e-mail to Stakeholders and will post the announcement on the Transmission Provider's public website.

"Commission" means the British Columbia Utilities Commission

"Economic Planning Studies" means studies that evaluate potential upgrades or other investments that could reduce congestion or integrate new resources and loads on an aggregated or regional basis. Stakeholders may request Economic Planning Studies in the Initiation Phase of the Planning Process. The Transmission Provider may limit the

number of Economic Planning Studies it undertakes in each planning cycle, depending on available resources. Economic Planning Study Requests that are not performed may be carried forward to the next planning cycle for consideration. The conducting of an Economic Planning Study in no way imposes any obligation on the Transmission Provider to fund, assign cost responsibility, or otherwise determine whether any economic project should be implemented.

“First Nations Engagement Process” means a process to consider the specific interests and needs of affected First Nations.

“Initiation Phase” means the stage of the Planning Process described in Section 3.

“Planning Manual” means the document produced and updated from time to time by the Transmission Provider that describes the basic methodology, criteria and assumptions used by the Transmission Provider in the Planning Process.

“Planning Process” means the process of planning Projects described in this Attachment for the purpose of expanding the capability of the Transmission System in order to meet potential requirements and opportunities. The Planning Process includes the Initiation Phase, Study Plan Development Phase, Study Phase, and Transmission Plan Development Phase.

“Point of Contact” means the contact at the Transmission Provider designated by the Transmission Provider to whom all information and inquiries related to the Planning Process should be directed. Point of Contact information shall be posted on the Transmission Provider’s public website.

“Project” means a capital project to expand the capability of the Transmission System to meet potential requirements and opportunities.

“Stakeholder” means any person affected by the Planning Process, such as a transmission customer, interconnection customer, or neighbouring transmission provider as the case may be.

“Study Phase” means the phase of the Transmission Provider’s Planning Process described in Section 5.

“Study Plan Development Phase” means the stage of the Planning Process described in Section 4.

“Technical Review Group” means a group of Stakeholders formed to provide the Transmission Provider with input on the assessment of planning alternatives that meet

in accordance with the Terms of Reference for Technical Review Groups found in Appendix 1 to this Attachment.

“Transmission Plan” means a collection of Projects that meets the needs identified in the study plan developed pursuant to Section 4.

“Transmission Plan Development Phase” means the phase of the Transmission Provider’s Planning Process described in Section 6.

“WECC” means the Western Electricity Coordinating Council.

3. INITIATION PHASE

3.1. Initiation of the Planning Process: The Transmission Provider will announce the initiation of the Planning Process via electronic mail to Stakeholders and on its public website. The announcement will include a description of the planning process, including milestones and an anticipated schedule, instructions on how to access the Transmission Provider’s planning information and instructions for providing planning information and requests for Economic Planning Studies to the Transmission Provider. The announcement will also indicate the number of Economic Planning Studies that may be performed within the Planning Process.

3.2 Stakeholder Mailing List: The Transmission Provider will maintain a Stakeholder mailing list including customers, neighbouring transmission providers, the Commission and affected parties that have expressed interest in the Transmission Provider’s consultation activities. Stakeholders may request to be added to the list through the Transmission Provider’s Point of Contact.

3.3 Submission of Customer Planning Information: the Transmission Provider will establish a business practice in consultation with customers regarding the format and procedure for the submission of planning information to the Transmission Provider. The business practice will address how and when the following will occur:

(a) Stakeholders may submit written requests for Economic Planning Studies.

(b) Network Customers shall provide updates to their 10-year forecasts on Network Loads and Network Resources, Contingency

Resource Plans and the other information contemplated by Section 31.6 and Attachment P of the Tariff.

(c) Transmission Customers receiving Long-Term Firm Point-to-Point Transmission service shall provide a 10-year projection of the need for and usage of Long-Term Firm Point-to-Point Transmission service on the Transmission System including receipt and delivery points.

(d) Interconnection Customers shall provide a 10-year forecast with respect to any planned additions or upgrades, including their status and expected in-service date, planned retirements and environmental restrictions.

(e) Any Stakeholder may also provide

(i) information related to non-wires solutions to offset or defer transmission investments, including targeted demand-side management and energy procurement;

(ii) any information on potential requirements or opportunities that the Stakeholder believes should be considered in the Planning Process.

3.4 Use of Customer Planning Information: Subject to confidentiality and security restrictions, any information may be used by the Transmission Provider without restriction in its planning activities under this Attachment K and in the Transmission Provider's other planning activities or studies, such as studies in response to requests for transmission service or interconnection. However, if the Transmission Provider reasonably determines that any information provided under this Attachment K is inappropriate or unreasonable for a particular purpose, the Transmission Provider may not use it for such purpose.

The good faith projections of anticipated point-to-point uses of the transmission system or forecasted generation additions or upgrades provided by customers are additional data for consideration by the Transmission Provider in its planning activities. The Transmission Provider may consider such projections, for example, to support likely scenarios for new investments. The projections, however, will not be treated as a substitute for actual point-to-point reservations or interconnection requests.

3.5 Confidentiality: If a Stakeholder wishes to submit confidential information, the Stakeholder may provide the information in accordance with section 9, provided that the Transmission Provider may use the information for planning purposes and present the information to the public on an aggregated basis or by any other method which the Transmission Provider reasonably believes will not compromise the confidentiality requirements of the Stakeholder.

3.6 Availability of Planning Information: Subject to the need to protect confidential information or security sensitive information, the Transmission Provider will post on an ongoing basis the following on its Planning Web Page:

- (a) the Transmission Provider's Planning Manual;
- (b) the data used by the Transmission Provider in its planning and study work, including base case data,
- (c) potential requirements and opportunities;
- (c) the Transmission Provider's latest Capital Plan, including current reports regarding the state of the Transmission System;
- (d) the status of Network Upgrades for Projects in progress;
- (e) Transmission Service and Interconnection Service requests pursuant to the Tariff and any studies and agreements related to such requests;
- (f) information on regional planning activities, as described in Section 11;
- (g) information received from customers throughout the course of the Planning Process; and,
- (h) planning information developed in the course of the Planning Process, including draft and final study and transmission plans, minutes of meetings and customer comments.

Subject to the need to protect confidential information or security sensitive information, the Transmission Provider will also post the following information as it becomes available:

- (a) information regarding existing transmission constraints;
- (b) generation redispatch options that can relieve transmission constraints in the Transmission Provider's Balancing Authority Area; and,
- (c) other information the Transmission Provider considers relevant to the Planning Process, including information received from policy advisory groups, regional stakeholder meetings, regional planning groups, the First Nation's Engagement Process, and local and regional studies.

Planning information that is confidential or security sensitive will be described on the Transmission Provider's public website and made available to participating Stakeholders in accordance with Section 9.

4 STUDY PLAN DEVELOPMENT PHASE

4.1 Draft Study Plan: Based on the planning information submitted to the Transmission Provider or made available by the Transmission Provider in accordance with Section 3, the Transmission Provider will prepare and post on the Planning Web Page a draft study plan. The Draft Study Plan will include:

- (a) potential requirements and opportunities;
- (b) study data and planning assumptions;
- (c) a list of approved projects in progress and their status;
- (d) a list of proposed studies for meeting the potential requirements and opportunities, including list of studies required for meeting interconnection and transmission service requests, including a description of the scope and deliverables for each study;
- (e) a review of the possible opportunities for combining the studies described in 4.1(d);
- (f) a review of potential non-wires solutions to the potential requirements and opportunities; and,
- (g) if there are more Economic Planning Study requests than the Transmission Provider is able to undertake, suggested criteria for

selecting Economic Planning Studies to be performed, such as whether the requested Economic Planning Studies: (a) address significant and recurring congestion; (b) integrate new generation resources or load or both on an aggregated or regional basis; or (c) reduce the overall cost of transmission.

4.2 Consultation Meeting: The Transmission Provider will schedule a Consultation Meeting after the posting of the draft study plan. In the Consultation Meeting, the Transmission Provider will

- (a) provide a high level review of the Transmission Provider's study methodology, data and planning assumptions,
- (b) review the proposed list of studies;
- (c) discuss and determine which, if any, requested Economic Planning Studies can be combined;
- (d) if necessary, determine with Stakeholders which Economic Planning Studies will be undertaken, including determining selection criteria, the weight to be given to the criteria and the ranking of studies according to the criteria;
- (e) review the Transmission Provider's coordination with WECC and any bilateral or multilateral initiatives in which the Transmission Provider is participating with neighbouring transmission providers, utilities or sub-regional planning groups, including any opportunities for Stakeholders to be involved in such activities;
- (f) establish Technical Review Groups for specific projects based on stakeholder interest and schedule initial meetings to review the Terms of Reference (see Appendix A) and to develop a meeting schedule; and,
- (g) establish a comment period for Stakeholders to provide written comments.

4.3 Posting of Minutes and Materials: As soon as practicable, the Transmission Provider will post on its public website minutes of the Consultation Meeting along with any materials distributed at the Consultation Meeting, subject to the need to protect confidential or security-sensitive information.

4.4 Written Comments: Stakeholders may provide written comments on the draft study plan to the Point of Contact within the comment period. Stakeholder comments on the draft study plan will be posted on the Planning Web Page.

4.5 Final Study Plan: Taking into account the written comments of Stakeholders, the Transmission Provider will develop and post on the its public website a final study plan. The final study plan will include:

(a) a written description of potential requirements and opportunities;

(b) study data and planning assumptions;

(c) a list of studies designed to meet the potential requirements and opportunities, including a description of the scope and deliverables for each study;

(d) a list of the Economic Planning Studies selected to be performed by the Transmission Provider;

(d) a schedule for the completion of each identified task;

(e) a schedule of Technical Review Group meetings;

(f) a list of studies that involve multiple Balancing Authority Areas; and

(g) for studies that involve multiple Balancing Authority Areas, a description of the Transmission Provider's coordination with the relevant regional planning groups and periodic progress updates to affected Transmission Customers.

4.6 Amendments to the Study Plan: During the Study Plan Development Phase or Study Phase, the Transmission Provider may propose amendments to the study plan by notifying Stakeholders and posting on the Transmission Provider's public website a notice of the proposed amendment along with an explanation of the reason for the amendment and specify a period for Stakeholders' comments. Stakeholders may provide written comments on the draft study plan to the Point of Contact. The Transmission Provider will take into account written comments before formally amending the study plan. The amended study plan will be posted on the Transmission Provider's public website along with the written comments.

5. STUDY PHASE

5.1 Performance of Studies

- (a) Following the posting of the final study plan, the Transmission Provider will perform the studies identified in the study plan in order to develop a preliminary set of Projects that will meet the potential requirements or opportunities identified.
- (b) Following the posting of the final study plan, the Transmission Provider conduct the selected Economic Planning Studies, except for those of regional scope.
- (c) In accordance with WECC's Transmission Planning Protocol, the Transmission Provider will submit Economic Planning Studies to WECC during its study request window. Economic Planning Studies of regional scope will be prioritized and completed as part of a Western Interconnection synchronized study cycle in accordance with the Transmission Planning Protocol, which is open to interested parties. Economic Planning Studies of regional scope which are not given high priority in the process will be deferred, although the requesting party may request that the study be completed at its own cost. The Transmission Provider will conduct and participate in regional studies in accordance with the Transmission Expansion Protocol. Information on the Transmission Planning Protocol will be provided to Stakeholders in accordance with Section 11.
- (d) The Transmission Provider may request proponents of selected Economic Planning Studies and other Stakeholders to supply information within their possession or control necessary for the Transmission Provider to the conduct the selected Economic Planning Studies. Such information may include cost information for transmission and generation facilities. The information provided will be considered not to be confidential unless it is claimed as such. Confidential information may be provided under protection of a confidentiality agreement in accordance with Section 9 of this Attachment. The Transmission Provider will have no obligation to proceed with an Economic Planning Study if the Transmission Provider does not receive the information reasonably necessary to conduct the Economic Planning Study.

(e) In conducting studies, the Transmission Provider will consider customer demand and generation based non-wires solutions on a comparable basis to transmission alternatives. the Transmission Provider will develop planning criteria, which will be included in the Transmission Provider's Planning Manual, describing how transmission and non-wires solutions will be considered on a comparable basis in the study process.

5.2 Technical Review Groups: The Transmission Provider will engage the Technical Review Groups formed in the Study Plan Development Phase in accordance with their Terms of Reference and schedule.

5.3 Preliminary Set of Projects: After the completion of the studies pursuant to Subsection 5.1, the Transmission Provider will post the following on the its public website:

(a) study results; and,

(b) a preliminary set of Projects.

5.4 Consultation Meeting: The Transmission Provider will schedule a Consultation Meeting after the preliminary set of Projects is posted. At the Consultation Meeting the Transmission Provider will:

(a) review the preliminary set of Projects for inclusion in the Transmission Plan;

(b) review the results of studies that support the development of the preliminary set of Projects;

(c) review the results of Economic Planning Studies; and,

(d) establish a comment period for Stakeholders to provide written comments.

5.5 Posting of Minutes and Materials: As soon as practicable, the Transmission Provider will post on the its public website minutes of the Consultation Meeting along with any materials distributed at the Consultation Meeting, subject to the need to protect confidentiality or security sensitive information.

5.6 Written Comments: Stakeholders may submit written comments within the comment period to the Point of Contact. The Transmission Provider will post on the its public website comments received from Stakeholders.

6. TRANSMISSION PLAN DEVELOPMENT PHASE

6.1 Draft Transmission Plan: Taking into account the written comments of Stakeholders, the Transmission Provider will develop and post on the its public website, a draft Transmission Plan. The draft Transmission Plan which describes the Transmission Provider's growth capital portfolio with a 10 year planning horizon will include the following:

- (a) Projects that meet the need identified in the study plan;
- (b) Projects that are in progress;
- (c) Projects that meet the requirements of transmission and interconnection service requests;
- (d) Projects that have been developed sufficiently for the Transmission Provider to seek approval from its Board of Directors; and,
- (e) Projects for which no approval will be sought in the current planning cycle.

The Transmission Provider will also specify a comment period.

6.2 Written Comments: Stakeholders may submit written comments on the draft Transmission Plan to the Point of Contact within the comment period. The Transmission Provider will post comments received from Stakeholders on the Transmission Provider's public website.

6.3 Final Transmission Plan: Taking the comments from Stakeholders into consideration as necessary, the Transmission Provider will develop a final Transmission Plan.

7. INQUIRIES: At any time, Stakeholders may direct inquiries related to the Planning Process to the Point of Contact, who will be identified on the Transmission Provider's public website.

8. DISPUTE RESOLUTION PROCESS: Stakeholders are encouraged to bring to the attention of the Point of Contact any issues that they may have arising out of the

Planning Process. Stakeholders may also file a complaint with the Commission with respect to any such issue.

9. CONFIDENTIALITY: In the event that a Stakeholder or the Transmission Provider claims that planning-related information is confidential, any party seeking access to such information must agree to adhere to the terms of a confidentiality agreement. The form of confidentiality agreement will be initially developed by the Transmission Provider and will be posted on its Planning Website. Stakeholders will have an opportunity to submit comments on the form of confidentiality agreement. Confidential information shall be disclosed only to those participants in the planning process that require such information and that execute the confidentiality agreement. The Transmission Provider will develop procedures for the submission and requesting of confidential information and make such procedures available for comment on its public website.

10. STANDARDS OF CONDUCT: The Transmission Provider's conduct under this Attachment is subject to the Transmission Provider's Standards of Conduct.

11. REGIONAL PLANNING: The Transmission Provider will coordinate with interconnected systems through its participation in WECC and through direct engagement of neighbouring systems. As a system in the corner of the WECC interconnected system, the Transmission Provider has not found it necessary to join any subregional planning groups, although the Transmission Provider will coordinate with such subregional planning groups through WECC and as otherwise may be necessary.

11.1 WECC: As a member of WECC, the Transmission Provider will follow and participate in WECC's policies and procedures for Regional Planning Project Review, Project Rating Review, and Progress Reports. The Transmission Provider will also participate in the Transmission Planning Protocol of WECC's Transmission Expansion Planning Policy Committee. The Transmission Provider will post current links to WECC's procedures and guidelines on its public website as well as information detailing the Transmission Provider's participation in WECC's regional planning processes.

11.2 Other Regional Planning Activities: In addition to its participation in WECC processes, the Transmission Provider may engage neighbouring systems or sub-regional planning groups for the purpose of regional transmission planning and investment. As part of these regional planning activities, the Transmission Provider will seek opportunities to improve the overall efficiency and economic savings from increased inter-regional cooperation and integration. Once opportunities are identified, the

Transmission Provider will seek to facilitate the required studies and implementation through working groups consisting of representatives from the Transmission Provider and other participating entities. The Transmission Provider will post on its public website information on such activities including notice of meetings, relevant materials and information on how interested parties may participate.

11.3 Customer Participation: The Transmission Provider will provide on its public website information on how Stakeholders may participate in any of the Transmission Provider's regional planning activities, which may involve attending meetings, conference calls or submitting comments on particular projects. Stakeholders who are interested in any regional planning activities are encouraged to contact the Transmission Provider's Point of Contact so that the Transmission Provider may facilitate such participation. As described in Section 4, the Transmission Provider will also include a description of its regional planning activities in the Draft Study Plan, which customers may comment on and discuss with the Transmission Provider at the Consultation Meeting held for that purpose.

12. COST ALLOCATION

12.1 The Transmission Provider will recover the costs of projects required for meeting service requests and system improvements in accordance with the provisions in the Transmission Provider's Tariff.

12.2 The Transmission Provider is not obliged to expand the system based on the results of Economic Planning Studies. Where the Transmission Provider decides to construct facilities based on the results of one or more Economic Planning Studies, it will do so in accordance with a transmission expansion or congestion policy developed by the Transmission Provider, subject to Commission approval. In these cases, the Transmission Provider will apply the cost allocation principles of the applicable transmission expansion or congestion policy under which the project is developed, subject to Commission approval.

13. No Participant Funding: Stakeholders may participate in the Planning Process at their own cost.

Appendix 1

Terms of Reference for Technical Review Groups

Technical Review Groups formed in accordance with Attachment K are to be conducted in accordance with these Terms of Reference.

1. Definitions

- a. “Interested Person” means any transmission or interconnection customer or any other person directly impacted by the subject matter of a particular TRG and wishes to participate in the particular TRG;
- b. “Tariff” means the Transmission Provider’s Open Access Transmission Tariff as may be amended from time to time by the British Columbia Utilities Commission; and
- c. “TRG” means a Technical Review Group formed pursuant to Attachment K of the Tariff.

2. **Purpose:** The TRG will provide an open, transparent forum whereby Interested Persons can review and provide feedback to the Transmission Provider in respect of planning alternatives for a transmission system requirement or opportunity identified by the Transmission Provider, which, in turn, provides a forum for the Transmission Provider to better understand the specific concerns of Interested Persons regarding planning alternatives to meet an identified transmission system requirement or opportunity.

3. **Establishment:** A TRG shall be established by the Transmission Provider in accordance with Attachment K of the Tariff. The TRG shall consist of at least one representative from the Transmission Provider, who shall be the facilitator, and representatives of at least two different Interested Persons.

Participation in a TRG is entirely voluntary and done so at each Interested Person’s own cost and expense.

4. **Role of TRG:** The TRG may, with the benefit of results of any study determined to be relevant by the Transmission Provider, comment and provide feedback on planning alternatives to meet a transmission system requirement or opportunity identified by the Transmission Provider.

The TRG shall be advisory only and shall have no formal voting protocol.

5. Meetings

5.1 General: All meetings of a TRG will be open to all Interested Persons, subject to their agreement to comply with procedures to protect confidential or proprietary information as may be required by the Transmission Provider.

Meetings will be conducted to (i) provide an opportunity for the Transmission Provider to increase its understanding of Interested Persons' perspectives with respect to planning alternatives; (ii) offer Interested Persons an opportunity to be informed about transmission system requirements or opportunities identified by the Transmission Provider; (iii) review results of studies determined to be relevant by the Transmission Provider; and (iv) provide feedback with respect to planning alternatives.

5.2 Format: In accordance with the terms of Attachment K, the Transmission Provider will post on the Planning Web Page the description of that identified requirement or opportunity and a brief review of the planning alternatives. An initial TRG meeting will be scheduled to, among other things, establish need for confidentiality, discuss views generally in relation to the planning alternatives and to submit written submissions, if desired. The Transmission Provider will then take away the input received from the Interested Persons and prepare a draft planning alternative informed by such input. The draft planning alternative will then be posted on The Planning Web Page for further review and comment by the Interested Persons within a specified period of time.

Although the TRG process is described sequentially, the actual activities may be performed on a flexible, iterative and non-sequential basis, depending on the needs and wishes of the Transmission Provider informed by input from the particular TRG.

5.3 Administrative Matters: Meeting notices, including date, time, location and meeting agenda will be posted on the Transmission Provider's Planning Web Page. The agendas will identify the subject matter of the particular meeting, be posted on the Planning Web Page and be circulated to its distribution list in advance of the meetings to assist Interested Persons to choose their meeting attendance efficiently. A subscription page will be set up that allows Interested Persons to sign-up for email distribution.

The meetings will be informal and will be facilitated by a representative from the Transmission Provider, who will be responsible for guiding discussion, identifying issues to be covered, establishing governing rules as necessary and collecting appropriate information to inform the draft planning alternative.

Interested Persons are encouraged to provide, in a timely manner, input, comments, advice and questions into the process electronically by sending an email to the Transmission Provider's designated point of contact.

Where no confidentiality concerns have been raised and determined by the Transmission Provider to require any further action, the Transmission Provider will post all meeting-related notes, documents and draft or final planning alternatives on the Planning Web Page.

6. **Draft Planning Alternative:** While the Transmission Provider will be informed in its transmission planning by comments, input, feedback or recommendations from the TRG, any such comments, input, feedback or recommendations shall not be binding upon the Transmission Provider in any manner. In the event that a TRG is unable to reach a consensus on the attributes of a draft planning alternative, it shall be of no consequence to the Transmission Provider in its final determination of a planning alternative.
7. **Standards of Conduct:** Every TRG and all of its respective processes and procedures are subject to the Transmission Provider's Standards of Conduct.
8. **Confidentiality:** The Transmission Provider may, as a condition to participation, require Interested Persons to sign a non-disclosure agreement with respect to information gathered, exchanged or disclosed during the TRG process. Notwithstanding the foregoing, all of the information, input, comments and feedback provided in connection with a TRG will be deemed to be public and not confidential in nature unless otherwise expressly indicated to the Transmission Provider prior to disclosure to the Transmission Provider or TRG.
9. **Ownership:** Any and all documents, reports, analysis and other works prepared by a TRG shall be and remain the property of the Transmission Provider.

ATTACHMENT L

Creditworthiness Provisions

1. Preamble

This Attachment L contains the Transmission Provider's Creditworthiness Provisions and is supplemented by a detailed Credit Administration Procedure ("Credit Policy"), which is published on the Transmission Provider's public website, with a corresponding link to the Credit Policy provided on the Transmission Provider's OASIS.

2. Credit Review

For the purpose of determining the ability of the Transmission Customer to meet its obligations related to Transmission Service, the Transmission Provider will apply the credit review provisions described in this Attachment L. A credit review shall be conducted for each Transmission Customer not less than annually, or upon reasonable request by the Transmission Customer.

3. Creditworthiness

A Transmission Customer is creditworthy if

(i) the Transmission Customer has the requisite long-term debt rating from a nationally recognized debt rating agency as indicated in the Transmission Provider's Credit Policy;

or

(ii) if the Transmission Customer does not have a long-term debt rating, the Transmission Customer has the requisite short-term debt rating from a nationally recognized debt rating agency as indicated in the Transmission Provider's Credit Policy.

Where the Transmission Customer has multiple ratings from nationally recognized debt rating agencies, the highest rating shall determine creditworthiness, provided that there is not more than one sub-level rating classification difference between the highest and lowest credit rating. If the difference exceeds one sub-level rating classification, the lowest rating is used to determine creditworthiness.

4. Creditworthiness Criteria

If the credit exposure is within the maximum credit limit set forth in BCTC's Credit Policy, a Transmission Customer that meets either requirement described in Section 4(i) or Section 4(ii) shall not be required to provide any form of security against the risk of nonpayment for any type of service, including deposits for studies that otherwise would be required pursuant to Sections 17.3, 19.1, 19.4, 29.2, 32.1 and 32.4 of the Transmission Provider's Open Access Transmission Tariff ("the Tariff"). A Transmission Customer that meets either requirement described in Section 4(i) or Section 4(ii) shall remain subject to any requirements of the Tariff to provide security related to the cost of new facilities or upgrades, including letters of credit or other forms of security required in accordance with Attachment O.

(i) The Transmission Customer

(a) is creditworthy in accordance with Section 3 of this Attachment L, and

(b) is not in default of its payment obligations under Section 7.3 of the Tariff;

or

(ii) The Transmission Customer's parent company

(a) is creditworthy in accordance with Section 3 of this Attachment L and the parent company provides a written guarantee that the parent company will be unconditionally responsible to the Transmission Provider for all financial obligations associated with the transmission service subscribed to by the Transmission Customer, and

(b) is not in default of its payment obligations under Section 7.3 of the Tariff

5. Requirements for Customers Not Meeting Creditworthiness Criteria:

A Transmission Customer that does not meet the creditworthiness criteria set out in Section 4 above shall comply with one of the following:

(i) Providing Security

The Transmission Customer shall provide security for the lesser of (i) the total charge for service or (ii) the charge for ninety (90) days of service by the later of five (5) Business Days prior to the commencement of service or the time when it makes the request for transmission service. The security will be either an unconditional and irrevocable letter of credit drawn on a financial institution acceptable to the Transmission Provider or an

alternative form of security acceptable to the Transmission Provider and consistent with commercial practices established under the laws of Canada and the Province of British Columbia that protects the Transmission Provider against the risk of non-payment. If the financial institution on which the letter of credit is drawn or the alternative form of security cease to be acceptable to the Transmission Provider, then the Transmission Customer shall provide a new form of security that meets the Transmission Provider's requirements, as stated above, within 30 Calendar Days of notice being provided to the Transmission Customer.

or

(ii) Pre-paying service

- (a) For service of one month or less, the Transmission Customer shall pay the total charge for service by the later of five (5) Business Days prior to the commencement of service or the time when it makes the request for transmission service.
- (b) For service of greater than one month, the Transmission Customer shall pay for each month's service not less than five (5) Business Days prior to the beginning of that month. For Network Integration Transmission Service customers, the advance payment for each month shall be based on a reasonable estimate by the Transmission Provider of the charge for that month.

the Transmission Provider will not provide transmission service requested by the Transmission Customer unless one of the conditions described in Section 5(i) and 5(ii) of this Attachment L is met.

6. Changes in Creditworthiness Status

If a Transmission Customer fails to meet the requirements of Section 4 of this Attachment L at any time after transmission service is requested, the Transmission Customer will, within 5 days of notification by the Transmission Provider, either (a) pay in advance for thirty (30) Calendar Days of transmission service or (b) provide an unconditional and irrevocable letter of credit or alternative form of security acceptable to the Transmission Provider in an amount equal to the charge for thirty (30) Calendar Days of transmission service. Within thirty (30) Calendar Days of such notification the Transmission Customer shall meet the requirements of Section 5 of this Attachment L.

7. Suspension of Service

The Transmission Provider may suspend service to a Transmission Customer who does not meet the creditworthiness criteria of Section 4 of this Attachment L under the following circumstances:

- (i) If the Transmission Customer qualifies for service pursuant to Section 5 of this Attachment L as a result of providing a letter or credit or alternative form of security, and it does not pay its bill within in accordance with Section 7.1 of the Tariff, and it has not initiated a billing dispute in accordance with Section 7.3 of the Tariff, the Transmission Provider may suspend service thirty (30) Calendar Days after written notice to the Transmission Customer and the Commission that the service will be suspended unless the Transmission Customer pays its bills within this thirty (30) Calendar Day period.
- (ii) If the Transmission Customer qualifies for service as a result of committing to prepay for service pursuant to Section 5(ii) of this Attachment L, and it fails to prepay for service as provided in such section, the Transmission Provider may refuse or suspend service, as applicable, immediately upon written notice to the Transmission Customer and the Commission.
- (iii) If the Transmission Customer loses its creditworthy status as a result of circumstances other than a default of its payment obligations and it fails to meet the credit security requirements of Section 6 of this Attachment L, but it either pays its bills within the time period provided in Section 7.1 of the Tariff or initiates a billing dispute in accordance with Section 7.3 of the Tariff, the Transmission Provider may suspend service thirty (30) Calendar Days after written notice to the Transmission Customer and the Commission that the service will be suspended unless the Transmission Customer meets the credit security requirements of Section 5 of this Attachment L.
- (iv) If the Transmission Customer loses its creditworthy status because it is in default of its payment obligations under Section 7.3 of the Tariff and it fails to meet the requirements of Section 6 of this Attachment L, the Transmission Provider may suspend service five (5) Business Days after written notice to the Transmission Customer and the Commission that service will be suspended if the Transmission Customer does not meet the requirements of Section 6 of this Attachment L.

The suspension of service shall continue only for as long as the circumstances that entitle the Transmission Provider to suspend service continue. A Transmission Customer is not obligated to pay for Transmission Service that is not provided as a result of a suspension of service.

8. Notice of Change in Creditworthiness Status and Security Requirements

If the Transmission Provider determines that there has been a change in the creditworthiness status or security requirements of a Transmission Customer it will notify the Transmission Customer within 5 Business Days.

9. Written Explanation for any Change in Creditworthiness Status and Security Requirements

Upon request made in writing by the Transmission Customer to the Transmission Provider, the Transmission Provider will provide to the Transmission Customer a written explanation of any change in the creditworthiness status or security requirements of the Transmission Customer within 5 Business Days.

10. Contesting Determinations of Creditworthiness Status and Security Requirements

If a Transmission Customer disagrees with the Transmission Provider's determination of the Transmission Customer's creditworthiness or credit security requirements, the Transmission Customer may write to the Transmission Provider explaining the nature of the disagreement. The Transmission Provider will consider the comments, review the application of its credit provisions to the Transmission Customer and notify the Transmission Customer of the results of its review within 5 Business Days.

ATTACHMENT M-1

**STANDARD GENERATOR
INTERCONNECTION PROCEDURES (SGIP)**

including

**STANDARD GENERATOR
INTERCONNECTION AGREEMENT (SGIA)**

Standard Generator Interconnection Procedures (SGIP)

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LIST OF APPENDICES

Appendix 1 – Interconnection Request for a Generating Facility

Appendix 2 – Interconnection Feasibility Study Agreement

Appendix 3– Combined Study Agreement

Appendix 4 – Optional Interconnection Study Agreement

Appendix 5 – Standard Generator Interconnection Agreement

Section 1. Definitions

Capitalized terms used but not defined in these SGIP shall have the meanings given to them elsewhere in the Tariff. In these SGIP:

Adverse System Impact shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

Affected System shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

Affected System Operator shall mean the entity that operates an Affected System.

Affiliate shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

Ancillary Services shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

Applicable Laws and Regulations shall mean all duly promulgated applicable federal, provincial and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

Applicable Reliability Council shall mean the reliability council(s) applicable to the Transmission System.

Applicable Reliability Standards shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System.

Base Case shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

Breach shall mean the failure of a Party to perform or observe any material term or condition of the Standard Generator Interconnection Agreement.

Breaching Party shall mean a Party that is in Breach.

Business Day shall mean Monday through Friday, excluding Holidays.

Calendar Day shall mean any day including Saturday, Sunday or a Holiday.

Clustering shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, for purposes of Interconnection System Impact Studies and Interconnection Facilities Studies.

Combined Study Agreement shall mean the form of agreement contained in Appendix 3 of the SGIP.

Commercial Operation shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

Commercial Operation Date of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix D to the Standard Generator Interconnection Agreement.

Commission means the British Columbia Utilities Commission, or its successor.

Confidential Information shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise.

Control Area shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by the Applicable Reliability Council.

Default shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the Standard Generator Interconnection Agreement.

Dispute Resolution shall mean the procedure for resolution of a dispute between the Parties as set out in Appendix G to the SGIA.

Emergency Condition shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life, or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the Standard Generator Interconnection Agreement to possess black start capability.

Energy Resource Interconnection Service shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

Engineering & Procurement (E&P) Agreement shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

Environmental Law shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Force Majeure shall mean any act of God, labour disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

Generating Facility shall mean Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but shall not include Interconnection Customer's Interconnection Facilities.

Generating Facility Capacity shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, [including any reliability standards adopted by the Commission pursuant to section 125.2 of the British Columbia Utilities Commission Act](#).

Governmental Authority shall mean any federal, provincial, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or

power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

Hazardous Substances shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

Holiday shall mean a statutory holiday in British Columbia.

Initial Synchronization Date shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

In-Service Date shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Transmission Provider's Interconnection Facilities to obtain back feed power.

Interconnection Customer shall mean any entity, including Transmission Provider or any of the Affiliates or subsidiaries, that proposes to interconnect its Generating Facility with the Transmission Provider's Transmission System.

Interconnection Customer's Interconnection Facilities shall mean all facilities and equipment, as identified in Appendix A of the Standard Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

Interconnection Facilities shall mean the Transmission Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities Study shall mean a study conducted by the Transmission Provider or, at the option of the Transmission Provider, by a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades, as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System. The scope of the study is defined in Section 8.3 of the Standard Generation Interconnection Procedures.

Interconnection Feasibility Study shall mean a preliminary evaluation of the system impact and cost of interconnecting the Generating Facility to the Transmission Provider's Transmission System, the scope of which is described in Section 6 of the Standard Generator Interconnection Procedures.

Interconnection Feasibility Study Agreement shall mean the form of agreement contained in Appendix 2 of the Standard Generator Interconnection Procedures for conducting the Interconnection Feasibility Study.

Interconnection Request shall mean an Interconnection Customer's request, in the form of Appendix 1 [including Attachments](#) to the Standard Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System.

Interconnection Service shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

Interconnection Study shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study described in the Standard Generator Interconnection Procedures.

Interconnection System Impact Study shall mean an engineering study that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Generator Interconnection Procedures.

Interest means interest calculated at the average prime rate of Transmission Provider's lead bank for the applicable period, and shall be calculated from the day a deposit or payment is credited to the Transmission Provider's account.

Joint Operating Committee shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Material Modification shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date or that would affect the reliability or stability of the Transmission System.

Metering Equipment shall mean all metering equipment installed or to be installed pursuant to the Standard Generator Interconnection Agreement, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

NERC shall mean the North American Electric Reliability Council or its successor organization.

Network Resource shall have the meaning provided in the Tariff.

Network Resource Interconnection Service shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Generating Facility with the Transmission Provider's Transmission System in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service.

Network Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the Point of Interconnection to accommodate the interconnection of the Generating Facility to the Transmission Provider's Transmission System.

Operating Region means any one of the following of Transmission Provider's planning regions: Metro Vancouver, Fraser Valley, Vancouver Island, Northern Interior and Southern Interior, and **Operating Regions** means all of them.

Optional Interconnection Study shall mean a sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

Optional Interconnection Study Agreement shall mean the form of agreement contained in Appendix 4 of the Standard Generator Interconnection Procedures for conducting the Optional Interconnection Study.

Party shall mean Transmission Provider or Interconnection Customer and **Parties** shall mean both of them.

Point of Change of Ownership shall mean the point, as set forth in Appendix A to the Standard Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

Point of Interconnection shall mean the point where the Interconnection Facilities are to connect to the Transmission Provider's Transmission System, as determined pursuant to the SGIP.

Queue Position shall mean, subject to Attachment [P,M-2](#), the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Transmission Provider.

Reasonable Efforts shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Generator Interconnection Agreement, efforts that are timely and

consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Reliability Management System or RMS shall mean WECC's reliability criteria, agreements, data collection requirements and terms and conditions set forth in WECC's reliability compliance programs and agreements as in effect from time to time. Appendix F to the SGIA is the RMS Agreement required by WECC.

Scoping Meeting shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Site Control shall mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.

Stand Alone Network Upgrades shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Generator Interconnection Agreement.

Standard Generator Interconnection Agreement (SGIA) shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility, that is included in the Transmission Provider's Tariff.

Standard Generator Interconnection Procedures (SGIP) shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility that are included in the Transmission Provider's Tariff.

System Protection Facilities shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

Tariff shall mean the Transmission Provider's tariff through which open access transmission service and Interconnection Service are offered, as filed with the Commission, and as amended or supplemented from time to time, or any successor tariff.

Transmission Provider shall mean British Columbia Transmission Corporation.

Transmission Provider's Interconnection Facilities or **TPIF** shall mean all facilities and equipment owned, controlled, or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Stand Alone Network Upgrades or Network Upgrades.

Transmission System shall mean the facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under the Tariff.

Trial Operation shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

WECC shall mean Western Electricity Coordinating Council, or any successor organization.

Section 2. Scope and Application

2.1 Application of Standard Generator Interconnection Procedures.

Sections 2 through 13 apply to processing an Interconnection Request.

2.2 Comparability

Transmission Provider shall receive, process and analyze all Interconnection Requests in a timely manner as set forth in this SGIP. Transmission Provider will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Generating Facilities are owned by Transmission Provider, its subsidiaries or Affiliates or others.

2.3 Base Case Data.

Transmission Provider shall provide base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request subject to confidentiality provisions in SGIP Section 13.1. Transmission Provider is permitted to require that Interconnection Customer sign a confidentiality agreement before the release of commercially sensitive information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include all (i) generation projects and (ii) transmission projects, including merchant transmission projects that are proposed for the Transmission System for which a transmission expansion plan has been submitted and approved by the Commission.

2.4 No Applicability to Transmission Service.

Nothing in this SGIP shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

Section 3. Interconnection Requests.

3.1 General.

An Interconnection Customer shall submit to Transmission Provider an Interconnection Request in the form of Appendix 1 [including Attachments](#) to this SGIP. Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At Interconnection Customer's option, Transmission Provider and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will select the definitive Point(s) of Interconnection to be studied no later than the execution of the Interconnection Feasibility Study Agreement.

3.2 Identification of Types of Interconnection Services.

At the time the Interconnection Request is submitted, Interconnection Customer must request either Energy Resource Interconnection Service or Network Resource Interconnection Service, as described; provided, however, any Interconnection Customer requesting Network Resource Interconnection Service may, at any time before or concurrent with the delivery of notice to proceed with an Interconnection Facilities Study pursuant to Section 8.2, also request that it be concurrently studied for Energy Resource Interconnection Service. Interconnection Customer may then elect to proceed with Network Resource Interconnection Service or to proceed under a lower level of interconnection service to the extent that only certain upgrades will be completed.

3.2.1 Energy Resource Interconnection Service.

3.2.1.1. The Product. Energy Resource Interconnection Service allows Interconnection Customer to connect the Generating Facility to the Transmission System and be eligible to deliver the Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. Energy Resource Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or Point of Delivery.

3.2.1.2. The Study. The study consists of short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The short circuit/fault duty analysis would identify direct Interconnection Facilities required and the Network Upgrades necessary to address short circuit issues associated with the Interconnection Facilities. The stability and steady state studies would identify necessary upgrades to allow full

output of the proposed Generating Facility and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Generating Facility without requiring additional Network Upgrades.

3.2.2 Network Resource Interconnection Service.

3.2.2.1. The Product. Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Generating Facility in the same manner as Network Resources. Network Resource Interconnection Service allows Interconnection Customer's Generating Facility to be designated as a Network Resource, up to the Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur.

3.2.2.2. The Study. The Interconnection Study for Network Resource Interconnection Service shall assure that Interconnection Customer's Generating Facility meets the requirements for Network Resource Interconnection Service and as a general matter, that such Generating Facility's interconnection is also studied with Transmission Provider's Transmission System at peak load, under a variety of severely stressed conditions, to determine whether, with the Generating Facility at full output, the aggregate of generation in the local area can be delivered to the aggregate of load on Transmission Provider's Transmission System, consistent with Transmission Provider's reliability criteria and procedures. This approach assumes that some portion of existing Network Resources is displaced by the output of Interconnection Customer's Generating Facility. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery.

3.3 Valid Interconnection Request.

3.3.1 Initiating an Interconnection Request.

Subject to Attachment [P,M-2](#), to initiate an Interconnection Request, Interconnection Customer must submit all of the following: (i) an initial non-refundable \$15,000 deposit, and (ii) a completed application in the form of Appendix [4.1 including Attachments](#). Such deposits shall be applied toward any Interconnection Studies pursuant to the Interconnection Request. If an Interconnection Customer demonstrates Site Control within fifteen (15) Business Days of submitting its Interconnection Request, the deposit shall become refundable.

The expected In-Service Date of the new Generating Facility or increase in capacity of the existing Generating Facility shall be no more than the process window for the regional expansion planning period (or in the absence of a regional planning process, the process window for Transmission Provider's expansion planning period) not to exceed seven years from the date the Interconnection Request is received by Transmission Provider, unless Interconnection Customer demonstrates that engineering, permitting and construction of the new Generating Facility or increase in capacity of the existing Generating Facility will take longer than the regional expansion planning period. The In-Service Date may succeed the date the Interconnection Request is received by Transmission Provider by a period up to ten years, or longer where Interconnection Customer and Transmission Provider agree, such agreement not to be unreasonably withheld.

3.3.2 Acknowledgment of Interconnection Request.

Subject to Attachment [P,M-2](#), Transmission Provider shall acknowledge receipt of the Interconnection Request within five (5) Business Days of receipt of the request and attach a copy of the received Interconnection Request to the acknowledgement.

3.3.3 Deficiencies in Interconnection Request.

Subject to Attachment [P,M-2](#), an Interconnection Request will not be considered to be a valid request until all items in Section 3.3.1 have been received by Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 3.3.1, Transmission Provider shall notify Interconnection Customer within five (5) Business Days of receipt of the initial Interconnection Request of the reasons for such failure and that the Interconnection Request does not constitute a valid request. Interconnection Customer shall provide Transmission Provider the additional requested information needed to constitute a valid request within ten (10) Business Days after receipt of such notice. Failure by Interconnection Customer to comply with this Section 3.3.3 shall be treated in accordance with Section 3.6.

3.3.4 Scoping Meeting.

Within ten (10) Business Days after receipt of a valid Interconnection Request, Transmission Provider shall establish a date agreeable to Interconnection Customer for the Scoping Meeting, and such date shall be no later than thirty (30) Calendar Days from receipt of the valid Interconnection Request, unless otherwise mutually agreed upon by the Parties.

The purpose of the Scoping Meeting shall be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection. Transmission Provider and Interconnection Customer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. Transmission Provider and Interconnection

Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, Interconnection Customer shall designate its Point of Interconnection, pursuant to Section 6.1, and one or more available alternative Point(s) of Interconnection. The duration of the meeting shall be sufficient to accomplish its purpose.

Notwithstanding Section 4.4, the Transmission Customer may modify the Point(s) of Interconnection designated in its Interconnection Request on or before the return of the executed Interconnection Feasibility Study Agreement to the Transmission Provider.

This section is subject to Attachment [P-M-2](#).

3.4 OASIS Posting-

Transmission Provider will maintain on its OASIS a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by Operating Region; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Interconnection Request, including Queue Position; (vi) the type of Interconnection Service being requested; (vii) the availability of any studies related to the Interconnection Request; (viii) the date of the Interconnection Request; (ix) the type of Generating Facility to be constructed (technology and fuel type); and (x) for Interconnection Requests that have not resulted in a completed interconnection, an explanation as to why it was not completed. The list will not disclose the identity of Interconnection Customer until Interconnection Customer executes an SGIA or requests that Transmission Provider file an unexecuted SGIA with the Commission. Before holding a Scoping Meeting with its Affiliate, Transmission Provider shall post on OASIS an advance notice of its intent to do so. Transmission Provider shall post to its OASIS site any deviations from the study timelines set forth herein. Subject to Attachment [P-M-2](#), Interconnection Study reports and Optional Interconnection Study reports shall be posted to Transmission Provider's OASIS site subsequent to the meeting between Interconnection Customer and Transmission Provider to discuss the applicable study results. Transmission Provider shall also post any known deviations in the Generating Facility's In-Service Date.

This section is subject to Attachment [P-M-2](#).

3.5 Coordination with Affected Systems.

Transmission Provider will attempt to coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its applicable Interconnection Study within the time frame specified in this SGIP. Interconnection Customer will cooperate with Transmission Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

3.6 Withdrawal.

Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to Transmission Provider. In addition, if Interconnection Customer fails to adhere to all requirements of these SGIP, except as provided in Section 13.5 (Disputes), Transmission Provider shall deem the Interconnection Request to be withdrawn and shall provide written notice to Interconnection Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, Interconnection Customer shall have fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to initiate Dispute Resolution.

Withdrawal shall result in the loss of Interconnection Customer's Queue Position. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, Interconnection Customer's Interconnection Request is eliminated from the queue until such time that the outcome of Dispute Resolution would restore its Queue Position. If the outcome of Dispute Resolution is to restore that Interconnection Request to the queue anywhere above an Interconnection Request with respect to which an SGIA was executed by Transmission Provider at any time after the commencement of such Dispute Resolution, and provided that SGIA differs from the SGIA that would have been executed had the disputing Interconnection Customer's Interconnection Request not been eliminated from the queue during Dispute Resolution, then Transmission Provider shall apply to the Commission for a determination of how the restoration of the Interconnection Request to the queue should impact any such SGIA, if at all.

An Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request shall pay to Transmission Provider all costs that Transmission Provider prudently incurs with respect to that Interconnection Request prior to Transmission Provider's receipt of notice described above. Interconnection Customer must pay all monies due to Transmission Provider before it is allowed to obtain any Interconnection Study data or results.

Transmission Provider shall (i) update the OASIS Queue Position posting and (ii) refund to Interconnection Customer any refundable portion of Interconnection Customer's deposit or study payments that exceeds the costs that Transmission Provider has incurred, including Interest. In the event of such withdrawal, Transmission Provider, subject to the confidentiality provisions of Section 13.1, shall provide, at Interconnection Customer's request, all information that Transmission Provider developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

Section 4. Queue Position.

4.1 General.

Transmission Provider shall assign a Queue Position based upon the date and time of receipt of the valid Interconnection Request; provided that, if the sole reason an Interconnection Request is not valid is the lack of required information on the application form, and Interconnection Customer provides such information in accordance with Section 3.3.3, then Transmission Provider shall assign Interconnection Customer a Queue Position based on the date and time the application form was originally filed. Moving a Point of Interconnection shall result in a lowering of Queue Position if it is deemed a Material Modification under Section 4.4.3.

The Queue Position of each Interconnection Request will be used to determine the order of performing the Interconnection Studies and determination of cost responsibility for the facilities necessary to accommodate the Interconnection Request. A higher queued Interconnection Request is one that has been placed "earlier" in the queue in relation to another Interconnection Request that is lower queued.

4.2 Clustering.

At Transmission Provider's option, Interconnection Requests may be studied using Clustering. If Transmission Provider elects to study Interconnection Requests using Clustering, all Interconnection Requests received within a period not to exceed one hundred and eighty (180) Calendar Days, hereinafter referred to as the "Queue Cluster Window", shall be studied together. Transmission Provider, may at its option, establish Queue Cluster Windows for any one or more Operating Regions, in which case only those Generating Facilities with Points of Interconnection within such Operating Region(s) received within the Queue Cluster Window shall be studied together using Clustering. Transmission Provider may study an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility. Transmission Provider may, at its option, limit the number of Interconnection Requests Interconnection Customers may submit during a Queue Cluster Window for the same Generating Facility.

Clustering shall be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the Transmission System's capabilities at the time.

The Queue Cluster Window shall have a fixed time interval based on fixed annual opening and closing dates. Any changes to the established Queue Cluster Window interval and opening or closing dates shall be announced with a posting on Transmission Provider's OASIS beginning at least one hundred and eighty (180) Calendar Days in advance of the change and continuing thereafter through the end date of the first Queue Cluster Window that is to be modified.

Transmission Provider may allocate the costs of Interconnection Studies carried out pursuant to Clustering, and the costs of Network Upgrades and Interconnection Facilities identified as required by those Interconnection Studies, between or among the Interconnection Customers having filed the Interconnection Requests that are the subject of the Clustering pro rata, based on the maximum MW electrical output of the Generating Facility (if the Interconnection Request is for a new Generating Facility) or the increase in MW electrical output of the Generating Facility (if the Interconnection Request is for an increase in the generating capacity of an existing Generating Facility) from each Interconnection Request, notwithstanding their Queue Positions.

Notwithstanding Section 11, within fifteen (15) Calendar Days of the date on which the Transmission Provider delivers the draft Interconnection Facilities Study report to Interconnection Customers whose Interconnection Requests have been studied pursuant to Clustering, each Interconnection Customer shall indicate on OASIS whether it is willing to pay and provide security for its applicable share of the good faith estimate of costs contained in the Facilities Study in accordance with Attachment ~~K~~**Q** of the Tariff. Within thirty (30) Calendar Days after comments on the draft Interconnection Facilities Study report are submitted by the Interconnection Customers to the Transmission Provider, Transmission Provider shall tender a draft SGIA, together with draft appendices completed to the extent practicable, to each Interconnection Customer that has indicated that it is willing to pay and provide security for its applicable share of the costs. Each tendered SGIA shall be contingent on execution by each other Interconnection Customer receiving an SGIA. The remaining provisions of Section 11 with respect to the tender, negotiation and execution of SGIA's apply, except that if any one or more SGIA's so tendered is not executed by the applicable Interconnection Customer(s) and returned with evidence that milestones have been achieved pursuant to Section 11.3 by the deadline for execution of the SGIA by the Interconnection Customer, the Transmission Provider shall, within fifteen (15) Calendar Days thereafter, reissue SGIA's to those Interconnection Customers that executed the previous SGIA reapportioning the costs contained in the Interconnection Facilities Study among those remaining Interconnection Customers. Each of those remaining Interconnection Customers shall have fifteen (15) Calendar Days to execute its SGIA and return it with evidence that milestones have been achieved pursuant to Section 11.3. If any one or more of those SGIA's are not executed and returned as provided, then the Transmission Provider shall continue to reissue SGIA's as provided for above until all issued SGIA's are executed and returned as provided, or until the last SGIA tendered was tendered to a single Interconnection Customer.

4.3 Transferability of Queue Position.

An Interconnection Customer may transfer its Queue Position to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

4.4 Modifications.

Interconnection Customer shall submit to Transmission Provider, in writing, modifications to any information provided in the Interconnection Request. Interconnection Customer shall retain its Queue Position if the modifications are in accordance with Sections 4.4.1, 4.4.2, or 4.4.5, or are determined not to be Material Modifications pursuant to Section 4.4.3.

Notwithstanding the above, during the course of the Interconnection Studies, either Interconnection Customer or Transmission Provider may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to Transmission Provider and Interconnection Customer, such acceptance not to be unreasonably withheld, Transmission Provider shall modify the Point of Interconnection and/or configuration in accordance with such changes and proceed with any re-studies necessary to do so in accordance with Section 6.5, Section 7.6 and Section 8.7 as applicable and Interconnection Customer shall retain its Queue Position.

4.4.1 Permitted Modifications Before Combined Study Agreement

Prior to the return of the executed Combined Study Agreement to Transmission Provider, modifications permitted under this Section shall include specifically: (a) a decrease of up to 60 percent of electrical output (MW) of the proposed project; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration. For plant increases, the incremental increase in plant output will go to the end of the queue for the purposes of cost allocation and study analysis.

4.4.2 Permitted Modification After Interconnection System Impact Study

Permitted modifications before delivery of a notice authorizing the Transmission Provider to proceed with an Interconnection Facilities Study pursuant to Section 8.2 shall include specifically: (a) additional 15 percent decrease of electrical output (MW), and (b) Generating Facility technical parameters associated with modifications to Generating Facility technology and transformer impedances; provided, however, the incremental costs associated with those modifications are the responsibility of the requesting Interconnection Customer.

4.4.3 Request for Modification Evaluation

Prior to making any modification other than those specifically permitted by Sections 4.4.1, 4.4.2 and 4.4.5, Interconnection Customer may first request that Transmission Provider evaluate whether such modification is a Material Modification. In response to Interconnection Customer's request, Transmission Provider shall evaluate the proposed modifications prior to making them and inform Interconnection Customer in writing of whether the modifications would constitute a Material Modification. Any change to the

Point of Interconnection, except those deemed acceptable under Sections 4.4.1, 6.1, 7.2 or so allowed elsewhere, shall constitute a Material Modification. Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

4.4.4 Additional Studies for Modification Evaluation

Upon receipt of Interconnection Customer's request for modification permitted under this Section 4.4, Transmission Provider shall commence and perform any necessary additional studies as soon as practicable, but in no event shall Transmission Provider commence such studies later than thirty (30) Calendar Days after receiving notice of Interconnection Customer's request. Any additional studies resulting from such modification shall be done at Interconnection Customer's cost. Notwithstanding anything else in these SGIP, all time periods and deadlines provided for in these SGIP and falling after the date of receipt of such notice of request by Transmission Provider shall be extended by a period equal to the time period between receipt of such notice or request and the date on which all additional studies are completed.

4.4.5 Extensions of Commercial Operation Date

Extensions of less than three (3) cumulative years in the Commercial Operation Date of the Generating Facility to which the Interconnection Request relates are not material and should be handled through construction sequencing; provided, however, that extensions may necessitate a determination of whether the Generating Facility will retain its WECC accepted rating status and whether additional studies are required pursuant to the Applicable Reliability Standards.

Section 5. Procedures for Interconnection Requests Submitted Prior to Effective Date of Standard Generator Interconnection Procedures.

5.1 Queue Position for Pending Requests.

- 5.1.1** If an Interconnection Customer has not executed an interconnection system impact study agreement with Transmission Provider as of the effective date of this SGIP, then all interconnection studies shall be processed in accordance with this SGIP.
- 5.1.2** If an Interconnection Customer has executed an interconnection system impact study agreement with Transmission Provider prior to the effective date of this SGIP, such interconnection study shall be completed in accordance with the terms of such agreement. With respect to any remaining studies for which an Interconnection Customer has not signed a study agreement prior to the effective date of the SGIP, Transmission Provider must offer Interconnection Customer the option of either continuing under Transmission Provider's existing interconnection study process or going forward with the completion of the necessary Interconnection Studies (for which it does not have a signed Interconnection Studies Agreement) in accordance with this SGIP.

- 5.1.3** If an interconnection agreement has been executed before the effective date of the SGIP, then the interconnection agreement would be grandfathered.

5.2 Transition Period.

Transmission Provider and Interconnection Customers with an outstanding request (i.e., an interconnection request for which an interconnection agreement has not been executed as of the effective date of this SGIP) for which an Interconnection Study must be completed pursuant to these SGIP shall transition such request to this SGIP within a reasonable period of time not to exceed sixty (60) Calendar Days. Any Interconnection Customer with an outstanding request as of the effective date of this SGIP may request a reasonable extension of any deadline, otherwise applicable, if necessary to avoid undue hardship or prejudice to its Interconnection Request. A reasonable extension shall be granted by Transmission Provider to the extent consistent with the intent and process provided for under this SGIP.

5.3 New Transmission Provider.

If Transmission Provider transfers control of its Transmission System to a successor Transmission Provider during the period when an Interconnection Request is pending, the original Transmission Provider shall transfer to the successor Transmission Provider any amount of the deposit or payment with Interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net amount and the deposit or payment required by this SGIP shall be paid by or refunded to the Interconnection Customer, as appropriate.

The original Transmission Provider shall coordinate with the successor Transmission Provider to complete any Interconnection Study, as appropriate, that the original Transmission Provider has begun but has not completed. If Transmission Provider has tendered a draft SGIA to Interconnection Customer but Interconnection Customer has not either executed the SGIA or requested the filing of an unexecuted SGIA with the Commission, unless otherwise provided, Interconnection Customer must complete negotiations with the successor Transmission Provider.

Section 6. Interconnection Feasibility Study.

6.1 Interconnection Feasibility Study Agreement.

Subject to Attachment [P,M-2](#), simultaneously with the acknowledgement of a valid Interconnection Request Transmission Provider shall provide to Interconnection Customer an Interconnection Feasibility Study Agreement in the form of Appendix 2. The Interconnection Feasibility Study Agreement shall specify that Interconnection Customer is responsible for the actual cost of the Interconnection Feasibility Study. Within five (5) Business Days following the Scoping Meeting Interconnection Customer shall specify for inclusion in the attachment to the Interconnection Feasibility Study Agreement the Point(s) of Interconnection and any reasonable alternative Point(s) of Interconnection. Within five (5) Business Days following Transmission Provider's receipt of such designation,

Transmission Provider shall tender to Interconnection Customer the Interconnection Feasibility Study Agreement ~~signed by Transmission Provider~~, which includes a good faith estimate of the cost for completing the Interconnection Feasibility Study. Interconnection Customer shall execute and deliver to Transmission Provider the Interconnection Feasibility Study Agreement along with a \$15,000 deposit no later than thirty (30) Calendar Days after its receipt.

~~On or before the return of the executed Interconnection Feasibility Study Agreement to Transmission Provider, Interconnection Customer shall provide the technical data called for in Appendix 1, Attachment A.~~

Subject to Attachment ~~P~~, M-2, if the Interconnection Feasibility Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting, a substitute Point of Interconnection identified by either Interconnection Customer or Transmission Provider, and acceptable to the other, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and re-studies shall be completed pursuant to Section 6.5 as applicable.

Subject to Attachment ~~P~~, M-2, for the purpose of this Section 6.1, if Transmission Provider and Interconnection Customer cannot agree on the substituted Point of Interconnection, then Interconnection Customer may direct that one of the alternatives as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to Section 3.3.4, shall be the substitute.

If Interconnection Customer and Transmission Provider agree to forgo the Interconnection Feasibility Study, Transmission Provider will initiate an Interconnection System Impact Study under Section 7 of this SGIP and apply the \$15,000 deposit towards the Interconnection System Impact Study.

6.2 Scope of Interconnection Feasibility Study

The Interconnection Feasibility Study shall preliminarily evaluate the feasibility of the proposed interconnection to the Transmission System.

Subject to Attachment ~~P~~, M-2, the Interconnection Feasibility Study will consider the Base Case as well as all generating facilities (and with respect to (iii), any identified Network Upgrades) that, on the date the Interconnection Feasibility Study is commenced: (i) are directly interconnected to the Transmission System; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but have executed an interconnection agreement or an unexecuted interconnection agreement has been filed with the Commission. The Interconnection Feasibility Study will consist of a power flow and short circuit analysis. The Interconnection Feasibility Study will provide a list of facilities and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

6.3 Interconnection Feasibility Study Procedures

Transmission Provider shall utilize existing studies to the extent practicable when it performs the study. Subject to Attachment [P,M-2](#), Transmission Provider shall use Reasonable Efforts to complete the Interconnection Feasibility Study no later than forty-five (45) Calendar Days after Transmission Provider receives the fully executed Interconnection Feasibility Study Agreement. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Feasibility Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Feasibility Study. If Transmission Provider is unable to complete the Interconnection Feasibility Study within that time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers and relevant power flow, short circuit and stability databases for the Interconnection Feasibility Study, subject to confidentiality arrangements consistent with Section 13.1.

6.4 Meeting with Transmission Provider

At Interconnection Customer's request, within ten (10) Business Days of providing an Interconnection Feasibility Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection Feasibility Study.

6.5 Re-Study

If re-study of the Interconnection Feasibility Study is required due to a higher queued project dropping out of the queue, or a modification of a higher queued project subject to Section 4.4, or re-designation of the Point of Interconnection pursuant to Section 6.1 Transmission Provider shall notify Interconnection Customer in writing. Transmission Provider shall use Reasonable Efforts to complete such re-study no later than forty-five (45) Calendar Days from the date of the notice. Any cost of re-study shall be borne by the Interconnection Customer being re-studied.

Section 7. Interconnection System Impact Study

7.1 Combined Study Agreement

Subject to Attachment [P,M-2](#), unless otherwise agreed, pursuant to the Scoping Meeting provided in Section 3.3.4, simultaneously with the delivery of the Interconnection Feasibility Study to Interconnection Customer, Transmission Provider shall ~~provide~~[tender](#) to Interconnection Customer a Combined Study Agreement. Within ~~three~~[five](#) (35) Business Days following the ~~meeting contemplated by Section 6.4, or if Interconnection Customer requests no such meeting, within three (3) Business Days of the~~ deadline established pursuant to these SGIP for ~~such the~~ [meeting contemplated by Section 6.4](#), Transmission Provider shall provide to Interconnection Customer a non-binding good faith

estimate of the cost and timeframe for completing the Interconnection System Impact Study.

7.2 Execution of Combined Study Agreement

Interconnection Customer shall execute and deliver the Combined Study Agreement to Transmission Provider no later than thirty (30) Calendar Days after its receipt along with demonstration of Site Control, and a \$75,000 deposit.

If Interconnection Customer does not provide all technical data required by the Combined Study Agreement when it delivers the executed Combined Study Agreement to Transmission Provider, Transmission Provider shall notify Interconnection Customer of the deficiency within five (5) Business Days of the receipt of the executed Combined Study Agreement and Interconnection Customer shall cure the deficiency within ten (10) Business Days of receipt of the notice, provided, however, such deficiency does not include failure to deliver the executed Combined Study Agreement or deposit. If the Interconnection System Impact Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting and the Interconnection Feasibility Study, a substitute Point of Interconnection identified by either Interconnection Customer or Transmission Provider, and acceptable to the other, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and restudies shall be completed pursuant to Section 7.6 as applicable. For the purpose of this Section 7.2, if Transmission Provider and Interconnection Customer cannot agree on the substituted Point of Interconnection, then Interconnection Customer may direct that one of the alternatives as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to Section 3.3.4, shall be the substitute.

