BC Hydro PPA - RS 3808, TS No. 2 & 3 Exhibit B-1



Janet Fraser Chief Regulatory Officer Phone: 604-623-4046 Fax: 604-623-4407 bchydroregulatorygroup@bchydro.com

May 24, 2013

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

Dear Ms. Hamilton:

#### RE: British Columbia Utilities Commission (BCUC) British Columbia Hydro and Power Authority (BC Hydro) BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Inc.

BC Hydro encloses its application for approval of a new PPA, and associated agreements, with FortisBC Inc.

For further information, please contact Gordon Doyle at 604-623-3815 or by email at <u>bchydroregulatorygroup@bchydro.com</u>.

Yours sincerely,

andann

Janet Fraser Chief Regulatory Officer

jm/tn

Enclosures

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#### **Distribution List**

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- BCUC Project No. 3698622 BC Hydro 2012-2014 Revenue Requirements
- BCUC Project No. 3698620 FortisBC Inc. 2012-2013 Revenue Requirements and Review of ISP
- BCUC Project No. 3698696 FortisBC Inc. 2012 Purchase of the Utility Assets of the City of Kelowna

Association of Major Power Customers of BC Attention: R. Brian Wallace rbw@bht.com Attention: Lloyd Guenther Iguenther@novuscom.net Attention: Richard Stout roninconsult@live.com	BC Sustainable Energy Association BCSEA and Sierra Club of British Columbia Attention: Thomas Hackney <u>thackney@shaw.ca</u> Attention: William J. Andrews wjandrews@shaw.ca	British Columbia Pensioners' and Seniors' Organization support@bcpiac.com Attention: Bill Harper bharper@econalysis.ca Attention: Eugene Kung ekung@bcpiac.com Attention: Leigha Worth Iworth@bcpiac.com Attention: Sarah Y. Khan skhan@hs-law.ca Attention: Colin Fussell colinfussell@shaw.ca Attention: Ros Salvador rsalvador@bcpiac.com	British Columbia Municipal Electric Utilities Attention: Chris Weafer <u>cweafer@owenbird.com</u>
City of Nelson Attention: Karl E. Gustafson kgustafson@lmls.com Attention: Kevin Cormack kcormack@nelson.ca	City of New Westminster Electric Utility Commission Attention: R.E. Carle <u>rcarle@newwestcity.ca</u>	City of Trail Attention: Carolyn M. MacEachern maceachern@younganderson.ca	Columbia Power Corp. Attention: Gene Anderson gene.anderson@columbiapower.corp
Commercial Energy Consumers Association Attention: Chris Weafer <u>cweafer@owenbird.com</u>	Canadian Office & Professional Employees Union (COPE) Local 378 Attention: Jim Quail jquail@cope378.ca Attention: Sage Aaron SAaron@cope378.ca Attention: Jacqueline Hughes jhughes@litigationchambers.com Attention: Guy Leroux guyleroux2@gmail.com Attention: Mark S. Oulton moulton@litigationchambers.com Attention: Anthony J. Pullman acpullman@shaw.ca Attention: Lori Winstanley lwinstanley@cope378.ca	FortisBC Inc. electricity.regulatory.affairs@fortisbc.com gas.regulatory.affairs@fortisbc.com Attention: Dennis Swanson Dennis.Swanson@fortisBC.com Attention: Diane Roy diane.roy@fortisbc.com Attention: Dean O'Leary doleary@farris.com	Irrigation Ratepayers Group Attention: Fred J Weisberg fredweislaw@gmail.com
Clean Energy Association of British Columbia Attention: David Austin <u>daustin@securitieslaw.bc.ca</u> Attention: James Weimer jweimer@telus.net	Morgan Stanley Capital Group Attention: Paul Cassidy <u>paul.cassidy@blakes.com</u> Attention: Lisa Cherkas <u>lisa.cherkas@morganstanley.com</u> Attention: Steve Huhman <u>steven.huhman@morganstanley.com</u>	Energy Solutions for Vancouver Island Attention: Ludo Bertsch bcuc@horizontec.com	ENMAX Energy Marketing Inc. Attention: Darren Gogol dgogol@enmax.com

Lower Columbia Initiatives Corporation info@lcic.ca	Ministry of Energy, Mines and Natural Gas Attention: Paul Wieringa Paul.Wieringa@gov.bc.ca	Alan Wait alwait@telus.net	Norman Gabana ngabana@gmail.com
Buryl (Slack) Goodman Box 356, Osoyoos, BC V0H 1V0	Nelson Hydro Attention: Heather Grant hgrant@nelson.ca Attention: Alexander Love alove@nelson.ca	Okanagan Environmental Industry Alliance Attention: Ludo Bertsch bcuc@horizontec.com	Regional District of Okanagan Similkameen Attention: Doug French <u>dfrench@rdos.bc.ca</u> jburton@rdos.bc.ca
Teck Metals Ltd. Attention: Troy Albo troy.albo@teck.com Attention: Carleigh Whitman carleigh.whitman@teck.com alexa.young@teck.com	Tolko Industries Ltd. Attention: Michael Towers <u>energymanager@tolko.com</u> <u>michael.towers@tolko.com</u>	Zellstoff Celgar Limited Partnership Attention: Brian Merwin <u>bmerwin@mercerint.com</u> Attention: Robert Hobbs <u>rhhobbs@shaw.ca</u> Attention: Kim C. Moller <u>kmoller@sangramoller.com</u>	TransCanada Energy Ltd. Attention: Chris Best <u>chris_best@transcanada.com</u> <u>tce_regulatory@transcanada.com</u>
West Fraser Mills/Eurocan Pulp & Paper Attention: Ronald L Cliff ron@highcliff.ca	Gordon Currie gjcan@shaw.ca	Catalyst Paper Corporation Attention: Carlo Dal Monte Carlo.DalMonte@catalystpaper.com	Bruce Harris bharris11@hotmail.com
Canadian Wind Energy Association Attention: Nicholas Heap nicholasheap@canwea.ca	Peace Valley Environmental Association Attention: Gwen Johansson gjohan@pris.ca r_darnal@pris.ca	Capital Power Corporation Attention: Daniel Jurijew djurijew@capitalpower.com	Ilse C Leis anderson.leis@telus.net
Sea Breeze Power Corp Attention: Paul Manson PaulManson@SeaBreezePower.com	V.W. Ruskin and Associates Attention: Vernon W. Ruskin skipsalty@gmail.com kenbyrne@telus.net	Line Contractors Association of BC Attention: Jeff Skosnik jskosnik@gmail.com jeff@lca.ca	Vanport Sterilizers Inc. Attention: Richard Tennant sterilizers@excite.com
Terry Vulcano skywindtv@yahoo.ca			

### BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC

May 2013

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### 1 1 Executive Summary

<sup>2</sup> BC Hydro currently supplies electricity to FortisBC<sup>1</sup> pursuant to a Power Purchase

3 Agreement dated October 1, 1993 (1993 PPA) and at the embedded rates set out in

<sup>4</sup> Rate Schedule (**RS**) 3808. The 1993 PPA expires on September 30, 2013.

5 In 2005, BC Hydro and FortisBC (the **Parties**) began preliminary negotiations for a

6 new power purchase agreement to replace the 1993 PPA upon its expiry. The

7 Parties re-launched negotiations in 2009, and have reached agreement on a new

8 power purchase agreement dated May 21, 2013 (**New PPA**) and associated

- <sup>9</sup> agreements to replace the expiring 1993 PPA.
- 10 The New PPA does not change the basic parameters of the service BC Hydro has

been providing to FortisBC for 20 years under the 1993 PPA. The New PPA

continues to provide for up to 200 MW of capacity and 1,752 GWh/year of

associated energy for FortisBC to meet a portion of its load service obligations.

The New PPA and associated agreements modernize the terms and conditions of this service by introducing improvements for current industry practices and current circumstances including the development of the Waneta Expansion (**WAX**) Project as a new capacity resource available to FortisBC. The energy price for the service provided under the New PPA will be a two-step price with the first tranche set at an embedded cost price and the second tranche set at a proxy for BC Hydro's long-run marginal cost (**LRMC**) of new supply.

FortisBC Inc. was first known as West Kootenay Power & Light Company, Limited. The company subsequently changed its name to West Kootenay Power Ltd., then to UtiliCorp Networks Canada (British Columbia) Ltd., then to Aquila Networks Canada (British Columbia) Ltd. and, finally, to FortisBC Inc. Irrespective of its actual name at any time, the company is referred to throughout this application as "FortisBC".

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC

### 1 2 Introduction

The relationship between BC Hydro and FortisBC dates back to the 1950s. FortisBC and BC Hydro have numerous agreements, including multi-party agreements encompassing generation and transmission coordination, and under various agreements each is both customer and supplier of the other. In short, it is a very complicated and integrated relationship.

7 The Canal Plant Agreement is a major, foundational agreement between BC Hydro,

FortisBC and other parties. The original Canal Plant Agreement, dated
 August 1, 1972, was between BC Hydro, FortisBC and Teck Metals Ltd. (Teck)<sup>2</sup> and

was necessitated by the construction of BC Hydro's Kootenay Canal Plant. The

agreement provided for the parties to cooperate in the operation of their storage and

12 generating facilities in the Columbia River region of British Columbia for the purpose

- <sup>13</sup> of obtaining optimum generation from BC Hydro's generation resources and the
- other parties' plants. The Canal Plant Agreement also resulted in the integration of
- the parties' systems to allow the coordinated operation to occur and the allocation of
- <sup>16</sup> energy and capacity between the parties.<sup>3</sup> In simple terms, BC Hydro provides
- operating instructions for the plants included as part of the Canal Plant Agreement,
- in relation to generation and water releases, and in return the other parties receive a
- 19 specified amount of electricity (capacity and energy) which is referred to as
- 20 "entitlement".
- 21 The Canal Plant Agreement has been amended on various occasions, including by
- adding Brilliant Power Corporation, Brilliant Expansion Power Corporation and

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 <sup>&</sup>lt;sup>2</sup> The parties to the Canal Plant Agreement, other than BC Hydro, are referred to as the "Entitlement Parties".
 <sup>3</sup> The Canal Plant Agreement and its history are described in the joint application by FortisBC and BC Hydro to the BCUC, dated August 19, 2005, for an exemption from the *Utilities Commission Act*. BCUC Order No. G-41-06 exempts BC Hydro and FortisBC from the provisions of the *Utilities Commission Act* in respect of the 2005 Canal Plant Agreement and any amendments thereto. Further information on the Canal Plant Agreement is provided in section <u>3.1(a)</u> of this application.

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Waneta Expansion Limited Partnership<sup>4</sup> as Entitlement Parties to the agreement in 1 relation to their hydroelectric generation projects in the region. 2 During the 1978 to 1985 period BC Hydro sold electricity to FortisBC on a year to 3 year basis pursuant to the Canal Plant Agreement. BC Hydro's electricity sales to 4 FortisBC since 1985 have been pursuant to BCUC-approved tariffs and rate 5 schedules. Since 1993, BC Hydro has sold electricity to FortisBC pursuant to the 6 1993 PPA and associated RS 3808. The 1993 PPA expires on September 30, 2013. 7 After lengthy negotiations, the Parties have reached agreement on a New PPA and 8 associated agreements. Subject to BCUC approval, the 1993 PPA will be replaced 9 by the New PPA, as supplemented by the following agreements: 10 The Imbalance Agreement dated May 21, 2013 (Imbalance Agreement) 11 The Energy Export Agreement dated May 21, 2013 (Energy Export Agreement) 12 The Master Accounting Agreement dated May 21, 2013 (Master Accounting 13 Agreement) 14 In addition, arising from the changes in the New PPA, changes will need to be made 15 to the existing General Wheeling Agreement dated October 15, 1986, as amended 16 from time to time, between BC Hydro and FortisBC. Those changes have not yet 17 been completed. BC Hydro will file the amended General Wheeling Agreement with 18 the BCUC as a supplement to this application when it has been completed. 19 The purpose of this application is to obtain BCUC approval pursuant to 20 sections 58 to 61 of the Utilities Commission Act, of the New PPA and associated 21 amendments to RS 3808, the Imbalance Agreement, the Energy Export Agreement, 22

<sup>&</sup>lt;sup>1</sup> Brilliant Power Corporation and Brilliant Expansion Power Corporation are affiliates of Columbia Power Corporation and the Columbia Basin Trust. Waneta Expansion Limited Partnership is a limited partnership in which Fortis Inc., CPC Waneta Holdings Ltd. and CBT Waneta Expansion Power Corp. are limited partners.

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC

the Master Accounting Agreement, and the amended General Wheeling Agreement<sup>5</sup>

2 as filed in Appendix A.

The agreements work together as a package and, as such, it is not possible to alter a component of these agreements without affecting the overall balancing of interests negotiated by the parties and reflected in the package of agreements. Therefore, this application is submitted for approval in its entirety.

7 A draft order is provided in Appendix B.

### 8 2.1 Overview of New Agreements

The New PPA does not change the basic parameters of the service BC Hydro has
 been providing to FortisBC for 20 years under the 1993 PPA. The New PPA and
 associated agreements modernize the terms and conditions of this service by
 introducing improvements for current circumstances and industry practices.

The New PPA continues to provide for up to 200 MW of capacity and 13 1,752 GWh/year of associated energy for FortisBC to meet a portion of its load 14 service obligations. The energy price for the service provided under the New PPA 15 will be a two-step price with the first tranche at an embedded cost price and the 16 second tranche at a proxy for BC Hydro's LRMC. The energy and demand charges 17 for the service are set out in the amended RS 3808 (refer to Appendices C and D). 18 The New PPA provides that FortisBC may, in accordance with the new Energy 19 Export Agreement, export "Eligible Energy<sup>6</sup>" using "entitlement capacity" attributable 20 to the WAX Project and available to FortisBC in an hour during which FortisBC is 21 taking electricity under the New PPA. Otherwise, FortisBC is prohibited from 22

<sup>&</sup>lt;sup>5</sup> A placeholder for the General Wheeling Agreement, Tariff Supplement No. 3, Appendix 5, is included with this application. BC Hydro expects to file the amended General Wheeling Agreement with the BCUC as a supplemental filing by July 16, 2013, as further explained in Sections <u>4.5</u> and <u>7</u>.

<sup>&</sup>lt;sup>6</sup> Refer to Section 3.4 of the Energy Export Agreement.

scheduling exports of electricity out of its service area during any hour when

<sup>2</sup> FortisBC is taking electricity under the New PPA.

The Imbalance Agreement sets out the terms, conditions and prices that will apply if 3 a condition on the Entitlement Parties' system causes an unauthorised transfer of 4 imbalance energy from or to the BC Hydro system. An unauthorised transfer could 5 occur if there is an unexpected condition on the Entitlement Parties' system such as 6 a transmission or generation outage, or an unexpected load event. Imbalance 7 energy is not a service; it is an unauthorised use or delivery of energy. Accordingly, 8 the Imbalance Agreement has terms, conditions and pricing designed to encourage 9 FortisBC to plan for and avoid such unauthorized use or delivery. 10

The Master Accounting Agreement is required to determine the amount of imbalance 11 energy, if any. The Master Accounting Agreement reconciles the contractual energy 12 transactions and financial flows under the New PPA, the Imbalance Agreement, the 13 Energy Export Agreement, and the General Wheeling Agreement, together with all 14 other transactions under the Canal Plant Agreement and other agreements. The use 15 of entitlement resources available under the Canal Plant Agreement, and the flows 16 deemed to be associated with them, are contractual (not necessarily physical) and 17 therefore an accounting agreement is required to reconcile contractual flows with 18 physical flows that are directly metered. 19

A summary table comparing the 1993 PPA and the New PPA is provided in

21 Appendix E.

Also, due to the General Wheeling Agreement being intrinsically linked to the Power

<sup>23</sup> Purchase Agreement, an amended and restated General Wheeling Agreement,

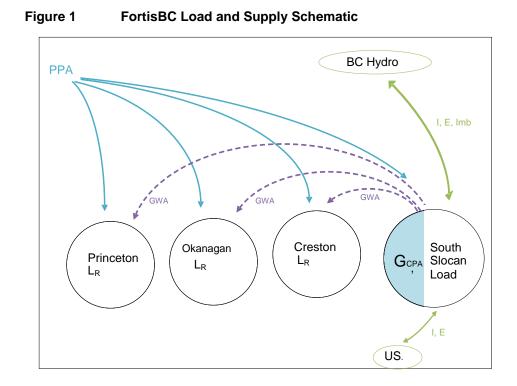
which will address revisions reasonably required as a result of the New PPA, will be

<sup>25</sup> filed as a supplement to this application and is required to implement the accounting

<sup>26</sup> procedures required for these agreements.

3

- 1 The following figure provides a schematic of FortisBC's supply (the Power Purchase
- 2 Agreement, Canal Plant Agreement, generation, imports), load, and exports.



- <sup>4</sup> In <u>Figure 1</u> the abbreviated terms have the following meaning:
- 5 PPA Power Purchase Agreement
- GWA General Wheeling Agreement
- 7 I Imports
- 8 E Exports
- Imb Imbalance Energy<sup>7</sup>

<sup>&</sup>lt;sup>7</sup> Refer to Section 5.3 of the Imbalance Agreement.

- G<sub>CPA</sub> Canal Plant Agreement generation
- 2 L<sub>R</sub> Remote Load Center

### **3 3 Context for New PPA**

The events reviewed in this part of the Application form the context for negotiating a
modernized New PPA and associated agreements within the same basic
parameters as the service BC Hydro has been providing to FortisBC for 20 years
under the 1993 PPA.

Section 3.1 of this part reviews the key, pre-1993 events that formed the basis for 8 BC Hydro supplying electricity services to FortisBC pursuant to the coordinated 9 operation of generating resources under the Canal Plant Agreement, and pursuant 10 to a BCUC-regulated tariff and embedded cost rates under the PPA. The events that 11 formed the basis for the 1993 PPA continue to form the basis for New PPA. 12 Section 3.3 reviews the events since the 1993 PPA became effective which explain 13 in part why it would not be appropriate to simply renew the PPA on the same terms 14 and conditions as the 1993 PPA. 15

16 **3.1** 

### Events Leading Up to the 1993 PPA

17 (a) Canal Plant Agreement

In 1961 Canada and the United States of America entered into the Columbia River Treaty (the **Treaty**), which requires the Canadian and United States entities to coordinate the operation of the Libby Dam on the Kootenai River in Montana with the hydroelectric plants on the Kootenay River and elsewhere in British Columbia. The over-arching purpose of the Treaty was to maximize the total power and flood control benefits on both sides of the Canada-U.S. border that were possible through the construction and co-ordinated operation of storage projects.

In 1964 BC Hydro was established and became the electric utility that served most
 areas of British Columbia, excluding the FortisBC service territory. BC Hydro was

named as the Canadian Entity for the purposes of implementing the arrangements
contemplated in the Treaty. BC Hydro owns and is responsible for operating the
three Canadian Treaty dams (Duncan Dam, Mica Dam and Keenleyside Dam) to
achieve the benefits contemplated in the Treaty. The dams constructed under the
Treaty, including the Canadian Treaty Dams and the Libby Dam in the United
States, allowed for the better regulation of water flows on the Columbia River and its
tributaries, including the Kootenay River.

The Province wished to obtain benefits associated with the better regulation of the
water flows on the Kootenay River that were available as a result of the Treaty. To
that end the Province proposed that the Kootenay Canal Plant be constructed by
BC Hydro on the Kootenay River.

To achieve this proposal, BC Hydro, FortisBC and Teck entered into the Canal Plant
 Agreement dated August 1, 1972 (being the date the Libby Dam was considered to
 begin affecting Kootenay River stream flows). The underlying rationale for the Canal
 Plant Agreement is summarized in the recitals in the original agreement. Amongst
 other things, the recitals state:

- BC Hydro was proposing to construct a hydroelectric power project on the
   Kootenay River that includes a canal which has an intake on the intake of the
   pre-existing Corra Linn Dam
- Teck and FortisBC operated storage in Kootenay Lake and were the owners of
   generating plants on the Kootenay and Pend d'Oreille Rivers and the
   transmission facilities that interconnected those plants
- The Kootenay Canal Plant of BC Hydro will produce capacity and energy over
   and above that which could be produced from the existing plants of Teck and
- 25 FortisBC
- The additional capacity and energy can best be produced by coordinated use of the Teck and FortisBC plants and related facilities and the Kootenay Canal

Plant and its facilities, and cooperation for the purpose of obtaining optimum
 generation is desirable

The Canadian and U.S. entities under the Treaty are required to cooperate in
 the coordination of the operation of the Libby Dam with the operation of
 hydroelectric plants on the Kootenay River and elsewhere in Canada in
 accordance with the Treaty, and the U.S. Entity has indicated a willingness to
 regulate the release from Libby Dam to improve generation on the Kootenay
 River

The improvement of stream flow in the Kootenay and Duncan Rivers brought
 about by the construction and operation of Duncan and Libby Dams will make
 possible additional generation in Canada on the Kootenay River; to take full
 economic advantage of this improvement in stream flow it is necessary to
 construct the Kootenay Canal Plant

The Canal Plant Agreement allowed the construction of the Kootenay Canal Plant to
 proceed and for the coordinated use of the hydroelectric facilities in the area to be
 achieved.

Fundamentally, the Canal Plant Agreement is an agreement for the coordinated 17 operation of the generating resources of the Entitlement Parties and BC Hydro to 18 obtain optimum generation; the integration of the systems of the Entitlement Parties 19 and BC Hydro to allow the coordinated operation to occur; and the allocation of 20 energy and capacity entitlements to the Entitlement Parties. The practical effect of 21 the interconnection, integration and coordination under the Canal Plant Agreement is 22 that for most purposes the plants of the Entitlement Parties and BC Hydro are 23 operated, at the direction of BC Hydro, as parts of a single integrated system to 24 optimally utilize provincial water resources. 25

In return, a defined amount of energy and capacity is allocated to the Entitlement

27 Parties in the form of an "Aggregate Entitlement" consisting of "Entitlement Energy"

1 and "Entitlement Capacity". Aggregate Entitlement under the Canal Plant Agreement is based on an agreed 1938 – 1988 historical stream flow period and the capability 2 of the Entitlement Parties' generating facilities to convert these flows into electric 3 power. It is not dependent on the actual stream flows that occur in the Kootenay and 4 Pend d'Oreille Rivers. For example, entitlement power is not reduced when stream 5 flows are less than average, nor is it increased when the runoff is above average. 6 Any energy and capacity of the plants over or below the Aggregate Entitlement is to 7 the account of BC Hydro. 8

The original Canal Plant Agreement also provided for BC Hydro to sell electricity to
FortisBC through the 1978 to 1985 period. The agreement contemplated that after
1985 the amounts of capacity and energy to be supplied to FortisBC and the terms
and conditions of such supply would be by further agreement.

13 (b) 1986 and 1993 BCUC Decisions

FortisBC's purchases since 1985 have been pursuant to BC Hydro tariffs and rate 14 schedules approved by the BCUC. The BCUC considered the relationship between 15 BC Hydro and FortisBC in two decisions: Matters in Dispute between British 16 Columbia Hydro and Power Authority and West Kootenay Power and Light 17 Company, Limited dated October 15, 1986 (1986 Decision), and An Application by 18 British Columbia Hydro and Power Authority for Rate Schedule 3808 and Revised 19 Power Purchase Agreement with West Kootenay Power Ltd. dated April 22, 1993 20 (1993 Decision).<sup>8</sup> 21

In 1985, differences with respect to the issues of power supply and wheeling rates could not be resolved by negotiation as between BC Hydro and FortisBC, and the resolution of these issues was brought before the BCUC. The 1986 Decision, and the direction provided by the BCUC pursuant to this decision, ultimately led to the General Wheeling Agreement and the Power Purchase Agreement and their

<sup>&</sup>lt;sup>8</sup> The 1986 Decision is provided in Appendix F. The 1993 Decision is provided in Appendix G.

respective rate schedules.<sup>9</sup> These two agreements were required by FortisBC for the
purpose of meeting its load obligations. With respect to the issue of supply of
electricity by BC Hydro, the BCUC decided in the 1986 Decision that FortisBC is
different from BC Hydro's other customers because FortisBC is a utility with the
responsibility and obligation to undertake system planning functions, and it has other
supply options available to it.

7 In the 1993 Decision the BCUC concluded that the nature of the relationship

8 between FortisBC and BC Hydro is unique, "a hybrid, in which [FortisBC] is partly a

9 customer of BC Hydro and partly an independent utility. While BC Hydro has

10 customer obligations to [FortisBC], there are limits to these obligations. Beyond

these limits, the relationship is to be that which would exist between two

<sup>12</sup> independent utilities."<sup>10</sup>

The BCUC determined that the limits on BC Hydro's obligations to FortisBC at that
 time included the following:

"The Commission determines that, after September 30, 1995, the Customer
 Demand Limit under modified Rate 3808 is to be set at 200 MW. The energy
 limit is to be determined by [FortisBC's] use of the available capacity."<sup>11</sup>

"...the electricity price under the 200 MW Customer Demand Limit is
 determined through BC Hydro's rate hearings and resulting changes to

Rate 1821. Second, the price for electricity above the 200 MW Customer

21 Demand Limit will be negotiated in the same way that BC Hydro or other

22 suppliers negotiate contracts."<sup>12</sup>

<sup>10</sup> 1993 Decision at page 23.

<sup>&</sup>lt;sup>9</sup> See Sections 5 and 6 of Appendix F.

<sup>&</sup>lt;sup>11</sup> 1993 Decision at page 27.

<sup>&</sup>lt;sup>12</sup> 1993 Decision at page 33. RS 1821 refers to the former BC Hydro rate schedule applicable to customers served at transmission voltage (generally speaking, industrial customers). RS 1821 was replaced in 2006 by the stepped rate RS 1823, time of use rate RS 1825 and exempt flat rate RS 1827. The existing RS 3808 is consistent with RS 1827.

"A general indication of fair market arrangements would be BC Hydro's
 opportunity cost, information that is available to the Commission. Thus, for
 shorter term arrangements, the appropriate indicator may be the value to
 BC Hydro of short-term exports, while for longer term arrangements, the
 appropriate indicator may be BC Hydro's long-run incremental cost. The fairly
 negotiated rate will provide [FortisBC] with the correct price signal of the
 provincial value of the resources that BC Hydro will develop."<sup>13</sup>

### 8 **3.2 1993 PPA**

The 1993 PPA was made in accordance with the following direction in the
1993 Decision: "the Commission directs BC Hydro and [FortisBC] to negotiate
amendments to the PPA to incorporate the Commission's findings and directions as
set out in other sections of this Decision."<sup>14</sup> By Order No. G-85-93 the BCUC
approved the 1993 PPA as BC Hydro Electric Tariff Supplement No. 3. The
1993 PPA became effective on October 1, 1993<sup>15</sup>.

Under the 1993 PPA BC Hydro supplies FortisBC up to 200 MW of capacity and 15 associated energy, initially at the RS 1821 and now at the RS 1827 energy and 16 demand charges that are applicable to BC Hydro transmission service customers. 17 The RS 1827 energy charge is a blended flat rate, currently set at \$37.24/MWh, for 18 all energy consumption. The demand charge is \$6.353/kVA per month. The 19 determination of billing demand is subject to a ratchet similar to other transmission 20 voltage customers with an additional charge for capacity exceeding the Nominated 21 Demand at the points of delivery. 22

FortisBC provides BC Hydro with an annual nomination of PPA demand usage five
 years in advance, for each point of delivery. Capacity is nominated at each point of
 delivery and the total nominated demand cannot exceed 200 MW.

<sup>&</sup>lt;sup>13</sup> 1993 Decision at page 31.

<sup>&</sup>lt;sup>14</sup> 1993 Decision at page 29.

<sup>&</sup>lt;sup>15</sup> A consolidated version of the 1993 PPA is included in Appendix I.

1 FortisBC's energy requirements are prescheduled twice a week and the scheduled amounts are take or pay. FortisBC provides hourly preschedules of PPA purchases 2 each Wednesday and Thursday (not to exceed levels associated with the nominated 3 demands for each point of delivery) and energy taken over the prescheduled 4 amounts is accounted for as excess energy for that hour. That is, the 1993 PPA 5 does not prohibit FortisBC from actually taking energy in amounts greater or less 6 than the scheduled amounts which can require BC Hydro to operate its system 7 relatively more conservatively or take measures to hold additional reserves. As a 8 result of this structure and accounting procedures agreed to by the parties, the 9 1993 PPA has been used to deal with "imbalance shortfalls" on the Entitlement 10 Parties' system. 11

Electricity purchased under the 1993 PPA is solely for the purpose of supplementing FortisBC's resources to enable it to meet its service area load requirements and shall not be exported or stored. Furthermore, FortisBC may not export any electricity out of its service area during any given hour while FortisBC is taking energy requirements from BC Hydro under the agreement for that hour.

#### **3.3 Developments Since the 1993 PPA Was Approved**

This section discusses developments that have occurred since the 1993 PPA
became effective. These developments form part of the context for negotiating a
modernized New PPA and associated agreements, and explain in part why it would
not be appropriate to simply renew the PPA on the same terms and conditions as
the 1993 PPA.

23 (a) Columbia Basin Accord

The Province incorporated Columbia Power Corporation (**CPC**) in 1994 to facilitate the purchase by the Province from Teck of the existing Brilliant Plant and of expansion rights at the Brilliant and Waneta Dams. The Brilliant Plant and the expansion rights were assigned to CPC.

1 In 1995 the Province enacted the Columbia Basin Trust Act which created the Columbia Basin Trust (CBT) to manage the funding provided by the Province to CBT 2 for the economic, environmental and social benefit of the Columbia Basin region. 3 CBT is owned by the Province, and its Board is appointed by the Lieutenant 4 Governor in Council. The CBT was part of the Columbia Basin Initiative which 5 followed from the 1995 Columbia Basin Accord, the main goal of which was to 6 provide benefits to the Columbia Basin region in recognition of the costs borne by 7 that region as a result of the Treaty dams. 8

9 The Province also entered into an agreement with CBT in 1995 under which the 10 Province agreed to fund investments in the Columbia Basin region. That funding 11 represents a share of the value received for the downstream power benefits under 12 the Treaty. Under the Columbia Basin Accord and the 1995 agreement, the Arrow 13 Lakes Generating Station, the Brilliant Expansion and the WAX projects were 14 identified as core power projects to be developed by CBT and CPC.

BC Hydro and the Entitlement Parties negotiated an amendment and re-statement of the original Canal Plant Agreement dated July 1, 2005 under which the parties agree to continue to cooperate in the operation of their storage and generating facilities in the Columbia Basin region for the purpose of obtaining optimum generation. The Canal Plant Agreement has been further amended after the 2005 restatement, with the most recent amended agreement dated November 15, 2011.

The Arrow Lakes Generation Station was completed in 2002. The Brilliant Expansion Project was completed in 2007. The WAX Project is currently under construction, as discussed in section <u>3.3(e)</u>, below and is anticipated to be completed in mid-2015.

The addition of the new WAX generation resource in the region, which will allow FortisBC to export, under certain conditions, while taking PPA energy, complicates the accounting pursuant to the Canal Plant Agreement and complicates the settling of imbalances between the systems of BC Hydro and FortisBC.

#### 1 (b) Open Access Transmission

Open, non-discriminatory access to the electricity transmission system did not exist in B.C. or neighbouring jurisdictions at the time the 1993 PPA was signed. At that time the majority of energy purchase and sale agreements were by utilities under bilateral arrangements with other neighbouring utilities. Individual utility customers, and other market participants, did not have the opportunities to export and participate in electric power markets that they do now.

In 1995, BC Hydro joined two Regional Transmission Groups (RTGs): the Western 8 Regional Transmission Association, and the Northwest Regional Transmission 9 Association. RTGs were U.S. based voluntary organizations, composed of both 10 utility and non-utility members that agreed to adhere to rules for wholesale 11 transmission access. Under the terms of the RTGs, each utility member was 12 required to allow other utility members to use its transmission system in a manner 13 that is comparable to its own use. Included in the bylaws of each of these 14 associations was a requirement that each member utility file, with its own regulator, 15 wholesale transmission tariffs. 16

As well as encouraging the formation of the RTGs, the U.S. Federal Energy

18 Regulatory Commission (FERC) issued on March 29, 1995 a "Notice of Proposed

19 Rule Making" (NOPR) relating to the opening of access to transmission lines,

<sup>20</sup> including recommended procedures for developing wholesale transmission rates

21 and initial pro forma tariffs for Network Service, Point-to-Point Service and Ancillary

22 Services. The NOPR resulted in FERC Order No. 888 - Open Access and Stranded

<sup>23</sup> Costs, and Order No. 889 - Information Systems and Standards of Conduct.

Following FERC Order No. 888, and pursuant to BCUC Order Nos. G-67-96 and
 G-43-98, effective August 1, 1997 BC Hydro implemented Wholesale Transmission

<sup>26</sup> Tariffs for open access transmission services on its system.

1 In 1998 BC Hydro and FortisBC filed a joint proposal with the BCUC for harmonizing the transmission wheeling rates between the two utilities. The objective of 2 harmonization was to eliminate rate "pancaking" – the payment by customers of two 3 transmission wheeling tariffs on transactions where power is moved between utility 4 service areas. In accordance with BCUC Order No. G-12-99, transmission wheeling 5 customers are charged only the transmission service rate of the utility within whose 6 service area the customer taking service is located (the licence plate approach). 7 In accordance with the 2002 B.C. Energy Plan and Transmission Corporation Act, in 8 2004 British Columbia Transmission Corporation (BCTC) was formed as a new 9 Crown corporation responsible for planning, operating and managing BC Hydro's 10 transmission system, including designing and applying to the BCUC for approval of 11 an Open Access Transmission Tariff (**OATT**). BCUC Order No. G-58-05 approved 12 an OATT for BCTC. 13

On September 10, 2009, BCUC Order No. G-102-09 approved amendments to the
 OATT proposed by BCTC to reflect changes to align with the pro forma tariff
 established in FERC Order No. 890.

In accordance with the *Clean Energy Act*, in 2010 BCTC was reintegrated with
 BC Hydro and responsibility for the OATT transferred to BC Hydro. BC Hydro's
 OATT remains largely unchanged since that time.

There are now rules in B.C. and the U.S. Pacific Northwest for obtaining and scheduling electricity transmission services that are consistent with practices adopted by FERC, the North American Electric Reliability Corporation, and the Western Electricity Coordinating Council. BC Hydro's transmission scheduling practices generally follow procedures established by the North American Energy Standards Board, which were last updated in 2009.

Open, non-discriminatory access to the electricity transmission system in B.C. and neighbouring jurisdictions has enabled FortisBC and certain of its customers to

access regional electricity markets under the same terms and conditions as are

2 available to any other market participant.

3 (c) Regional Electricity Markets

Access to liquid electricity markets in adjacent jurisdictions through open access

5 transmission services enables market participants including FortisBC to take

<sup>6</sup> advantage of opportunities to buy and sell electricity when market prices are

7 favourable.

8 (i) Pacific Northwest

Open access transmission with consistent rules and procedures has facilitated
 dramatic growth in Pacific Northwest electricity trade and a liquid electricity market
 has been established in the region.

12 Electricity generating capacity in the U.S. Pacific Northwest is approximately

<sup>13</sup> 50 per cent hydroelectric, with generation patterns dominated by Columbia River

runoff patterns and hydro system operational restrictions such as minimum flows for

15 fish. Natural gas-fired electricity generation sets the market price for electricity a

<sup>16</sup> majority of the time.

In addition, U.S. government policies such as Federal Production Tax Credits and

18 State Renewable Energy Credits have resulted in a rapid growth in renewable

electricity generation facilities in the U.S. Pacific Northwest region.

<sup>20</sup> Between July 2005 and May 2012 approximately 4,250 MW of wind power capacity

was added in the Bonneville Power Administration (**BPA**) Balancing Authority

- <sup>22</sup> Area.<sup>16</sup> Further wind power capacity is expected to be added in the region, though
- this is projected to occur at a slower pace given recent legislative changes in

<sup>&</sup>lt;sup>16</sup> BPA Administrator's Final Record of Decision, BPA's Interim Environmental Redispatch and Negative Pricing Policies, May 2011, online: <http://www.bpa.gov/corporate/pubs/RODS/2011/ERandNegativePricing\_FinalROD\_web.pdf> at page 8. BPA Fact Sheet, Working together to address Northwest oversupply of power, May 2012, online: <http://www.bpa.gov/news/pubs/Pages/FactSheets.aspx>.

1 California that limit wind imports from outside the state from counting towards

- 2 California's renewable portfolio standards.<sup>17</sup> The Northwest Planning and
- <sup>3</sup> Conservation Council's updated report, dated December 14, 2012 projects that
- installed renewable power generation capacity in the U.S. Pacific Northwest region
- 5 will increase to more than 10,000 MW by 2020.
- 6 Wind power operators cannot store their fuel and therefore will generate and inject
- 7 energy into the grid regardless of demand or market price for energy. As a result of
- 8 Federal Production Tax Credits and/or State Renewable Energy Credits in relation to
- 9 energy generated from certain resources, wind power generators are able to earn
- <sup>10</sup> revenue even at negative prices for energy.<sup>18</sup>
- Large amounts of wind generated energy in combination with large amounts of
- 12 hydroelectric generated energy during spring freshet conditions have resulted in
- 13 situations of oversupply in the Pacific Northwest<sup>19</sup> and very low prices for energy at
- <sup>14</sup> mid-Columbia particularly in spring 2012.<sup>20</sup>
- 15 (ii) Alberta
- Alberta's electricity grid has two major links to external systems: a synchronous AC
- 17 (Alternating Current) intertie with B.C. and a DC (Direct Current) intertie with
- 18 Saskatchewan. In addition, the pending energisation of the Montana Alberta Tie Line
- 19 will add interconnection with Montana.
- <sup>20</sup> The price of electricity in Alberta has been set on an hourly basis since Alberta's
- 21 power market was deregulated in the late 1990's. Generators submit offers into a

<sup>&</sup>lt;sup>17</sup> Refer to page 18 of the Northwest Planning Conservation Council's report: <a href="http://www.nwcouncil.org/library/2012/2012-13.pdf">http://www.nwcouncil.org/library/2012/2012-13.pdf</a>>.

<sup>&</sup>lt;sup>18</sup> BPA's Interim Environmental Redispatch and Negative Pricing Policies, supra note 11 at page 11. The PTC is currently 2.2¢/kWh for wind and generally applies to first ten years of operation; state RECs are generally in the \$8 to \$20 per MWh range.

<sup>&</sup>lt;sup>19</sup> BPA Fact Sheet, Working together to address Northwest oversupply of power, supra note 11.

<sup>&</sup>lt;sup>20</sup> Federal Energy Regulatory Commission, Office of Enforcement, Energy Market Snapshot – Western States Version, January 2013, online: <a href="https://www.ferc.gov/market-oversight/mkt-snp-sht/mkt-snp-sht.asp">https://www.ferc.gov/market-oversight/mkt-snp-sht/mkt-snp-sht.asp</a> at page 49.

1 power pool and receive a single market clearing price if their offers are accepted and

- <sup>2</sup> their generator is dispatched by the Alberta Electric System Operator (**AESO**).
- <sup>3</sup> Coal-fired electricity generation provides base load requirements in Alberta, with
- <sup>4</sup> natural gas-fired generation typically setting the market price.
- 5 Similarly, consumers participating in the wholesale market (typically distributors and
- 6 industrial customers) pay a single market clearing pool price when they purchase
   7 electricity.
- Parties located outside Alberta transacting over the interties can submit offers to
  import power into Alberta or offers to export power from Alberta. There is no
  competitive bidding market for these imports and exports. Rather, external parties
  are price takers because their imports must be submitted at \$0/MWh and exports
  submitted at \$999/MWh. As a result, any power offered for import or export is
  dispatched by the AESO and settled at the Alberta pool price.
- The Path Rating of the AB BC Path is 1,000 MW and the BC Hydro real-time
  transfer limit is typically 700 MW for imports from Alberta to BC. However, as a result
  of real-time constraints in Alberta, the path is often limited by AESO to zero MW in
  on-peak hours and no more than 700 MW in off-peak hours. Currently there are
  249 MW of existing long term commitments on this path.
- The Path Rating of the BC AB Path is 1,200 MW and the BC Hydro real-time
  transfer limit is typically 850 MW for exports from BC to Alberta. However, as a result
  of real-time constraints in Alberta, the path is often limited by AESO to less than
  600 MW. Currently there are 690 MW of existing long term commitments on this
  path. As a result of the AESO's new allocation rule, typical exports from BC to
  Alberta will decrease by about a third when the Montana-Alberta Transmission Line
  (MATL) begins operation in summer 2013.
- 26 (d) Trends in FortisBC's PPA purchases
- 27 (i) Short Term Variability

Most of the energy that FortisBC purchases from BC Hydro under the 1993 PPA is 1 prescheduled ahead of time. Twice a week FortisBC submits energy schedules to 2 BC Hydro that typically forecast purchases for the next three to four days. When 3 FortisBC's actual purchases exceed the prescheduled amount, which is permitted 4 under the 1993 PPA, an excess energy charge occurs and there may also be an 5 excess demand charge. FortisBC took unscheduled excess energy in 1,043 hours in 6 F2012 and 775 hours in F2013. The maximum hourly amount of unscheduled 7 excess energy was 123 MW in F2012 and 82 MW in F2013. In recent years, most of 8 FortisBC's unscheduled energy purchases occur in the spring and summer months 9 when market prices are most likely to be less than the RS 3808 price. 10

-	1

Table 1	Excess Energy Purchases

	Number of Hours in F2013 with Excess Energy Purchases	Average Hourly Excess Energy in F2013 (MW) <sup>21</sup>	Maximum Hourly Excess Energy in F2013 (MW) <sup>22</sup>
April	81	11	39
Мау	142	11	52
June	181	13	82
July	73	12	51
August	135	16	53
September	35	6	22
October	125	16	51
November	3	2	2
December	0	0	0
January	0	0	0
February	0	0	0
March	0	0	0
Total	775	N/A	N/A

FortisBC is permitted to take excess energy under the 1993 PPA, however, the lack 12

of advance notice to BC Hydro about how much energy will actually be taken above 13

<sup>21</sup> Average calculated during hours in which Excess Energy was used.

<sup>&</sup>lt;sup>22</sup> Maximum calculated during hours in which Excess Energy was used.

prescheduled amounts in a given hour can require BC Hydro to operate its system 1 relatively more conservatively or take measures to respond to unexpected energy 2 purchases. As the balancing authority for the province of British Columbia, BC Hydro 3 is responsible for ensuring that the system, which includes FortisBC's load and 4 schedules, is in load-resource-balance. If FortisBC's energy needs are different than 5 prescheduled quantities, BC Hydro may need to take a variety of measures to 6 maintain the systems load resource balance. These can include running additional 7 generation, obtaining additional imports, or decreasing exports in order to meet 8 unexpected FortisBC service territory obligations. 9

Long Term Variability (ii) 10

15

16

Figure 2 below shows FortisBC's annual energy purchases from BC Hydro under the 11 1993 PPA over the past ten years. FortisBC's purchases increased from 794 GWh in 12 F2004 to a peak of 974 GWh in F2007, and have since declined to 513 GWh and 13 338 GWh in F2012 and F2013, respectively. 14

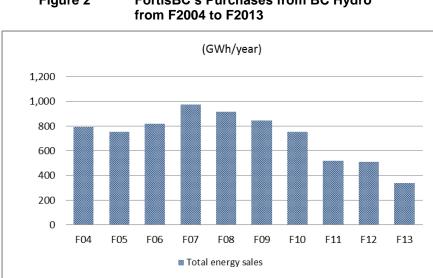


Figure 2 FortisBC's Purchases from BC Hydro

1 In recent regulatory filings FortisBC has provided a number of reasons for the

<sup>2</sup> decline in PPA purchases.<sup>23</sup> These include increased participation in the electricity

3 markets of other jurisdictions (increased market purchases due to wholesale prices

4 at times falling to below the RS 3808 price) and lower than expected load growth.

5 FortisBC has increased its participation in regional power markets in response to the

<sup>6</sup> opportunities presented by low, and occasionally negative, prices at Mid-C. This

7 participation in power markets has at times resulted in very large swings in

8 FortisBC's energy purchases from BC Hydro under the 1993 PPA.

9 FortisBC's actual PPA purchases are less predictable than they used to be. Each

<sup>10</sup> summer FortisBC typically provides a five-year energy purchase forecast to

BC Hydro. In calendar year 2011, FortisBC's actual purchases of 508 GWh were

<sup>12</sup> 200 GWh lower than its forecast purchases of 708 GWh.<sup>24</sup> In calendar year 2012,

actual purchases of 418 GWh were less than half of forecast purchases of

14 1,012 GWh.<sup>25</sup>

15 The extent of variability between FortisBC's forecasts and its actual purchases in

recent years has created uncertainty for BC Hydro system operations and planning.

17 Figure 3 shows the monthly profile of FortisBC's energy purchases under the

18 1993 PPA. FortisBC purchases more energy during the fall and winter months and

<sup>19</sup> less during spring and summer months. The figure shows that FortisBC's F2013

20 purchases generally tracked the monthly consumption pattern of PPA purchases

<sup>21</sup> made over the past five years, and that purchases were lower in each month than

the five-year average for the month. The figure also shows that FortisBC made most

<sup>&</sup>lt;sup>23</sup> FortisBC 2012-2013 Revenue Requirements Application at Tab 4, sections 4.1.2.4, 4.1.2.6 and 4.1.5.

<sup>&</sup>lt;sup>24</sup> FortisBC's calendar year 2011 purchase forecast is found in their 2012-2013 Revenue Requirements Application at Tab 4, Table 4.1.4-1 2011 Forecast Power Purchase Expense at Line 6 (Total BCH 3808 Energy). FortisBC's calendar year 2012 purchase forecasts are also found in Tab 4, Table 4.1.4-2 2012 Forecast Power Purchase Expense at Line 6 (Total BCH 3808 Energy) and their November 4, 2011 Evidentiary Update of the 2012-2013 Revenue Requirements Application (Exhibit B at Tab 4, Table 4.1.4-3 2012 Forecast Power Purchase Expense at Line 6 (Total BCH 3808 Energy).

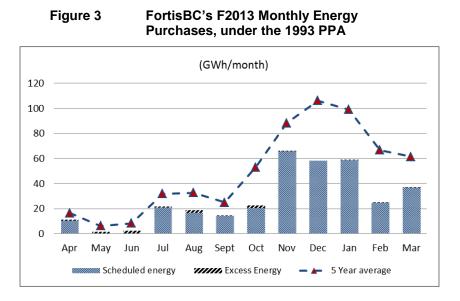
<sup>&</sup>lt;sup>25</sup> FortisBC's F12/F13 Revenue Requirement Application Evidentiary Update.

of its excess energy purchases during the spring and early summer, indicating that

2 this is the period when actual purchases varied the most from prescheduled

3 amounts.

4 5



### 6 (iii) Use of PPA and GWA to Serve FortisBC Load

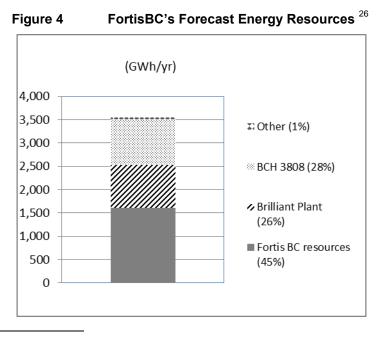
FortisBC utilizes both the 1993 PPA and the General Wheeling Agreement to meet
its regional load growth at the Princeton, Okanagan and Creston remote load
centres. The most recent capacity nomination under the 1993 PPA is 30 MW at
Princeton, zero MW at Creston and 170 MW at Okanagan with an aggregate
nomination of 200 MW. Whereas, the most recent General Wheeling Agreement
nomination at each point of delivery is zero MW at Princeton, 35 MW at Creston and
225 MW at Okanagan.