7.3 Scope of Interconnection System Impact Study

The Interconnection System Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Interconnection

System Impact Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Interconnection System Impact Study is commenced: (i) are directly interconnected to the Transmission System; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but for which there is an executed interconnection agreement or an unexecuted interconnection agreement has been filed with the Commission. In the case of Clustering, the Interconnection System Impact Study will also consider all other Interconnection Requests to be studied concurrently pursuant to Section 4.2.

The Interconnection System Impact Study will consist of a short circuit analysis, a stability analysis, and a power flow analysis. The Interconnection System Impact Study will state

the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested Interconnection Service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The Interconnection System Impact Study will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility (including any amounts that Interconnection Customer may have to pay, or security the Interconnection Customer may have to provide, pursuant to Article 11 of the SGIA) and a non-binding good faith estimated time to construct.

7.4 Interconnection System Impact Study Procedures.

Transmission Provider shall coordinate the Interconnection System Impact Study with any Affected System that is affected by the Interconnection Request pursuant to Section 3.5 above. Transmission Provider shall utilize existing studies to the extent practicable when it performs the study. Transmission Provider shall use Reasonable Efforts to complete the Interconnection System Impact Study within ninety (90) Calendar Days after the receipt of the Combined Study Agreement or notification to proceed, study payment, and technical data. If Transmission Provider uses Clustering, Transmission Provider shall use Reasonable Efforts to deliver a completed Interconnection System Impact Study within ninety (90) Calendar Days after the close of the Queue Cluster Window.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection System Impact Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection System Impact Study. If Transmission Provider is unable to complete the Interconnection System Impact Study within the time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Upon request, Transmission Provider shall provide Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Interconnection System Impact Study, subject to confidentiality arrangements consistent with Section 13.1.

7.5 Meeting with Transmission Provider.

At Interconnection Customer's request, within ten (10) Business Days of providing an Interconnection System Impact Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection System Impact Study.

7.6 Re-Study.

If re-study of the Interconnection System Impact Study is required due to a higher queued project dropping out of the queue, a modification of a higher queued project subject to 4.4, or re-designation of the Point of Interconnection pursuant to Section 7.2 Transmission

Provider shall notify Interconnection Customer in writing. Such re-study shall take no longer than sixty (60) Calendar Days from the date of notice. Any cost of re-study shall be borne by the Interconnection Customer being re-studied.

Section 8. Interconnection Facilities Study.

8.1 Interconnection Facilities Study.

Within ~~three~~^{five} (3~~5~~⁵) Business Days following the ~~meeting contemplated by Section 7.5,~~ or if Interconnection Customer requests no such meeting, within three (3) Business Days of the deadline established pursuant to these SGIP for ~~such the~~ meeting contemplated by Section 7.5, Transmission Provider shall provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

8.2 Authority to Proceed.

Interconnection Customer shall notify Transmission Provider in writing of whether it wishes Transmission Provider to proceed with the Interconnection Facilities Study no later than ten (10) Calendar Days of receipt from Transmission Provider of the cost estimate contemplated by Section 8.1. If Interconnection Customer wishes Transmission Provider to proceed with the Interconnection Facilities Study, it shall provide Transmission Provider with a \$150,000 deposit and all additional technical data requested by Transmission Provider together with such notice.

If Interconnection Customer does not provide all requested additional technical data when it delivers such notice, Transmission Provider shall notify Interconnection Customer in writing of the deficiency within five (5) Business Days of receipt of Interconnection Customer's notice to proceed. Interconnection Customer shall cure the deficiency within ten (10) Business Days of receipt of Transmission Provider's notice.

Transmission Provider may invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

8.3 Scope of Interconnection Facilities Study.

The Interconnection Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the Transmission System. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Transmission Provider's Interconnection Facilities and Network Upgrades necessary to

accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities.

8.4 Interconnection Facilities Study Procedures.

Transmission Provider shall coordinate the Interconnection Facilities Study with any Affected System pursuant to Section 3.5 above. Transmission Provider shall utilize existing studies to the extent practicable in performing the Interconnection Facilities Study. Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after receipt of notice from the Interconnection Customer to proceed pursuant to Section 8.2: ninety (90) Calendar Days, with no more than a +/- 20 percent cost estimate contained in the report; or one hundred eighty (180) Calendar Days, if Interconnection Customer requests a +/- 10 percent cost estimate.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Facilities Study. If Transmission Provider is unable to complete the Interconnection Facilities Study and issue a draft Interconnection Facilities Study report within the time required, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

8.5 Meeting with Transmission Provider.

At Interconnection Customer's request, within ten (10) Business Days of providing the draft Interconnection Facilities Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection Facilities Study.

8.6 Comments.

Interconnection Customer may, within thirty (30) Calendar Days after receipt of the draft Interconnection Facilities Study report, provide written comments to Transmission Provider, which Transmission Provider shall include in the final report. Transmission Provider shall issue the final Interconnection Facilities Study report within fifteen (15) Business Days of receiving Interconnection Customer's comments or promptly upon receiving Interconnection Customer's statement that it will not provide comments. Transmission Provider may reasonably extend such fifteen-day period upon notice to Interconnection Customer if Interconnection Customer's comments require Transmission Provider to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Study report. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study report, subject to confidentiality arrangements consistent with Section 13.1.

8.7 Re-Study.

If re-study of the Interconnection Facilities Study is required due to a higher queued project dropping out of the queue or a modification of a higher queued project pursuant to Section 4.4, Transmission Provider shall so notify Interconnection Customer in writing. Such re-study shall take no longer than sixty (60) Calendar Days from the date of notice. Any cost of re-study shall be borne by the Interconnection Customer being re-studied.

Section 9. Engineering & Procurement ("E&P") Agreement.

Prior to executing an SGIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and Transmission Provider shall offer Interconnection Customer, an E&P Agreement that authorizes Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, Transmission Provider shall not be obligated to offer an E&P Agreement if Interconnection Customer is in Dispute Resolution as a result of an allegation that Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the SGIP. The E&P Agreement is an optional procedure and it will not alter the Interconnection Customer's Queue Position or In-Service Date.

The E&P Agreement shall provide for Interconnection Customer to pay the cost of all activities authorized by Interconnection Customer and to make advance payments or provide other satisfactory security for such costs. Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If Interconnection Customer withdraws its Interconnection Request or either Party terminates the E&P Agreement, to the extent the equipment ordered can be cancelled under reasonable terms, Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably cancelled, Transmission Provider may elect: (i) to take title to the equipment, in which event Transmission Provider shall refund Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to Interconnection Customer, in which event Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

Section 10. Optional Interconnection Study

10.1 Optional Interconnection Study Agreement.

On or after the date when Interconnection Customer receives an Interconnection System Impact Study report, or at any time for Interconnection Customers subject to Clustering, Interconnection Customer may request, and Transmission Provider shall perform a reasonable number of Optional Interconnection Studies. The request shall describe the assumptions that Interconnection Customer wishes Transmission Provider to study within

the scope described in Section 10.2. Within five (5) Business Days after receipt of a request for an Optional Interconnection Study, Transmission Provider shall provide to Interconnection Customer an Optional Interconnection Study Agreement in the form of Appendix 4.

The Optional Interconnection Study Agreement shall specify: (i) the technical data that Interconnection Customer must provide for each phase of the Optional Interconnection Study, (ii) Interconnection Customer's assumptions as to which Interconnection Requests with earlier queue priority dates will be excluded from the Optional Interconnection Study case and assumptions as to the type of Interconnection Service for Interconnection Requests remaining in the Optional Interconnection Study case, and (iii) Transmission Provider's estimate of the cost of the Optional Interconnection Study. To the extent known by Transmission Provider, such estimate shall include any costs expected to be incurred by any Affected System whose participation is necessary to complete the Optional Interconnection Study. Notwithstanding the above, Transmission Provider shall not be required as a result of an Optional Interconnection Study request to conduct any additional Interconnection Studies with respect to any other Interconnection Request.

Interconnection Customer shall execute the Optional Interconnection Study Agreement within ten (10) Business Days of receipt and deliver the Optional Interconnection Study Agreement, the technical data and a \$15,000 deposit to Transmission Provider.

10.2 Scope of Optional Interconnection Study.

The Optional Interconnection Study will consist of a sensitivity analysis based on the assumptions specified by Interconnection Customer in the Optional Interconnection Study Agreement. The Optional Interconnection Study will also identify Transmission Provider's Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, that may be required to provide transmission service or Interconnection Service based upon the results of the Optional Interconnection Study. The Optional Interconnection Study shall be performed solely for informational purposes. Transmission Provider shall use Reasonable Efforts to coordinate the study with any Affected Systems that may be affected by the types of Interconnection Services that are being studied. Transmission Provider shall utilize existing studies to the extent practicable in conducting the Optional Interconnection Study.

10.3 Optional Interconnection Study Procedures.

The executed Optional Interconnection Study Agreement, the deposit, and technical and other data called for therein must be provided to Transmission Provider within ten (10) Business Days of Interconnection Customer receipt of the Optional Interconnection Study Agreement. Transmission Provider shall use Reasonable Efforts to complete the Optional Interconnection Study within a mutually agreed upon time period specified within the Optional Interconnection Study Agreement. If Transmission Provider is unable to complete the Optional Interconnection Study within such time period, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of

the reasons why additional time is required. Any difference between the study payment and the actual cost of the study shall be paid to Transmission Provider or refunded to Interconnection Customer, as appropriate. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation and workpapers and databases or data developed in the preparation of the Optional Interconnection Study, subject to confidentiality arrangements consistent with Section 13.1.

Section 11. Standard Generator Interconnection Agreement (SGIA)

11.1 Tender.

Interconnection Customer shall tender comments on the draft Interconnection Facilities Study report within thirty (30) Calendar Days of receipt of the report. Within thirty (30) Calendar Days after the comments are submitted, Transmission Provider shall tender a SGIA, together with draft appendices. Interconnection Customer shall return the completed draft appendices within thirty (30) Calendar Days.

11.2 Negotiation.

Notwithstanding Section 11.1, at the request of Interconnection Customer Transmission Provider shall begin negotiations with Interconnection Customer concerning appendices A through D to the SGIA at any time after Transmission Provider delivers the draft Interconnection Facilities Study report to Interconnection Customer pursuant to Section 8.4. Following such request, or where no such request is made, following receipt by Transmission Provider of the completed draft appendices to the SGIA from Interconnection Customer pursuant to Section 11.1, Transmission Provider and Interconnection Customer shall negotiate concerning any disputed provisions of appendices A through D to the SGIA for not more than sixty (60) Calendar Days after Transmission Provider's tender of the SGIA and draft appendices pursuant to Section 11.1. If Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after Transmission Provider's tender of the SGIA and draft appendices pursuant to Section 11.1. Transmission Provider shall provide to Interconnection Customer a final SGIA within fifteen (15) Business Days after the completion of the negotiation process. Unless otherwise agreed by the Parties, if Interconnection Customer has not executed a final SGIA, requested filing of an unexecuted SGIA with the Commission, or initiated Dispute Resolution procedures pursuant to Section 13.5, within thirty (30) Calendar Days of Transmission Provider's tender of a final SGIA, it shall be deemed to have withdrawn its Interconnection Request.

11.3 Execution and Filing.

If Interconnection Customer executes a final SGIA, it shall execute two originals of the tendered final SGIA and return them to Transmission Provider. At the same time, Interconnection Customer also shall provide reasonable evidence that one or more of the following milestones in the development of the Generating Facility, at Interconnection Customer election, has been achieved: (i) the execution of a contract for the supply or

transportation of fuel to the Generating Facility; (ii) the execution of a contract for the supply of cooling water to the Generating Facility; (iii) execution of a contract for the engineering for, procurement of major equipment for, or construction of, the Generating Facility; (iv) execution of a contract for the sale of electric energy or capacity from the Generating Facility; or (v) application for an air, water, or land use permit.

If Interconnection Customer requests in writing that Transmission Provider file with the Commission an SGIA in unexecuted form, Transmission Provider shall, as soon as practicable, but not later than ten (10) Business Days after receiving a request to file an unexecuted SGIA with the Commission, file an SGIA with Commission, together with its explanation of any matters as to which Interconnection Customer and Transmission Provider disagree and support for the costs that Transmission Provider proposes to charge to, or security that Transmission Provider proposes to require from, Interconnection Customer under the SGIA. An unexecuted SGIA should contain terms and conditions deemed appropriate by Transmission Provider for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted SGIA, they may proceed subject to the Commission ordering otherwise.

11.4 Commencement of Interconnection Activities.

If Interconnection Customer executes the final SGIA, Transmission Provider and Interconnection Customer shall perform their respective obligations in accordance with the terms of the SGIA, subject to modification by the Commission. Upon submission of an unexecuted SGIA, Interconnection Customer and Transmission Provider shall promptly comply with the unexecuted SGIA, subject to modification by the Commission.

Section 12. Construction of Transmission Provider's Interconnection Facilities and Network Upgrades.

12.1 Schedule.

Transmission Provider and Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades.

12.2 Construction Sequencing.

12.2.1 General.

In general, the In-Service Date of an Interconnection Customer seeking interconnection to the Transmission System will determine the sequence of construction of Network Upgrades.

12.2.2 Advance Construction of Network Upgrades that are an Obligation of an Entity other than Interconnection Customer.

An Interconnection Customer with an SGIA, in order to maintain its In-Service Date, may request that Transmission Provider advance to the extent necessary the completion of Network Upgrades that: (i) were assumed in the Interconnection Studies for such Interconnection Customer, (ii) are necessary to support such In-Service Date, and (iii) would otherwise not be completed, pursuant to a contractual obligation of an entity other than Interconnection Customer that is seeking interconnection to the Transmission System, in time to support such In-Service Date. Upon such request, Transmission Provider will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that Interconnection Customer provides Transmission Provider security as contemplated by Attachment [KO](#) of the Tariff for: (i) any associated expediting costs and (ii) the cost of such Network Upgrades.

Transmission Provider will reduce the outstanding amount of the security provided by the Interconnection Customer for both the expediting costs and the cost of such Network Upgrades, in accordance with Attachment [KO](#) of the Tariff. The entity that would have had a contractual obligation to provide security for such Network Upgrades had they not been expedited shall be obligated to provide security for the outstanding balance of the security provided by the Interconnection Customer for such Network Upgrades on the date that it would have been due had there been no request for advance construction. Upon receipt of security from that entity, Transmission Provider shall release the security provided by the Interconnection Customer for such Network Upgrades.

12.2.3 Advancing Construction of Network Upgrades that are Part of an Expansion Plan of Transmission Provider.

An Interconnection Customer with an SGIA, in order to maintain its In-Service Date, may request that Transmission Provider advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an expansion plan of Transmission Provider, in time to support such In-Service Date. Upon such request, Transmission Provider will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that Interconnection Customer provides Transmission Provider security as contemplated by Attachment [KO](#) of the Tariff for any associated expediting costs. Interconnection Customer may consolidate security for the expediting costs with other security in accordance with Attachment [KO](#).

12.2.4 Amended Interconnection System Impact Study.

An Interconnection System Impact Study will be amended to determine the facilities necessary to support the requested In-Service Date. This amended study will include those transmission and Generating Facilities that are expected to be in service on or before the requested In-Service Date.

Section 13. Miscellaneous

13.1 Confidentiality.

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the Parties to the other prior to the execution of an SGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

Notwithstanding the foregoing, if Transmission Provider performs study work using WECC data (power flow, stability, and disturbance monitoring data) for an Interconnection Customer that is not a member of WECC, Interconnection Customer may only look at the data at Transmission Provider's office, but shall not be permitted to have the data or a copy of the data, and only once Interconnection Customer has signed the WECC Non-member Confidentiality Agreement in accordance with the Applicable Reliability Council policies.

Notwithstanding the foregoing, the release of Confidential Information shall be subject to Applicable Laws and Regulations and Applicable Reliability Standards.

13.1.1 Scope.

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the other Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the other Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of the SGIA; or (6) is required, in accordance with Section 13.1.6, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by Applicable Laws and Regulations, or is necessary in any legal proceeding establishing rights and obligations under the SGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

13.1.2 Release of Confidential Information.

Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), employees, contractors, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Section 13.1 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Section 13.1.

13.1.3 Rights.

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

13.1.4 No Warranties.

By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

13.1.5 Standard of Care.

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under these procedures or its regulatory requirements.

13.1.6 Order of Disclosure.

If a court or a Governmental Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of the SGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

13.1.7 Remedies.

The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's breach of its obligations under this Section 13.1. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party breaches or threatens to breach its obligations under this Section 13.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the breach of this Section 13.1, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Section 13.1.

13.1.8 Disclosure to the Commission.

Notwithstanding anything in this Section 13.1 to the contrary, if the Commission, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to the SGIP, the Party shall provide the requested information to the Commission within the time provided for in the request for information. In providing the information to the Commission, the Party must request that the information be treated as confidential and non-public by the Commission and that the information be withheld from public disclosure.

13.1.9

Subject to the exception in Section 13.1.8, any information that a Party claims is competitively sensitive, commercial or financial information ("Confidential Information") shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this SGIP or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

13.1.10

This Section 13.1 shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

13.1.11

Transmission Provider shall, at Interconnection Customer's election, destroy, in a confidential manner, or return Confidential Information provided, at the time Confidential Information is no longer needed.

13.2 Delegation of Responsibility.

Transmission Provider may use the services of contractors as it deems appropriate to perform its obligations under this SGIP.

Transmission Provider shall remain primarily liable to Interconnection Customer for the performance of such contractors and compliance with its obligations of this SGIP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

13.3 Obligation for Study Costs.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Studies. Any difference between the study deposit and the actual cost of the applicable Interconnection Study shall be paid by or refunded, except as otherwise provided herein, to Interconnection Customer or offset against the cost of any future Interconnection Studies associated with the applicable Interconnection Request prior to beginning of any such future Interconnection Studies. Any invoices for Interconnection Studies shall include a detailed and itemized accounting of the cost of each Interconnection Study. Interconnection Customer shall pay any such undisputed costs within thirty (30) Calendar Days of receipt of an invoice therefor. Transmission Provider shall not be obligated to perform or continue to perform any studies unless Interconnection Customer has paid all undisputed amounts in compliance herewith.

13.4 Third Parties Conducting Studies.

If (i) at the time of the signing of an Interconnection Study agreement there is disagreement as to the estimated time to complete an Interconnection Study, (ii) Interconnection Customer receives notice pursuant to Sections 6.3, 7.4 or 8.4 that Transmission Provider will not complete an Interconnection Study within the applicable timeframe for such Interconnection Study, or (iii) Interconnection Customer receives neither the Interconnection Study nor a notice under Sections 6.3, 7.4 or 8.4 within the applicable timeframe for such Interconnection Study, then Interconnection Customer may require Transmission Provider to utilize a third party consultant reasonably acceptable to Interconnection Customer and Transmission Provider to perform such Interconnection

Study under the direction of Transmission Provider. At other times, Transmission Provider may also utilize a third party consultant to perform such Interconnection Study, either in response to a general request of Interconnection Customer, or on its own volition.

In all cases, use of a third party consultant shall be in accord with Article 26 of the SGIA (Subcontractors) and limited to situations where Transmission Provider determines that doing so will help maintain or accelerate the study process for Interconnection Customer's pending Interconnection Request and not interfere with Transmission Provider's progress on Interconnection Studies for other pending Interconnection Requests. In cases where Interconnection Customer requests use of a third party consultant to perform such Interconnection Study, Interconnection Customer and Transmission Provider shall negotiate all of the pertinent terms and conditions, including selection through a request for proposal process where appropriate, reimbursement arrangements and the estimated study completion date and study review deadline. Transmission Provider shall convey all workpapers, data bases, study results and all other supporting documentation prepared to date with respect to the Interconnection Request as soon as practicable upon Interconnection Customer's request subject to the confidentiality provision in Section 13.1. In any case, such third party contract may be entered into with either Interconnection Customer or Transmission Provider at Transmission Provider's discretion. In the case of (iii) Interconnection Customer maintains its right to submit a claim to Dispute Resolution to recover the costs of such third party study. Such third party consultant shall be required to comply with this SGIP, Article 26 of the SGIA (Subcontractors), and the relevant provisions of the Tariff as would apply if Transmission Provider were to conduct the Interconnection Study and shall use the information provided to it solely for purposes of performing such services and for no other purposes. Transmission Provider shall cooperate with such third party consultant and Interconnection Customer to complete and issue the Interconnection Study in the shortest reasonable time.

13.5 Disputes.

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with the other Party's failure to comply with these SGIP, such dispute or claim shall be resolved in accordance with Dispute Resolution. Notwithstanding anything else herein, no Party shall be liable to the other for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with these SGIP.

13.6 Notice.

Unless otherwise provided in these SGIP, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective only if given in writing, and may be so given by recognized national courier, or by depositing the same with the Canadian Postal Service with postage prepaid for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address for that Party's representative as set out in the Interconnection Request. Any notice, demand or request required or permitted to be given by either Party to the other and not

required by these SGIP to be given in writing may be so given by telephone, facsimile or email to the numbers or addresses for the Party's representative as set out in the Interconnection Request.

APPENDIX 1 to SGIP

INTERCONNECTION REQUEST FOR A GENERATING FACILITY

- I. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with Transmission Provider's Transmission System pursuant to the Tariff. Capitalized terms used but not defined herein shall have the meanings given to them in the SGIP.**
- II. This Interconnection Request is for (check one):**
- _____ A proposed new Generating Facility.
- _____ An increase in the generating capacity or a Material Modification of an existing Generating Facility.
- III. The type of interconnection service requested (check one):**
- _____ Energy Resource Interconnection Service
- _____ Network Resource Interconnection Service
- IV. Check here only if Interconnection Customer requesting Network Resource Interconnection Service also seeks to have its Generating Facility studied for Energy Resource Interconnection Service**
- V. Interconnection Customer provides the following information:**
- A. Address or location of the proposed new Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;**
- B. Maximum summer at ____ degrees C and winter at ____ degrees C megawatt electrical output of the proposed new Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;**
- C. General description of the equipment configuration;**
- D. Commercial Operation Date (Day, Month, and Year);**

- E. Name, address, telephone number, fax number and e-mail address of Interconnection Customer's contact person;**
- F. Approximate location of the proposed Point of Interconnection (optional); and**
- G. Interconnection Customer Data (set forth in Attachment A)**

VI. Applicable deposit amount as specified in the SGIP.

VII. Evidence of Site Control as specified in the SGIP (check one)

_____ Is attached to this Interconnection Request

_____ Will be provided at a later date in accordance with the SGIP

VIII. This Interconnection Request shall be submitted to the representative indicated below:

British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street
Vancouver, BC V7X 1V5

Attention: [Interconnections](#) Manager, Market Operations [& Development](#)

Telephone: <*>

Facsimile: <*>

Email: <*>

IX. Representative of Interconnection Customer to contact:

[To be completed by Interconnection Customer]

Telephone: <*>

Facsimile: <*>

Email: <*>

X. This Interconnection Request is submitted by:

**Attachment A
To Appendix 1
Interconnection Request**

GENERATING FACILITY DATA

UNIT RATINGS

Power Factor Voltage

Speed (RPM) Connection (e.g. Wye)

Short Circuit Ratio Frequency, Hertz

Stator Amperes at Rated kVA Field Volts

Max Turbine MW °C

COMBINED TURBINE GENERATOR EXCITER INERTIA DATA

Inertia Constant, H = kW sec/kVA

Moment of Inertia, WR² = lb. ft.²

REACTANCE DATA (PER UNIT RATED KVA)

DIRECT AXIS

QUADRATURE AXIS

Synchronous saturated X_{dv} X_{qv}

Synchronous unsaturated X_{di} X_{qi}

Transient saturated X'_{dv} X'_{qv}

Transient unsaturated X'_{di} X'_{qi}

Subtransient saturated X''_{dv} X''_{qv}

Subtransient unsaturated X''_{di} X''_{qi}

REACTANCE DATA (PER UNIT RATED KVA)

Negative Sequence—saturated	X_{2s}
Negative Sequence—unsaturated	X_{2i}
Zero Sequence—saturated	X_{0s}
Zero Sequence—unsaturated	X_{0i}
Leakage Reactance	X_{lm}

FIELD TIME CONSTANT DATA (SEC)

Open Circuit	T'_{do}	T'_{qe}
Three-Phase Short Circuit Transient	T'_{d3}	T'_{q}
Line to Line Short Circuit Transient	T'_{d2}	
Line to Neutral Short Circuit Transient	T'_{d1}	
Short Circuit Subtransient	T''_d	T''_q
Open Circuit Subtransient	T''_{do}	T''_{qe}

ARMATURE TIME CONSTANT DATA (SEC)

Three Phase Short Circuit	T_{a3}
Line to Line Short Circuit	T_{a2}
Line to Neutral Short Circuit	T_{a1}

NOTE: If requested information is not applicable, indicate by marking "N/A."

MW CAPABILITY AND PLANT CONFIGURATION

GENERATING FACILITY DATA

ARMATURE WINDING RESISTANCE DATA (PER UNIT)

Positive R_1 _____

Negative R_2 _____

Zero R_0 _____

Rotor Short Time Thermal Capacity $I_2^2 t =$ _____

Field Current at Rated kVA, Armature Voltage and PF = _____ amps

Field Current at Rated kVA and Armature Voltage, 0 PF = _____ amps

Three Phase Armature Winding Capacitance = _____ microfarad

Maximum Continuous Field Voltage = _____ volts

Maximum Continuous Field Current = _____ amps

Maximum 30 Sec Field Current = _____ amps

Field Ceiling Voltage = _____ volts

Field Winding Resistance = _____ ohms _____ °C

Armature Winding Resistance (Per Phase) = _____ ohms _____ °C

CURVES

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves.
Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

GENERATOR STEP-UP TRANSFORMER DATA RATINGS

Capacity Self-cooled/maximum nameplate _____/_____ kVA

Voltage Ratio (Generator Side/System side/Tertiary) _____/_____ kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye)) _____/_____

Fixed Taps Available _____

Present Tap Setting _____

IMPEDANCE

Positive _____ Z_+ (on self-cooled kVA rating) _____ % _____ X/R

Zero _____ Z_0 (on self-cooled kVA rating) _____ % _____ X/R

EXCITATION SYSTEM DATA

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

GOVERNOR SYSTEM DATA

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request: _____

Elevation: _____ Single Phase _____ Three Phase

Inverter manufacturer, model name, number, and version: _____

List of adjustable setpoints for the protective equipment or software: _____

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. Data must be in PSSE format. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

INDUCTION GENERATORS:

- (*) Field Volts: _____
- (*) Field Amperes: _____
- (*) Motoring Power (kW): _____
- (*) Neutral Grounding Resistor (If Applicable): _____
- (*) $I_2^2 t$ or K (Heating Time Constant): _____
- (*) Rotor Resistance: _____
- (*) Stator Resistance: _____
- (*) Stator Reactance: _____
- (*) Rotor Reactance: _____
- (*) Magnetizing Reactance: _____
- (*) Short Circuit Reactance: _____
- (*) Exciting Current: _____
- (*) Temperature Rise: _____
- (*) Frame Size: _____
- (*) Design Letter: _____
- (*) Reactive Power Required In Vars (No Load): _____
- (*) Reactive Power Required In Vars (Full Load): _____
- (*) Total Rotating Inertia, H: _____ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (*) is required.

DATA REQUIREMENTS FOR GENERATOR INTERCONNECTION

Interconnection Customers must submit the applicable data submission form provided in the Transmission Provider's Business Practices identified to be submitted as Attachment A to Appendix 1 Interconnection Request. The data that the Transmission Provider may require in the data submission forms in order to assess the Interconnection Request is set out below. The definition and explanation of the data may be found in the Generator Interconnection Equipment Statement(s) and Technical Interconnection Requirements of the Transmission Provider's Business Practices.

1. Site Location and Point of Interconnection

All Interconnection Customers will be required to submit a site location map, which shall include all generating sites of a project, the point of interconnection (POI), and the transmission line(s) to connect the project into the system at POI. The locations of generating sites, new substations, or new taps on existing lines must also be shown on the map and located by latitude and longitude. On the site location map, the Interconnection Customer shall:

- a. Identify the substation(s), if connecting to an existing BCTC substation(s), or
- b. Identify the line by name (such as 2L1) as well as the location of the proposed interconnection, if connecting to an existing BCTC transmission line.

The Interconnection Customer will also be required to provide a site layout plan.

2. Electrical Data

The required electrical data must be submitted by a registered professional engineer in the APEGBC.

2.1 One-Line Diagram

All Interconnection Customers will be required to provide a one-line diagram that includes major station equipment (such as generators, transformers, station load, breakers, disconnects, capacitors, reactors, surge arrestors, current transformers, voltage transformers, capacitive voltage transformers), equipment ratings, transformer configuration, generator configuration and grounding, and bus arrangement.

The Interconnection Customer will also be required to provide a protection one-line diagram showing metering and relaying.

2.2 Generator Data

If one or more generators are included, the following data for each different type of generator and generator step up transformer may be required to be provided by the Interconnection Customer. For wind turbine generators, models of all control schemes must be submitted in PSS/E and EMTP formats.

a. Generator General Specifications

- 1. Energy source (e.g., hydro, thermal, wind, combined cycle.) and energy profile in a typical year, and/or typical daily pattern for wind.
- 2. Number of rotating generators with power factor, MW and MVAR ratings.
- 3. Number of turbines, combustion, steam, wind, hydro, etc..
- 4. Maximum output in winter, spring and summer, MW.
- 5. Maximum injected MW's at the POI.

6. Station service load for auxiliaries, MW, MVAR.
7. Station service connection plan.

b. Generator Data, Synchronous Machines

The Transmission Provider may require the following data for each different generator assembly:

1. Reactive capability, 'P-Q' curves;
2. Excitation 'Vee' curves;
3. Saturation and synchronous impedance curves;
4. Identifier (e.g., Generator unit number);
5. Number of similar generators;
6. Complex power, MVA;
7. Active power, MW;
8. Terminal voltage, kV;
9. Machine parameters:
 - a. S_b – Power base (MVA) upon which machine data is specified;
 - b. H – Total inertia constant of the generator and turbine, MWs/MVA;
 - c. R_a – Armature resistance, pu;
 - d. X_d – Direct axis unsaturated synchronous reactance, pu;
 - e. X_q – Quadrature axis unsaturated synchronous reactance, pu;
 - f. X'_d – Direct axis unsaturated transient reactance, pu;
 - g. X'_q – Quadrature axis saturated and unsaturated transient reactance, pu;
 - h. X''_d – Direct axis saturated and unsaturated subtransient reactance, pu;
 - i. X_{lm} – Stator leakage reactance, pu;
 - j. T'_{do} – Direct axis transient open circuit time constant, seconds;
 - k. T'_{qo} – Quadrature axis transient open circuit time constant, seconds;
 - l. T''_{do} – Direct axis subtransient open circuit time constant, seconds;
 - m. T''_{qo} – Quadrature axis subtransient open circuit time constant, seconds;
 - n. S(1.0) – Saturation factor at rated terminal voltage; and
 - o. S(1.2) – Saturation factor at 1.2 per unit of rated terminal voltage;

10. Excitation system modeling information with reference to standard types as specified in PTI PSS/E model library:

- a. Type (static, ac rotating, etc.);
- b. Maximum/Minimum dc current;
- c. Maximum/Minimum dc voltage;
- d. Nameplate information;
- e. Block diagram with control parameter settings; and
- f. Power System Stabilizer (PSS) type and settings;

11. Speed governor information with detailed modeling information with reference to standard types as specified in PTI PSS/E model library for each turbine:

- a. Turbine type (hydro, thermal, wind);
- b. Total capacity, MW (available peak operation rating);
- c. Number of stages;
- d. Manufacturer and model, if known;
- e. Frequency vs. time operational limits, seconds at Hz;
- f. Maximum turbine ramping rates, MW/minute, ramp up and ramp down;

c. Generator Data, Asynchronous Machines

The Transmission Provider may require the following data for each different generator assembly:

1. Shunt reactive compensation devices for power factor correction with induction generators or converters:

- a. Power Factor without compensation;
- b. Power Factor with full compensation;
- c. Reactive power of shunt compensation voltage, kvar; and
- d. Type and model (if required) of shunt compensation device.

2. AC/DC Converter devices employed with certain types of induction motor installations or with dc sources.

- a. Number of converters;
- b. Nominal ac voltage, kV;
- c. Capability to supply or absorb reactive power, MVAR;
- d. Converter manufacturer, model name, number, version; and
- e. Rated/Limitation on Fault current contribution, kA.

3. Machine parameters:

- a. S_b – Power base (MVA) upon which machine data is specified;
- b. H – Total inertia constant of generator and turbine, MWs/MVA;
- c. R_a – Armature resistance, pu;
- d. X_d – Direct axis saturated and unsaturated synchronous reactance, pu;
- e. X'_d – Direct axis saturated and unsaturated transient reactance, pu;
- f. X''_d – Direct axis saturated and unsaturated subtransient reactance, pu;
- g. X_l – Stator leakage reactance, pu;
- h. T'_{do} – Direct axis transient open circuit time constant, seconds;
- i. T''_{do} – Direct axis subtransient open circuit time constant, seconds;
- j. S(1.0) – Saturation factor at rated terminal voltage, A/A;
- k. S(1.2) – Saturation factor at 1.2 per unit of rated terminal voltage, A/A;
- l. V_t – Voltage threshold for tripping, pu;
- m. V_r – Voltage at which reconnection is permitted, pu;
- n. T_v – Pickup time for voltage-based tripping, seconds;
- o. T_{vr} – Time delay for reconnection, seconds;
- p. F_t – Frequency threshold for tripping, Hz;
- q. T_f – Pickup time for frequency-based tripping, seconds;
- r. Reactive power required at no load, MVAR; and
- s. Reactive power required at full load, MVAR.

4. External Shunt Compensation:

- a. Bus Voltage;
- b. Number and rating of each shunt capacitor section; and
- c. Voltage/PF controller scheme description and time delays.

2.3 Load Information Requirements

The Transmission Provider may require the following information regarding the plant load:

- a. Delivery voltage, kV;
- d. Power factor;
- e. Transformer data including high and low voltage levels and impedances.

2.4 Transformer Data

If one or more power transformers are included as part of the proposed connection, the Transmission Provider may require the following data for each unique transformer:

1. Transformer number or identifier;
2. Number of similar transformers;
3. Transformer type and number of windings, (e.g. two winding);
4. Transformer winding data. For a two winding transformer, only winding H and L data is required.

a. For each winding, H, L, y: (y=tertiary):

- 1) Nominal voltage, kV; and
- 2) Configuration (Δ or Y) and Y winding connection (ungrounded, solid ground or impedance ground).

b. Transformer MVA ratings:

- 1) Winding H, MVA;
- 2) Winding L, MVA; and
- 3) Winding y, MVA.

c. Transformer impedances, positive and zero sequence:

- 1) Winding H to L, % X and R at MVA;
- 2) Winding H to Y, % X and R at MVA; and
- 3) Winding L to Y, % X and R at MVA.

d. Transformer tap changer information:

- 1) No load or load;
- 2) Tap changer winding location, H, L, Y; and
- 3) Available taps.

e. Transformer cooling requirements if required from BCTC:

- 1) Load, amps; and
- 2) Voltage, single or three phase, volts.

2.5 Transmission Line/ Cable Data

If a new transmission line or cable is to be included as part of the proposed connection, the Transmission Provider may require the following data:

1. Nominal operating voltage, kV;
2. Line length, km and routes shown in map;
3. Line capacity, amps at °C;
4. Overhead/underground construction including conductor type; and
5. Positive and zero sequence transmission line data in physical units:
 - a) Series resistance, R Ω ;
 - b) Series reactance, X Ω ; and
 - c) Shunt susceptance, B μ S (or $\mu \Omega^{-1}$).

3. Plant Data

The Transmission Provider may require the following information regarding the plant.

1. Plant designation;
2. Maximum inject Power (“Facility Interconnection Capacity”) into the Transmission Provider system;
3. Contracted capacity to BC Hydro (if applicable);
4. Total Plant generating capacity;
5. Total number of generators in the Plant;
6. Total number of generator transformers in the Plant;
7. Total Plant Load (MW);
8. Total Plant Load (MVar);
9. Total Plant Motor Load;
10. Total Plant Static Load;
11. Total Plant Static Load power factor;
12. Total Plant Reactive compensation;
13. Ground Grid resistance;
14. Plant restoration time immediately following a self restoring fault or upset on the transmission line;
15. Bus length from generation to interconnection station;
16. Line length from interconnection station to Transmission Provider’s transmission line;
17. Tower number – observed in the field and painted on tower leg;
18. Number of third party easements required for transmission lines;
19. Black Start Capability (yes/no);
20. Is the Generating Facility in the Transmission Provider’s service area (yes/no);
 - a. If no, provide name of Local Provider
21. Maximum Summer plant output;
22. Maximum Winter plant output;
23. Maximum Spring plant output.

APPENDIX 2 to SGIP

INTERCONNECTION FEASIBILITY STUDY AGREEMENT

THIS AGREEMENT is made and entered into this ____ day of _____, 20____ by and between _____, a _____ organized and existing under the laws of the Province of _____, ("Interconnection Customer,") and **BRITISH COLUMBIA TRANSMISSION CORPORATION**, a Crown corporation existing under the laws of the Province of British Columbia, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____; and

WHEREAS, Interconnection Customer desires to interconnect the proposed or modified Generating Facility with the Transmission System; and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection Feasibility Study to assess the feasibility of interconnecting the proposed or modified Generating Facility to the Transmission System, and of any Affected Systems;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1) When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the SGIP.
- 2) Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection Feasibility Study consistent with Section 6 of the SGIP.
- 3) The scope of the Interconnection Feasibility Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4) The Interconnection Feasibility Study shall be based on the technical information provided by Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Feasibility Study and as designated in accordance with Section 3.3.4 of the SGIP. If, after the designation of the Point of Interconnection pursuant to Section 3.3.4 of the SGIP, Interconnection Customer modifies its Interconnection Request pursuant to Section 4.4, the time to complete the Interconnection Feasibility Study may be extended.

- 5) The Interconnection Feasibility Study report shall provide the following information:
2. preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 3. preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
 4. preliminary description and non-binding estimated cost of facilities required to interconnect the proposed or modified Generating Facility to the Transmission System and to address the identified short circuit and power flow issues.

- 6) Interconnection Customer shall provide a deposit of \$15,000 for the performance of the Interconnection Feasibility Study.

Upon receipt of the Interconnection Feasibility Study Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7) Miscellaneous. The Interconnection Feasibility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the SGIP and the SGIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

BRITISH COLUMBIA TRANSMISSION CORPORATION

By: _____

Title: _____

Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A to Appendix 2
Interconnection Feasibility
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE
INTERCONNECTION FEASIBILITY STUDY**

The Interconnection Feasibility Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on _____:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

APPENDIX 3 to SGIP

COMBINED STUDY AGREEMENT

THIS AGREEMENT is made and entered into this ____ day of _____, 20__ by and between _____, a _____ organized and existing under the laws of the Province of _____, ("Interconnection Customer,") and **BRITISH COLUMBIA TRANSMISSION CORPORATION**, a Crown corporation existing under the laws of the Province of British Columbia, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____; and

WHEREAS, Interconnection Customer desires to interconnect the proposed or modified Generating Facility with the Transmission System;

WHEREAS, Transmission Provider has completed an Interconnection Feasibility Study (the "Feasibility Study") and provided the results of said study to Interconnection Customer (This recital to be omitted if Transmission Provider does not require the Interconnection Feasibility Study);

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection System Impact Study to assess the impact of interconnecting the proposed or modified Generating Facility to the Transmission System, and of any Affected Systems; and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the Transmission System.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1) When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the SGIP.
- 2) Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection System Impact Study consistent with ~~Section~~[Section](#) 7 of the SGIP.
- 3) The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

- 4) The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study if one was completed and the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 4.4 of the SGIP. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection System Impact Study. If Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.
- 5) The Interconnection System Impact Study report shall provide the following information:
 - identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - identification of any thermal overload or voltage limit violations resulting from the interconnection;
 - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection; and
 - description and non-binding, good faith estimated cost of facilities required to interconnect the proposed or modified Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6) Interconnection Customer shall provide a deposit of \$75,000 for the performance of the Interconnection System Impact Study. Transmission Provider's good faith estimate for the time of completion of the Interconnection System Impact Study is [insert date].

Upon receipt of the Interconnection System Impact Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection System Impact Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.
- 7) If Interconnection Customer elects to proceed with an Interconnection Facilities Study consistent with Section 8.2 of the SGIP, Transmission Provider shall cause an Interconnection Facilities Study consistent with Section 8 of the SGIP to be performed in accordance with the Tariff.
- 8) The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment B and the data provided in Attachment C to this Agreement.

- 9) The Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment B), schedule for required facilities to interconnect the proposed or modified Generating Facility to the Transmission System and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 10) If Interconnection Customer elects to proceed with an Interconnection Facilities Study consistent with Section 8.2 of the SGIP, Interconnection Customer shall provide a deposit of \$150,000 for the performance of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment B.

Transmission Provider may invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

- 11) Miscellaneous. The Combined Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the SGIP and the SGIA.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

BRITISH COLUMBIA TRANSMISSION CORPORATION

By: _____

Title: _____

Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A To Appendix 3
Combined Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE
INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study, subject to any modifications in accordance with Section 4.4 of the SGIP, if one was completed and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

**Attachment B To Appendix 3
Combined Study Agreement**

**INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR CONDUCTING
THE INTERCONNECTION FACILITIES STUDY**

Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after receipt of notice from the Interconnection Customer to proceed with an Interconnection Facilities Study:

1. ninety (90) Calendar Days with no more than a +/- 20 percent cost estimate contained in the report, or
2. one hundred eighty (180) Calendar Days with no more than a +/- 10 percent cost estimate contained in the report.

**Attachment C to Appendix 3
Combined Study Agreement****DATA FORM TO BE PROVIDED BY INTERCONNECTION CUSTOMER WITH
THE COMBINED STUDY AGREEMENT**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT)
Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?

☐ Yes ☐ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?

☐ Yes ☐ No (Please indicate on one line diagram).

What type of control system or PLC will be located at Interconnection Customer's Generating Facility?

What protocol does the control system or PLC use?

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to Transmission Provider's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with Transmission Provider.

Is the Generating Facility in the Transmission Provider's service area?

____ Yes ____ No Local provider: _____

Please provide proposed schedule dates:

Begin Construction	Date: _____
Generator step-up transformer receives back feed power	Date _____
Generation Testing	Date: _____
Commercial Operation	Date: _____

APPENDIX 4 to SGIP**OPTIONAL INTERCONNECTION STUDY AGREEMENT**

THIS AGREEMENT is made and entered into this ____ day of _____, 20__ by and between _____, a _____ organized and existing under the laws of the Province of _____, ("Interconnection Customer,") and **BRITISH COLUMBIA TRANSMISSION CORPORATION**, a Crown corporation existing under the laws of the Province of British Columbia, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____;

WHEREAS, Interconnection Customer is proposing to establish an interconnection with the Transmission System; and

WHEREAS, Interconnection Customer has submitted to Transmission Provider an Interconnection Request; and

WHEREAS, Interconnection Customer has further requested that Transmission Provider prepare an Optional Interconnection Study;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1) When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the SGIP.
- 2) Interconnection Customer elects and Transmission Provider shall cause to be performed an Optional Interconnection Study consistent with ~~Section~~[Section](#) 10 of the SGIP.
- 3) The scope of the Optional Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4) The Optional Interconnection Study shall be performed solely for informational purposes.
- 5) The Optional Interconnection Study report shall provide a sensitivity analysis based on the assumptions specified by Interconnection Customer in Attachment A to this Agreement. The Optional Interconnection Study will identify Transmission Provider's Interconnection Facilities and the Network Upgrades, and the estimated

cost thereof, that may be required to provide transmission service or interconnection service based upon the assumptions specified by Interconnection Customer in Attachment A.

- 6) Interconnection Customer shall provide a deposit of \$15,000 for the performance of the Optional Interconnection Study. Transmission Provider's good faith estimate for the time of completion of the Optional Interconnection Study is [insert date].

Upon receipt of the Optional Interconnection Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Optional Study.

Any difference between the initial payment and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7) Miscellaneous. The Optional Interconnection Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the SGIP and the SGIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

BRITISH COLUMBIA TRANSMISSION CORPORATION

By: _____

Title: _____

Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A to Appendix 4
Optional Interconnection Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE
OPTIONAL INTERCONNECTION STUDY**

Appendix 5 to the SGIP

STANDARD GENERATOR INTERCONNECTION AGREEMENT

This Appendix has not been included as Order No. 890 contemplates no changes to the SGIA and the only changes BCTC is proposing are to reflect changes to the letters of Attachment in the OATT.

ATTACHMENT **PM-2****Transmission Service and Interconnection Service Procedures for CEAPS****1. Preamble**

This attachment contains certain replacement and additional procedures required in order for interconnection customers to obtain NRIS, and for Network Customers to obtain modifications to its Network Integration Transmission Service, for generation resources participating in and selected in a Competitive Electricity Acquisition Process.

2. Definitions

Capitalized words not defined in this Section 2 of Attachment **PM-2** shall be given the meanings ascribed to them elsewhere in this Tariff.

CEAP or “Competitive Electricity Acquisition Process” means a competitive process initiated by a Network Customer to acquire electricity from CEAP Generators.

CEAP Generator means a generation resource that is the subject of a CEAP IR, and “CEAP Generators” means all such generation resources.

CEAP IR means an Interconnection Request for Network Resource Interconnection Service received from a Participant on the CEAP IR Submission Date in accordance with the provisions of this Attachment **PM-2** and Section 3.3.1 of the SGIP.

CEAP IR Submission Date means the date specified by a Network Customer for the submission of CEAP IRs in connection with any CEAP.

CEAP Transmission Information means information relating to the Transmission System that could assist in evaluating the incremental costs to a Network Customer for its Network Integration Transmission Service if it were to designate CEAP Generators as Network Resources, including without limitation transmission cut-planes and reinforcement options.

D-Connected CEAP Generator means a generation resource, the proponent of which is participating in a CEAP, but for which no CEAP IR is submitted because the generation resource is seeking interconnection to the Network Customer’s distribution system.

Optional CEAP Studies means studies involving the Transmission System or CEAP IRs or both that could assist a Network Customer in selecting the Successful Participants.

Participant means the proponent of a CEAP Generator, and “Participants” means all such proponents.

Reasonable Efforts means efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a person would use to protect the person’s own interests.

SGIP means Attachment M-1 of the Tariff.

Successful Participant means a Participant with whom a Network Customer is prepared to contract with for the supply of power in connection with any CEAP.

Workshop means the workshop referred to in Paragraph 4.3 below.

3. **Relationship with Tariff**

The provisions of the balance of the Tariff apply to CEAP IRs and any Applications for a modification to NITS received by the Transmission Provider in connection with any CEAP, except as otherwise specifically provided in this Attachment [PM-2](#).

4. **CEAP Procedures**

4.1 **Advanced Notice of CEAP**

A Network Customer that wishes to avail itself of the provisions of this Attachment [PM-2](#) in connection with a CEAP, and make the provisions of this Attachment [PM-2](#) available to Participants in that CEAP, shall provide the Transmission Provider with at least 60 Calendar Days’ prior written notice before formally issuing or commencing the CEAP.

4.2 **Consultation**

A Network Customer and the Transmission Provider shall consult during the period beginning on receipt by the Transmission Provider of the notice contemplated by Paragraph 4.1 and ending on the date the CEAP Transmission Information is provided to the Network Customer in respect of the following:

- (a) Design considerations for the CEAP for coordination with the Tariff;
- (b) Milestones for activities to be undertaken pursuant to this Attachment [PM-2](#);
- (c) Scope and volume of CEAP Transmission Information;
- (d) Scope and volume of Optional CEAP Studies;

- (e) Date of the Workshop; and
- (f) Coordination of studies related to D-Connected CEAP Generators.

The purpose of the consultation is to assist the Network Customer in designing and implementing a CEAP process that meets the Network Customer's needs and integrates with the Tariff, including the timelines provided for in this Attachment ~~PM-2~~.

4.3 Workshop

At Network Customer's request, or in the absence of such a request at Transmission Provider's option, Transmission Provider shall provide a workshop for Participants in respect of CEAP IR requirements at least 30 Calendar Days before the CEAP IR Submission Date.

4.4 Pre-Submission of CEAP IRs

Each Participant must submit an Interconnection Request for each of its CEAP Generators to the Transmission Provider at least 30 Calendar Days before the CEAP IR Submission Date. Sections 3.3.2, ~~and~~ 3.3.3 and Appendix 1 (including Attachments) of the SGIP apply in respect of these Interconnection Requests.

4.5 CEAP IR Submission Date

A Network Customer shall specify a CEAP IR Submission Date for every CEAP. Notwithstanding Sections 3.3.1 and 3.3.3 of the SGIP, only valid Interconnection Requests received by the Transmission Provider from Participants on or before the CEAP IR Submission Date, together with an executed Interconnection Feasibility Study Agreement and the deposits required by Sections 3.3.1 and 6.1 of the SGIP, will be accepted by the Transmission Provider as CEAP IRs and processed in accordance with this Attachment ~~PM-2~~. Section 3.3.4 ~~and Appendix 1~~ of the SGIP does not apply to CEAP IRs. ~~For the purpose of CEAP IRs Appendix 1 of the SGIP is replaced with Appendix 1 of this Attachment P.~~ Section 3.4 of the SGIP only applies to CEAP IRs from and after the CEAP IR Submission Date.

4.6 CEAP IR Queue Position

Notwithstanding the definition of Queue Position in the SGIP, the Queue Position for CEAP IRs shall be deemed to have been received simultaneously at 12:00 AM on that CEAP IR Submission Date and each shall be assigned the same Queue priority.

4.7 Interconnection Feasibility Studies

The Transmission Provider shall complete an Interconnection Feasibility Study for each CEAP IR in accordance with Section 6 of the SGIP except as follows:

- (a) Notwithstanding Section 6.2 of the SGIP, the Interconnection Feasibility Study for each CEAP IR will not consider the other CEAP IRs;
- (b) Notwithstanding Section 6.3 of the SGIP, Transmission Provider shall use Reasonable Efforts to complete all Interconnection Feasibility Studies for the CEAP IRs within 10 weeks of the CEAP IR Submission Date;
- (c) Notwithstanding Sections 6.3 and 3.4 of the SGIP, Transmission Provider shall deliver all Interconnection Feasibility Studies to Participants on the same day, and shall only post the Interconnection Feasibility Study reports to its OASIS site 10 Business Days after their delivery to Participants; and
- (d) Notwithstanding Section 6.1 of the SGIP, substitute Points of Interconnection shall not be available.

4.8 CEAP Transmission Information

The Transmission Provider shall use Reasonable Efforts to publish publicly the CEAP Transmission Information requested by the Network Customer during the consultation contemplated by Paragraph 4.2 above no later than the date on which it delivers the Interconnection Feasibility Study reports to Participants as contemplated by Paragraph 4.7 above. The Transmission Provider shall use Reasonable Efforts to account for all pending Applications received at least 60 Calendar Days immediately prior to the CEAP IR Submission Date and all Applications for Point-to-Point Transmission Service received prior to the CEAP IR Submission Date in the CEAP Transmission Information.

4.9 Optional CEAP Studies

The Transmission Provider shall use Reasonable Efforts to complete and report on the Optional CEAP Studies requested by the Network Customer within 26 weeks of the CEAP IR Submission Date. The Network Customer may not request Optional CEAP Studies that cannot be reasonably completed by the Transmission Provider within that 26-week period. If the Optional CEAP Studies require the use of information contained in the CEAP IRs, the Network Customer must obtain the Participants' consent to the use of such information in the Optional CEAP Studies.

4.10 Selection of Successful Participants

Within 30 weeks of the CEAP IR Submission Date or 4 weeks after receipt by the Network Customer of the Optional CEAP Studies, whichever is later, the Network Customer shall provide written notice to the Transmission Provider of the Successful Participants and shall submit an Application for a modification of its NITS to address the following, and only the following, matters:

- (a) designating the Successful Participants as Network Resources in accordance with Section 29 of the Tariff; and
- (b) as necessary to reflect the selection by the Network Customer as part of the same CEAP of D-Connected CEAP Generators in respect of which the Network Customer is reasonably likely to contract for the supply of power.

If the Network Customer provides such notice and submits such an Application the CEAP IRs of Participants other than Successful Participants will be deemed withdrawn pursuant to Section 3.6 of the SGIP. If the Network Customer fails to provide such notice or fails to make such an Application all Participants' CEAP IRs will be deemed withdrawn pursuant to Section 3.6 of the SGIP.

4.11 Timing of Combined Study Agreement

Notwithstanding Section 7.1 of the SGIP, the Transmission Provider shall only tender a Combined Study Agreement to Successful Participants. Transmission Provider shall tender a Combined Study Agreement to a Successful Participant no later than seven Calendar Days after the Transmission Provider receives the Network Customer's written notice of the Successful Participants pursuant to Paragraph 4.10 above. If a Successful Participant fails to return an executed Combined Study Agreement and deposit as required by Section 7.2 of the SGIP to the Transmission Provider within 30 Calendar Days of its tender, the Successful Participant's CEAP IR will be deemed withdrawn pursuant to Section 3.6 of the SGIP.

4.12 Deemed Withdrawal of CEAP IR

The CEAP IRs of any Participant that is no longer eligible to participate in the CEAP for any reason, or any Participant that does not comply with the requirements of this Attachment [PM-2](#), will be deemed withdrawn pursuant to Section 3.6 of the SGIP.

4.13 Standards of Conduct Prevail

Except as specifically provided for herein, nothing herein shall detract from or limit the Transmission Provider's obligations to comply with its Standards of Conduct.

5. Multiple CEAPs

Subject to any relief obtained by a Network Customer pursuant to Paragraph 7.1, if a Network Customer issues or commences a CEAP with a CEAP IR Submission Date less than one year after the CEAP IR Submission Date of any other CEAP issued or commenced by that Network Customer, then:

- (a) Section 4 of this Attachment [PM-2](#), as modified by paragraphs (b) to (f) below, will apply in respect of the second CEAP, and Section 6 of this Attachment [PM-2](#) will not apply in respect of the second CEAP;
- (b) The Transmission Provider will not consider any of the CEAP IRs in connection with the second CEAP in any System Impact Study, Facilities Study or Interconnection Study commenced before the Transmission Provider receives the Network Customer's written notice of the Successful Participants pursuant to Paragraph 4.10 above in connection with the second CEAP;
- (c) When received by the Transmission Provider, the Network Customer's Application for a modification to its NITS pursuant to Paragraph 4.10 above in connection with the second CEAP will have a deemed service priority as though it had been received at 12:00 AM on the second CEAP's CEAP IR Submission Date, immediately after the CEAP IRs in connection with the second CEAP;
- (d) Where as a result of Paragraph 5(b) or Paragraph 5(c), a restudy of any:
- i. System Impact Study or Facilities Study completed in connection with any Application with a lower service priority to the Network Customer's Application for a modification to its NITS pursuant to Paragraph 4.10 above in connection with the second CEAP; or
 - ii. Interconnection Study completed in connection with any Interconnection Request with a lower Queue Position than the CEAP IRs in connection with the second CEAP,
- is or would be necessary, then in respect of such Interconnection Request or Application:
- iii. the Network Customer will indemnify and save harmless the Transmission Provider, and the Interconnection Customer associated with such Interconnection Request or the Transmission Customer associated with such Application as applicable, from and against:
 - A. all restudy costs; and
 - B. the costs of the Interconnection Facilities or Direct Assignment Facilities, as applicable, identified by the restudy to the extent they: (x) are incremental to the costs of the Interconnection Facilities or Direct Assignment Facilities, as applicable, identified by the original study; and (y) arise as a result of Paragraph 5(b) or Paragraph 5(c); and

- iv. notwithstanding anything else contained in the Tariff, the Network Customer and not such Interconnection Customer or such Transmission Customer as applicable, will be required to post Security in respect of the costs of any Network Upgrades identified by the restudy to the extent they: (x) are incremental to the costs of the Network Upgrades identified by the original study; and (y) arise as a result of Paragraph 5(b) or Paragraph 5(c);
- (e) Where the Transmission Provider has not completed sufficient study work in respect of a pending Interconnection Request or Application by the second CEAP's CEAP IR Submission Date to identify its impacts to the Transmission System, the Transmission Provider will not consider such Application or Interconnection Request in any of the Interconnection Feasibility Studies or Optional CEAP Studies it conducts in connection with the second CEAP; and
- (f) Where after completing sufficient study work in respect of a pending Interconnection Request or Application referred to in Paragraph 5(e) a restudy of a CEAP IR in connection with the second CEAP is or would be necessary then in respect of such CEAP IR:
 - i. the Network Customer will indemnify and save harmless the Transmission Provider, and the Interconnection Customer associated with such CEAP IR from and against:
 - A. all restudy costs; and
 - B. the costs of the Interconnection Facilities identified by the restudy to the extent they: (x) are incremental to the costs of the Interconnection Facilities identified by the original study; and (y) arise as a result of the completed study work in respect of a pending Interconnection Request or Application referred to in Paragraph 5(e); and
 - ii. notwithstanding anything else contained in the Tariff, the Network Customer and not such Interconnection Customer will be required to post Security in respect of the costs of any Network Upgrades identified by the restudy to the extent they: (x) are incremental to the costs of the Network Upgrades identified by the original study; and (y) arise as a result of the completed study work in respect of a pending Interconnection Request or Application referred to in Paragraph 5(e).

6. Processing Other Service Requests

6.1 Processing of Interconnection Requests with Lower Queue Positions

Notwithstanding Section 6.1 of the SGIP, the Transmission Provider shall not tender an Interconnection Feasibility Study Agreement to any Interconnection Customer with an Interconnection Request with a lower Queue Position than the CEAP IRs until the earlier of:

- (a) the Network Customer's selection of the Successful Participants; and
- (b) a determination by the Transmission Provider that: (i) none of the CEAP IRs could affect the Interconnection Study results of such Interconnection Request with the lower Queue Position; and (ii) no Interconnection Request with a higher Queue Position in respect of which the Transmission Provider has not yet tendered an Interconnection Feasibility Study Agreement could affect the Interconnection Study results of such Interconnection Request with the lower Queue Position.

6.2 Processing of Transmission Requests

Notwithstanding Part II and Part III of the Tariff, all Applications received by the Transmission Provider from and after the CEAP IR Submission Date until the Network Customer submits its Application for a modification to its NITS pursuant to Paragraph 4.10 above shall be deemed to have been received by the Transmission Provider, in the same order as originally received by the Transmission Provider, but immediately after the Network Customer's Application for a modification to its NITS made pursuant to Paragraph 4.10 above or, if no such Application is made, then beginning at 12:00 AM on the date such Application was to have been made, provided however, where the Transmission Provider is able to determine based on:

- (a) the CEAP IRs and corresponding Interconnection Feasibility Studies;
- (b) any studies completed by the Transmission Provider at the Network Customer's request in respect of D-Connected CEAP Generators; and
- (c) Applications with a higher service priority,

that the processing of such an Application will not affect the System Impact Study results or Facilities Study results of:

- (d) the Network Customer's Application for a modification to its NITS pursuant to Paragraph 4.10; or
- (e) all Applications with a higher service priority whose processing has been delayed because of this Paragraph 6.2,

the Transmission Provider shall process such Application in accordance with the Tariff.

7. Relief from Requirements of this Attachment [PM-2](#)

7.1 Application to the Commission for Relief

A Network Customer may apply to the Commission for relief from one or more of the requirements contained in this Attachment [PM-2](#) where a variance serves the broader public interest.