Under the 1993 PPA, FortisBC is required to provide its capacity nominations for
each point of delivery five years' in advance. Such capacity nominations, or
Nominated Demands as defined in the 1993 PPA, also set a limit on the amount of
energy which could be prescheduled to each point. Thus, because of the variability
associated with FortisBC load centres, FortisBC was not able to fully schedule up to

1 the full 200 MW of available capacity. For example, Princeton load is typically

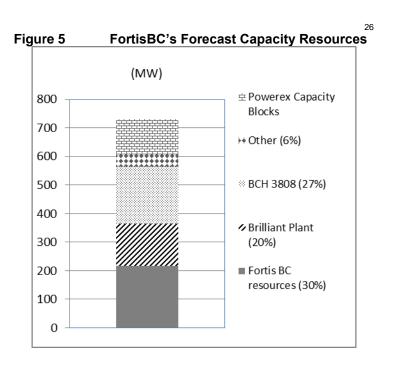
- 2 20 MW (which is what FortisBC would schedule) but because the Nominated
- 3 Demand for Princeton is 30 MW, in a typical hour there would be 10 MW of
- <sup>4</sup> "stranded" PPA energy that could not be used to serve the other load centres.
- 5 (e) BCUC Decisions related to Customers with Self-Generation Facilities
- 6 FortisBC meets its service area load requirements with electricity generated at its
- <sup>7</sup> own generation resources, as well as from specific resources under contract with
- 8 third parties, the 1993 PPA and short- and medium-term market purchases.
- 9 BC Hydro supplies power to FortisBC at embedded cost rates under RS 3808. In
- effect, FortisBC is one of BC Hydro's largest customers with self-generation
   facilities.
- 12 Figure 4 and Figure 5 below show FortisBC's forecast of total energy and capacity
- resources for calendar year 2012, and <u>Figure 4</u> indicates that FortisBC uses the
- 14 1993 PPA to meet approximately 28 per cent of its requirements.





<sup>26</sup> Based on forecasts provided in Table 4.1.4-2 of Fortis' 2012-2013 Revenue Requirements Evidentiary Update dated November 4, 2011.

1



- 2 As a BC Hydro customer with self-generation facilities and market access, there is
- 3 the potential for FortisBC to inappropriately arbitrage between embedded cost utility
- 4 service and market prices. The 1993 PPA addressed the potential for inappropriate
- 5 arbitrage as follows:
- 2.1 The Electricity purchased under this Agreement is solely for
   the purpose of supplementing FortisBC's resources to enable it
   to meet its service area load requirements and shall not be
   Exported or stored provided that nothing contained herein shall
   prohibit FortisBC from storing its entitlement resources in its
   entitlement account pursuant to the Canal Plant Agreement.
- 2.2 "Export" and all forms of the verb "to Export" means, for the
   purposes of this Agreement, any transaction by or on behalf of
   FortisBC whereby Electricity leaves the FortisBC service area
   save and except for [certain listed exceptions].
- 8.4 FortisBC shall not Export any Electricity out of its service
   area during any given hour while FortisBC is taking energy
   requirements from BC Hydro under this Agreement for that hour.

Thus, electricity purchased under the 1993 PPA is solely for the purpose of
supplementing FortisBC's resources to enable it to meet its service area load
requirements and shall not be exported or stored. Section 8.4 goes further by
providing that FortisBC may not export any electricity out of its service area during
any given hour while FortisBC is taking energy requirements from BC Hydro under
the agreement for that hour.

In September of 2008, BC Hydro applied to the BCUC to amend section 2.1 of the
1993 PPA to clarify that, in addition to the limitations identified above, electricity
purchased by FortisBC under the agreement cannot be arbitraged by a FortisBC
customer with self-generation capability. The BCUC's Order No. G-48-09 amended
section 2.1 of the 1993 PPA as follows:<sup>27</sup>

12	(a)	The electricity purchased under this agreement is
13		solely for the purpose of supplementing FortisBC's
14		resources to enable it to meet its service area load
15		requirements and, shall not be exported or stored,
16		provided that nothing contained herein shall prohibit
17		FortisBC from storing its entitlement resources in its
18		entitlement account pursuant to the Canal Plant
19		Agreement; and
20	(b)	shall not be sold to any FortisBC customer when such
21		customer is selling self-generated electricity which is
22		not in excess of its load.
	<b>–</b> <i>i</i>	
23	•	er certainty, paragraph (b) above is to prevent FortisBC
24	0	rating customers from purchasing power at regulated
25		d cost rates and simultaneously selling an equivalent
26	amount o	f power into available domestic and export markets.
07	The BCUC also cor	nsidered the issues related to utility customers with
27		
28	self-generation facil	lities purchasing energy from the utility while at the same time
29	selling energy to the	e market in a proceeding that resulted in Order No. G-38-01. In
30	that Order the BCU	C determined that BC Hydro's transmission service customers

<sup>&</sup>lt;sup>27</sup> BCUC Order No. G-48-09 Reasons for Decision In the Matter of British Columbia Hydro and Power Authority and Application to Amend Section 2.1 of Rate Schedule 3808 Power Purchase Agreement, at page 31.

1	(then RS 1821 customers) should be allowed to sell excess self-generated
2	electricity, provided the customers do not arbitrage between embedded-cost utility
3	rates and market prices to the detriment of other utility ratepayers:
4	"The Commission directs B.C. Hydro to allow Rate Schedule
5	1821 customers with idle self-generation capability to self
6 7	excess self-generated electricity, provided the self-generating customers do not arbitrage between embedded cost utility
8	service and market prices. This means that B.C. Hydro is not
9 10	required to supply any increased embedded cost of service to a RS 1821 customer selling its self-generation output to market." <sup>28</sup>
11	Recently, in its Order No. G-202-12 Reasons for Decision, the BCUC confirmed a
12	consistent regulatory principle that self-generators should not arbitrage power to the
13	detriment of other ratepayers. <sup>29</sup> The BCUC further allowed that three different
14	mechanisms can be used to achieve this protection in different circumstances,
15	including the "Generator Baseline (GBL)" approach, the "net of load" approach, and
16	for FortisBC customers that are eligible customers under FortisBC's Access
17	Principles an approach that involves customer nomination of expected load to be
18	served by some level of FortisBC embedded cost power and a "matching
19	methodology" for notionally matching sales to non-PPA resources.
20	The approach used in sections 2.1 and 8.4 of the 1993 PPA is a net of load
21	approach: FortisBC may not export any electricity out of its service area during an
22	hour while FortisBC is taking energy requirements from BC Hydro under the
23	agreement for that hour; and FortisBC may not sell PPA electricity to any FortisBC
24	customer when such customer is selling self-generated electricity which is not in
25	excess of the customer's load.
26	The New PPA provides FortisBC with greater flexibility than the net of load approach
27	used in the 1993 PPA, as amended. This is discussed further below and in
28	section <u>4.3</u> of this application.

<sup>&</sup>lt;sup>28</sup> BCUC Order No. G-38-01, Directive 1.

<sup>&</sup>lt;sup>29</sup> Decision on BCUC Order No. G-202-12 at page 11.

1 The additional flexibility in the New PPA and the Energy Export Agreement will allow

2 FortisBC to export "Eligible Energy" using "entitlement capacity" attributable to the

new WAX Project and available to FortisBC in an hour during which FortisBC is

4 taking electricity under the New PPA.

5 The WAX Project is a 335 MW hydroelectric generating facility expected to be

6 completed by mid-2015. The WAX Project is being constructed by the WAX Limited

7 Partnership which includes Fortis Inc. (FortisBC's parent corporation), CPC Waneta

8 Holdings LTd. and CBT Waneta Expansion Power Corp.

All entitlement energy from the WAX Project, along with the associated entitlement
 capacity required to deliver that energy, has been sold to BC Hydro under a long
 term energy purchase agreement. The surplus entitlement capacity has been sold to
 FortisBC under a long-term capacity purchase agreement and is recognized as
 entitlement capacity pursuant to the Canal Plant Agreement.

FortisBC's ability to export using such entitlement capacity was an integral 14 component of value for Fortis Inc. in committing to the development of the WAX 15 Project. Therefore, BC Hydro and FortisBC have agreed in the Energy Export 16 Agreement to terms under which FortisBC may export Eligible Energy using the 17 WAX capacity while at the same time purchasing energy from BC Hydro under the 18 New PPA, and which mitigates the risk to BC Hydro ratepayers of FortisBC 19 arbitraging between BC Hydro's embedded cost and market prices. The Energy 20 Export Agreement is discussed in greater detail in Section 4.3. 21 The Energy Export Agreement will not become effective unless the New PPA 22 becomes effective and the WAX Project achieves commercial operation. It will 23 provide that FortisBC may export energy during hours when FortisBC is 24

simultaneously purchasing power from BC Hydro under the New PPA, provided that

such exports (i) are supported by "Eligible Energy" sources, and (ii) are supported by

27 WAX capacity available to FortisBC, and (iii) demonstrably do not result in increased

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purchases under the New PPA. In this context, "Eligible Energy" does not include
any purchases under the New PPA, or any purchases from FortisBC's customers'
self-generation to the extent such purchases result in an increase in purchases
under the New PPA. This means that FortisBC may only export using incremental
resources during hours in which it is taking PPA energy.
The principles of the Energy Export Agreement are in accordance with BCUC

<sup>7</sup> decisions related to sales by customers with self-generation facilities, as discussed
<sup>8</sup> above.

9 (f) Inclining Block Rate Structures

Prior to April 2006, the energy and demand charges for BC Hydro's transmission
 voltage service customers were set out in RS 1821. The energy and demand
 charges for BC Hydro's service to FortisBC pursuant to the 1993 PPA as set out in
 RS 3808 were based on the RS 1821 charges.

In April 2006, RS 1821 was cancelled and replaced by RS 1823 – Transmission 14 Service Stepped Rate, RS 1825 – Transmission Service Time-of-Use Rate, and 15 RS 1827 – Transmission Service Rate for Exempt Customers (i.e., for City of New 16 Westminster, University of British Columbia and other transmission service 17 customers exempted from RS 1823 and RS 1825 by the BCUC). RS 1823 has an 18 inclining-block (or two-step) rate structure for energy with the price for the second 19 block set at a proxy for BC Hydro's LRMC of new supply. RS 1825 has a time-of-use 20 rate structure; however, the rate schedule has not been used. RS 1827 has a flat 21 rate structure. From April 2006 to the present the energy and demand charges in 22 RS 3808 have been consistent with the flat rate structure charges in RS 1827. 23 Following implementation of the RS 1823 Stepped Rate for transmission service 24 customers in April 2006 pursuant to section 3(1) of Heritage Special Direction 25 No. HC2 to the BCUC, and direction from the BCUC in its reasons for decision In the 26 Matter of British Columbia Hydro and Power Authority 2007 Rate Design Application 27

1 (Phase 1) dated October 26, 2007 (BC Hydro 2007 RDA Decision), most of

2 BC Hydro's rates now have inclining-block rate structures with the price for the

<sup>3</sup> second block set at a proxy for BC Hydro's LRMC of new supply.

<sup>4</sup> In the BC Hydro 2007 RDA Decision the BCUC determined that rate structures, such

5 as two-step inclining block rate structures, are an appropriate and practical way to

<sup>6</sup> "avoid dilution of the Heritage benefit with the ever increasing reliance on high

7 marginal cost incremental supply."<sup>30</sup> The BCUC also provided strong

8 encouragement to BC Hydro in that decision to continue to develop rate structures

9 which send price signals to customers.

<sup>10</sup> The BCUC followed through with its support for rate structures which send price

11 signals by directing FortisBC to implement similar inclining block rate structures for

<sup>12</sup> its customers.<sup>31</sup> FortisBC has implemented a two-step inclining block rate structure

for its residential service customers, and recently submitted its application to the

BCUC regarding a two-step rate structure for its transmission service customers.

As discussed further in section <u>4.1(d)</u>, below, the New PPA will have an inclining

<sup>16</sup> block rate structure, including a LRMC price signal, which is generally consistent

with the approach used in other BC Hydro rates and in FortisBC rates. As FortisBC

is a public utility with an obligation to serve its customers within its own service area,

the purpose of the two-step pricing under the new RS 3808 is not to encourage

20 FortisBC to reduce its load generally. Rather, the two-step pricing under the new

21 RS 3808 acts primarily as a price signal for FortisBC's long-term electricity supply

22 planning purposes.

### 234The Agreements

<sup>24</sup> The New PPA and associated, supplemental agreements are specialized

<sup>25</sup> arrangements reflecting the unique historical and ongoing relationships between

<sup>&</sup>lt;sup>30</sup> BCUC Order No. G-130-07, BC Hydro 2007 RDA Decision, page 57.

<sup>&</sup>lt;sup>31</sup> BCUC Order No. G-156-10, Reasons for Decision In the Matter of FortisBC Inc. 2009 Rate Design and Cost of Service Analysis dated October 19, 2010.

BC Hydro and FortisBC. The agreements apply to only the service BC Hydro

2 provides to FortisBC and not to the service BC Hydro provides to any other

3 customer.

4 The agreements are the result of years of bilateral, arms-length and at times difficult negotiations between BC Hydro and FortisBC. Preliminary negotiations began in 5 2005 but faltered. The Parties re-launched negotiations in 2009 but they reached an 6 impasse on several issues. In July 2009 the parties retained a facilitator to assist 7 with the negotiations. The involvement of the facilitator also failed to yield an 8 agreement. In 2011 the Parties recommitted to the goal of reaching a negotiated 9 solution, ultimately resulting in agreement on the New PPA and associated 10 agreements to replace the expiring 1993 PPA. 11

The negotiations were within the context of the Canal Plant Agreement, the BCUC's
1986 and 1993 Decisions and subsequent developments as discussed in section <u>3</u>,
above.

Over the course of the negotiations, there were a multitude of complex and difficult

16 issues. Each party put forward numerous proposals for dealing with various issues,

and there was considerable give and take to agree to the current structure and to

<sup>18</sup> arrive at agreements that are acceptable as a package to both Parties.

As a result, the agreements do not represent a unilaterally designed rate developed

to meet specific rate design criteria such as those articulated by Bonbright. Further,

there are no specific alternatives to speak of because the final package of

agreements was achieved through an iterative and evolving process. Nevertheless,

<sup>23</sup> BC Hydro submits that the resulting agreements and RS 3808 align with the

Bonbright rate design criteria, as discussed below.

- 1) Recovery of the Revenue Requirement
- To the extent that the main pricing components for energy and demand in
   RS 3808 continue to generally be at par with the rates applicable to other

1 2 3 4 5 6		BC Hydro transmission service customers (through the alignment of the RS 3808 Tranche 1 energy charge and demand charge with the RS 1827 energy and demand charges), BC Hydro generally will recover its costs from FortisBC in a manner similar to recovery from other transmission service customers, as reflected in each BC Hydro revenue requirement application ( <b>RRA</b> )
7 8 9		Improvements to the nomination and scheduling provisions in the New PPA will allow BC Hydro to forecast FortisBC's energy and demand requirements more accurately and include these forecasts in BC Hydro's RRAs
10 11 12		The new Imbalance Agreement and improved scheduling provisions of the New PPA will provide new mechanisms to reduce or recover BC Hydro's operational costs
13	2)	Fair Apportionment of Costs among Customers
14		<ul> <li>Refer to the Recovery of the Revenue Requirement section above</li> </ul>
15 16		<ul> <li>The new agreements encourage operational efficiency in relation to this unique and complex business relationship</li> </ul>
17		<ul> <li>Opportunities for arbitrage are mitigated</li> </ul>
18	3)	Price Signals that Encourage Efficient Use and Discourage Inefficient Use
19 20 21		The introduction of a LRMC-based Tranche 2 energy price sends a clear signal regarding the provincial cost of new electricity supply for FortisBC's long-term resource planning decisions
22 23 24		Price signals in the new Imbalance Agreement will provide a strong financial disincentive for FortisBC against allowing a transfer of imbalance energy from or to the BC Hydro system

1	4)	Customer Understanding and Acceptance
2 3 4		The New PPA and associated agreements have been negotiated and agreed to by BC Hydro and its customer, FortisBC, indicating customer understanding and acceptance
5	5)	Practical and Cost Effective to Implement
6 7 8 9 10		The New PPA will not change the basic parameters of the service BC Hydro has been providing to FortisBC for 20 years under the 1993 PPA. The New PPA and associated agreements modernize the terms and conditions of this service by introducing improvements for current circumstances and industry practices.
11	6)	Rate and Bill Stability
12 13 14		The main pricing components (i.e., the Tranche 1 energy charge and demand charge) of RS 3808 will only be subject to change over time in accordance with BC Hydro general rate increases
15 16		<ul> <li>As well, a twenty year agreement provides a level of certainty and stability for BC Hydro and FortisBC for the long term</li> </ul>
17	7)	Provision of Revenue Stability
18		<ul> <li>Refer to sections 1 and 6 above</li> </ul>
19	8)	Avoidance of Undue Discrimination
20 21 22 23		<ul> <li>The relationship between BC Hydro and FortisBC is unique, however, the main pricing components of RS 3808 are generally at par with the rates applicable to BC Hydro's other transmission service customers</li> <li>As well, the new agreements expressly allow FortisBC to export incremental</li> </ul>
23 24 25		energy under certain conditions from a new resource (the WAX Project) during hours when FortisBC is simultaneously purchasing power from

BC Hydro under the New PPA, providing similar treatment to that afforded to

- 2 BC Hydro's other customers with self-generation facilities
- <sup>3</sup> The following sections provide summaries of the key terms of the agreements.
- 4 References to the specific agreement sections are provided in the footnotes.
- 5 **4.1 The New PPA**
- 6 (a) Term<sup>32</sup>

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7 The New PPA will replace the 1993 PPA as of October 1, 2013 provided that all

8 conditions precedent have been met. The conditions precedent are set out in

<sup>9</sup> section 2.2 of the New PPA, with the key conditions being BCUC approval of the

10 New PPA and associated agreements without any changes to what has been filed

- 11 unless acceptable to both parties.
- The New PPA is a 20-year fixed term agreement and can be terminated early as
   provided in section 5.6 of the New PPA.
- 14 (b) Contract Demand<sup>33</sup>
- 15 The Contract Demand for the New PPA continues to be 200 MW subject to
- reduction by FortisBC. However, unlike the limitations in the 1993 PPA, there will be

no excess demand charge resulting from capacity nominations at each point of

delivery. Transmission capacity issues will now be dealt with in the amended and

- 19 restated General Wheeling Agreement.
- 20 (c) Annual Energy Nomination and Scheduling
- 21 (i) Annual Energy Nomination<sup>34</sup>
- 22 Each year FortisBC will provide an Annual Energy Nomination for the following year,
- not to exceed the lesser of (i) 1752 GWh, and (ii) the product of the Contract

<sup>&</sup>lt;sup>32</sup> Section 2.1, 2.2, and 5.6 of the New PPA.

<sup>&</sup>lt;sup>33</sup> Sections 1.1 and 5.6 of the New PPA.

<sup>&</sup>lt;sup>34</sup> Sections 5.1 to 5.5 of the New PPA.

Demand for that year and 8760 hours. The Annual Energy Nomination is not simply a forecast, but will be a single energy nomination for the aggregate of all points of delivery and any amounts taken above the Annual Energy Nomination will have an adder as described below in the section that explains pricing. The change in nomination from one year to the next may not exceed +/- 20 per cent relative to the nomination for the immediately preceding year. In any Contract Year, FortisBC will

7 "take or pay" for at least 75 per cent of the Annual Energy Nomination for that

8 Contract Year.

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9 (ii) Daily Energy Scheduling<sup>35</sup>

Each day FortisBC will provide an hourly preschedule by 5:30 a.m. for electricity to be consumed the following day(s) in accordance with the scheduling calendar for the WECC region. The Maximum Contract Demand for each hour is 200 MW, and no schedule will be above that amount. Any energy prescheduled is "take and pay" and no amounts over the scheduled amounts will be delivered (i.e., there is no excess energy or excess demand charge). Scheduled energy will be allocated to each point of delivery in accordance with procedures developed by the parties.

If the daily preschedule is not received then the preschedule for the previous day will generally be applied. FortisBC can change the schedule by up to +/- 25 MW for any hour with 30 minutes' notice before the hour. Following the Scheduling Deadline, no changes to a schedule will be permitted.

21 (d) Pricing<sup>36</sup>

The pricing set out in the New PPA is not based on a customer-specific cost of service rate design. FortisBC is part of BC Hydro's transmission rate class for cost of service purposes, and the Tranche 1 energy charge and the demand charge in the New PPA continue to reflect BC Hydro's existing RS 1827 energy and demand

<sup>&</sup>lt;sup>35</sup> Sections 6.1 to 6.4 of the New PPA.

<sup>&</sup>lt;sup>36</sup> Sections 7 and 8 of the New PPA.

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charges for its customers served at transmission voltages that are exempted from
 RS 1823 by the BCUC.

The New PPA has two-step pricing for energy. The threshold where the rate
transitions from Tranche 1 to Tranche 2 (1,041 GWh/year) was negotiated between
the Parties and takes into consideration FortisBC's prior purchases under the
1993 PPA and provides for some load growth based on FortisBC's forecasts.

This pricing structure includes a LRMC price signal which is generally consistent 7 with the inclining block approach used in other BC Hydro rates. However, the 8 purpose of the LRMC price signal for RS 3808 is different from the purpose of the 9 marginal cost price signal used in other BC Hydro rates. A number of BC Hydro's 10 other rates are designed as tiered rates in order to encourage conservation by the 11 customer. Because FortisBC is a public utility that undertakes resource planning to 12 serve its customers within its own service area, the purpose of the two-step pricing is 13 not to encourage FortisBC to reduce its load generally. Rather, the two-step pricing 14 under the New PPA provides FortisBC with continuing access to a fixed amount of 15 BC Hydro embedded cost power and also provides a price signal for FortisBC's 16 long-term electricity supply planning purposes. BC Hydro believes this pricing 17 structure appropriately recognizes the hybrid relationship between FortisBC and 18 BC Hydro. As FortisBC's load grows, the limited amount of energy available to 19 FortisBC at the Tranche 1 Energy Price will encourage FortisBC to plan for and 20 obtain alternate supplies of electricity if it is able to obtain them for less than 21 BC Hydro's LRMC as represented by the Tranche 2 Energy Price. 22

23 (i) Energy Charges<sup>37</sup>

The New PPA has two-step pricing for energy. The Tranche 1 Energy Price will
reflect the energy charge component of BC Hydro's RS 1827. The energy price for
RS 1827 in F2014 (and on the Effective Date of the New PPA) is \$0.03724/kWh.

<sup>&</sup>lt;sup>37</sup> Sections 7.1 and 7.2 of the New PPA.