APPENDIX 1 to ATTACHMENT P

GENERATOR INTERCONNECTION EQUIPMENT STATEMENT AND OATT FEASIBILITY STUDY APPLICATION

PROPOSED TO BE DELETED

 British Columbia Transmission CORPORATION™		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP- 08- 01 BCTC Service Voltages 69 kV to 500 kV		
Section 1 - Applicant Information				
Applicant	Company Name:	Street Address:		
	Contact Name:	Unit/Suite:		
	Phone:	City:		
	Fax:	Province / State:		
	E-Mail:	Country:	Postal / Zip Code:	
Section 2 - Project Information				
Project	Project Name:			
	Owner / Developer:			
	Consultant Name:			
	Technical Contact:	Name:	Phone number:	E-mail:
	In-Service Dates (MM/DD/YYYY):	A) Begin construction:		B) Generator step-up transformer receives back fed power (i.e. for site construction):
	C) Generator testing:		D) Commercial operation date:	
Provide site geographical coordinates with seconds expressed to the 2nd decimal point. Attach a 7.5-minute quadrangle map of the site with longitude and latitude border scale. Sketch the plant, station, transmission line and property line on the map. Include dimensions of the proposed interconnection station.				
Longitude (degrees:minutes:seconds) Latitude (degrees:minutes:seconds) 				
Instructions for Section 3:				
For Feasibility studies, "Typical" values are acceptable. Shaded cells in the Feasibility Study column are "required information". Please include additional information if it is available.		COLUMN - A Feasibility Study	Units of Measurement	
Section 3 - Plant Information				
PLANT INFORMATION	3.01.	Plant Designation:		
	3.02.	Maximum Injected Power ("Facility Interconnection Capacity") into the BC Transmission System:		(MW)
	3.03.	Contracted Capacity to BC Hydro:		(MW)
	3.04.	Total Plant Generating Capacity:		(MW)
	3.05.	Total number of generators in plant:		
	3.06.	Total number of generator transformers in plant:		
	3.07.	Total Plant Load (MW)		(MW)
	3.08.	Total Plant Load (MVar)		(MVAR)
	3.09.	Total Plant Motor load (see requirements for One-Line Diagram in Section 11 of this document):		(MW)
	3.10.	Total Plant Static load:		(MW)
	3.11.	Total Plant Static load power factor:		(pf)
	3.12.	Total Plant Reactive Compensation:		(MVar)
	3.13.	Ground Grid resistance:		(ohms)
	3.14.	Plant restoration time immediately following a self restoring fault or upset on the transmission line?		(cycles)
	3.15.	Bus length from generation to interconnection station:		(m)
	3.16.	Line length from interconnection station to Transmission Provider's transmission line:		(m)
	3.17.	Tower number - observed in the field and painted on tower leg. To be coordinated with Transmission Provider.		
	3.18.	Number of third party easements required for transmission lines. To be coordinated with Transmission Provider.		
	3.19.	Black Start Capability (Yes / No) ?		
	3.20.	Is the Generating Facility in the Transmission Provider's service area (Yes / No) ?		
	3.21.	If "No" to the line above, please provide name of Local Provider:		
	3.22.	Maximum Summer Plant Output		(MW)
	3.23.	Maximum Winter Plant Output		(MW)
	3.24.	Maximum Spring Plant Output		(MW)

PROPOSED TO BE DELETED

British Columbia Transmission Corporation		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP-08-01 BCITC Service Voltages 69 kV to 509 kV											
Instructions for Sections 4:		Feasibility Study Generate information by Unit											
Per Feasibility studies, "Types" of values are acceptable. Based on the Feasibility Study studies are "Feasible" or "Not Feasible". Please include additional information if a feasibility study is required.		UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	UNIT 7	UNIT 8	UNIT 9	UNIT 10	UNIT 11	UNIT 12
Section 4: Machine, Gas and Thermal Generator Information													
Generator Information													
4.1	Generator Name												
4.2	Generator Type												
4.3	Generator Manufacturer												
4.4	Generator Model												
4.5	Generator Serial Number												
4.6	Generator Capacity (MW)												
4.7	Generator Capacity (MVA)												
4.8	Generator Capacity (MW) (Specify Voltage or Supply)												
4.9	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.10	Generator Capacity (MW) (Specify Voltage or Supply)												
4.11	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.12	Generator Capacity (MW) (Specify Voltage or Supply)												
4.13	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.14	Generator Capacity (MW) (Specify Voltage or Supply)												
4.15	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.16	Generator Capacity (MW) (Specify Voltage or Supply)												
4.17	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.18	Generator Capacity (MW) (Specify Voltage or Supply)												
4.19	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.20	Generator Capacity (MW) (Specify Voltage or Supply)												
4.21	Generator Capacity (MVA) (Specify Voltage or Supply)												
4.22	Generator Capacity (MW) (Specify Voltage or Supply)												
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4.100	Generator Capacity (MW) (Specify Voltage or Supply)												

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British Columbia Transmission Corporation		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP-08-01 BCTC Service Voltages 69 kV to 500 kV										
Instructions for Section 5:		Feasibility Study Wind Generation Interconnection Type										
Per feasibility studies, "Typical" values are acceptable. Based on a known feasibility study submit an "original information". Please submit original information for the following:		Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8	Type 9	Type 10	Unit of Measurement
Section 5 - Wind Generation Information												
5.01	241 Designation											
5.02	Manufacturer											
5.03	Model											
5.04	Rating (kW)											kW
5.05	Rating (MW)											MW
5.06	Rated Power Factor (specify "leading" or "lagging")											
5.07	Rated Power Factor (specify "leading" or "lagging")											
5.08	Rated kW											kW
5.09	Rated MW											MW
5.10	Maximum Full Current (see Item 5.08)											A
5.11	Number of Phases											
5.12	Generator Rated Speed											rpm
5.13	Generator Rated Voltage (V)											V
5.14	Rating at rated speed											
5.15	Connection: "Series", "Delta" or "Wye"											
5.16	Type of Disconnecting switch: "circuit breaker", "vacuum" or "fuse"											
5.17	Number of Phases											
5.18	Number of Lines of this Type											
5.19	Number of Feasibility Study entry											
Wind Generation Wind farm site data including the generator station and the location with appropriate electrical parameters The combined effect of the generator, the step-up transformer and the connection The combined effect of the generator, the step-up transformer and the connection		Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	Attach to digital format with this statement.	

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GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GEP-08-01 BCBC Service Voltages 88 kV to 500 kV											
Instructions for Section E: For Facility studies, "Yes" values are acceptable. Models with other Facility Study values are "Required Information". Please include additional information if available.											
Section E - Transformer (Generator Step Up)											
Item	Step Up 1	Step Up 2	Step Up 3	Step Up 4	Step Up 5	Step Up 6	Step Up 7	Step Up 8	Step Up 9	Step Up 10	Units of Measurement
E.0.1 Transformer											
E.0.2 Transformer											
E.0.3 Transformer											
E.0.4 Transformer											
E.0.5 Transformer											
E.0.6 Transformer											
E.0.7 Transformer											
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British Columbia Transmission Corporation

GENERATOR INTERCONNECTION EQUIPMENT STATEMENT
Version: GIEP-08-01

BCTC Service Voltages 69 kV to 500 kV

Instructions for Section 7:

For Facility Index, "Type" values are indicated. Shaded cells in the Facility Index column are "required information". Areas marked shaded are not required for the Facility Index.

Section 7 - Transformer (Utility Tie)		Availability Study Utility Tie Transmission Requirements by Transmission					Units of Measurement	
		Utility Tie 1	Utility Tie 2	Utility Tie 3	Utility Tie 4	Utility Tie 5		
7.0.1	Transformer (Utility Tie)							
7.0.2	Transformer (Utility Tie)							
7.0.3	Transformer (Utility Tie)							
7.0.4	Transformer (Utility Tie)							
7.0.5	Transformer (Utility Tie)							
7.0.6	Transformer (Utility Tie)							
7.0.7	Transformer (Utility Tie)							
7.0.8	Transformer (Utility Tie)							
7.0.9	Transformer (Utility Tie)							
7.0.10	Transformer (Utility Tie)							
7.0.11	Transformer (Utility Tie)							
7.0.12	Transformer (Utility Tie)							
7.0.13	Transformer (Utility Tie)							
7.0.14	Transformer (Utility Tie)							
7.0.15	Transformer (Utility Tie)							
7.0.16	Transformer (Utility Tie)							
7.0.17	Transformer (Utility Tie)							
7.0.18	Transformer (Utility Tie)							
7.0.19	Transformer (Utility Tie)							
7.0.20	Transformer (Utility Tie)							
7.0.21	Transformer (Utility Tie)							
7.0.22	Transformer (Utility Tie)							
7.0.23	Transformer (Utility Tie)							
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7.0.33	Transformer (Utility Tie)							
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7.0.37	Transformer (Utility Tie)							
7.0.38	Transformer (Utility Tie)							
7.0.39	Transformer (Utility Tie)							
7.0.40	Transformer (Utility Tie)							
7.0.41	Transformer (Utility Tie)							
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7.0.45	Transformer (Utility Tie)							
7.0.46	Transformer (Utility Tie)							
7.0.47	Transformer (Utility Tie)							
7.0.48	Transformer (Utility Tie)							
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7.0.99	Transformer (Utility Tie)							
7.0.100	Transformer (Utility Tie)							

 British Columbia Transmission Corporation		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP- 08- 01 BCTC Service Voltages 69 kV to 500 kV					
Instructions for Section 8:		Feasibility Study					Units of Measurement
For Feasibility studies, "Typical" values are acceptable. Shaded cells in the Feasibility Study column are "required information". Please include additional information if it is available.		Circuit Breaker Information by Circuit Breaker					
Section 8 – HV Circuit Breaker at Point of Interconnection		Breaker 1	Breaker 2	Breaker 3	Breaker 4	Breaker 5	
8.01.	Unit Designation						
8.02.	Manufacturer						
8.03.	Model						
8.04.	Serial Number						
8.05.	Interlocking Media (e.g. oil, air, SF6)						
8.06.	Year of Manufacture						
8.07.	Rated maximum voltage						(kV)
8.08.	Rated Frequency						(Hz)
8.09.	Basic impulse level (BIL)						(kV)
8.10.	Rated continuous current						(A)
8.11.	Momentary (1/2 cycle) current withstand capability						(kA crest)
8.12.	Rated symmetrical short circuit interrupting capability						(kA RMS sym.)
8.13.	Interrupting time						(cycles)
8.14.	Cut-off phase switching capability						(kA RMS sym.)

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Attachment M-2, page 18

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 British Columbia Transmission CORPORATION™		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP-08-01 BCTC Service Voltages 69 kV to 500 kV	
Instructions for Section 10:			
For Feasibility studies, "Typical" values are acceptable. Shaded cells in the Feasibility Study column are "required information". Please include additional information if it is available.		Feasibility Study Protection and Drawing Information	
Section 10 - Protection Information The following information is necessary for System Impact Studies and Facilities Studies. Upon commencement of these studies, BCTC will request that the Applicant submit preliminary protective relaying settings followed shortly (3 to 4 weeks) by design level setting so that system modeling can be completed in accordance with the timeline set out by the OATT.			
Relay	Manufacturer	Model	Timed Element Setting Range
10.01: Ground Overcurrent			Inst. Element Setting Range
10.02: Phase Overcurrent			
10.03: Over Frequency			
10.04: Under Frequency			
10.05: Over Voltage			
10.06: Under Voltage			
10.07: Transformer Differential			
10.08: Generator Differential			
10.09: Bus Differential			
10.10: Synchronizing Check			
10.11: Reverse Power			
10.12: Line			
Protection C.T. is must be adequate for all fault duty magnitudes.			

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 British Columbia Transmission CORPORATION™		GENERATOR INTERCONNECTION EQUIPMENT STATEMENT Version: GIEP-08-01 BCTC Service Voltages 69 kV to 500 kV																																				
Instructions for Section 11:																																						
For Feasibility studies, "Typical" values are acceptable. Shaded cells in the Feasibility Study column are "required information". Please include additional information if it is available.		Feasibility Study Drawing Information																																				
Section 11 - Drawing Information																																						
Please provide the following drawings digitally in Portable Document Format (PDF). Note: Electric symbols and format shall be in accordance with North American (ANSI/IEEE) drawing practices.																																						
D	11.01.1 A-C SINGLE LINE (ONE-LINE) DIAGRAM Drawing Number:	This diagram must clearly show all major station equipment such as capacitors, reactors, transformers, surge arresters, generators, static loads (net MW with power factor), disconnect switches, circuit breakers, current transformers (CTs), voltage transformers (VTs), capacitive voltage transformers (CVTs). Their ratings should be clearly identified on the diagram.																																				
	11.01.2 Motor detail is not required for Feasibility Study. Note [1]: Based on the interpretation of the IEEE standards C37.10-1979 and C37.5-1979, the motor groupings are as follows: Group 1 - Induction motors smaller than 50 hp - neglect Group 2 - Induction motors 50 hp and above Group 3 - Induction motors 250 hp and above at 3600 rpm Group 4 - Induction motors 1000 hp and above at 1800 rpm or less Group 5 - All synchronous motors For groups 2 and 3, the net hp for each group need only be provided. For groups 4 and 5, please provide information on each of the motors individually.	Example: Motor Load Table. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Type</th> <th>Induction</th> <th>Induction</th> <th>Induction</th> <th>Synchronous</th> </tr> </thead> <tbody> <tr> <td>Group</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>H.P.</td> <td>125 *</td> <td>1500 *</td> <td>1000</td> <td>5000</td> </tr> <tr> <td>kV rated</td> <td>575V</td> <td>2400V</td> <td>4160V</td> <td>13800</td> </tr> <tr> <td>X'd (pu) **</td> <td>--</td> <td>--</td> <td>--</td> <td>0.15</td> </tr> <tr> <td>X'd (pu) **</td> <td>0.17</td> <td>0.17</td> <td>0.17</td> <td>0.09</td> </tr> <tr> <td>X/R</td> <td>10</td> <td>10</td> <td>25</td> <td>38</td> </tr> </tbody> </table> * - net horsepower ** - pu of machine kVA rating.		Type	Induction	Induction	Induction	Synchronous	Group	2	3	4	5	H.P.	125 *	1500 *	1000	5000	kV rated	575V	2400V	4160V	13800	X'd (pu) **	--	--	--	0.15	X'd (pu) **	0.17	0.17	0.17	0.09	X/R	10	10	25	38
	Type	Induction	Induction	Induction	Synchronous																																	
	Group	2	3	4	5																																	
	H.P.	125 *	1500 *	1000	5000																																	
	kV rated	575V	2400V	4160V	13800																																	
	X'd (pu) **	--	--	--	0.15																																	
	X'd (pu) **	0.17	0.17	0.17	0.09																																	
X/R	10	10	25	38																																		
11.02. PROTECTION ONE-LINE (METERING & RELAYING) DIAGRAM Drawing Number:	This document is an extension of the A-C Single Line Diagram. It should show all the protective relaying, metering, major control and telecommunications interface to tie in the generator, transformer and plant protection with the transmission line protection schemes. This document should also provide the CT & VT ratios and accuracy classes.																																					
11.03. PROJECT OVERALL ELECTRICAL SINGLE LINE DIAGRAM: Drawing Number:	The diagram should show all generators, transformers, circuit breakers, transmission connections and associated electrical parameters and data not showing elsewhere in the data sheets. If a HVDC system is involved in the interconnection, the diagram should include the DC system and associated electrical parameters and data for power flow studies.																																					
11.04. Not Used Drawing Number:																																						
11.05. Not Used Drawing Number:																																						
11.06. Not Used Drawing Number:																																						
11.07. Not Used Drawing Number:																																						
11.08. SITE LOCATION MAP: Drawing Number:	This document should include topographical details and proximity to the BCTC service connection. It should also include the longitude and latitude of the Customer's generation facility.																																					
Submission Information																																						
The Engineer of Record declares that the data submitted herein meets the requirements of this document.																																						
S	Seal of Professional Engineer of British Columbia		Print Name: _____ Signature: _____ Date: _____																																			
BCTC - Generator Interconnections Office Use																																						
Received By: _____ Date and Time Received: _____ Signature: _____																																						

ATTACHMENT N**DEFERRAL CREDIT**

This Attachment has not been included as it is not effected by Order No. 890 and the only changes BCTC is proposing are to reflect changes to the letters of Attachments in the OATT.

ATTACHMENT **RECOVERY OF NEW FACILITIES COSTS****I. Development of System Plan**

The Transmission Provider will develop an annual System Plan to assure that sufficient transmission capacity exists to serve all Long-Term Firm Point-to-Point (LTF PTP) Service and Network Integration Transmission Service (NITS) commitments.

The annual System Plan will be developed based on current NITS and LTF PTP Service commitments with their rollover rights and the annual load forecast provided by the Network Customer as required by Section 31.6 of this Tariff.

II. Definitions

Capitalized words not defined in this Section II of Attachment  shall be given the meanings ascribed to them elsewhere in this Tariff.

A. Direct Assignment Facilities

Direct Assignment Facilities are facilities or portions of facilities that are constructed by the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and may be subject to Commission approval.

B. Transmission Provider Interconnection Facilities

Transmission Provider Interconnection Facilities are all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A of the Standard Generator Interconnection Agreement (SGIA) with any generator, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Stand Alone Network Upgrades or Network Upgrades.

C. System Plan Network Upgrades

System Plan Network Upgrades are modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such

Transmission System identified in the development of the System Plan as necessary to maintain reliable service for long-term firm service commitments including:

1. LTF PTP Services, including import, export and flow through services; and
2. NITS, as required to accommodate expected load growth, but excluding Network Upgrades identified in NRIS Interconnection Studies.

D. Network Upgrades

Network Upgrades are modifications or additions to transmission-related facilities that are not System Plan Network Upgrades. Network Upgrades for:

1. LTF PTP Service is defined in Section 1.26 of Terms and Conditions in OATT.
2. Energy Resource Interconnection Service (ERIS) is defined in Section 1 of Attachment M-1 to OATT.
3. Network Resources Interconnection Service (NRIS) is defined in Section 1 of Attachment M-1 to OATT.

III. Cost Recovery

A. Direct Assignment Facilities

The Transmission Customer shall pay the costs of Direct Assignment Facilities.

B. Transmission Provider's Interconnection Facilities

The Interconnection Customer shall pay the costs of Transmission Provider's Interconnection Facilities.

C. System Plan Network Upgrades

The costs of System Plan Network Upgrades are recovered through transmission rates for PTP and NITS.

D. Network Upgrades

1. Funding of Network Upgrades

The Transmission Provider shall fund Network Upgrades.

2. Provision of Revenue Guarantee for Network Upgrades

- (a) Transmission Customers shall provide Transmission Provider with security for the Network Upgrades in the form of a standby irrevocable letter of credit or other form of security that is reasonably acceptable to Transmission Provider (“Security”) in accordance with Section 19.4 or Section 32.4 of OATT. Interconnection Customers shall provide Security for Network Upgrades in accordance with Article 11.5 of the SGIA. Notwithstanding the above and notwithstanding Section 19.4 and Section 32.4 of OATT and Article 11.5 of the SGIA, if the Transmission Customer or Interconnection Customer is the Transmission Owner, than no security for Network Upgrades is required under Section 19.4 or Section 32.4 of OATT or Article 11.5 of the SGIA.
- (b) Such Security shall be granted in favour of Transmission Provider and Transmission Owner and shall be in a sufficient amount which may be revised from time to time to cover the costs for designing, constructing, procuring and installing the Network Upgrades.
- (c) Such Security must be made by an entity that meets the creditworthiness requirements of Transmission Provider, or issued by a financial institution reasonably acceptable to Transmission Provider. If the entity making the Security ceases to meet the creditworthiness requirements of the Transmission Provider or the financial institution issuing the security ceases to be reasonably acceptable to the Transmission Provider, then the Transmission Customer shall provide a new form of security that meets the Transmission Provider’s requirements, as stated above, within 30 Calendar Days of notice being provided to the Transmission Customer.
- (d) The Security will be held for a period and reduced by the Transmission Provider in accordance with Section III.D.3 of this Attachment K.
- (e) The Transmission Customer or Interconnection Customer will be responsible for the costs of arranging for and maintaining the Security.
- (f) The Transmission Provider will not pay interest on the amount on the Security.

3. Release of and Reducing Outstanding Balance of Security

- (a) LTF PTP Service

- (i) The Transmission Provider shall reduce the outstanding balance of the Security by an amount equal to the Transmission Customer's payment for transmission services on the LTF PTP rate schedule excluding the costs of scheduling, losses and ancillary services. Subject to paragraphs (ii) and (iii) below, the Transmission Provider will continue to reduce the outstanding balance of the Security by the Transmission Customer's payment for service until the balance becomes zero.
 - (ii) If the Transmission Customer terminates its Service Agreement, the Transmission Provider may call on the full outstanding balance of the Security at that time.
- (b) ERIS
 - (i) If LTF PTP Service is purchased to transmit output from the Generating Facility receiving ERIS pursuant to the same SGIA pursuant to which the Security was provided, the Transmission Provider will, subject to paragraphs (ii) and (iii) below, reduce the outstanding amount of the Security in accordance with Section III.D.3.(a) of this Attachment ~~K~~O.
 - (ii) If the Interconnection Customer terminates the SGIA or the Interconnection Customer's Generating Facilities fails to achieve Commercial Operation within 3 years of the target date for Commercial Operation set out in Appendix B of the SGIA, the Transmission Provider may call on the full outstanding balance of the Security at that time.
- (c) NRIS
 - (i) If Interconnection Customer's Generating Facility is designated as a Network Resource, the Transmission Provider will, subject to paragraph (ii) below, at the end of each calendar year beginning with the calendar year during which the Generating Facility achieves Commercial Operation, agree to a reduction in the then outstanding amount of the Security by an amount equal to the capacity of the Generating Facility designated as a Network Resource during that calendar year multiplied by the LTF PTP rate, excluding the costs of scheduling, losses and ancillary services.
 - (ii) If the Interconnection Customer terminates the SGIA or the Interconnection Customer's Generating Facility fails to achieve Commercial Operation within 3 years of the target

date for Commercial Operation set out in Appendix B of the SGIA, the Transmission Provider may call on the full outstanding balance of the Security at that time.

- (iii) If Interconnection Customer's Generating Facility is not or ceases to be designated as a Network Resource, Transmission Provider shall deal with the Security in accordance with Section III.D.3.(b) of this Attachment ~~OK~~.

(d) Security Balance Information

The Transmission Provider will compute and provide to each Transmission Customer or Interconnection Customer, as applicable, an initial forecast of the time required to reduce the entire amount of the Security to zero. The Transmission Provider will track remaining credit balances for all Transmission Customers and Interconnection Customers and notify them of material changes in the length of time required to reduce the outstanding balance of the Security to zero due to LTF PTP rate changes.

4. Multiple Securities

Where Transmission Customer or Interconnection Customer causes Network Upgrades for more than one service, the Transmission Customer may consolidate the Securities required for each Network Upgrade into one with an amount equals to sum total of the Network Upgrade costs incurred.

E. Clustering and Open Season

1. Interconnection

Pursuant to Section 4.2 of SGIP, the Transmission Provider may elect to study Interconnection Requests using Clustering. In Clustering, the Transmission Provider may allocate the costs of Network Upgrades identified in the Interconnection Facilities Study arising out of Clustering between or among the Interconnection Requests subject to the Clustering on a pro rata basis relative to the maximum output of the Generating Facilities that are the subject of the Interconnection Requests. The Interconnection Customers of these Generating Facilities shall provide Security in the same amount of their respective allocated Network Upgrade costs. The Transmission Provider may reduce the amount of the Security as described in Section III.D.3.(b) or III.D.3.(c) of this Attachment.

2. LTF PTP

Pursuant to Section 15.8 of the OATT, the Transmission Provider may elect to study LTF PTP service requests in an Open Season process. The Transmission Provider may allocate costs of Network Upgrades identified in the Facilities Study arising out of the Open Season process to Transmission Customers on a pro rata basis relative to the capacity requested by each Transmission Customer, after having deducted, for any Transmission Customer, any requested capacity that has been accommodated by any available transmission capability identified in the System Impact Study and allocated to that Transmission Customer in accordance with Section 15.8 and Section 15.9. The Transmission Customers shall provide Security in the same amount as their respective allocated Network Upgrade costs. The Transmission Provider may reduce the amount of the Security as described in Section III.D.3.(a) of this Attachment.

ATTACHMENT **CRP & RELEASE OF CAPCITY NOT REQUIRED BY NITS**

This Attachment has not been included as it is not effected by Order No. 890 and the only changes BCTC is proposing are to reflect changes to the letters of Attachments in the OATT.

ATTACHMENT **Q-1****DYNAMIC SCHEDULING SERVICE**Preamble

This attachment contains the eligibility requirements and the terms and conditions for the provision of dynamic scheduling to Transmission Customers ~~with generation located in the Transmission Provider's Control Area to facilitate the real-time delivery of Dynamic Scheduling Energy to the Receiving Control Area.~~

1. Definitions

- (a) "AGC" means Automatic Generation Control.
- (b) "Dynamic Scheduling Business Practices" means the Transmission Provider's published Dynamic Scheduling Spinning Reserve, Dynamic Scheduling Contingency Reserve and Dynamic Scheduling Regulation Reserve business practices, as amended or replaced from time to time.
- (c) "Dynamic Schedule" means a telemetered reading or value that is updated in real-time and is used as a schedule in the Transmission Provider's AGC and Area Control Error equation. The integrated value is treated as a schedule for interchange accounting purposes.
- (d) "Dynamic Scheduling Energy" means regulating energy or energy delivered from operating reserves.
- (e) "Dynamic Scheduling Transmission" means firm hourly transmission used for the real-time delivery of Dynamic Scheduling Energy to the Receiving ~~Control~~ Balancing Authority Area and consists of Dynamic Scheduling Spinning Reserve (DSSpinRes), Dynamic Scheduling Contingency Reserve (DSConRes) and Dynamic Scheduling Regulation Reserve (DSRegRes).
- (f) "EMS" means Energy Management System.
- (g) "Intermediary ~~Control~~ Balancing Authority Area" means any ~~Control~~ Balancing Authority Area between the ~~Transmission Provider's Control~~ Host Balancing Authority Area and the Receiving Balancing Authority ~~Control~~ Area. ~~An Intermediary Control Area may or may not be directly interconnected with the Transmission Provider's Control Area.~~

- (h) “NERC” means the North American Electric Reliability Council or its successor organization.
- (i) “Receiving ~~Control~~ Balancing Authority Area” means the ~~Control~~ Balancing Authority Area which is to dynamically receive Dynamic Scheduling Energy schedules, ~~from system resources within the Transmission Provider’s Control Area.~~
- (j) “Host Balancing Authority Area” means the Balancing Authority Area which is to send Dynamic Scheduling Energy schedules, from system resources within its Balancing Authority Area.
- (j) “SCADA” means Supervisory Control and Data Acquisition.
- (k) “WECC” means the Western Electricity Coordinating Council, or any successor organization.

2. Availability of Dynamic Scheduling Transmission

Dynamic Scheduling Transmission is only available as follows:

- (a) ~~on exports of Dynamic Scheduling Energy out of the Transmission Provider’s Control Area;~~
- (a) while such Dynamic Scheduling Transmission is technically feasible and consistent with all applicable NERC and WECC criteria and policies;
- (b) if the Transmission Provider’s Balancing Authority Area is the Host Balancing Authority Area,
 - (i) while the Transmission Provider has arrangements in place with applicable Intermediary ~~Control~~ Balancing Authority Areas for the facilitation by each such Intermediary ~~Control~~ Balancing Authority Area of Dynamic Scheduling Energy, as appropriate, ~~from system resources within the Transmission Provider’s Control Area to the Receiving Area’s Control Area;~~ and
 - (ii) while the Transmission Provider has arrangements in place with the Receiving ~~Control~~ Balancing Authority Area for the receipt by the Receiving ~~Control~~ Balancing Authority Area of Dynamic Scheduling Energy, as appropriate; ~~and, from system resources within the Transmission Provider’s Control Area.~~
- (c) if the Transmission Provider’s Balancing Authority Area is an Intermediary Balancing Authority Area, while the Transmission Provider has arrangements in place with the Host Balancing Authority Area, Receiving Balancing Authority Area and any other Intermediary Balancing Authority

Area for the delivery, receipt and facilitation of Dynamic Scheduling Energy, as appropriate.

3. Eligibility Requirements

To be eligible to designate Dynamic Scheduling Transmission, a Transmission Customer must satisfy the following eligibility requirements.

- (a) The Transmission Customer must satisfy the requirements of the Receiving ~~Control~~-Balancing Authority Area with respect to the delivery of Dynamic Scheduling Energy into the Receiving ~~Control~~-Balancing Authority Area.
- (b) The Transmission Customer must satisfy the requirements of Intermediary ~~Control~~-Balancing Authority Area(s) with respect to Dynamic Scheduling Energy and arrangement of appropriate transmission services through the Intermediary ~~Control~~-Balancing Authority Area.
- (c) The Transmission Customer must satisfy the requirements and standards of the Transmission Provider with respect to dynamic scheduling from the Transmission Provider's ~~Control~~-Balancing Authority Area, as those requirements and standards are described from time to time in this Attachment ~~Q-1~~ and the Dynamic Scheduling Business Practices.
- (d) The Transmission Customer shall be responsible for all costs related to its own systems and equipment required to dynamically schedule, such as communications equipment, communication circuits and facility upgrades.
- (e) The Transmission Customer must have sufficient resources of the appropriate type available and ready to be delivered in the scheduled period from a resource or resources for dynamic scheduling that are electrically located within the Transmission Provider's ~~Control~~-Balancing Authority Area ~~and connected to the electricity grid. The resource or resources~~ must be responsive to control signals issued by the Transmission Provider's EMS.
- (f) The Transmission Customer must have a Firm Point to Point Transmission Service reservation that is of equal or greater duration and capacity than the duration and capacity designated by the Transmission Customer as Dynamic Scheduling Transmission.
- (g) The Transmission Customer must comply with applicable WECC and NERC standards and policies.
- (h) If, at any time, a Transmission Customer fails to meet any of the eligibility requirements in this section 3, the Transmission Provider may immediately suspend the Transmission Customer's eligibility for dynamic scheduling.

4. Relationship Between Dynamic Scheduling Transmission and Dynamic Scheduling Energy

The Transmission Customer may reserve Dynamic Scheduling Transmission only up to its reasonably expected share of the total capacity of Dynamic Scheduling commitments to the Receiving ~~Control~~ Balancing Authority Area. The procedures for scheduling Dynamic Scheduling Energy shall be as set out from time to time in the Dynamic Scheduling Business Practices.

5. ~~Revert Back~~, Resale, and Reassignment of Unused Dynamic Scheduling Transmission

~~(a) At the Transmission Customer's request, the Transmission Provider will revert transmission that has been designated for Dynamic Scheduling Transmission back to the original Firm Point-to-Point Transmission Service reservation.~~

~~(ab)~~ Transmission Customers cannot resell or reassign any reserved transmission capacity during the time, and to the extent, that it is designated for Dynamic Scheduling Transmission.

~~(be)~~ The Transmission Provider will not resell any reserved transmission capacity that has been designated for Dynamic Scheduling Transmission ~~DSConRes, DSSpinRes, or DSRegRes as unused transmission in real time.~~

6. Official Dispatch Signal

The Transmission Provider, as the ~~h~~Host ~~Control~~ Balancing Authority Area, is responsible for issuing the official dispatch signal for any dynamically scheduled resources located within its ~~Control~~ Balancing Authority Area.

7. Dispatch Instruction Data

(a) When acting as the Host Balancing Authority Area, ~~T~~he Transmission Provider will automatically dispatch Dynamic Scheduling Energy upon receiving the Receiving ~~Control~~ Balancing Authority Area's dispatch instruction data, based on the value of the dispatch instruction data, up to any existing constraints that might be in place at the time of dispatch and subject to the limitations described in section 8 of this Attachment Q-1 ~~Q-10~~. Receiving ~~Control~~ Balancing Authority Area's dispatch instruction data will govern provided that there are no constraints.

(b) For the purpose of this section, the following are deemed to be constraints:

- (i) the reliability of the Transmission System is threatened;
- (ii) resource constraints declared by the resource owner;

- (iii) insufficient firm transmission reservations for Dynamic Scheduling purposes; and
 - (iv) any constraints imposed by the Receiving ~~Control~~-Balancing Authority Area or any Intermediary ~~Control~~-Balancing Authority Areas on the scheduling path.
 - (c) The Transmission Customer is responsible for resolving with the Receiving ~~Control~~-Balancing Authority Area any discrepancy in data between the Receiving Balancing Authority ~~Control~~-Area's dispatch instruction data and the Transmission Customer's eTag. The Transmission Customer is responsible for ensuring the accuracy and resolving any discrepancies in eTag information related to the Intermediary Balancing Authority ~~Control~~ Areas.
8. Limitations
- Dynamic Schedules will be limited by the Transmission Provider's cut-off times, and by the Transmission Provider's reasonable assessment of its capabilities to process Dynamic Schedules. Dynamic Schedules will be processed on a first-come, first-received basis, up to the limit of the number of Dynamic Schedules that may be concurrently delivered and the total volume of Dynamic Scheduling Energy that may be delivered.
9. Losses
- Any transmission losses attributed to the Dynamic Schedule on transmission systems external to the Transmission Provider's Transmission System will be the responsibility of the Transmission Customer.
10. Settlement Data Discrepancy
- (a) The Transmission Provider will use its own time-integrated energy value for inter-Control Area check-out and for settlement and billing purposes.
 - (b) The Transmission Customer is responsible for resolving with the Receiving ~~Control~~-Balancing Authority Area any discrepancy between the time-integrated energy value used by the Transmission Provider and the time-integrated energy value provided by the Receiving ~~Control~~-Balancing Authority Area prior to sending the value to the Transmission Provider for settlement purposes.
11. Failure of Dynamic Transfer Signal or Official Dispatch Signal
- (a) If the Host Balancing Authority Area's or Receiving ~~Control~~-Balancing Authority Area's dynamic transfer signal fails, the Transmission Provider's obligation to comply with the Host Balancing Authority or Receiving ~~Control~~-Balancing Authority Area's request is automatically suspended.

- (b) If the Host Balancing Authority Area's or Receiving Control Area's dynamic transfer signal fails or the official dispatch signal from the Transmission Provider fails, the last known value will be used for the remainder of the hour. If the Transmission Provider does not recover the signal by the end of the hour, the Transmission Provider will decrease the value to zero.
- (c) For the purposes of this section, a signal fails if both redundant communication paths fail.

12. Suspension or Reduction in Dynamic Schedules

In addition to the limitations and constraints described in sections 7 and 8, the Transmission Provider may suspend or reduce Dynamic Schedules out of its ~~Control~~ Balancing Authority Area if:

- (a) the reliability of the Transmission System is threatened; or
- (b) the Receiving ~~Control~~ Balancing Authority Area or an Intermediary Balancing Authority ~~Control~~ Area requests that Dynamic Schedules be limited or suspended.

13. Sharing of Information

The Transmission Provider may share with the Host Balancing Authority Area, Receiving ~~Control~~ Balancing Authority Area, Intermediary ~~Control~~ Balancing Authority Areas and reliability coordinators whatever operational information directly related to dynamic scheduling is necessary or desirable to facilitate dynamic scheduling. The foregoing information shall include such information that may be required by applicable tariff provisions and business practices and standards of any of the Host Balancing Authority Area, Receiving ~~Control~~ Balancing Authority Area, Intermediary ~~Control~~ Balancing Authority Areas and the Transmission Provider, and shall also include such information that may be required by each of the Receiving Control Area, Intermediary Control Areas and the Transmission Provider to curtail dynamic schedules in accordance with its tariff, business practices, standards and applicable service agreements.

14. Charges for Dynamic Scheduling (DS) Service

- (a) DS Service designated from Short-Term Firm service is charged in accordance with Rate Schedule 01 of OATT.
- (b) DS Service designated from Long-Term Firm service is charged in accordance with Rate Schedule 01 of OATT.
- (c) Charges for Scheduling, System Control and Dispatch will be applied in accordance with Rate Schedule 03 of OATT.

ATTACHMENT Q-2**NETWORK ECONOMY SERVICE**

This Attachment has not been included as it is not effected by Order No. 890 and the only changes BCTC is proposing are to reflect changes to the letters of Attachments in the OATT.

ATTACHMENT RQ-3**SPINNING RESERVE AND CONTINGENCY RESERVE SERVICE**

This Attachment has not been included as it is not effected by Order No. 890 and the only changes BCTC is proposing are to reflect changes to the letters of Attachments in the OATT.

ATTACHMENT SQ-4**MIXED CLASS WHEEL THROUGH SERVICE**

This Attachment has not been included as it is not effected by Order No. 890 and the only changes BCTC is proposing are to reflect changes to the letters of Attachments in the OATT.

~~ATTACHMENT L~~ RATE SCHEDULESTransmission RatesPREAMBLE

Transmission rates for services are provided in Section A ~~of this Attachment~~. The rates for Network Integration Transmission Services, Long and Short-Term Firm Point-to-Point Transmission and Non-Firm Point-to-Point Transmission Service are the combined rates of the Transmission Provider and the Transmission Owner which are provided in Section B and C respectively.

A. Transmission Rates for Services

Transmission rates for services provided under the OATT include rates charged to customers for the following services:

- Network Integration Transmission Service
- Long and Short-Firm Point-to-Point Transmission Service
- Non-Firm Point-to-Point Transmission Service
- Scheduling, System Control and Dispatch Service
- Reactive Supply and Voltage Control from Generation Sources Services
- Regulation and Frequency Response Service
- Energy Imbalance
- Operating Resource (OR) – Spinning Resource Service
- Operating Resource (OR) – Supplemental Resource Services
- Real Power Losses

SCHEDULE 00

NETWORK INTEGRATION TRANSMISSION SERVICE

Availability: For wholesale transmission of electricity.

Rate: Monthly Transmission Revenue Requirement:

Customers will be charged their load ratio share of one twelfth (1/12th) of the Network Transmission Revenue Requirement per month. The Transmission Revenue Requirement is shown in Attachment H.

One-twelfth of the Transmission Revenue Requirement is \$40,566,667.

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: The terms and conditions under which Network Integration Transmission Service is supplied are contained in British Columbia Transmission Corporation's OATT. Capitalized terms appearing in this Schedule, unless otherwise noted, shall have the meaning ascribed to them therein.

This rate combines the rates of the Transmission Owner under the Rate Schedule 3000 and the Transmission Provider under its Rate Schedule 100.

SCHEDULE 01

~~LONG AND SHORT-TERM FIRM~~ POINT-TO-POINT TRANSMISSION SERVICE

Availability: For transmission of electricity on a firm basis from one or more Point(s) of Receipt (POR) to one or more Point(s) of Delivery (POD).

Rate for Long-Term Firm Service: The Reserved Capacity Charge for the Long-Term Firm Service Rate will be up to a maximum price as set out below except where the POD is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00).

The Maximum Reserved Capacity Charge is \$48,111/MW of reserved capacity per year.

~~The Reserved Capacity Charge is billed on the sum of the maximum non-coincident POR or POD Requirements.~~

~~The Maximum \$/kW of Reserved Capacity Billing Demand per month is \$4.009~~

Reserved Capacity Billing Demand:

The Reserved Capacity Billing Demand is determined for each POR(s), POD(s) pair. The Reserved Capacity for each pair of POR(s) and POD(s) will be the maximum non-coincident sum of the designated POR(s) and POD(s) included in the pair.

~~Penalty Charge:~~

~~A penalty charge will be applied at the rate of 125 percent of the Reserved Capacity Charge for all unauthorized usage, including all demand in excess of the Reserved Capacity Billing Demand.~~

SCHEDULE 01

~~LONG AND SHORT-TERM FIRM~~ POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for Short-Term The posted prices for Short-Term Firm and Non-Firm Service will be less Firm and Non-Firm than or equal to a maximum price (\$/MWh) as set out below, except where Service: the POD is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00). In no case shall this rate produce a price per transaction below the Minimum Price.

Minimum Price: \$0/kW

Maximum Price: The Transmission Customer shall pay each month for Reserved Capacity Billing Demand at rates not to exceed the applicable charges set forth below:

~~1) Yearly delivery: one twelfth of the demand charge of \$48.111/kW of Reserved Capacity per year.~~

~~2~~1) Monthly delivery: ~~\$4.009/kW~~ \$4,009.25/MW of Reserved Capacity per month.

~~3~~2) Weekly delivery: ~~\$0.925/kW~~ \$925.21/MW of Reserved Capacity per week.

~~4~~3) Daily delivery: ~~\$0.132/kW~~ \$131.81/MW of Reserved Capacity per day.

~~5~~4) Hourly delivery: ~~\$0.0055/kW~~ \$5.49/MW of Reserved Capacity per hour.

SCHEDULE 01

~~LONG AND SHORT-TERM FIRM~~ POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for
Short-Term
Firm and
Non-Firm

~~The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.~~

Service:
(Cont'd)

~~The rate for Short-Term Firm Service is the price per kW of Reserved Capacity per hour that will be posted each working day on OASIS.~~

Discount Rate:

For discounted paths posted on the Transmission Provider's OASIS, the Transmission Customer shall pay each month for Reserved Capacity Billing Demand the greater of the rates set forth below and the rate offered by the Transmission Customer and accepted by the Transmission Provider up to the maximum rate for Short-Term Firm and Non-Firm Service:

- 1) Hourly delivery: \$3/MWh of Reserved Capacity per hour in the Heavy Load Hour period (06:00-22:00, Monday - Saturday, excluding NERC holidays) and \$1/MWh for the Light Load Hour period (remaining hours and days).
- 2) Daily delivery: the product of the hourly delivery charge and 24.
- 3) Weekly delivery: the product of the hourly delivery charge, 24 and 7.
- 4) Monthly delivery: the product of the hourly delivery charge and 8760, divided by 12.

Reserved
Capacity for
Short-Term Firm
and Non-Firm

The Reserved Capacity shall be the maximum of the sum of non-coincident POD(s) Capacity Reservations or sum of non-coincident POR(s) Capacity Reservations.

Services:

Penalty Charge: AIn addition to the applicable rate for service (including associated charges for Ancillary Services), a penalty charge will be applied to all unauthorized usage at a rate of 125 percent of the Reserved Capacity Charge for all unauthorized usagemaximum hourly delivery charge.

Special
Conditions:

Discounts:

The following conditions apply to discounts for transmission service as

follows:

- 1) any offer of a discount made by BCTC must be announced to all Eligible Customers solely by posting on the OASIS,
- 2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posting on the OASIS,

SCHEDULE 01LONG AND SHORT-TERM FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Special 3) once a discount is negotiated, details must be immediately posted on the
Conditions: OASIS, and
(Contd)

- 4) for any discount agreed upon for service on a path, from POR(s) POD(s), BCTC must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same POD(s) on the Transmission System and

~~5) for discounted Short Term Service the minimum charge per transaction excluding taxes is \$55.~~

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Resales: The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

Note: The terms and conditions under which Transmission Service is supplied are contained in British Columbia Transmission Corporation's Open Access Transmission Tariff. The rates in this Schedule combine the rates of the Transmission Provider in its Rate Schedule 101 and the Transmission Owner in its Rate Schedule 3001. Capitalized terms appearing in this Rate Schedule, unless otherwise noted, shall have the meaning ascribed to them therein.

SCHEDULE 02

Reserved.

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE

Availability: For wholesale transmission of electricity on a Non-Firm basis from one or more Point(s) of Receipt (POR) to one or more Point(s) of Delivery (POD).

Rate for Short-Term Non-Firm Service: The Transmission Customer shall pay each month for Reserved Capacity designated at the POR(s) at the posted prices which will be less than or equal to a maximum price (\$/MWh) as set out below, except where the POD(s) is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00). In no case shall this rate produce a price per transaction below the Minimum Price.

Minimum Price: ~~—\$0/kW~~

Maximum Price: ~~—The Transmission Customer shall pay for Non-Firm Point-to-Point Transmission Service at rates not to exceed the applicable charges set forth below.~~

~~1) Monthly delivery: —\$4.009/kW of Reserved Capacity per month.~~

~~2) Weekly delivery: —\$0.925/kW of Reserved Capacity per week.~~

~~3) Daily delivery: —\$0.132/kW of Reserved Capacity per day.
The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.~~

~~4) Hourly Delivery: —The basic charge shall be agreed upon by the Parties at the time this service is reserved and in no event shall exceed \$0.0055/kW.h. The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any hour during such day.~~

SCHEDULE 02

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for Short-Term Non-Firm Service: (Cont'd) In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Penalty Charge: A penalty charge will be applied to all unauthorized usage at a rate of 125 percent of the maximum monthly delivery charge.

Special Conditions: 1. Discounts

The following conditions apply to discounts for transmission service as follows:

- (1) any offer of a discount made by BCTC must be announced to all Eligible Customers solely by posting on the OASIS;
- (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posting on the OASIS, and
- (3) once a discount is negotiated, details must be immediately posted on the OASIS.
- (4) for any discount agreed upon for service on a path, from POR(s) to POD(s), BCTC must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same POD(s) on the Transmission System.

SCHEDULE 02

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Special Conditions: (5) — information regarding any non-firm transmission discounts must be posted on the OASIS. In addition, discounts to non-affiliates must be offered in a not unduly discriminatory manner, and

(6) — for discounted Short Term Service, the minimum charge per transaction for Transmission Service is \$55.

2. Customers taking Non-Firm Service will only be billed for the time for which service is available. All bills will be prorated to the nearest hour.

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: The terms and conditions under which Non-Firm Transmission Service is supplied are contained in the British Columbia Transmission Corporation OATT. Capitalized terms appearing in this Rate Schedule, unless otherwise noted, shall have the meaning ascribed to them therein.

SCHEDULE 03

SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE

Preamble: This service is required to schedule the movement of power through, out of, within, or into a Control Area. This service can be provided only by the operator of the Control Area in which the transmission facilities used for transmission service are located. Scheduling, System Control and Dispatch Service is to be provided directly by BCTC. The Transmission Customer must purchase this service from BCTC. The charges for Scheduling, System Control and Dispatch Service are to be based on the rates set forth below.

Availability: In support of Network Integration Transmission Service, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point-to-Point Transmission Service.

Rate: \$0.106 per MW of Reserved Capacity per hour.

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: A description of the methodology for discounting Scheduling, System Control and Dispatch Services provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 04REACTIVE SUPPLY AND VOLTAGE CONTROL FROM GENERATION [OR OTHER SOURCES SERVICES](#)

<u>Preamble</u>	In order to maintain transmission voltages on BCTC's Transmission System within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the control area operator are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation Sources Service must be provided for each transaction on BCTC's Transmission System. The amount of Reactive Supply and Voltage Control from Generation or other Sources and Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region.
<u>Availability:</u>	In support of Network Integration Transmission Services, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point-to-Point Transmission Service.
<u>Rate:</u>	\$0.825 per MW of Reserved Capacity per hour.
<u>Taxes:</u>	The Rate and Charges contained herein is exclusive of the Goods and Services Tax and Social Service Tax.
<u>Note:</u>	A description of the methodology for discounting Reactive Supply and Voltage Control from Generation or other Sources Services provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 05

REGULATION AND FREQUENCY RESPONSE SERVICE

Preamble: Regulation and Frequency Response (RFR) Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled Interconnection frequency at sixty cycles per second (60 Hz). Regulation and Frequency Response Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) [and by other non-generation resources capable of providing this service](#) as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with BCTC. BCTC must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from BCTC or make alternative comparable arrangements to satisfy its Regulation and Frequency Response Service obligation. The amount of and charges for Regulation and Frequency Response Service are set forth below.

Availability: In support of Network Integration Transmission Service, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point-to-Point Transmission Service.

Rate: \$6.37 per MW per hour of generating Capacity requested for RFR.

The required amount of RFR service is a minimum of 2% of the Customer's load located in BCTC's control area.

Taxes: The Rate and Charges contained herein is exclusive of the Goods and Services Tax and Social Service Tax.

Note: A description of the methodology for discounting Regulation and Frequency Response Services provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 06

ENERGY IMBALANCE SERVICE

Preamble:

Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within a Control Area or to a Control Area boundary over a single hour. BCTC must offer this service when the transmission service is used to serve load within its Control Area or to export to neighbouring Control Areas. The Transmission Customer must either purchase this service from BCTC or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. ~~The Transmission Provider may charge a Transmission Customer a penalty for either hourly generator imbalances under this Schedule or a penalty for hourly energy imbalances under Schedule 4 for imbalances occurring during the same hour, but not both unless the imbalances aggravate rather than offset each other.~~

BCTC shall establish a deviation band of 4 MW to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s). The Transmission Customer will compensate BCTC for such service. Energy imbalances outside the deviation band will be subject to charges to be specified by BCTC. The charges for Energy Imbalance Service are set forth below. In this Rate Schedule, "BC Hydro's hourly buy price" means the hourly rate at which BC Hydro buys electricity pursuant to the Rate Section of BC Hydro Rate Schedule 3011. "BC Hydro's hourly sell price" means the hourly rate that BC Hydro charges for electricity pursuant to the Rate Section of BC Hydro Rate Schedule 3011. "Energy Imbalance Period" means one of three 08 hour periods defined as HE23-6, HE7-14 or HE15-22.

~~The Transmission Provider shall establish charges for generator imbalance based on the deviation bands as follows: (i) deviations within +/- 1.5 percent (with a minimum of 2 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be netted on a monthly basis and settled financially, at the end of each month, at 100 percent of incremental or decremental cost, (ii) deviations greater than +/- 1.5 percent up to 7.5 percent (or greater than 2 MW up to 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at~~

~~110 percent of incremental cost or 90 percent of decremental cost, and (iii) deviations greater than +/- 7.5 percent (or 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled at 125 percent of incremental cost or 75 percent of decremental cost, except that an intermittent resource will be exempt from this deviation band and will pay the deviation band charges for all deviations greater than the larger of 1.5 percent or 2 MW. An intermittent resource, for the limited purpose of this Schedule is an electric generator that is not dispatchable and cannot store its fuel source and therefore cannot respond to changes in system demand or respond to transmission security constraints.~~

~~Notwithstanding the foregoing, deviations from scheduled transactions in order to respond to directives by the Transmission Provider, a balancing authority, or a reliability coordinator shall not be subject to the deviation bands identified above and, instead, shall be settled financially, at the end of the month, at 100 percent of incremental and decremental cost. Such directives may include instructions to correct frequency decay, respond to a reserve sharing event, or change output to relieve congestion.~~

~~For purposes of this Schedule, incremental cost and decremental cost represent the Transmission Provider's actual average hourly cost of the last 10 MW dispatched for any purpose, e.g., to supply the Transmission Provider's Native Load Customers, correct imbalances, or make off system sales, based on the replacement cost of fuel, unit heat rates, start-up costs (including any commitment and redispatch costs), incremental operation and maintenance costs, and purchased and interchange power costs and taxes, as applicable.~~

Availability: In support of Network Integration Transmission Services, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point-to-Point Transmission Service.

Energy Imbalance: Energy imbalances are calculated hourly based on deviations from scheduled generation and load. Positive imbalances occur when actual generation is greater than scheduled generation or when actual load is less than scheduled load. Negative imbalances occur when actual generation is less than scheduled generation or when actual load is greater than scheduled load.

- ~~Energy imbalances less than or equal to 4 MW in any hour will be settled at BCTC's hourly Energy Imbalance Price.~~

SCHEDULE 06ENERGY IMBALANCE SERVICE (Cont'd)Energy
Imbalance:
(Cont'd)

- Positive imbalances that ~~exceed 4 MW in any hour, but which~~ do not exceed 20 MWh over an Energy Imbalance Period, will be settled at BCTC's hourly Energy Imbalance Price for the amount of the imbalance that does not exceed 4 MW in any hour, and at BC Hydro's hourly buy price for the amount of the imbalance in any hour that exceeds that amount.
- Positive imbalances that exceed 20 MWh over an Energy Imbalance Period will be settled at BC Hydro's hourly buy price for the entire amount of the imbalance over that Energy Imbalance Period.
- Negative imbalances that ~~exceed 4 MW in any hour, but which~~ do not exceed 20 MWh over an Energy Imbalance Period, will be settled at BCTC's hourly Energy Imbalance Price for the amount of the imbalance that does not exceed 4 MW in any hour, and at BC Hydro's hourly sell price for the amount of the imbalance in any hour that exceeds that amount.
- Negative imbalances that exceed 20 MWh over an Energy Imbalance Period will be settled at BC Hydro's hourly sell price for the entire amount of the imbalance over that Energy Imbalance Period.

BCTC's Energy Imbalance Price will be calculated hourly based on the average of BC Hydro's hourly buy price and BC Hydro's hourly sell price.

Taxes: The Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: A description of the methodology for discounting Energy Imbalance Services provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 07

OPERATING RESERVE (OR) - SPINNING RESERVE SERVICE

Preamble: Spinning Reserve Service is needed to serve load immediately in the event of a system contingency. Spinning Reserve Service may be provided by generating units that are on-line and loaded at less than maximum output [and by non-generation resources capable of providing this service](#). BCTC must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from BCTC or make alternative comparable arrangements to satisfy its Spinning Reserve Service obligation. The amount of and charges for Spinning Reserve Service are set forth below.

Availability: In support of Network Integration Transmission Services, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point to Point Transmission Service.

Rate: \$6.20 per MW per hour of generating Capacity requested for OR - Spinning.

The required amount of Spinning Reserve Service, for a Customer's load located in BCTC's control area, depends upon the type of generation serving the load. When the load is served by hydro generation, the required amount of Spinning Reserve Service is a minimum of 2.5% of the Customer's load. When the load is served by thermal generation, the required amount of Spinning Reserve Service is a minimum of 3.5% of the Customer's load.

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: A description of the methodology for discounting Spinning Reserve Service provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 08

OPERATING RESERVE (OR) - SUPPLEMENTAL RESERVE SERVICES

Preamble: Supplemental Reserve Service is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load [or other non-generation resources capable of providing this service](#). BCTC must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from BCTC or make alternative comparable arrangements to satisfy its Supplemental Reserve Service obligation. The amount of and charges for Supplemental Reserve Service are set forth below.

Availability: In support of Network Integration Transmission Service, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point to Point Transmission Service.

Rate: \$6.27 per MW per hour of generating Capacity requested for OR - Supplemental.

The required amount of Supplemental Reserve Service, for a Customer's load located in BCTC's control area, depends upon the type of generation serving the load. When the load is served by hydro generation, the required amount of Supplemental Reserve Service is a minimum of 2.5% of the Customer's load. When the load is served by thermal generation, the required amount of Supplemental Reserve Service is a minimum of 3.5% of the Customer's load.

Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: A description of the methodology for discounting Operating Reserve (OR) - Supplemental Reserve Services is provided under this Schedule is contained in Section 3 of the British Columbia Transmission Corporation OATT.

SCHEDULE 09LOSS COMPENSATION SERVICE

- Availability: To Transmission Customers taking Network Integration Transmission Service, Long and Short-Term Firm Point-to-Point Transmission Service, and Non-Firm Point to Point Transmission Service who have elected to take the Loss Compensation Service.
- Termination Date: 1 March 2009
- Rate: Loss Compensation Service will be priced at BC Hydro's hourly sell price. "BC Hydro's hourly sell price" means the hourly rate at which BC Hydro charges for electricity pursuant to the Rate Section of BC Hydro's Rate Schedule 3016.
- Taxes: The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

SCHEDULE 10

REAL POWER LOSSES

All transactions will incur real power losses of 6.28% on the energy delivered to the points of receipt.

SCHEDULE 9

Generator Imbalance Service

~~Generator Imbalance Service is provided when a difference occurs between the output of a generator located in the Transmission Provider's Control Area and a delivery schedule from that generator to (1) another Control Area or (2) a load within the Transmission Provider's Control Area over a single hour. The Transmission Provider must offer this service, to the extent it is physically feasible to do so from its resources or from resources available to it, when Transmission Service is used to deliver energy from a generator located within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Generator Imbalance Service obligation. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area Operator. The Transmission Provider may charge a Transmission Customer a penalty for either hourly generator imbalances under this Schedule or a penalty for hourly energy imbalances under Schedule 4 for imbalances occurring during the same hour, but not both unless the imbalances aggravate rather than offset each other.~~

~~The Transmission Provider shall establish charges for generator imbalance based on the deviation bands as follows: (i) deviations within +/- 1.5 percent (with a minimum of 2 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be netted on a monthly basis and settled financially, at the end of each month, at 100 percent of incremental or decremental cost; (ii) deviations greater than +/- 1.5 percent up to 7.5 percent (or greater than 2 MW up to 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission~~

~~Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 110 percent of incremental cost or 90 percent of decremental cost, and (iii) deviations greater than +/- 7.5 percent (or 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled at 125 percent of incremental cost or 75 percent of decremental cost, except that an intermittent resource will be exempt from this deviation band and will pay the deviation band charges for all deviations greater than the larger of 1.5 percent or 2 MW. An intermittent resource, for the limited purpose of this Schedule is an electric generator that is not dispatchable and cannot store its fuel source and therefore cannot respond to changes in system demand or respond to transmission security constraints.~~

~~Notwithstanding the foregoing, deviations from scheduled transactions in order to respond to directives by the Transmission Provider, a balancing authority, or a reliability coordinator shall not be subject to the deviation bands identified above and, instead, shall be settled financially, at the end of the month, at 100 percent of incremental and decremental cost. Such directives may include instructions to correct frequency decay, respond to a reserve sharing event, or change output to relieve congestion.~~

~~For purposes of this Schedule, incremental cost and decremental cost represent the Transmission Provider's actual average hourly cost of the last 10 MW dispatched for any purpose, e.g., to supply the Transmission Provider's Native Load Customers, correct imbalances, or make off-system sales, based on the replacement cost of fuel, unit heat rates, start-up costs (including any commitment and redispatch costs), incremental operation and maintenance costs, and purchased and interchange power costs and taxes, as applicable.~~

Appendix B

Draft Orders

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

British Columbia Transmission Corporation
Application to Amend the Open Access Transmission Tariff

and

A Complaint of TransCanada Energy Ltd.
Re: Firm Transmission Sales to Alberta

BEFORE: (Panel members)

XX Month 2008

ORDER

WHEREAS:

- A. On 3 July 2008 the Commission issued Order G-110-08 (Suspension Order), granting British Columbia Transmission Corporation's (BCTC) application dated 3 June 2008 to suspend the release for sale of additional Firm Available Transfer Capacity (ATC) on the British Columbia to Alberta path (BC>AB Path) and to suspend the Facilities Study relating to requests for additional service on the BC>AB Path; and
- B. In granting the Suspension Order, the Commission directed BCTC to address the issue raised in that application in the context of BCTC's next Open Access Transmission Tariff (OATT) Application or Rate Design review and to provide a Tariff provision to address the issue; and
- C. On 9 November 2008, TransCanada Energy Ltd. (TransCanada) filed a complaint (Complaint) with the Commission with respect to the release for sale of Firm ATC on the BC>AB Path; and
- D. On 21 November 2008, BCTC filed pursuant to Sections 58, 59 and 60 of the *Utilities Commission Act* (Act) an Application to Amend the OATT (the Application) for the purposes of: maintaining consistency with revisions to the Federal Energy Regulatory Commission's (FERC) pro forma OATT following upon FERC Order Nos. 890, 890-A and 890-B; addressing minor issues that have arisen in the course of BCTC's administration of the OATT; changing its Short-Term Point-to-Point rate design; and, limiting the sale of Firm transmission service on the BC>AB Path to 785 MW; and
- E. BCTC indicated that the Application also constitutes its response to the Complaint; and
- F. In the Application BCTC also sought an interim order, pursuant to section 89 of the Act and section 15 of the *Administrative Tribunals Act*, that BCTC be required to

indicate on certain new Service Agreements for transmission service on the BC>AB Path that the Service Agreements are subject to a further Commission order in this Application; and

- G. The Commission believes that the interim order sought by BCTC is in the public interest.

NOW THEREFORE the Commission orders that:

1. BCTC, in processing the rollover requests on BC Hydro Service Agreements dated 30 November 2007 (OASIS Transmission Request No. 70999095 for 50 MW) and 17 October 2007 (OASIS Transmission Request No. 71630197 for 120 MW), and also queued requests for Firm Available Transfer Capacity coming available on the BC>AB Path on 1 January 2009, indicate on the new Service Agreements that:

"This Service Agreement is subject to a further order of the British Columbia Utilities Commission in the matter of the 'British Columbia Transmission Corporation Application to Amend the Open Access Transmission Tariff' filed on 21 November 2008."

DATED at the City of Vancouver, in the Province of British Columbia, this day of Month 2009.

BY ORDER

Panel Chair

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

British Columbia Transmission Corporation
Application to Amend the Open Access Transmission Tariff

and

A Complaint of TransCanada Energy Ltd.
Re: Firm Transmission Sales to Alberta

BEFORE: (Panel members)

XX Month 2008

ORDER

WHEREAS:

- A. On 3 July 2008 the Commission issued Order G-110-08 (Suspension Order), granting British Columbia Transmission Corporation's (BCTC) application dated 3 June 2008 to suspend the release for sale of additional Firm Available Transfer Capacity (ATC) on the British Columbia to Alberta path (BC>AB Path) and to suspend the Facilities Study relating to requests for additional service on the BC>AB Path; and
- B. In granting the Suspension Order, the Commission directed BCTC to address the issue raised in that application in the context of BCTC's next Open Access Transmission Tariff (OATT) Application or Rate Design review and to provide a Tariff provision to address the issue; and
- C. On 9 November 2008, TransCanada Energy Ltd. (TransCanada) filed a complaint (Complaint) with the Commission with respect to the release for sale of Firm ATC on the BC>AB Path; and
- D. On 21 November 2008, BCTC filed pursuant to Sections 58, 59 and 60 of the *Utilities Commission Act* (Act) an Application to Amend the OATT (the Application) for the purposes of: maintaining consistency with revisions to the Federal Energy Regulatory Commission's (FERC) pro forma OATT following upon FERC Order Nos. 890, 890-A and 890-B; addressing minor issues that have arisen in the course of BCTC's administration of the OATT; changing its Short-Term Point-to-Point rate design; and, limiting the sale of Firm transmission service on the BC>AB Path to 785 MW; and
- E. BCTC indicated that the Application also constitutes its response to the Complaint; and
- F. In the Application BCTC also sought an interim order, pursuant to section 89 of the Act, that BCTC be required to indicate on certain new Service Agreements for

transmission service on the BC>AB Path that the Service Agreements are subject to a further Commission order in this Application, and the interim order was granted on _____ 2008; and

- G. On 15 December 2008 the Commission held a procedural conference to address procedural matters relating to the Application and Complaint;
- H. By Order No. _____, the Commission established a written hearing process to address Parts 3 to 5 of the Application (Written Hearing) and an oral hearing process to address both Part 6 of the Application and the Complaint (Oral Hearing); and
- I. The Written Hearing process was completed when BCTC filed its Reply Submission on 24 April 2009; and
- J. The Oral Hearing process was completed when BCTC and TransCanada filed their respective Reply Submissions on 15 May 2009; and
- K. The Commission has reviewed the Complaint, the Application, other evidence, and submissions filed.

NOW THEREFORE the Commission orders that:

- 1. Pursuant to Section 83 of the Act, the Complaint is dismissed; and
- 2. Pursuant to Sections 58, 59, and 60 of the Act, the Commission approves the amendments to the OATT, as described in the Application and set out in Appendix A of the Application.

DATED at the City of Vancouver, in the Province of British Columbia, this _____ day of _____ Month 2009.

BY ORDER

Panel Chair

Appendix C

Implementation Schedule

Appendix C: Implementation Schedule

Amendments (Reference to Application)	Market Operations & Development Business System Upgrade and/or OASIS Functionality	NAESB Standards & Business Practices	Other Implementation Requirements	Estimated Implementation Date
Housekeeping (Part 4)	N/A	N/A	N/A	1 month after Commission approval
Firm Transmission Sales to Alberta (Attachment C)	N/A	N/A	N/A	1 month after Commission approval
Credits for Network customers (Section 3.3.2)	N/A	N/A	N/A	1 month after Commission approval
Network Economy (Section 3.5.8)	N/A	N/A	N/A	1 month after Commission approval
Growth Transmission Planning (Section 3.2)	N/A	N/A	New webpage Update business practices/procedures	6 months after Commission approval
Unreserved Use Penalties (Section 3.3.4)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Other ancillary services (Section 3.3.5)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Planning Redispatch (Section 3.4.2)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Rollover Rights (Section 3.5.1)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Performance Metrics and Penalties (Section 3.5.2)	N/A	N/A	Develop performance / monitoring measures	6 months after Commission approval
Extensions for Commencement of Service (Section 3.5.4)	N/A	N/A	Develop BP & tracking	6 months after Commission approval
Designation of Network Resource –Documentation (Section 3.5.6)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Standardization of Business Practices (Section 3.5.9)	N/A	N/A	Ensure info provided on website	6 months after Commission approval
Creditworthiness (Section 3.5.10)	N/A	N/A	Update business practices/procedures	6 months after Commission approval
Short Term Rate Design (Part 5)	N/A	N/A	Update business practices/procedures and TSS	6 months after Commission approval
Capacity Re-assignment (Section 3.3.3)	Required	BCTC to review and modify as appropriate		On or before 31 March 2011
Conditional Firm Service (Section 3.4.3)	Required	BCTC to review and modify as appropriate		On or before 31 March 2011
Reservation Priority (Section 3.5.3)	Required	BCTC to review and modify as appropriate		On or before 31 March 2011
Designation of Network Resource – Qualification (Section 3.5.5)	Required	BCTC to review and modify as appropriate		On or before 31 March 2011

Appendix D

Stakeholder Consultation Record Regarding Order No. 890 Implementation



[Home](#) > [Transmission Scheduling](#) > [Workshops & Presentations](#) > FERC Order No. 890 Consultation

FERC Order No. 890 Consultation

Date(s)

Wednesday April 30, 2008 8:00 a.m. - 4:30 p.m.

Community

Vancouver

Event details

BCTC invites you to attend a consultation regarding FERC Order No. 890. In this consultation, BCTC will be presenting its proposal for the implementation of FERC Order No. 890.

Consultation agenda and presentation materials will be posted to BCTC's website, by April 16, for pre-reading purposes. Shortly after the consultation, BCTC will post its proposed regulatory submissions for customer comment. Customers will be invited to submit their comments to BCTC on specific issues by May 14. Customers will indicate whether a second consultation addressing specific topics is desired.

BCTC will review the customer comments and will confirm by May 16 whether a second, topic-specific, consultation will be held on May 29.

Location:

The Sutton Place Hotel
Salon Prommard (Lobby Level)

845 Burrard Street
Vancouver, BC
Telephone: 604-682-5511

RSVP:

Please RSVP to [Brenda Ambrosi](#) by April 17, 2008.

Post Event Materials:

PDFs

- [Attachment K Process](#) (PDF, 14KB)
- [BCTC Planning Activities](#) (PDF, 16KB)
- [BP - Business Practice Review Process](#) (PDF, 152KB)
- [BP - Capacity Reassignment](#) (PDF, 232KB)
- [BP - Conditional Firm Service](#) (PDF, 361KB)
- [BP - Planning Manual to Attachment K](#) (PDF, 257KB)
- [BP - Rollover Rights](#) (PDF, 387KB)
- [BP - Transmission Study Metrics and Penalties](#) (PDF, 278KB)
- [BP - Unreserved Use Penalties](#) (PDF, 200KB)
- [Redlined OATT](#) (PDF, 792KB)

Word DOCs

- [Attachment K Process](#) (DOC, N/A)
- [BCTC Planning Activities](#) (DOC, N/A)
- [BP - Business Practice Review Process](#) (DOC, 71KB)
- [BP - Capacity Reassignment](#) (DOC, 55KB)
- [BP - Conditional Firm Service](#) (DOC, 92KB)
- [BP - Planning Manual to Attachment K](#) (DOC, 70KB)
- [BP - Rollover Rights](#) (DOC, 99KB)
- [BP - Transmission Study Metrics and Penalties](#) (DOC, 74KB)
- [BP - Unreserved Use Penalties](#) (DOC, 70KB)
- [Redlined OATT](#) (DOC, N/A)

Event materials

([Download 274.3KB](#))Presentation

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ORDER NO. 890 IMPLEMENTATION

Welcome, Introduction & Overview

Stakeholder Consultation

April 30, 2008

Agenda for Today

Time	Items	Presenter
8:00 - 8:30	Breakfast	
8:30 - 9:00	Welcome, Introduction & Overview	Rohan Soulsby
9:00 - 11:00	Planning Process (including Break)	Peter Chow
11:00- 12:00	Conditional Firm Service	Stephen Tran
12:00 - 12:45	Lunch	
12:45 - 13:45	Conditional Firm Service	Stephen Tran
13:45 - 16:15	Other Modifications (including Break)	Rob Gorter
16:15 – 16:30	Wrap Up	Rob Gorter

Purpose of Today's Workshop

- To review BCTC's proposal on the implementation of Order 890 and 890-A
- To provide details on the consultation and application process
- To obtain your feedback and determine if additional meetings are required
- PLEASE FEEL FREE TO ASK QUESTIONS.

Consultation and Application Process

- We will post draft filing materials on our website on Friday, May 2, 2008 for your review
- Please provide written comments on the materials presented today and on the draft filing materials by May 14, 2008. Please also indicate if you require further discussion any of the topics.
- Please email your written comments to Brenda Ambrosi, brenda.ambrosi@bctc.com.
- Based on your comments we will determine if a 2nd consultation will be required by May 16.
- The 2nd consultation, if required, will be topic specific.
- The date for the 2nd consultation is tentatively set for May 29, 2008.
- We target to file the OATT changes with BCUC by the end of June, 2008.

History and Context

- BCTC offers transmission services pursuant to an Open Access Transmission Tariff (OATT).
- B.C. has had an OATT for wholesale electricity since 1997, first with BC Hydro's wholesale transmission tariff, replaced with BCTC's OATT filed with the BCUC in 2004 and approved in June 2005.
- BCTC's OATT is modeled on the FERC Order 888 Pro-Forma Tariff
- On February 16, 2007 FERC issued Order No. 890, refining the open access rules implemented in Order No. 888.
- Order No. 890 requires modifications to specific provisions of the Pro Forma OATT, while preserving the overall tariff framework.
- On December 28, 2007, FERC issued Order No. 890-A, the Order on Rehearing and Clarification of its Final Rule (Order No. 890), that largely affirms Order No. 890.

Why BCTC adopts FERC Pro-forma Tariff

- **The use of a tariff that is used widely throughout North America provides more certainty and efficiency in application.**
- **The use of a tariff that is familiar to customers reduces seams between jurisdictions to the benefit of open access.**

Objectives of Order 890

Order 890 Objectives	Order 890 Measures
Increase non-discriminatory access to the grid	➤ Consistent ATC methodology ➤ Post ATC data and models
Increase access to new generation & promote utilization of transmission	➤ Provide opportunities for stakeholders and customers to participate in an open and transparent planning process and require transmission providers to describe that process in an Attachment K to OATT
Increase the efficient use of transmission	➤ Economic re-dispatch ➤ Conditional firm service
Facilitates the use of clean energy resources	➤ Economic re-dispatch ➤ Conditional firm service ➤ Generator & Energy Imbalance Service ➤ Non-generating resources to supply Ancillary Services
Strengthen compliance & enforcement efforts	➤ Operating penalties ➤ Performance metrics ➤ Tying compliance to market based rate authority
Modify, improve and clarify existing provisions	➤ Misc. amendments

Order 890 Implementation Approach

- **Evaluate Order 890 changes with respect to**
 - BCTC current service offerings
 - Infra-structure requirements.
- **Adopt a “wait and see” approach with respect to the development of Attachment K to learn through the experience of other utilities.**
- **Participate in WECC work group to develop business practice for conditional firm service.**
- **Will not adopt economic re-dispatch since BCTC does not own any generation and BC Hydro cannot identify any surplus generation which could be used for long term redispatch.**
- **Participate in NERC/NAESB work group on the development of ATC methodology.**
- **Will conduct another information session on ATC methodology when this work is finalized**



BC Transmission
CORPORATION

Building Connections

Today's Workshop

- **Topics are grouped into three main areas**

- **Planning Process/ Attachment K**

- **Conditional Firm Service**

- **OATT Terms and Conditions**

- Modifications and clarifications
 - Compliance and enforcement

ORDER NO. 890 IMPLEMENTATION

Planning Process

Stakeholder Consultation

April 30, 2008

Requirement

- **Order No. 890 requires a transmission provider to document its planning process in a new Attachment K to the OATT**
- **The planning process shall be open, transparent and inclusive with 9 planning principles for:**
 - promoting regional coordination
 - removing congestion
 - planning to meet anticipated needs

Proposed Planning Tariff

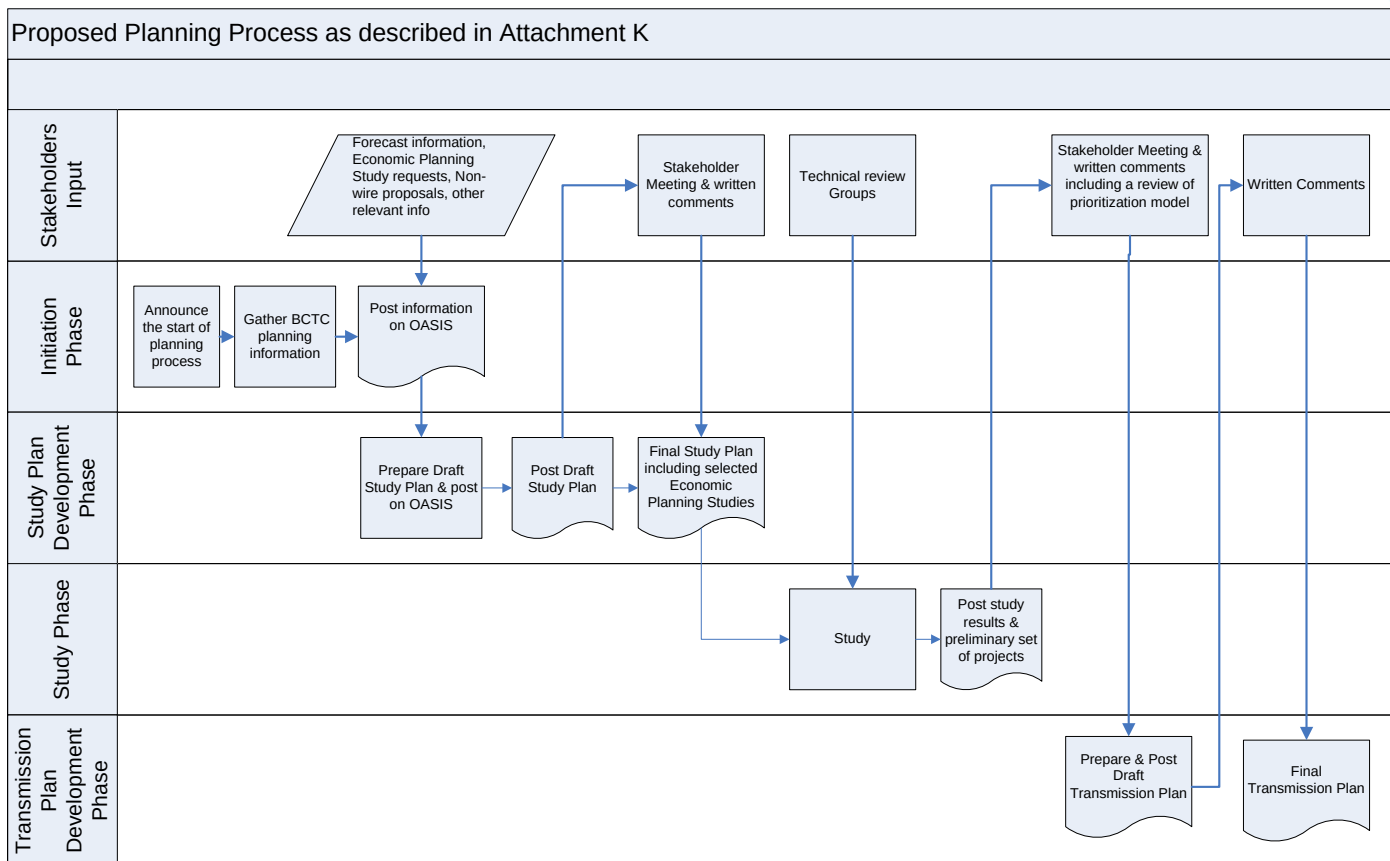
➤ Attachment K

- Describes BCTC planning process in a step by step fashion
- Specifies obligations and responsibilities of Stakeholders and BCTC in the planning process.

➤ Business Practice

- BCTC proposes to include planning criteria in a Planning Manual.

Process Flowchart



Order 890 Planning Principles

The 9 Planning Principles are:

1. Coordination
2. Openness
3. Transparency
4. Information Exchange
5. Comparability
6. Dispute Resolution
7. Regional Participation
8. Economic Planning Studies
9. Cost Allocation for New Projects

Planning Principles - Coordination

➤ Order 890 Requirements

- Provide stakeholders the opportunity to participate fully in the development of the transmission plan, in the early stages of the planning process.
- Transmission provider can determine the number of meetings, scope and format
- Customers are given an opportunity to participate in the planning process to voice their concerns, not a formal “vote” on the transmission plan.

➤ Proposed BCTC Process

- Point of Contact to address all enquiries from Stakeholders
- Provide milestones and anticipated schedule at the beginning of the planning process
- Invite Stakeholders to participate in the planning process via announcement on BCTC webpage and individual e-mails.
- Include 2 consultation meetings and opportunities for written comments at various stages of the planning process

Planning Principles - Openness

➤ Order 890 Requirements

- Transmission planning meetings must be open to all affected parties including, but not limited to, all transmission and interconnection customers, BCUC staff and other stakeholders.
- It may be appropriate in certain circumstances to limit participation to a relevant subset of these entities. Such limitations must be documented.
- confidential and security sensitive information must be managed through the use of confidentiality agreements or password protected access.

➤ Proposed BCTC Process

- Planning meetings are open to all, including transmission and interconnection customers, stakeholders, neighbouring utilities, BCUC staff and other interested parties
- Protect confidential and security sensitive information through the use of confidentiality agreement

Planning Principles - Transparency

➤ Order 890 Requirements

- Transmission providers must disclose to all customers and other stakeholders the basic criteria, assumptions, and data that underlie their transmission system plans.
- This information should enable customers, other stakeholders, or an independent third party to replicate the results of planning studies.
- Transmission providers are required to make information available regarding the status of upgrades identified in their transmission plans in addition to the underlying plans and related studies.

➤ Proposed BCTC Process

- Post available information on BCTC's website while maintaining confidentiality
- Review posted planning information in consultation meetings
- Engage interested parties as part of a Technical Review Group so that interested parties have full knowledge of how BCTC arrives at the study results

Planning Principles - Information Exchange

➤ Order 890 Requirements

- Transmission providers must develop guidelines and a schedule for the submittal of information in consultation with their network, point-to-point and interconnection customers.
- Information collected by transmission providers to provide transmission service to their native load customers must be transparent
- Equivalent information must be provided by other transmission customers to ensure effective planning and comparability.
- Point-to-point and interconnection customers are required to submit projections of their need for service over the planning horizon and to specify receipt and delivery points for that service.
- The information exchanged should be with respect to system planning, and is not limited to studies in response to interconnection or transmission service requests.

➤ Proposed BCTC Process

- Requires network, point-to-point and interconnection customers to submit forecast information in specified procedure and schedule
- Encourages customers to submit non-wire ideas and information
- Incorporates as part of Economic Planning Study requests

Planning Principles - Comparability

➤ Order 890 Requirements

- Transmission provider must develop a transmission system plan that meets the specific service requests of its transmission customers and otherwise treats similarly-situated customers (e.g., network and retail native load) comparably in transmission system planning.
- Customer demand resources are to be considered on a comparable basis to the service provided by comparable generation resources where appropriate.

➤ Proposed BCTC Process

- All similarly situated customers are required to provide forecast information over the same planning horizon
- All customers are provided the same opportunities in participating in the planning process
- Non-wire solutions will be considered on the same basis to service provided by comparable generation resources

Planning Principles - Dispute Resolution

➤ **Order 890 Requirements**

- The dispute resolution process must address both procedural and substantive planning issues
- Existing dispute resolution procedures may be relied upon and used if appropriate
- A three step dispute resolution process, including: 1) Negotiation, 2) Mediation, and 3) Arbitration.

➤ **Proposed BCTC Process**

- The dispute resolution process is tailored to fit BCUC process and involves the following steps
 1. Customer to make the complaint in writing to the Point of Contact
 2. The Point of Contact will arrange a meeting between the stakeholder and a senior executive of BCTC within 7 days to negotiate a solution to the dispute
 3. Failing to reach a solution, the disputing party may bring a complaint to BCUC for resolution

Planning Principles - Regional Participation

➤ Order 890 Requirements

- Transmission providers must coordinate with interconnected systems to (1) share system plans to ensure that they are simultaneously feasible and otherwise use consistent assumptions and data and (2) identify system enhancements that could relieve congestion or integrate new resources.
- The specific features of the regional planning effort should take account of and accommodate, where appropriate, existing institutions, as well as physical characteristics of the region and historical practices.

➤ Proposed BCTC Process

- Participate in Western Electricity Coordinating Council and Northwest Transmission Assessment Committee (NTAC) of Northwest PowerPool
- Seek opportunities to improve the overall efficiency and economic savings from increased inter-regional cooperation and integration through bilateral arrangements.

Planning Principles - Economic Planning Studies

➤ Order 890 Requirements

- Customers should be permitted to choose the studies that are of the greatest value to them, and be given the right to request a defined number of high priority studies annually, the cost of which would be recovered as a part of the overall pro forma OATT cost of service.
- A customer requesting the study must provide economic data in its possession
- Transmission providers are not obliged to implement or fund economic projects

➤ Proposed BCTC Process

- Identifies and informs stakeholders of the number of studies that can be done in the current planning cycle based on available resources
- Develops criteria for selecting requests to be studied in consultation with stakeholders
- Economic Planning Studies will be performed on the same basis as other planning studies

Planning Principles – Cost Allocation for New Projects

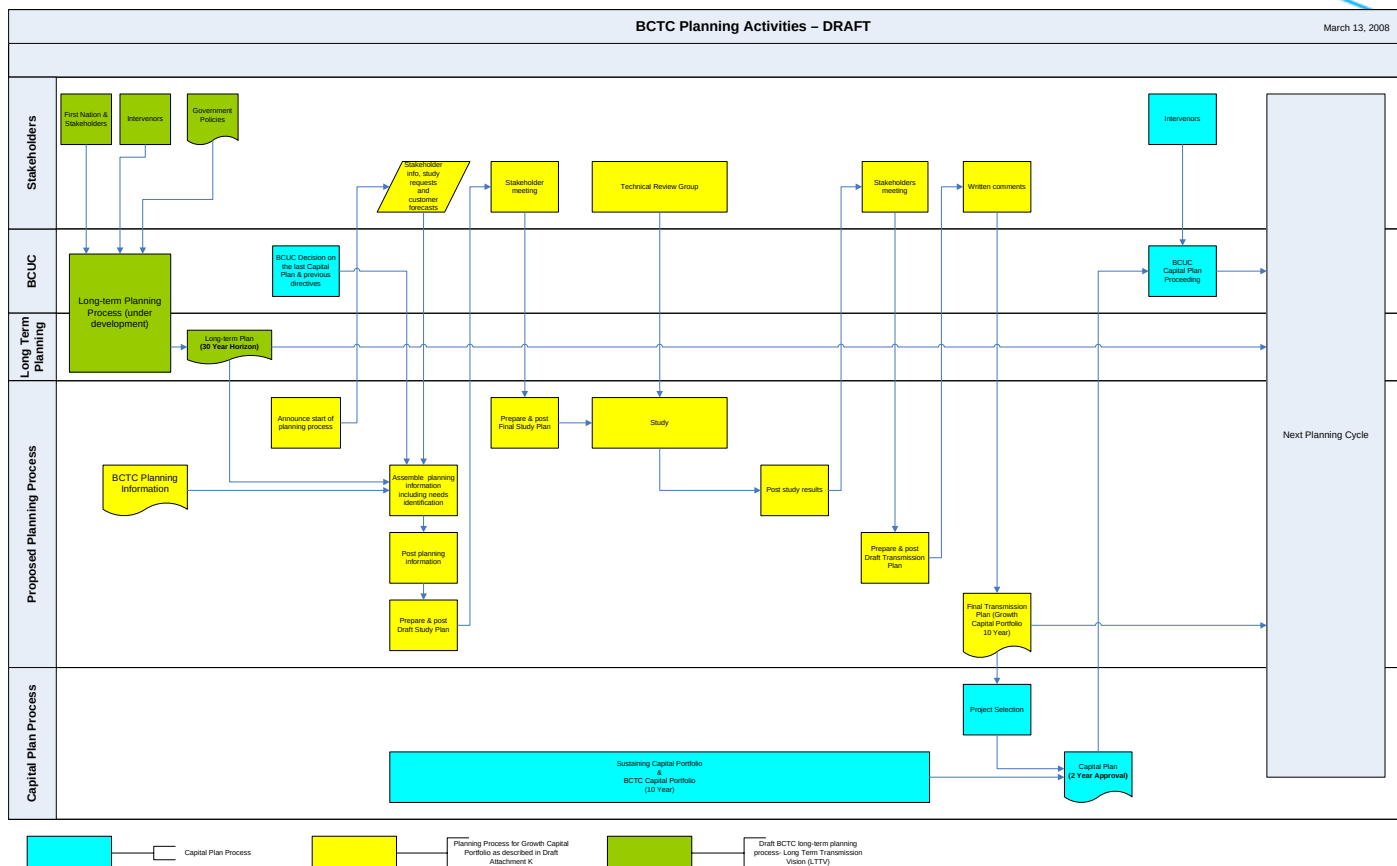
➤ Order 890 Requirements

- Cost allocation methodologies are intended to apply to projects that do not fit under existing rate structures,
- Factors to be considered upon review of cost allocation proposals are:
 - whether a cost allocation proposal fairly assigns costs among participants, including those who cause them to be incurred and those who otherwise benefit from them;
 - whether a cost allocation proposal provides adequate incentives to construct new transmission; and
 - whether the proposal is generally supported by provincial and state authorities and participants across the region.

➤ Proposed BCTC Process

- Develop cost allocation methodology on a case by case basis as required, in consultation with Stakeholders
- Submit resulting methodology to BCUC for approval

Coordination with Other Planning Activities



Questions?

ORDER NO. 890 IMPLEMENTATION

Conditional Firm Service (CFS)

Stakeholder Consultation

April 30, 2008

Background

- **Order 890 requires transmission provider to offer economic redispatch and conditional firm service to address system conditions that occur infrequently but prevent granting long term service.**
- **Redispatch**
 - BCTC proposes to not adopt economic re-dispatch since BCTC does not own any generation and BC Hydro cannot identify any surplus generation which could be used for long term redispatch.
- **Conditional Firm Service**
 - BCTC proposes to adopt Conditional Firm Service

Rationale & Definition

- **CFS is a modified form of LTFPTP service that is offered when there is insufficient ATC to meet the full request.**
- **CFS includes less-than-firm service in a *defined numbers of hours* of the year or during *defined system conditions* when firm PTP service is not available.**
- **CFS is the same as other firm services when:**
 - The *defined number of hours* for curtailment is used up;
 - The *defined system condition* is not occurring or is not anticipated to occur.

Service Attributes

- **Availability**
- **Study requirement**
- **Curtailment**
- **As a bridge to full service**
 - Service reassessment
 - Termination of service
- **Rollover rights**
- **Termination of CFS**
- **Other Terms and Conditions**

Service Attribute: Availability

BCTC will offer CFS if:

- a customer has requested in its application for service that BCTC includes, in the System Impact Study, curtailment options as an alternative to network upgrades, and
- system reliability would not be adversely impacted by offering CFS, e.g.
 - Violation of one or more of NERC or WECC reliability Standards
 - Violation of TP's written reliability requirement
 - Creation of unscheduled flow that cannot be predicted on a long term basis

Service Attribute: Study Requirements

- **The System Impact Study (“SIS”) must identify**
 - system constraints by transmission facilities;
 - additional direct assignment facilities or network upgrades to provide the requested service;
 - if customer has chosen to include curtailment options, conditions under which the service may be curtailed to maintain reliability:
 - specific system condition(s) when conditional curtailment may apply and
 - annual number of hours when conditional curtailment may apply.
- **The SIS will follow existing study milestones regardless of whether the study for curtailment options is chosen**

Service Attribute: Curtailment

- **CFS can be curtailed on the same priority as secondary network service under one of the following conditions:**

1. annual number of hours

- TP can add risk factor to the calculation of curtailment hours to account for forecasting risk
- TP has the flexibility to conditionally curtail the customer for any reliability reason during those hours, including but not limited to, the system condition(s) identified in the system impact study; or

2. specific system conditions.

- e.g. limiting transmission elements and the load level that is linked to a specific constraint

Service Attribute: As a bridge to full service

- **At the completion of the study process, if the customer is unwilling to commit to network upgrade costs, the TP shall identify and provide CFS subject to a biennial reassessment of the conditions or number of hours under which the TP may conditionally curtail the service**
 - If TP foregoes any biennial assessment, the conditional curtailment conditions will remain unchanged for another 2 years
 - If a TP proposes to change the conditional curtailment conditions due to a reassessment, the TP must provide the reassessment study to the customer along with a narrative statement describing the study and reasons for changes to the curtailment conditions requirements no later than 90 days prior to the date for imposition of these new conditions or requirements.

- **If the Customer is willing to support network upgrades, curtailment conditions are fixed until the construction of network upgrades is completed and full service is commenced.**
 - **COMMENT:** For network upgrades with long construction periods, the inability to reassess curtailment conditions may result in overly stringent curtailment conditions. May want to consider to allow re-assessment.

Service Attribute: Rollover Right

- A customer taking CFS as a less than firm service with a term of 5 years or more can roll over its CFS.
- For CFS with reassessment date coincides with its rollover deadline:
 - BCTC will provide information on reassessed curtailment conditions at least 30 calendar days prior to rollover deadline
 - BCTC may reassess curtailment conditions at the end of the 1st year of service that has been rolled-over
- For CFS with reassessment date not coincides with its rollover deadline:
 - BCTC will provide information on the new curtailment conditions to be effective when the service is rolled-over at least 30 days prior to rollover deadline

Service Attribute: Termination of Service

- **Applies only to a customer not willing to support network upgrade**
 - TP can terminate CFS if the results of the biennial reassessment indicate that CFS can no longer be reliably provided
 - Customer may terminate CFS if the curtailment conditions become more onerous as a result of reassessment

Service Attribute: Other Terms & Conditions

➤ **Assignment of ST Firm capacity**

- In the periods where Short-term firm ATC was available subsequent to CFS, CFS has the same priority as other long-term firm service

➤ **Pricing**

- CFS will be priced at LTFPTP rate

➤ **Can be used for out of area Designated Network Resources**

Shaped Service vs. CFS

- **The Shaped Service product is based on forecast of committed use**
 - It is less certain and less available
- **CFS can be applied to more situations/scenarios**
- **CFS may increase the availability of long-term service**
- **BCTC proposes to adopt CFS and remove Shaped Service from OATT**

ATC Methodologies

➤ ATC for CFS may be based on

➤ Forecast of committed use

- Use a combination of load level and available coastal generations as curtailment condition
- Higher forecast uncertainty due to the uncertainty in the availability of coastal generations and load level in the 2-year period
- Will reduce the availability of Short-Term Firm Service

➤ Outage of specific facilities

- Use facility outage as curtailment condition
- Need to estimate outage frequencies
- Will reduce the availability of non-firm service

➤ Transmission Reserve Margin (TRM)

- Sell TRM associated with certain facilities as CFS e.g. 50 MW of TRM associated with the BC-US path
- Use facility outage as curtailment condition

ATC Methodologies for CFS Implementation

- BCTC proposes to use the above methods in the System Impact Study and select the curtailment conditions on case specific basis in consultation with customer
- BCTC will document these methods in Attachment C of its OATT

Questions ?

Comments?

ORDER NO. 890 IMPLEMENTATION

Other Modifications

Stakeholder Consultation

April 30, 2008

‘Other Modifications’ – BCTC defined

Order 890 reforms to the Transmission Pricing provisions and Non-Rate Terms and Conditions of the OATT, excluding the modifications to Long-Term Firm PTP Service (i.e. Planning Redispatch & Conditional Firm Service)

Transmission Pricing	Non-Rate Terms & Conditions
- Energy & Generator Imbalances - Credits for Network Customers - Capacity Reassignment - Unreserved Use Penalties	- Rollover Rights - Modification of Receipt & Delivery Points - Acquisition of Service – Processing Metrics & Penalties - Acquisition of Service – Queue Processing / Reservation Priority - Designation of Network Resources - Standardization of Business Practices - OATT Definitions

Other Modifications – Implementation Overview

ADOPT nearly all Order 890 reforms:

1. Maintain comparability to FERC's pro forma OATT
2. Facilitate a seamless market

REQUIRES, as applicable to specific provisions:

1. Amended or new tariff language as per Order 890 pro forma OATT
2. New or revised Business Practices
3. Reporting framework
4. OASIS and BCTC Systems modifications

DEFER consultation and implementation of:

1. Energy & Generator Imbalance reforms
2. Other Ancillary Services reforms

Credits for Network Customers

ADOPT

Order 890	1. New test severs link between joint planning and credits for new facilities. New facilities must be integrated into the operations of the transmission provider's facilities 2. Network customer's transmission facilities will be presumed to be integrated if the facilities, if owned by the transmission provider, would be eligible for inclusion in the transmission provider's annual transmission revenue requirement as specified in Attachment H of the pro forma OATT. 3. Costs associated with the transmission credits will not be automatically recovered in the transmission provider's cost of service. 4. Transmission providers may propose an automatic adjustment clause under their rates to address the "lag time" between the costs incurred and the transmission provider's next rate case.								
Discussion	• BCTC has only one network customer, BC Hydro, that is also the owner of BCTC's transmission facilities. • The application of credits to new BCTC transmission facilities owned by BC Hydro are not applicable • Therefore unnecessary at this time to propose an automatic adjustment clause to provide for the recovery of credit costs in BCTC's revenue requirement applications.								
Implementation	<table> <tr> <td>OATT:</td><td>Amend Section 30.9, notwithstanding that credits are not applicable at this time.</td></tr> <tr> <td>Business Practice:</td><td>n/a</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a</td></tr> </table>	OATT:	Amend Section 30.9, notwithstanding that credits are not applicable at this time.	Business Practice:	n/a	Reporting:	n/a	BCTC Systems / OASIS:	n/a
OATT:	Amend Section 30.9, notwithstanding that credits are not applicable at this time.								
Business Practice:	n/a								
Reporting:	n/a								
BCTC Systems / OASIS:	n/a								

Capacity Reassignments

ADOPT

Order 890

1. Lift Price Cap on assignments
2. Require a service agreement for assignments prior to date on which the reassigned service commences
 - Sufficient for assignee to exercise service agreement generally and to complete a particular assignment through OASIS
3. Requires Transmission Providers to credit or charge reseller for difference in price in the respective service agreements of the reseller and assignee.
4. Limits the applicability of lifting the price cap until October 1, 2010; subject to FERC review of a scheduled staff report on the development of the secondary market under the new rules.

Discussion

- Execution of service agreement by the assignee does not terminate reseller's SA.
- Reseller will continue to be billed; the assignment of service simply transfers to the assignee some or all of the reseller's scheduling rights for the period of the reassignment and, in return, obligates the assignee to pay BCTC the negotiated rate.
- In order to prevent over-recovery, BCTC must therefore credit the reseller the reassignment rate, which leaves the reseller with the net difference between the resale rate and the reseller's original rate.
- BCTC will only credit reseller upon receipt of payment from Assignee.
- If the reseller and assignee agree to a full transfer of the reseller's rights and obligations, the reseller would only make payments to the extent the transfer is executed at a lower rate than the rate agreed to between the reseller and BCTC, to ensure that BCTC receives the full contract price agreed to by the reseller.
- If the full transfer is executed at a rate in excess of the reseller's contract with BCTC, BCTC must credit the reseller with the additional revenue as a result of the transfer.
- If the assignee defaults and fails to pay for the reassigned capacity, BCTC will reverse the credit to the reseller to reflect the lack of payment by the assignee.

Capacity Reassignments - *continued*

Implementation	OATT: Amend Sections 23.1, 23.2 and 23.3, New Service Agreement for LT Reassignments: Attachment A-1 Business Practice: Required Reporting: n/a BCTC Systems / OASIS: All sales or assignments of capacity are to be posted on OASIS before the reassigned service commences. Resellers may also use BCTC's OASIS to post transmission capacity available for resale. BCTC systems changes to administer charges and credits.

Unreserved Use Penalties

ADOPT

Order 890

1. Transmission Provider discretion for level of penalties up to 2x the standard rate, based on period of unreserved use
2. Principles
 - UUP for single hour of unreserved use based on the rate for daily firm PTP
 - > 1 assessment for a given duration (e.g., daily) increases penalty period to next longest duration (e.g., weekly).
3. UUPs distributed to non-offending transmission customers – TPs to propose mechanism to identify non-offending customers and to allocate UUP among them. And flexibility to establish minimum threshold for distributions to avoid administrative burden for small amounts of penalty revenue.
4. All unreserved uses of host TP system to be considered firm PTP uses, even if the customer is taking network service or non-firm PTP service.
5. Charges for ancillary services costs to support unreserved use should be based on actual cost, and not subject to the penalty rate

Example

Penalty Charge Escalation

25 MW of unreserved use: 2 hours on 1 day during the first week of the month

50 MW of unreserved use: 2 hours on 1 day during the last week of the month:

- UUP based on the rate for 25 MW of daily firm PTP and 50 MW of daily firm PTP.

25 MW of unreserved use: 2 separate days during the first week of the month

50 MW of unreserved use: 2 hours on 1 day during the last week of the month

- UUP based on the rate for 25 MW of weekly firm PTP and 50 MW of daily firm PTP

Unreserved Use Penalties *continued*

Discussion

1. BCTC proposes to maintain current penalty charge = 125% of reserved capacity charge at the maximum rate for service.
2. Penalty charge escalation not applicable as penalty rates are applied at the maximum rate and all maximum rates for service in BCTC's OATT are equivalent on an hourly basis.
3. Unreserved use is discovered after the fact on the basis of a customer complaint that its reservation was scheduled upon by another party or through BCTC's own internal checks.
4. If unreserved use occurs and enough time remains in real-time, BCTC will notify offending customer and request that customer withdraw its e-Tag to allow affected customer to resubmit e-Tag.
5. BCTC proposes to distribute unreserved use penalties pro rata (MW reservations) to non-offending PTP customers with reservations in the same monthly billing cycle under which the unreserved use occurred.
6. BCTC proposes to establish a minimum threshold penalty amount of \$1,000 for distribution.

Implementation

OATT:	Required – Section 3.0, 13.4 and 30.4
Business Practice:	Required - Procedure and obligation for calculating, recovering and allocating penalties.
Reporting:	n/a
BCTC Systems / OASIS:	n/a

Rollover Rights

ADOPT

Order 890	1. Request term must be at least 5 years to be eligible for rollover rights 2. One year's notice to exercise priority 3. Matching term and rate policy continues as the mechanism to award capacity to those who value it most, as well as tie-breaking mechanism.
Discussion	Implementation Transition • Requests in the transmission queue as of the effective date of BCUC approval of BCTC's OATT. • Subject to existing rules until first rollover after execution of contract and effectiveness of new rules. • Current one-year contract commitment requirement will continue to apply • Five-year contract commitment requirement will not apply until the first rollover date • Existing customer • Must comply with the new rollover reforms at the time of the first rollover of its contract occurring after the effectiveness of the rollover reforms. • Current 60-day notice rule will continue to apply only to those existing contracts that have less than five years left in their terms at the time of effectiveness of rollover reform • A customer with an existing contract with five or more years left in its term at the time of effectiveness of rollover reform for its transmission provider will be required to give one-year notice of whether it intends to exercise its rollover right.

Rollover Rights - *continued*

Implementation	OATT:	Amend Section 2.2
	Business Practice:	Required – Amend existing business practice, implementation transition
	Reporting:	n/a
	BCTC Systems / OASIS:	n/a

Modification of Receipt & Delivery Points

ADOPT

Order 890	1. Order 890 clarifies that rollover rights follow redirects, regardless of the duration of the redirect (even if, for example, the redirect is requested for a shorter period). 2. Any change to a delivery point is treated as a new request for service for the purpose of determining ATC 3. Each redirect is therefore subject to availability of capacity and subject to the possibility that the Transmission Provider may not be able to provide rollover rights on the redirected path. If a customer has not been granted rollover rights for a redirect that extends to the end of its contract, the redirected service will terminate on the same date as the parent service. 4. Order 890 also concludes that NAESB WEQ is the appropriate body to develop Business Practices to implement its redirect policy								
Discussion	• If the redirect ends before the end of the contract term the customer does not have rollover rights on the redirect path but retains any rollover rights on the original path. • If the redirect extends to the end of the contract term and it has rollover rights, the rollover rights apply only to the redirect path • A redirect request will be evaluated in accordance with Section 17 of the OATT using the same system assumptions and analysis applicable to any other new request for service, including whether sufficient ATC exists to accommodate the request.								
Implementation	<table> <tr> <td>OATT:</td><td>n/a</td></tr> <tr> <td>Business Practice:</td><td>Required - Participate in NAESB WEQ discussions to develop revised standards consistent with FERC policy</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a</td></tr> </table>	OATT:	n/a	Business Practice:	Required - Participate in NAESB WEQ discussions to develop revised standards consistent with FERC policy	Reporting:	n/a	BCTC Systems / OASIS:	n/a
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Business Practice:	Required - Participate in NAESB WEQ discussions to develop revised standards consistent with FERC policy								
Reporting:	n/a								
BCTC Systems / OASIS:	n/a								

Performance Metrics & Penalties

ADOPT

Order 890	1. Quarterly posting of performance metrics – Long-Term Transmission Requests Only 2. Notification and additional metrics filed with Commission 3. No revenue requirement recovery allowed - allocation to all non-affiliate customers. 4. Processing time is measured from the point that the customer returns its executed study agreement unless (as clarified by Order 890-A) the Transmission Provider and the customer agree on an alternate day for the Transmission Provider to begin the study.
Discussion	Aggregate all transmission service request studies completed during each quarter <u>for non-affiliates</u>. IF: > 20% of studies are completed outside of the 60-day due-diligence deadlines in OATT Sections 19.3, 19.4, 32.3 and 32.4 <u>for 2 consecutive quarters</u> THEN: BCTC must file a Notification Filing with the BCUC within 30 days of the end of the 2nd quarter IF: A Notification Filing is made and there are no extenuating circumstances that excuse BCTC's non-compliance AND IF: In <u>each of the two quarters following</u> the Notification Filing (the 3rd & 4th quarter in sequence), BCTC completes > 10% of non-affiliates system impact and facilities studies outside of the 60 days due-diligence guidelines THEN: BCTC will be assessed a <u>penalty of \$500 for each day</u> it took to complete any study beyond 60-days (or for each day the study has been in the study queue beyond 60 days), starting with the quarter following the Notification Filing (penalty applied beginning in the 3rd Quarter). The penalties will continue to be assessed until BCTC completes at least 90% of all studies in the quarter following the assessment of the penalty.

Performance Metrics & Penalties – *continued*

Allocation of Penalties	Allocate penalties by customer, and only to non-affiliate customers that: • Had studies completed late under the trigger for the Notification Filing; • Had studies completed late under the trigger of the Penalty Assessment; or • Had studies in the queue beyond 60 Calendar days that were included in the assessment of the penalty.	
Implementation	OATT:	Required – New Section 19.9 & 32.5
	Business Practice:	Required – Metrics and posting requirements, penalty assessment and distribution
	Reporting:	Required – Consistent with Business Practice
	BCTC Systems / OASIS:	Required –BCTC systems and OASIS functionality in support of posting requirements

Performance Metrics & Penalties – Illustration 1

End of Quarter	New Study	Q1	Q2	Q3	Q4	Q5	Q6
Q0	1	✓					
	2	✓					
	3	✓					
	4	x	✓				
	5	x	✓				
Q1	1		✓				
	2		✓				
	3		✓				
	4		x	✓			
	5		x	✓			
Q2	1			✓			
	2			✓			
	3			✓			
	4			✓			
	5			✓			
Q3	1				✓		
	2				✓		
	3				✓		
	4				✓		
	5				✓		
Q4	1					✓	
	2					✓	
	3					✓	
	4					✓	
	5					x	✓
Q5	1						✓
	2						✓
	3						✓
	4						x
	5						x
Total Completed		3	5	7	5	4	4
Completed On-time		3	3	5	5	4	3
Completed Late		0	2	2	0	0	1
% Completed Late		0%	40%	29%	0%	0%	25%
End of Quarter Notification Filing?		No	No	Yes	n/a	n/a	No
End of Quarter Penalty trigger?		n/a	n/a	n/a	n/a	No	No
Penalty assessed end of Q?		n/a	n/a	n/a	n/a	n/a	n/a

Performance Metrics & Penalties – Illustration 2

End of Quarter	New Study	Q1	Q2	Q3	Q4	Q5	Q6
Q0	1	✓					
	2	✓					
	3	✓					
	4	x	✓				
	5	x	✓				
Q1	1		✓				
	2		✓				
	3		✓				
	4		x	✓			
	5		x	✓			
Q2	1			✓			
	2			✓			
	3			✓			
	4			✓			
	5			x	✓		
Q3	1				✓		
	2				✓		
	3				✓		
	4				✓		
	5				x	✓	
Q4	1					✓	
	2					✓	
	3					✓	
	4					✓	
	5					✓	
Q5	1						✓
	2						✓
	3						✓
	4						x
	5						x
Total Completed		3	5	6	5	6	3
Completed On-time		3	3	4	4	5	3
Completed Late		0	2	2	1	1	0
% Completed Late		0%	40%	33%	20%	17%	0%
End of Quarter Notification Filing?		No	No	Yes	n/a	n/a	No
End of Quarter Penalty trigger?		n/a	n/a	n/a	n/a	Yes	n/a
Penalty assessed end of Q?		n/a	n/a	n/a	Yes	Yes	No

Extension of Commencement of Service

ADOPT

Order 890	1. Amends Section 17.7 of the OATT to require a transmission customer that is extending the commencement of service to pay the required annual reservation fee within 15 days of notifying the Transmission Provider that it would like to extend the commencement of service. Otherwise, the customer will lose its option to extend its transmission service start date. 2. Amends Section 17.7 of the OATT to allow the Transmission Provider the opportunity to consider the ability to provide service in the event of an extension of service.								
Implementation	<table> <tr> <td>OATT:</td><td>Amend Section 17.7 in respect of the 15-day payment deadline after notification to extend the commencement of service.</td></tr> <tr> <td>Business Practice:</td><td>n/a</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a</td></tr> </table>	OATT:	Amend Section 17.7 in respect of the 15-day payment deadline after notification to extend the commencement of service.	Business Practice:	n/a	Reporting:	n/a	BCTC Systems / OASIS:	n/a
OATT:	Amend Section 17.7 in respect of the 15-day payment deadline after notification to extend the commencement of service.								
Business Practice:	n/a								
Reporting:	n/a								
BCTC Systems / OASIS:	n/a								

Designation of Network Resources – Qualification

ADOPT

Order 890

1. A PPA with a “make whole” Liquidated Damages provision that reimburses for replacement power can qualify for network designation.
2. Transmission Providers to develop OASIS functionality to:
 - allow all of the information required for a request to designate network resources to be provided electronically;
 - mask information about operating restrictions and generating cost on OASIS; and
 - allow for queries of all information provided with designation requests.
3. Transmission Providers to work in conjunction with NAESB to develop business practice standards on procedural requirements for submitting designations over any new OASIS functionality.

Discussion

Network Customer obligations

Provide and post on OASIS when designating an off-system resource (intended to improve determining effects on ATC):

1. identification of the resource as an off-system resource;
2. amount of power to which the customer has rights;
3. identification of the control area(s) from which the power will originate;
4. delivery point(s) to the transmission provider’s transmission system; and
5. transmission arrangements on the external transmission system(s)

Section 29.2(v)e revised to require following information be provided with such designation, but masked on OASIS:

1. any operating restrictions (periods of restricted operation, maintenance schedules, minimum loading level of resource, normal operating level of resource); and
2. approximate variable generating cost (\$/MWH) for redispatch computations.

Designation of Network Resources – Qualification - *continued*

Implementation	OATT:	Required – Amend Section 29.2 and 30.2
	Business Practice:	Required - Process and Network customer obligations for designating off-system resources over OASIS (NAESB)
	Reporting:	n/a
	BCTC Systems / OASIS:	Required - Functionality in support of posting requirements and processing

Designation of Network Resources – Documentation

ADOPT

Order 890	1. Verification • Transmission Providers are not responsible for verifying that the generating units and power purchase agreements that network customers designate as network resources satisfy the requirements in Sections 30.1 and 30.7. • But, Transmission Providers continue to be responsible for verifying that third-party transmission arrangements to deliver the purchase to the transmission provider's system are firm 2. Network customers to include a statement that: • The transmission customer owns or has committed to purchase the designated network resource and • The designated network resource comports with the requirements for designated network resources pro forma OATT Section 29.2 , and Section 30.2 3. Transmission Provider must notify network customer within 15 days of confirmation if its request is deficient in this regard (in accordance with the procedures in section 29.2).
Discussion	• Business Practice that identifies the process and obligations regarding the network customer's attestation and BCTC's notification and response to deficiencies. i. Notify network customer within 15 days of confirmation if its request is deficient in reference to section 29.2. ii. Remedy deficiencies through informal communications, but if unsuccessful, annul or displace the network customer's request and change the status of the request on OASIS to "retracted." iii. Attestations not required until service request confirmed, but required at the same time as pre-confirmed applications.

Designation of Network Resources – Documentation - *continued*

Implementation

OATT:	n/a
Business Practice:	Required - Process and obligations for Network customer attestation over OASIS.
Reporting:	n/a
BCTC Systems / OASIS:	Functionality in support of Network customer requirement to include a statement attesting to network resources.

Undesignation of Network Resources

ADOPT

Order 890	1. Temporary and Indefinite Terminations • A request to undesignate that is submitted concurrently with a request to redesignate at a specific point is considered a temporary termination - no forfeiture of rights. • Transmission Provider must post change in ATC on OASIS. • A requests to undesignate without any concurrent request to redesignate is considered a request for indefinite termination - no continuing rights. • Transmission Provider must develop OASIS functionality and, working through NAESB, business practice standards describing the procedural requirements for submitting both temporary and indefinite terminations. 2. Other Provisions • Network customers not permitted to make firm third-party sales from any designated network resource without: • undesignating that resource for the period of the third-party sale pursuant to pro forma OATT section 30.3 and • providing notice of such undesignation before the firm scheduling deadline								
Discussion	• Awaiting further FERC ruling with respect to minimum lead-time requirement for undesignations • BCTC Proposal: • Minimum lead-time for undesignations - no later than XX:40 prior to the scheduling hour. • Would allow BCTC a 20 minute window to update its ATC and post any freed-up ATC on OASIS by the top of the scheduling hour, and would provide a window for customers to submit bids on freed-up ATC prior to the delivery hour								
Implementation	<table border="0"> <tr> <td>OATT:</td><td>Required – Amend Section 30.3</td></tr> <tr> <td>Business Practice:</td><td>Required – Subject to BCTC Proposal/FERC ruling on minimum lead-time</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Follow development of industry standards, ATC tracking and posting.</td></tr> </table>	OATT:	Required – Amend Section 30.3	Business Practice:	Required – Subject to BCTC Proposal/FERC ruling on minimum lead-time	Reporting:	n/a	BCTC Systems / OASIS:	Follow development of industry standards, ATC tracking and posting.
OATT:	Required – Amend Section 30.3								
Business Practice:	Required – Subject to BCTC Proposal/FERC ruling on minimum lead-time								
Reporting:	n/a								
BCTC Systems / OASIS:	Follow development of industry standards, ATC tracking and posting.								

Transmission Curtailments

ADOPT

Order 890	Posting of additional curtailment information is necessary to provide transparency. - Transmission providers, working through NAESB, are to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. - Transmission providers are not required to implement OASIS modifications until NAESB develops appropriate standards.								
Discussion	- No need to amend the OATT to address these aspects. - Participate with NAESB as applicable.								
Implementation	<table> <tr> <td>OATT:</td><td>n/a</td></tr> <tr> <td>Business Practice:</td><td>Required - Update business practice subject to NAESB standards development</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Required – Functionality to follow development of industry standards, as necessary</td></tr> </table>	OATT:	n/a	Business Practice:	Required - Update business practice subject to NAESB standards development	Reporting:	n/a	BCTC Systems / OASIS:	Required – Functionality to follow development of industry standards, as necessary
OATT:	n/a								
Business Practice:	Required - Update business practice subject to NAESB standards development								
Reporting:	n/a								
BCTC Systems / OASIS:	Required – Functionality to follow development of industry standards, as necessary								

Standardization of Business Practices

ADOPT

Order 890	Continuation of Rule of Reason Test - Only those rules, standards, and practices that significantly affect transmission service are to be incorporated into the transmission provider's OATT under the "rule of reason" test. - But a transmission provider must post on its public website a statement of the process by which it will amend its rules, standards, and practices, including a mechanism to provide reasonable notice of any proposed changes to a posted business practice and the respective effective date of such change.								
Discussion	BCTC does not specifically apply FERC's "rule of reason" test. However, BCTC's Business Practices set out the business rules and procedures to implement the Terms and Conditions of the OATT in a manner consistent with the BCUC's June 20, 2005 OATT decision at pages 93-95. In that decision, the BCUC concluded that BCTC should endeavour to put as much specificity in the tariff as practicable, without being so prescriptive that the tariff becomes unworkable, and that it must have the authority and latitude to make decisions regarding the implementation of the tariff and the appropriate Business Practices to do so.								
Implementation	<table border="0"> <tr> <td>Tariff:</td><td>Required – Amend Section 4</td></tr> <tr> <td>Business Practice:</td><td>Required - Business practice specifying the process by which BCTC will amend its rules, standards and business practices and notification procedure.</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a</td></tr> </table>	Tariff:	Required – Amend Section 4	Business Practice:	Required - Business practice specifying the process by which BCTC will amend its rules, standards and business practices and notification procedure.	Reporting:	n/a	BCTC Systems / OASIS:	n/a
Tariff:	Required – Amend Section 4								
Business Practice:	Required - Business practice specifying the process by which BCTC will amend its rules, standards and business practices and notification procedure.								
Reporting:	n/a								
BCTC Systems / OASIS:	n/a								

Creditworthiness

ADOPT

Order 890	• Include an Attachment L to the OATT that describes the transmission provider's basic credit standards. • To include the quantitative and qualitative criteria to be utilized by the transmission provider to determine the level of credit extended to customers, including: 1. summary of the procedure for determining the level of secured and unsecured credit; 2. a list of the acceptable types of collateral/security; 3. a procedure for providing customers with reasonable notice of changes in credit levels and collateral requirements; 4. a procedure for providing customers, upon request, a written explanation for any change in credit levels or collateral requirements; 5. a reasonable opportunity to contest determinations of credit levels or collateral requirements; and 6. a reasonable opportunity to post additional collateral, including curing any non-creditworthy determination.								
Discussion	• BCTC proposes to address these criteria in a new Attachment L, supplemented by its existing Credit Policy, already posted on its website. • BCTC proposes to preserve the pertinent sections of Section 11 that are otherwise struck from the Tariff in Order 890.								
Implementation	<table> <tr> <td>Tariff:</td><td>Required – Amend Section 11, Add new Attachment L</td></tr> <tr> <td>Business Practice:</td><td>n/a</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Required – Supplement Attachment L with a credit guide or manual, or other more detailed information to be posted on website and/or OASIS.</td></tr> </table>	Tariff:	Required – Amend Section 11, Add new Attachment L	Business Practice:	n/a	Reporting:	n/a	BCTC Systems / OASIS:	Required – Supplement Attachment L with a credit guide or manual, or other more detailed information to be posted on website and/or OASIS.
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Business Practice:	n/a								
Reporting:	n/a								
BCTC Systems / OASIS:	Required – Supplement Attachment L with a credit guide or manual, or other more detailed information to be posted on website and/or OASIS.								

OATT Definitions

ADOPT

Order 890

1. Affiliate
 - Supports the reforms associated with the distribution of operational penalties, and is also referenced as an exception to penalties for late study of requests
 - *“With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.”*
2. Non-Firm Sale
 - Creation of definition of “non-firm sale” to clarify the treatment of such sales under section 30.4 of the pro forma OATT.
3. Pre-Confirmed Application
 - Adopts the NOPR proposed definition of “pre-confirmed application” in order to implement the reforms adopted regarding the priority of transmission service requests.
4. Good Utility Practice
 - Order 890 incorporates the definition of reliable operation from FPA section 215 into the definition of “good utility practice” in the pro forma OATT - to ensure that reliability standards ultimately developed by the ERO and approved by FERC are reflected in the OATT
 - N/A to BCTC at this time. BCTC proposes to incorporate a similar provision at a later date that reflects British Columbia’s approach to the adoption of Mandatory Reliability Standards

OATT Definitions - *continued*

Discussion	Adopt new Order 890 definitions as a matter of course to the extent they support the pro forma tariff reforms in Order No. 890 that BCTC is implementing.								
Implementation	<table> <tr> <td>OATT:</td><td>Required – Insert new definitions</td></tr> <tr> <td>Business Practice:</td><td>n/a</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a</td></tr> </table>	OATT:	Required – Insert new definitions	Business Practice:	n/a	Reporting:	n/a	BCTC Systems / OASIS:	n/a
OATT:	Required – Insert new definitions								
Business Practice:	n/a								
Reporting:	n/a								
BCTC Systems / OASIS:	n/a								

Reservation Priority – Pre-confirmed Requests

ADOPT

Order 890	1. Longer duration requests for transmission service will continue to have priority over shorter duration requests for transmission service, with pre-confirmation serving as a tie-breaker for requests of equal duration 2. A pre-confirmed request for transmission service will not pre-empt an equal duration request that has already been confirmed. 3. Pre-confirmed requests for short-term service will not have priority over long-term service requests that have not been confirmed. 4. Transmission Providers are allowed to invalidate a pre-confirmed request at the request of the transmission customer in the very near term following submittal of the request, in the event the transmission customer makes an inadvertent error in submitting its request. 5. Transmission Provider's are to log such occurrences as an act of discretion so that potential abuses of this flexibility can be monitored.								
Discussion	• Subject to ongoing business practice development of the requirements above.								
Implementation	<table> <tr> <td>OATT:</td><td>Required - Amend Section 13.2, 14.2, 17.2, 18.2</td></tr> <tr> <td>Business Practice:</td><td>Required – Subject to industry standards development - Process and obligations in accordance with new pre-emption rules and prohibitions on withdrawing pre-confirmed non-firm and short-term firm point-to-point transmission service requests prior to when the transmission customer is offered service or a system impact study</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Follow development of industry standards</td></tr> </table>	OATT:	Required - Amend Section 13.2, 14.2, 17.2, 18.2	Business Practice:	Required – Subject to industry standards development - Process and obligations in accordance with new pre-emption rules and prohibitions on withdrawing pre-confirmed non-firm and short-term firm point-to-point transmission service requests prior to when the transmission customer is offered service or a system impact study	Reporting:	n/a	BCTC Systems / OASIS:	Follow development of industry standards
OATT:	Required - Amend Section 13.2, 14.2, 17.2, 18.2								
Business Practice:	Required – Subject to industry standards development - Process and obligations in accordance with new pre-emption rules and prohibitions on withdrawing pre-confirmed non-firm and short-term firm point-to-point transmission service requests prior to when the transmission customer is offered service or a system impact study								
Reporting:	n/a								
BCTC Systems / OASIS:	Follow development of industry standards								

Reservation Priority – Price as a Tiebreaker

ADOPT

Order 890	Clarifications • Price will serve as a tie-breaker after pre-confirmation for those requests that have not yet been confirmed by customer or evaluated by the Transmission Provider. • In the event a later queued short-term request for transmission service preempts a conditional confirmed short-term request for transmission service based on price, then the conditional confirmed request has a right to match the price offer of the later queued request.
Implementation	OATT: n/a Business Practice: Required - Subject to industry standards development Reporting: n/a BCTC Systems / OASIS: Required - Follow development of industry standards

Reservation Priority – Administration of ROFR

ADOPT

Order 890

1. When a longer-term request seeks capacity allocated to multiple shorter term requests, the shorter-term customers should have simultaneous opportunities to exercise the right of first refusal.
2. Duration, price, and time of response would then be used to determine which of the shorter term requests will be able to exercise the right of first refusal.
3. A competing request for these purposes includes one that overlaps with only part of another existing request since both requests cannot be granted simultaneously. It may therefore also include a request for which transmission capacity cannot be accommodated without pre-empting one or more existing transmission reservations.

Example Scenario

50 MW ATC available all 3 months
 Customer A = 50 MW 1 month, then
 Customer B = 50 MW 2 months, then
 Customer C = 50 MW 3 months

Scenario:

- Customer A would have the right to match Customer B duration. The customer that wins that competition would then have the right to match Customer C duration.
- But if Customer A matches Customer B, but then refuses to match Customer C, while Customer B would have matched Customer C, it would no longer have the opportunity to do so.

Interpretation:

- Through its simultaneous administration rule, Order 890 contemplates that Customer B should retain the opportunity to match Customer C in the above scenario, rather than be excluded from the opportunity created by Customer A not matching Customer C duration.

Reservation Priority – Administration of ROFR - *continued*

Discussion	• This will be a subject of debate in the NAESB process regarding pre-emption and competition of Short-Term Firm and Non-Firm services. • Submittal time for new competing matching requests must be equal in order to facilitate simultaneous ROFR (BCTC cannot notify customers simultaneously) • Requires design of window for “simultaneous” new matching requests • To only apply to primary transmission service, not the reassignment of scheduling rights.								
Implementation	<table> <tr> <td>OATT:</td><td>Required – Amend Section 13.2</td></tr> <tr> <td>Business Practice:</td><td>Required – Subject to NAESB business practices and industry standards development</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Required - Follow development of industry standards.</td></tr> </table>	OATT:	Required – Amend Section 13.2	Business Practice:	Required – Subject to NAESB business practices and industry standards development	Reporting:	n/a	BCTC Systems / OASIS:	Required - Follow development of industry standards.
OATT:	Required – Amend Section 13.2								
Business Practice:	Required – Subject to NAESB business practices and industry standards development								
Reporting:	n/a								
BCTC Systems / OASIS:	Required - Follow development of industry standards.								

Reservation Priority – Simultaneous Submission Window (SSW) ADOPT

Order 890

1. Transmission Providers to propose a window within which all transmission service requests the transmission provider received will be deemed to have been submitted simultaneously
 - A change to the current first-come, first-served policy to ensure that service is not awarded in an arbitrary fashion, and that less sophisticated customers with fewer financial resources have equal access.
2. Discretion to determine which transmission services subject to window
3. Propose a method for allocating transmission capacity if sufficient capacity is not available to meet all requests submitted within the specified time period
4. Transmission Providers that set a “no earlier than” time for request submittal (BCTC does) must treat all transmission service requests received within a specified period of time as having been received simultaneously.
5. Transmission Providers to propose the period of time within which all requests would be deemed to have been submitted simultaneously, but Order 890 expects that window to be open for at least 5 minutes and considers it logical that the window begin on the first minute of the “no earlier than” time period for each service.
6. Requests submitted within a specified window should not be publicly available until the window has closed in order to prevent competitors from requesting the same service simply to disrupt the transmission service procurement process.

Discussion

- BCTC proposes to use a 5 minute window, beginning at start of service request period, pre-schedule only, excluding LTF PTP
- Allocation method options

Reservation Priority – SSW *continued*

Allocation Method - Option 1

1. Sort all requests into priority buckets (by duration, then pre-confirmation status, then price).
2. Randomly assign customer pick-order for repeated draws
3. Conduct iterative customer pick based on pick-order for each priority bucket until bucket is empty
4. Proceed to next bucket using the same pick-order in sequence
5. Allocate ATC based on the resulting priority sequence of requests
6. Counteroffer the request in the sequence for which remaining ATC would be insufficient, given the prior allocations to requests with a higher priority sequence.

RECOMMENDED: Fair to all customers, no disproportionate allocation of ATC, consistent with principle that requires a SSW, consistent priority sequence remains subsequent to the 5-minute window closing.