1 The Tranche 2 Energy Price will reflect BC Hydro's most recent proxy for LRMC for firm energy as determined by BC Hydro and accepted by the BCUC for rate making 2 purposes, which will not include an amount on account of distribution losses but will 3 include an amount on account of transmission losses and an adjustment for inflation. 4 The Tranche 2 Energy Price is currently represented by the proxy for LRMC 5 accepted by the BCUC in BC Hydro's 2010 Residential Inclining Block Rate Design 6 Re-pricing Application, and will be \$0.1297/kWh on the Effective Date of the 7 New PPA. 8 The Tranche 1 and Tranche 2 Energy Prices will be applied as follows: 9 Price for energy less than or equal to the Annual Energy Nomination: 10 Tranche 1 Energy Price applies to energy that is less than or equal to the 11 Maximum Tranche 1 amount (1,041 GWh/year) 12 Tranche 2 Energy Price applies to energy that exceeds the Maximum 13 Tranche 1 amount 14 Price for energy exceeding the Annual Energy Nomination: 15 Tranche 1 Energy Price plus 50 per cent of the Tranche 1 Energy Price 16 applies to energy that exceeds the Annual Energy Nomination but is less 17 than or equal to the Maximum Tranche 1 amount 18 Tranche 2 Energy Price plus 15 per cent of the Tranche 2 Energy Price 19 applies to energy that exceeds the Annual Energy Nomination and also 20 exceeds the Maximum Tranche 1 amount 21 Demand Charges<sup>38</sup> (ii) 22 The New PPA continues to have a monthly Demand Charge, based on FortisBC's 23 Billing Demand. The Demand Charge will reflect the demand charge component of 24 BC Hydro's RS 1827 for customers taking electricity at transmission voltages that 25

<sup>&</sup>lt;sup>38</sup> Sections 8.1 and 8.2 of the New PPA.

are exempted from RS 1823 by the BCUC. The demand charge for RS 1827 in 1 F2014 (and on the Effective Date of the New PPA) is \$6.353/kW/month. 2 The Demand Charge for each month will be applied to the highest of: 3 The maximum amount of electricity (in kW) scheduled under the agreement for 4 any hour of the Billing Month 5 Seventy five per cent of the maximum amount of electricity (in kW) scheduled 6 under the agreement in any hour in the 11 months prior to the Billing Month<sup>39</sup> 7 Fifty per cent of the Contract Demand (in kW) for the Billing Month 8 (e) Exports<sup>40</sup> 9 The New PPA provides that to the extent specifically agreed FortisBC may export 10 energy in certain circumstances and under certain conditions during hours when 11 FortisBC is simultaneously purchasing electricity from BC Hydro under the 12 New PPA. The Energy Export Agreement sets out the circumstances in which 13 FortisBC is allowed to export while FortisBC is taking New PPA energy. Otherwise, 14 FortisBC is prohibited from scheduling exports of energy out of its service area 15 during any hour when FortisBC is taking electricity under the New PPA. 16 The New PPA also includes refinements that allow FortisBC additional flexibility for 17 serving its self-generating customers while still protecting against increases in 18 New PPA purchases arising from the sale of self-generated power. Specifically, 19 FortisBC will be allowed to sell electricity purchased under the New PPA to a 20 self-generating customer that is selling electricity if a portion of the customer's load 21 equal to or greater than the customer-specific "baseline" is being served by power 22 from resources other than the New PPA. 23

<sup>&</sup>lt;sup>39</sup> This provision does not apply in circumstances where FortisBC has reduced the Contract Demand in accordance with section 5.6 of the New PPA. In such circumstances the amount of Electricity specified is section 8.2(b) may not exceed an amount equal to 100 per cent of the Contract Demand.

<sup>&</sup>lt;sup>40</sup> Sections 2.5 and 2.6 of the New PPA.

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1 The "baseline" will be as agreed between the Parties, acknowledging that such baseline shall be determined in a manner consistent with how BC Hydro establishes 2 a "generator baseline" for its own customers. BC Hydro has published a report -3 Transmission Service Rate Customer GBL Information Report June 2012 – 4 explaining the context and purpose of GBLs as well as the principles, process and 5 considerations used by BC Hydro for establishing a GBL in cases where a customer 6 sells electricity to BC Hydro. FortisBC and its customers with self-generation 7 facilities can refer to the GBL Information Report for guidance in relation to 8 section 2.5 of the New PPA. 9

These refinements provide similar treatment of FortisBC self-generating customers and BC Hydro self-generating customers, in respect of BC Hydro embedded cost rates. At the same time, the New PPA continues to prevent FortisBC from increasing its purchases of PPA power if such increase would be the result of self-generating customers selling electricity.

Section 2.5 does not limit FortisBC's ability to serve load, directly or indirectly, in the 15 "FBC Service Territory", which is defined as the area in British Columbia served, 16 directly or indirectly, by FortisBC from time to time, and connected by the Entitlement 17 Parties' System. Thus, section 2.5 does not limit FortisBC's access to RS 3808 18 electricity for the purpose of indirectly serving the loads in British Columbia of the 19 interior municipal utilities. However, the refined provisions discussed above would 20 apply to potentially limit FortisBC's access to RS 3808 electricity in circumstances 21 where a municipal utility with self-generation facilities (e.g., the City of Nelson) is 22 selling self-generated electricity unless a portion of the municipality's load equal to or 23 greater than the customer-specific baseline is being served by electricity that is not 24 electricity taken under the New PPA. 25

<sup>26</sup> (f) Other New Terms and Conditions & Dispute Resolution<sup>41</sup>

<sup>&</sup>lt;sup>41</sup> Sections 9, 11, 12, and 13 of the New PPA.

1 The Parties agree to cooperate in the full exchange of, and shall provide, such planning and operating information as may be reasonably necessary for the timely 2 and efficient performance of the Parties' obligations or exercise of rights under the 3 agreement. No reasonable request shall be refused. In addition, by June 30 of each 4 year, FortisBC shall provide BC Hydro with forecasts for the next ten years of loads 5 in British Columbia directly or indirectly served by FortisBC, and annual purchases 6 under the agreement. BC Hydro uses this information for resource planning to meet 7 its obligations under the agreement, and the forecasts shall contain such detail as 8 BC Hydro may reasonably require for such purposes. 9

Each Party will appoint a Contract Representative who will have authority to make
 decisions with respect to actions to be taken by its Party in the ordinary course of
 day-to-day management of obligations under the agreement.

With respect to dispute resolution, the New PPA includes clear, modern procedures 13 for resolution of any dispute, question or difference of opinion between the Parties 14 arising out of or under the agreement, including billing disputes. The New PPA 15 provides that such a dispute will be referred to the Contract Representatives and if 16 they are not able to resolve the dispute, it would be escalated to senior executives 17 and then to arbitration under the Commercial Arbitration Act. If a dispute relates to 18 amendment of the New PPA, then a Party may submit the dispute to the BCUC as 19 an application or complaint, as applicable. 20

Each Party shall also maintain, and provide access to, sufficient books and records in relation to the Party's performance of the New PPA so as to enable the Parties or an auditor to determine or verify all purchases, sales, billing and payment amounts comply with the New PPA.

### **4.2** The Imbalance Agreement

BC Hydro acts as the operator of the BC Control Area<sup>42</sup> and the balancing authority
in British Columbia, and FortisBC operates an integrated generation and
transmission system within the BC Control Area. Under the terms of the 1993 PPA,
and pursuant to accounting procedures agreed to by the parties, any unscheduled
flows to the FortisBC system were excess energy and capacity provided pursuant to
the 1993 PPA. In other words, the 1993 PPA was the last resource used to address
any imbalance on the Entitlement Parties' system.

The New PPA does not include an excess energy and capacity charge. Under the 9 new package of agreements FortisBC will use commercially reasonable efforts to 10 avoid unscheduled flows of energy to or from BC Hydro's system in any hour and 11 FortisBC resources (generally Canal Plant Agreement entitlement energy and 12 entitlement capacity) will typically be used as the last resource to balance the 13 FortisBC system. However, from time to time there may be unexpected conditions 14 (for example, a transmission or generation outage, or an unexpected load event) on 15 the Entitlement Parties' system that would cause a transfer of imbalance energy 16 from or to the BC Hydro system. If there is imbalance energy in any hour, it shall be 17 dealt with in accordance with the Imbalance Agreement.<sup>43</sup> 18

Pursuant to the Imbalance Agreement, FortisBC must take all reasonable efforts to
 avoid, minimize or end as soon as possible transfers of imbalance energy from or to
 the BC Hydro system. The Imbalance Agreement requires FortisBC to make a
 payment to BC Hydro if imbalance energy transfers from the BC Hydro system. It
 also sets out the circumstances in which FortisBC must pay if imbalance energy
 transfers to the BC Hydro system, as explained further below.

<sup>&</sup>lt;sup>42</sup> "BC Control Area" is defined in the Canal Plant Agreement and is generally known under current WECC and NERC rules as the "BC Hydro Balancing Authority Area".

<sup>&</sup>lt;sup>43</sup> Section 6.5 of the Imbalance Agreement.

### 1 (a) Term<sup>44</sup>

The Imbalance Agreement will become effective as of October 1, 2013 provided that
all conditions precedent have been met. The conditions precedent are: the BCUC
has approved the Imbalance Agreement without imposing changes unless
acceptable to both Parties; and the New PPA has become, or will concurrently
become, effective in accordance with its terms.
The Imbalance Agreement will continue in effect for at least as long as the New PPA

is in effect. It can be terminated on one year's notice after that. If it is terminated
while the 2011 CPA is still in effect, the Parties must negotiate a replacement
imbalance agreement.

11 (b) Imbalance Energy is not a Service<sup>45</sup>

Imbalance energy is not a service. Rather, it is an unauthorized deemed transfer of
 energy to or from the BC Hydro system as a result of an imbalance on the
 Entitlement Parties' system. The Imbalance Agreement does not offer a service that

- <sup>15</sup> FortisBC can rely on to balance its system.
- 16 Each Party will plan based on no transfers of imbalance energy occurring in any
- 17 hour for any purpose, and each Party will operate its system assuming there will be
- no imbalance energy transfers at any time. BC Hydro will not be forecasting any
- <sup>19</sup> revenue associated with the Imbalance Agreement.
- Imbalance energy may transfer between the systems in unexpected conditions. If an
   unexpected condition occurs, FortisBC is required to avoid, minimize or end as soon
   as possible the transfer of imbalance energy, including cutting export schedules or
   buying in the market as necessary, but not including curtailing domestic customers

<sup>&</sup>lt;sup>44</sup> Sections 2.1 and 2.2 of the Imbalance Agreement.

<sup>&</sup>lt;sup>45</sup> Sections 3 and 5 of the Imbalance Agreement.

or other Entitlement Parties. FortisBC is also required to hold a capacity buffer of at

<sup>2</sup> least 15 MW or 10 per cent of exports, whichever is greater.

3 (c) Determination of Amount of Imbalance Energy<sup>46</sup>

4 Imbalance energy, if any, is the net amount of electrical energy that is considered to

5 be transferred between the systems in any hour and that is not accounted for by

6 scheduled deliveries under the New PPA, scheduled imports and exports to or from

7 the FBC Service Territory, generation and loads within the FBC Service Territory,

8 Entitlement Energy usage under the Canal Plant Agreement, or other resources

9 used by FortisBC<sup>47</sup>.

<sup>10</sup> Imbalance energy is not metered and does not necessarily represent actual flows of

energy between the systems in any hour. As a result of the Canal Plant Agreement,

imbalance energy, if any, is a derived amount determined and calculated in

accordance with the accounting procedures under the Master Accounting

14 Agreement.

15 (d) Payment for Imbalance Energy<sup>48</sup>

As further incentive to avoid, minimize or end as soon as possible transfers of
 imbalance energy, the Imbalance Agreement provides for FortisBC to pay BC Hydro
 in most cases where imbalance energy transfers between the systems.

(i) Charges for Imbalance Energy Transfers from BC Hydro to FortisBC

<sup>20</sup> The charges for imbalance energy transfers from BC Hydro to FortisBC are

designed to provide a financial disincentive for FortisBC against taking imbalance

energy.

<sup>&</sup>lt;sup>46</sup> Section 5 of the Imbalance Agreement.

<sup>&</sup>lt;sup>47</sup> Refer to <u>Figure 1</u> for a high level schematic of these transfers.

<sup>&</sup>lt;sup>48</sup> Section 6 of the Imbalance Agreement.

1 FortisBC shall pay to BC Hydro an amount equal to the greatest of: \$1,000; \$50/MWh of imbalance energy; or for each MWh of imbalance energy, 150 per cent 2 of the higher of the Mid-C, California market prices or if FortisBC is scheduling to 3 Alberta, the Alberta market prices. 4 Commencing one year after the new agreements come into effect, if there are 5 persistent, significant imbalance energy transfers, FortisBC shall pay to BC Hydro an 6 amount equal to the greatest of: \$5,000; \$100/MWh of imbalance energy; or for each 7 MWh of imbalance energy, 200 per cent of the higher of Mid-C, California market 8 prices or if FortisBC is scheduling to Alberta, the Alberta market prices. 9 The lower financial disincentives applicable during the first year reflect the 10 expectation that the Parties will require a period of adjustment to the energy 11 nomination provisions of the New PPA and other provisions of the new agreements. 12 (ii) Charges for Imbalance Energy Transfers from FortisBC to BC Hydro 13 If imbalance energy transfers to the BC Hydro system, BC Hydro shall own but have 14 no obligation to pay for such imbalance energy. If the hour in which the transfer 15 occurs is an hour in which the Mid-C price is reported as being a negative price, then 16 FortisBC will pay to BC Hydro 150 per cent of the absolute value of the Mid-C price. 17 (e) Other New Terms and Conditions & Dispute Resolution 18 The Imbalance Agreement contains substantially the same other terms and 19 conditions, including dispute resolution provisions, as are contained in the New PPA 20 and described in section 4.1(e), above. 21 4.3 The Energy Export Agreement 22

The Energy Export Agreement defines the circumstances under which FortisBC can
 export energy while taking RS 3808 energy to enable certain exports while mitigating
 the arbitrage opportunity.

### 1 (a) Term<sup>49</sup>

The Energy Export Agreement will become effective if the New PPA becomes
 effective and the WAX Project achieves commercial operation. The agreement will

4 then remain in effect until the expiry of the New PPA.

5 (b) Right to Export<sup>50</sup>

FortisBC is eligible to export as long as it has: (i) WAX capacity available to it, (ii)
"Eligible Energy" available to it, and (iii) the exports do not result in increased
New PPA purchases. Eligible Energy is obtained from a variety of new resources
including the wholesale energy markets and new IPPs, but specifically does not
include New PPA purchases and the FortisBC entitlement under the Canal Plant
Agreement.

12 (c) Remedies for Breach<sup>51</sup>

The Energy Export Agreement sets out the consequences if FortisBC exports when it is not authorized to do so. If such an event happens, FortisBC is required to pay BC Hydro the greatest of 150 per cent of the hourly Mid-C market index or the profits earned by FortisBC on the transaction. If FortisBC exports when unauthorized on more than four occasions in a year or reaches a volume of 75 MWh of unauthorized exports in a year, this triggers a right for BC Hydro to issue a notice of suspension, and can ultimately result in termination proceedings before the BCUC.

### 20 4.4 The Master Accounting Agreement

The purpose of the Master Accounting Agreement is to reconcile the scheduled energy and capacity amounts under the New PPA, the after-the-fact accounting of entitlement energy and capacity amounts under the Canal Plant Agreement, imports and exports to/from the FortisBC system and energy and capacity amounts under

<sup>&</sup>lt;sup>49</sup> Sections 2.1 and 2.2 of the Energy Export Agreement.

<sup>&</sup>lt;sup>50</sup> Section 3 of the Energy Export Agreement.

<sup>&</sup>lt;sup>51</sup> Section 4 of the Energy Export Agreement.

other relevant agreements (e.g., the Energy Export Agreement, General Wheeling
Agreement and OATT) that give rise to or manage power transfers between the
BC Hydro system and the Entitlement Parties' system. This will allow the Parties to
manage the accounting for all energy flows between their service areas under one
agreement.
Due to the allocation of energy and capacity entitlements pursuant to the Canal
Plant Agreement, the flows being accounted for are contractual, not necessarily

physical, and cannot be directly metered and reconciled with actual flows on the
 system. For each hour, the Master Accounting Agreement will provide for the

reconciliation of FortisBC's loads (domestic customers and exports) and all of its
 resources (New PPA, imports, IPPs, Canal Plant Agreement entitlements) and if
 there is a mismatch, the Master Accounting Agreement determines the amount of
 the imbalance energy. The Imbalance Agreement specifies the billing treatment for
 such imbalance energy.

15 (a) Term<sup>52</sup>

The Master Accounting Agreement continues until the last of the New PPA, Energy
 Export Agreement, Imbalance Agreement and Canal Plant Agreement expires.

18 (b) Information Exchange<sup>53</sup>

The Master Accounting Agreement is an enabling agreement with no financial commitment, but is critical for administering the other agreements. Essentially the agreement defines what, how and when information is to be provided by the parties in order to administer the other agreements and sets out the consequences for failing to provide the information.

<sup>24</sup> (c) Accounting Procedures<sup>54</sup>

<sup>&</sup>lt;sup>52</sup> Sections 2.1 and 2.2 of the Master Accounting Agreement.

<sup>&</sup>lt;sup>53</sup> Section 3 of the Master Accounting Agreement.

1 The Master Accounting Agreement provides for accounting procedures that the Parties shall develop and maintain from time to time that describe in detail the 2 capacity and energy information and accounting that is required under the 3 agreement. The Parties will review the accounting procedures from time to time and 4 amend them as required and in accordance with the principles and requirements set 5 out in section 4.4 of the agreement. A Technical Committee established pursuant to 6 the Master Accounting Agreement will have responsibility for implementing the 7 agreement and for maintaining the accounting procedures in accordance with the 8 agreement. 9

#### **4.5** The General Wheeling Agreement

Late in the negotiations related to the New PPA it was determined that changes to 11 the General Wheeling Agreement are also required to align with the New PPA 12 revisions. The General Wheeling Agreement provides for grand-fathered 13 transmission rights that, among other things, enable FortisBC to use its generation 14 resources at South Slocan to serve its remote load centres by wheeling through 15 BC Hydro's transmission system. Transmission reserved by BC Hydro on its system 16 to deliver PPA schedules needs to be taken into consideration with General 17 Wheeling Agreement transmission nominations made by FortisBC to ensure 18 transmission capacity is properly allocated and accounted. Refer to Figure 1 for a 19 high level schematic. 20

As the amendments to the General Wheeling Agreement are driven by and needed for the parties to fulfill their obligations under the New PPA, BC Hydro will be submitting the amended General Wheeling Agreement to the BCUC for approval as part of this application. However, with the New PPA, Imbalance Agreement, Energy Export Agreement and Master Accounting Agreement finalized, and in order not to delay the filing of the application, it was determined that the amended General Wheeling Agreement would be submitted as a supplement to the Application by

<sup>&</sup>lt;sup>54</sup> Sections 4.5 and 6 of the Master Accounting Agreement.

July 16, 2013. BC Hydro's proposed regulatory process as set out in section 7

<sup>2</sup> reflects the supplemental filing approach.

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### Benefits of New PPA to BC Hydro

The following is a summary of the benefits to BC Hydro of the New PPA and
 associated agreements relative to the 1993 PPA.

- 6 (a) Improved Rate Structure
- The rate structure for RS 3808 is improved by providing a Tranche 2 price
   signal based on BC Hydro's cost of new supply for FortisBC's long-term
   resource planning decisions, and by aligning with the two-tiered rate
   structures applicable to BC Hydro's other customers
   (b) BC Hydro System Optimization
- Improved scheduling procedures and a continued requirement to "take and pay" for scheduled energy increase certainty for BC Hydro and allow for a more efficient operation of BC Hydro's system
- The new "take or pay" provision in relation to nominated energy discourages
   over-nomination by requiring FortisBC to take at least 75 per cent of its
   Annual Energy Nomination
- Improved exchange of information will enable more efficient system
   optimization and operation
- Energy scheduling procedures and the Imbalance Agreement encourage
   FortisBC to more efficiently balance its loads and resources
- 22 (c) Export Rights are Granted and Arbitrage Opportunities are Mitigated
- Limited export rights are granted to FortisBC with respect to Eligible Energy
   and entitlement capacity available from the WAX Project enabling FortisBC

1 2	to export while taking embedded cost energy from BC Hydro and mitigating arbitrage opportunities in relation to such exports
3 4 5	Arbitrage opportunities for FortisBC self-generating customers are mitigated in relation to BC Hydro's RS 3808 embedded cost price, using a similar approach as BC Hydro uses for its other self-generating customers
6	(d) Revenue Certainty
7 8	The New PPA provides improved revenue certainty and stability, including a requirement for FortisBC to take or pay for 75 per cent of its Annual Energy
9	Nomination
10	BC Hydro will have a long-term contract with one of its largest customers
11 12	<ul> <li>Rate impacts to BC Hydro's customers attributable to the New PPA are expected to be minimal</li> </ul>
13	(e) Improved Contract Administration
14 15	<ul> <li>Contract administration is improved, including by providing clear accounting and audit rights, and a clear, modern dispute resolution process</li> </ul>
16 17	<ul> <li>The consequences of breaching various provisions have been clarified, increasing certainty</li> </ul>
18 19	BC Hydro understands that FortisBC will be submitting to the BCUC its own summary of the benefits to it of the New PPA and related agreements.

### 20 6 Consultation

The New PPA, along with its related agreements, is the result of a lengthy bilateral negotiation between BC Hydro and FortisBC, both of which are public utilities. The customers of the Parties are not themselves parties to the agreements, and their interest in RS 3808 is indirect. During the negotiations, neither party engaged in consultation with its customers in regard to the specifics of the agreements. The

duration and nature of the negotiations were such that consultation would likely not
 have been conducive to ultimately reaching agreement. However, both Parties had
 the benefit of customer views on a number of recurring themes that have surfaced
 between the Parties over the years in BCUC proceedings and other contexts.

5 The Parties are now proposing to hold two customer workshops to inform their 6 customers about the agreements that have been reached.

### 7 **7 Proposed Regulatory Process**

As described above, BC Hydro has undertaken extensive negotiations with FortisBC
resulting in the attached agreements which have been signed by both parties. The
agreements work together as a package and, as such, it is not possible to alter a
component of these agreements without affecting the overall balancing of interests
negotiated by the parties and reflected in the package of agreements<sup>55</sup>. Therefore,
this application is submitted for approval in its entirety.

As part of the regulatory process BC Hydro is proposing two workshops – one in 14 Vancouver and the second in Castlegar, a location suggested by FortisBC. The 15 purpose of the workshops is to provide an overview for BCUC staff and interveners 16 of the New PPA and associated agreements. The workshops will also provide an 17 opportunity for participants to ask clarifying questions. BC Hydro proposes that the 18 discussions at the workshops will not be recorded or transcribed. Upon confirmation 19 of the regulatory process, BC Hydro will provide notification of the workshops to all 20 parties copied on this application. A detailed list of parties copied on this application 21 is shown in Attachment 1 to the cover letter. This list includes all parties who have 22 expressed interest in a number of BC Hydro and Fortis applications over the past 23 few years. 24

<sup>&</sup>lt;sup>55</sup> Refer to Section 2.2a of the New PPA.

Given that these agreements are the result of lengthy bilateral negotiations among

- 2 sophisticated, arm's length public utilities and that they are being submitted for
- approval in their entirety without modification, BC Hydro is proposing a written
- 4 hearing process with one round of information requests (IRs) regarding the
- 5 Application. However given that the General Wheeling Agreement will be filed after
- 6 the first round of IRs have been issued, it may be necessary to have a second round
- 7 of IRs specific to the General Wheeling Agreement submission. Therefore,
- 8 BC Hydro proposes that the BCUC order a written hearing process with the following
- <sup>9</sup> regulatory timetable to review this Application.

Action	Date
New PPA, Imbalance Agreement, Energy Export Agreement, Master Accounting Agreement filed	May 24, 2013
Intervener Registration	June 7, 2013
Workshop – Vancouver	June 11, 2013
Workshop – Castlegar	June 13, 2013
BCUC and Interveners file Round One Information Requests ( <b>IRs</b> ) to BC Hydro and FortisBC regarding the Application and FortisBC Statement of Support	June 26, 2013
General Wheeling Agreement filed	July 16, 2013
BC Hydro and FortisBC file responses to BCUC and Intervener Round One IRs	July 22, 2013
Procedural Conference	July 29, 2013

<sup>10</sup> FortisBC will be a Registered Intervener and will file a statement in support of this

application including a confirmation that it is prepared to receive and respond to IRs

12 on its statement.

### 13 8 Conclusion

- 14 In conclusion, approval of the New PPA and the associated amendments to
- 15 RS 3808 would allow BC Hydro to continue selling embedded cost power to
- <sup>16</sup> FortisBC after the term of the current 1993 PPA expires on September 30, 2013.

The New PPA and the associated agreements described in this application 1 modernize the arrangement between these two public utilities, provide a long-term 2 price signal to FortisBC for supply planning purposes, and provide certainty with 3 respect to FortisBC's rights and obligations, including its rights to export incremental 4 energy in certain circumstances and its obligations related to scheduling and 5 accounting among other benefits to both Parties. BC Hydro requests the BCUC to 6 approve the New PPA and associated amendments to RS 3808, the Energy Export 7 Agreement, the Imbalance Agreement, the Master Accounting Agreement and the 8 amended General Wheeling Agreement. A draft order is provided in Appendix B. 9

### BC Hydro Application for Approval of New PPA with FortisBC

Appendix A

**Tariff Supplement No. 3** 

Appendix A BC Hydro Tariff Supplement No. 3 Attachment 1 Power Purchase Agreement Effective: First Revision of Page 1 of 38

### **ATTACHMENT 1**

#### POWER PURCHASE AGREEMENT

#### BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

and

FORTISBC INC.