Reservation Priority – SSW *continued*

Other Possible Allocation Methods	If the applicable priority determinants (duration, then pre-confirmation status, price) do not apply and would otherwise require allocation based on time of submittal: Option 2 • Allocate in equal proportion to all applicable requests (<i>pro rata by request</i>), without exceeding the request amount of any one request. • NOT RECOMMENDED – could result in allocation of partial MW if # requests > total MW of ATC; disproportionate allocation amounts relative to request amounts Option 3 • Allocate <i>pro rata</i> by MW volume to all applicable requests • NOT RECOMMENDED - May diverge from the principle underlying establishment of SSW (improving the fairness in transmission access across customers that differ in size and sophistication in market access). May result in inflated request amounts or redundant requests.								
Implementation	<table> <tr> <td>OATT:</td><td>Required</td></tr> <tr> <td>Business Practice:</td><td>Required</td></tr> <tr> <td>Reporting:</td><td>n/a</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>Required - Monitor development of industry standards to minimize seams with other jurisdictions.</td></tr> </table>	OATT:	Required	Business Practice:	Required	Reporting:	n/a	BCTC Systems / OASIS:	Required - Monitor development of industry standards to minimize seams with other jurisdictions.
OATT:	Required								
Business Practice:	Required								
Reporting:	n/a								
BCTC Systems / OASIS:	Required - Monitor development of industry standards to minimize seams with other jurisdictions.								

SSW Option 1 Example - *continued*

Stage 3: Establish Random Customer Pick Order

Using computerized random number generator: **B - A - C**

Stage 4: Establish Priority Sequence of Requests for ATC allocation using Customer Pick Order, for each Bucket in sequence

Method required to pick between Multiple Requests of the Same Customer in One Priority Bucket

Option 1a: Order multiple requests from one customer in one bucket by MW from Small to Large

Option 1b: Order multiple requests from one customer in one bucket by MW from Large to Small

Option 1c: Randomly select between multiple requests from one customer in one bucket (**RECOMMENDED**)

Option 1a (Small to Large)			Option 1b (Large to Small)			Option 1c (Random) [n! possibilities]		
Request #	Customer	MW	Request #	Customer	MW	Request #	Customer	MW
7	B	100	7	B	100	7	B	100
1	A	50	3	A	150	6	A	100
11	C	25	11	C	25	11	C	25
6	A	100	6	A	100	1	A	50
3	A	150	1	A	50	3	A	150
10	C	25	10	C	25	10	C	25
9	B	100	9	B	100	9	B	100
2	A	50	2	A	50	2	A	50
12	C	25	12	C	25	12	C	25
4	A	50	4	A	50	4	A	50
8	B	100	8	B	100	8	B	100
5	A	50	5	A	50	5	A	50

SSW Option 1 Example - continued

Stage 5: Allocate ATC to requests - (Assumes Option 1c from Stage 4)

Scenario	1			2			3		
Total ATC (MW)	850			650			450		
Allocation (in Priority Sequence)	Request #	Customer	MW	Request #	Customer	MW	Request #	Customer	MW
	7	B	100	7	B	100	7	B	100
	6	A	100	6	A	100	6	A	100
	11	C	25	11	C	25	11	C	25
	1	A	50	1	A	50	1	A	50
	3	A	150	3	A	150	3	A	150
	10	C	25	10	C	25	10	C	25
	9	B	100	9	B	100			
	2	A	50	2	A	50			
	12	C	25	12	C	25			
	4	A	50	4	A	25			
	8	B	100						
	5	A	50						
Total	825			650			450		

Scenario	4a - Option 1a			4b - Option 1b			4c - Option 1c		
Total ATC (MW)	250			250			250		
Allocation (in Priority Sequence)	Request #	Customer	MW	Request #	Customer	MW	Request #	Customer	MW
	7	B	100	7	B	100	7	B	100
	1	A	50	3	A	150	6	A	100
	11	C	25				11	C	25
	6	A	75				1	A	25
Total	250			250			250		

Note: CounterOffer - shaded blue

Energy & Generator Imbalance Service

DEFER

Order 890	Separate but standardized services for Energy & Generator imbalances - Three Principles: 1. Imbalance charges based on incremental cost 2. Three graduated deviation bands to provide incentive for accurate scheduling 3. Account for the limited ability of intermittent generators to precisely forecast or control generation
Discussion	• Defer discussion of and consultation on (and implementation of) Order 890 requirements. • BCTC proposes to coordinate review and implementation of energy and generator imbalance service with the review of IOS supply in advance of expiry of BC Hydro's IOS tariff on March 1, 2009, including Schedule 3011 – Energy Service Available to BCTC as IOS. Other Supporting Points • Current design provides a similar 3-tiered approach to provide an incentive for accurate scheduling • Consistent with each of Order 890's three imbalance principles (although Order 890's means of meeting principle #3 (i.e. exemption from 3rd tier charges) is a unique solution. • Zero energy imbalance service purchased in F2007 and F2008.
Implementation	OATT: n/a at this time Business Practice: n/a at this time Reporting: n/a at this time BCTC Systems / OASIS: n/a at this time

Ancillary Services

DEFER

Order 890	Schedules 2 – 6 and Schedule 9 of the pro forma OATT - Amended to state that Reactive Supply and Voltage Control, Regulation and Frequency Response, Energy Imbalance, Spinning Reserves, Supplemental Reserves, and Generator Imbalance, may be provided by generating units <u>or non-generating resources, such as demand resources where appropriate.</u> - Sales of energy imbalance and operating reserves, for example, should be permitted where appropriate on a comparable basis from those provided by generating resources - Transmission Provider may impose technical criteria in order to reliably allow load resources to provide such Ancillary Services (to be developed and imposed on a non-discriminatory basis)								
Discussion	BCTC proposes to defer discussion, consultation and implementation of Order 890 requirements in order to coordinate review and implementation of Ancillary Services requirements with BCTC review of IOS supply in advance of expiry of BC Hydro's IOS tariff on March 1, 2009.								
Implementation	<table> <tr> <td>OATT:</td><td>n/a at this time</td></tr> <tr> <td>Business Practice:</td><td>n/a at this time</td></tr> <tr> <td>Reporting:</td><td>n/a at this time</td></tr> <tr> <td>BCTC Systems / OASIS:</td><td>n/a at this time</td></tr> </table>	OATT:	n/a at this time	Business Practice:	n/a at this time	Reporting:	n/a at this time	BCTC Systems / OASIS:	n/a at this time
OATT:	n/a at this time								
Business Practice:	n/a at this time								
Reporting:	n/a at this time								
BCTC Systems / OASIS:	n/a at this time								

Other Modifications – Excluded

Provisions in Order 890 where BCTC already provides for service in the manner contemplated by Order 890, or NOPR proposals that FERC declined to adopt under Order 890.

Exclusion	Reason
Higher-of Pricing Policy	No changes to existing policy required at this time
Hourly Firm Service	Mandatory hourly firm not required; BCTC already provides
Fee for Multiple Self-Competing Transactions	Not required in light of NAESB queue flooding & hoarding business practices
Clustering TSR studies	BCTC provides for clustering through its Open Season provisions.
BP Standardization - Study queue processing	No OATT changes required; ongoing NAESB business practice development
Secondary Service (Network Economy)	BCTC has an approved Network Economy tariff
Behind the meter generation	Declines to require TP to allow netting of behind-the-meter generation
Enforcement	Reforms driven by legislative framework in United States; n/a to BCTC

Other Modifications

Implementation Summary

Modification	Position	Implementation			
	Order 890	OATT	Business Practice	Reporting	Systems / OASIS
Credits for Network Customers	Adopt	●	n/a	n/a	n/a
Capacity Reassignment	Adopt	●	●	n/a	●
Unreserved Use Penalties	Adopt	●	●	n/a	n/a
Rollover Rights (& Redirects)	Adopt	●	●	n/a	n/a
Performance Metrics and Operational Penalties	Adopt	●	●	●	●
Designation of Network Resources	Adopt	●	▼	n/a	●
Transmission Curtailments	Adopt	n/a	●	n/a	●
Standardization of Business Practices / Creditworthiness	Adopt	●	●	n/a	●
Queue Processing	Adopt	●	▼	n/a	▼
Energy & Generator Imbalance Charges	Defer	▼	▼	n/a	n/a
Other Ancillary Services	Defer	▼	▼	n/a	n/a

Key: ● Clear or self-evident ▼ Some uncertainty

Questions ?

Comments?

ORDER NO. 890 IMPLEMENTATION

Wrap-Up

Stakeholder Consultation

April 30, 2008

Wrap-Up

- Thank you for your attention and consideration today.
- We very much value the comments we have received thus far and we look forward to reviewing any further comments as we resolve outstanding issues and finalize our draft regulatory filing materials.
- Please remember that:
 - We will post draft filing materials on our website on Friday, May 2, 2008 for your review
 - Please provide written comments on the materials presented today and on the draft filing materials by May 14, 2008. Please also indicate if you require further discussion any of the topics.
 - Please email your written comments to Brenda Ambrosi
 - Based on your comments we will determine by May 16 if a 2nd consultation will be required (scheduled for May 29th)
- Additional Questions?

Please contact:

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May 16, 2008

Ms. Janet Fraser
Director, Regulatory Affairs
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street PO Box 49260
Vancouver, BC V7X 1V5

Dear Ms. Fraser:

**RE: British Columbia Hydro and Power Authority (BC Hydro)
British Columbia Transmission Corporation (BCTC)
BCTC Proposed Implementation of FERC Order 890**

Please find attached BC Hydro's preliminary comments on the materials presented by BCTC on April 30, 2008 and the draft BCTC filing materials made available on May 2, 2008 in relation to BCTC's proposed implementation of FERC Order 890. BC Hydro notes that at this point in the process, and under the schedule for providing comments back to BCTC, Powerex's comments have been incorporated into the attached document and further comments may be forthcoming as this process unfolds.

Both BC Hydro and Powerex believe a second consultation would be useful and productive. The attached document outlines our specific areas of concern on particular topics and includes comments and questions which we would like to discuss in greater detail prior to BCTC's proposed filing.

Yours sincerely,


for Joanna Sofield
Chief Regulatory Officer

Enclosure

c: Brenda Ambrosi, Customer Services Manager, BCTC

BC Hydro Comments on BCTC Proposed Implementation of FERC Order 890 (Draft Filing Materials Posted on 2 May 2008)

Issue	Reference	Discussion	Comments
Planning Process	OATT Attachment K and process diagrams	In general, we support an open, coordinated, big tent approach to transmission planning. However, we are not able to evaluate the potential impacts of the proposed Attachment K planning process on our planning processes and BCTC's existing planning processes, including NITS applications (designation of network resources and network loads), substation and reference load forecast updates, CEAPs, CRPs, IEP/LTAPs, etc. Attachment K indicates that customers will have to provide their information to BCTC in certain yet-to-be developed forms. It is not clear whether BCTC is contemplating an administrative form, or whether it is contemplating a form that would require customers provide information they do not already develop in their own planning processes. We are concerned that the Attachment K process may require us to undertake significant new work. The preamble of Attachment K states that NITS, CEAP and interconnection requests are governed by and studied in accordance with the applicable OATT provisions. However, sections 16.1(e) and 29.2(i) of the OATT, and section 3.1 of Attachment K, suggest that a customer would be out of compliance with the OATT if it chooses to make its service request under Part II or Part III of the OATT, as applicable, instead of participating in the Attachment K process.	We need more information about how BCTC's proposed Attachment K process will be coordinated with our planning processes and BCTC's existing planning processes, and how the Attachment K process fits with Parts II and III of the OATT. We are prepared to work with BCTC on these issues directly (and BCTC could post the results of such conversations) or, alternatively, in an open consultation session.
Conditional Firm Service (CFS)	OATT s. 15.4(c) and CFS Business Practice	We are concerned about BCTC offering CFS because this service as presented at this time has the potential to degrade the reliability of existing firm transmission service contracts, including BC Hydro's NITS. The concern arises, in part, because there is not sufficient transparency respecting 1) the level of risk that BCTC may find acceptable, and 2) the methodology BCTC will use to determine whether system conditions exist, for how many hours per year they are expected to exist, and the types of system conditions that permit the award of CFS agreements. We note that even if CFS is awarded based on a conservative risk assessment, there would be more firm service commitments that would be curtailable pro rata with other firm service because of Alberta or BPA system downgrades. We are also concerned about the potential for BCTC and a customer to agree to system conditions that might disclose confidential information about the status of our generators or industrial loads, or that might be otherwise inappropriate. At paragraph 960 of Order 890, FERC says that it deems any service agreement that incorporates conditional firm options to be a non-conforming agreement that must be filed with FERC. It	We have serious concerns with respect to BCTC offering CFS, as presented at this time, because of the risk to the reliability of service to existing firm transmission customers and the lack of transparency. We are also concerned that certain system conditions may disclose confidential BC Hydro information. To address such concerns, we suggest the CFS business practice needs to set out: (i) a complete list of the specific types of system conditions that could form the basis of CFS (which conditions would not reveal confidential information); (ii) the methodology and risk criteria BCTC will use to determine conditional curtailment hours that could form the basis of CFS; (iii) a requirement that any system impact study that identifies curtailment options be posted for comment before any CFS service is offered, and (iv) a requirement that any CFS service agreement be filed with the BCUC for approval.

Issue	Reference	Discussion	Comments
		would greatly increase transparency if BCTC were to file CFS service agreements with the BCUC for approval.	
Designation of Network Resources	OATT s.29.2(h) and s.30.2	We are concerned about the proposed changes to sections 29.2(h) and 30.2 of the OATT because the requirements and form of the contemplated attestation are not clear. It is not clear whether an IPP could be designated as a Network Resource if, under its EPA with BC Hydro, the IPP has the ability to sell some of its generation output to third parties. It is also not clear whether the requirements for designation of a Network Resource under sections 29.2(h) and 30.2 conflict with identification of forecast generation resources under Attachment J (proposed new Attachment P), and Attachment P (proposed new M-2). Finally, it is also not clear whether we will be able to designate our entitlement agreement resources as Network Resources. Orders 890 and 890-A provide commentary on the designation of Network Resources, but it is not clear whether BCTC will seek to incorporate that commentary into the BCTC OATT approved by the BCUC.	We need more information about BCTC's proposed changes to the Network Resource designation provisions of the OATT in order to assess how these changes may impact our business. Given that BC Hydro is BCTC's only NITS customer, we are prepared to work with BCTC on these issues directly as this may be easier and more efficient than an open consultation session. If required, BCTC could post the results of conversations as between BC Hydro and BCTC. We suggest that such discussions should be initiated prior to the OATT filing.
Temporary Termination of Network Resources	OATT s. 30.3	We are concerned about the notification deadline and process for temporary termination of a Network Resource to serve a non-designated load using PTP. Given the complexity of our hydro-based system, and that trade decisions are often made in real time, a lengthy notification period and onerous process could reduce our ability to optimise the system in real-time, which would result in losses to us and BC Hydro's customers, and could possibly impact reliability. Until we have the opportunity to review detailed business practices for temporary termination of Network Resources, we are not able to evaluate whether the process will be workable.	We need more information about BCTC's proposed changes to the termination of Network Resource provisions of the OATT in order to assess how these changes may impact reliability and our business, specifically the potential impact on our ability to optimise the system. We suggest that we work directly with BCTC on these issues because BC Hydro is BCTC's only NITS customer and we anticipate that we would potentially be disclosing to BCTC commercially sensitive information related to the operation of our generation system. If required, BCTC could post the results, which would exclude customer confidential information, of such conversations. We suggest that such discussions should be initiated prior to the OATT filing.
Performance Metrics & Operational Penalties	OATT s.19.9 and s.32.5	BC Hydro, as BCTC's only network customer, makes service requests in connection with network loads (e.g., new transmission voltage/industrial customers or distribution load growth at substations) and network resources (e.g., Resource Smart projects and new IPP interconnections as a result of calls for new energy supplies). Powerex also makes service requests in its own capacity. We are concerned that if BCTC treats BC Hydro and Powerex as Affiliates for the purposes of section 19.9 of the OATT, BCTC will not have the appropriate incentive to use due diligence to meet study completion deadlines for its only Network Customer (and the Network Customer's approximately 1.6 million customers) and for Powerex. Instead, BCTC would have an incentive to focus its efforts on the studies that could trigger the notice requirement under section 19.9(a) of the OATT and an	We request that BCTC reconsider its existing view, as expressed at the April 30, 2008 consultation and in the draft business practices, that BC Hydro and Powerex are Affiliates of BCTC for the purposes of section 19.9 of the OATT. By including studies for BC Hydro and Powerex in the metrics that trigger a notice under section 19.9(a) of the OATT, BCTC will have the correct incentive to use due diligence to meet study completion deadlines for all customers. If BCTC does not wish to include our studies in the metrics that trigger notice, we request that BCTC provide a justification on why it has deviated from FERC's decision. In addition, we expect that the operational penalty payment mechanism under section 19.9(c) and (d) will not be particularly helpful. It will likely be difficult to administer, and effort may be expended on documenting and arguing about extenuating circumstances instead of focusing the effort on completing the studies on time. We suggest that the notice requirement under section 19.9(a) is sufficient incentive for due diligence on study work.

Issue	Reference	Discussion	Comments
		operational penalty under section 19.9(c). That is, BCTC would have an incentive to focus its efforts on studies for non-affiliates, rather than on studies for all customers. In support of the above, we note that at paragraph 1683 of Order 890, FERC said that where a transmission owner has turned over operational control of its transmission facilities to an independent entity the transmission owner and its merchant affiliate are not to be considered affiliates. (Also refer to paragraph 484 of Order 890-A).	
Arbitration	OATT s.12	BCTC added a new section 12.2.1 to the OATT, which appears to require that any dispute related to the allocation of the same transfer capability be resolved by (a single) arbitration. This does not appear to be consistent with sections 12.2 and 12.6, which provide that a dispute may be resolved by arbitration or by complaint to the BCUC at a party's option.	We suggest that BCTC delete the word “disputes” at the beginning of section 12.2.1, and replace it with “arbitrations”.
Creditworthiness	OATT Attachment L	The proposed Attachment L appears to exempt creditworthy customers from any requirement to provide any form of security, including in relation to the costs of new facilities or upgrades pursuant to section 19.4 of the OATT. We have concerns that BCTC will have the discretion to shift potential risk to other transmission customers.	Would creditworthy customers be exempt from the requirement to provide any form of security for the costs of new facilities or upgrades? If so, please explain how this will not impact other transmission customers and transmission rates. Also, please explain how any potential losses related to not having adequate security will be treated by BCTC. We suggest that security for the costs of new facilities or upgrades should be required, at least above a material dollar value.
Reservation Priority	OATT s.13.2(e) and 14.2	We are concerned about BCTC's proposal for a new 5 minute window in which all requests for service (firm and non-firm) during that window will be deemed to have been submitted simultaneously. We note that FERC recently clarified in its Order on Pacificorp's Compliance Filing in Docket ER07-1291-002, at paragraphs 16 and 17, that it did not intend for this requirement to apply to non-firm services, and that it is only a mandatory requirement for firm services.	Our first preference is for BCTC to continue with the current system, as BPA has chosen to do at this time. However, if this change to the OATT is to be put forward by BCTC, we suggest that it only be implemented for firm services which is consistent with FERC recent order. We also suggest that if a 5 minute window is to be implemented for any service, then the reservation priority method must be robust and provide transparency to customers.
Ancillary Services	Economic Re-dispatch	BCTC has stated it does not intend to offer economic re-dispatch since it does not have its own generation and because BC Hydro cannot identify any surplus generation which could be used for long-term re-dispatch. BC Hydro notes that there are generation resources in the province that are not owned by BC Hydro and which may be available for long-term re-dispatch.	Has BCTC inquired whether other generation owners in the province would offer their generation for long-term re-dispatch? If so, what are the results?
Available Transfer Capability		BCTC is participating in a NERC/NAESB work group on the development of an available transfer capability (ATC) methodology.	We support continued work with NERC/NAESB to develop a robust, transparent ATC methodology.

Comments of NorthPoint Energy Solutions

Thanks for the informative consultation and for the opportunity to comment. NorthPoint Energy Solutions comments are as follows.

Conditional Firm Service

Its interesting that Transmission Providers are contemplating adding a service with this name. The fact is that firm service as it exists today is only conditional, as it gets curtailed under many different circumstances, none of which are defined in the service agreement. The concern is that by granting Conditional Firm Service to other transmission customers, the value of existing Firm Service will be further devalued. This is especially true in the "Number of Hours Option". With this option, once the defined number of hours is used up, the CFS becomes the same priority as Firm Service. This option also leaves it up to the discretion of BCTC as to when the hours are used. The "System Conditions Option" seems to be more prudent as it has the system conditions predefined, so there is no discretionary use of the curtailments and no limits to the number of hours it can be used. Even with the "System Conditions Option" there is times when CFS service could be more firm than existing Firm Service. This is due to the fact that CFS can only be curtailed when the predefined system conditions exist. There could be a situation where curtailments to Firm Service is required but it is due to a condition that was not predefined. In this case the CFS would not be curtailed but existing Firm service would be curtailed because curtailments to existing Firm Service are not limited to certain predefined conditions. NorthPoint is of the opinion that the "System Conditions Option" should be the only type of CFS that BCTC should consider offering and that CFS is always curtailed before or pro rata with existing Firm Service.

Regarding Section XY.4.1 - Why does the TC have to decide at the time of the application that they would consider CFS? Shouldn't the TC be able to chose this option when a System Impact Study is offered?

Simultaneous Submission Window

The allocation option that BCTC is recommending to adopt seems the most fair. Our only concern is that a company can increase its chances of being selected first by submitting requests using different affiliate names. The possibility of this happening needs to be addressed in the business practices.

The rest of the FERC 890 revisions are welcomed. NorthPoint does not feel there is a need for a topic specific customer consultation at this time.

Dennis Slade

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16 May 2008

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Attention: Brenda Ambrosi

Dear Ms. Ambrosi:

RE: Proposed Amendments to British Columbia Transmission Corporation's ("BCTC") Open Access Transmission Tariff ("OATT");
Comments of TransCanada Corporation ("TransCanada")

In response to BCTC's proposed amendments to its OATT posted May 2, 2008, please find TransCanada's comments on the transmission planning process, available transmission capacity methodology, conditional firm service, and various other proposed revisions to the OATT.

TransCanada's wholly-owned indirect subsidiary, TransCanada Energy Ltd. ("TCE"), is a power marketing and electricity generation development company, which conducts wholesale electricity marketing in Alberta. TCE's wholly-owned direct subsidiary, TransCanada Energy Marketing ULC ("TCEM"), is a power marketer active in the purchase and sale of wholesale power within the Western Electricity Coordinating Council ("WECC"). TCEM has contracted for long-term firm point-to-point transmission service with BCTC from the US-BC Border to the BC-Alberta Border. As an existing transmission customer of BCTC, TCEM is directly affected by the proposed amendments to the BCTC OATT.

On February 16, 2007, the US Federal Energy Regulatory Commission ("FERC") issued Order No. 890, which reformed its Order No. 888 *pro forma* OATT to clarify and expand the obligations of electricity transmission providers to ensure that transmission service is provided on a non-discriminatory basis.¹ Among other things, Order No. 890 amended the *pro forma* OATT to: (i) require coordinated, open, and transparent planning of transmission systems on both a local and regional level;² (ii) increase non-discriminatory access to the grid by requiring consistent available transfer capability ("ATC") methodology and the posting of ATC data and models;³ and (iii) increase the efficient use of the transmission grid by requiring the offering of conditional firm service.⁴

¹ *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed Reg. 12266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007) ("Order No. 890"); *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007) ("Order No. 890-A")

² Order 890 at P 214.

³ *Id.* at P 148-190.

⁴ *Id.* at P 319-332

BCIC offers open access wholesale transmission service pursuant to its OATT, which is based on FERC's Order No. 888 *pro forma* tariff, and BCIC is regulated by the British Columbia Utilities Commission ("BCUC").⁵ BCIC states that it is aware of the reciprocity requirements in the OATTs of US Transmission providers which are similar to those contained in BCIC's OATT, and anticipates filing tariff amendments with the BCUC necessary to maintain consistency with FERC Order No. 890 by the end of June, 2008.⁶

TransCanada supports BCIC's efforts to maintain consistency with FERC Order 890, which will help eliminate opportunities for undue discrimination and address deficiencies in its OATT, improve certainty and efficiency in the market, and address seams issues between jurisdictions. These issues are of particular importance given the well-known transmission constraints from British Columbia into Alberta.⁷ BCIC's recent sales of additional firm capacity over the BC-Alberta interconnection have resulted in increased pro rata curtailments of existing firm capacity holders. Accordingly, BCIC's proposed amendments to the OATT raise important concerns, explained in more detail below, which must be addressed in order to ensure the underlying goals and objectives of the OATT are not compromised.

I. Planning Process

Order No. 890 requires a transmission provider to document its planning process in a new Attachment K to the OATT. FERC identified nine planning principles in Order No. 890 that must be satisfied for a transmission provider's planning process to be considered compliant with that order. These nine planning principles are: (1) coordination; (2) openness; (3) transparency; (4) information exchange; (5) comparability; (6) dispute resolution; (7) regional participation; (8) economic planning studies; and (9) cost allocation.⁸ BCIC's proposed Attachment K describes the planning process in a step by step fashion, which it maintains meets FERC's nine planning principles.

Regarding the planning principle of regional participation, FERC's Order No. 890 requires that transmission providers coordinate with interconnected systems to share system plans to ensure that they are simultaneously feasible and otherwise use consistent assumptions and data, and that the specific features of the regional planning effort should take account of and accommodate, where appropriate, existing institutions, as well as physical characteristics of the region and historical practices. Section 11 of BCIC's proposed OATT addresses regional planning, including BCIC's obligation to work on such issues with WECC, the Northwest Transmission Assessment Committee ("NTAC") of the Northwest PowerPool, and neighbouring transmission providers.

We support BCIC's commitment to participating in such regional organizations, and in particular coordinating with neighbouring transmission providers such as the Alberta Electric

⁵ See, e.g., Comments of BCIC, FERC Docket No. RM05-25-000 at p 1 (Nov 22, 2005). BCIC's OATT was approved by the BCUC through Order G-58-05.

⁶ See BCIC letters to BCUC, "BCIC Assessment and Response to FERC Order 890" (June 20 and October 2, 2007); and BCIC Presentation, "Order No. 890 Implementation, Stakeholder Consultation" at p. 3 (April 30, 2008).

⁷ See Point to Point US to BC, BC to Alberta and wheel through US to Alberta System Impact Study, Report No. SPA 2007-85 (Nov 2007) at Section 3.0; System Impact Study for Increasing Firm ATC from BC to Alberta and from BC Interior to the US, Report No. SPA 2007-88 (April 2007) at Section 3.1; BCIC OATT Business Practices at Sec. 2.2.1.

⁸ Order No. 890 at P 214; Order No. 890-A at P 181.

System Operator (“AESO”) in order to resolve transmission planning challenges, particularly the existing transmission constraints over the BC-Alberta intertie. Such coordination will improve certainty and efficiency by encouraging these entities to agree on consistent assumptions and data, which are based on the physical characteristics of the region and historical practices.

II. Available Transfer Capability

ATC is the transfer capability remaining on a transmission provider’s transmission system that is available for further commercial activity over and above already committed uses.⁹ Transmission providers currently calculate the ATC for their systems using different assumptions and methodologies. FERC concluded that the absence of a consistent ATC methodology increases the discretion of transmission providers and the opportunities for undue discrimination in the application of the *pro forma* OATT. For instance, FERC noted that “[a]ccurate ATC calculation requires reliable and timely information about such things as load, generation dispatch, facility outages, *and transactions on neighboring systems*. Transmission providers may apply differing assumptions and criteria to ATC calculations, which may produce wide variations in posted ATC values for the same transmission paths.”¹⁰

To remedy such problems, FERC’s Order No. 890 requires: (1) consistency in all ATC calculation components and certain data inputs and modeling assumptions, as well as consistency in the exchange of data between transmission providers; (2) public utilities, working through the North American Electric Reliability Corporation (“NERC”) and the North American Energy Standards Board (“NAESB”), to develop appropriate standards; (3) increased transparency of ATC calculations through the inclusion in each transmission provider’s OATT of its specific ATC calculation methodology, and through posting of relevant data and models on each transmission provider’s open access same-time information system (“OASIS”); and (4) transmission providers to post, on OASIS, the metrics relating to transmission requests that are approved and rejected.¹¹

At the April 30, 2008 Stakeholder meeting, BCIC stated that it is currently participating in the NERC and NAESB working groups on the development of ATC methodology, and that it will disclose a proposal on ATC methodology in late May or June, 2008. BCIC should fully implement the increased transparency measures of ATC calculations emphasized by FERC’s Order No. 890. Moreover, the assumptions and data in any such ATC calculations should be based on the physical characteristics and historical practices of the transmission system. It should also be emphasized that under the FERC, WECC and current BCIC OATT definitions of ATC, it is clear that BCIC is required to take its existing firm transmission agreements into account when determining how much capacity it has available over and above already committed uses to sell to third parties. Ignoring relevant considerations, such as clearly foreseeable negative impacts on existing firm customers, is a misapplication of BCIC’s OATT and inconsistent with the letter and spirit of FERC’s Order No. 890.

III. Conditional Firm Service

⁹ See Glossary of WECC Terms and Acronyms. Specifically, WECC determines ATC using the following formula: total transfer capability less existing transmission commitments, less capacity benefit margin, less a transmission reliability margin. See NERC/WECC Planning Standards at I E ; BCIC OATT Business Practices at 2.3.

¹⁰ Order No. 890 at P 122 (emphasis added).

¹¹ *Id.* at P 148-190.

FERC's Order No. 890 modified the *pro forma* OATT by adopting a "conditional firm" component to long-term firm point-to-point service that requires the transmission provider to identify either defined system conditions or an annual number of hours during which service will be conditional, and allows the customer to select one of them. Accordingly, BCIC's proposed conditional firm service, as set forth in section 15.4(c) of the proposed OATT, provides that the "Transmission Provider may curtail the service prior to the curtailment of other Firm Transmission Service for a specified number of hours per year or during System Condition(s)." Conversely, BCIC's conditional firm service is the same as other firm services when the defined number of hours for curtailment are used up or when the defined system condition is not occurring or is not anticipated to occur. Section 1.46 of BCIC's proposed OATT defines "System Condition" as a "constrained transmission element, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement."

As drafted, BCIC's proposed conditional firm service contains ambiguities and discretion that provide an opportunity for undue discrimination in the provision of transmission service. For example, it is not clear what will constitute a "System Condition". Although BCIC proposes to offer conditional firm service only if system reliability will not be adversely impacted, and a System Impact Study must identify system constraints,¹² there is no assurance that constraints on neighbouring systems will be considered. Without such an assurance, this conditional firm service will only exacerbate the recently degraded service of existing firm capacity holders. As noted above, in 2007 BCIC increased the amount of firm capacity sold over the BC-Alberta interconnection beyond what is capable of being transferred during periods of high transfers, and the resulting pro rata curtailment has eroded the value of existing firm transmission service. Under such circumstances, it is difficult to see how BCIC can offer conditional firm service at all, without further eroding existing transmission commitments.

Moreover, if the customer selects the "Number of Hours Option," BCIC has the sole discretion to determine the number and timing of such hours when the new firm service will be conditional. The calculation of such determinations should be public and transparent, and existing firm customers should have a voice in this determination, since outside of these hours existing firm capacity holders and new conditional firm capacity holders will be curtailed equally on a pro rata basis. As proposed, this process, in effect, encourages transmission providers to oversell capacity, which degrades the value of existing firm capacity holders. Moreover, such broad and non-transparent discretion given to transmission providers provides an opportunity for abuse and undue discrimination.

IV. Other Amendments

Other proposed revisions to BCIC's OATT would also benefit from further clarification or revision. For instance, Order Nos. 890 and 890-A clarified that a transmission customer would be subject to unreserved use penalties in any circumstance where the transmission customer uses a transmission service that it has not reserved, and that a penalty rate of 200 percent to all unreserved uses is appropriate.¹³ BCIC proposes to maintain the current penalty charge of 125% of reserved capacity charge at the maximum rate of service. This proposed penalty, which is less than the 200% amount deemed appropriate by FERC, is insufficient to effectively deter such

¹² See BCIC Presentation, "Order No. 890 Implementation, Stakeholder Consultation" at p. 30-31 (April 30, 2008).

¹³ See Order 890-A at P 434 and 462.

unreserved uses, which have the potential to impair reliability and disrupt the allocation of transmission rights. A more robust solution that should also be explored would be the implementation of computer software that prevents such unreserved uses from occurring in the first place

In its analysis of the modification of receipt and delivery points, BCITC states that "Order 890 clarifies that rollover rights follow redirects, regardless of the duration of the redirect (even if, for example, the redirect is requested for a shorter period)." ¹⁴ BCITC goes on to state that "[i]f the redirect ends before the end of the contract term the customer does not have rollover rights on the redirect path but retains any rollover rights on the original path" ¹⁵ These two statements are contradictory and require clarification. Moreover, there should be clarification of whether such redirected transmission is firm, conditional firm, or non-firm.

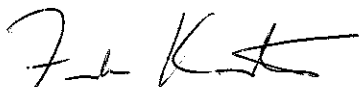
Order No. 890 requires the posting of additional curtailment information as necessary to provide transparency. Transmission providers, working through NAESB, are to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. BCITC will participate with NAESB to develop such a template ¹⁶ The industry would benefit from more and clearer examples of what types of information will be posted as the NAESB process moves forward.

Conclusion

TransCanada looks forward to working with the BCITC at a second stakeholder consultation meeting, proposed for May 29, 2008, to further discuss the specific topics addressed above. A second stakeholder consultation meeting, followed by further written comments from stakeholders, would help eliminate opportunities for undue discrimination and address deficiencies in the OATT, improve certainty and efficiency in the market, and address seams issues between jurisdictions.

Sincerely,

TransCanada Corporation



Frank Karabetsos
Legal Counsel
Law and Regulatory Research

¹⁴BCITC Presentation, "Order No. 890 Implementation, Stakeholder Consultation" at p. 51 (April 30, 2008).

¹⁵*Id*

¹⁶ *Id* at p. 62.

BCTC Response to Customer Comments on Proposed Implementation of FERC Order No. 890, received May 16th, 2008

BC Hydro	
Topic / Issue	BCTC Response
Planning Process	As indicated in the May 21st FERC 890 Consultation Bulletin, BCTC will meet with BC Hydro on the specific Network Customer issue associated with coordinating BCTC's proposed Attachment K process with BC Hydro's planning process, and how Attachment K fits with Parts II and III of the OATT. The results of these discussions will be reported at the second consultation.
Conditional Firm Service	BC Hydro is concerned that the proposed conditional firm service lacks transparency, entails risk to the reliability of service to existing firm transmission customers, and may involve disclosure of confidential BC Hydro information. As indicated in the June 3rd FERC 890 Consultation No. 2 Bulletin, the second consultation will discuss customer proposals on mitigating the perceived risks associated with the implementation of conditional firm service.
Designation of Network Resources	As indicated in the May 21st FERC 890 Consultation Bulletin, BCTC will meet with BC Hydro on specific Network Customer issues associated with clarifying: i) Network Customer attestation requirements, ii) whether IPPs and entitlement agreement resources qualify for designation, and iii) whether the requirements conflict with identification of forecast generation resources under Attachments J and P of the current OATT. The results of these discussions will be reported at the second consultation.
Temporary Termination of Network Resources	As indicated in the May 21st FERC 890 Consultation Bulletin, BCTC will meet with BC Hydro on the specific Network Customer issue associated with the notification deadline and process for temporary terminations. The results of these discussions will be reported at the second consultation.
Performance Metrics and Operational Penalties	BC Hydro requests that BCTC reconsider its existing view that BC Hydro and Powerex are Affiliates for the purpose of Section 19.9 of the OATT. BC Hydro also comments that the operational penalty mechanism will not be particularly helpful, being difficult to administer and possibly requiring significant effort and process to document and defend extenuating circumstances. BCTC will include a discussion of these issues at the second consultation.
Arbitration	BC Hydro comments that the proposed Section 12.2.1 of the OATT does not appear consistent with Sections 12.2 and 12.6, which provide that a dispute may be resolved by arbitration or by complaint to the BCUC at a party's option. BCTC agrees with BC Hydro's suggestion to delete the word "disputes" at the beginning of OATT Section 12.2.1 and to replace it with "arbitrations". BCTC will include discussion of this clarification at the second consultation, as necessary.

BC Hydro	
Topic / Issue	BCTC Response
Creditworthiness	BC Hydro is concerned that the proposed Attachment L appears to exempt creditworthy customers from any requirement to provide any form of security, including in relation to the costs of new facilities or upgrades pursuant to Section 19.4 of the OATT.. BCTC proposes to add the words “for studies” after the word “deposits” in the first sentence of Section 4 of Attachment L and also proposes to add additional clarifying language to indicate that Attachment L does not exempt a creditworthy customer from the requirement to provide security in relation to the costs of new facilities or upgrades pursuant to Section 19.4. The revised Section 4 of Attachment L would then read: <i>A Transmission Customer that meets either requirement described in Section 4(i) or Section 4(ii) shall not be required to provide any form of security against the risk of nonpayment for any type of service, including deposits for studies that otherwise would be required pursuant to Sections 17.3, 19.1, 19.4, 29.2, 32.1 and 32.4 of BCTC’s Open Access Transmission Tariff (“the Tariff”). A Transmission Customer that meets either requirement described in Section 4(i) or Section 4(ii) shall remain subject to any requirements of the Tariff to provide security related to the cost of new facilities or upgrades, including letters of credit or other forms of security required in accordance with Attachment K.</i> BCTC will include discussion of this clarification at the second consultation, as necessary.
Reservation Priority	BC Hydro expresses general concern with the simultaneous submission window, and suggests that if it were to be implemented, it should only apply to short-term firm services, and not also to short-term non-firm services, as proposed by BCTC. BCTC will include a discussion of this issue at the second consultation.
Ancillary Services	BC Hydro questions whether BCTC has ever inquired whether other generation owners in the province would offer their generation for long-term re-dispatch, and, if so, what the results were. BCTC has not inquired whether other generation owners in the province would offer their generation for long-term re-dispatch. Completed System Impact Studies have not incorporated possible changes to the generation pattern at facilities not owned by or under contract to BC Hydro. BCTC will include discussion of this clarification at the second consultation, as necessary.
Available Transfer Capacity	BCTC acknowledges BC Hydro’s support for continued work with NERC/NAESB to develop a robust, transparent ATC methodology.

NorthPoint Energy Solutions	
Topic / Issue	BCTC Response
Conditional Firm Service	NorthPoint is concerned that the value of existing Firm Service will be further devalued by granting conditional firm service to other transmission customers. NorthPoint indicates that the “System Condition Option” should be the only type of conditional firm service that BCTC should consider offering and that it should always be curtailed before or pro rata with existing Firm Service. As indicated in the June 3rd FERC 890 Consultation No. 2 Bulletin, the second consultation will discuss customer proposals on mitigating the perceived risks associated with the implementation of conditional firm service.
Simultaneous Submission Window	NorthPoint comments that BCTC’s proposed allocation option seems the most fair, but it is concerned about the possible impact on ATC allocation from customers submitting requests using different affiliate names. BCTC will include a discussion of this issue at the second consultation.

TransCanada	
Topic / Issue	BCTC Response
Planning Process	BCTC acknowledges TransCanada’s support of BCTC’s commitment to regional participation and coordination with neighbouring transmission providers.
Available Transfer Capacity	TransCanada comments that BCTC should fully implement the increased transparency measures for ATC calculations emphasized under FERC Order No. 890. TransCanada states that ATC calculations should be based on the physical characteristics and historical practices of the transmission system, and emphasizes that current rules and practices require BCTC to take its existing firm transmission agreements into account when determining ATC. As indicated in the May 21st FERC 890 Consultation Bulletin, BCTC will hold an information session on ATC methodology when the methodology is adopted by NERC. It is expected that NERC will adopt the ATC methodology in September, 2008.
Conditional Firm Service	TransCanada comments that BCTC’s proposed conditional firm service contains ambiguities and discretion that provide an opportunity for undue discrimination in the provision of transmission service and degradation to the value of existing firm capacity holders,. It highlights concerns with i) what constitutes a system condition, ii) assurance that constraints on neighbouring systems will be considered, and iii) discretion in the determination and timing associated with the “Number of Hours Option”. As indicated in the June 3rd FERC 890 Consultation No. 2 Bulletin, the second consultation will discuss customer proposals on mitigating the perceived risks associated with the implementation of conditional firm service.

TransCanada	
Topic / Issue	BCTC Response
	Also as indicated in the June 3rd FERC 890 Consultation No. 2 Bulletin, at the second consultation BCTC will seek input on the issues raised by some customers regarding the potential impact of incremental sales of firm transmission on existing firm transmission service on the BC to Alberta path.
Penalty Rate for Unreserved Use	TransCanada comments that BCTC's proposal to maintain its current penalty charge of 125 percent of the maximum rate for service is insufficient to effectively deter unreserved use. TransCanada notes that the proposed penalty is less than the 200 percent amount deemed appropriate by FERC in Order Nos. 890 and 890-A. BCTC proposed to maintain its current penalty charge on the basis of its understanding that FERC continues to believe that penalties up to twice the relevant firm point-to-point rate are just and reasonable, given the new definition of the penalty period in Order No. 890. Order No. 890 established a rebuttable presumption that unreserved use penalties no greater than twice the firm point-to-point rate for the penalty period are just and reasonable (see Order No. 890, paragraphs 848-849, for example). BCTC is amenable to increasing its current penalty charge from 125 to 200 percent of the maximum rate for service. BCTC is interested in the comments of other parties in this regard. BCTC will include discussion of this clarification at the second consultation, as necessary.
Modification of Receipt and Delivery Points	TransCanada requests that BCTC clarify its interpretation of FERC's policy, as stated in Order No. 890, that rollover rights follow redirects, regardless of the duration of the redirect (even if, for example, the redirect is requested for a shorter period). FERC clarifies in Order No. 890-A (paragraph 705): ... At the same time, a customer can exercise its rollover right only at the end of the contract. Thus, if a customer with rollover rights chooses to redirect its capacity for less than the full remaining term of the contract, absent some further request to redirect, the original path will automatically be reinstated and rollover rights would remain on only the original path. By contrast, if the customer chooses to redirect its capacity until the end of its contract, the customer would have rollover rights along only the redirected path, and only to the extent not restricted based on native load growth or future contracts along the redirected path. BCTC clarifies the practice through which it will implement FERC's policy with the following simplified examples (given the provisions of the existing OATT), assuming in each case a one-year Long-Term PTP contract January 1, 2009 – December 31, 2009 on Path A, with rollover rights. In each example, notice to exercise the rollover right would be required at least 60 Calendar Days in advance of January 1, 2010.

TransCanada	
Topic / Issue	BCTC Response
	Example 1: Redirect to Path B: May 1, 2009 – December 31, 2009 → Rollover rights only on Path B, effective January 1, 2010 Example 2: Redirect to Path B: May 1, 2009 – August 31, 2009 → Service reinstated on Path A, effective September 1, 2009 → Rollover rights only on Path A, effective January 1, 2010 Example 3: Redirect to Path B: May 1, 2009 – November 30, 2009 → Service reinstated on Path A, effective December 1, 2009 → Rollover rights only on Path A, effective January 1, 2010 → So, in this example, at the deadline for notice to exercise rollover rights, service is on Path B. However, the notice to exercise rollover rights, effective January 1, 2010, is made in respect of continuation of service on Path A, which is due to resume on December 1, 2009. BCTC will include discussion of this clarification at the second consultation, as necessary.
Additional Curtailment Information	BCTC agrees that industry would benefit from more and clearer examples of what types of information will be posted as the NAESB process moves forward.



17 June 2008

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Attention: Brenda Ambrosi

Dear Ms. Ambrosi:

RE: Proposed Amendments to British Columbia Transmission Corporation's ("BCTC") Open Access Transmission Tariff ("OATT");
Comments of TransCanada Energy Ltd. ("TransCanada")

In response to BCTC's June 3, 2008 clarifications on the comments it received on its proposed implementation of the U.S. Federal Energy Regulatory Commission ("FERC") Order No. 890,¹ please find TransCanada's comments on BCTC's clarifications. Specifically, TransCanada submits its proposal on mitigating the perceived risks associated with the implementation of conditional firm service, and addresses the revised definition of "affiliate".

TransCanada supports BCTC's efforts to eliminate opportunities for undue discrimination and address deficiencies in its OATT, improve certainty and efficiency in the market, and address seams issues between jurisdictions. In its June 3, 2008 FERC 890 Consultation Bulletin, BCTC states that it will seek input at the second consultation meeting on the issue regarding the impact of incremental sales of firm transmission on existing firm transmission service on the British Columbia to Alberta path. As TransCanada explained in its May 16, 2008 comments, increased pro rata curtailment of existing firm service as a result of such incremental sales over this constrained path during the past year is of particular concern, and we look forward to discussing this issue at the second consultation meeting, currently scheduled for July 14, 2008.

I. Conditional Firm Service

In its June 3, 2008 FERC 890 Consultation Bulletin, BCTC acknowledged customers' comments that its proposed conditional firm service lacks transparency and entails risk in the manner that curtailment options would be defined and imposed, and therefore may have potential adverse impacts on existing long-term firm services. Accordingly, BCTC requested that customers submit proposals on mitigating the perceived risks associated with the implementation

¹ See *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed Reg. 12266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007) ("Order No. 890"); *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007) ("Order No. 890-A").

of conditional firm service, and/or any further comments on implementation issues of conditional firm service.

TransCanada supports the offering of conditional firm service to meet FERC Order No. 890 requirements, but not at the expense of existing Long Term Firm Point-to-Point (“LTFPTP”) customers. Currently the Alberta system cannot sink or accept the existing 785 MW of LTFPTP service sold by BCTC (850 MW of Firm TTC less 65 MW of TRM), and in fact, has not been able to accept that flow for some time. Any time all existing LTFPTP customers attempt to schedule their full volume, pro rata curtailments occur.

BCTC has advised that conditional firm service will be the same as other firm services when the defined number of hours for curtailment is used up and when the defined system condition is not occurring or is not anticipated to occur. Under such circumstances, however, further pro rata curtailments would occur, thereby further devaluing an already devalued LTFPTP service. Such degradation of existing customers’ LTFPTP service rights is neither the intention of FERC’s conditional firm service nor FERC Order No. 890. Although BCTC proposes to offer conditional firm service only if system reliability will not be adversely impacted, and a System Impact Study must identify system constraints,² there is no assurance that constraints on neighbouring systems, such as the Alberta system, will be considered. Without such an assurance, conditional firm service will cause existing LTFPTP customers to suffer even deeper and more frequent curtailments.

Additionally, BCTC has provided no information on what would constitute a “system condition” or how the number of hours of curtailment would be determined and/or implemented. TransCanada suggests that a public and transparent process be created to determine the calculation of curtailment hours and provide insight into what constitutes a “system condition”.

Therefore, conditional firm service should only be offered when the following mitigating circumstances are met:

- the Alberta system can sink or accept all existing LTFPTP volumes, plus the proposed volumes of conditional firm service;
- no curtailments of LTFPTP are occurring;
- offering conditional firm service would not cause any LTFPTP curtailments to occur; and
- a public and transparent process is created to clarify the calculation and implementation of hours of curtailment and the definition of a system condition.

II. Definition of Affiliate

In order to implement the reforms associated with the distribution of operational penalties, FERC adopted the following definition of Affiliate in the *pro forma* OATT: “With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.”³ BCTC

² See BCTC Presentation, “Order No. 890 Implementation, Stakeholder Consultation” at p. 30-31 (April 30, 2008).

³See Order 890-A at P 999.

proposes to adopt this definition of Affiliate in section 1.1 of its OATT, as well as adopt the section on “Penalties for Failure to Meet Study Deadlines” in section 19.9 of FERC’s *pro forma* OATT.

BC Hydro’s May 16, 2008 comments request that BCTC reconsider its existing view that BC Hydro and Powerex are Affiliates under the OATT. BC Hydro alleges that the operational penalty mechanism will not be particularly helpful, being difficult to administer and possibly requiring significant effort and process to document and defend extenuating circumstances. BC Hydro expresses concern that if BCTC treats BC Hydro and Powerex as Affiliates for the purposes of section 19.9 of the OATT, BCTC will not have the appropriate incentive to use due diligence to meet study completion deadlines for its only Network Customer, BC Hydro, and for Powerex, its marketing affiliate. Instead, BCTC would have an incentive to focus its efforts on studies for non-affiliates, rather than on studies for all customers.

In support of its comments, BC Hydro states that in Order No. 890, FERC said that where a transmission owner has turned over operational control of its transmission facilities to an independent entity the transmission owner and its merchant affiliate are not to be considered affiliates.⁴ However, BC Hydro misinterprets FERC’s clarification, which states:

We clarify that, for purposes of the distribution of penalties, if such transmission owner is not required to be a transmission provider under a Commission-approved tariff, the merchant affiliate of such transmission owner would not be considered to be an “affiliate” of the RTO, ISO, or independent entity under the definition adopted in this Final Rule. The affiliation of a merchant to a transmission owner does not establish an affiliation between such merchant and the RTO, ISO, or independent entity transmission provider.⁵

In other words, Order No. 890 clarified that an affiliation of a merchant (i.e., Powerex) to a transmission owner (i.e., BC Hydro) does not necessarily establish an affiliation between such merchant (i.e., Powerex) and the independent entity transmission provider (i.e., BCTC). However, there may still be indirect or common control between the merchant and the independent entity transmission provider, which does not depend solely on the transmission owner-merchant relationship. In such a case the merchant and transmission provider would be affiliates under the revised definition.

BC Hydro’s interpretation would undermine the intent of the revised definition, namely, to prevent affiliate abuse by capturing entities under common control, whether directly or indirectly through intermediaries. In other words, the transmission provider is to use the same due diligence in meeting the 60-day study completion deadlines for System Impact Studies and Facilities Studies for non-affiliated Eligible Customers as it uses when completing studies for itself or its affiliates. Specifically, FERC stated: “By imposing late study penalties on RTOs and ISOs, the Commission has established financial incentives for those transmission providers to complete request studies in a timely manner or otherwise justify their inability to do so.”⁶ Accordingly, TransCanada agrees with FERC Order Nos. 890 and 890-A that the financial incentives under proposed sections 19.9(c) and (d) of the OATT are necessary to ensure the transmission provider treats all study requests in an equally fair and even-handed manner.

⁴ See BC Hydro’s May 16, 2008 comments (citing Order No. 890 at P 1683).

⁵ Order No. 890 at P 1683.

⁶ Order 890-A at P 484.

Conclusion

TransCanada looks forward to working with the BCTC and other customers at the second stakeholder consultation meeting, scheduled for July 14, 2008, to further discuss the specific topics addressed above. If you have any questions, please do not hesitate to contact the writer.

Sincerely,

TransCanada Energy Ltd.

Original signed by:

Darren Angerman
Director Power Trading, Marketing and Operations



[Home](#) > [Transmission Scheduling](#) > [Workshops & Presentations](#) > FERC Order No. 890 Consultation #2

FERC Order No. 890 Consultation #2

Date(s)

Monday July 14, 2008 8:30 a.m. - 4:30 p.m.

Community

Vancouver

Event details

BCTC invites you to attend its second consultation regarding FERC Order No. 890. This second consultation will discuss: 1) the potential impact of incremental sales of firm transmission on existing firm transmission service on the BC to Alberta path, 2) the simultaneous submission window, and 3) performance metrics and operational penalties. BCTC will also report on discussions held with BC Hydro with respect to Attachment K planning processes, and designation and undesignation of network resources.

BCTC will post the final agenda by June 24 based upon review of customers' comments that will be submitted by June 17.

Location:

Hyatt Regency
2nd Floor, Georgia A
655 Burrard Street
Vancouver, BC
Telephone: 604-683-1234

RSVP:

RSVP to [Brenda Ambrosi](#) by June 24, 2008.

Event materials

[\(Download 28.8KB\)](#) Agenda 890 2.pdf

[\(Download 105.3KB\)](#)FERC Order No 890 Consultation 2 Presentation.pdf



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ORDER NO. 890 IMPLEMENTATION

Stakeholder Consultation No. 2

July 14, 2008

Agenda

1. Meeting Goals
2. Firm Service to Alberta
3. Conditional Firm Service
4. Report and Discussion on Other Outstanding Items

Meeting Goals

1. Explore options for the development of a tariff section which formally establishes provisions on how BCTC will handle future sales of LTFPTP service on BC>AB path
2. Explore options for Conditional Firm Service
3. Discuss Other outstanding items on tariff changes

Firm Service to Alberta

- BCUC in its decision on BCTC's Application for temporary suspension, directed BCTC to
 - Include in its next rate Design review and/or FERC-890 compliance filing, whichever comes first, a Tariff section which formally establishes, consistent with general OATT principles, and the FERC 890 guidelines, provisions for how BCTC will handle future situations, similar in nature to that addressed in the Application
 - Submit a report, by August 8, 2008, containing the stakeholder submissions made to BCTC, and any BCTC commentary in response to those submissions, concerning the resolution of LTFPTP services to Alberta, and Customer Proposals on Conditional Firm Service.
 - Stakeholders are requested to submit stakeholder submissions on the resolution of LTFPTP service to Alberta and revised or additional proposals on Conditional Firm Service to brenda.ambrosi@bctc.com by July 24, 2008

Firm Service to Alberta– The Choices

- Option 1: Provide Long Term Firm Point-To-Point (LTFPTP) service based on BC System only
 - Status Quo: All firm service have same firm priority and service is cut by load ratio share if needed.
 - Something New: Work with AESO to develop near-term and longer-term mitigation measures
- Option 2: Stop selling any additional LTFPTP service on BC to Alberta Path and issue new LTFPTP service conditional on limits of neighboring systems
 - Requires defining the Alberta constraint over a period of at least 1 year.
- Option 3: Stop selling any additional LTFPTP service on BC to Alberta Path, with all incremental ATC, ***conditional on limits of neighboring systems,*** released as Short-Term Firm Service.
- Other Options?
- ***[NOTE: the text in italicized red font above was added on July 15th subsequent to the consultation session, in response to a customer request for clarification during the session]***

Some Questions to Consider

- Option1- Continue to Sell Up to ATC per Tariff
 - Is there interest in such sales and why?
 - What will be the implications and potential solutions?
 - Other Questions?
- Option 2- Only sell incremental LTFPTP service that is conditional on conditions in neighboring jurisdiction
 - Should this service be offered?
 - If so, can the conditions be defined?
 - How to determine the level of long term service available?
 - When should additional long term firm sales be offered?
 - How to implement?
 - Other Questions?
- Option 3- Only sell incremental short term service on this path
 - Economic justification
 - Other Questions?
- Other Options?

Conditional Firm Service

What is CFS

- It is a modified LTFPTP service that includes less-than-firm service in some defined periods when firm PTP service is not available.
- It is designed to be a bridge product.
- It is conditional upon system conditions within the transmission providers own system.
- It can be curtailed on the same priority as secondary network service for a ***defined numbers of hours*** of the year or during ***defined system conditions***.
- If firm service is curtailed, CFS on the same path will also be curtailed.

How does CFS compare with “Shaped Service”

- Both Shaped Service and CFS are different forms of Partial Service Under Section 19.7 of the Tariff
- Shaped Service provides firm service in all periods where it is available, and no service where it is not.
 - Shaped Service is based on forecast of committed use
- CFS provides firm service where it is available and conditional firm where it is not.
 - CFS is based on forecast occurrence of certain system conditions and frequency of occurrence

Customer Proposals

1. Business Practice to set out:

- a complete list of the specific types of system conditions that could form the basis of CFS (without revealing confidential information);
- the methodology and risk criteria BCTC will use to determine conditional curtailment hours that could form the basis of CFS;
- a requirement that any system impact study that identifies curtailment options be posted for comment before any CFS service is offered, and
- a requirement that any CFS service agreement be filed with BCUC for approval

2. Offer CFS only if

- AESO can accept all existing LTFPTP volumes and new CFS service
- No curtailments on LTFPTP are occurring
- Offering CFS would not cause curtailment on LTFPTP
- Public and transparent process on the determination of curtailment criteria for CFS

3. Offer CFS with only “System Conditions Option”

Customers Comments

- Impact on existing firm services on BC>AB path
- Clarify system conditions
- Don't like "Number of Hour Option"

Choices for Curtailment Conditions

- With system condition defined as:
 - Shaped Service
 - Firm service in periods where it is available and no service in periods where it is not available as determined by the current methodology
 - CFS
 - “System Conditions” determined in SIS
 - Combined Shaped + CFS
 - Firm service in periods where it is available as determined by the current methodology used for Shaped Service
 - CFS in period where no service is available with curtailment conditions based on the methodology of Shaped Service
 - Both the periods where firm service is unavailable and the conditions that cause no firm service will be defined in the System Impact Study.
 - Other Options?

Example

- Responding to a request for LTFPTP service for one year, BCTC determines that there is firm service available in the months March to November, based on forecasted committed use.
- Choice of curtailment condition based on:
 - Shaped Service
 - Firm service for the months between March to November
 - No service in the months of December, January and February
 - CFS
 - Firm service can be curtailed any time during the period if actual committed use exceeds the level defined by BCTC
 - Shaped + CFS
 - Firm service for the months between March to November
 - CFS in the months of December, January and February which will be curtailed if the actual committed use exceeds the level defined by BCTC

Report and Discussion on Other Outstanding Items

Context

1. BCTC posted its red-lined OATT and associated Business Practices for customer comment, following its consultation on its proposed implementation of FERC Order No. 890
2. BCTC received comments from BC Hydro, Northpoint and TransCanada
3. On the basis of the comments received, BCTC arranged, in part, to:
 1. Meet with BC Hydro directly on specific Network Customer issues that it raised in respect of:
 - the coordination of BCTC's proposed Planning Process with BC Hydro's Planning Process, and
 - the requirements for Designation and Undesignation of Network Resources.
 2. Respond in writing to other comments where clarifications were warranted and to invite further comment on such clarifications.
4. BCTC provided clarifications on specific customer comments, and arranged for a second consultation today to include:
 1. Report on the discussions with BC Hydro on the specific Network Customer issues, and
 2. Discussion of the outstanding issues raised in customer comments, where necessary.

Outstanding Discussion Items based on Customer Comments

FERC 890 Provision	Customer	Outstanding Discussion Item
Planning Process	BC Hydro TransCanada	BCTC to report on discussion
Designation and Undesignation of Network Resources	BC Hydro	BCTC to report on discussion
Performance Metrics and Operational Penalties	BC Hydro TransCanada	Definition of 'Affiliate'; Adoption of reform Definition of 'Affiliate'
Simultaneous Submission Window	BC Hydro	Applicability to Non-firm service

Meeting with BC Hydro on the Proposed Planning Process

BC Hydro Comments on the Proposed Planning Process

- How the proposed Attachment K process will be coordinated with BC Hydro's planning process and BCTC's existing planning process
- How the proposed Attachment K process fits with Parts II and III of the OATT

Coordination with BC Hydro's Planning Process

- The proposed planning process is a documentation of the current Capital Planning Process for the Growth Portfolio with a 2-year planning cycle
- There will be no change in the coordination with BC Hydro's planning processes
 - re-alignment of dates may be required because of the change in the length of planning cycle

Coordination with Part II & III of OATT

- BCTC will continue to respond to service requests under Part II & III of OATT following current practices
- These requests will inform the determination of the “need and requirements” of the planning process
- To the extent allowed by the timing and schedule of the service requests, BCTC will combine studies required under Part II and III of OATT with the planning studies in the proposed planning process

Meeting with BC Hydro on Designation of Network Resources

Designation of Network Resources - Attestation

890 Provision

- Statement required that, for existing and new Network Resources (OATT Sections 29.2(h) and 30.2):

“...(1) The Network Customer owns the resource, has committed to purchase the generation pursuant to an executed contract, or has committed to purchase generation where execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff; and (2) the Network Resources do not include any resources, or any portion thereof, that are committed for sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer’s Network Load on a non-interruptible basis; ...”

Customer Comment

- The requirements and form of the contemplated attestation are not clear in respect of:
 1. Designation of Split-Bid IPP as a Network Resource
 2. Forecast generation resources (not under contract)
 3. Entitlement Agreement Resources

Designation of Network Resources - Attestation

Discussion

- Attestation aligns with definition of Network Resource in Section 1.25 of the OATT
 - Attestations not required until service request confirmed
1. Designation of Split-Bid IPP as a Network Resource
 - Attest only to the portion of output in a split-bid EPA that is designated as Network Resource, as such could be called upon to meet the Network Customer's Network Load on a non-interruptible basis.
 2. Forecast generation resources
 - Attestations can be submitted at the time a resource designation is confirmed (Order 890-B), consistent with obligations of Section 30.7 of the OATT
 - Attestations required in respect of designated Network Resources, so no concern to attest to forecast resources that are not under contract and designated.
 - Capitalize "Network Resources" listed pursuant to Section 29.2(e) of the OATT, in preamble to attestation requirement in Section 29.2(h)
 3. Entitlement Agreement Resources
 - BCTC's Business Practices define BC Hydro's firm scheduling rights on the US > BC intertie under its Network Integration Transmission Service for the return of energy under the Canadian Entitlement Agreement.

Meeting with BC Hydro on Undesignation of Network Resources

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

890 Provision

Temporary and Indefinite Terminations

- A request to undesignate that is submitted concurrently with a request to re-designate at a specific point is considered a temporary termination - no forfeiture of rights.
- Transmission Provider must post change in ATC on OASIS.
- A requests to undesignate without any concurrent request to re-designate is considered a request for indefinite termination - no continuing rights.
- Transmission Provider must develop OASIS functionality and, working through NAESB, business practice standards describing the procedural requirements for submitting both temporary and indefinite terminations.