DATED FOR REFERENCE

May 21, 2013

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#### POWER PURCHASE AGREEMENT

THIS AGREEMENT is made as of the 21<sup>st</sup> day of May, 2013 (the "Reference Date"), to be effective on the Effective Date.

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, having its Head Office at 333 Dunsmuir Street, City of Vancouver, Province of British Columbia

("BC Hydro")

AND:

FORTISBC INC., a body corporate having an office at 10<sup>th</sup> Floor, 1111 West Georgia Street, City of Vancouver, Province of British Columbia

("FortisBC")

WHEREAS:

- A. BC Hydro and FortisBC (then known as "West Kootenay Power Ltd.") entered into a power purchase agreement made as of October 1, 1993 (together with amendments thereto, the "1993 Agreement"), which agreement expires on September 30, 2013; and
- B. BC Hydro has agreed to sell Electricity to FortisBC, and FortisBC has agreed to purchase Electricity from BC Hydro, at the rates and under the terms and conditions specified in this Agreement.

THIS AGREEMENT WITNESSES that in consideration of the covenants and agreements set forth in this Agreement and of other good and valuable consideration, the Parties hereby covenant, agree and declare as follows:

#### 1. DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement:

- (a) "1993 Agreement" has the meaning ascribed to it in Recital A;
- (b) "Accounting Procedures" means the accounting procedures established from time to time under the Master Accounting Agreement;

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- (c) "Agreement" means this Power Purchase Agreement, as amended, restated and/or supplemented from time to time, and includes any appendices referred to in it as being attached to it;
- (d) "Annual Energy Nomination" means the annual amount of energy (in GWh) that FortisBC nominates for purchase under this Agreement in a Contract Year, in accordance with and subject to Section 5.1;
- (e) "Annual Minimum Take" has the meaning ascribed to it in Section 5.4(a);
- (f) "Annual Shortfall" has the meaning ascribed to it in Section 5.4(b);
- (g) "BC Control Area" has the meaning ascribed to it in the Canal Plant Agreement, and under current WECC and NERC rules is generally known as the "BC Hydro Balancing Authority area";
- (h) "BC Hydro System" means the interconnected generation and transmission facilities and related protection, control and communication equipment in British Columbia owned and/or operated by BC Hydro (excluding the Entitlement Parties' System), including all additions and modifications thereto and repairs or replacements thereof;
- (i) "Billing Demand" has the meaning ascribed to it in Section 8.2;
- (j) "Billing Month" means a calendar month;
- (k) "Breach" has the meaning ascribed to it in Section 14.1(a);
- "Breaching Party" has the meaning ascribed to it in Section 14.1(a);
- (m) "Brilliant Plant" has the meaning ascribed to it in the Canal Plant Agreement;
- (n) "Brilliant Power Purchase Agreement" means the agreement made as of the 4th day of April, 1996 between Brilliant Power Corporation (as assignee of Columbia Power Corporation and CBT Power Corp.) and FortisBC (then known as "West Kootenay Power Ltd."), as amended, restated and/or supplemented from time to time;
- "Business Day" means any calendar day which is not a Saturday, Sunday or other day recognized as a statutory holiday in British Columbia;
- (p) "Canal Plant Agreement" means the Second Amended and Restated 2005 Canal Plant Agreement dated for reference November 15, 2011 among BC Hydro, FortisBC, Teck Metals Ltd., Brilliant Power Corporation, Brilliant Expansion Power Corporation and Waneta

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Expansion Limited Partnership, as amended, restated and/or supplemented from time to time;

- (q) "Commission" means the British Columbia Utilities Commission established pursuant to the Utilities Commission Act (British Columbia), or a successor thereto;
- (r) "Contract Demand" means the maximum demand (in MW) that FortisBC may schedule and take under this Agreement in any hour, being 200 MW, unless reduced in accordance with Section 5.6;
- (s) "Contract Year" means a period commencing on October 1 and ending on the following September 30, provided that if this Agreement terminates earlier than September 30, 2033, the last Contract Year shall end on the earlier termination date;
- (t) "Day of Flow" means the calendar day on which, in accordance with standard scheduling practice in the WECC region and the WECC Preschedule Calendar, energy which is scheduled to flow; for greater certainty, a Day of Flow is a single calendar day even in the event that two or more calendar days are scheduled during the same Preschedule Day;
- (u) "Demand Charge" means the monthly demand charge to be paid by FortisBC to BC Hydro for supplying Electricity pursuant to this Agreement, to be determined from time to time in accordance with Section 8;
- (v) "Effective Date" means October 1, 2013, provided that the conditions precedent in Section 2.2 have then been met;
- (w) "Electricity" means electric energy and its associated capacity;
- (x) "Energy Export Agreement" means the Energy Export Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- "Entitlement Energy" has the meaning ascribed to it in the Canal Plant Agreement;
- "Entitlement Parties" means the parties to the Canal Plant Agreement, except BC Hydro;
- (aa) "Entitlement Parties' System" means the contiguous, interconnected generation and transmission facilities and related protection, control and communication equipment located in British Columbia and owned by one or more of the Entitlement Parties or their affiliates, and includes all additions and modifications thereto and repairs or replacements thereof, and specifically includes the Waneta Expansion, even though it is

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connected to the Entitlement Parties' transmission facilities through facilities owned by BC Hydro;

- (bb) "Exchange Accounts" has the meaning ascribed to it in the Canal Plant Agreement;
- (cc) "export", and all forms of the verb "to export", means any transaction whereby Electricity is determined and calculated in accordance with the Accounting Procedures to transfer out of the FBC Service Territory, and without netting such transfers against concurrent imports, but specifically excludes the following:
  - (i) wheeling losses scheduled to BC Hydro;
  - (ii) Coordination Transfers to BC Hydro under the Canal Plant Agreement; and
  - such other exceptions as the Parties may agree to from time to time, acting reasonably;
- (dd) "Force Majeure" means any cause which is beyond a Party's reasonable control, in each case that directly affects the Party's ability to perform hereunder; a Force Majeure event does not include an act of negligence or intentional wrongdoing or lack of money or credit or economic hardship;
- (ee) "FBC Entitlement Energy" means FortisBC's share of the Entitlement Energy, as set out and described in Table 9 of the Canal Plant Agreement under "FBC Projects", as redetermined and/or adjusted under that agreement from time to time, plus Entitlement Energy attributable to the Brilliant Plant and sold to FortisBC under the Brilliant Power Purchase Agreement;
- (ff) "FBC Service Territory" means the area in British Columbia served, directly or indirectly, by FortisBC from time to time, and connected by the Entitlement Parties' System;
- (gg) "Final Notice of Pending Complaint" has the meaning ascribed to it in Section 14.1(d);
- (hh) "Freshet Period" means the period from May 1 through July 31 in each year;
- "General Wheeling Agreement" or "GWA" means the General Wheeling Agreement, dated October 15, 1986, between FortisBC and BC Hydro, as amended, restated and/or supplemented from time to time;

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- (jj) "Imbalance Agreement" means the Imbalance Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- (kk) "Imbalance Energy" has the meaning ascribed to it in the Imbalance Agreement;
- (11) "Interconnection Agreement" means the interconnection agreement entered into between BC Hydro and FortisBC dated May 16, 2013, as amended, restated and/or supplemented from time to time;
- (mm) "Master Accounting Agreement" means the Master Accounting Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, including the Accounting Procedures established pursuant to it, in each case as amended, restated and/or supplemented from time to time;
- (nn) "material Breach" has the meaning ascribed to it in Section 14.1(a);
- (00) "Maximum Tranche 1 Amount" means 1041 GWh each Contract Year;
- (pp) "NERC" means the North American Electric Reliability Corp., or a successor organization;
- (qq) "Notice of Material Breach" has the meaning ascribed to it in Section 14.1(a);
- (ir) "Notice of Pending Complaint" has the meaning ascribed to it in Section 14.1(c);
- (ss) "OATT" means BC Hydro's Open Access Transmission Tariff as approved by the Commission from time to time;
- (tt) "Other Party" has the meaning ascribed to it in Section 14.1(a);
- (uu) "Parties" means the parties to this Agreement and "Party" means either of them;
- (vv) "Points of Delivery" means the Point of Supply and the Points of Interconnection as identified and defined in the General Wheeling Agreement;
- (ww) "Preschedule" means a schedule provided by FortisBC to BC Hydro by the Prescheduling Deadline setting out FortisBC's scheduled Electricity purchases under this Agreement for each hour of each of the following Day(s) of Flow, that complies with, and is delivered in accordance with, Section 6.1, and, if a change to any such schedule is provided in

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compliance with Section 6.1 for any hour, means the schedule as so changed;

- (xx) "Preschedule Day" means a day on which, in accordance with standard scheduling practice in the WECC region and the WECC Preschedule Calendar, Electricity is scheduled for delivery on one or more Day(s) of Flow; Preschedule Days and their corresponding Day(s) of Flow with respect to NERC holidays and any special scheduling days shall be as set forth in the WECC Preschedule Calendar;
- (yy) "Preschedule Change" means a change to a Preschedule made pursuant to and in accordance with Section 6.2(b);
- (zz) "Prescheduled Energy" means for any hour of a Day of Flow the amount of Electricity to be delivered by BC Hydro to FortisBC pursuant to the Preschedule for that hour;
- (aaa) "Prescheduling Deadline" has the meaning ascribed to it in Section 6.1;
- (bbb) "Prime Rate" means the annual rate of interest designated by the Bank of Montreal as its "prime rate" for Canadian dollar commercial loans to customers in Canada;
- (ccc) "Reference Date" has the meaning ascribed to it on the first page of this Agreement;
- (ddd) "Schedule" means a Preschedule provided by FortisBC to BC Hydro pursuant to Section 6.1 that has become a Schedule pursuant to Section 6.2, setting out FortisBC's scheduled Electricity purchases under this Agreement for the following hour;
- (eee) "Scheduled Energy" means for any hour of a Day of Flow the amount of Electricity to be delivered by BC Hydro to FortisBC pursuant to the Schedule for that hour;
- (fff) "Scheduling Deadline" has the meaning ascribed to it in Section 6.2;
- (ggg) "Service Area Load Requirements" means for any hour the load served by FortisBC, directly or indirectly, in the FBC Service Territory, as determined for each hour in accordance with the Accounting Procedures and, where the context requires, means the load in the FBC Service Territory that FortisBC has an obligation to serve;
- (hhh) "Term" has the meaning ascribed to it in Section 2.1;

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(iii) "Tranche 1 Energy" means the volume of energy (in GWh) taken, or deemed to be taken, under this Agreement in any Contract Year that is less than or equal to the Maximum Tranche 1 Amount;

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- (jjj) "Tranche 1 Energy Price" means the price (in \$/MWh) for Tranche 1 Energy, to be determined from time to time in accordance with Section 7.1;
- (kkk) "Tranche 2 Energy" means the volume of energy (in GWh) taken, or deemed to be taken, under this Agreement in any Contract Year that exceeds the Maximum Tranche 1 Amount;
- (111) "Tranche 2 Energy Price" means the charge (in \$/MWh) for Tranche 2 Energy, to be determined from time to time in accordance with Section 7.2;
- (mmm)"WECC" means the Western Electricity Coordinating Council, or a successor organization; and
- (nnn) "WECC Preschedule Calendar" means the WECC Scheduling Calendar published annually by WECC that identifies certain NERC holidays and any special scheduling days which affect normal preschedule timelines and the days upon which prescheduling will take place to accommodate these identified days.

#### 1.2 Canal Plant Agreement Definitions

Capitalized words and terms in this Agreement that are not defined herein but are defined in the Canal Plant Agreement shall have the meanings ascribed to them in the Canal Plant Agreement.

#### 1.3 Interpretation

In this Agreement, except where otherwise expressly provided:

- (a) unless the context otherwise requires, words importing the singular include the plural and vice versa, words importing gender include all genders, "or" is not exclusive, "including" is not limiting, whether or not non-limiting language (such as "without limitation") is used with reference to it, a grammatical variation of a defined term shall have a corresponding meaning, and reference to any person includes such person's successors and assigns but, if applicable, only if the succession or assignment is permitted under this Agreement;
- (b) the inclusion of headings in this Agreement is for convenience only and shall not affect the construction or interpretation of this Agreement;
- any reference to an hour, day or month is a reference to a calendar hour, day or month, unless specified otherwise;
- (d) any reference to a specified Section, subsection or other subdivision of this Agreement or to an Appendix is to the designated Section, subsection or

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other subdivision of, or Appendix to, this Agreement, unless the context otherwise requires;

- (e) any reference to a statute includes and is a reference to such statute and to the regulations made pursuant to it, with all amendments to them in force from time to time, and to any statute or regulations that may be passed which supplement or supersede such statute and such regulations;
- all monetary amounts referred to in this Agreement are stated and shall be paid in Canadian currency; and
- (g) the language used in this Agreement is the language chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against either Party.

#### 2. TERM AND PURPOSE

#### 2.1 Term of Agreement

F

Subject to Section 2.2, the term of this Agreement (the "Term") shall commence on the Effective Date and shall continue until September 30, 2033 unless terminated earlier pursuant to Section 5.6(b) or an order of the Commission. Expiry or early termination of this Agreement shall not relieve either Party from any liability or obligation then accrued but unsatisfied.

#### 2.2 Conditions Precedent to Agreement Becoming Effective

This Agreement and the amendments to Rate Schedule 3808 contemplated in this Agreement shall not be effective unless each of the following conditions precedent has, on or before October 1, 2013, been satisfied:

- (a) the Commission has issued an order under Sections 58 to 61 of the Utilities Commission Act approving this Agreement, including the amended Rate Schedule 3808 attached as Appendix 1, without imposing changes unless acceptable to both Parties;
- (b) each of the Imbalance Agreement and the Master Accounting Agreement has become, or will concurrently become, effective in accordance with its respective terms; and
- (c) the condition precedent in Section 2.1(a)(i) of the Energy Export Agreement has been, or will concurrently be, satisfied.

#### 2.3 Support and Cooperation in Obtaining Commission Approval

FortisBC shall support BC Hydro's application for approval by the Commission of this Agreement and the amendments to Rate Schedule 3808 contemplated in this Agreement, including intervening in support of the application, provided that

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FortisBC reserves the right to oppose any changes proposed during proceedings before the Commission with which FortisBC does not agree. FortisBC shall cooperate with BC Hydro and provide such assistance as BC Hydro may reasonably request towards obtaining approval of this Agreement by the Commission.

#### 2.4 Agreement Replaces the 1993 Agreement

This Agreement replaces the 1993 Agreement as of the Effective Date; provided that replacement of the 1993 Agreement shall not relieve either Party from any liability or obligation accrued but unsatisfied thereunder as at the Effective Date.

#### 2.5 Purpose/Limitation of use of Scheduled Energy

- (a) Electricity taken under this Agreement:
  - (i) is to be used solely for the purpose of supplementing FortisBC's resources to enable FortisBC to serve the Service Area Load Requirements and shall not be (A) exported or used to support or enable exports, (B) sold, exchanged or transferred to any person without load, or an obligation to serve load, in the FBC Service Territory, or (C) stored; provided that nothing contained herein shall prohibit FortisBC from storing FBC Entitlement Energy in the Exchange Accounts pursuant to the Canal Plant Agreement;
  - (ii) shall not be sold to any FortisBC customer with self-generation facilities, or used by FortisBC to serve any such customer's load, when such customer is selling self-generated Electricity unless a portion of the customer's load equal to or greater than the customer-specific baseline is being served by Electricity that is not Electricity taken under this Agreement, where such customerspecific baseline is as agreed between the Parties (acknowledging that such baseline shall be determined in a manner consistent with how BC Hydro establishes a generator baseline for its own customers), failing which agreement either Party may submit the matter for dispute resolution in accordance with Section 13; and
  - (iii) may be sold to any FortisBC customer with self-generation facilities, or used by FortisBC to serve any such customer's load, when such customer (A) is not selling self-generated Electricity, or (B) is selling self-generating Electricity and a portion of the customer's load equal to or greater than the customer-specific baseline is being served by Electricity that is not Electricity taken under this Agreement, where such customer-specific baseline is as determined in accordance with Section 2.5(a)(ii).
- (b) For greater certainty, Section 2.5(a)(ii) is intended to prevent FortisBC from increasing its purchases of Electricity under this Agreement if such

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increased purchases would be a result of FortisBC's customers with selfgeneration facilities purchasing Electricity from FortisBC at regulated rates and simultaneously selling Electricity at higher rates, except as otherwise approved by the Commission.

## 2.6 Limitation on Exports While Taking Electricity under this Agreement

- (a) FortisBC shall not export or permit its customers to export (except as permitted under Section 2.5(a)(iii)) any Electricity (including capacity and/or energy comprised therein) in any hour during which FortisBC is taking Electricity from BC Hydro under this Agreement, except during the term of, and to the extent specifically agreed under, and in accordance with, the terms and conditions of, the Energy Export Agreement.
- (b) BC Hydro acknowledges and agrees that nothing in this Agreement affects any right FortisBC has to export Electricity in any hour during which FortisBC is not taking Electricity from BC Hydro under this Agreement; provided such exports are in compliance with any applicable agreements to which FortisBC and BC Hydro are both parties.

## 3. POINTS OF DELIVERY / INTERCONNECTED OPERATION

#### 3.1 Electricity to be Delivered and Received at Points of Delivery

BC Hydro shall deliver and FortisBC shall take Electricity scheduled under this Agreement at the Points of Delivery. Such deliveries and take shall be deemed to occur and be allocated among the Points of Delivery in accordance with the Accounting Procedures.

#### 3.2 Provision of Generation Reserves

BC Hydro shall be responsible for supplying reserves associated with deliveries of Scheduled Energy to FortisBC under this Agreement.

#### 3.3 Interconnection Agreement

The Parties acknowledge and agree that interconnection related issues as between them shall be governed by the Interconnection Agreement.

#### 3.4 General Wheeling Agreement

The Parties agree to negotiate in good faith and use all reasonable efforts to reach agreement on and execute amendments to the General Wheeling Agreement that reasonably result from this Agreement and the other agreements referred to in Section 2.2, by the Effective Date. The obligations in this Section 3.4 shall be effective and binding on the Parties as of the date of executing this Agreement, notwithstanding that this Agreement shall not otherwise be effective until the Effective Date.

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## 4. SUPPLY AND USAGE OF ELECTRICITY

#### 4.1 Supply of Electricity

FortisBC may schedule Electricity under this Agreement for any hour up to the Contract Demand in aggregate at the Points of Delivery. BC Hydro shall deliver, and FortisBC shall take and pay for, the Scheduled Energy, subject to and in accordance with this Agreement.

#### 4.2 Electricity is Bundled Product

Electricity to be delivered by BC Hydro to FortisBC under this Agreement shall at all times be energy with associated capacity and such capacity shall be used in the determination of Billing Demand. FortisBC shall not take delivery of energy without associated capacity and shall not take capacity without associated energy.

#### 5. ANNUAL ENERGY NOMINATIONS AND CONTRACT DEMAND

## 5.1 Annual Energy Nomination

FortisBC may, by notice to BC Hydro provided on or before June 30, 2013 (as if this Agreement were then effective) specify the Annual Energy Nomination for the first Contract Year (commencing October 1, 2013); if FortisBC does not provide such Annual Energy Nomination by June 30, 2013, the Annual Energy Nomination for the first Contract Year shall be deemed to be 1041 GWh. On or before June 30 of each Contract Year, FortisBC shall provide BC Hydro with notice of its Annual Energy Nomination for the Contract Year that commences on the following October 1. If the Annual Energy Nomination for a Contract Year is not received by BC Hydro by June 30 of the immediately preceding Contract Year, then the Annual Energy Nomination for the Contract Year shall be deemed to be the same as the Annual Energy Nomination for the immediately preceding Contract Year.

## 5.2 Maximum Annual Energy Nomination

The maximum Annual Energy Nomination for any Contract Year shall be the lesser of (i) 1752 GWh, and (ii) the product of the Contract Demand for that Contract Year and 8760 hours.

#### 5.3 Limitation on Changes to Annual Energy Nomination

- (a) Subject to Section 5.2, the Annual Energy Nomination for any Contract Year shall not be more than 120% of, or less than 80% of, the Annual Energy Nomination for the immediately preceding Contract Year.
- (b) If in respect of a Contract Year FortisBC provides an Annual Energy Nomination that is not in compliance with Section 5.3(a), then FortisBC shall be deemed to have not provided an Annual Energy Nomination for

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that Contract Year, in which case the Annual Energy Nomination for the Contract Year shall be deemed to be the same as the Annual Energy Nomination for the immediately preceding Contract Year.

## 5.4 Annual Minimum Take/ Take or Pay

- (a) In any Contract Year, FortisBC shall schedule and take an amount of Electricity equal to at least 75% of the Annual Energy Nomination for that Contract Year, less:
  - Scheduled Energy FortisBC is prevented from taking by a Force Majeure event, as described in Section 6.4(a)(i); and
  - Scheduled Energy not delivered by BC Hydro, other than by reason of FortisBC's unexcused failure to take the Scheduled Energy, as described in Section 6.4(a)(ii)

(the "Annual Minimum Take").

(b) The amount of Electricity scheduled and taken by FortisBC in each Contract Year shall be the sum of the Scheduled Energy for each hour of the Contract Year that FortisBC is deemed to have taken pursuant to Section 6.4(a).

If FortisBC schedules and takes an amount of Electricity in any Contract Year that, in the aggregate, is less than the Annual Minimum Take for that Contract Year (the difference in MWh between the Annual Minimum Take and the amount FortisBC schedules and takes, being referred to as the "Annual Shortfall"), then in addition to the amount FortisBC has scheduled and taken, BC Hydro shall also be deemed to have delivered, and FortisBC shall be deemed to have taken and shall pay for, the Annual Shortfall.

- (c) BC Hydro shall have no obligation to deliver the Annual Shortfall, if any, at any future time.
- (d) The price payable for each MWh of the Annual Shortfall shall be the Tranche 1 Price or Tranche 2 Price, as applicable, as determined in accordance with Section 7.3.

## 5.5 Single Nomination for all Points of Delivery

The Annual Energy Nomination shall be a single nomination for all Points of Delivery.

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#### 5.6 Contract Demand Reduction; Termination

- (a) On or before June 30 of each Contract Year, FortisBC may by notice to BC Hydro reduce the Contract Demand, as follows, to be effective:
  - (i) on October 1 of the 3<sup>rd</sup> following Contract Year (or earlier by mutual agreement), if FortisBC is building or acquiring new generation resources to serve the Service Area Load Requirements, and
  - (ii) on October 1 of the 2<sup>nd</sup> following Contract Year, if FortisBC has lost significant load or for any other reason, except if FortisBC is building or acquiring new generation resources to serve the Service Area Load Requirements.

Any such reduction in Contract Demand shall apply for the balance of the Term, unless the Parties mutually agree otherwise by written agreement.

(b) If, by a notice provided pursuant to Section 5.6(a), FortisBC reduces the Contract Demand to zero, then this Agreement shall automatically terminate on the day immediately prior to the effective date of such reduced Contract Demand.

#### 5.7 Power Purchase Agreement may be Amended

The Contract Demand and maximum Annual Energy Nomination may be amended by agreement in writing of the Parties if there is an agreed transfer of load between FortisBC and BC Hydro. Nothing in this Agreement requires either Party to agree to amendments to this Agreement.

#### 6. ELECTRICITY TO BE SCHEDULED

## 6.1 FortisBC to Preschedule Electricity Requirements

FortisBC shall schedule its Electricity purchases under this Agreement in the following manner:

- (a) by 05:30 hours prevailing Pacific Time (the "Prescheduling Deadline") on each and every Preschedule Day, FortisBC shall provide BC Hydro with a Preschedule (not to exceed the Contract Demand in any hour) for each hour of each of the following Day(s) of Flow;
- (b) for greater certainty, FortisBC may provide one or more changes to a Preschedule so long as any such change is provided on or before the Prescheduling Deadline;

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- (c) Preschedules shall be in such form, and delivered to BC Hydro to such person(s) and in such manner, as BC Hydro may reasonably specify from time to time; and
- (d) if FortisBC does not provide BC Hydro with a Preschedule for any Day of Flow by the Prescheduling Deadline, then FortisBC shall be deemed to have provided a Preschedule the same as the Preschedule submitted for the most recent 'like day'. For this purpose, a 'like day' shall be the same day in the immediately preceding week (for example, the previous Tuesday if the Day of Flow is a Tuesday or the previous Saturday if the Day of Flow is a Saturday); provided that if the same weekday in the preceding week is a BC holiday (for example, the previous Tuesday is a BC holiday), the like day shall be deemed to be the day immediately preceding the BC holiday (or the day immediately following, if the day immediately preceding the BC holiday is itself a holiday or is a weekend day).