Other

- Network customers not permitted to make firm third-party sales from any designated network resource without:
 - undesignating that resource for the period of the third-party sale pursuant to pro forma OATT section 30.3 and
 - providing notice of such undesignation before the firm scheduling deadline

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

Customer Comment

- Given the complexity of the hydro-based system, and that operational decisions are often made in real-time, a lengthy notification period and onerous process could reduce the ability to optimise the system in real-time, which would result in losses to BC Hydro and its customers, and could possibly impact reliability.

Potential Solution

- FERC approved a joint application by Pacific Northwest utilities in response to this issue, in particular:
 - For purposes of temporary undesignations to support firm third-party sales, all or part of generation owned, purchased, or leased by the Network Customer associated with an OASIS-registered POR, behind which there are no transmission constraints that could affect offerings of transmission service to other customers, should be treated as a single generating unit.
 - ATC would not be affected by the selection of any particular generating unit behind the POR that the Network Customer might choose to support the third-party sale.
 - Reduces an unnecessary accounting and operational burden related with unit by unit undesignations when no ATC impact.

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

Proposed Plan for Moving Forward

- Potential solution has merit.
- However, with ongoing development of ATC methodologies required under Order No. 890, current uncertainty about:
 1. what constitutes a transmission constraint in respect of ATC calculations;
 2. the associated determination of Network Resource groupings; and
 3. the associated business practice under which undesignations would occur when there is a transmission constraint.
- BCTC therefore proposes to finalize its proposed approach to deal with temporary undesignations, including the necessary revisions to its OATT and business practices, at such time that NERC approves the ATC methodologies.
 - ➔ BCTC will post for customer comment, will consult with customers if necessary, and will file an application to the BCUC for the necessary tariff amendments.

Other Comments and Clarifications

Performance Metrics & Penalties

890 Provision

1. Quarterly posting of performance metrics – Long-Term Transmission Requests Only
2. Notification and additional metrics filed with Commission and penalties for routine poor performance
3. No revenue requirement recovery of penalties allowed - allocation to all non-affiliate customers.

Customer Comments

- BC Hydro requests that BCTC reconsider its existing view that BC Hydro and Powerex are Affiliates for the purpose of Section 19.9 of the OATT.
- TransCanada maintains BCH/Powerex are affiliates of BCTC under the new definition in the OATT, for reasons set out in page 3 of their comments, dated June 17, 2008
- BC Hydro also comments that the operational penalty mechanism will not be particularly helpful, being difficult to administer and possibly requiring significant effort and process to document and defend extenuating circumstances.

Simultaneous Submission Window

890 Provision

Window within which all transmission service requests will be deemed to have been submitted simultaneously

- Required, as applicable, for transmission providers that have adopted a “no earlier than” time for the submission of firm PTP service
- Discretion to determine which transmission services subject to window
- A change to the current first-come, first-served policy to ensure that service is not awarded in an arbitrary fashion, and that less sophisticated customers with fewer financial resources have equal access.
- BCTC proposes to use a 5 minute window for firm and non-firm service, beginning at start of service request period, pre-schedule only, excluding LTF PTP

Customer Comment

Applicability to Non-Firm Service

- It should only apply to short-term firm services, and not also to short-term non-firm services, as proposed by BCTC.

Simultaneous Submission Window

Discussion

Applicability to Non-Firm Service

- FERC notes in Order 890-A that the pro forma OATT contains a “no earlier than” time that applies to requests for non-firm service, but it did not intend that this trigger the requirement to establish an SSW. The requirement applies to TPs that adopted a no earlier time for the submission of firm PTP or network service
 - Clarification of the trigger given that otherwise the SSW would be triggered in all instances given the language of the pro forma OATT in respect of non-firm service
 - BCTC proposal to apply the SSW to non-firm service intended as a consistent approach to meet the principles that embody FERC’s enhancement of open and non-discriminatory access through the establishment of the SSW
- Are there other customer views on applying the SSW only to Short-term Firm service?

Questions ?

Comments?

Wrap-Up & Next Steps

- Stakeholder submissions on
 1. tariff provisions with respect to future sales of LTFPTP service to Alberta and
 2. revised or additional proposals on Conditional Firm Service, by July 24, 2008
- Additional comments on other items discussed today, by August 1, 2008.
- Send to: Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
Vancouver, BC V7X 1V5
Phone: (604) 699-7391 / Fax: (604) 699-7539
brenda.ambrosi@bctc.com

Appendix E

Tables Regarding Conditional Firm Service

APPENDIX E: TABLES REGARDING CONDITIONAL FIRM SERVICE (CFS)

Table E-1. Firm Monthly ATC posted on 20 August 2008

The Firm Monthly ATC values in the following table are presented as an example of part of what BCTC normally posts on OASIS.

Month	BC to US	US to BC	BC to AB	AB to BC	AB to US (Min of AB-BC & BC-US)	US to AB (Min of US-BC & BC-AB)
Sep 2008	586	83	0	0	0	0
Oct 2008	1050	0	0	136	136	0
Nov 2008	184	0	0	136	136	0
Dec 2008	53	0	0	0	0	0
Jan 2009	53	0	0	0	0	0
Feb 2009	429	113	0	115	115	0
Mar 2009	827	113	0	136	136	0
Apr 2009	1280	113	0	136	136	0
May 2009	1280	113	0	136	136	0
Jun 2009	1280	113	0	136	136	0
Jul 2009	1280	113	0	136	136	0
Aug 2009	1212	8	0	136	136	0

Table E-2. Comparison of BCTC's Shaped Service and Proposed CFS

Service Characteristics	Shaped Service	BCTC's Proposed CFS
Service Period	In yearly increments.	1 year or longer.
Minimum Service Level	Must contain at least 12 months of non-zero service.	None.
Quantity	Maximum amount available in varying monthly quantities over contract term.	Fixed quantity over contract term.
Curtailment Conditions	Service is firm in the periods where service is determined to be available. No service in the periods where service is determined to be not available.	Service is firm in unconditional period. Service can be curtailed at the priority of secondary network service in conditional periods.
Biennial Reassessment	No provision for reassessment.	Re-assess every 2 years. Curtailment conditions may change after reassessment.
Termination	Service may not be terminated within the contract period.	Service may be terminated if curtailment conditions become more stringent after reassessment.
Rollover Right	Yes. Shaped service customer must match terms and quantity of competing request.	Yes. CFS customer must match terms of competing request.
Award of Short-Term Capacity	If ATC becomes available during the term of the Service Agreement, the Shaped Service customer will not be able or required to amend its contract during the contract term.	If ATC becomes available during the term of the Service Agreement, the ATC will be awarded to CFS customers first.
Pricing	Charge at LTF-PTP rate for the shape of service.	Charge at LTF-PTP rate.
Out of Area Network Resource	No.	Yes.
Redirect and Re-sales	No.	Yes.

Appendix F

2007 Short-Term Pricing Customer Consultation Record



[Home](#) > [Transmission Scheduling](#) > [Workshops & Presentations](#) > Short-Term Rates Consultation

Short-Term Rates Consultation

Date(s)

Monday March 5, 2007 8:30 a.m. - 12:00 p.m.

Community

Vancouver

Event details

Objectives:

Consult with customers and stakeholders on BCTC's proposed changes to the short term rate design as described in the BCTC OATT Review of Rate Design Alternatives Report filed with the British Columbia Utilities Commission on December 20, 2006.

Agenda:

8:30 am – 9:00 am Continental Breakfast

9:00 am – 12:00 pm Consultation Session

Location:

Hyatt Regency Hotel
Georgia A, 2nd Floor
655 Burrard Street
Vancouver, BC
Tel: 604-683-1234

RSVP:

RSVP by February 26, 2007, to Brenda Ambrosi via email at brenda.ambrosi@bctc.com.

Additional Event Material:

- [Presentation](#) (PPT, 984KB)
- [Request for Comment](#) (DOC, 126KB)
- [Questionnaire](#) (DOC, 50KB)
- [Responses to Request for Comment](#) (PDF, 365KB)

Event materials

([Download 508.1KB](#))Rate Design Alternatives Report

([Download 189.5KB](#))Agenda



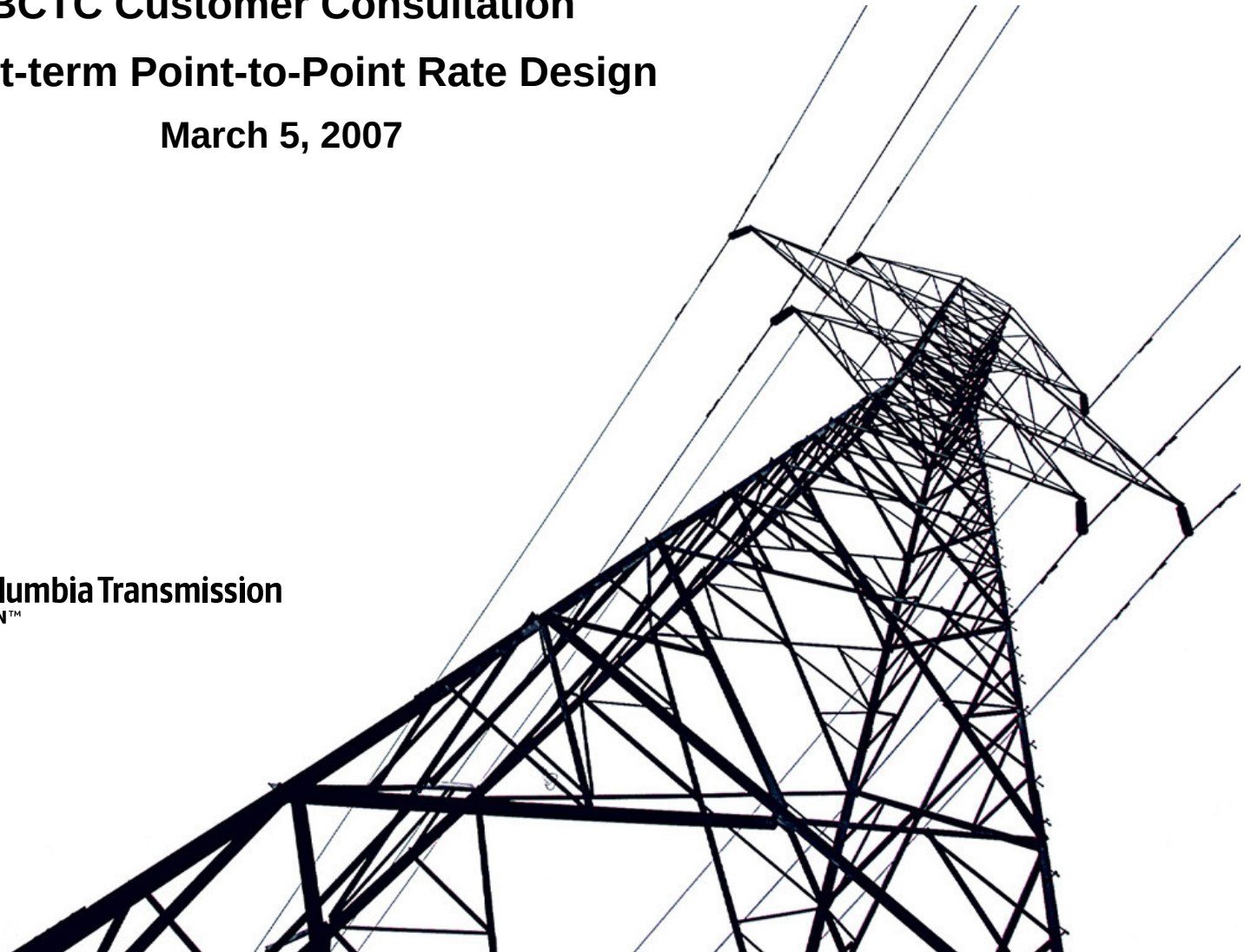
([Download 107KB](#)) Invitation

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BCTC Customer Consultation
Short-term Point-to-Point Rate Design
March 5, 2007



British Columbia Transmission
CORPORATION™



Welcome



Introductions

Emerging Context

- FERC Order No. 890: Preventing Undue Discrimination and Preference in Transmission Service
 - Amendments to the regulations and the pro forma open access transmission tariff adopted in Order Nos. 888 and 889.
 - Issued February 16, 2007

- BCTC Plan
 - BCTC is evaluating and developing its approach to Order No. 890.
 - BCTC expects that it will consult with its customers on the implications of Order No. 890.
 - BCTC's ST Rate design consultation plan is not directly affected by Order No. 890.

Agenda and Outline



1. Welcome and Introductions
2. Objectives
3. Review
 - Context
 - ST Rate Design Elements of BCTC Report: *Review of Rate Design Alternatives*
4. Discussion
 - Replacement of the \$55 Minimum Fee;
 - Discounting transmission reservations beyond one day; and
 - Directional pricing of discounted short-term service.
5. Next Steps

Objectives



1. Review ST Rate Design elements of BCTC report: *Review of Rate Design Alternatives*
2. Seek customer input on:
 - Whether to replace the \$55 Minimum Fee per transaction with a minimum \$/MWh charge (price floor);
 - Whether to discontinue discounting transmission reservations beyond one day; and
 - Whether directional pricing of discounted short-term service is appropriate.
3. Discuss other alternatives, as necessary
4. Determine the need for additional customer consultation



ST Rate Design Elements

- Updated discounting formula
 - Replaced California-Oregon border (COB) price index with more liquid Mid-C price index,
 - Replaced the Alberta gas-based electricity price with actual values from Alberta Power Pool.

- Eliminated \$1 price floor for non-firm service and instituted a \$55 minimum scheduling fee

- Allowed discounted ST PTP rate to go to zero in the opposite direction of market opportunity

Context – Commission Directives



BCTC directed to file a Rate Design Report that includes:

- Evaluation of the directional aspect of short-term service price discounting
- Evaluation of \$55 Minimum Scheduling Fee

BCTC Compliance Filing - *Review of Rate Design Alternatives*, includes:

- Analysis of three directional aspects of BCTC's current ST-PTP rate formula:
 - Zero-price reservations and schedules in the opposite direction of market prices
 - Discounting of multiple-day transactions
 - “Blocking” effect of various rate formulae, including the impact of a non-directional formula
- Analysis of \$55 Minimum Scheduling Fee

Context - Current ST Rate Design



ST-PTP Service

- Available firm and non-firm for reservation periods up to one year.
- Undiscounted Service
 - ST PTP transmission service to load serving points within BC
- Discounted Service
 - Export and wheel-through transmission services
 - Hourly Firm and Non-firm Service
 - Daily Firm and Non-Firm Service
 - Weekly Firm and Non-Firm

Context - Current ST Rate Design



ST Pricing Formula

- Firm hourly rate formula approximates 1/4 of the value of the gains from trade
 - Difference between posted market prices in Alberta and at Mid-C
 - Adjusted for exchange rate and transmission system losses.

Example: Discounted ST Firm Hourly Rate for Transactions to US:

$$[(\text{Mid-C Price} * \text{ex.r}) - (\text{AESO Price} * \text{Loss Factor for AB} * \text{Loss Factor for BPA})] / 4$$

- Minimum ST firm hourly rate = 0
- Maximum ST firm hourly rate = LT PTP rate (“ST Firm Cap Rate”)
- Non-firm hourly rate = Min. (Firm Hourly rate formula - \$1/MWh, Firm Cap Rate)

Context - Current ST Rate Design



Discounted ST-PTP rates based on the hourly rate formula and rate caps

Discounted Rate	Formula
Hourly Firm Rate	Minimum (Firm Hourly Formula, Firm Cap Rate)
Hourly Non-Firm Rate	Minimum (Firm Hourly Formula - \$1/MWh, Firm Cap Rate)
Daily Firm Rate	Sum of 24 Hourly Firm Formula / 24
Daily Non-Firm Rate	(Sum of 24 Hourly Firm Formula / 24) - \$1/MWh
1 Week Firm Rate	Daily Firm Rate + .5 (Firm Cap Rate – Daily Firm Rate)
1 Week Non-Firm Rate	(Daily Firm Rate + .5 (Firm Cap Rate – Daily Firm Rate)) - \$1/MWh
X Week Firm Rate	$(1 \times \text{Weekly Firm Rate}) + ((X - 1) \times \text{Firm Cap Rate}) / X$
X Week Non Firm Rate	$((1 \times \text{Weekly Firm Rate}) + ((X - 1) \times \text{Firm Cap Rate})) / X - 1 \text{ \$ / MWh}$
<i>Where X is the number of weeks in the reservation</i>	

Context - Sales and Revenue



Analysis

Over a comparable period April-September '05 – '06:

- PTP transmission volumes increased by 30%
- PTP transmission revenues declined by 17%.
- Average revenue for all ST-PTP service declined by 50%, from ~ \$4 to \$2/MWh.

Conclusion

- Roughly 1/3 of reservations were zero-price
- Increase in reservations
- Change in reservation patterns

Context - Sales and Revenue



PTP Reservations MWh (000's)

	Before OATT April – September, 2005			After OATT April – September, 2006			Difference	
	BCH	Other	Total	BCH	Other	Total	Total	%
LT Firm PTP	1,892	414	2,306	1,824	648	2,471	165	7 %
ST Firm PTP	1,755	92	1,847	5,659	17	5,676	3,829	207 %
ST Non-Firm PTP	3,430	210	3,640	1,832	158	1,990	(1,650)	- 45 %
Total	7,077	716	7,793	9,315	823	10,137	2,344	30 %

Context - Sales and Revenue



PTP Transmission Revenues (\$ million)

	Before OATT April – September, 2005			After OATT April – September, 2006			Difference	
	BCH	Other	Total	BCH	Other	Total	Total	%
LT Firm PTP	\$ 11.1	\$ 2.4	\$ 13.5	\$ 10.1	\$ 3.6	\$ 13.7	\$0.2	0.9 %
ST Firm PTP	\$ 10.3	\$ 0.5	\$ 10.8	\$ 11.5	\$ 0.1	\$ 11.6	\$0.8	7.5 %
ST Non-Firm PTP	\$ 10.5	\$ 0.6	\$ 11.1	\$ 3.5	\$ 0.4	\$ 3.9	(\$7.2)	- 64.5 %
Total	\$ 31.9	\$ 3.5	\$ 35.4	\$ 25.1	\$ 4.1	\$ 29.2	(\$6.2)	- 17.5 %

ST Rate Design – Consultation Questions



BCTC seeks customer input on the following questions:

1. Should the \$55 Minimum Fee per transaction be replaced by a Minimum \$/MWh charge (price floor)?
2. Should short-term discounting be available for transmission reservations beyond one day?
3. Should the pricing of discounted short-term service be directional?

Question 1 – Considerations



Should the \$55 Minimum Fee per transaction be replaced by a Minimum \$/MWh charge (price floor)?

Regulatory Approvals

- A price floor was previously approved by the Commission as an appropriate minimum price for transmission service (1998 WTS Decision)
- The \$55 minimum fee was introduced when the price floor was removed (2005 OATT Decision).

Minimum Scheduling Fee

- Applicable to all ST transactions on export and flow-through transmission paths
- Intended to ensure that all transactions make some contribution to costs
- Issue
 - \$55 Minimum Fee disproportionately increases the price of transmission on small reservations
 - Commission directed BCTC to re-assess the impact of the Minimum Scheduling Fee
- Analysis
 - Incremental BCTC revenue (April – September, 2006): roughly \$100,000

Question 1 – Discussion



Should the \$55 Minimum Fee per transaction be replaced by a Minimum \$/MWh charge (price floor)?

Discussion Points

- BCTC supports concept of ensuring that all customers make some minimum contribution to costs
- BCTC seeks to alleviate the disproportionate impact of the minimum fee on very small transmission users.
- Replacing minimum fee with a minimum \$/MWh charge would have no detrimental financial impact on BCTC
- Therefore, BCTC would propose to reinstate a price floor of \$1/MWh, based on the price floor previously approved by the Commission
 - The price floor under WTS was \$1/MWh (non-firm) and \$2/MWh (firm), based on a firm “premium” of \$1/MWh - made necessary by a formula that computed a non-firm price
 - The updated ST discounting formula under OATT calculates a firm price and determines the non-firm price by subtracting a \$1/MWh firm “premium”
 - A separate price floor for firm and non-firm service as provided under WTS is unnecessary because the updated formula under OATT calculates a firm price.
 - Predicted increase in blocked transactions from 11% to 14.7%

Comments?

Question 2 – Considerations



Should short-term discounting be available for transmission reservations beyond one day?

Issue

- Current rate formula relies on data that is two days old
- Stale price data: market price too far removed from time trades take place
- Direction of trade often reversed from that predicted by formula in volatile Alberta market
- Overly simplified approximation of trading opportunity

Analysis: Accuracy of the Discounting Formula

- HLH price difference on day t has, on average, a 61% chance being a directionally correct forecast of the price difference on day $(t+2)$
- LLH price difference on day t has, on average, a 73% chance as a directionally correct forecast of the price difference on day $(t+2)$
- Performance degrades in subsequent days

Question 2 – Discussion



Should short-term discounting be available for transmission reservations beyond one day?

Discussion Points

- Current rate formula a poor predictor of directional value by the time data are two days old
- Highly volatile Alberta Power Pool price contributes to formula inaccuracy
- Erroneous zero-price: 40% of HLH, 30% of LLH
 - Pricing error increases for reservations of longer than one day.
 - Market volatility and trading practices suggest relatively short trading horizons underpin most actual use of the transmission system
- Discounting reservations longer than one day does little to encourage throughput.

Comments?

Question 3 – Considerations



Should the pricing of discounted short-term service be directional?

Issue

- Inaccuracy in capturing the direction and size of transmission value
- Trading opportunities more complex than assumed under ST PTP rate formula

Analysis: Reservations & utilization by price point and path

- Roughly 1/3 of reservations were zero-price
- Energy schedules in four directions (April – September, 2006):

1.northbound (from the US into BC or from BC into Alberta):	81% of hours
2.southbound (from Alberta into BC or from BC into the US):	99% of hours
3.forward (toward higher market prices):	93% of hours
4.reverse (toward lower market prices):	87% of hours
- Energy scheduled in both directions ~ 81% of hours.

Question 3 - Discussion



Should the pricing of discounted short-term service be directional?

Comments?

Next Steps



- BCTC will post its presentation on its website following this consultation session
- BCTC will notify you of the next steps after it:
 1. Identifies the need for further customer consultation; and
 2. Finalizes recommended changes to the ST Rate Design
- Additional Questions?

Please contact:

Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
Vancouver, BC V7X 1V5
Phone: (604) 699-7391 / Fax: (604) 699-7539
brenda.ambrosi@bctc.com

Short-term Rate Design Proposal – Request for Comment

BCTC writes to seek comment from you on a proposal for changes to its short-term rate design prior to filing an Application with the British Columbia Utilities Commission (Commission).

BCTC intends to file with the Commission an Application to eliminate the \$55 Minimum Scheduling Fee and to institute a minimum charge (price floor) of \$1/MWh. This proposal stems from the short-term rate design analysis in BCTC's Report, [Review of Rate Design Alternatives](#), and from its customer [consultation session](#) on March 5, 2007. BCTC concludes that its proposal to replace the \$55 Minimum Scheduling Fee with a minimum charge of \$1/MWh:

- Maintains consistency with prior regulatory approvals;
- Mitigates the disproportionate impact of the Minimum Scheduling Fee on small transmission users;
- Ensures a fair contribution to costs for the use of the transmission system; and
- Offers some reflection of the value inherent in reserving discounted multi-day transmission.

BCTC is of the view that its proposal to institute a price floor of \$1/MWh will address to some extent the issues with directional pricing and multi-day reservations that were highlighted in its short-term rate design analysis.

BCTC acknowledges certain customer views that changes to its short-term rate design should be considered at a later date as part of a comprehensive review of all of BCTC's rate design options in concert with future planned upgrades to BCTC's Transmission Scheduling System (TSS). Indeed, BCTC's compliance filing to the Commission, *Review of Rate Design Alternatives*, sets out a future consultation plan on the design of long-term point-to-point rates. Also, the Federal Energy Regulatory Commission (FERC) recently released Order No. 890, *Preventing Undue Discrimination and Preference in Transmission Service*, which has implications that require customer consultation. However, BCTC is of the view that its current proposal is a stand-alone solution that represents an efficient and cost-effective means to improve its short-term rate design. BCTC has attached as Appendix A to this letter the changes to its Rate Schedules and Business Practices that would be required in support of its proposal.

Prior to filing an Application with the Commission, BCTC would like to provide you the opportunity to comment on its proposal. Specifically, BCTC would be interested in your response to the enclosed Questionnaire.

BCTC values your input and appreciates your consideration of this matter. Your comments will assist BCTC in finalizing its short-term rate design proposal, and may be appended to an Application if filed. BCTC requests that you provide your responses to Brenda Ambrosi (Brenda.Ambrosi@bctc.com) by April 5, 2007. All comments will be posted to our website for public review.

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: Tom Rudd - Candela Energy Corporation

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response: No.

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response: No. Larger users may argue that they will incur higher costs relative to the current rate design, but the current design favoured larger users in the first place.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response: It may increase our ability to reserve transmission, as large reservations will incur as large a proportional cost as smaller reservations. Currently, it's possible that larger users may choose to reserve larger blocks of transmission simply because it doesn't cost them any more than smaller blocks under the current regime. If certain users simply reserve what they need, rather than padding their reservations, additional ATC may be available.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response: Candela Energy Corporation is supportive of the proposal, as it reduces the burden smaller users of the transmission system bear under the current rate design.

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response: Although \$1 seems quite arbitrary, it should function adequately as a price floor.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: ENMAX Corporation

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response:

No, the proposal appears to improve efficiency by more closely reflecting the value inherent in reserving discounted multi-day transmission.

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response:

No, the proposal appears to reduce discrimination by mitigating the disproportionate impact of the minimum scheduling fee on small transmission users and the incentive to overbook discounted transmission as a result of the fixed cost approach.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response:

ENMAX is of the view that the proposal will improve our ability to reserve transmission compared to the status quo. ENMAX understands that the use of the Minimum Scheduling Fee approach has led to an increase in the volume of discounted multi-day transmission reservations, but a decrease in reservation utilization. Unscheduled transmission reservations are then released at T-50 for the next hour. This means that the reservation timeline for other users is shortened to the real-time window as a result of the low cost (\$55) to reserve multi-day transmission blocks. Imposing a \$1/MWh minimum charge should reduce the incident of unutilized transmission reservations.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response:

ENMAX is supportive of this proposal. It mitigates the impact of the Minimum Scheduling Fee on small transmission users and reduces the incentive to over-reserve discounted transmission.

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response:

ENMAX has no alternative proposal at this time.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:

ENMAX would support maintaining the status quo until such time that the BCUC approves the proposed change.

----- Original Message -----

From: Lail, Kelly <KLail@epcor.ca>

To: Ambrosi, Brenda

Cc: wendell_klassen@transcanada.com <wendell_klassen@transcanada.com>;

CJoy@enmax.com <CJoy@enmax.com>; cheryl_terry@transcanada.com
<cheryl_terry@transcanada.com>

Sent: Thu Apr 05 13:19:47 2007

Subject: RE: Request for Comments - ST Rate Design

We would support BCTC proceeding with an application to replace the Fixed Charge of \$55 per transaction with a variable minimum charge. It should be structured so that it resolves the issue of blocking small reservations, have no or minimal adverse impact on the remaining reservations and be revenue neutral.

The analysis and information presented at the consultation is insufficient to comment on each of the specific questions in the questionnaire. We have the following comments:

* The impact analysis covered the period from April to September. As commented at the session this may not be representative of the impact over a water year or a comparable 12 month period.

* As suggested at the session an alternative rate structure with a variable charge of \$1/MWh up to the current minimum of \$55 / reservation would remove the barrier to small reservations with have no adverse impact on larger transactions. It would also be revenue neutral. It is worth examining.

* Proposed minimum of \$1/MWh may prevent some opposite to the normal flow transactions from occurring and decrease the throughput and would make the system less efficient.

It would be better to make this change as part of the comprehensive review of all BCTC rates and implementation of 890 but if the current fixed charge is in fact blocking a material number of small reservations then an alternative structure should be examined or at the very least addressed and any application supported with full analysis.

Regards,

Kelly

Kelly S. Lail

Director, Regulatory and Business Initiatives EPCOR

Telephone: (604) 232.2241

Facsimile: (604) 270.3851

Email: klail@epcor.ca

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: Dennis Slade – NorthPoint Energy Solutions

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response:
No

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response:
Definitely not.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response:
None whatsoever.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response:
Very supportive

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response:
I agree that a \$1 floor price is reflective of the value and it prevents transmission hoarding for no cost.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:
In different.

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: Gifford Jung, Powerex

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response:

From a rate design perspective, Powerex does not view the setting of the price floor of \$1/MWh for both Firm and Non-Firm PTP as fair or efficient. The relative scheduling priority of Firm versus Non-Firm transmission would in Powerex's opinion support a lower price floor for Non-Firm relative to Firm from a fairness perspective.

Also, in Powerex's opinion imposing a minimum charge that incrementally increases the number of blocked transactions does not seem efficient.

Finally from a fairness and effectiveness perspective, Powerex is concerned that the proposed change shifts costs between customers, and potentially, the proposed minimum floor charge over-collects relative to the existing minimum scheduling fee.

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response:

The shift in costs from small customers to large customers is of concern to Powerex.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response:

BCTC's proposal will potentially increase transmission costs and reduce the volume of PTP transactions conducted on the BCTC system compared to the status quo. Based on the information provided by BCTC, average costs for transmission will increase by about 33% and number of hours blocked will increase by about 33% relative to the current formula (ref. Table 6.14).

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response:

Powerex supports the principle of discounting and supports BCTC in this regard.

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response:

Powerex supports BCTC's desire to address the issues with directional pricing and the ability to reserve multi-day

transmission but doesn't agree that these issues are linked. Powerex does not agree that an arbitrary price floor for Firm PTP transmission necessarily reflects the inherent value in directional pricing and the ability to reserve multi-day transmission as they are not linked. However if BCTC proceeds, Powerex believes setting a price floor of \$0.50/MWh for Firm PTP and a price floor of \$0.25/MWh or lower for Non-Firm PTP would be an alternative that could reduce the number of blocked transactions and reduce the shift in costs between customers.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:

Powerex would prefer to maintain the status quo.

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: TransCanada Energy

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response: TransCanada views BCTC's proposal as consistent with existing rate design principles and prior regulatory approvals.

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response: BCTC's proposal does not cause undue discrimination. In fact, TransCanada would suggest that it creates a level playing field among all participants regardless of size and frequency of usage. In addition, this proposal also reduces the potential of individual parties reserving transmission at no financial obligation which may cause underutilization of the transmission system and blocking.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response: BCTC's proposal will have a positive impact with respect to the ability of reserving transmission. By charging a minimum \$1/MWh, additional energy will be available for TransCanada and other third party users to reserve.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response: TransCanada is in support of BCTC's proposal. The suggested short-term rate design change will distribute the financial obligations of the user on a more unified basis as opposed to a flat one time cost. This also promotes fair contribution costs to all players while achieving BCTC's goal of cost recovery.

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response: TransCanada agrees that the floor price suggested is a fair reflection of directional pricing. In fact, the ability to reserve multi-day transmission enhances and stabilizes longer term planning with more financial stability and certainty.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response: TransCanada supports the status quo as an interim solution however strongly encourages BCTC to implement the new proposal as soon as possible. We do not promote waiting for any FERC decisions on this topic.

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: Brian Wallace (on behalf of the Joint Industry Electricity Steering Committee)

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response:

The JIESC is of the view that ST PTP rates should recover transaction costs and make some contribution to the fixed costs of the transmission system. While it appears the proposed formula will increase recoveries beyond those currently experienced, it is not clear that ST PTP revenues will cover costs and make a contribution to fixed costs under the proposed changes.

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response:

There is not sufficient information available to determine if there is undue discrimination or undue preference. The JIESC is concerned that under the current OATT formula, while throughput and transactions have increased, total revenue and per unit revenue decreased from levels experienced under WTS, with no evidence of offsetting benefits such as lower market prices for BC Hydro customers. Promoting throughput must be balanced with revenues and costs and the current OATT approach appears to have incented higher throughput while reducing revenue.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response:

It will not have any impact at this time as the JIESC members are not currently active users of the ST PTP rate.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response:

The JIESC questions the desirability of putting this proposal forward on an individual basis rather than as part of a package of Rate Design changes. Proceeding in this manner makes it difficult for stakeholders who may only be indirectly impacted to participate, even though they may be affected to some degree. The end result of splitting off small issues for individual determination is that these smaller issues may not get the attention they otherwise would, and may deserve, in a more comprehensive context.

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response:

It is clear from the BCTC material that a substantial number of transaction proceed at \$0 under current OATT rates. The proposal is an improvement, however, the relationship between cost, rates, volume and revenue has not been addressed.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:

The JIESC notes that users want stability. It would appear to run counter to that desire to implement interim or temporary changes in rate structures, absent clear reasons.

Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Proposal 2 – Eliminate “same price” for different length LT/ST and daily/weekly/monthly reservations.

Proposal 3 – Institute a “profit sharing” tariff for trades that make “windfall” profits from arbitrage

Name: **Cascade Pacific Power Corporation**

1. Do you regard BCTC’s proposal as inconsistent with any particular rate design principles? If so, please explain.

Response: Proposals 2 and 3 are more effective.

2. Do you regard BCTC’s proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response: Since BCH was allowed to “negotiate” pricing, so too, should BCTC, so that small customers are not disadvantaged.

3. What impact will BCTC’s proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response: Why are you only addressing the \$55 fee here? Why not ask the same question for all the other rate design changes?

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC’s proposal? Please explain.

Response: Supportive – but it is a little late for Cascade.

5. BCTC’s proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response: Why do you not propose a tariff where transactions (arbitrage) with large price differences between BC, Mid-C, and Alberta would “share” some of the “price difference” with BCTC – profit sharing? If a

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response: What alternative (other alternatives) are there?

SCHEDULE 01

LONG AND SHORT-TERM FIRM POINT-TO-POINT TRANSMISSION SERVICE

Availability: For transmission of electricity on a firm basis from one or more Point(s) of Receipt (POR) to one or more Point(s) of Delivery (POD).

Rate for Long-Term Firm Service: The Reserved Capacity Charge for the Long-Term Firm Service Rate will be up to a maximum price as set out below except where the POD is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00).

The Reserved Capacity Charge is billed on the sum of the maximum non-coincident POR or POD Requirements.

The Maximum \$/kW of Reserved Capacity Billing Demand per month is \$3.829

Why is there no change from daily or weekly or monthly to annual reserved capacity?

Reserved Capacity Billing Demand:

The Reserved Capacity Billing Demand is determined for each POR(s), POD(s) pair. The Reserved Capacity for each pair of POR(s) and POD(s) will be the maximum non-coincident sum of the designated POR(s) and POD(s) included in the pair.

Penalty Charge:

A penalty charge will be applied at the rate of 125 percent of the Reserved Capacity Charge for all unauthorized usage, including all demand in excess of the Reserved Capacity Billing Demand.

SCHEDULE 01

LONG AND SHORT-TERM FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for Short-
Term Firm
Service:

The posted prices will be less than or equal to a maximum price (\$/MWh) as set out below, except where the POD is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00). In no case shall this rate produce a price per transaction below the Minimum Price.

Minimum Price: ~~\$0/kW~~ \$1/MW

Maximum Price: The Transmission Customer shall pay each month for Reserved Capacity Billing Demand at rates not to exceed the applicable charges set forth below:

- 1) Yearly delivery: one-twelfth of the demand charge of \$45.948/kW of Reserved Capacity per year. **Is this correct? Why is it 1/12?**
- 2) Monthly delivery: \$3.829/kW of Reserved Capacity per month.
- 3) Weekly delivery: \$0.884/kW of Reserved Capacity per week.
- 4) Daily delivery: \$0.126/kW of Reserved Capacity per day.
- 5) Hourly delivery: \$0.0053/kW of Reserved Capacity per hour.
There appears to be no (little) savings by reserving further ahead. This does not promote "early booking" of the system, or "better use" of it. What it does accomplish, is "status quo", where the larger, well financed or public/crown corporations with deep pockets can "reserve" capacity a year ahead, and foreclose options for smaller traders to participate, since this "already reserved" capacity is not released until the last minute.

SCHEDULE 01

LONG AND SHORT-TERM FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for Short-Term Firm Service:
(Cont'd)

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.

The rate for Short-Term Firm Service is the **price per kW of Reserved Capacity per hour that will be posted each working day on OASIS.**
How will this be determined?

Reserved Capacity for Short-Term Firm Services:

The Reserved Capacity shall be the maximum of the sum of non-coincident POD(s) Capacity Reservations or sum of non-coincident POR(s) Capacity Reservations.

Penalty Charge:

A penalty charge will be applied at a rate of 125 percent of the Reserved Capacity Charge for all unauthorized usage.

Special Conditions:

Discounts:

The following conditions apply to discounts for transmission service as follows:

- 1) any offer of a discount made by BCTC must be announced to all Eligible Customers **solely by posting on the OASIS, This prevents prospective users of BCTC from knowing the discounts, unless they have registered and paid for OASIS service. It does not promote an open and inclusive attitude for smaller / newer companies. Discounts should be publicly accessible.**
- 2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posting on the OASIS,

SCHEDULE 01

LONG AND SHORT-TERM FIRM POINT-TO-POINT TRANSMISSION SERVICE

(Cont'd)

Special
Conditions:
(Contd)

- 3) once a discount is negotiated, details must be immediately posted on the OASIS, ~~and~~
- 4) for any discount agreed upon for service on a path, from POR(s) POD(s), BCTC must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same POD(s) on the Transmission System, ~~and~~
- ~~5) for discounted Short Term Service the minimum charge per transaction excluding taxes is \$55.~~

Taxes:

The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note:

The terms and conditions under which Transmission Service is supplied are contained in British Columbia Transmission Corporation's Open Access Transmission Tariff. The rates in this Schedule combine the rates of the Transmission Provider in its Rate Schedule 101 and the Transmission Owner in its Rate Schedule 3001. Capitalized terms appearing in this Rate Schedule, unless otherwise noted, shall have the meaning ascribed to them therein.

SCHEDULE 02

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE

Availability: For wholesale transmission of electricity on a Non-Firm basis from one or more Point(s) of Receipt (POR) to one or more Point(s) of Delivery (POD).

Rate for Short-Term Non-Firm Service: The Transmission Customer shall pay each month for Reserved Capacity designated at the POR(s) at the posted prices which will be less than or equal to a maximum price (\$/MWh) as set out below, except where the POD(s) is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00). In no case shall this rate produce a price per transaction below the Minimum Price.

Why is short-term non-firm the same as firm Pricing?

Minimum Price: ~~\$0/kW~~ **\$1/MW**

Maximum Price: The Transmission Customer shall pay for Non-Firm Point-to-Point Transmission Service at rates not to exceed the applicable charges set forth below.

No \$ advantage to pre-booking & filling system w longer term reservations.

1) Monthly delivery: \$3.829/kW of Reserved Capacity per month.

2) Weekly delivery: \$0.884/kW of Reserved Capacity per week.

3) Daily delivery: \$0.126/kW of Reserved Capacity per day.
The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.

4) Hourly Delivery: The basic charge **shall be agreed upon by the Parties at the time this service is reserved** and in no event shall exceed \$0.0053/kW.h. The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any hour during such day.**How will this be determined? Sounds arbitrary.**

SCHEDULE 02

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Rate for Short-Term Non-Firm Service: (Cont'd) In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Penalty Charge: A penalty charge will be applied to all unauthorized usage at a rate of 125 percent of the maximum monthly delivery charge.

Special Conditions: 1. Discounts

The following conditions apply to discounts for transmission service as follows:

- (1) any offer of a discount made by BCTC must be announced to all Eligible Customers solely by posting on the OASIS,
- (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posting on the OASIS, ~~and~~
- (3) once a discount is negotiated, details must be immediately posted on the OASIS,
- (4) for any discount agreed upon for service on a path, from POR(s) to POD(s), BCTC must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same POD(s) on the Transmission System; ~~and~~.

SCHEDULE 02

NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE (Cont'd)

Special
Conditions:
(Cont'd)

- (5) information regarding any non-firm transmission discounts must be posted on the OASIS. In addition, discounts to non-affiliates must be offered in a not unduly discriminatory manner. ~~and~~

~~(6) for discounted Short Term Service, the minimum charge per transaction for Transmission Service is \$55.~~

2. Customers taking Non-Firm Service will only be billed for the time for which service is available. All bills will be prorated to the nearest hour.

Taxes:

The Rate and Charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note:

The terms and conditions under which Non-Firm Transmission Service is supplied are contained in the British Columbia Transmission Corporation OATT. Capitalized terms appearing in this Rate Schedule, unless otherwise noted, shall have the meaning ascribed to them therein.

3.0 PRICING METHODOLOGIES for SHORT TERM (ST) SERVICE

In this section:

[Hourly Firm and Non-firm Service](#)
[Daily Firm and Non-Firm Service](#)
[Weekly Firm and Non Firm Service](#)

The price for ST PTP transmission service to a load serving points within BC will not be discounted.

For export and wheel-through transmission services, the following calculations are used to calculate the prices for discounted short-term services.

All prices are in CDN \$/MWh, rounded to 1 decimal place.

Cascade Pacific Power submits that the pricing methodology needs to be re-examined and restructured so that large and small players are treated equally, without huge deposits and security requirements far in advance.

Cascade submits that where there are significant price discrepancies between Mid-C prices and Alberta prices, that some of the difference should be recovered under the transmission tariff in place, to benefit all users of the system, not just the participants in a particular trade. This would apply in either direction. One mechanism would be to charge a percentage of the value of the trade, thus when great profit opportunities exist ("windfall"), that some significant percentage of the "windfall" revenue will be retained by BCTC, perhaps 50% or more.

Where an agency has booked longer term transmission, and will in all likelihood be the primary beneficiary of a trade, there is additional merit to the argument that BCTC should retain a significant portion of the "windfall" revenue.

3.1 Hourly Firm and Non-firm Service

A. Firm Service Price **What is the basis for determining a ¼ ratio?**

For transactions delivering to US, the Discounted ST Firm Hourly Service Price for Hourly Service is:

$$(1) \quad \frac{[(\text{Mid-C Price} * \text{exchange rate}) - (\text{AESO Price} * \text{Loss Factor for AB} * \text{Loss Factor for BPA})]}{4}$$

For transactions delivering to Alberta, the Discounted ST Firm Hourly Service Price for Hourly service is:

$$(2) \quad \frac{[\text{AESO Price} - (\text{Mid-C} * \text{exchange rate} * \text{Loss Factors for AB} * \text{Loss Factor for BPA})]}{4}$$

The Discounted ST Firm Hourly Service Prices from equations (1) and (2) above are bounded by a minimum of \$0.1 and a maximum equals to the non-discounted hourly price for ST Service.

Where:

Exchange rate is the daily Bank of Canada exchange rate for converting Mid-C price to the Canadian equivalent.

AESO price is a volume-weighted average of hourly prices for each previous day's HLH and LLH period.

Since it is hourly trades and pricing which are involved, particularly for Alberta (AESO) this should probably be based on the previous hour's price.

Mid-C price would be based on the published firm index provided by Dow Jones for each previous day's HLH and LLH period.

Loss Factor for BPA is determined by BPAT's loss factor to Mid-C.

Loss Factor for AB is determined by the loss factors provided by AESO at <http://www.aeso.ca/transmission/144.html>.

All inputs to calculate the Day +1 (delivery) price are taken from Day -1, unless Day -1 data points are absent, in which case the last available values are used.

B. Non-Firm Service Price

For transactions delivering to US, the Discounted ST Non-Firm Hourly Service Price for Hourly Service is :

$$(3) \quad [(Mid-C \text{ Price} * \text{exchange rate}) - (AESO \text{ Price} * \text{Loss Factor for AB} * \text{Loss Factor for BPA})] / 4 - \$1/MW$$

For transactions delivering to Alberta, the Discounted ST Non-Firm Hourly Service Price for Hourly Service is :

$$(4) \quad [AESO \text{ Price} - (Mid-C * \text{exchange rate} * \text{Loss Factors for AB} * \text{Loss Factor for BPA})] / 4 - \$1/MW$$

The Discounted ST Non-Firm Hourly Service Prices from equations (3) and (4) above are bounded by a minimum of \$0.1 and a maximum equals to the non-discounted hourly price for ST Service.

3.2 Daily Firm and Non-Firm Service

The Discounted ST Firm Hourly Price for Daily Service is equal to the average of the 24 Discounted ST Firm Hourly Prices for Hourly Service.

The Discounted ST Non-Firm Hourly Price for Daily Service is equal to the Discounted ST Firm Hourly Price for Daily Service minus \$1/MW.

3.3 Weekly Firm and Non-Firm Formulae

- A. For reservation of one week of service from the day of reservation.
 - i). The Discounted ST Firm Hourly Price for Weekly Service for Week One is equal to

$$\text{Discounted ST Firm Hourly Price for Daily Service} + \frac{1}{2}(\text{non-discounted hourly price for ST Service} - \text{Discounted ST Firm Hourly Price for Daily Service})$$
 - ii). The Discounted ST Non-Firm Hourly Price for Weekly Service Price for Week One is equal to the Discounted ST Hourly Firm Price for Daily Service minus \$1/MW.
- B. For reservation of service beyond Week One and not including Week One, both the Discounted ST Firm Hourly Price for Weekly Service and the Discounted ST Non-Firm Hourly Price for Weekly Service are equal to the non-discounted hourly price for ST Service.
- C. For reservation of more than one week duration of service, including week one, from the day of reservation,
 - i). the Discounted ST Firm Hourly Price for Weekly Service is equal to the weighed average of the Discounted Short-Term Firm Hourly Price for Week One and the non-discounted hourly price for ST Service for the weeks of service requested beyond Week One.
 - ii). the Discounted ST Non-Firm Hourly Price for Weekly Price is equal to the Discount ST Firm Hourly Price for Weekly Service Price minus \$1/MW.

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Appendix G

2008 Short-Term Pricing Customer Consultation Record

Short-Term PTP Rate Design Proposal – Soliciting Comments

Posted on October 6 , 4:47 p.m.

BCTC is pleased to invite your comments on its proposal with respect to amending the Short-Term Point-to-Point rate design as detailed in the attached paper ([BCTC_STPTP_Proposal.pdf](#)). Please send your comments to [Brenda Ambrosi](#) by October 17, 2008.

Overview of Draft TIR Sept 17

Posted on September 17 , 4:36 p.m.

BCTC has completed a draft 60 kV to 500 kV Technical Interconnection Requirements for Power Generators (the TIR). This TIR has been drafted to improve clarity and update to the existing 69 kV to 500 kV Interconnection Requirements for Power Generators. For details please click [Here](#).

System Impact Study of NITS Update for Mica Revelstoke Peaking Units (CRP2)

Posted on September 15 , 2:29 p.m.

[System Impact Study of NITS update for Mica and Revelstoke Peaking Units \(CRP2\)](#) is posted. Please refer to the link to review.

OASIS and ETS Outages – OVER

Posted on September 8 , 8:28 a.m.

Further to the bulletin posted on September 8 at 8:05 am, we are pleased to advise you that the OASIS and ETS outages are over. Please resume normal procedures immediately. Thank you, again, for patience regarding this matter.

OASIS and ETS Outages

Posted on September 8 , 8:25 a.m.

BCTC is experiencing technical issues with OASIS and ETS. As a result, we are declaring OASIS and ETS outages. Therefore, [Business Practice Sections 13.2 and 13.3](#) are in effect immediately. We will notify you via bulletin when we have resolved the technical difficulties.

We apologize for the inconvenience and thank you, in advance, for your patience regarding this matter.

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Customer Consultation Paper

Proposed Amendments to BCTC's Short-Term Point-to-Point ("ST-PTP") Rate Design

Purpose

The purpose of this paper is to seek comments from customers on a proposal to change British Columbia Transmission Corporation's ("BCTC") short-term point-to-point ("ST-PTP") rate design prior to making an Application with the British Columbia Utilities Commission ("BCUC").

BCTC proposes to file with the BCUC an Application to replace the current ST-PTP rate design with a design for ST-PTP that will:

- Include a fixed rate of \$3/MWh for the High Load Hour ("HLH") period (06:00-22:00, Monday - Saturday, excluding NERC holidays) and a fixed rate of \$1/MWh for the Low Load Hour ("LLH") period (remaining hours);
- Discontinue directional pricing;
- Eliminate the \$55 minimum scheduling fee; and
- Eliminate the price difference between firm and non-firm service.

The proposed time-of-use ("TOU") rates will apply to hourly and daily services. Weekly and monthly services will be charged at the undiscounted ST-PTP firm rates set out in Attachment L of BCTC's Open Access Transmission Tariff ("OATT"). The following sections will describe BCTC's proposal in more detail.

Prior to filing an Application with the BCUC, BCTC would like to provide you with the opportunity to comment on its proposal. Your comments will assist BCTC in finalizing its ST-PTP rate design proposal, and may be appended to its Application when filed. Please provide your response to Brenda Ambrosi (Brenda.Ambrosi@bctc.com) by October 17, 2008. All comments will be posted on our website for public review.

1. Introduction

On December 20, 2006, BCTC filed its Rate Design Report (“2006 Report”)¹ to the BCUC in compliance with the BCUC’s June 20, 2005 Order No.G-58-05 (“2005 Decision”) and other Orders and Letters. On January 24, 2007, the BCUC issued Letter (Log. No. 17391), accepting BCTC’s compliance filing. In the same letter, the BCUC expressed its expectation that it would be informed of possible amendments to BCTC’s OATT after the 2007 public consultation processes.

On June 26, 2008, the BCUC issued Order No. G-105-08, approving the negotiated settlement for BCTC’s F2009 and F2010 Transmission Revenue Requirement Application. As part of the settlement, BCTC indicated that it was considering changes to its ST-PTP rate design,² and agreed to file, by December 31, 2008, a rate design for its ST-PTP service.

¹ Available at: <http://www.bctc.com/NR/rdonlyres/19014948-340F-4AFA-BF38-4DDC856114B4/0/BCTCRateDesignReport20Dec2006.pdf>

² BCUC Order No. G-105-08, June 26, 2008, Appendix 1, paragraph 26.

The objective of this Customer Consultation Paper is to solicit customer comments on BCTC's proposal for amending the pricing of ST-PTP service. To this end, the paper describes BCTC's proposed amendments and offers reasons for change.

The paper is structured as follows. Section 2 provides the background for BCTC's proposal. It describes BCTC's current ST-PTP rate design, as approved by the 2005 Decision, the design's history, and ST-PTP reservations and revenue since the current design was put in place.

Section 3 contains an analysis of the existing design. It addresses two questions, and can be summarized, as follows:

- (1) Is the pricing formula underlying the existing design sufficiently accurate for ST-PTP pricing? Based on wholesale market prices during 01/01/2003-12/31/2005, the 2006 Report (Chapter 6) concluded that the formula does not accurately predict trading gains on the day of power flow. Using more recent wholesale market price data for the period of 07/23/2006-07/22/2008, the analysis herein affirms this conclusion.
- (2) Given the formula's poor prediction performance and the resulting dramatic decline BCTC has experienced in ST-PTP service revenues, what are the alternatives to the existing formula based design? Alternatives include: (a) adding a price floor to the existing design; or (b) replacing the existing design with fixed rates, which may be differentiated by TOU period. An evaluation indicates that adding a floor can increase ST-PTP revenues but that TOU fixed rate designs

would also restore higher revenue, without blocking more trades than formula-based designs.³

Based on the above findings, BCTC proposes to replace the current ST-PTP rate design with a fixed TOU rate design: \$3/MWh fixed rate for HLH and \$1/MWh fixed rate for LLH. The new TOU rates apply to hourly and daily services. BCTC would also discontinue directional pricing, eliminate the current \$1/MWh price difference between firm and non-firm services, and eliminate the minimum scheduling fee. Weekly and monthly services will be provided at the undiscounted ST-PTP firm rates posted in BCTC's OATT.

2. Background

2.1 Current design

BCTC's current ST-PTP rate design was established by the 2005 Decision. It has a price floor of \$0/MW and a price ceiling based on the hourly price derived from the per MW-year rate for Long-Term Firm Point-to-Point service. The daily-varying discounted rate is equal to one-quarter of an estimate of transmission value, reflecting an equal allocation of the value among the seller (e.g., a generator in the US), two transmission providers (e.g., BPA and BCTC), and the buyer (e.g., a load-serving entity in Alberta).

BCTC uses a formula to estimate a daily transmission value. This estimate is the price difference, adjusted for line losses, between the Mid-Columbia (Mid-C) Hub in

³ BCTC's Rate Design policy is to maximize utilization of the system as stated in section 4.6(e) of the Master Agreement between BC Hydro and BCTC, dated November 12, 2003, provided that customers make positive contributions to fixed costs.

Washington State and the Alberta Pool.⁴ The per MWh ST-PTP rate is then set to 25% of the value estimate, subject to a current price floor of \$0/MWh and a price ceiling of \$5.3/MWh. Scheduling considerations require that the discounted rate be posted one day ahead of power flow. Since the Mid-C price is for day-ahead delivery, the formula in effect uses two-day old price data to estimate the trading gain on the day of power flow.

Prior to the 2005 Decision, the ST-PTP discounted rate was based on the **absolute value** of the difference between the electricity price index at the California and Oregon Border (COB) and a proxy for the value of electricity in Alberta, based on the price of natural gas at the AECO pricing point. It had a minimum price of \$2/MWh for firm service and \$1/MWh for non-firm service.

The 2005 Decision approved changes that led to the current design: (1) the ST-PTP discounted rate became based on the **positive** difference between the Mid-C price and the Alberta Electricity System Operator (AESO) pool price; (2) the price floor was reduced from \$2/MWh to \$0/MWh, implying that reservations with an estimated value of less than zero, i.e. reservations in the direction of reverse flow, were free; (3) a \$55 minimum scheduling fee was added to collect the revenue loss due to the price floor reduction; and (4) the non-firm price was set \$1/MWh less than the firm price.

2.2 2006 Report

Filed in compliance with the 2005 Decision, the 2006 Report analyzed wholesale market price data during 01/01/2003-12/31/2005, suggesting that “actual trading opportunities are different from, and likely more complex than, the contemporaneous

⁴ The per MWh value of a transmission path A → B is the sale price at region B less (a) the purchase price at region A plus (b) the line loss of transmitting power from A to B. Should the difference be negative, the value would be set to zero for ST-PTP pricing purpose.

arbitrage assumption that underlies the ST-PTP rate formula.” (p.6.83) Moreover, the formula only correctly predicts the two-day-ahead direction of transmission value only about 70% of the time (p.6.85). Its prediction performance worsens as the number of days ahead increases. Finally, the Report concluded that “a floor of \$0.50/MWh on the ST-PTP rate would recover substantially more than \$100,000 of incremental revenue, approximately the same amount of revenue generated by the \$55 minimum scheduling fee, so the elimination of the minimum scheduling fee will have no financial impact on BCTC.” (p.6.88)

2.3 Customer consultation

BCTC conducted a Customer Consultation Session on March 5, 2007, seeking customer input on: (a) whether to replace the \$55 minimum scheduling fee with a \$1/MWh price floor; (b) whether to discontinue reservations beyond one day at discounted rates; and (c) whether to continue directional pricing of ST-PTP service.

Following the consultation session, BCTC requested customers to complete a questionnaire, eliciting their comments on a proposal of replacing the minimum scheduling fee with a \$1/MWh price floor. While customers were generally supportive of the proposal, they expressed reservations, including: (a) the \$1/MWh floor was seen as arbitrary; (b) the \$1/MWh price floor would shift cost from small users to large users; and (c) the price floor would block trade that would otherwise occur under the current design. In addition, some customers opined that there should be a price differential between firm and non-firm service, and that multiple-day reservation should be preserved. Finally, customers were concerned with required changes to their information and trading processes; and they requested BCTC to consider combining ST-PTP rate

changes with its anticipated OATT tariff changes due to Federal Energy Regulatory Commission's (FERC) Order 890.

2.4 Reservations and revenue

The \$1/MWh price floor proposal put forth by BCTC for consultation was due in part to the dramatic revenue decrease that BCTC experienced since the current design was put in place. While the volume of all ST-PTP reservations in F2007 was about 20% higher than F2006, total ST-PTP revenue declined by about 45%, from approximately \$36 million to approximately \$20 million, mainly because almost 50% of total ST-PTP reservations were made at zero-price. In F2008, the volume increased by roughly 18% over F2006 amounts. However, ST-PTP total revenue declined by roughly 60% to \$15 million because 68% of total reservations were made at zero-price.

3. Evaluation of the existing design

3.1 Pricing formula's prediction performance

BCTC's examination of the predictive value of the current design's transmission value formula concludes that the formula has serious shortcomings.

The examination has the following steps:

- Step 1: Compute the price differences between Mid-C and AESO by TOU period.⁵

⁵ BCTC's assessment of the accuracy of the formula in predicting transmission value uses daily Mid-C and AESO market prices by TOU period for the 2-year period of 07/23/2006-07/22/2008. The daily Mid-C HLH and LLH prices come from Platts. The daily AESO TOU prices are the daily equally-weighted averages of hourly prices by TOU period.

- Step 2: Compare the price difference on day $(t-i)$ for $i = 2, 3, 4, 5, 6, 7$ to the difference on day t . If both price differences are positive (negative), the price difference on day $(t-i)$ is said to be directionally accurate in predicting the price difference on day t .

Tables 1.A and 1.B below affirm the finding in the 2006 Report (Chapter 6).

When it is two days ahead ($i = 2$), the pricing formula is only accurate in about 70% of the time during LLH hours and just over 60% of the time during HLH hours. The formula's accuracy declines when the number of days ahead increases. This lack of prediction accuracy makes the usefulness of a formula-based rate design for pricing BCTC's ST-PTP service questionable, especially for multiple-day reservations.

Table 1.A: Prediction performance for the HLH period

Variable	i=2	i=3	i=4	i=5	i=6	i=7	i=8
Number of Days	731	731	731	731	731	731	731
Day t and Day $t-i$ Same Direction	460	436	425	417	412	425	405
Day t and Day $t-i$ Opposite Direction	271	295	306	314	319	306	325
Percent of Days with Correct Direction	63%	60%	58%	57%	56%	58%	55%

Table 1.B. Prediction performance for the LLH period

Variable	i=2	i=3	i=4	i=5	i=6	i=7	i=8
Number of Days	731	731	731	731	731	731	731
Day t and Day $t-i$ Same Direction	566	543	537	529	541	535	534
Day t and Day $t-i$ Opposite Direction	165	188	194	202	190	196	197
Percent of Days with Correct Direction	77%	74%	73%	72%	74%	73%	73%

3.2 Evaluation of alternative designs

Given the formula's poor prediction performance, what are the alternatives to the existing design? A reasonable alternative design is one that can restore ST-PTP revenue, without causing a significant decline in energy trading.

The evaluation process has the following steps:

- Step 1: Develop alternative designs. Alternative designs fall into three categories:⁶
 - Category 1: Designs 2 to 7 in Table 2.A, each formed by adding a price floor to the existing design. Design 2 with a \$0.50/MWh price floor was considered in the 2006 Report; and Design 3 is the same design on which customers commented after the March 5, 2007 Customer Consultation Session. To explore time-varying discounting, Designs 4 to 7 have TOU price floors: \$0.50/MWh or \$1/MWh for LLH and \$2/MWh or \$3/MWh for HLH.
 - Category 2: Design 8, which offers discounting, subject to a \$1/MWh price floor, to hourly non-firm service only.
 - Category 3: Designs 9 to 12 in Table 2.B, which have fixed rates that do not vary by service reliability (i.e., firm vs. non-firm). Design 9 has a fixed \$0.50/MWh rate that applies to both HLH and LLH periods. Designs 10 to 12 are formed by combining a LLH rate that can be \$1/MWh or \$1.50/MWh with a HLH rate that can be \$2/MWh or \$3/MWh.
- Step 2: Estimate the percent of hours in which trades would be blocked.⁷ A path-specific transaction is said to be blocked by the applicable transmission rate when the transmission rate exceeds the sum of (a) the hourly wholesale market price difference (i.e., gross gain from trade), (b) transmission losses, and (c) applicable non-BCTC transmission charges.

⁶ Some of these designs were tested in the 2006 Report (p.6.91, Table 6.13).

⁷ Two types of trade are considered here: (1) the contemporaneous buy and sell in the same TOU period (e.g., BPA export through BC to Alberta); and (b) the inter-temporal buy in the LLH period and sell in the HLH period (e.g., BC import from BPA or Alberta in the LLH period for export to BPA or Alberta in the HLH period).

- Step 3: Estimate the effect of each alternative design on the *value* of transmission reservations. This effect is estimated as the percentage change in the total value of trades under the alternative design, relative to the current design. In this calculation, the value of a trade is defined as the hourly wholesale market price difference, net of line losses and transmission costs.⁸ The total value of trades is the sum of the values during all hours in which trades are not blocked.
- Step 4: Quantify each alternative design's revenue effect. The revenue effect is calculated by applying the new pricing designs to reservation data from FY07 and FY08, and reducing the revenues by the percentage increase in blocking relative to the status quo. An estimate of this effect is the ***incremental*** revenue collected (or lost) from reservations under an alternative design, divided by the total revenue collected from reservations under the current status quo design.

Table 2.A below shows that raising the price floor increases blocking and ST-PTP revenue. For example, Design 3, which modifies the existing rate by including a \$1/MWh floor, increases ST-PTP revenues by 84% and blocked hours from an estimated 11.4% to 15.1%. However, blocking typically occurs during low-value hours with small wholesale market price difference. Thus, the value of transactions under Design 3 is only 1.3% less than that of the status quo design.

Alternatively, Design 6 has a \$3/MWh floor for HLH and \$1/MWh floor for LLH. This design blocks 23.6% of hours, which is 12.2% higher than the current design's 11.4%. However, the design decreases the value of the transactions by only 2.9%, even though the design generates an additional 176% of revenue relative to the status quo.