#### 6.2 Preschedule Changes

- (a) A Preschedule for an hour, as changed by a Preschedule Change, if any, shall be deemed to become a "Schedule" provided by FortisBC for the purposes of this Agreement, at 10 minutes prior to the deadline in the WECC region for making real time changes (as such deadline is amended from time to time, and which as of the Reference Date is 20 minutes prior to the start of the hour that energy is scheduled to flow) (the "Scheduling Deadline").
- (b) FortisBC may submit a change to a Preschedule after the Prescheduling Deadline but before the Scheduling Deadline, provided that:
  - (i) during the Freshet Period, the Scheduled Energy for any hour may not exceed the Prescheduled Energy (as at the Prescheduling Deadline) for that hour by more than 25 MW, and may not be less than the Prescheduled Energy (as at the Prescheduling Deadline) for that hour;
  - at any time other than during the Freshet Period, the Scheduled Energy may not exceed, or be less than, the Prescheduled Energy (as at the Prescheduling Deadline) for that hour by more than 25 MW;
  - (iii) after the Prescheduling Deadline, only one change can be made to a Preschedule for any hour; and
  - (iv) if:

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A. a change to a Preschedule after the Prescheduling Deadline would reduce the amount of Scheduled Energy (as compared to the amount of Prescheduled Energy (as at the

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Prescheduling Deadline)) for any hour, and a change to aggregate Interchange Schedules for that same hour would reduce exports from, or increase imports to, the FBC Service Territory, then the combined magnitude of the change to the Preschedule and the change to the Interchange Schedule shall not exceed the Late Schedule Change Limit;

- B. a change to a Preschedule after the Prescheduling Deadline would increase the amount of Scheduled Energy (as compared to the amount of Prescheduled Energy (as at the Prescheduling Deadline)) for any hour, and a change to aggregate Interchange Schedules for that same hour would increase exports from, or decrease imports to, the FBC Service Territory, then the combined magnitude of the change to the Preschedule and the change to the Interchange Schedule shall not exceed the Late Schedule Change Limit.
- (c) BC Hydro shall have the right to reject a Preschedule Change for any hour if such Schedule does not comply with the foregoing requirements. A Schedule shall be in such form as the Parties may agree from time to time, acting reasonably, and delivered to BC Hydro to such person(s) and in such manner as BC Hydro may reasonably specify from time to time. Failing agreement on the form of Schedule, either Party may submit the matter for dispute resolution in accordance with Section 13. If BC Hydro rejects a Preschedule Change, then the Scheduled Energy for any hour is deemed to be the Prescheduled Energy (as at the Prescheduling Deadline) for that hour.
- 6.3 No Changes to Schedules

From and after the Scheduling Deadline, no changes to a Schedule shall be permitted for any reason.

## 6.4 Take and Pay for Scheduled Energy

- (a) FortisBC shall be deemed to have taken in any hour, and shall pay for, all Scheduled Energy, except if, and only to the extent:
  - (i) FortisBC is prevented from taking Scheduled Energy by a Force Majeure event, provided that FortisBC immediately advises BC Hydro of, and reasonably establishes the occurrence of the Force Majeure event and inability to take Scheduled Energy, and further provided that FortisBC has taken all reasonable steps to mitigate the effect of the Force Majeure event and to promptly overcome the Force Majeure event, or

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- BC Hydro fails to deliver Scheduled Energy for any reason, other than by reason of FortisBC's unexcused failure to take the Scheduled Energy.
- (b) BC Hydro shall have no obligation to deliver the untaken Scheduled Energy at any future time
- (c) FortisBC shall have no obligation to pay for Scheduled Energy not delivered by BC Hydro (other than by reason of FortisBC's unexcused failure to take the Scheduled Energy) or not taken by reason of FortisBC being prevented from taking the Scheduled Energy by a Force Majeure event as described in Section 6.4(a)(i).
- (d) The Accounting Procedures shall account for Scheduled Energy that is deemed to be taken as provided for in Section 6.4(a).

#### 6.5 Imbalance Energy

If there is Imbalance Energy in any hour, it shall be dealt with in accordance with the Imbalance Agreement.

## 7. ENERGY PRICE

7.1 Tranche 1 Energy Price

- (a) The Tranche 1 Energy Price ("Tranche 1 Energy Price") shall be established by Rate Schedule 3808 from time to time and shall reflect the energy charge component of BC Hydro's rate for customers taking Electricity at transmission voltages that are exempted from Rate Schedule 1823 by the Commission. As at the Reference Date, the Parties agree that this rate is represented by BC Hydro's Rate Schedule 1827, as it may be amended from time to time, and as at April 1, 2013 is \$37.24 per MWh (\$0.03724 per kWh).
- (b) If and when the Commission approves changes to the energy charge component of Rate Schedule 1827, the Parties agree that Rate Schedule 3808 shall be amended accordingly and, if required, BC Hydro shall apply to the Commission for approval thereof. If there is a material change in the underlying design for the energy charge component of Rate Schedule 1827, the Parties shall negotiate in good faith for a replacement rate for the Tranche 1 Energy Price and BC Hydro shall seek approval of the Commission of any agreed rate. If despite good faith negotiations, the Parties are unable to agree, BC Hydro may apply to the Commission for approval of a proposed replacement rate and FortisBC may intervene in such proceeding or file a complaint with respect to the proposed replacement rate.

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## 7.2 Tranche 2 Energy Price

- (a) The Tranche 2 Energy Price ("Tranche 2 Energy Price") shall be established by Rate Schedule 3808, from time to time and shall reflect BC Hydro's most recent proxy for long run marginal cost for firm energy (the "LRMC"), as determined by BC Hydro and as accepted by the Commission for rate making purposes, which shall not include an amount on account of distribution losses but shall include an amount on account of transmission losses and an adjustment for inflation. As at the Reference Date, BC Hydro's most recent proxy for the LRMC used for ratemaking purposes is as accepted by the Commission in BC Hydro's 2010 Residential Inclining Block Rate Re-pricing Application. The Parties agree that as at April 1, 2013 the Tranche 2 Energy Price, determined as described above, is \$129.70 per MWh (\$0.1297 per kWh).
- (b) If a new proxy for the LRMC is accepted by the Commission for ratemaking purposes, the Tranche 2 Energy Price shall be amended accordingly and, if required, BC Hydro shall apply to the Commission for approval thereof.
- (c) If the LRMC is no longer used by BC Hydro for rate-making purposes other than for this Agreement, the Parties shall negotiate in good faith for a replacement rate for the Tranche 2 Energy Price and BC Hydro shall seek approval of the Commission of any agreed replacement rate. If despite good faith negotiations, the Parties are unable to agree on a replacement rate, (i) BC Hydro may apply to the Commission for approval of a proposed replacement rate and FortisBC may intervene in such proceeding or file a complaint with respect to the proposed replacement rate, or (ii) if BC Hydro fails to apply to the Commission for approval of a proposed replacement rate. FortisBC may file a complaint with the Commission seeking to change the then existing rate.

#### 7.3 Price for Scheduled Energy Less Than or Equal to Annual Energy Nomination

In any Contract Year, for the amount of Scheduled Energy taken or deemed to be taken that is less than or equal to the Annual Energy Nomination, FortisBC shall pay:

- (a) the Tranche 1 Energy Price for each MWh of such Scheduled Energy taken or deemed taken that is less than or equal to the Maximum Tranche 1 Amount; and
- (b) the Tranche 2 Energy Price for each MWh of such Scheduled Energy taken or deemed taken that exceeds the Maximum Tranche 1 Amount.

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#### 7.4 Price for Scheduled Energy Exceeding the Annual Energy Nomination

In any Contract Year, for the amount of Scheduled Energy taken or deemed to be taken that exceeds the Annual Energy Nomination, FortisBC shall pay:

- (a) 150% of the Tranche 1 Energy Price, for each MWh of such Scheduled Energy taken or deemed taken that exceeds the Annual Energy Nomination but is less than or equal to the Maximum Tranche 1 Amount; and
- (b) 115% of the Tranche 2 Energy Price, for each MWh of such Scheduled Energy taken or deemed taken that exceeds the Annual Energy Nomination and also exceeds the Maximum Tranche 1 Amount.

## 8. CAPACITY PRICE

## 8.1 Demand Charge

- (a) In addition to an energy price applicable to Scheduled Energy, FortisBC shall pay a monthly demand charge (in \$ per kW/month) ("Demand Charge") based on its Billing Demand, as determined in accordance with Section 8.2. The Demand Charge shall be established in Rate Schedule 3808 from time to time and shall reflect the demand charge component of BC Hydro's rate for customers taking Electricity at transmission voltages that are exempted from Rate Schedule 1823 by the Commission. As at the Reference Date, the Parties agree that this rate is represented by BC Hydro's Rate Schedule 1827, as it may be amended from time to time, and as at April 1, 2013 is \$6.353 per kW/month.
- (b) If and when the Commission approves changes to the demand charge component of Rate Schedule 1827, the Parties agree that Rate Schedule 3808 shall be amended accordingly and, if required, BC Hydro shall apply to the Commission for approval thereof. If there is a material change in the underlying design for the capacity charge component of Rate Schedule 1827, the Parties shall negotiate in good faith for a replacement rate for the Demand Charge and BC Hydro shall seek approval of the Commission of any agreed rate. If, despite good faith negotiations, the Parties are unable to agree, BC Hydro may apply to the Commission for approval of a proposed replacement rate for the Demand Charge and FortisBC may intervene in such proceeding or file a complaint with respect to the proposed replacement rate.

## 8.2 Calculation of Monthly Demand Charge

The Demand Charge for each Billing Month of the Term shall be applied to the highest of the following amounts of Electricity (the "Billing Demand"), in the period specified:

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- the maximum amount of Electricity (in kW) scheduled under this Agreement, for any hour of the Billing Month;
- (b) subject as hereinafter provided, 75% of the maximum amount of Electricity (in kW) scheduled under this Agreement in any hour in the 11 months of the Term immediately prior to the Billing Month (or less than 11 months, if the Effective Date is less than 11 months prior to the Billing Month); and
- (c) 50% of the Contract Demand (in kW) for the Billing Month.

If FortisBC has reduced the Contract Demand pursuant to Section 5.6, the amount of Electricity specified in Section 8.2(b) may not exceed an amount equal to 100% of the Contract Demand.

#### 9. PLANNING AND OPERATING INFORMATION

#### 9.1 General Information Requests

BC Hydro and FortisBC agree to cooperate in the full exchange of, and shall provide, such planning and operating information as may be reasonably necessary for the timely and efficient performance of the Parties' obligations or the exercise of rights under this Agreement. Such information shall be provided on a timely basis and no reasonable request shall be refused. FortisBC acknowledges and agrees that planning and operating information related to other agreements may be required by BC Hydro for the purpose of administering and implementing this Agreement.

## 9.2 Load-Resource Forecasts

By June 30 of each year, FortisBC shall provide BC Hydro with a forecast for the next ten years of (i) loads in the FBC Service Territory and (ii) annual purchases under this Agreement. The forecast shall contain such detail as BC Hydro may reasonably require for purposes of resource planning to meet its obligations under this Agreement.

## 10. INVOICES AND PAYMENT

10.1 Invoices

BC Hydro shall render an invoice monthly in respect of Demand Charges and Scheduled Energy taken or deemed to be taken in the immediately preceding Billing Month, based on best available billing and accounting information at the time of invoicing. Billing adjustments shall be made in subsequent months if the billing and accounting information is updated or revised. BC Hydro shall render an invoice within 30 days after the end of each Contract Year for the Annual Shortfall, if any. Invoices shall be due and payable upon receipt.

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## 10.2 All Charges Exclusive of Applicable Taxes

All amounts payable hereunder, including in respect of Demand Charges and Scheduled Energy taken or deemed to be taken, are exclusive of all applicable taxes, including federal goods and services tax, provincial sales tax, and harmonized sales tax (or any successor or replacement tax therefor).

#### 10.3 Billing Disputes

If a Party disputes an invoice or the billing or accounting information on which the invoice is based, the Party shall nevertheless pay the invoice in full and may dispute the invoice or the billing or accounting information on which it was based in accordance with Section 13.4. Those parts of the invoice which are paid notwithstanding the dispute or disagreement and which are subsequently determined not to have been properly rendered and due with that invoice shall be repaid with interest at the Prime Rate from the date paid by the disputing Party until repaid.

## 10.4 Late Payment Charge

If the amount due on any invoice has not been paid in full after 20 days from the billing date shown on the invoice, a late payment charge shall be applied to the unpaid balance, and the resulting amount shall be shown and identified on the next invoice to be rendered. The late payment charge shall be as specified in BC Hydro's Electric Tariff, as amended from time to time.

## 11. INFORMATION, ACCOUNTING AND AUDITS

### 11.1 Information and Accounting

- (a) Each Party shall keep sufficient books and records in relation to its performance of this Agreement so as to enable the Parties (or an auditor) to determine or verify all purchases and sales of Electricity hereunder, the Demand Charge payable each month, all amounts of Electricity scheduled, taken and/or deemed taken hereunder, all amounts required for determining the Annual Shortfall, if any, all billing and payment amounts hereunder, and otherwise as may be required to implement and confirm (or for an auditor to confirm) compliance with this Agreement, and any related agreements.
- (b) Each Party shall provide access to the books and records described in Section 11.1(a) to an auditor appointed pursuant to and in accordance with the Master Accounting Agreement.
- (c) Each Party shall provide to the other Party and an auditor appointed pursuant to and in accordance with the Master Accounting Agreement any and all information and accounting related to this Agreement that may reasonably be required (i) to implement and confirm compliance with this

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Agreement, (ii) to account for purchases and payments under this Agreement, and (iii) to account for transactions and matters to be accounted for under the Master Accounting Agreement.

#### 11.2 Audits

- (a) If a Party discovers that any amount paid or payable under this Agreement has been incorrectly determined then, subject to Section 3.6(j) of the Master Accounting Agreement, the Parties shall make correcting adjustments and adjusting payments, if any.
- (b) If an audit under the Master Accounting Agreement shows that amounts paid or payable under this Agreement have been incorrectly determined, the Parties shall make correcting adjustments and adjusting payments, if any.
- (c) If an audit under the Master Accounting Agreement shows that either Party has failed to comply with this Agreement, such audit findings may be used as evidence of a Breach of this Agreement for purposes of Section 14.1.

#### 12. CONTRACT REPRESENTATIVES

#### 12.1 Contract Representative

The following persons are hereby appointed as the initial contract representatives ("Contract Representatives") under this Agreement:

- (a) for BC Hydro, Principal Engineer, Coordination Agreements; and
- (b) for FortisBC, Senior Manager, Power Supply & Planning.

Either Party may replace its Contract Representative by notice in writing to the other Party from time to time. The Contract Representatives shall be responsible for the relationship between the Parties under this Agreement.

## 12.2 Authority of Contract Representatives

Each Contract Representative shall have the authority to make decisions with respect to actions to be taken by its Party in the ordinary course of day-to-day management of the obligations of such Party under this Agreement. The Contract Representatives shall have no authority, expressly or by course of conduct, to agree to amend this Agreement.

## 12.3 Meetings of Contract Representatives

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The Contract Representatives shall meet at least each quarter and otherwise upon the request of either Contract Representative. Where appropriate, the Contract

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Representatives may invite contract representatives under other agreements between the Parties to attend meetings.

## 13. DISPUTE RESOLUTION

13.1 Disputes

If any dispute, question or difference of opinion between the Parties arises out of or under this Agreement ("Dispute") including (i) the interpretation of any provision of this Agreement, (ii) any billing or invoice dispute, (iii) any matter on which agreement of the Parties is required and this Agreement provides may be submitted for dispute resolution in accordance with this Section 13 in the absence of agreement, or (iv) any proposed amendment to this Agreement, then a Party may give to the other Party a notice ("Dispute Notice") specifying the Dispute and requiring its resolution under this Section 13. All Disputes shall be exclusively resolved in accordance with the provisions of this Section 13.

#### 13.2 Contract Representatives to Seek Resolution

If the Dispute is not resolved within 7 days after a Dispute Notice is given to the other Party, each Party shall forthwith refer the Dispute to its Contract Representative and cause its Contract Representative to negotiate in good faith to resolve the Dispute.

#### 13.3 Referral to Senior Executives

If a Dispute is not resolved within 7 days of the Dispute being referred to the Contract Representatives or within 14 days after the Dispute Notice is given, whichever is earlier, the Parties shall seek to resolve the Dispute through their respective senior executives (at the vice president level or higher) before proceeding to resolve the Dispute through dispute resolution in accordance with Section 13.5. Each Party shall appoint a senior executive to undertake such informal process within 10 days of a Party notifying the other Party that the Contract Representatives have not timely resolved the Dispute through their appointed senior executives within 30 days after notification.

#### 13.4 Resolution of Billing Disputes

If any Dispute relating to billing or invoice matters is not resolved within 30 days of the Dispute being referred to the senior executives, or if either Party fails to appoint a senior executive for that purpose, then such Dispute shall be exclusively resolved by the expedited dispute resolution process in Section 13.6(e).

## 13.5 Referral to a Third Party for resolution

If the Dispute is not resolved within 30 days of the Dispute being referred to the senior executives, or if either Party fails to appoint a senior executive for that

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purpose, then either Party may refer the Dispute for resolution in accordance with the following:

- (a) if the Dispute relates to any amendment to this Agreement proposed by either Party, then:
  - (i) BC Hydro may apply to the Commission; and
  - (ii) FortisBC may file a complaint with the Commission;

in respect of the proposed amendment, and the other Party may intervene in such proceeding; and

(b) if the Dispute relates to any other matter, then either Party may refer the Dispute to arbitration under the Commercial Arbitration Act (British Columbia) for resolution.

#### 13.6 Arbitration Procedure

ACCEPTED:

The following rules shall apply to an arbitration under this Agreement:

- (a) The arbitration shall be conducted before one arbitrator mutually agreed to by the Parties or if the Parties are unable to agree upon a mutually acceptable arbitrator within 15 days after a demand for arbitration has been given, either Party may apply to the court pursuant to the *Commercial Arbitration Act* (British Columbia) for the appointment of a single arbitrator, and the provisions of the *Commercial Arbitration Act* (British Columbia) shall govern such appointment;
- (b) The venue for the arbitration shall be the venue selected by the arbitrator in Vancouver, British Columbia, unless otherwise agreed between the Parties;
- (c) The arbitrator shall promptly fix the time, date and place of the hearing and notify the Parties;
- (d) The arbitration shall be dealt with on an expeditious basis with both Parties using commercially reasonable efforts to obtain and implement a timely decision of the arbitrator;
- (e) Where provided for in this Agreement, or the Parties agree, the arbitrator shall be instructed to impose time limits of no more than 10 days on the production of documents, filing of evidence, examination of witnesses and filing of arguments, such that a decision may be rendered within 45 days of appointment of the arbitrator;
- (f) All costs of the arbitration shall be paid by the Parties in such amount and proportions as the arbitrator may determine, and if the arbitrator does not

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make an award of costs, the Parties shall bear the costs of the arbitration equally and each Party shall bear its own costs;

- (g) The arbitrator shall promptly transmit an executed copy of its decision to the Parties and the decision of the arbitrator shall be final, binding and conclusive upon the Parties;
- (h) The arbitrator shall determine the Dispute in accordance with the internal laws of the Province of British Columbia and applicable Canadian federal law, without giving effect to any conflict of law rules or other rules that might render such law inapplicable or unavailable;
- Neither Party shall commence or voluntarily participate in any court action or proceeding relating to any Dispute except:
  - for enforcement of arbitral awards or orders as contemplated herein;
  - to restrict or vacate an arbitral decision based on corruption of the arbitrator; or
  - (iii) to seek injunctive relief if an arbitrator has not then been appointed.

#### 13.7 Authority of Arbitrator

If the Dispute involves a matter on which agreement of the Parties is required and that this Agreement provides may be submitted for dispute resolution in the absence of agreement, each Party hereby expressly authorizes and directs the arbitrator to make the required determination. Any such determination by the arbitrator shall be deemed to have been the agreement of the Parties. No award or determination of an arbitrator may be inconsistent with the terms and conditions of this Agreement.

## 13.8 Equitable Remedies

The arbitrator shall adjudicate the Dispute, and may grant remedies in both law and equity. The Parties acknowledge that a declaratory judgment or damages may provide an inadequate remedy for breach of the provisions of this Agreement, and accordingly each Party shall be entitled to seek specific performance, injunction or other similar remedy to ensure full and proper performance by the other Party of its obligations under this Agreement. Subject to Section 13.6(i)(iii), such remedy may only be sought from the arbitrator appointed under Section 13.6(a).

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## 14. REMEDIES FOR BREACH

#### 14.1 Breach of Agreement

ACCEPTED:

- (a) Subject to Section 14.1(b), if either Party (the "Breaching Party") breaches this Agreement (a "Breach"), and the Breach is material or if there are persistent Breaches (in either case, a "material Breach"), the other Party (the "Other Party") may issue a notice describing the material Breach (a "Notice of Material Breach") and the Breaching Party shall have 7 days to satisfy the Other Party, acting reasonably, that the cause of the material Breach has been or will be addressed to the Other Party's reasonable satisfaction within the 7 day period.
- (b) If FortisBC Breaches Section 2.6, such Breach shall be considered a Breach under the Energy Export Agreement to be dealt with in accordance with the Energy Export Agreement.
- (c) If the Breaching Party fails to satisfy the Other Party, acting reasonably, that the cause of the material Breach has been or will be addressed to the Other Party's reasonable satisfaction within the 7 day period referred to in Section 14.1(a), the Other Party may at any time thereafter issue to the Breaching Party a notice (a "Notice of Pending Complaint") that it intends to file a complaint to the Commission with regard to the material Breach and/or any previous material Breach.
- (d) If, within 14 days of the Other Party issuing a Notice of Pending Complaint, the Breaching Party has not established to the Other Party's satisfaction, acting reasonably (which may include consideration of previous Breaches and steps taken), that the Breaching Party has remedied the cause of the material Breach and put procedures in place designed to avoid a recurrence of the material Breach, the Other Party's Chief Executive Officer may give notice (a "Final Notice of Pending Complaint") to the Breaching Party's Chief Executive Officer of the Other Party's intent to apply to the Commission for such remedies as the Other Party considers appropriate in the circumstances.
- (e) The Chief Executive Officers shall meet within 10 days of the Final Notice of Pending Complaint to try to resolve the issues giving rise to the Other Party's Final Notice of Pending Complaint. If they fail to resolve the issues to their mutual satisfaction within 30 days of the Final Notice of Pending Complaint, the Other Party may apply to the Commission for such remedies as the Other Party considers appropriate in the circumstances.
- (f) If the Commission declines to adjudicate whether there has been a material Breach of this Agreement, either Party may submit the matter for dispute resolution in accordance with the Commercial Arbitration Act

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(British Columbia) pursuant to Section 13. The arbitrator shall have the authority to determine whether there has been a material Breach of this Agreement and to order appropriate remedies.

## 14.2 Deemed Breach

If FortisBC does not provide timely and reliable information and accounting, as required by this Agreement and/or the Master Accounting Agreement, in connection with its performance of this Agreement, that itself shall be deemed a Breach of this Agreement.

#### 15. SUPPLY; SUSPENSION OF SUPPLY

### 15.1 No Warranty of Continuous Supply

BC Hydro does not warrant a continuous supply of Electricity or the maintenance of unvaried frequency or voltage.

## 15.2 Request to Suspend or Reduce Taking

At any time, in the event there is a shortage of Electricity, whether actual or apprehended by BC Hydro, BC Hydro may request FortisBC to reduce its taking of Electricity at the Points of Delivery. If FortisBC does not suspend or reduce its take of Electricity as requested, BC Hydro may suspend or reduce the supply of Electricity under this Agreement to FortisBC. BC Hydro shall use its reasonable efforts to advise FortisBC and to curtail service to FortisBC on a pro-rata basis with other BC Hydro load.

## 16. LIABILITY/INDEMNITY

## 16.1 Liability

- (a) All responsibility of BC Hydro for Electricity delivered to FortisBC under this Agreement shall cease at the applicable Point of Delivery.
- (b) Neither Party, its servants or agents, shall be liable to the other Party for any loss, injury, damages or expense of the other Party caused by or resulting from any suspension, discontinuance or defect in the supply of Electricity, or the maintenance of unvaried frequency or voltage alleged or caused by an act or omission of the other Party, its servants or agents.

## 16.2 Indemnity

E

FortisBC shall indemnify BC Hydro and save it harmless from any and all claims from FortisBC's customers or other third parties in connection with the supply of, or any suspension, discontinuance or defect in the supply of, Electricity, or the maintenance of unvaried frequency or voltage, by BC Hydro under this Agreement.

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## 17. NOTICES

17.1 Notices

All notices, directions and other instruments required or permitted to be given under this Agreement (except those given pursuant to Section 6 which shall be given as provided for therein, or otherwise in accordance with standard scheduling requirements in the BC Control Area) shall be in writing, and shall be sufficient in all respects if delivered, or if sent by facsimile, or if sent by prepaid registered post mailed in British Columbia to the Parties at the following addresses respectively:

 to BC Hydro: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

> Attention: Executive Vice-President, Generation Facsimile Number: 604-623-4155

With a copy to: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Attention: Director of Legal Services Facsimile Number: 604-623-3606

(b) to FortisBC: FortisBC Inc. 10<sup>th</sup> Floor 1111 West Georgia Street Vancouver, B.C. V6E 4M3

> Attention: Vice-President, Energy Supply Facsimile Number: 604-592-7620

With a copy to: FortisBC Inc. 10th Floor 1111 West Georgia Street Vancouver, B.C.V6E 4M3

Attention: General Counsel Facsimile Number: 604-443-6540

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Either Party shall have the right at any time to change its address by notice in writing sent to the other Party at the address in effect hereunder.

17.2 Delivery of Notices

Any notice, direction or other instrument shall be deemed to have been received on the following dates:

- (a) if sent by facsimile, on the Business Day next following the date the sender receives confirmation of successful transmission;
- (b) if delivered, on the Business Day next following the date of delivery; or
- (c) if sent by registered mail, on the seventh day following its mailing, provided that if there is at the time of mailing or within 7 days thereafter a mail strike, slowdown, lockout or other labour dispute which might affect the delivery, then any notice, direction or other instrument, shall only be effective upon actual delivery or if delivered or sent by facsimile.

## 17.3 Electronic Mail Notices

As an alternative to the methods of giving notice described in Section 17.1, a Party may give notices, directions and other instruments required or permitted to be given under this Agreement by electronic mail to the other Party's representative(s) identified in Section 17.1 who continues to be employed by the other Party and is not to the knowledge of the sending Party unavailable; provided (i) the notice, direction or other instrument is stated to be a notice, direction or other instrument required or permitted to be given under this Agreement, and (ii) the notice, direction or other instrument is concurrently also given by electronic mail to the Corporate Secretary of the other Party. Any notice, direction or other instrument given by electronic mail shall be deemed to have been received on the Business Day next following the date of sending, provided that no such notice shall be effective unless such notice is actually received by the representative(s).

#### 18. MISCELLANEOUS

#### 18.1 Time is of the Essence

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If a Party persistently fails to perform any of its obligations hereunder by the time(s) provided for herein (and the result or effect of such failure is not provided for in this Agreement), then the other Party may, by notice to the Party, require that from the date specified in the notice, time shall be of the essence with respect to such obligations.

## 18.2 No Assignment Without Consent

Neither Party may sell, assign or otherwise transfer this Agreement or any of its rights, obligations or liabilities under this Agreement to any other person unless

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all such rights, obligations and liabilities are assigned, and then only with the prior consent in writing of the other Party.

#### 18.3 No Third Party Beneficiaries

Nothing in this Agreement, express or implied, is intended or shall be construed to confer upon or to give any person, other than the Parties and their respective permitted successors and assigns, any rights or remedies under or by reason of this Agreement.

18.4 Further Assurances

Each of the Parties agrees that it shall take from time to time such actions and execute such additional instruments as may be reasonably necessary or convenient to implement and carry out the intent and purpose of this Agreement.

18.5 No Consequential Damages

No arbitrator shall award any special, incidental, exemplary, punitive or consequential damages with respect to, arising out of, relating to or in any way connected with a Party's performance or non-performance under this Agreement, provided nothing in this Section 18.5 shall limit any damages or other remedies for any Breach or material Breach of this Agreement that may be expressly provided for herein.

18.6 Waiver

The failure of a Party to insist on the strict performance of any provision of this Agreement or to exercise any right, power or remedy upon a breach hereof shall not constitute a waiver of any provision of this Agreement or limit that Party's right thereafter to enforce any provision or exercise any right.

#### 18.7 Governing Law

This Agreement and all the terms and conditions contained in it shall be governed and construed in accordance with the laws of British Columbia and, to the extent applicable, shall be subject to (a) the provisions of the *Utilities Commission Act*, as amended or re-enacted from time to time, and (b) to the jurisdiction of the Commission.

#### 18.8 Amendments

No amendment of this Agreement shall be valid unless made in writing and executed by the appropriate duly authorized signatories of the Parties (and approved by the Commission to the extent required by law) or unless ordered by the Commission in accordance with its authority under the *Utilities Commission Act*, either upon its own motion or upon the application of either Party. A Party seeking amendment of this Agreement by the Commission shall give reasonable

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prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission.

#### 18.9 Enurement

This Agreement shall be binding upon and shall enure to the benefit of the Parties and their respective successors and permitted assigns.

#### 18.10 Counterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

## 18.11 Electronic Delivery

Delivery by a Party of an executed copy of this Agreement by electronic means shall be effective delivery.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

### BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By:

FORTISBC INC.

By:

7843666.9

Authorized Signatory

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Authorized Signatory

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prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission.

## 18.9 Enurement

This Agreement shall be binding upon and shall entire to the benefit of the Parties and their respective successors and permitted assigns.

## 18.10 Counterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

#### 18.11 Electronic Delivery

Delivery by a Party of an executed copy of this Agreement by electronic meansshall be effective delivery.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

## BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By: Authorized Signatory FORTISBC INC. By: Authorized Signatory John Walker President & CEO

79435881.9

ACCEPTED:\_\_\_\_\_ ORDER NO.\_\_\_\_\_ BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC

Appendix A BC Hydro Tariff Supplement No. 3 Attachment 1 Power Purchase Agreement Effective: First Revision of Page 36 of 38

Appendix 1

RATE SCHEDULE 3808 attached

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Appendix A BC Hydro Tariff Supplement No. 3 Attachment 1 Power Purchase Agreement Effective: First Revision of Page 37 of 38

# BC Hydro Rate Schedules

	SCHEDULE 3808 – TRANSMISSION SERVICE – FORTISBC		
	<u>Availability</u> :	This schedule is available to FortisBC in accordance with the terms and conditions of the Agreement between BC Hydro and FortisBC entered into and deemed effective the 1st day of October 2013 (the "Power Purchase Agreement"). The Contract Demand shall not exceed 200 MW in any hour.	
	Applicable in:	For Electricity delivered to FortisBC at each Point of Delivery as defined in the Power Purchase Agreement.	
	Rate:	Demand Charge: \$6.353 per kW of Billing Demand per Billing Month	
		plus	
		Tranche 1 Energy Price: 3.724¢ per kW.h	
		Tranche 2 Energy Price: 12.97¢ per kW.h	
	Billing Demand:	The Billing Demand for billing purposes in any Billing Month shall be the greatest of:	
		<ol> <li>The maximum amount of Electricity (in kW) scheduled under the Power Purchase Agreement, for any hour of the Billing Month;</li> </ol>	
		<ol> <li>Subject as hereinafter provided, 75% of the maximum amount of Electricity (in kW) scheduled under the Power Purchase Agreement in any hour in the 11th months of the Term immediately prior to the Billing Month (or less than 11 months, if the Effective Date is less than 11 months prior to the Month); and</li> </ol>	
		3. 50% of the Contract Demand (in kW) for the Billing Month.	
		If FortisBC has reduced the Contract Demand in accordance with the Power Purchase Agreement, the amount of Electricity specified in Section 2 above may not exceed an amount equal to 100% of the Contract Demand.	
	Maximum Tranche1 Amount Scheduled Energy Less Than or Equ to Annual Energy Nomination	The Maximum Tranche 1 Amount for each Contract Year is 1041 GWh.	
	Hennikaen	In any Contract Year, for the amount of the Scheduled Energy taken or deemed to be taken that is less than or equal to the Annual Energy Nomination, FortisBC shall pay:	
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		COMMISSION SECRETARY	
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**Appendix A** BC Hydro Tariff Supplement No. 3 Attachment 1 Power Purchase Agreement Effective: First Revision of Page 38 of 38

# BC Hydro Rate Schedules

	(a) The Tranche 1 Energy Price for each kW.h of such Sche deemed taken that is less than or equal to the Maximum Tra	
Scheduled Exceeding		and a reasonal, dist
Annual	nergy	and a state and
Nomination	(b) The Tranche 2 Energy Price for each kW.h of such Sched exceeds the Maximum Tranche 1 Amount.	uled Energy taken that
	In any Contract Year, for the amount of the Scheduled Energy taken that exceeds the Annual Energy Nomination, FortisBC shall pay:	or deemed to be taken
	(a) 150% of the Tranche 1 Energy Price, for each kW.h of s taken or deemed taken that that exceeds the Annual Ener less than or equal to the Maximum Tranche 1 Amount; and	
	(b) 115% of the Tranche 2 Energy Price, for each kWh of s taken that exceeds the Annual Energy Nomination and also Tranche 1 Amount.	
Annual Mini	um Take In any Contract Year, FortisBC shall schedule and take an equal to at least 75% of the Annual Energy Nomin responsible for any Annual Shortfall.	
<u>Note</u> :	The terms and conditions under which service is supplied to Forti the Power Purchase Agreement.	sBC are contained in
Taxes:	The rates and charges contained herein are exclusive of the tax and the Social Services tax.	Goods and Services
Rate Rider:	The Deferral Account Rate Rider as set out in Rate Schedule 1901 payable under this Rate Schedule, before taxes and levies.	applies to all charges
Rate Increa	The Tranche 1 Energy Price and Demand Charge are subj adjustments as Schedule 1827. Tranche 2 Energy Price is s provided for in the Power Purchase Agreement.	
	Effective April 1, 2013 the Tranche 1 Energy Price and the De this schedule includes an increase of 1.44% before rounding Order No. G-77-12A	
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Appendix A BC Hydro Tariff Supplement No. 3 Attachment 2 Imbalance Agreement Effective: First Revision of Page 1 of 29

# **ATTACHMENT 2**

# IMBALANCE AGREEMENT

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

and

FORTISBC INC.

DATED FOR REFERENCE

May 21, 2013

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#### IMBALANCE AGREEMENT

THIS AGREEMENT is made as of the 21<sup>st</sup> day of May, 2013 (the "Reference Date"), to be effective on the Effective Date.

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, having its Head Office at 333 Dunsmuir Street, City of Vancouver, Province of British Columbia

("BC Hydro")

AND:

FORTISBC INC., a body corporate having an office at 10<sup>th</sup> Floor, 1111 West Georgia Street, City of Vancouver, Province of British Columbia

("FortisBC")

WHEREAS:

- A. FortisBC and BC Hydro serve adjacent areas in British Columbia and have various points of electrical system interconnection which permit the flow of electricity to and from their respective systems;
- B. FortisBC and BC Hydro, among other parties, are parties to the Canal Plant Agreement, pursuant to which FortisBC receives from BC Hydro a capacity and energy entitlement that is not scheduled and the usage of which is determined on an after-the-fact basis;
- C. Concurrently with this Agreement, BC Hydro and FortisBC are entering into a power purchase agreement to be effective October 1, 2013 (the "Power Purchase Agreement"), pursuant to which FortisBC has agreed to schedule and purchase, and BC Hydro has agreed to supply and sell, Electricity to be delivered from the BC Hydro System;
- D. BC Hydro acts as the operator of the BC Control Area and the balancing authority in British Columbia and FortisBC operates an integrated generation and transmission system within the BC Control Area;
- E. From time to time Unexpected Conditions may occur that will cause Imbalance Energy to transfer from the BC Hydro System to the Entitlement Parties' System, or vice versa; and
- F. The Parties have agreed that FortisBC will pay BC Hydro an amount for transfers of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System and, in Negative Price Hours, from the Entitlement Parties' System to the BC Hydro System, all on the terms and conditions specified in this Agreement.

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THIS AGREEMENT WITNESSES that in consideration of the covenants and agreements set forth in this Agreement and of other good and valuable consideration, the Parties hereby covenant, agree and declare as follows:

#### 1. DEFINITIONS AND INTERPRETATION

#### 1.1 Definitions

In this Agreement:

- "Accounting Procedures" means the accounting procedures established from time to time under the Master Accounting Agreement;
- (b) "AESO" means the Alberta Electric System Operator, or a successor organization;
- (c) "AESO Hourly Pool Price" means the price for each hour, in \$/MWh, established and reported by AESO, in accordance with the AESO rules, for electric energy exchanged through the Alberta power pool;
- (d) "Agreement" means this Imbalance Agreement, as amended, restated and/or supplemented from time to time and includes any schedules or exhibits referred to in it as being attached to it;
- (e) "BC Control Area" has the meaning ascribed to it in the Canal Plant Agreement, and under current WECC and NERC rules is generally known as the "BC Hydro Balancing Authority area";
- (f) "BC Hydro System" means the interconnected generation and transmission facilities and related protection, control and communication equipment in British Columbia owned and/or operated by BC Hydro (excluding the Entitlement Parties' System), including all additions and modifications thereto and repairs or replacements thereof;
- "Business Day" means any calendar day which is not a Saturday, Sunday or other day recognized as a statutory holiday in British Columbia;
- (h) "Canal Plant Agreement" means the Second Amended and Restated 2005 Canal Plant Agreement dated for reference November 15, 2011 among BC Hydro, FortisBC, Teck Metals Ltd., Brilliant Power Corporation, Brilliant Expansion Power Corporation and Waneta Expansion Limited Partnership, as amended, restated and/or supplemented from time to time;
- (i) "Capacity Buffer" means, in respect of any hour, an amount of reserves held by FortisBC immediately prior to the start of that hour, in addition to (i) the capacity required to meet FortisBC's reasonably forecast load obligations, (ii) the ancillary services requirements in Sections 6.2 and 6.7(a) of the Canal Plant Agreement, and (iii) reserve requirements under

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any other CPA-Related Agreement (as defined in the Master Accounting Agreement);

- (j) "COB or NOB HASP LMP" means for an hour the index representing the market price for real time sales to the California Independent System Operator ("CAISO") from sources in the Pacific Northwest, and, as at the date of this Agreement, is the average of the four 15 minute Locational Marginal Prices for the hour for either the MALIN\_5\_N01 (COB) node or the SYLMARDC\_2\_N501 (NOB) node, whichever is higher, as published by the CAISO;
- (k) "Commission" means the British Columbia Utilities Commission, established pursuant to the Utilities Commission Act (British Columbia), or a successor thereto;
- "Contract Year" means a period commencing on October 1 and ending on the following September 30, provided that if this Agreement terminates on a day other than September 30, the last Contract Year shall end on the date of termination;
- (m) "Dow Jones Mid-Columbia Daily Firm Off-Peak Index" means for an hour the price as reported in the Dow Jones Mid-Columbia Daily Firm Off-Peak Index, as published by Dow Jones;
- (n) "Dow Jones Mid-Columbia Daily Firm On-Peak Index" means for an hour the price as reported in the Dow Jones Mid-Columbia Daily Firm On-Peak Index, as published by Dow Jones;
- "Effective Date" means October 1, 2013, provided that the conditions precedent in Section 2.2 have then been met;
- (p) "Electricity" means electric energy and its associated capacity;
- (q) "Entitlement Parties" means the parties to the Canal Plant Agreement, except BC Hydro;
- (r) "Entitlement Parties' System" means the contiguous, interconnected generation and transmission facilities and related protection, control and communication equipment located in British Columbia and owned by one or more of the Entitlement Parties or their affiliates, and includes all additions and modifications thereto and repairs or replacements thereof, and specifically includes the Waneta Expansion, even though it is connected to the Entitlement Parties' transmission facilities through facilities owned by BC Hydro;
- "FBC Service Territory" means the area in British Columbia served, directly or indirectly, by FortisBC from time to time, and connected by the Entitlement Parties' System;

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- (t) "General Wheeling Agreement" or "GWA" means the General Wheeling Agreement, dated October 15, 1986, between FortisBC and BC Hydro, as amended, restated and/or supplemented from time to time;
- (u) "Imbalance Energy" has the meaning ascribed to it in Section 5.3;
- "Imbalance Energy Charge" has the meaning ascribed to it in Section 6.1;
- (w) "Master Accounting Agreement" means the Master Accounting Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, including the Accounting Procedures established pursuant to it, in each case as amended, restated and/or supplemented from time to time;
- (x) "Mid-Columbia Powerdex Realtime Hourly Index Price" means for an hour the weighted average price for that hour reported in the Powerdex Realtime Mid-Columbia Power index, as published by Powerdex, Inc.;
- (y) "Negative Price Hour" means any hour in which either (i) the Dow Jones Mid-Columbia Daily Firm On-Peak or Dow Jones Mid-Columbia Daily Firm Off-Peak Index, as applicable to that hour, or (ii) the Mid-Columbia Powerdex Realtime Hourly Index Price applicable to that hour, is reported as being a negative price;
- "NERC" means the North American Electric Reliability Corp., or a successor organization;
- "Parties" means the parties to this Agreement and "Party" means either of them;
- (bb) "Points of Delivery" means the Point of Supply and the Points of Interconnection as identified and defined in the General Wheeling Agreement;
- (cc) "Power Purchase Agreement" has the meaning ascribed to it in Recital C;
- (dd) "Powerex" means Powerex Corp., a wholly-owned subsidiary of BC Hydro;
- (ee) "Prime Rate" means the annual rate of interest designated by the Bank of Montreal as its "prime rate" for Canadian dollar commercial loans to customers in Canada;
- (ff) "Service Area Load Requirements" means for any hour the load served by FortisBC, directly or indirectly, in the FBC Service Territory, as determined for each hour in accordance with the Accounting Procedures and, where the context requires, means the load in the FBC Service Territory that FortisBC has an obligation to serve;

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- (gg) "Term" has the meaning ascribed to it in Section 2.1;
- (hh) "Unexpected Condition" means any of the following:
  - an unexpected transmission limitation;
  - (ii) an unexpected change to generation availability caused by a generation outage;
  - (iii) an unexpected change to reasonably forecasted load requirements in the FBC Service Territory; or
  - (iv) any other unexpected circumstance affecting imports or exports into or out of the FBC Service Territory (excluding curtailments, reinstatements, adjustments and/or withdrawals of schedules other than for emergency reasons), loads in the FBC Service Territory or resources in the FBC Service Territory used to serve such loads;

that could reasonably be expected to, or does, cause Imbalance Energy to transfer from the BC Hydro System to the Entitlement Parties' System, or vice versa; and

- (ii) "WECC" means the Western Electricity Coordinating Council or a successor organization.
- 1.2 Canal Plant Agreement Definitions

Capitalized words and terms in this Agreement that are not defined herein but are defined in the Canal Plant Agreement shall have the meanings ascribed to them in the Canal Plant Agreement.

1.3 Meaning of "transfer"

In this Agreement, any reference to Imbalance Energy that "transfers" from the BC Hydro System to the Entitlement Parties' System, or vice versa, means Imbalance Energy that is determined and calculated in accordance with the Accounting Procedures to transfer from the BC Hydro System to the Entitlement Parties' System, or vice versa.

For the purposes of this Agreement, any transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, shall be deemed to occur at the Point of Supply (as that term is defined in the General Wheeling Agreement).

1.4 Interpretation

In this Agreement, except where otherwise expressly provided:

(a) unless the context otherwise requires, words importing the singular include the plural and vice versa, words importing gender include all

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genders, "or" is not exclusive, "including" is not limiting, whether or not non-limiting language (such as "without limitation") is used with reference to it, a grammatical variation of a defined term shall have a corresponding meaning, and reference to any person includes such person's successors and assigns but, if applicable, only if the succession or assignment is permitted under this Agreement;

- (b) the inclusion of headings in this Agreement is for convenience only and shall not affect the construction or interpretation of this Agreement;
- any reference to an hour, day or month is a reference to a calendar hour, day or month, unless specified otherwise;
- (d) any reference to a specified Section, subsection or other subdivision of this Agreement is to the designated Section, subsection or other subdivision of this Agreement, unless the context otherwise requires;
- (e) any reference to a statute includes and is a reference to such statute and to the regulations made pursuant to it, with all amendments to them in force from time to time, and to any statute or regulations that may be passed which supplement or supersede such statute and such regulations;
- (f) all monetary amounts referred to in this Agreement are stated and shall be paid in Canadian currency; where indices used in this Agreement are denominated in US dollars, index amounts and US dollar amounts payable hereunder shall be converted from US dollars to Canadian dollars at the Bank of Canada noon spot rate on the applicable day(s); and
- (g) the language used in this Agreement is the language chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against either Party.

#### 2. TERM AND CONDITIONS PRECEDENT

#### 2.1 Term of Agreement

- (a) Subject to Section 2.2, the term of this Agreement (the "Term") shall commence on the Effective Date and shall continue until either Party elects to terminate this Agreement upon at least one year's notice to the other Party; provided that neither Party may give notice to terminate this Agreement to be effective prior to the expiry or earlier termination (as the case may be) of the Power Purchase Agreement.
- (b) If a Party gives notice to terminate this Agreement pursuant to Section 2.1(a) and the Canal Plant Agreement is then in force, the Parties shall negotiate in good faith the terms and conditions of an agreement to replace this Agreement upon its termination; failing agreement, either Party may submit the matter for dispute resolution in accordance with Section 10.

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(c) Termination of this Agreement shall not relieve either Party from any liability or obligation then accrued but unsatisfied.

#### 2.2 Conditions Precedent to Agreement Becoming Effective

This Agreement shall not be effective unless each of the following conditions precedent has, on or before October 1, 2013, been satisfied:

- (a) the Commission has issued an order under Sections 58 to 61 of the Utilities Commission Act approving this Agreement, without imposing changes unless acceptable to both Parties; and
- (b) the Power Purchase Agreement has become, or will concurrently become, effective in accordance with its terms.

## 2.3 Support and Cooperation in Obtaining Commission Approval

FortisBC shall support BC Hydro's application for approval by the Commission of this Agreement, including intervening in support of the application; provided that FortisBC reserves the right to oppose any changes proposed during proceedings before the Commission with which FortisBC does not agree. FortisBC shall cooperate with BC Hydro and provide such assistance as BC Hydro may reasonably request towards obtaining approval of this Agreement by the Commission.

## 3. IMBALANCE ENERGY IS NOT A SERVICE

## 3.1 Imbalance Energy is Not a Service

- (a) FortisBC acknowledges that, despite that BC Hydro acts as the operator of the BC Control Area, BC Hydro is not, pursuant to this Agreement or otherwise, offering to FortisBC an imbalance energy service and that any transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, is not authorized. If Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System, or vice versa, as determined in accordance with the Accounting Procedures, FortisBC shall pay BC Hydro for such transfer in accordance with this Agreement.
- (b) FortisBC shall not plan for a transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, to occur in any hour for any purpose, including to serve load, to meet reserve requirements or to support imports, exports or other marketing activities by FortisBC or any other person.
- (c) If an Unexpected Condition occurs in any hour, FortisBC shall use all reasonable efforts to avoid, minimize and/or end any transfer of Imbalance Energy, in accordance with Sections 5.1(c) and 5.1(d).