⁸ If the value is negative, the trade should not occur and thus should have a zero value.

When discounting only applies to hourly non-firm service under Design 8, the blocking is 24.8% of total hours and the revenue effect is an additional 259% of the status quo design's level. The design's value effect cannot be computed because the assumed 1-MW transaction is not reliability-differentiated. That is, it is impossible to determine from the historical market prices an appropriate value discount to apply to non-firm service relative to firm service.

Table 2.B shows that fixed rate designs can produce more revenue than the status quo design, without significantly causing more blocking. For example, Design 10 with a \$2/MWh HLH fixed rate and a \$1/MWh LLH fixed rate blocks 12.8% of hours and causes little change in the total value of trade. However, the design yields 94% more revenue than the status quo design.

Increasing the TOU fixed rates as under Designs 11 and 12 causes more blocking but yields more revenue. For example, the HLH rate of Design 11 is \$3/MWh, higher than the HLH \$2/MWh rate of Design 10. The \$1/MWh HLH rate increase raises the estimated blocking from 12.8% to 18.2%, but the change in the value of unblocked trades is only -1.2%. It also alters the additional revenue from a 94% to a 152% increase of the status quo design's level.

Figure 1 provides a graphic summary of the results in Tables 2.A and 2.B. The horizontal axis measures blocking and vertical axis measures revenue effect. Each point in the figure indicates a particular design's revenue effect for a given blocking percentage. The top line formed by Designs 9, 10, 11 and 12 indicates the maximum revenue that a design may collect for a given level of blocking. It is above the bottom line formed by the blocking and revenue effects of formula-based designs. A comparison

of these two lines indicates that TOU fixed rate designs are reasonable candidates to replace the status quo design.

Table 2.A: Blocking and revenue effect by formula-based rate design.

Design number	Description	Path	Percent of trade blocked	Value effect of trade blocked	Revenue effect
1. Status Quo	All hours, all types: Formula, \$0 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.3% 5.8% 4.44% 12.02% 11.43%	+ 0% + 0% + 0% + 0% + 0%	+ 0% + 0% + 0% + 0% + 0%
2. \$0.50 Floor	All hours, all types: Formula, \$0.50 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.8% 6.76% 5.26% 14.01% 13.29%	- 0.2% - 2.1% - 1.6% - 0.5% - 0.6%	+ 12% + 5% + 10% + 54% + 42%
3. \$1 Floor	All hours, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	9.8% 7.9% 6.35% 15.93% 15.13%	- 0.4% - 4.2% - 3.2% - 0.9% - 1.3%	+ 23% + 10% + 19% + 109% + 84%
4. \$1 LLH/\$2 HLH Floor	HLH, all types: Formula, \$2 floor, \$5.30 ceiling LLH, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	10.7% 9.46% 7.53% 19.91% 18.82%	- 0.7% - 6.1% - 5.1% - 1.5% - 2.1%	+ 38% + 17% + 30% + 172% + 134%
5. \$0.50 LLH/\$3 HLH Floor	HLH, all types: Formula, \$3 floor, \$5.30 ceiling LLH, all types: Formula, \$0.50 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	11.72% 10.91% 8.46% 24.47% 23.04%	- 1.1% - 6.8% - 6.3% - 1.9% - 2.6%	+ 50% + 21% + 38% + 209% + 163%
6. \$1 LLH/\$3 HLH Floor	HLH, all types: Formula, \$3 floor, \$5.30 ceiling LLH, all types: Formula, \$1 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	11.98% 11.27% 8.83% 25.06% 23.60%	- 1.1% - 8.0% - 7.1% - 2.1% - 2.9%	+ 55% + 24% + 43% + 226% + 176%
7. \$1 LLH Floor	HLH, all types: \$5.30 LLH, all types: Formula, \$1 Floor	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	15.2% 15.2% 12.65% 31.85% 30.07%	- 2.1% - 12.4% - 11.9% - 3.7% - 4.9%	+ 94% + 41% + 72% + 352% + 277%
8. Non-firm Hourly Discounting Only	All hours, Non-Firm Hourly Reservations: Formula, \$1 floor, \$5.30 ceiling All hours, Firm Reservations and Daily Non-Firm: \$5.30	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	9.98% 11.89% 13.29% 27.36% 24.87%	Not calculated because all transactions are assumed to be of the same type for this analysis	+ 15% + 20% + 401% + 284% + 259%

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission charge ÷ Total hours with non-zero transmission value
Value effect = 1 - (Total value of unblock trades under an alternative design ÷ Total value of unblocked trades the status quo design)
Revenue effect = Revenue collected under an alternative design ÷ Revenue collected under the status quo design

Table 2.B: Blocking and revenue effect by fixed rate design.

Design number	Description	Path	Percent of trade blocked	Value effect of trade blocked	Revenue effect
1. Status Quo	All hours, all types: Formula, \$0 floor, \$5.30 ceiling	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.3% 5.8% 4.44% 12.02% 11.43%	+ 0% + 0% + 0% + 0% + 0%	+ 0% + 0% + 0% + 0% + 0%
9. Fixed Price \$0.50	All hours, all types: \$0.50	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	1.74 % 1.83% 1.60% 3.98% 3.75%	+ 1.9% + 3.0% + 6.9% + 2.3% + 2.9%	- 73% - 80% - 77% - 19% - 34%
10. Fixed Price – Medium Low	HLH, all types: \$2 LLH, all types: \$1	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	5.8% 6.3% 5.31% 13.62% 12.83%	+ 0.6% - 2.8% + 0.3% + 0.3% + 0.2%	- 14% - 48% - 25% + 138% + 94%
11. Fixed Price – High-Low	HLH, all types: \$3 LLH, all types: \$1	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.27% 8.65% 7.0% 19.32% 18.17%	- 0.1% - 5.6% - 3.3% - 0.8% - 1.2%	+ 19% - 36% + 4% + 208% + 152%
12. Fixed Price – High-Medium	HLH, all types: \$3 LLH, all types: \$1.50	BPA – AESO: AESO – BPA: BC – AESO: BC – BPA: Overall:	8.75% 9.29% 7.53% 20.8% 19.55%	- 1.1% - 10.9% - 8.5% - 2.5% - 3.4%	+ 26% - 25% + 10% + 227% + 168%

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission charge ÷ Total hours with non-zero transmission value
Value effect = 1- (Total value of unblock trades under an alternative design ÷ Total value of unblocked trades the status quo design)
Revenue effect = Revenue collected under an alternative design ÷ Revenue collected under the status quo design

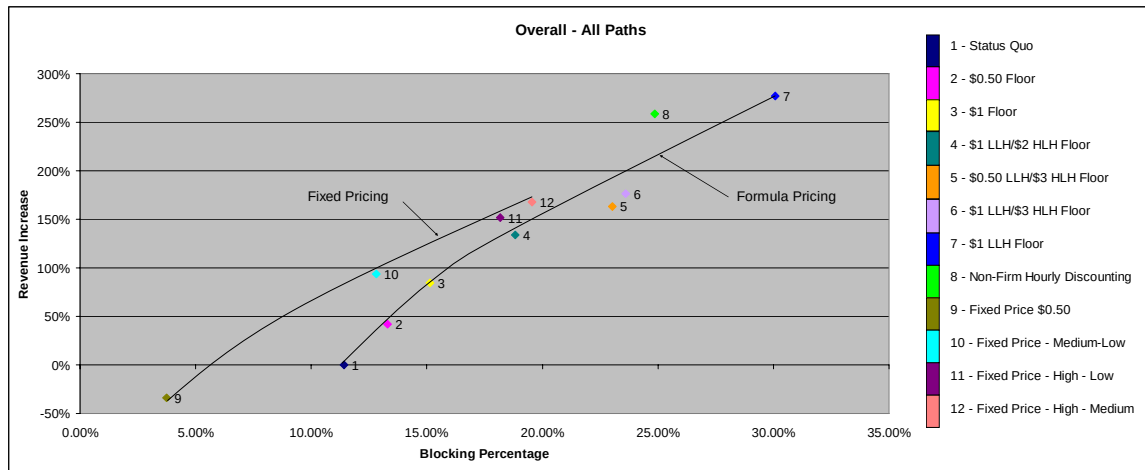


Figure 1: Tradeoff between trade blocking and revenue effect by design.

4. BCTC's Proposed ST-PTP Design

Based on the analysis presented in Section 3, BCTC supports replacing the existing design with a simple TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate for the following reasons:

- The proposed TOU design balances the competing goals of assuring that all transmission customers make positive contributions to fixed costs and encouraging economically-efficient levels of trade.
- The proposed TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate provides for a more balanced cost contribution across all paths than would a \$2/MWh HLH rate and a \$1/MWh LLH rate.
- A TOU design is easier to understand than formula-based rates and can be readily implemented on BCTC's system.
- The proposed TOU design creates stable ST PTP rates that are not formula-based, or connected to Alberta energy prices that have recently become extremely volatile. Although it is conceptually appealing to charge more for transmission during high-value hours, BCTC's assessment of its formula-based design indicates that it is difficult to do so in practice.
- As the discounted TOU rates will be available at times of capacity surplus, they will not vary between firm and non-firm service. The firm vs. non-firm service distinction is meaningful only in the presence of a capacity shortage. But a shortage also implies that BCTC should not offer ST-PTP rate discounting.

October 22, 2008

Ms. Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Customer
1100 – 1055 Dunsmuir Street
Vancouver, BC V7X 1V5

Dear Ms. Ambrosi,

RE: Short-Term Point-to-Point Rate Design Proposal (Proposal)

Please accept this letter in response to the proposal to amend BCTC's short-term rate point-to-point (ST-PTP) design as outlined in your Customer Consultation Paper (Paper) posted on October 6, 2008. We note that at this point in the process, and due to the time constraints in providing comments back to BCTC, both BC Hydro's and Powerex's comments have been incorporated into this letter.

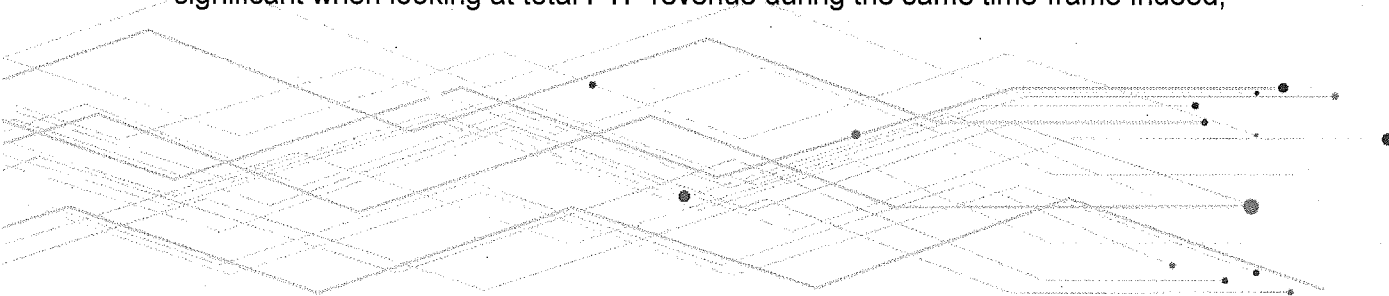
With respect to the proposal and the justifications included in the Paper, we offer the following.

We agree with BCTC's assessment that the current formula used in the ST-PTP rate is flawed and does not accurately predict trading gains on the day of the power flow. The most significant flaws with the current formula are that price inherently lags market events, the formula is not reflective of actual economic opportunities for parties and it presumes certain responses by other parties.

We have consistently held the view that the formulaic approach is not the best mechanism to fully achieve the objectives of availability and efficiency of the transmission system. As stated in the direct testimony of Mr. Mike MacDougall, testifying on behalf of BC Hydro, on December 17, 2004 in BCTC's OATT Application (Testimony), the availability and efficiency of transmission system use can be improved by eliminating the use of a formula. Thus, we support BCTC's desire to amend the ST-PTP rate design by ceasing to use the current formula to calculate transmission value.

We continue to advocate the concept of discounting ST-PTP services. Even in the absence of coordination in neighbouring jurisdictions, discounting is beneficial to the BC transmission system within BC from both an efficiency and availability standpoint and from a revenue standpoint.

The dramatic decline in ST-PTP revenue claimed by BCTC in the Paper is not as significant when looking at total PTP revenue during the same time-frame. Indeed,



referencing Table 11-1 in Section 11.1.1.3 Point to Point Revenue Forecast in BCTC's F2009 and F2010 Transmission Revenue Requirement Application filed with the BCUC on February 20, 2008, BCTC shows that PTP revenue for F2007 was comprised of:

- \$36.5 million in Long-Term Firm
- \$11.1 million in Short-Term Firm
- \$9 million in Short-Term Non-Firm;

and the Forecast for F2008 was comprised of:

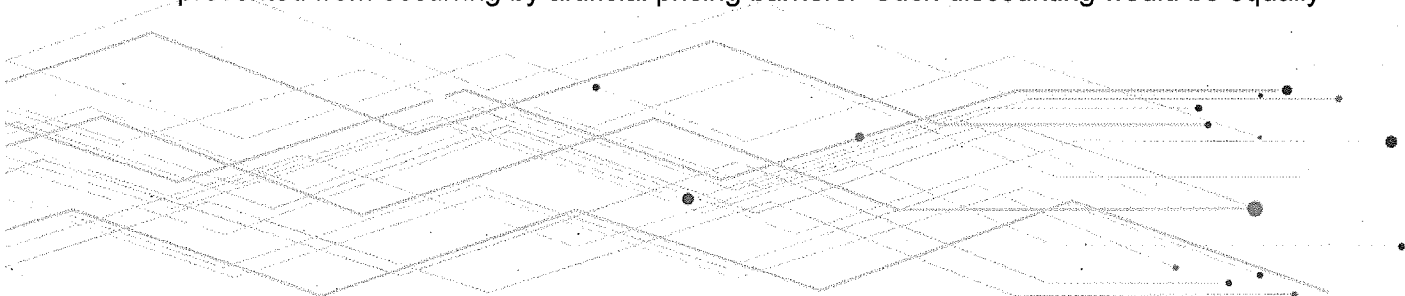
- \$48.2 million in Long-Term Firm
- \$3 million in Short Term-Firm.
- \$12.3 million in Short-Term Non-Firm.

This clearly indicates a shift from Short-Term revenue to Long-Term revenue but demonstrates that total PTP revenue has increased. BCTC has capitalized on its Long-Term revenue recently with its controversial decision to over-sell Long-Term PTP transmission service on the BC – Alberta path. The revenue contribution from Monthly delivery and Long-Term transmission services constitutes a significant portion of the revenue for PTP services.

BCTC has an obligation as a utility to maximize utilization of the transmission system. In our opinion the alternative provided in the Paper is inconsistent in that it focuses on increasing revenue at the expense of blocking an increased number of transactions. As stated in the Testimony,

[a]s the operating hour approaches, transmission capacity, in essence, becomes a perishable commodity. That is, if the capacity is not used in that hour it cannot be stored and sold later. Thus every hour in which there is unused transmission is potentially a lost revenue opportunity. The minimum price for such a commodity should be based on its economics. That is, if the transmission provider can recover its variable costs plus even 1 cent, the transmission provider is better off than if the product goes unsold. Therefore, even in the absence of neighbouring transmission providers applying discounting, it is in the interest of BCTC's customers to have BCTC discount its Short-Term transmission services. BC Hydro – as BCTC's largest customer and the party ultimately responsible for paying for the transmission revenue requirement because it is currently the only Network Customer – supports this discounting principle.

Thus, we continue to assert that the benefits of more efficient transmission pricing for Hourly and Daily delivery transmission services outweigh the associated revenue risks. Discounting the ST-PTP transmission down to its variable cost, allows for a fuller optimization of the BC Hydro system because economic transactions would not be prevented from occurring by artificial pricing barriers. Such discounting would be equally



available to all transmission customers and would not create any barriers to a third party requesting service.

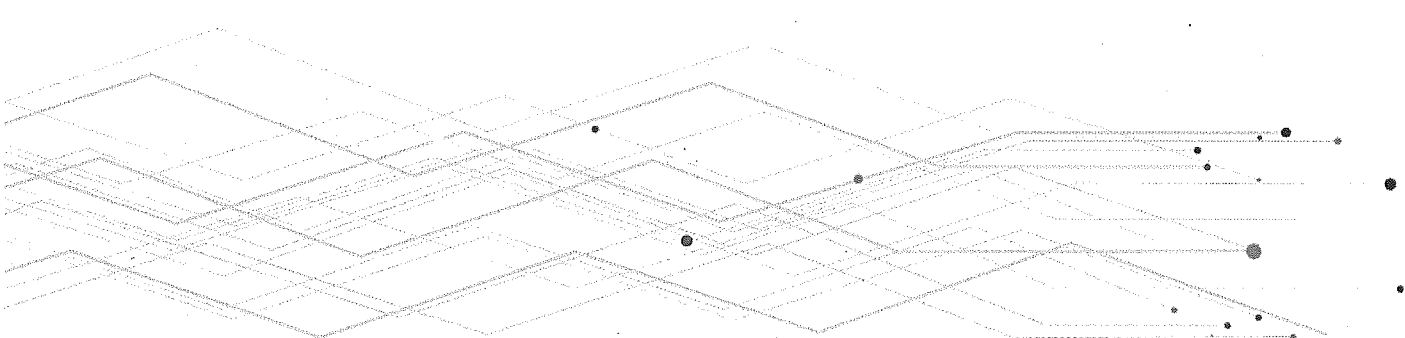
BCTC transmission costs are included in the evaluation of the economics of trade related transactions and the efficiency concern arises when transmission prices related only to fixed cost recovery are greater than the trade margin. Under that particular circumstance, the trade does not occur resulting in neither an energy sale nor any PTP revenue and therefore ultimately a loss of benefits to BC Hydro's ratepayers.

We remain supportive of BC Hydro's Short-Term rate design proposal as provided in the Testimony at page 6 of 19 (BCH Proposal). Namely, we advocate the elimination of a price floor for Hourly delivery and Daily delivery transmission services (i.e. do not use a formula or arbitrary price level) and the modification of the OATT to include displacement based on price for Short-Term Firm transmission on the same basis as Short-Term Non-Firm transmission.

Rather than BCTC attempting to estimate the market value of transmission, it should simply allow the transmission customers to set the value. BCTC would still recover the system variable costs via the Scheduling charge in Rate Schedule 03 and the provision of Real Power Losses via Rate Schedule 10. Therefore the issue is simply one of fixed cost recovery.

The BCH Proposal allows the most efficient utilization of the transmission system because value rather than cost will determine system usage at the margin. It allows market participants the widest possible access to Hourly and Daily delivery transmission services and there is nothing in the BCH Proposal that favours any one market participant over another. BCTC itself in response to BCUC IR 1.25.3 in the OATT Application stated that the objective is to maximize throughput in circumstances where rates which are not reflective of the marginal economics, are blocking energy trades.

In the Paper at page 8, Section 3.2 "Evaluation of Alternative Designs", BCTC states that in fixing the existing design, a reasonable alternative design would be one that restores the ST PTP revenue without causing a significant decline in energy trading. The implication therein is that it is acceptable to block even some energy trades in order to achieve increased revenue. In our opinion, implementing a rate design that increases the number of blocked transactions does not seem efficient.

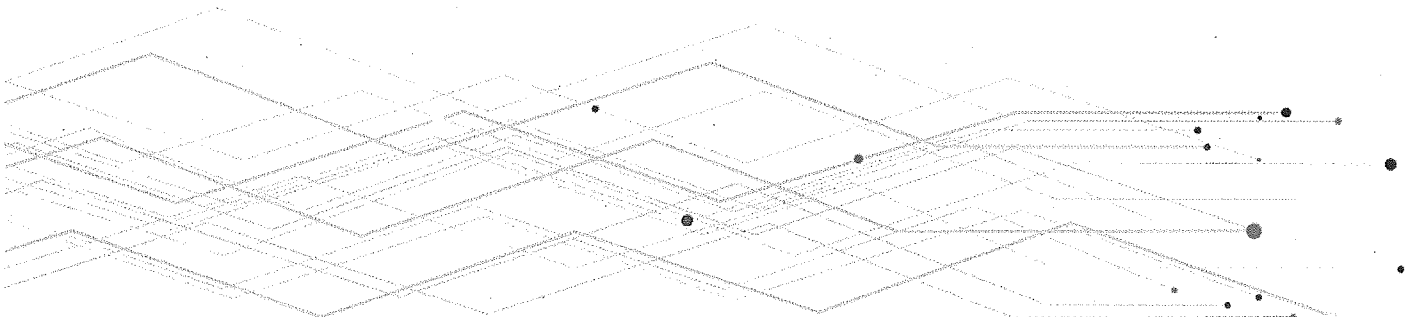


While we acknowledge that the current rate design has flaws, we do not support any of the alternative designs proposed in the Paper. Thank you for the opportunity to provide comments on the proposal and the contents of the Paper.

Sincerely,



Lisa Cherkas
Trade Policy: BC & Alberta
lisa.cherkas@powerex.com



Hi Brenda,

Thanks for the opportunity to comment on the STPTP proposal.

As I think we have stated before, we are happy to see BCTC dispense with the minimum transaction charge.

While there is some ambivalence regarding the fixed HLH charge and the other proposed changes, none of them should hinder our trading activities.

Tom

Tom Rudd

Candela Energy Corporation

tom.rudd@candelaenergy.com

403-701-5757

October 22, 2008

Cascade Pacific Power Corporation's Response to Request for Consultation:

RE: BCTC's Customer Consultation Paper; Proposed Amendments to BCTC's Short-Term Point-to-Point ("ST-PTP") Rate Design Customer Consultation Paper

Prepared by Roger Bryenton, President, Cascade Pacific Power Corporation

(Cascade apologizes for the formatting irregularities as they are unable to red/blue line directly onto a pdf format document.)

Several initial overall observations are pertinent:

1. **It is extremely disappointing for a small IPP to have endured more than one year of forgone revenue, due to the lack of BCTC's attention to the matter of addressing their obvious dramatic drop in revenue from facilities use.** It is equally disappointing to know that BCTC has forgone substantial revenue reduction, and has been remiss in not addressing the problem in a more timely manner. If the matter of revenue decrease was in fact substantial, Cascade feels that BCTC would have addressed the issue much sooner. The fact that BCTC chose to continue its operations with reduced revenue, knowing that it has substantially affected at least one IPP implies that the loss of revenue was, in fact, not serious for BCTC, while it has been dramatic for Cascade.

2. The matter of transmission pricing is only one aspect of "selling electricity". Cascade believes that **BCTC has still not addressed, in this proposed pricing revision document, the matter of "hoarding", the reservation of transmission capability,** but the lack of penalty or other provision for agencies that reserve, but do not utilize the transmission capability, thus preventing other agencies from conducting legitimate electricity sales. There appears to be no change in reservation policy to facilitate more optimal utilization, by revising actual reservation policy. Thus weekly and monthly reservations will continue to take precedence, regardless of pricing changes, enabling larger, well funded agencies such as BCHydro and Powerex to continue to hoard transmission, to the detriment of smaller entities.

Thus the intention of OATT, "Open Access" appears to be a sound concept, but the execution of the details of "openness" are sadly lacking. From a small IPP's perspective, the actual "electricity trading system" remains, to a great extent, a "cartel", which, while not intended to limit access and availability, very effectively functions as a cartel.

3. **Cascade Power believes that the two stated goals of maximizing transmission system utilization and maximizing revenue may be mutually exclusive under the proposed tariff changes.** Maximizing utilization generally will involve reducing the fees involved, while maximizing revenue involves increasing the fees. Thus BCTC and the agencies it serves need to clearly decide which goals are to be pursued, and how. It is Cascade's contention that longer term reservations tend to be contradictory: on the one hand, agencies require large quantities of transmission to be available and assured. On the other hand maximizing revenue in the longer term requires speculative practices, and tends to promote hoarding, "in the event that prices escalate". **The present short-term PTP does nothing to address these contradictions, and in fact, may in the longer term, actually promote market distortions, as there is no mechanism to distinguish which of the two goals – maximize revenue, vs maximize utilization, will be given greater priority.**

4. **Cascade contends that the two goals can better be addressed by a more "market-based" approach to transmission pricing.** A "fixed-fee" and a "variable-fee". The fixed fee need not be an arbitrary, and revenue disastrous, 'scheduling fee', but can be a more modest fee as proposed. Cascade

believes that a floor of 50 cents plus a variable fee based upon selling price would be the best combination.

Example 1. Cascade (or other small IPP under 10 MW) sells under former conditions. At one MW, the selling price must be greater than \$55/MWh, plus forgone revenue, say to BCH at \$26, plus transmission and fees (minimum \$5) plus commission to agent, totaling \$100/MWh. Almost no sales occur, Agent cancels sales agreement.

Example 2. Cascade sells 1MWh, with local transmission and fees (\$5), BCTC floor price \$3, plus opportunity cost of \$26, plus commission. Minimum selling price required is \$34 plus commission, say \$45/MWh. From historical sales, daily prices exceeding \$45 are infrequent, hence few sales occur. Most transactions will therefore be hourly.

Example 3. As per Example 2, but floor price of 50 cents, plus revenue sharing. Minimum selling price is now \$31.50 plus commission, plus “shared revenue” to BCTC. Minimum selling price is now reduced to \$41.50. This becomes more appealing on a daily basis, despite lower night-time (LLH) prices, and even more appealing for HLH sales. Cascade is thus much more likely to conduct business of power sales as a result. In addition, Cascade, in seeking to optimize revenue, would be willing to share the benefit of increased prices both with the agent’s sales commission (as a percentage) and with BCTC, as a percentage, in recognition of the increase of revenue obtained from higher sales prices. [See comments, page 3 item 2\).](#) [See also comments page 6 re “price floor”.](#)

In this regard, Cascade perceives that working cooperatively will likely create the optimum conditions for BCTC and its users, through “win-win” agreements. Cascade would much prefer a modest percentage of a “sure-thing”, a certain sale, than 100% of nothing – the loss of a sale because of arbitrary market conditions, such as transmission reservation hoarding, or arbitrary “non-optimum” fixed fee structures.

4. Ceiling price - \$5.30 – page 5, 2.1 Current Design

Cascade contends that the concept of a fixed “ceiling price” is outdated in today’s real-time electronic based markets, and needs to be replaced by a design reflective of the current state of the art transactions. This could constitute an alternative rate design, which does not have or require a “ceiling price”, but has a value either proportional to the value of the sale, or a cost reflective of the marginal cost of the next MW of transmission capacity, which could well exceed \$5.30, but would encourage and facilitate adding transmission resources and capability, by creating additional revenue from “high value” sales, which can be invested in additional facilities.

This can partly be addressed by having a variable portion of the rate tariff, reflective of the value of the transaction.

Additional specific comments are included as blue text in the BCTC document.

Proposed Amendments to BCTC's Short-Term Point-to-Point ("ST-PTP") Rate Design

Purpose

The purpose of this paper is to seek comments from customers on a proposal to change British Columbia Transmission Corporation's ("BCTC") short-term point-to-point ("ST-PTP") rate design prior to making an Application with the British Columbia Utilities Commission ("BCUC").

BCTC proposes to file with the BCUC an Application to replace the current STPTP rate design with a design for ST-PTP that will:

- Include a fixed rate of \$3/MWh for the High Load Hour ("HLH") period (06:00-22:00, Monday - Saturday, excluding NERC holidays) and a fixed rate of \$1/MWh for the Low Load Hour ("LLH") period (remaining hours);
- Discontinue directional pricing;
- Eliminate the \$55 minimum scheduling fee; and
- Eliminate the price difference between firm and non-firm service.

The proposed time-of-use ("TOU") rates will apply to hourly and daily services.

Weekly and monthly services will be charged at the undiscounted ST-PTP firm rates set out in Attachment L of BCTC's Open Access Transmission Tariff ("OATT"). The following sections will describe BCTC's proposal in more detail.

Prior to filing an Application with the BCUC, BCTC would like to provide you with the opportunity to comment on its proposal. Your comments will assist BCTC in finalizing its ST-PTP rate design proposal, and may be appended to its Application when filed. Please provide your response to Brenda Ambrosi (Brenda.Ambrosi@bctc.com) by October 17, 2008. All comments will be posted on our website for public review.

1. Introduction

On December 20, 2006, BCTC filed its Rate Design Report (“2006 Report”)¹ to the BCUC in compliance with the BCUC’s June 20, 2005 Order No.G-58-05 (“2005 Decision”) and other Orders and Letters. On January 24, 2007, the BCUC issued Letter (Log. No. 17391), accepting BCTC’s compliance filing. In the same letter, the BCUC expressed its expectation that it would be informed of possible amendments to BCTC’s OATT after the 2007 public consultation processes.

On June 26, 2008, the BCUC issued Order No. G-105-08, approving the negotiated settlement for BCTC’s F2009 and F2010 Transmission Revenue Requirement Application. As part of the settlement, BCTC indicated that it was considering changes to its ST-PTP rate design,² and agreed to file, by December 31, 2008, a rate design for its ST-PTP service.

¹ Available at: <http://www.bctc.com/NR/rdonlyres/19014948-340F-4AFA-BF38-4DDC856114B4/0/BCTCRateDesignReport20Dec2006.pdf>

² BCUC Order No. G-105-08, June 26, 2008, Appendix 1, paragraph 26.

The objective of this Customer Consultation Paper is to solicit customer comments on BCTC's proposal for amending the pricing of ST-PTP service. To this end, the paper describes BCTC's proposed amendments and offers reasons for change.

The paper is structured as follows. Section 2 provides the background for BCTC's proposal. It describes BCTC's current ST-PTP rate design, as approved by the 2005 Decision, the design's history, and ST-PTP reservations and revenue since the current design was put in place.

Section 3 contains an analysis of the existing design. It addresses two questions, and can be summarized, as follows:

(1) Is the pricing formula underlying the existing design sufficiently accurate for STPTP pricing? Based on wholesale market prices during 01/01/2003-12/31/2005, the 2006 Report (Chapter 6) concluded that the formula does not accurately predict trading gains on the day of power flow. Using more recent wholesale market price data for the period of 07/23/2006-07/22/2008, the analysis herein affirms this conclusion.

(2) Given the formula's poor prediction performance and the resulting dramatic decline BCTC has experienced in ST-PTP service revenues, what are the alternatives to the existing formula based design? Alternatives include: (a) adding a price floor to the existing design; or (b) replacing the existing design with fixed rates, which may be differentiated by TOU period.

Cascade Power contends that there are necessarily more than two options. A third option is to include a mix of: the existing design, a fixed rate portion, plus a **VARIABLE RATE PORTION**. The variable rate portion can be a fixed or non-fixed amount, related to the value of the electricity transaction. Since BCHydro use a step function rate for electricity sales, it is not incomprehensible that BCTC can also use a step function for transmission fees ie. "if it is worth more, charge more".

An evaluation indicates that adding a floor can increase ST-PTP revenues but that TOU fixed rate designs

would also restore higher revenue, without blocking more trades than formulabased designs.³

Based on the above findings, BCTC proposes to replace the current ST-PTP rate design with a fixed TOU rate design: \$3/MWh fixed rate for HLH and \$1/MWh fixed rate for LLH. The new TOU rates apply to hourly and daily services. BCTC would also discontinue directional pricing, eliminate the current \$1/MWh price difference between firm and non-firm services, and eliminate the minimum scheduling fee. Weekly and monthly services will be provided at the undiscounted ST-PTP firm rates posted in BCTC's OATT.

2. Background

2.1 Current design

BCTC's current ST-PTP rate design was established by the 2005 Decision. It has a price floor of \$0/MW and a price ceiling based on the hourly price derived from the per MW-year rate for Long-Term Firm Point-to-Point service. The daily-varying discounted rate is equal to one-quarter of an estimate of transmission value, reflecting an equal allocation of the value among the seller (e.g., a generator in the US), two transmission providers (e.g., BPA and BCTC), and the buyer (e.g., a load-serving entity in Alberta). BCTC uses a formula to estimate a daily transmission value. This estimate is the price difference, adjusted for line losses, between the Mid-Columbia (Mid-C) Hub in

³ BCTC's Rate Design policy is to maximize utilization of the system as stated in section 4.6(e) of the Master Agreement between BC Hydro and BCTC, dated November 12, 2003, provided that customers make positive contributions to fixed costs.

Washington State and the Alberta Pool.⁴ The per MWh ST-PTP rate is then set to 25% of the value estimate, subject to a current price floor of \$0/MWh and a price ceiling of \$5.3/MWh.

[See comments in Cascade's initial section.](#)

Scheduling considerations require that the discounted rate be posted one day ahead of power flow. Since the Mid-C price is for day-ahead delivery, the formula in effect uses two-day old price data to estimate the trading gain on the day of power flow. Prior to the 2005 Decision, the ST-PTP discounted rate was based on the **absolute value** of the difference between the electricity price index at the California and Oregon Border (COB) and a proxy for the value of electricity in Alberta, based on the price of natural gas at the AECO pricing point. It had a minimum price of \$2/MWh for firm service and \$1/MWh for non-firm service.

The 2005 Decision approved changes that led to the current design: (1) the STPTP discounted rate became based on the **positive** difference between the Mid-C price and the Alberta Electricity System Operator (AESO) pool price; (2) the price floor was reduced from \$2/MWh to \$0/MWh, implying that reservations with an estimated value of less than zero, i.e. reservations in the direction of reverse flow, were free; (3) a \$55 minimum scheduling fee was added to collect the revenue loss due to the price floor reduction; and (4) the non-firm price was set \$1/MWh less than the firm price.

2.2 2006 Report

Filed in compliance with the 2005 Decision, the 2006 Report analyzed wholesale market price data during 01/01/2003-12/31/2005, suggesting that “actual trading opportunities are different from, and likely more complex than, the contemporaneous

⁴ The per MWh value of a transmission path A → B is the sale price at region B less (a) the purchase price at region A plus (b) the line loss of transmitting power from A to B. Should the difference be negative, the value would be set to zero for ST-PTP pricing purpose.

arbitrage assumption that underlies the ST-PTP rate formula.” (p.6.83) Moreover, the formula only correctly predicts the two-day-ahead direction of transmission value only about 70% of the time (p.6.85). Its prediction performance worsens as the number of days ahead increases. Finally, the Report concluded that “a floor of \$0.50/MWh on the ST-PTP rate would recover substantially more than \$100,000 of incremental revenue, approximately the same amount of revenue generated by the \$55 minimum scheduling fee, so the elimination of the minimum scheduling fee will have no financial impact on BCTC.” (p.6.88)

2.3 Customer consultation

BCTC conducted a Customer Consultation Session on March 5, 2007, seeking customer input on: (a) whether to replace the \$55 minimum scheduling fee with a \$1/MWh price floor; (b) whether to discontinue reservations beyond one day at discounted rates; and (c) whether to continue directional pricing of ST-PTP service. Following the consultation session, BCTC requested customers to complete a questionnaire, eliciting their comments on a proposal of replacing the minimum scheduling fee with a \$1/MWh price floor. While customers were generally supportive of the proposal, they expressed reservations, including: (a) the \$1/MWh floor was seen as arbitrary; (b) the \$1/MWh price floor would shift cost from small users to large users; and (c) the price floor would block trade that would otherwise occur under the current design.

Cascade contends that the notion of a fixed “price floor” is also outdated in today’s trading environment, and that a variable floor (or discount) may be applicable during some periods or under some conditions, especially what formerly involved “reverse flow transactions”.

In addition, some customers opined that there should be a price differential between firm and non-firm service, and that multiple-day reservation should be preserved. Finally, customers were concerned with required changes to their information and trading processes; and they requested BCTC to consider combining ST-PTP rate

changes with its anticipated OATT tariff changes due to Federal Energy Regulatory Commission's (FERC) Order 890.

2.4 Reservations and revenue

The \$1/MWh price floor proposal put forth by BCTC for consultation was due in part to the dramatic revenue decrease that BCTC experienced since the current design was put in place. While the volume of all ST-PTP reservations in F2007 was about 20% higher than F2006, total ST-PTP revenue declined by about 45%, from approximately \$36 million to approximately \$20 million, mainly because almost 50% of total ST-PTP reservations were made at zero-price. In F2008, the volume increased by roughly 18% over F2006 amounts. However, ST-PTP total revenue declined by roughly 60% to \$15 million because 68% of total reservations were made at zero-price.

3. Evaluation of the existing design

3.1 Pricing formula's prediction performance

BCTC's examination of the predictive value of the current design's transmission value formula concludes that the formula has serious shortcomings.

The examination has the following steps:

- Step 1: Compute the price differences between Mid-C and AESO by TOU period.⁵

⁵ BCTC's assessment of the accuracy of the formula in predicting transmission value uses daily Mid-C and AESO market prices by TOU period for the 2-year period of 07/23/2006-07/22/2008. The daily Mid-C HLH and LLH prices come from Platts. The daily AESO TOU prices are the daily equally-weighted averages of hourly prices by TOU period.

• Step 2: Compare the price difference on day $(t-i)$ for $i = 2, 3, 4, 5, 6, 7$ to the difference on day t . If both price differences are positive (negative), the price difference on day $(t-i)$ is said to be directionally accurate in predicting the price difference on day t .

Tables 1.A and 1.B below affirm the finding in the 2006 Report (Chapter 6).

When it is two days ahead ($i = 2$), the pricing formula is only accurate in about 70% of the time during LLH hours and just over 60% of the time during HLH hours. The formula's accuracy declines when the number of days ahead increases. This lack of prediction accuracy makes the usefulness of a formula-based rate design for pricing BCTC's ST-PTP service questionable, especially for multiple-day reservations.

Table 1.A: Prediction performance for the HLH period

Variable	$i=2$	$i=3$	$i=4$	$i=5$	$i=6$	$i=7$	$i=8$
Number of Days	731	731	731	731	731	731	731
Day t and Day $t-i$ Same Direction	460	436	425	417	412	425	405
Day t and Day $t-i$ Opposite Direction	271	295	306	314	319	306	325
Percent of Days with Correct Direction	63%	60%	58%	57%	56%	58%	55%

Table 1.B. Prediction performance for the LLH period

Variable	$i=2$	$i=3$	$i=4$	$i=5$	$i=6$	$i=7$	$i=8$
Number of Days	731	731	731	731	731	731	731
Day t and Day $t-i$ Same Direction	566	543	537	529	541	535	534
Day t and Day $t-i$ Opposite Direction	165	188	194	202	190	196	197
Percent of Days with Correct Direction	77%	74%	73%	72%	74%	73%	73%

3.2 Evaluation of alternative designs

Given the formula's poor prediction performance, what are the alternatives to the existing design? A reasonable alternative design is one that can restore ST-PTP revenue, without causing a significant decline in energy trading.

Cascade contends that this is typical “megolithic thinking” – that what ideas we have, are necessarily the only ones, and/or the best ones.

Cascade contends that the two objectives of maximizing system utilization, and maximizing revenue necessarily will involve a series of complex designs, each of which ought to be considered and evaluated, including the effect of pricing on reservations and on actual system utilization. (see also Cascade's comments page 1)

Thus rate design needs to include assessment of reservation activity AND transaction activity as a result of:

1. A variety of fixed and variable floor prices; (the HLH \$3, and LLH \$1 is only one option).
2. A variety of fixed and variable ceiling prices; including the effect of variable pricing on long-term transactions;
3. A differentiation of pricing based upon system load, and
4. A rate structure that “shares the benefits” from transaction revenues.

This might translate into an effective SuperHLH (as per USA rates) which might be \$4 to \$5, or more.

The evaluation process has the following steps:

- Step 1: Develop alternative designs. Alternative designs fall into three categories:⁶
 - o Category 1: Designs 2 to 7 in Table 2.A, each formed by adding a price floor to the existing design. Design 2 with a \$0.50/MWh price floor was considered in the 2006 Report; and Design 3 is the same design on which customers commented after the March 5, 2007 Customer Consultation Session. To explore time-varying discounting, Designs 4 to 7 have TOU price floors: \$0.50/MWh or \$1/MWh for LLH and \$2/MWh or \$3/MWh for HLH.
 - o Category 2: Design 8, which offers discounting, subject to a \$1/MWh price floor, to hourly non-firm service only.
 - o Category 3: Designs 9 to 12 in Table 2.B, which have fixed rates that do not vary by service reliability (i.e., firm vs. non-firm). Design 9 has a fixed \$0.50/MWh rate that applies to both HLH and LLH periods. Designs 10 to 12 are formed by combining a LLH rate that can be \$1/MWh or \$1.50/MWh with a HLH rate that can be \$2/MWh or \$3/MWh.
- Step 2: Estimate the percent of hours in which trades would be blocked.⁷ A path-specific transaction is said to be blocked by the applicable transmission rate when the transmission rate exceeds the sum of (a) the hourly wholesale market price difference (i.e., gross gain from trade), (b) transmission losses, and (c) applicable non-BCTC transmission charges.

⁶ Some of these designs were tested in the 2006 Report (p.6.91, Table 6.13).

⁷ Two types of trade are considered here: (1) the contemporaneous buy and sell in the same TOU period (e.g., BPA export through BC to Alberta); and (b) the inter-temporal buy in the LLH period and sell in the HLH period (e.g., BC import from BPA or Alberta in the LLH period for export to BPA or Alberta in the HLH period).

- Step 3: Estimate the effect of each alternative design on the *value* of transmission reservations. This effect is estimated as the percentage change in the total value of trades under the alternative design, relative to the current design. In this calculation, the value of a trade is defined as the hourly wholesale market price difference, net of line losses and transmission costs.⁸ The total value of trades is the sum of the values during all hours in which trades are not blocked.

- Step 4: Quantify each alternative design's revenue effect. The revenue effect is calculated by applying the new pricing designs to reservation data from FY07 and FY08, and reducing the revenues by the percentage increase in blocking relative to the status quo. An estimate of this effect is the **incremental** revenue collected (or lost) from reservations under an alternative design, divided by the total revenue collected from reservations under the current status quo design.

Table 2.A below shows that raising the price floor increases blocking and ST-PTP revenue. For example, Design 3, which modifies the existing rate by including a \$1/MWh floor, increases ST-PTP revenues by 84% and blocked hours from an estimated 11.4% to 15.1%. However, blocking typically occurs during low-value hours with small wholesale market price difference. Thus, the value of transactions under Design 3 is only 1.3% less than that of the status quo design.

Alternatively, Design 6 has a \$3/MWh floor for HLH and \$1/MWh floor for LLH. This design blocks 23.6% of hours, which is 12.2% higher than the current design's 11.4%. However, the design decreases the value of the transactions by only 2.9%, even though the design generates an additional 176% of revenue relative to the status quo.

⁸ If the value is negative, the trade should not occur and thus should have a zero value.

When discounting only applies to hourly non-firm service under Design 8, the blocking is 24.8% of total hours and the revenue effect is an additional 259% of the status quo design's level. The design's value effect cannot be computed because the assumed 1-MW transaction is not reliability-differentiated. That is, it is impossible to determine from the historical market prices an appropriate value discount to apply to non-firm service relative to firm service.

Table 2.B shows that fixed rate designs can produce more revenue than the status quo design, without significantly causing more blocking. For example, Design 10 with a \$2/MWh HLH fixed rate and a \$1/MWh LLH fixed rate blocks 12.8% of hours and causes little change in the total value of trade. However, the design yields 94% more revenue than the status quo design.

Increasing the TOU fixed rates as under Designs 11 and 12 causes more blocking but yields more revenue. For example, the HLH rate of Design 11 is \$3/MWh, higher than the HLH \$2/MWh rate of Design 10. The \$1/MWh HLH rate increase raises the estimated blocking from 12.8% to 18.2%, but the change in the value of unblocked trades is only -1.2%. It also alters the additional revenue from a 94% to a 152% increase of the status quo design's level.

Figure 1 provides a graphic summary of the results in Tables 2.A and 2.B. The horizontal axis measures blocking and vertical axis measures revenue effect. Each point in the figure indicates a particular design's revenue effect for a given blocking percentage. The top line formed by Designs 9, 10, 11 and 12 indicates the maximum revenue that a design may collect for a given level of blocking. It is above the bottom line formed by the blocking and revenue effects of formula-based designs. A comparison

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of these two lines indicates that TOU fixed rate designs are reasonable candidates to replace the status quo design.

Table 2.A: Blocking and revenue effect by formula-based rate design.

Design

number

Description Path Percent of trade

blocked

Value effect of

trade blocked

Revenue effect

1. Status Quo All hours, all types:

Formula, \$0 floor, \$5.30

ceiling

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

8.3%

5.8%

4.44%

12.02%

11.43%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

+ 0%

2. \$0.50

Floor

All hours, all types:

Formula, \$0.50 floor,

\$5.30 ceiling

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

8.8%

6.76%

5.26%

14.01%

13.29%

- 0.2%

- 2.1%

- 1.6%

- 0.5%

- 0.6%

+ 12%

+ 5%

+ 10%

+ 54%

+ 42%

3. \$1 Floor All hours, all types:

Formula, \$1 floor, \$5.30

ceiling

BPA – AESO:
AESO – BPA:
BC – AESO:
BC – BPA:

Overall:

9.8%
7.9%
6.35%
15.93%
15.13%
- 0.4%
- 4.2%
- 3.2%
- 0.9%
- 1.3%
+ 23%
+ 10%
+ 19%
+ 109%
+ 84%

4. \$1 LLH/\$2

HLH Floor

HLH, all types: Formula,

\$2 floor, **\$5.30** ceiling

LLH, all types: Formula,

\$1 floor, **\$5.30** ceiling

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

10.7%
9.46%
7.53%
19.91%
18.82%
- 0.7%
- 6.1%
- 5.1%
- 1.5%
- 2.1%
+ 38%
+ 17%
+ 30%
+ 172%
+ 134%

5. \$0.50

LLH/\$3

HLH Floor

HLH, all types: Formula,

\$3 floor, **\$5.30** ceiling

LLH, all types: Formula,

\$0.50 floor, **\$5.30** ceiling

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

11.72%
10.91%
8.46%
24.47%
23.04%
- 1.1%
- 6.8%

- 6.3%

- 1.9%

- 2.6%

+ 50%

+ 21%

+ 38%

+ 209%

+ **163%**

6. \$1 LLH/\$3

HLH Floor

HLH, all types: Formula,

\$3 floor, **\$5.30** ceiling

LLH, all types: Formula,

\$1 floor, **\$5.30** ceiling

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

11.98%

11.27%

8.83%

25.06%

23.60%

- 1.1%

- 8.0%

- 7.1%

- 2.1%

- 2.9%

+ 55%

+ 24%

+ 43%

+ 226%

+ **176%**

7. \$1 LLH

Floor

HLH, all types: **\$5.30**

LLH, all types: Formula,

\$1 Floor

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

15.2%

15.2%

12.65%

31.85%

30.07%

- 2.1%

- 12.4%

- 11.9%

- 3.7%

- **4.9%**

+ 94%

+ 41%

+ 72%

+ 352%

+ **277%**

8. Non-firm

Hourly

Discounting

Only

All hours, Non-Firm

Hourly Reservations:

Formula, \$1 floor, \$5.30
ceiling
All hours, Firm
Reservations and Daily
Non-Firm: \$5.30

BPA – AESO:

AESO – BPA:

BC – AESO:

BC – BPA:

Overall:

9.98%

11.89%

13.29%

27.36%

24.87%

Not calculated

because all
transactions are
assumed to be of
the same type for
this analysis

+ 15%

+ 20%

+ 401%

+ 284%

+ **259%**

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission
charge ÷ Total hours with non-zero transmission value

Value effect = 1 - (Total value of unblock trades under an alternative design ÷
Total value of unblocked trades the status quo design)

Revenue effect = Revenue collected under an alternative design ÷ Revenue
collected under the status quo design

Table 2.B: Blocking and revenue effect by fixed rate design.

BPA – AESO:

AESO – BPA:
BC – AESO:
BC – BPA:

Overall:

5.8%
6.3%
5.31%
13.62%
12.83%
+ 0.6%
- 2.8%
+ 0.3%
+ 0.3%
+ 0.2%
- 14%
- 48%
- 25%
+ 138%

+ 94%
11. Fixed

Price –
High-Low
HLH, all types: **\$3**
LLH, all types: **\$1**
BPA – AESO:
AESO – BPA:
BC – AESO:
BC – BPA:

Overall:

8.27%
8.65%
7.0%
19.32%
18.17%
- 0.1%
- 5.6%
- 3.3%
- 0.8%
- 1.2%
+ 19%
- 36%
+ 4%
+ 208%
+ 152%

12. Fixed

Price –
High-
Medium
HLH, all types: **\$3**
LLH, all types: **\$1.50**
BPA – AESO:
AESO – BPA:
BC – AESO:
BC – BPA:

Overall:

8.75%
9.29%
7.53%
20.8%
19.55%
- 1.1%
- 10.9%
- 8.5%
- 2.5%
- 3.4%

+ 26%
- 25%
+ 10%
+ 227%
+ 168%

Notes: Percent of hours blocked = Total hours blocked under BCTC's transmission charge ÷ Total hours with non-zero transmission value

Value effect = 1 - (Total value of unblock trades under an alternative design ÷ Total value of unblocked trades the status quo design)

Revenue effect = Revenue collected under an alternative design ÷ Revenue collected under the status quo design

Overall - All Paths

9
2
1
5
3
10
4
11
12 6
8
7
-50%
0%
50%
100%
150%
200%
250%
300%
0.00% 5.00% 10.00% 15.00% 20.00% 25.00% 30.00% 35.00%

Blocking Percentage

Revenue Increase

Formula Pricing Fixed Pricing

Figure 1: Tradeoff between trade blocking and revenue effect by design.

1 - Status Quo
2 - \$0.50 Floor
3 - \$1 Floor
4 - \$1 LLH/\$2 HLH Floor
5 - \$0.50 LLH/\$3 HLH Floor
6 - \$1 LLH/\$3 HLH Floor
7 - \$1 LLH Floor
8 - Non-Firm Hourly Discounting
9 - Fixed Price \$0.50
10 - Fixed Price - Medium-Low
11 - Fixed Price - High - Low
12 - Fixed Price - High - Medium

Cascade apologizes for the formatting irregularities, but was unable to have access to a .doc file for comment.

Cascade contends that what has resulted, is an over-analysis of too few options. Cascade believes that "sharing revenue" analysis is required, to evaluate the effect of "major price variation" transactions, for example, sales to the US or Alberta when the price between purchases (or cost) and sales (or value) exceeds 2, 3 or 4 times.

This would be similar to Example 3 for Cascade, where the base-price for power is \$26.25, and where a sale to the US or Alberta might exceed \$100/MWh. Analysis of such transactions might create substantially different revenues for BCTC if BCTC were to price transmission at several percentage values such as 10%, 15%, 20%, and 25%, to see the effect on BCTC revenue.

Cascade contends that designing rates for today's complex market must include electronic transaction capabilities, and that market arbitrage of tiny amounts, based upon huge quantities, can result in major financial transactions, the benefit of which ought to be shared, and which in a small way, Cascade is prepared to share when possible, larger amounts (or percentages) of much smaller quantities.

4. BCTC's Proposed ST-PTP Design

Based on the analysis presented in Section 3, BCTC supports replacing the existing design with a simple TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate for the following reasons:

- The proposed TOU design balances the competing goals of assuring that all transmission customers make positive contributions to fixed costs and encouraging economically-efficient levels of trade. [Agreed](#)
- The proposed TOU rate design with a \$3/MWh HLH rate and a \$1/MWh LLH rate provides for a more balanced cost contribution across all paths than would a \$2/MWh HLH rate and a \$1/MWh LLH rate. [Cascade contends that additional assessment is required, and that a variable TOU rate may provide much more balance contributions costs, even with 50 cents LLH, and perhaps as much as \\$4 to \\$5 or more HLH, or Super HLH](#)
- A TOU design is easier to understand than formula-based rates and can be readily implemented on BCTC's system.
- The proposed TOU design creates stable ST PTP rates that are not formula-based, or connected to Alberta energy prices that have recently become extremely volatile. Although it is conceptually appealing to charge more for transmission during high value hours, BCTC's assessment of its formula-based design indicates that it is difficult to do so in practice. [Cascade contends that it is well within the ability of BCTC to design and implement a modern rate structure, that reflects the value of the transactions, probably most effectively accomplished by combining a fixed rate portion, with a variable rate portion, for transactions that are much higher value.](#)
- As the discounted TOU rates will be available at times of capacity surplus, they will not vary between firm and non-firm service. The firm vs. non-firm service distinction is meaningful only in the presence of a capacity shortage. But a shortage also implies that BCTC should not offer ST-PTP rate discounting. [Cascade contends that the tariff needs to reflect the actual conditions. When there are shortages of capacity, more can be charged, especially if a "percentage value" tariff is added to a fixed portion tariff. Cascade contends that discounting is appropriate whenever system capacity is less than 100%, and should be used to encourage system utilization.](#)

From: dslade@northpointenergy.com
To: Ambrosi, Brenda
Sent: Wed Oct 22 08:20:03 2008
Subject: Short-Term PTP Rate Design Proposal Soliciting Comments

Hello Brenda. NorthPoint is generally in agreement with the rate proposal. We have no further comments to add to the questionnaire that we answered in April of 2007, a copy of which is attached.

Dennis Slade
Power Marketing – Transmission Strategist
NorthPoint Energy Solutions
2025 Victoria Avenue, Regina Saskatchewan, Canada S4P-0S1

Telephone: (306) 566-3311 Cell: (306) 533-9456
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Website: www.northpointenergy.com

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Short-term Rate Design Proposal – Questionnaire

Proposal: Eliminate the \$55 Minimum Scheduling Fee and institute a minimum charge (price floor) of \$1/MWh.

Name: Dennis Slade – NorthPoint Energy Solutions

1. Do you regard BCTC's proposal as inconsistent with any particular rate design principles? If so, please explain.

Response:
No

2. Do you regard BCTC's proposal as causing undue discrimination or preference to any particular class or group of customers? If so, please explain.

Response:
Definitely not.

3. What impact will BCTC's proposal have on your ability to reserve transmission, as compared to the status quo? Please explain.

Response:
None whatsoever.

4. Are you generally supportive of, indifferent to, or unsupportive of BCTC's proposal? Please explain.

Response:
Very supportive

5. BCTC's proposed price floor of \$1/MWh is intended, in part, to address the issues with directional pricing and the ability to reserve multi-day transmission. Do you agree that a \$1/MWh price floor is a fair reflection of the value inherent in directional pricing and the ability to reserve multi-day transmission? If not, please explain and propose an alternative for determining such value.

Response:
I agree that a \$1 floor price is reflective of the value and it prevents transmission hoarding for no cost.

6. Would you prefer or are you indifferent to an alternative to maintain the status quo in the interim? Please explain.

Response:
In different.



October 17, 2008

Brenda D. Ambrosi
Customer Service Manager
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
Vancouver B.C. V7X 1V5

TransCanada Energy Ltd.
450 - 1st Street S.W.
Calgary, Alberta, Canada T2P 5H1

tel 403.920.2081
fax 403.920.2362
email chris_best@transcanada.com
web www.transcanada.com

Sent electronically: (Brenda.Ambrosi@bctc.com)

Dear Brenda:

Re: Proposed Amendments to BCTC's Short-Term Point-to-Point ("ST-PTP") Rate Design

TransCanada appreciates the effort undertaken by BCTC to develop the Customer Consultation Paper on Proposed Amendments to BCTC's ST-PTP Rate Design. The following are TransCanada's comments on that paper:

TransCanada is concerned with some of the analysis presented in the paper, primarily with respect to "blocked transactions". When determining the "percent of trade blocked" in table 2A, BCTC has assumed that some of the executed historic trades would have been blocked if the ST-PTP transmission rate exceeded the wholesale market difference, transmission losses and other transmission charges. TransCanada does not believe this analysis should be relied on due to the effect of other unaccounted-for external influences. These would include market participant position, sunk costs, contractual obligations, amongst others, and most critically the impact of trades on market prices. In fact, the reduction of transmission price may incent more trades into a region, putting downward pressure on the index in that region and in effect "block" more trades, than if the transmission price had been higher. Thus, the wholesale price differential should not be considered to be static as transmission rates are changed. Moreover, parties dealing with the AESO are exposed to power price uncertainty, making them less likely to respond to marginal differences in transmission price. Due to this factor, trades that may appear "blocked" would have likely been executed anyway. Without a thorough assessment and reconstitution of both the Alberta merit order and the Mid-Columbia market this analysis is suspect.

While TransCanada may have historically financially benefited under the proposed rate design, we are opposed to it on principle. TransCanada believes that an indexed price design can be more reflective of the value of ST-PTP transmission than a flat price as it relates to the underlying markets interconnected by the transmission line. Furthermore, the flat price would be open to more arbitrary changes than an indexed price.

If you need further clarification on these comments and questions, please feel free to contact me at (403) 920-2081.

Regards,

Chris Best
Market Services, Western Power

cc: Darren Angerman – TransCanada
Frank Karabetsos - TransCanada

Appendix H

Report on Firm Sales to Alberta and
Conditional Firm Service, 8 August 2008

Janet L. Fraser
Director, Regulatory Affairs
Phone: 604 699-7318
Fax: 604 699-7229
E-mail: janet.fraser@bctc.com

8 August 2008

Ms. Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
900 Howe Street, Sixth Floor
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

**Re: British Columbia Transmission Corporation (BCTC)
Report to British Columbia Utilities Commission (Commission) Regarding
Firm Sales to Alberta and Conditional Firm Service**

Pursuant to Commission Order G-110-08, BCTC submits the attached report to the Commission regarding Firm Sales to Alberta and Conditional Firm Service.

Sincerely,

Original signed for

Janet L. Fraser
Director, Regulatory Affairs

**Report to the
British Columbia Utilities Commission on**

**FIRM SALES TO ALBERTA AND
CONDITIONAL FIRM SERVICE**

8 August 2008

1.0 PURPOSE OF THE REPORT

By Order G-110-08 (the Suspension Order) issued on 3 July 2008, the British Columbia Utilities Commission (the Commission) approved BCTC's Application (the Suspension Application) for Approval to Temporarily Suspend the Release of Firm Available Transfer Capacity (Firm ATC) on the BC to Alberta Path (BC>AB path). As part of the approval of the Suspension Application, the Commission directed BCTC to include in its next rate design review and/or FERC Order No. 890 filing, whichever comes first, a Tariff section which formally establishes, consistent with general Open Access Transmission Tariff (OATT) principles, and the FERC Order No. 890 guidelines, provisions for how BCTC will handle future situations, similar in nature to that addressed in the Application.

The Commission also directed BCTC to submit to the Commission by 8 August 2008 "a report containing the stakeholder submissions made to BCTC, and any BCTC commentary in response to those submissions, concerning the resolution of Long-Term Firm Point-to-Point services to Alberta, and Customer Proposals on Conditional Firm Service."

This Report complies with the Commission's latter directive by conveying customer comments and BCTC's responses on (1) the resolution of Long-Term Firm Point-to-Point (LTF PTP) service to Alberta, and (2) customer proposals on Conditional Firm Service (CFS).

2.0 LTF PTP SERVICE TO ALBERTA

2.1 Introduction

The issue raised by the Suspension Application, and the subject of the comments that are included in this part of this report, may be briefly stated as: "Should BCTC's OATT provide for limits on LTF PTP sales for service to Alberta, based on system conditions in Alberta and, if so, how?".

1 In this report, BCTC uses the term “BC>AB path” to describe transmission service to
2 Alberta, whether the service originates from British Columbia or the United States.

3 The BCTC OATT requires that Firm ATC be made available on a non-discriminatory
4 basis on request to LTF PTP customers on a first come, first serve basis. Firm ATC (on
5 any path) is calculated, without considering any constraints on neighbouring systems, in
6 accordance with the methodology prescribed in Attachment C of the OATT and BCTC’s
7 published Business Practices. Mathematically, ATC is defined as the Total Transmission
8 Capability (TTC) less the sum of the Transmission Reliability Margin (TRM), the
9 Capacity Benefit Margin and the sum of existing transmission commitments.¹

10 BCTC’s most recent studies have indicated that the TTC on the BC>AB path on a long–
11 term basis is 850 MW, which provides 785 MW for sale, after allowances for TRM.
12 Those studies have also indicated that TTC could be increased to the full WECC path
13 rating of 1200 MW with the addition of certain upgrades.

14 However, the AESO does not sell long-term transmission capacity in Alberta in the same
15 manner as BCTC. At an operational level, the AESO sets a maximum hourly import limit
16 into Alberta. That hourly import limit is currently set at a maximum of 780 MW in system
17 normal conditions, and varies with Alberta internal load levels. In real time, however, the
18 import limits can vary further and be much less than 780 MW as system conditions in
19 Alberta change, with the result that the LTF PTP capacity reservations for the BC>AB
20 path in British Columbia can exceed the amount of energy that can be dispatched by the
21 AESO over the intertie. Curtailments of energy schedules or transmission reservations
22 are necessary when the Alberta import limits are lower than the energy scheduled to
23 Alberta on BCTC LTF PTP transmission reservations. It is this situation that led to the
24 Suspension Application, and the issues discussed in this part of the report.

25 Existing LTF PTP customers have urged BCTC to take Alberta’s system conditions into
26 account when determining TTC on the BC>AB path so that curtailment of transmission

¹ Business Practice 2.0, at p.7. Business Practice 2.0 can be found at: <http://www.bctc.com/NR/rdonlyres/E1A96D8A-8BB2-426B-B83F-C9FB92799648/0/Section2Dec102007.pdf>

1 reservations on those customers are limited. Potential customers have urged BCTC to
2 continue to sell LTF PTP service on that path as Firm ATC becomes available on the
3 BCTC system alone, so as to increase access to transmission services.

4 In BCTC's view, the issue is exacerbated by the different market structures in BC and
5 Alberta. In contrast to British Columbia, the AESO does not have an OATT-style physical
6 capacity reservation transmission tariff. Alberta has a pool-based energy market where
7 transmission is provided to those generators or marketers whose schedules are
8 dispatched, usually in merit order. The current market structure in Alberta also requires
9 imports to be "price takers" with a bid into the pool at zero, so that energy schedules
10 above import limits are not rationed based on price. The AESO dispatches all import
11 energy schedules up to and above its own maximum import levels, relying on BCTC to
12 curtail transmission in BC when Alberta's import limit is exceeded. It is only if BCTC
13 does not curtail transmission reservations to the Alberta import levels in a particular hour
14 that Alberta curtails energy schedules, doing so on a last-in/first-out basis. Accordingly,
15 what customers tend to see is curtailment of transmission on the BC system, rather than
16 curtailment of energy schedules on the Alberta system.

17 As described in the Suspension Application, and as directed by the Suspension Order,
18 BCTC intends to address the issue of additional LTF PTP sales to Alberta in its next
19 OATT application. Prior to doing so, BCTC has consulted with its customers and sought
20 comment on the options available to address the issue of additional LTF PTP sales to
21 Alberta.

22 **2.2 Potential Options**

23 At the 14 July 2008 consultation, BCTC outlined three potential options with respect to
24 additional LTF PTP sale to Alberta. BCTC characterized Options 1 and 3 as
25 representing "bookends".

26 Option 1: Provide LTF PTP service based on the British Columbia System only.

This option represents the status quo to the extent that all LTF PTP service has the same firm priority and service is cut pro rata if needed. BCTC will continue to work with the AESO to develop near-term and longer-term mitigation measures for the Alberta system constraints that are causing the curtailments. Taking this option means that the suspended studies on the BC>AB path would resume, that LTF PTP services would be provided based on BCTC system conditions only, and that BCTC would continue to work with the AESO to develop both short and long-term solutions at the border.

Option 2: Stop selling any additional LTF PTP service on the BC to Alberta Path and issue new LTF PTP service conditional on the limits of neighbouring systems.

BCTC observed that this option would require defining the Alberta constraint over a period of at least 1 year.

Option 3: Stop selling any additional LTF PTP service on BC to Alberta Path, with all incremental ATC, conditional on limits of neighbouring systems, released as Short-Term Firm Service.

Customer comment was sought on each of these options. The presentation delivered by BCTC at the 14 July 2008 consultation on this issue is attached at Tab A.

2.3 Customer Comments

At the 14 July 2008 consultation, BCTC requested that participants forward comments to BCTC for consideration and inclusion in this report by no later than 24 July 2008. BCTC received written comments on 24 July 2008 from five customers: NorthPoint Energy Solutions Inc. (NorthPoint), TransAlta Energy Marketing (U.S.) Inc. (TransAlta), TransCanada Corporation (TransCanada), British Columbia Hydro and Power Authority, for itself and Powerex Corporation (BC Hydro/Powerex), and Candela Energy Corporation (Candela). Their comments are attached to this report at Tabs B through F respectively, and are summarized below.

1 As a general statement, the comments of each customer, perhaps predictably, tend to
2 reflect that customer's commercial position. Existing LTF PTP customers such as
3 TransCanada, NorthPoint, and BC Hydro/Powerex seek to protect the value of their
4 existing rights by limiting further sales of LTF PTP. Potential LTF PTP customers such
5 as TransAlta and Candela seek enhanced access to transmission services, at the risk of
6 increased curtailment of existing customers.

7 Option 1 (status quo/operational co-ordination with AESO) was favoured by TransAlta.
8 TransAlta does not currently hold a LTF PTP contract, but has requests in the queue,
9 and is a customer participating in the Facilities Study on the BC>AB path that was
10 suspended by the Suspension Order. TransAlta indicates that it supports Option 1
11 because Option 1 is consistent with the current OATT tariff; recognises that the Alberta
12 import limits are indicative of operational constraints, rather than tariff issues; and
13 releases Firm ATC to the market in a non-discriminatory manner.

14 Option 2 (stop selling any additional LTF PTP service on the BC>AB path and issue new
15 LTF PTP service conditional on the limits of neighbouring systems) is favoured by BC
16 Hydro/Powerex. BC Hydro/Powerex hold most of the LTF PTP capacity on the BC>AB
17 path, including most of the capacity that was released for sale December 2007. BC
18 Hydro/Powerex do not favour Option 1 because of the risk of further curtailments to
19 existing firm customers, and do not favour Option 3 because of the perceived difficulty in
20 predicting the available Alberta import capacity on the BC>AB path.

21 In favouring Option 2, BC Hydro/Powerex do not recommend the establishment of preset
22 criteria with respect to Alberta import limits that, if satisfied, would provide LTF PTP
23 service to new customers on the same basis as existing customers. Rather, BC
24 Hydro/Powerex recommend the establishment of two classes of LTF PTP customers:
25 those who already have service and those who acquire new service. As BCTC
26 understands BC Hydro/Powerex's comments, the "new customers" would always be
27 curtailed before the "old customers".

28 Option 3 did not find favour among any of BCTC's customers.

1 Three customers, TransCanada, NorthPoint and Candela, did not expressly favour any
2 of the options presented by BCTC at the 14 July 2008 consultations.

3 In its comments, TransCanada raised a similar proposal (two classes of LTF PTP
4 service) to that of BC Hydro, but back-dated the demarcation line between “old” and
5 “new” customers to 1 December 2007. TransCanada suggested that priority be given to
6 firm holders of capacity before the latest sales of LTF PTP service to Alberta beginning
7 1 December 2007, pointing out that the largest purchaser after that date was BC
8 Hydro/Powerex. TransCanada is a current LTF PTP customer, holding a 100 MW
9 contract that it “rolled over” for five years in December 2006.

10 NorthPoint made a similar suggestion during the oral portion of the consultations and
11 suggested in its written comments that no LTF PTP service on the BC>AB path should
12 be provided above 600 MW.² NorthPoint suggested, in the alternative, that some
13 consideration should be given to refunding transmission charges to transmission
14 customers, based on the ATC posting in Alberta. NorthPoint also raised concerns
15 regarding the impacts of the Suspension Order on studies with respect to upgrades on
16 the US>BC path. NorthPoint holds an existing contract for LTF PTP service on the
17 BC>AB path, and has further requests in the queue for wheeling service from the US to
18 Alberta.

19 Finally, Candela proposed a number of options, including:

- 20 (a) Resale of BC Hydro/Powerex reserved capacity to other customers while capacity
21 to Alberta is constrained;
- 22 (b) Limiting LTF PTP sales to a term of one year;
- 23 (c) Limiting the maximum and minimum volume of LTF PTP sales to any one
24 customer; and

² In order to provide some context for the Commission, BCTC notes that there is an existing LTF PTP contract for 180 MW of capacity that is set to expire on 1 January 2009. The question of whether this capacity should be withheld from further release will likely be addressed by the determination of the appropriate Tariff terms and conditions for LTF PTP sales to Alberta in BCTC's next OATT application.

(d) Refunding firm service charges for the portion of reserved capacity subject to curtailment.

2.4 BCTC Response to Customer Comments

As directed by the Commission, BCTC will be providing a proposal to address LTF PTP sales to Alberta in its next rate design review and/ or FERC Order 890 filing. As such, the following comments are preliminary in nature, with the intention of providing the Commission with some context on the issues that are raised by the customer comments included in this report. BCTC will address these issues more completely in its next OATT application to the Commission.

Prior to addressing each of the options, a number of general comments are warranted.

First, at a general level, BCTC agrees with TransAlta that the issues associated with the provisions of LTF PTP service on the BC>AB path are largely operational, rather than tariff related. While the BC>AB path has a WECC path rating of 1200 MW, and the maximum import limit in Alberta is 780 MW, system conditions tend to limit that import limit further in real-time, to values as low as zero. Fluctuations are dependent on load levels in Alberta, units in service, the availability of Import Load Remedial Action Schemes (ILRAS) and other factors. Moreover, curtailments of transmission reservations in BC to account for import levels to Alberta are a reflection of the BCTC/AESO protocols for managing the intertie in real time. BCTC believes that the longer term resolution of the issues due to lower Alberta hourly import levels is more likely to come from co-ordinated planning and operational measures than it is from OATT tariff changes.

Second, the determination of any particular limit to LTF PTP sales based on varying Alberta system conditions raises significant difficulties. Customer comments tend to focus on the use of historic real-time values of Alberta import limits as potential limits for the sale of LTF PTP on the BCTC Transmission System. However, BCTC does not view these past real-time values as useful indicators of future long-term TTC because they

1 reflect historic short-term conditions such as hourly load levels and the availability of
2 demand response schemes, and are not necessarily accurate reflections of the future
3 longer term state of the transmission system in Alberta.³ Customer comments indicate
4 different levels of confidence with respect to the time frame in which Alberta import
5 capacity can be increased. However, the presence of customers (with knowledge of
6 current constraints) seeking LTF PTP service in the BCTC queue is an indication of
7 some level of confidence that the current situation is not permanent and that long-term
8 investments in transmission capacity reservations are warranted.

9 Third, and in particular response to NorthPoint, BCTC's understanding of the
10 Suspension Order is that it has not suspended the studies with respect to network
11 upgrades on the US>BC path.

12 Turning to the specific comments on the options that have been presented, BCTC
13 believes that, in essence, four basic options have been raised by either BCTC or by
14 customers.

15 **Option 1: Status quo**

16 Continue to offer the full amount of ATC in accordance with existing tariff and
17 study procedures. To the extent that customers are willing to pay for network
18 upgrades on the BCTC system, this may increase the amount of LTF PTP sales
19 up to the full WECC West-to-East path rating of 1200 MW. This option (and all
20 options) would also include co-ordination with the AESO at a planning and
21 operational level to increase the imports into Alberta over time.

³ BCTC and the AESO have each expressed their interest in working together to find ways to increase transfer capability between the two provinces. BCTC also notes that Section 15(1)(g) of the *Alberta Transmission Regulation* (AR 86/2007) requires the AESO to “make rules respecting the preparation of needs identification documents for, and the planning and processing of, enhancements or upgrades to transmission facilities that existed on August 12, 2004, for the purpose of providing transmission capacity to import or export electricity to or from Alberta in excess of the path ratings that existed on August 12, 2004”. BCTC understands the reference to “path ratings that existed on August 12, 2004” to refer to the 1200 MW path rating on the BC>AB path.

Option 2: Provide lower priority service to new LTF PTP customers

Stop selling new LTF PTP service (that is, above 785 MW) on the BC>AB path until the AESO can increase its capability to accept energy above 785 MW. Instead, BCTC would sell new “conditional” LTF PTP service, with the conditions being defined by operating restrictions in both BC and in Alberta. The new customer may be required to back-stop network upgrades in BC to remove BC-specific conditions. BC Hydro/Powerex and, to some extent, TransCanada, propose a variation of this option by creating two classes of LTF PTP customers based on the date that LTF PTP service was obtained, with “old customers” having priority over “new customers” regardless of the system condition that causes a curtailment.

Option 3: Stop selling new LTF PTP

Stop selling new LTF PTP service altogether and sell only short term firm service when the AESO increases its capability.

Option 4: Roll back TTC

Return service to some defined level and modify the business practice and tariff to explicitly link TTC to limits in neighbouring systems.

Option 1, as noted above, is favoured by new customers, but is not favoured by existing customers because of the risk of future curtailments due to system conditions in Alberta.

From a tariff principle⁴ perspective, there are a number of advantages to Option 1. It results in comparable service for all LTF PTP customers, rather than discriminating on

⁴ There are a number of principles that are applicable to OATT tariffs. Of particular relevance here, are the principles of comparability, fairness, and practicality. The principle of comparability is that a transmission provider is to provide service to others on the same terms and conditions as it provides those services to itself or its affiliates. BCTC applies this principle as requiring comparable treatment of wheelthrough customers and domestic customers like BC Hydro in like circumstances. Fairness tends to relate to the principle that one set of customers should not subsidize another. Practicality is self-explanatory.

1 the basis of service date. It ensures that new customers supporting upgrades on the
2 BCTC system do not receive a poorer level of service than existing customers.

3 There are also practical advantages to this solution. First, it is easier to administer a tariff
4 where there are fewer distinctions among customers. Second, BCTC believes that if
5 upgrades are not made to the BCTC system as requests for service are made, it is less
6 likely that the BCTC system will expand in a timely way to capture the opportunities that
7 become available as the Alberta system improves its import capability. The issue that
8 the Commission will have to consider, with respect to Option 1, is whether these
9 advantages are outweighed by the increased risk of curtailment to existing LTF PTP
10 customers until import capability into Alberta can be increased.

11 There are two versions of Option 2 that have been presented. The version presented by
12 BCTC would see incremental LTF PTP being sold subject to a condition that, if met,
13 would convert the service to the same LTF PTP service provided to existing customers.
14 The form of Option 2 presented by BC Hydro/Powerex and TransCanada (and perhaps
15 NorthPoint) would set different priorities for “old” and “new” customers respectively
16 based on the date of the service contract, with the difference between the two parties, as
17 BCTC understands their comments, largely dictated by the date of their last contract.

18 Option 2, as described by BC Hydro/Powerex (and as modified by TransCanada) is a
19 solution that may limit curtailments to existing LTF PTP customers. However, the
20 Commission will also have to consider whether creating two classes of customers, with a
21 higher priority given to “old” customers, is fair to “new” customers who may well have
22 elected to support upgrades to the British Columbia transmission system.

23 Option 2 also raises issues of comparability among customers, pricing issues (how
24 would the new service be priced?), and practicality issues.

25 For example, customers would be less prepared to finance upgrades to the BCTC
26 system if the service that they receive is a lower priority service than they would receive
27 under Option 1. If that support cannot be obtained, it may make it more difficult to co-

1 ordinate overall development of the intertie to provide greater export capacity from
2 British Columbia and greater import capacity into Alberta over time.

3 Finally, there is a practical problem in determining the system condition that separates
4 the “old” and “new” customers. With Option 2, as presented by BCTC, the practical issue
5 is identifying the appropriate system condition that, if satisfied, would convert the
6 conditional service to LTF PTP service that is comparable to that provided to existing
7 customers. With Option 2, as presented by BC Hydro/Powerex and TransCanada, the
8 practical issue will be what system condition appropriately defines the date at which the
9 division between “old” and “new” customers is made.

10 As there was no significant comment supporting Option 3, BCTC does not intend to
11 comment further on that Option in this report.

12 Option 4 involves a “roll-back” of TTC to some defined level of service. Assuming that it
13 is at all feasible, the advantage of this proposal is that it would protect the perceived
14 rights of some, but not all, existing LTF PTP customers. However, the disadvantages to
15 this proposal include potentially discriminatory treatment of those customers whose
16 contracts are “rolled back”, the difficulty of finding the appropriate “roll-back” level, and
17 the removal of an option for customers to support upgrades to develop the BCTC system
18 to take advantage of increased import capacity in Alberta as it arises - tantamount to the
19 denial of comparable access to ATC on the BCTC system for those who are willing to
20 pay.

21 Options 2 through 4 would each require BCTC to look outside of its own jurisdiction and
22 beyond the facilities it can control to determine how much ATC can be offered on the
23 BCTC system. These options raise a number of issues that BCTC would have to
24 address. For instance, if BCTC is to limit ATC on its own system in response to issues
25 on the Alberta system, it would need to determine which limits to enforce, and how to
26 decide on those limits. It would also have to determine which study cases to consider
27 when evaluating the effect of new transmission service on its neighbours' system. It
28 would have to determine which systems to consider. Would BCTC consider only its

1 direct neighbours, or would it be required to consider flows throughout the western
2 interconnection for each system impact study?

3 Candela raised a number of comments that are not specifically addressed under any of
4 the Options. These included re-selling existing BC Hydro/Powerex reserved LTF PTP
5 capacity to other parties, restricting the term and value of LTF PTP transmission
6 contracts, and providing for refunds of transmission charges when curtailments occur.

7 BCTC observes that the re-allocation of existing BC Hydro/Powerex reserved LTF PTP
8 capacity does not appear to address the issue of whether incremental LTF PTP capacity
9 to Alberta should be sold. BCTC also observes that the proposal to restrict the term and
10 volume of LTF PTP contracts appears to be inconsistent with the general policy
11 underlying the OATT to encourage longer term contracts as a means of fostering the
12 stable and orderly development of the transmission system. Finally, BCTC notes that
13 any proposal to refund rates for LTF PTP would require the Commission to consider
14 whether such a proposal would be just and reasonable, given the apparent value of that
15 scarce transmission capacity, the apparent willingness of customers to subscribe for that
16 capacity knowing of the risks of curtailment, and the impact of refunds on other rate
17 payers.

18 **3.0 CONDITIONAL FIRM SERVICE**

19 **3.1 Introduction**

20 In Order No. 890, FERC required transmission providers to offer a new service called
21 Conditional Firm Service (CFS). CFS is a form of partial⁵ LTF PTP service that is offered
22 when firm ATC cannot meet the full request. CFS may be curtailed before other firm
23 services under some specified conditions. CFS may be used as a bridge service for
24 customers wishing to start service before the completion of required network upgrades,
25 or by customers who can accept the risk of curtailment. A summary of CFS, as
26 described by FERC, is set out below. BCTC currently contemplates that a form of CFS

⁵ Partial service terms and conditions are set out in Section 19.7 of BCTC's OATT.

will replace BCTC's current Shaped Service. The precise form that CFS should take has been the subject of BCTC's consultations.

3.2 Characteristics of CFS

3.2.1 Curtailment Conditions

CFS may be curtailed prior to other firm services, on the same priority as secondary network service (commonly known in British Columbia as Network Economy), under certain specified conditions. There are two options for curtailment – the System Condition Option and the Number of Hours Option. A CFS customer must choose one of those options.

If the CFS customer chooses the System Condition Option, CFS may be curtailed by the Transmission Provider prior to other firm services when the specified system conditions occur, or are anticipated to occur.

If the CFS customer chooses the Number of Hours Option, CFS may be curtailed by the Transmission Provider for a specified number of hours, prior to other firm services, whenever a reliability event is occurring, or is anticipated to occur, that curtailment of the service would help to relieve.

3.2.2 Biennial Reassessment and Termination of Service

CFS is subject to biennial reassessment, unless the transmission customer is using CFS as a bridge service prior to obtaining LTF PTP service. For CFS customers who are not using CFS as a bridge service, the Transmission Provider may reassess the curtailment conditions biennially. If the reassessment results in curtailment conditions becoming more onerous to the transmission customer, the transmission customer may choose to either continue with the service under the new conditions or discontinue the service. If the reassessment results in curtailment conditions becoming less onerous to the transmission customer, the transmission customer may not terminate the service agreement; rather, both parties will remain contractually bound to continue the service

1 until the next reassessment or until the service agreement terminates, whichever comes
2 first. If the reassessment results in no change to curtailment conditions, both parties are
3 obligated to continue the service through the term of the service agreement.

4 **3.2.3 Rollover Right**

5 CFS customers have rollover rights under the same conditions in which rollover rights
6 are available for LTF PTP customers and with the same conditions, unless a
7 reassessment changes the conditions.

8 **3.2.4 Award of Short-Term Capacity**

9 Short-term firm ATC (i.e. hourly, daily, weekly or monthly) will be awarded to the CFS
10 customers in queue order during the term of their service agreements, as it becomes
11 available and prior to being offered to the market.

12 **3.2.5 Pricing**

13 CFS customers pay the LTF PTP rate regardless of any curtailments.

14 **3.2.6 Out of Area Network Resource**

15 CFS qualifies as firm service that supports the designation of network resources
16 imported from other regions.

17 **3.2.7 Redirect & Resale**

18 CFS has the same redirect and resale rights as LTF PTP service.

19 **3.3 Consultation with Customers**

20 The characteristics of CFS were presented to customers in a consultation session on
21 30 April 2008. Subsequent to this session, customers provided comments. In those
22 comments customers primarily expressed concerns regarding the determination of
23 system conditions for curtailment (in the System Condition Option), and generally

1 indicated that they did not favour the Number of Hours Option. TransCanada, in
2 comments dated 17 June 2008, also set out a set of conditions under which CFS would
3 be acceptable to it. These conditions were (i) that the Alberta system can sink or accept
4 all existing LTF PTP volumes, plus the proposed volumes of conditional firm service; (ii)
5 that no curtailments of LTF PTP are occurring; (iii) that offering conditional firm service
6 would not cause any LTF PTP curtailments to occur; and (iv) that a public and
7 transparent process is created to clarify the calculation and implementation of hours of
8 curtailment and the definition of a system condition.

9 At the consultation session on 14 July 2008, BCTC proposed three options with respect
10 to determining system conditions for curtailment under the System Condition Option.
11 Three customers provided further comments on these options, which are included in the
12 correspondence attached to this report at Tab B (NorthPoint), Tab D (TransCanada) and
13 Tab E (BC Hydro/Powerex).

14 The three potential options for determining system conditions for curtailment under the
15 System Condition Option presented by BCTC at the 14 July 2008 consultation session
16 are:

17 (a) Using the same method as BCTC's current Shaped Service

18 The amount of monthly firm service available is defined in a System Impact Study
19 for the service requested, on the same basis as Shaped Service, i.e. based on
20 forecast committed use.⁶ CFS will not be available in months where the forecast
21 committed use is above the level where ATC becomes zero. The shape for the
22 service will be defined in the Service Agreement.

23 (b) Adopting the requirements of FERC Order No. 890

24 The system condition is defined on a case by case basis, in a System Impact
25 Study for the service requested. Under this method, CFS can be curtailed prior to

⁶ Forecast committed use includes the capacities reserved for committed LTF PTP contracts and forecast use for domestic loads net of generation.

other firm services when the specified system condition is occurring or anticipated to occur. System conditions will be defined in the Service Agreement.

(c) Combining the criteria of Shaped Service and CFS

The amount of monthly firm service available is defined in a System Impact Study for the service requested, on the same basis as Shaped Service, i.e. based on forecast committed use as in (a). Under this method, (i) in the months where firm service is available, CFS can only be curtailed on the same basis as other firm services, and (ii) in the months where firm service is not available, service will continue to be available but can be curtailed prior to other firm services if actual committed use is equal to or higher than a predetermined value which will be specified in the Service Agreement.

3.4 Customer Comments

Customers generally raised the following questions and issues with CFS:

- (a) Potential impact of additional sales on the reliability of existing firm service, especially on the BC>AB path;
- (b) Transparency in determining system conditions for curtailment;
- (c) Release of Network Customers' confidential information with the curtailment conditions;
- (d) Discretion provided to the Transmission Provider in the "Number of Hours" Option.

Three customers, BC Hydro/Powerex, TransCanada and NorthPoint, included proposals with their comments.

BC Hydro/Powerex proposed that BCTC should develop: a Business Practice for CFS that would set out a complete list of specific system conditions that could form the basis of CFS (without revealing confidential information); the methodology and risk criteria

BCTC will use to determine conditional curtailment hours that could form the basis of CFS; a requirement that any system impact study that identifies curtailment options be posted for comment before any CFS service is offered; and a requirement that any CFS service agreement be filed with BCUC for approval. BC Hydro suggested that BCTC address these concerns in its application to implement FERC Order No. 890 later this year.

TransCanada maintained its view that BCTC should offer CFS only if: (i) the AESO can accept all existing LTF PTP volumes and new CFS service; (ii) no curtailments on LTF PTP are occurring; (iii) offering CFS would not cause curtailment on LTF PTP; and (iv) a public and transparent process is created to clarify the calculation and implementation of hours of curtailment and the definition of a system condition.

NorthPoint proposed that BCTC should not offer the “Number of Hours Option” with CFS.

3.5 BCTC Response to Customers

Customers did not specifically express a preference for one of the three options to determine the system conditions for curtailment of CFS that BCTC presented at the 14 July 2008 consultation. However, customers have expressed a concern with the Number of Hours Option regarding the level of discretion that is provided to the Transmission Provider with respect to the terms of curtailment. BCTC does not share this concern because under the Number of Hours Option, CFS can only be curtailed prior to other firm services if the reliability of the system is at risk and the curtailment would help to relieve the reliability event. In addition, under this option the maximum number of hours that the service can be curtailed prior to other firm services is predetermined.

BCTC understands BC Hydro's primary concern to be the potential impact of CFS on the reliability and flexibility of BC Hydro's network service. BCTC agrees that the methodology and risk criteria that BCTC will use to determine conditional curtailment

1 need to be transparent. BCTC intends to set out the methodology and risk criteria in a
2 business practice. BCTC believes that a predetermined list of specific system conditions
3 for conditional curtailment is not necessary or practical because the availability of CFS
4 depends on many factors including firm service requests with higher queue priority,
5 forecast domestic loads and forecast generation resources all of which could change
6 from time to time.

7 BCTC understands TransCanada's concerns regarding CFS to reflect its general
8 concerns with respect to sales of incremental Firm ATC on the BC>AB path. That is,
9 offering CFS might increase curtailment risk on existing customers. BCTC acknowledges
10 that the implementation of CFS on the BC>AB path will have to be consistent with the
11 resolution of the issues with respect to additional sales of LTF PTP service to Alberta.

12 **4.0 CONCLUSION**

13 In this report, BCTC has responded to the Commission's directive to convey customer
14 comments and BCTC's responses on: (i) the resolution of the issue of additional LTF
15 PTP service to Alberta, and (ii) customer proposals on Conditional Firm Service. BCTC
16 has provided its responses and comments in this report as directed, but notes that it is
17 still considering the comments made by customers and developing an application that
18 will, among other matters (such as BCTC's implementation of FERC Order No. 890),
19 address these issues in greater detail.

20 As indicated previously, BCTC intends to file that application this fall.

Tab A

ORDER NO. 890 IMPLEMENTATION

Stakeholder Consultation No. 2

July 14, 2008

Agenda

1. Meeting Goals
2. Firm Service to Alberta
3. Conditional Firm Service
4. Report and Discussion on Other Outstanding Items

Meeting Goals

1. Explore options for the development of a tariff section which formally establishes provisions on how BCTC will handle future sales of LTFPTP service on BC>AB path
2. Explore options for Conditional Firm Service
3. Discuss Other outstanding items on tariff changes

Firm Service to Alberta

- BCUC in its decision on BCTC's Application for temporary suspension, directed BCTC to
 - Include in its next rate Design review and/or FERC-890 compliance filing, whichever comes first, a Tariff section which formally establishes, consistent with general OATT principles, and the FERC 890 guidelines, provisions for how BCTC will handle future situations, similar in nature to that addressed in the Application
 - Submit a report, by August 8, 2008, containing the stakeholder submissions made to BCTC, and any BCTC commentary in response to those submissions, concerning the resolution of LTFPTP services to Alberta, and Customer Proposals on Conditional Firm Service.
 - Stakeholders are requested to submit stakeholder submissions on the resolution of LTFPTP service to Alberta and revised or additional proposals on Conditional Firm Service to brenda.ambrosi@bctc.com by July 24, 2008

Firm Service to Alberta– The Choices

- Option 1: Provide Long Term Firm Point-To-Point (LTFPTP) service based on BC System only
 - Status Quo: All firm service have same firm priority and service is cut by load ratio share if needed.
 - Something New: Work with AESO to develop near-term and longer-term mitigation measures
- Option 2: Stop selling any additional LTFPTP service on BC to Alberta Path and issue new LTFPTP service conditional on limits of neighboring systems
 - Requires defining the Alberta constraint over a period of at least 1 year.
- Option 3: Stop selling any additional LTFPTP service on BC to Alberta Path, with all incremental ATC, ***conditional on limits of neighboring systems,*** released as Short-Term Firm Service.
- Other Options?
- ***[NOTE: the text in italicized red font above was added on July 15th subsequent to the consultation session, in response to a customer request for clarification during the session]***

Some Questions to Consider

- Option1- Continue to Sell Up to ATC per Tariff
 - Is there interest in such sales and why?
 - What will be the implications and potential solutions?
 - Other Questions?
- Option 2- Only sell incremental LTFPTP service that is conditional on conditions in neighboring jurisdiction
 - Should this service be offered?
 - If so, can the conditions be defined?
 - How to determine the level of long term service available?
 - When should additional long term firm sales be offered?
 - How to implement?
 - Other Questions?
- Option 3- Only sell incremental short term service on this path
 - Economic justification
 - Other Questions?
- Other Options?

Conditional Firm Service

What is CFS

- It is a modified LTFPTP service that includes less-than-firm service in some defined periods when firm PTP service is not available.
- It is designed to be a bridge product.
- It is conditional upon system conditions within the transmission providers own system.
- It can be curtailed on the same priority as secondary network service for a ***defined numbers of hours*** of the year or during ***defined system conditions***.
- If firm service is curtailed, CFS on the same path will also be curtailed.

How does CFS compare with “Shaped Service”

- Both Shaped Service and CFS are different forms of Partial Service Under Section 19.7 of the Tariff
- Shaped Service provides firm service in all periods where it is available, and no service where it is not.
 - Shaped Service is based on forecast of committed use
- CFS provides firm service where it is available and conditional firm where it is not.
 - CFS is based on forecast occurrence of certain system conditions and frequency of occurrence

Customer Proposals

1. Business Practice to set out:

- a complete list of the specific types of system conditions that could form the basis of CFS (without revealing confidential information);
- the methodology and risk criteria BCTC will use to determine conditional curtailment hours that could form the basis of CFS;
- a requirement that any system impact study that identifies curtailment options be posted for comment before any CFS service is offered, and
- a requirement that any CFS service agreement be filed with BCUC for approval

2. Offer CFS only if

- AESO can accept all existing LTFPTP volumes and new CFS service
- No curtailments on LTFPTP are occurring
- Offering CFS would not cause curtailment on LTFPTP
- Public and transparent process on the determination of curtailment criteria for CFS

3. Offer CFS with only “System Conditions Option”

Customers Comments

- Impact on existing firm services on BC>AB path
- Clarify system conditions
- Don't like "Number of Hour Option"

Choices for Curtailment Conditions

- With system condition defined as:
 - Shaped Service
 - Firm service in periods where it is available and no service in periods where it is not available as determined by the current methodology
 - CFS
 - “System Conditions” determined in SIS
 - Combined Shaped + CFS
 - Firm service in periods where it is available as determined by the current methodology used for Shaped Service
 - CFS in period where no service is available with curtailment conditions based on the methodology of Shaped Service
 - Both the periods where firm service is unavailable and the conditions that cause no firm service will be defined in the System Impact Study.
 - Other Options?

Example

- Responding to a request for LTFPTP service for one year, BCTC determines that there is firm service available in the months March to November, based on forecasted committed use.
- Choice of curtailment condition based on:
 - Shaped Service
 - Firm service for the months between March to November
 - No service in the months of December, January and February
 - CFS
 - Firm service can be curtailed any time during the period if actual committed use exceeds the level defined by BCTC
 - Shaped + CFS
 - Firm service for the months between March to November
 - CFS in the months of December, January and February which will be curtailed if the actual committed use exceeds the level defined by BCTC

Report and Discussion on Other Outstanding Items

Context

1. BCTC posted its red-lined OATT and associated Business Practices for customer comment, following its consultation on its proposed implementation of FERC Order No. 890
2. BCTC received comments from BC Hydro, Northpoint and TransCanada
3. On the basis of the comments received, BCTC arranged, in part, to:
 1. Meet with BC Hydro directly on specific Network Customer issues that it raised in respect of:
 - the coordination of BCTC's proposed Planning Process with BC Hydro's Planning Process, and
 - the requirements for Designation and Undesignation of Network Resources.
 2. Respond in writing to other comments where clarifications were warranted and to invite further comment on such clarifications.
4. BCTC provided clarifications on specific customer comments, and arranged for a second consultation today to include:
 1. Report on the discussions with BC Hydro on the specific Network Customer issues, and
 2. Discussion of the outstanding issues raised in customer comments, where necessary.

Outstanding Discussion Items based on Customer Comments

FERC 890 Provision	Customer	Outstanding Discussion Item
Planning Process	BC Hydro TransCanada	BCTC to report on discussion
Designation and Undesignation of Network Resources	BC Hydro	BCTC to report on discussion
Performance Metrics and Operational Penalties	BC Hydro TransCanada	Definition of 'Affiliate'; Adoption of reform Definition of 'Affiliate'
Simultaneous Submission Window	BC Hydro	Applicability to Non-firm service

Meeting with BC Hydro on the Proposed Planning Process

BC Hydro Comments on the Proposed Planning Process

- How the proposed Attachment K process will be coordinated with BC Hydro's planning process and BCTC's existing planning process
- How the proposed Attachment K process fits with Parts II and III of the OATT

Coordination with BC Hydro's Planning Process

- The proposed planning process is a documentation of the current Capital Planning Process for the Growth Portfolio with a 2-year planning cycle
- There will be no change in the coordination with BC Hydro's planning processes
 - re-alignment of dates may be required because of the change in the length of planning cycle

Coordination with Part II & III of OATT

- BCTC will continue to respond to service requests under Part II & III of OATT following current practices
- These requests will inform the determination of the “need and requirements” of the planning process
- To the extent allowed by the timing and schedule of the service requests, BCTC will combine studies required under Part II and III of OATT with the planning studies in the proposed planning process

Meeting with BC Hydro on Designation of Network Resources

Designation of Network Resources - Attestation

890 Provision

- Statement required that, for existing and new Network Resources (OATT Sections 29.2(h) and 30.2):

“...(1) The Network Customer owns the resource, has committed to purchase the generation pursuant to an executed contract, or has committed to purchase generation where execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff; and (2) the Network Resources do not include any resources, or any portion thereof, that are committed for sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer’s Network Load on a non-interruptible basis; ...”

Customer Comment

- The requirements and form of the contemplated attestation are not clear in respect of:
 1. Designation of Split-Bid IPP as a Network Resource
 2. Forecast generation resources (not under contract)
 3. Entitlement Agreement Resources

Designation of Network Resources - Attestation

Discussion

- Attestation aligns with definition of Network Resource in Section 1.25 of the OATT
 - Attestations not required until service request confirmed
1. Designation of Split-Bid IPP as a Network Resource
 - Attest only to the portion of output in a split-bid EPA that is designated as Network Resource, as such could be called upon to meet the Network Customer's Network Load on a non-interruptible basis.
 2. Forecast generation resources
 - Attestations can be submitted at the time a resource designation is confirmed (Order 890-B), consistent with obligations of Section 30.7 of the OATT
 - Attestations required in respect of designated Network Resources, so no concern to attest to forecast resources that are not under contract and designated.
 - Capitalize "Network Resources" listed pursuant to Section 29.2(e) of the OATT, in preamble to attestation requirement in Section 29.2(h)
 3. Entitlement Agreement Resources
 - BCTC's Business Practices define BC Hydro's firm scheduling rights on the US > BC intertie under its Network Integration Transmission Service for the return of energy under the Canadian Entitlement Agreement.

Meeting with BC Hydro on Undesignation of Network Resources

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

890 Provision

Temporary and Indefinite Terminations

- A request to undesignate that is submitted concurrently with a request to re-designate at a specific point is considered a temporary termination - no forfeiture of rights.
- Transmission Provider must post change in ATC on OASIS.
- A requests to undesignate without any concurrent request to re-designate is considered a request for indefinite termination - no continuing rights.
- Transmission Provider must develop OASIS functionality and, working through NAESB, business practice standards describing the procedural requirements for submitting both temporary and indefinite terminations.

Other

- Network customers not permitted to make firm third-party sales from any designated network resource without:
 - undesignating that resource for the period of the third-party sale pursuant to pro forma OATT section 30.3 and
 - providing notice of such undesignation before the firm scheduling deadline

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

Customer Comment

- Given the complexity of the hydro-based system, and that operational decisions are often made in real-time, a lengthy notification period and onerous process could reduce the ability to optimise the system in real-time, which would result in losses to BC Hydro and its customers, and could possibly impact reliability.

Potential Solution

- FERC approved a joint application by Pacific Northwest utilities in response to this issue, in particular:
 - For purposes of temporary undesignations to support firm third-party sales, all or part of generation owned, purchased, or leased by the Network Customer associated with an OASIS-registered POR, behind which there are no transmission constraints that could affect offerings of transmission service to other customers, should be treated as a single generating unit.
 - ATC would not be affected by the selection of any particular generating unit behind the POR that the Network Customer might choose to support the third-party sale.
 - Reduces an unnecessary accounting and operational burden related with unit by unit undesignations when no ATC impact.

Undesignation of Network Resources – Notification Deadline and Process for Temporary Termination

Proposed Plan for Moving Forward

- Potential solution has merit.
- However, with ongoing development of ATC methodologies required under Order No. 890, current uncertainty about:
 1. what constitutes a transmission constraint in respect of ATC calculations;
 2. the associated determination of Network Resource groupings; and
 3. the associated business practice under which undesignations would occur when there is a transmission constraint.
- BCTC therefore proposes to finalize its proposed approach to deal with temporary undesignations, including the necessary revisions to its OATT and business practices, at such time that NERC approves the ATC methodologies.
 - BCTC will post for customer comment, will consult with customers if necessary, and will file an application to the BCUC for the necessary tariff amendments.

Other Comments and Clarifications

Performance Metrics & Penalties

890 Provision

1. Quarterly posting of performance metrics – Long-Term Transmission Requests Only
2. Notification and additional metrics filed with Commission and penalties for routine poor performance
3. No revenue requirement recovery of penalties allowed - allocation to all non-affiliate customers.

Customer Comments

- BC Hydro requests that BCTC reconsider its existing view that BC Hydro and Powerex are Affiliates for the purpose of Section 19.9 of the OATT.
- TransCanada maintains BCH/Powerex are affiliates of BCTC under the new definition in the OATT, for reasons set out in page 3 of their comments, dated June 17, 2008
- BC Hydro also comments that the operational penalty mechanism will not be particularly helpful, being difficult to administer and possibly requiring significant effort and process to document and defend extenuating circumstances.

Simultaneous Submission Window

890 Provision

Window within which all transmission service requests will be deemed to have been submitted simultaneously

- Required, as applicable, for transmission providers that have adopted a “no earlier than” time for the submission of firm PTP service
- Discretion to determine which transmission services subject to window
- A change to the current first-come, first-served policy to ensure that service is not awarded in an arbitrary fashion, and that less sophisticated customers with fewer financial resources have equal access.
- BCTC proposes to use a 5 minute window for firm and non-firm service, beginning at start of service request period, pre-schedule only, excluding LTF PTP

Customer Comment

Applicability to Non-Firm Service

- It should only apply to short-term firm services, and not also to short-term non-firm services, as proposed by BCTC.

Simultaneous Submission Window

Discussion

Applicability to Non-Firm Service

- FERC notes in Order 890-A that the pro forma OATT contains a “no earlier than” time that applies to requests for non-firm service, but it did not intend that this trigger the requirement to establish an SSW. The requirement applies to TPs that adopted a no earlier time for the submission of firm PTP or network service
 - Clarification of the trigger given that otherwise the SSW would be triggered in all instances given the language of the pro forma OATT in respect of non-firm service
 - BCTC proposal to apply the SSW to non-firm service intended as a consistent approach to meet the principles that embody FERC’s enhancement of open and non-discriminatory access through the establishment of the SSW
- Are there other customer views on applying the SSW only to Short-term Firm service?

Questions ?

Comments?

Wrap-Up & Next Steps

- Stakeholder submissions on
 1. tariff provisions with respect to future sales of LTFPTP service to Alberta and
 2. revised or additional proposals on Conditional Firm Service, by July 24, 2008
- Additional comments on other items discussed today, by August 1, 2008.
- Send to: Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
Vancouver, BC V7X 1V5
Phone: (604) 699-7391 / Fax: (604) 699-7539
brenda.ambrosi@bctc.com

Tab B

NorthPoint

Energy Solutions Inc.
2025 Victoria Ave.
Regina, SK S4P 0S1

Phone: (306) 566-3311
Fax: (306) 566-3364
Email: dslade@northpointenergy.com

August 5, 2008

British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street
PO Box 49260
Vancouver, BC V7X 1V5

Attention: Brenda Ambrosi

Dear Ms Ambrosi:

NorthPoint would like to take this opportunity to submit comments regarding subject matter that was discussed during the second FERC 890 consultation held July 14, 2008 in Vancouver. The following comments are in no particular order of importance.

- Some of our previous concerns have been alleviated with new information that conditional firm service will always be curtailed pro rata anytime other firm service is being curtailed.
- NorthPoint is disappointed with the decision to temporarily suspend allocation of additional firm service and to suspend any facilities studies that were underway. It is NorthPoint's belief that they are next in the queue to receive firm service from BC.US Border to BC.AB. The understanding is that the only reason NorthPoint was not allocated service under TSR's #71086993 and 71086996 is because upgrades are required on the BC.US Border to BC Internal path. Now that facilities studies have been suspended, these upgrades will not proceed in a timely fashion and other TSR's that were queued after these requests, will be granted service because they are on a BC Internal to AB.BC path. Any further delay in completing the studies and completing required upgrades could mean that these requests will be denied because there will not be enough time to grant a minimum of 12 months of service. It seems grossly unfair to grant service to another counterparty, which causes present firm service to be devalued, and then not allocate any more firm service to requests that were queued earlier.
- One of the reasons for deciding to suspend the studies was so that no more money was spent on increasing the ATC into Alberta until some increase is done to the ATC inside Alberta. The previous point brings up the fact that the upgrades are needed on the BC.US Border, so in fact the money needs to be spent on that path, not the BC to Alberta path.
- In BCUC Order # G-110-08 point D, the wording "from time to time" and "it is sometimes necessary" are used in describing how often curtailments are required. NorthPoint argues that curtailments are a lot more often than this statement might indicate. In fact, since more firm transmission was allocated in December 2007, up to 785 MWs, the ATC posted by the AESO has never been higher than 600 MWs. This means that absolutely every hour that firm transmission customers choose to schedule their full allocation, curtailments would be required. If firm allocation had stayed at the 480 MW level, curtailments would only be required approximately 30% of the time. The frequency and level of curtailments has severely negatively impacted the value of all firm transmission on this path.
- NorthPoint questions why the decision to suspend the allocation of firm transmission is happening now, instead of before an additional 305 MWs was allocated in late 2007. If the

decision is based on problems in the Alberta system, it would make more sense to only allocate as much ATC as Alberta could receive a high percentage of hours. The ATC posted by the AESO has never been above 600 MWs for any hours during 2008. Therefore why would BCTC consider allocating anything above 600 MWs.

- If BCTC stands by its decision to suspend allocation of more ATC and maintains the firm allocation at 785 MWs, some consideration should be given to refunding transmission costs to the transmission customers, based on what the ATC posting is in Alberta. Although this is not a preferred solution, at least it alleviates some of the devaluation of existing firm transmission.

Thank you for this opportunity to comment and NorthPoint hopes that its opinions and arguments are given due consideration.

Sincerely,

Dennis Slade
Transmission Strategist

Tab C



TransAlta Energy Marketing (U.S.), Inc.
222 SW Columbia, Suite 1105
Portland, OR, USA 97201
Main: 503.295.8180
www.transalta.com

July 24, 2008

Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street
Vancouver, BC
V7X 1V5

Via E-Mail: Brenda.Ambrosi@bctc.com

TransAlta Comments: Resolution of LTFPTP Service to Alberta

Dear Brenda,

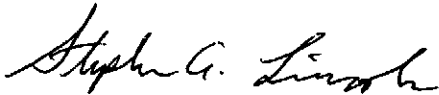
As a BCTC customer participating in the current Facilities Study on the British Columbia to Alberta path (BC>AB Path), TransAlta (TEMCO) submits the following comments regarding proposed options for providing this long-term firm point-to-point service. The options referred to below are those presented during BCTC's Stakeholder Consultation No. 2 on July 14, 2008.

- TransAlta endorses "Option 1 – Something New": 1.) Resume the suspended Facilities Study on the BC>AB Path, 2.) Provide long-term Firm Point-To-Point service based on BCTC system conditions only, and 3.) Work with AESO to develop both short- and long-term mitigation measures at the border.
- TransAlta disagrees with the British Columbia Utilities Commission's (BCUC) decision which requires that the issue be resolved in a rate Design review or FERC-890 compliance filing. Precedent has already been established in previous FERC rulings which prevents Transmission Providers—operating under FERC-approved transmission tariffs as BCTC does—from limiting transmission rights in response to external system conditions.
- Similarly, TransAlta disagrees that a form of conditional transmission service resolves LTFPTP service to Alberta, because it also has to be based on external system operations. Order 890's Conditional Firm is a beneficial new transmission product. However, it is not appropriate here because its implementation is based on a Transmission Provider's internal system conditions that affect ATC, not conditions in a neighboring system.

- Instead, TransAlta continues to contend that the inability to transmit the BC>AB Path's 1,200MW capacity is a seams issue between BC and Alberta that prevents interregional trade and reliability, which presumably were goals prompting the tie line's construction in the first place.

"Option 1 – Something New" is the only solution that satisfies all parties: It keeps BCTC compliant with their existing OATT; avoids unnecessary (and likely unsuccessful) efforts to obtain approval for OATT revisions; releases ATC to the market in a non-discriminatory manner; and keeps existing customers whole by dealing with the source of the problem at the BC/Alberta border.

Sincerely,



Stephen Lincoln
Manager, Transmission Analytics

TransAlta Energy Marketing (U.S.), Inc.
222 SW Columbia Street, Suite 1105
Portland, OR 97201

Phone: 503.295.8490

Fax: 503.295.8188

Email: steve_lincoln@transalta.com

Tab D



24 July 2008

British Columbia Transmission Corporation
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TransCanada Corporation
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Calgary, Alberta, Canada T2P 5H1

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fax 403.920.2362
email ken_kunz@transcanada.com
web www.transcanada.com

Attention: Brenda Ambrosi

Dear Ms. Ambrosi:

RE: Order No. 890 Implementation - Stakeholder Consultation Meeting No. 2;
Comments of TransCanada Energy Ltd. ("TransCanada")

In response to British Columbia Transmission Corporation's ("BCTC") request for stakeholder submissions on its Stakeholder Consultation Meeting No. 2 held on July 14, 2008 regarding implementation of the U.S. Federal Energy Regulatory Commission Order No. 890,¹ please find TransCanada's comments. Specifically, BCTC requested stakeholder submissions on tariff provisions with respect to future sales of long-term firm point-to-point ("LTFPTP") service to Alberta, and revised or additional proposals on Conditional Firm Service.

TransCanada continues to support BCTC's efforts to eliminate opportunities for undue discrimination and address deficiencies in its OATT, improve certainty and efficiency in the market, and address seams issues between jurisdictions. As TransCanada has explained in its previous written comments and at the two stakeholder consultation meetings, increased pro rata curtailment of existing firm service as a result of increased incremental sales over the constrained British Columbia to Alberta path beginning December 1, 2007, continues to be of particular concern to TransCanada.

At the July 14, 2008 stakeholder consultation meeting, BCTC presented three options regarding LTFPTP Service to Alberta: (1) provide LTFPTP service based on BC System only; (2) stop selling any additional LTFPTP service on BC to Alberta Path and issue new LTFPTP service conditional on limits of neighboring systems; and (3) stop selling any additional LTFPTP service on BC to Alberta Path, with all incremental ATC, conditional on limits of neighboring systems, released as Short-Term Firm Service. TransCanada does not agree with this framework since the options do not take into consideration the possibility of giving priority to firm holders of capacity before the increased sales of LTFPTP service to Alberta beginning December 1, 2008, the largest purchaser and beneficiary being BCTC's marketing affiliate, Powerex.

¹ See *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed Reg. 12266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007) ("Order No. 890"); *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007) ("Order No. 890-A").

BCTC has also asked for further comments regarding the proposed conditional firm service. TransCanada reiterates its position that the only acceptable form of conditional firm service would be one in which it was offered under the condition that the neighbouring system, i.e. Alberta, could accept all existing LTFPTP volumes. TransCanada's June 17, 2008 comments set forth the conditions under which conditional firm service would be acceptable to TransCanada. Again, conditional firm service should only be offered when the following mitigating circumstances are met:

- the Alberta system can sink or accept all existing LTFPTP volumes, plus the proposed volumes of conditional firm service;
- no curtailments of LTFPTP are occurring;
- offering conditional firm service would not cause any LTFPTP curtailments to occur; and
- a public and transparent process is created to clarify the calculation and implementation of hours of curtailment and the definition of a system condition.

If you have any questions, please do not hesitate to contact the writer.

Sincerely,

TransCanada Energy Ltd.

Original signed by:

Kenneth W. Kunz
Vice President, Western Region

Tab E

Joanna Sofield
Chief Regulatory Officer
Phone: (604) 623-4046
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regulatory.group@bchydro.com

July 24, 2008

Ms. Janet Fraser
Director, Regulatory Affairs
British Columbia Transmission Corporation
Suite 1100, Four Bentall Centre
1055 Dunsmuir Street PO Box 49260
Vancouver, BC V7X 1V5

Dear Ms. Fraser:

**RE: British Columbia Utilities Commission (BCUC)
British Columbia Hydro and Power Authority (BC Hydro)
British Columbia Transmission Corporation (BCTC) Proposed Implementation of
FERC Order 890, and BCUC Order No. G-110-08**

By Order No. G-110-08, the BCUC approved BCTC's June 3, 2008 application (Application) for approval to temporarily suspend the release of additional firm Available Transfer Capacity (ATC) on the BC>AB path. The BCUC's approval is on an interim basis pursuant to section 90(2) of the *Utilities Commission Act* (the Act), and the BCUC directed BCTC to submit a report containing stakeholder submissions concerning the resolution of long-term firm point-to-point (LTF PTP) services to Alberta, and customer proposals on conditional firm service.

These are the comments of BC Hydro and, on behalf of Powerex, BC Hydro is also submitting the comments of Powerex.

Additional Firm Service on BC>AB Path

The release by BCTC of additional LTF PTP service on the BC>AB path would inevitably result in increased curtailments for all firm service customers on that path, including Powerex, until such time as the Alberta electric system can import the same amount of electricity on a consistent basis. The participants at BCTC's July 14, 2008 consultation session (the Consultation) seemed to agree that the Alberta system is not able to import more than 480 MW on a consistent basis, and that the reliable transfer capability on the Alberta side of path will not be improved within the next two years.

The release by BCTC of additional firm service on the BC>AB path is not expected to result in curtailments of BC Hydro's Network Integration Transmission Service (NITS) because the flow under NITS is generally from the interior (Peace and Columbia Regions) to the lower mainland, which is counter to the flow on the BC>AB path. However, BC Hydro is concerned that the approach BCTC has taken with respect to the BC>AB path may be a precedent for how it calculates firm ATC for other paths. BC Hydro would be very concerned if its NITS could be curtailed or otherwise impacted by the release of firm transmission service on the

B.C. transmission system based on ATC calculated without regard to constraints on neighbouring systems.

During the Consultation, participants discussed whether the BCUC, by approving the provision by BCTC of long-term firm shaped service (Order No. G-58-05), determined that existing firm transmission service customers should accept greater risk of curtailments in the interests of increased utilisation of the system. BC Hydro and Powerex do not agree with that interpretation of the BCUC's decision with respect to shaped service. The BCUC approved shaped service largely because it accepted BCTC's evidence that provision of the service would not materially increase risk to existing firm service customers, as demonstrated from the following extract from the BCUC's decision:

"BCTC argues that its calculation of ATC is inherently conservative; its staff has considerable expertise and it has adopted procedures and safeguards to ensure that its shaped service proposal does not pose a material risk to the availability of capacity for NITS load growth and does not degrade the existing rights of NITS and LTF PTP customers." (Order No. G-58-05, Reasons for Decision at page 46)

The same cannot be said for the release of additional firm ATC on the BC>AB path without regard to constraints on the Alberta side of the path. Participants at the Consultation clearly believe that there is a high likelihood, if not certainty, that release of additional LTF PTP on the BC>AB path will inevitably increase curtailments on the path, degrading the existing rights of firm service customers. BC Hydro and Powerex believe that BCTC should take into account constraints on neighbouring systems when calculating firm ATC because it is highly likely that the rights of existing firm service customers in B.C. would be degraded when those constraints occur.

BC Hydro and Powerex support Order No. G-110-08 remaining in effect until such time as the BCUC makes a final determination on the issue in the context of BCTC's application to implement FERC Order 890, which is expected later this year. BC Hydro and Powerex also support BCTC addressing the issue in that application by seeking approval for a requirement in the OATT that BCTC take into account constraints on neighbouring systems in the calculation of firm ATC.

Options for Firm Service to Alberta

BCTC presented three options on page 5 of its Consultation materials with respect to firm service to Alberta.

BC Hydro and Powerex do not support Option 1 (provide LTF PTP service based on B.C. system only) because the approach would inevitably increase curtailments on the BC>AB path and it is not the right principle for BCTC to use in the calculation of ATC for the B.C. transmission system.

Option 3 (stop selling any additional LTF PTP service on BC>AB path, with all incremental ATC, conditional on limits of neighbouring systems, released as short-term firm PTP) would only address the issue to the extent that BCTC can predict the available import capability on the Alberta side of the BC>AB path. If BCTC releases firm capacity on the erroneous assumption that there will be ATC on the Alberta side, then there will be curtailments of firm service in B.C. BCTC was not able to explain at the Consultation the extent to which it is able to make such predictions accurately.

BC Hydro and Powerex believe that Option 2 (stop selling any additional LTF PTP service on BC>AB path and issue new LTF PTP service conditional on limits of neighbouring systems) could potentially address the issue because in the event of a constraint on the Alberta side, the conditional firm service (CFS) customer would be curtailed before the other firm service customers. By offering the transmission service on the understanding that it would be curtailed first in the event of constraints on the Alberta side in real time, the customer would be able to assess for itself the likelihood of curtailments and decide whether the transmission product has sufficient value to enter into a long-term contract.

While CFS may allow BCTC to offer more long-term “firm” transmission service on the BC>AB path without degrading the existing rights of other firm service customers, there are clearly many issues that would need to be resolved before CFS could be offered on the BC>AB path or on any other path in B.C.

Conditional Firm Service

At the Consultation BCTC compared CFS to shaped service and presented the option of a combined CFS and shaped service. Further clarity of the proposed CFS, the combined CFS and shaped service, and the methodology that BCTC would use to determine system conditions is required before BC Hydro and Powerex would be able to provide further comments on these proposed services.

BC Hydro and Powerex confirm their May 16, 2008 comments on CFS after the first Order 890 consultation session:

We have serious concerns with respect to BCTC offering CFS, as presented at this time, because of the risk to the reliability of service to existing firm transmission customers and the lack of transparency. We are also concerned that certain system conditions may disclose confidential BC Hydro information.

To address such concerns, we suggest the CFS business practice needs to set out:

- (i) a complete list of the specific types of system conditions that could form the basis of CFS (which conditions would not reveal confidential information);
- (ii) the methodology and risk criteria BCTC will use to determine conditional curtailment hours that could form the basis of CFS;
- (iii) a requirement that any system impact study that identifies curtailment options be posted for comment before any CFS service is offered, and
- (iv) a requirement that any CFS service agreement be filed with the BCUC for approval.

BC Hydro and Powerex suggest that BCTC address these concerns in its application to implement FERC Order 890 later this year. In the meantime, Order No. G-110-08 should remain in effect.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J. Sofield'.

Joanna Sofield
Chief Regulatory Officer

c. Brenda Ambrosi, Customer Services Manager, BCTC

Tab F



July 23, 2008

To: Brenda Ambrosi
Customer Services Manager
British Columbia Transmission Corporation
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Subject: FERC 890 Presentation Comments

Thank you for the opportunity to provide comments on the FERC 890 presentation, held July 14, 2008. As requested, the comments herein will pertain specifically to the issue of the suspension of sales of LTFPTP transmission service from BC to Alberta.

It is understood that this is an extremely contentious issue, with a great deal at stake for parties on both sides of the debate. On one side, the existing users of LTFPTP feel that they have had the value of their service diminished through BCTC's decision to sell firm services that are in excess of the capacity Alberta is able to accommodate. They are further concerned that the current tariff in no way recognizes their perceived right to have unfettered access to Alberta. By denying new users access to firm transmission services, they feel they could remain mostly whole and, ultimately, satisfied. Unfortunately, the current OATT does not provide for such a remedy. On the other side of the equation, there are new customers, wishing to purchase LTFPTP service, who have been pushed to the side through the BCUC decision to suspend all firm sales to Alberta indefinitely. Left in transmission limbo, these new customers wonder if they will ever be able to gain non-discriminatory access to long term, firm service. In the meantime, they sift the dregs of OASIS for non-firm scraps, in the hopes that they, too, might be able to schedule without being cut during times of high prices in Alberta. Both sides have valid concerns.

The argument, put forth by TransCanada and Northpoint, and given credence by the BCUC, is understood and noted. If BCTC was to go ahead with further firm sales, existing customers would flow fewer and fewer megawatts on a pro-rata basis, as new users essentially cannibalised the limited capacity. The new users would be similarly

curtailed on their service, resulting in all firm users paying for transmission they cannot use during times of congestion. Ultimately, no schedule could be put through with any certainty as to its viability, which would defeat the point of owning a so-called firm service.

The problem with this argument is not that it is not valid. From almost any point of view, it is perfectly logical. The problem is that it is being used to stop all new firm sales indefinitely as if that, in itself, is a viable solution. Given that there is further interest in firm service, it is clearly not viable to simply stop sales until Alberta gets its act together. Such a path is neither fair, nor efficient. If, for example, the current facilities study is frozen indefinitely and the AESO figures out a way to increase its import capacity in the meantime, how long would it take for BCTC to then complete the study and the facility upgrades to accommodate new capacity?

To suspend all sales simply hands market power to those few companies that already own the rights to firm transmission into Alberta. Such a solution is anticompetitive.

There are a couple of challenges standing in the way of finding a viable solution to this quandary. The first is that the bidding process for transmission is not ongoing. That is, there is no mechanism for new parties to bid for scarce resources. Those that have them keep them and have no concerns going forward as to whether or not they will lose the right to the firm service.

The second challenge is that the vast majority of the firm transmission on the BC to Alberta path sits in the hands of BC Hydro, a provincial government agent. As such, there is neither the incentive, nor the financial burden to dissuade them from owning such a large volume of firm transmission.

The obvious solution to the current problem for existing customers is to simply suspend further sales. But such a response puts the entire system in stasis and opens the door to an acceptance of the status quo as an inevitable future. That is, it accepts that Alberta will never get its act together and increase its capacity to sink higher volumes. It also accepts that current firm transmission holders have an inviolable right to their capacity for an indefinite duration, and thus the right to freeze out new customers for the foreseeable future.

The options provided by BCTC for consideration appear to be bound by conventional thinking and the current OATT. I would submit that, for the purposes of this conversation, the OATT should be considered as expendable, as indeed the BCUC must have done when it contravened it to approve the suspension of firm sales to Alberta.

Here are a number of possible solutions BCTC might want to consider as they go forward with the new OATT application:

1. BCHydro holds the most firm transmission of any participant on the BC to Alberta path. As BCHydro is tied to the same government as BCTC, there should be some consideration given to the idea that BCHydro is not like other customers. The new OATT should consider allowing new sales to be taken out of BCHydro's portfolio until capacity into Alberta increases.
2. Perhaps the definition of long term service could be altered to allow new customers to procure firm service. LTFPTP could be designated a one year term. If no service request exceeded one year, capacity could then be auctioned yearly, with incumbents given the option to extend their current capacity for a further year if no new requests are received during the auction period. In so doing, any new participant can get access to the limited capacity and BCHydro can take whatever remains. There should be no issues with revenue, as all new players would be committed for the year. As a backstop, any customers who enter into an agreement requiring transmission upgrades will take on the responsibility of the full amount of the upgrades, unless new customers wish to take on the remaining term on a year by year basis.
3. There could be a consideration of minimum and maximum volume increments. That is, any new customer must take a minimum volume, but no customer may take in excess of a maximum volume, unless further volume remains after all customers have been accounted for. Any further volume would be sold for a limited duration and subject to bids from other new customers at the end of the allotted period.
4. BCTC could continue to sell firm service, but could change their business practices to account for cuts due to external circumstances. That is, they accept the additional revenue to upgrade their system, but refund the portion that is cut due to Alberta constraints during times of congestion. Given that most hours will not be congested, this should, at worst, result in a longer time frame for paying off the upgrades. At best, it spreads the cost of the upgrades over a wider base of payers. This option could be considered even if the decision is made to continue with the suspension of firm sales. Existing users are being negatively affected by BCTC's decision last December to sell more firm transmission than Alberta can currently accommodate.

Whether any of these suggestions are more than of academic interest in the eyes of BCTC, BCUC and BCHydro, the fact remains that the current state of affairs is untenable if BCTC wishes to conform to the spirit of the FERC orders regarding access to the transmission system.

Regardless of the direction BCTC takes, I would argue strongly that Candela Energy Corporation's TSR and, in fact, every TSR currently in the queue, should be frozen until firm sales can be resumed. That is, all time limitations should be frozen at the date of the suspension and should be re-examined at the appropriate time. No customers currently in the queue should be negatively impacted by the BCUC decision to suspend the sale of LTFPTP on the BC to Alberta path.

Sincerely,

Tom Rudd
Real Time Trader
Candela Energy Corporation

Appendix I

Historic Alberta Hourly Import Limits Since January 2005

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Historic Alberta Hourly Import Limits Since January 2005

In the attached Excel spreadsheet “BCTC OATT Application 2008 – Appendix I.xls”, the value (in MW) appearing in the column “Final TTC” is the hourly limit in real-time on the transfer of power from BC to Alberta (i.e. the Alberta hourly import limit), upon completion of the coordination process outlined in BCTC's and the AESO's Operating Policies and Procedures (see Section 6.2.5 for further explanation).