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(d) FortisBC shall not enter into any purchases, sales or other transactions with third parties (including customers, third party generators, marketers, or Entitlement Parties) under which such third party would be permitted to take any action that would cause Imbalance Energy to transfer from the BC Hydro System to the Entitlement Parties' System, or vice versa.

#### 3.2 BC Hydro Entitled to Assume No Imbalance Energy Transfers

BC Hydro shall be entitled to operate the BC Hydro System assuming there will be no Imbalance Energy transfers at any time.

#### 4. POINTS OF DELIVERY / INTERCONNECTED OPERATION

#### 4.1 Imbalance Energy transfers at Points of Delivery

For purposes of this Agreement only, transfers of Imbalance Energy shall be deemed to occur as a result of system-to-system imbalances between the BC Hydro System and the Entitlement Parties' System. Imbalances occurring at individual Points of Delivery shall be derived in accordance with the Accounting Procedures and shall be netted against each other on an aggregate basis, to determine whether there is a transfer of Imbalance Energy between the BC Hydro System and the Entitlement Parties' System for purposes of this Agreement.

#### 5. IMBALANCE ENERGY

#### 5.1 Imbalance Energy Transfers to be Avoided

FortisBC shall use all reasonable efforts to avoid, minimize and/or end as soon as possible (as applicable) transfers of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, in any hour. This shall include FortisBC:

- (a) undertaking the following actions at all times during the Term:
  - maintaining a Capacity Buffer of at least the greater of (A) 15 MW; or (B) 10% of scheduled exports by or on behalf of FortisBC from the FBC Service Territory to outside the BC Control Area, to respond to Unexpected Conditions; and
  - maintaining continuous real-time monitoring of actual loads, resources, imports, exports, schedules and etags so it is able to timely respond to Unexpected Conditions;
- (b) at all times during the Term:
  - (i) not under-scheduling resources;
  - (ii) not over-scheduling resources;
  - (iii) not relying on or using Imbalance Energy as a firming service; and

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- (iv) planning to balance loads and resources at each Point of Delivery, including securing and scheduling transmission rights on the BC Hydro System;
- (c) if an Unexpected Condition occurs, undertaking such actions as would in all the circumstances reasonably be expected to avoid or minimize any such transfers of Imbalance Energy that might be caused thereby, including any or all of the actions described in Section 5.1(d);
- (d) if an Unexpected Condition occurs and a transfer of Imbalance Energy is caused thereby in any hour, undertaking such actions as would in all the circumstances reasonably be expected to end such transfer as soon as possible after its commencement (and in any event by the end of that hour or by the end of the next hour if the Unexpected Condition arises within 30 minutes before the start of the next hour), including:
  - (i) acquiring additional capacity resources;
  - using all other resources available to FortisBC (for example, Canal Plant Agreement, operating reserves);
  - (iii) curtailing and/or adjusting scheduled imports and/or exports, as permitted by industry practices;

but shall not include requiring FortisBC to curtail load on the Entitlement Parties' System or compensate third parties to curtail load; provided that nothing herein affects any obligations to curtail load under other agreements or pursuant to reliability orders; and

(e) if an Unexpected Condition occurs in any hour which affects the Capacity Buffer, undertaking such actions as would in all the circumstances reasonably be expected to re-establish the required Capacity Buffer as soon as possible.

## 5.2 Change to Capacity Buffer

If there is a material change in loads and/or resources in the FortisBC Service Territory, the Parties shall negotiate in good faith a revised Capacity Buffer amount for purposes of Section 5.1(a)(i); failing agreement, either Party may submit the matter for dispute resolution in accordance with Section 10.

## 5.3 Imbalance Energy is a Derived Amount

(a) For purposes of this Agreement, "Imbalance Energy" is a derived amount, determined and calculated in accordance with the Accounting Procedures, that is intended to be the net amount of electrical energy that is considered to transfer from the BC Hydro System to the Entitlement Parties' System, or vice versa, in any hour. The determination of Imbalance Energy takes into account scheduled deliveries under the Power Purchase Agreement, scheduled imports and/or exports to or from the FBC Service Territory,

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generation and loads within the FBC Service Territory, Entitlement Energy usage under the Canal Plant Agreement (within the limits of the applicable Exchange Accounts), or other resources used by FortisBC. Imbalance Energy is not metered and the Parties recognize that Imbalance Energy transfers do not represent actual flows of energy between the BC Hydro System and Entitlement Parties' System in any hour.

- (b) The Parties acknowledge and agree that any non-Canal Plant Agreement Electricity acquired by FortisBC and delivered into the FBC Service Territory in any hour shall be applied to serve the Service Area Load Requirements in priority to any Entitlement Energy and/or any Entitlement Capacity usage.
- (c) FortisBC acknowledges that BC Hydro is, as at the Reference Date, a party to the following CPA-Related Agreements (referred to as "commercial arrangements" in Section 3.5 of the Canal Plant Agreement):
  - Surplus Power Rights Agreement made as of March 5<sup>th</sup>, 2010 between BC Hydro and Teck Metals Ltd.;
  - Electricity Purchase Agreement made as of November 5<sup>th</sup>, 2003 between BC Hydro and Brilliant Expansion Power Corporation and Electricity Purchase Agreement made as of August 31<sup>st</sup>, 2006 between BC Hydro and Brilliant Expansion Power Corporation; and
  - (iii) Electricity Purchase Agreement made October 1, 2010 between BC Hydro and Waneta Expansion Limited Partnership;

which together have the effect of limiting the amount of non-Canal Plant Agreement Electricity that FortisBC may acquire and deliver into the FBC Service Territory in any hour, to an amount equal to the Service Area Load Requirements plus FortisBC exports from the FBC Service Territory in that hour (the "Maximum FBC Hourly Imports"). For so long as all such "commercial arrangements" are in effect (including any "commercial arrangements" that may amend or supplement same), any amount of non-Canal Plant Agreement Electricity acquired by FortisBC and delivered into the FBC Service Territory in any hour that is in excess of the Maximum FBC Hourly Imports shall be deemed to be Imbalance Energy. Nothing in this Section 5.3(c) is intended to imply what limits, if any, apply to the amount of non-Canal Plant Agreement Electricity that FortisBC may acquire and deliver into the FBC Service Territory in any hour if any of the "commercial arrangements" expires or is earlier terminated or is replaced. The Parties shall negotiate in good faith in an effort to agree on what limits, if any, will apply to the amount of non-Canal Plant Agreement Electricity that FortisBC may acquire and deliver into the FBC Service Territory in any hour if any or all of the "commercial arrangements" expires or is earlier terminated or is replaced, or if any other "commercial arrangement" is entered into by an Entitlement Party.

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Failing such agreement, either Party may submit the matter for dispute resolution in accordance with Section 10;

- (d) The Parties acknowledge and agree that, for the purposes of the Energy Export Agreement, a subsequent calculation shall be completed to recognize the storage of Eligible Energy in the applicable FBC Eligible Exchange Account.
- (e) The Parties acknowledge and agree that commitments of Entitlement Capacity to be held by FortisBC as reserves shall be applied under the Accounting Procedures in priority to all other capacity uses so that any capacity deficit in any hour shall be deemed to result in an Imbalance Energy transfer.

#### 5.4 Imbalance Energy Transfers Caused by Third Parties

- (a) FortisBC shall pay BC Hydro for Imbalance Energy that transfers from the BC Hydro System to the Entitlement Parties' System in any hour, regardless of how such transfer is caused, in accordance with Section 6.2. BC Hydro shall cooperate with FortisBC and shall provide such information as BC Hydro has (and is permitted to disclose to FortisBC, having taken reasonable steps to obtain such permission from all relevant third parties) and that FortisBC may reasonably request for the purpose of FortisBC seeking recovery from relevant third parties responsible for any Imbalance Energy Charges incurred by FortisBC pursuant to this Agreement.
- (b) BC Hydro shall own Imbalance Energy that transfers from the Entitlement Parties' System to the BC Hydro System and FortisBC shall pay BC Hydro for Imbalance Energy that transfers from the Entitlement Parties' System to the BC Hydro System in any Negative Price Hour, regardless of how such transfer is caused, all in accordance with Section 6.4. FortisBC shall hold BC Hydro harmless against any claim by any third party for payment for, or return of, any Imbalance Energy that so transfers.
- (c) Despite Sections 5.4(a) and 5.4(b), if a transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, is caused by a BC Hydro error or omission (including an error or omission by Powerex or any other affiliate of BC Hydro when acting as BC Hydro's scheduling agent), then to the extent the transfer of Imbalance Energy is the result of such cause, BC Hydro shall reduce any resulting Imbalance Energy Charge to the lower of: (i) the Tranche 1 Energy Price (as defined and determined under the Power Purchase Agreement), and (ii) the Mid-Columbia Powerdex Realtime Hourly Index Price.
- (d) To the extent any transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, is caused by:

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- a BC Hydro error or omission (including an error or omission by Powerex or any other affiliate of BC Hydro when acting as BC Hydro's scheduling agent); or
- (ii) an act or omission of an Entitlement Party other than FortisBC;

such transfer of Imbalance Energy shall not be taken into account in determining whether any threshold identified in 6.2(b)(i) or 6.2(b)(ii) is exceeded, provided that if the cause is one referred to in Section 5.4(d)(ii), BC Hydro is satisfied, acting reasonably, based on information provided by FortisBC to BC Hydro, that the transfer was caused by an act or omission of an Entitlement Party other than FortisBC and could not have been avoided by reasonably diligence on the part of FortisBC.

- (e) If and to the extent a transfer of electrical energy between the BC Hydro System and the Entitlement Parties' System in any hour that would, but for this Section 5.4(e), result in a transfer of Imbalance Energy for that hour, is bona fide settled after-the-fact pursuant to the Co-Ownership and Operating Agreement dated as of March 5<sup>th</sup>, 2010 between Teck Metals Inc. and BC Hydro, by payment of liquidated damages to BC Hydro thereunder, or otherwise, such transfer shall be deemed not to be a transfer of Imbalance Energy for that hour. The Accounting Procedures shall provide for such accounting as may be required to identify transfers of Imbalance Energy that are subject to this Section 5.4(e).
- (f) If BC Hydro enters into any contractual arrangement with any third party having generation in the FBC Service Territory (including an Entitlement Party other than FortisBC) after the Reference Date that provides for liquidated damages or a similar specific remedy in the event of an imbalance, then the Parties will negotiate in good faith to agree whether, and if so how, such remedy would impact transfers of Imbalance Energy for purposes of this Agreement.

## 6. PAYMENT FOR IMBALANCE ENERGY

6.1 Imbalance Energy Transfers from BC Hydro to FortisBC

Despite FortisBC using all reasonable efforts to avoid transfers of Imbalance Energy, including undertaking actions described in Section 5.1, and regardless of the cause, if Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System in any hour, FortisBC shall pay BC Hydro an imbalance energy charge (the "Imbalance Energy Charge") determined in accordance with Section 6.2.

## 6.2 Charges for Imbalance Energy Transfers from BC Hydro to FortisBC

(a) Subject to Section 5.4(c), for every hour in which Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System, FortisBC shall pay to BC Hydro an amount equal to the greatest of:

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(i) \$1,000;

- (ii) for each MWh of Imbalance Energy that transfers, \$50/MWh; and
- (iii) for each MWh of Imbalance Energy that transfers, 150% of the higher of the following two (or, if applicable, three) indices for the hour:
  - (A) the Mid-Columbia Powerdex Realtime Hourly Index Price;
  - (B) the COB or NOB HASP LMP;

and, if FortisBC or any person acting on behalf of, or purchasing from, FortisBC is scheduling to the Alberta market in that hour (which for purposes of this Section 6.2(a) includes energy, capacity, ancillary services or any allocation of Imbalance Energy Charges under this Agreement):

- (C) the AESO Hourly Pool Price.
- (b) Commencing one year after the Effective Date, if in any Contract Year either:
  - (i) 15 MWh or more of Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System in more than 5 hours (whether consecutive, or individual hours, or a combination thereof); or
  - 2 MWh or more of Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System in more than 25 hours (whether consecutive or individual hours, or a combination thereof);

then during the remainder of the Contract Year or the immediately following 6 months, whichever is longer, Section 6.2(a) shall not apply to subsequent transfers of Imbalance Energy and, instead for every hour that Imbalance Energy transfers from the BC Hydro System to the Entitlement Parties' System, FortisBC shall pay to BC Hydro an amount equal to the greatest of:

- (iii) \$5,000;
- (iv) for each MWh of Imbalance Energy that transfers, \$100/MWh; and
- (v) for each MWh of Imbalance Energy that transfers, 200% of the higher of the following two (or, if applicable, three) indices for the hour:
  - (A) the Mid-Columbia Powerdex Realtime Hourly Index Price;

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(B) the COB or NOB HASP LMP;

and, if FortisBC or any person acting on behalf of, or purchasing from, FortisBC is scheduling to the Alberta market in that hour (which for purposes of this Section 6.2(b) includes energy, capacity, ancillary services or any allocation of Imbalance Energy Charges under this Agreement):

- (C) the AESO Hourly Pool Price.
- (c) If the circumstances described in either Section 6.2(b)(i) or 6.2(b)(ii) occur in 2 or more consecutive Contract Years, then, in addition and without prejudice to its other remedies under this Agreement, BC Hydro may apply to the Commission to amend this Agreement to include financial disincentives that are in addition to and/or different from the payments provided for in Section 6.2(b).
- (d) The dollar amounts in Section 6.2(a) and 6.2(b) are in 2012 dollars and shall be escalated annually by increases or decreases in the energy price component of the Consumer Price Index as published by Statistics Canada or equivalent from time to time.
- (e) BC Hydro may, in its sole discretion, waive or reduce the charge that would otherwise be payable by FortisBC pursuant to Section 6.2(b) and/or determine that a transfer of Imbalance Energy shall not be considered for purposes of Sections 6.2(b)(i) or 6.2(b)(ii). If FortisBC wishes to request such a waiver, reduction or determination, the request shall be made by a senior executive (vice-president or higher) of FortisBC to a senior executive (vice-president or higher) of BC Hydro.

## 6.3 Flow-Through of Regulatory Penalties

If, as a result of a transfer of Imbalance Energy from the BC Hydro System to the Entitlement Parties' System, or vice versa, BC Hydro suffers or incurs any fine, penalty or similar charge imposed by WECC, NERC, the Commission or any other entity with authority to impose such fine, penalty or similar charge, then, except to the extent the transfer of Imbalance Energy in respect of which the fine, penalty or other charge was imposed was caused by a BC Hydro error or omission (including an error or omission by Powerex or any other affiliate of BC Hydro when acting as BC Hydro's scheduling agent), Hydro may, by written notice delivered to FortisBC (to which notice BC Hydro shall attach evidence of the fine, penalty or other charge and evidence that BC Hydro has paid the same), flow through the amount of any such fine, penalty or similar charge to FortisBC and FortisBC shall pay such amount within 14 days of receiving from BC Hydro such notice. BC Hydro shall not object to any application by FortisBC for standing, or to FortisBC's participation if granted standing, in any proceedings before WECC, NERC, the Commission or other entity having jurisdiction in which liability for any such fine, penalty or similar charge is at issue.

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#### 6.4 Imbalance Energy Transfers from FortisBC to BC Hydro

If Imbalance Energy transfers from the Entitlement Parties' System to the BC Hydro System in any hour, then

- (a) BC Hydro shall own but shall have no obligation to pay for such Imbalance Energy, and
- (b) if the hour is a Negative Price Hour, FortisBC shall pay to BC Hydro for each MWh of such Imbalance Energy an amount equal to 150% of the greater of (i) the absolute value of the Mid-Columbia Powerdex Realtime Hourly Index Price applicable to that hour, and (ii) the absolute value of the Dow Jones Mid-Columbia Daily Firm On-Peak Index or Dow Jones Mid-Columbia Daily Firm Off-Peak Index, as applicable to that hour.

#### 7. INFORMATION, ACCOUNTING AND AUDITS

## 7.1 Information and Accounting

- (a) Each Party shall keep sufficient books and records in relation to its performance of this Agreement so as to enable the Parties (or an auditor) to (i) verify the amount of Imbalance Energy, if any, that transferred from the BC Hydro System to the Entitlement Parties' System, or vice versa, in each hour, (ii) verify the basis for claiming an Unexpected Condition, (iii) confirm compliance with this Agreement in each hour, including Sections 3.1 and 5.1, (iv) confirm invoices for Imbalance Energy Charges and other amounts payable under this Agreement, and (v) otherwise as may be required to implement and confirm (or for an auditor to confirm) compliance with this Agreement, and any related agreements.
- (b) Each Party shall provide access to the books and records described in Section 7.1(a) to an auditor appointed pursuant to and in accordance with the Master Accounting Agreement.
- (c) Each Party shall provide to the other Party and an auditor appointed pursuant to and in accordance with the Master Accounting Agreement any and all information and accounting related to this Agreement as may reasonably be required (i) to implement and confirm compliance with this Agreement, (ii) to account for billings and payments under this Agreement, and (iii) to account for transactions and matters to be accounted for under the Master Accounting Agreement.

## 7.2 Audits/Adjustments

(a) If a Party discovers that any amount paid or payable under this Agreement has been incorrectly determined then, subject to Section 3.7(j) of the Master Accounting Agreement, the Parties shall make correcting adjustments and adjusting payments, if any.

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- (b) If an audit under the Master Accounting Agreement shows that amounts paid or payable under this Agreement have been incorrectly determined, the Parties shall make correcting adjustments and adjusting payments, if any.
- (c) If an audit under the Master Accounting Agreement shows that either Party has failed to comply with this Agreement, such audit findings may be used as evidence of a Breach of this Agreement for purposes of Section 11.1.

## 8. INVOICES AND PAYMENT

## 8.1 Billing Invoices

BC Hydro shall render an invoice monthly for:

- (a) charges payable hereunder for Imbalance Energy transferred from the BC Hydro System to the Entitlement Parties' System (including the Imbalance Energy Charge), if any, during the immediately preceding month;
- (b) charges payable hereunder for Imbalance Energy that transfers from the Entitlement Parties' System to the BC Hydro System, if any, during the immediately preceding month; and
- (c) any other charges payable pursuant to this Agreement.

Invoices shall be based on best available billing and accounting information at the time of invoicing. Billing adjustments shall be made in subsequent months if the billing and accounting information is updated or revised. Invoices shall be due and payable upon receipt.

# 8.2 All Charges Exclusive of Applicable Taxes

All amounts payable hereunder, including in respect of Imbalance Energy Charges, are exclusive of all applicable taxes, including federal goods and services tax, provincial sales tax, and harmonized sales tax (or any successor or replacement tax therefor).

## 8.3 Billing Disputes

If a Party disputes an invoice or the billing or accounting information on which the invoice is based, the Party shall nevertheless pay the invoice in full and may dispute the invoice or the billing or accounting information on which it was based in accordance with Section 10. Those parts of the invoice which are paid notwithstanding the dispute or disagreement and which are subsequently determined not to have been properly rendered and due with that invoice shall be repaid with interest at the Prime Rate from the date paid by the disputing Party until repaid.

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#### 8.4 Late Payment Charge

If the amount due on any invoice has not been paid in full after 20 days from the billing date shown on the invoice, a late payment charge shall be applied to the unpaid balance, and the resulting amount shall be shown and identified on the next invoice to be rendered. The late payment charge shall be as specified in BC Hydro's Electric Tariff, as amended from time to time.

## 9. CONTRACT REPRESENTATIVES

#### 9.1 Contract Representative

The following persons are hereby appointed as the initial contract representatives ("Contract Representatives") under this Agreement:

- (a) for BC Hydro, Principal Engineer, Coordination Agreements; and
- (b) for FortisBC, Senior Manager, Power Supply & Planning.

Either Party may replace its Contract Representative by notice in writing to the other Party from time to time. The Contract Representatives shall be responsible for the relationship between the Parties under this Agreement.

#### 9.2 Authority of Contract Representatives

Each Contract Representative shall have the authority to make decisions with respect to actions to be taken by its Party in the ordinary course of day-to-day management of the obligations of such Party under this Agreement. The Contract Representatives shall have no authority, expressly or by course of conduct, to agree to amend this Agreement.

## 9.3 Meetings of Contract Representatives

The Contract Representatives shall meet at least each quarter and otherwise upon the request of either Contract Representative. Where appropriate, the Contract Representatives may invite contract representatives under other agreements between the Parties to attend meetings.

#### 10. DISPUTE RESOLUTION

10.1 Disputes

If any dispute, question or difference of opinion between the Parties arises out of or under this Agreement ("Dispute") including (i) the interpretation of any provision of this Agreement, (ii) any billing or invoice dispute, (iii) any matter on which agreement of the Parties is required and this Agreement provides may be submitted for dispute resolution in accordance with this Section 10 in the absence of agreement, or (iv) any proposed amendment to or replacement of this Agreement, then a Party may give to the other Party a notice ("Dispute Notice") specifying the Dispute and requiring its resolution under this Section 10. All

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Disputes shall be exclusively resolved in accordance with the provisions of this Section 10.

#### 10.2 Contract Representatives to Seek Resolution

If the Dispute is not resolved within 7 days after a Dispute Notice is given to the other Party, each Party shall forthwith refer the Dispute to its Contract Representative and cause its Contract Representative to negotiate in good faith to resolve the Dispute

## 10.3 Referral to Senior Executives

If a Dispute is not resolved within 7 days of the Dispute being referred to the Contract Representatives or within 14 days after the Dispute Notice is given, whichever is earlier, the Parties shall seek to resolve the Dispute through their respective senior executives (at the vice president level or higher) before proceeding to resolve the Dispute through dispute resolution in accordance with Section 10.5. Each Party shall appoint a senior executive to undertake such informal process within 10 days of a Party notifying the other Party that the Contract Representatives have not timely resolved the Dispute and the Parties shall use commercially reasonable efforts to resolve the Dispute through their appointed senior executives within 30 days after notification.

## 10.4 Resolution of Billing Disputes

If any Dispute relating to billing or invoice matters is not resolved within 30 days of the Dispute being referred to the senior executives, or if either Party fails to appoint a senior executive for that purpose, then such Dispute shall be exclusively resolved by the expedited dispute resolution provisions of Section 10.6(e).

#### 10.5 Referral to Third Party for Resolution

If the Dispute is not resolved within 30 days of the Dispute being referred to the senior executives, or if either Party fails to appoint a senior executive for that purpose, then either Party may refer the Dispute for resolution in accordance with the following:

- (a) if the Dispute relates to any amendment to, or replacement of, this Agreement proposed by either Party, then:
  - (i) BC Hydro may apply to the Commission; and
  - (ii) FortisBC may file a complaint with the Commission;

in respect of the proposed amendment or replacement, as the case may be, and the other Party may intervene in such proceeding; and

(b) if the Dispute relates to any other matter, then either Party may refer the Dispute to arbitration under the Commercial Arbitration Act (British Columbia) for resolution.

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## 10.6 Arbitration Procedure

The following rules shall apply to an arbitration under this Agreement:

- (a) The arbitration shall be conducted before one arbitrator mutually agreed to by the Parties or if the Parties are unable to agree upon a mutually acceptable arbitrator within 15 days after a demand for arbitration has been given, either Party may apply to the court pursuant to the *Commercial Arbitration Act* (British Columbia) for the appointment of a single arbitrator, and the provisions of the *Commercial Arbitration Act* (British Columbia) shall govern such appointment;
- (b) The venue for the arbitration shall be the venue selected by the arbitrator in Vancouver, British Columbia, unless otherwise agreed between the Parties;
- (c) The arbitrator shall promptly fix the time, date and place of the hearing and notify the Parties;
- (d) The arbitration shall be dealt with on an expeditious basis with both Parties using commercially reasonable efforts to obtain and implement a timely decision of the arbitrator;
- (e) Where provided for in this Agreement, or the Parties agree, the arbitrator shall be instructed to impose time limits of no more than 10 days on the production of documents, filing of evidence, examination of witnesses and filing of arguments, such that a decision may be rendered within 45 days of appointment of the arbitrator;
- (f) All costs of the arbitration shall be paid by the Parties in such amount and proportions as the arbitrator may determine, and if the arbitrator does not make an award of costs, the Parties shall bear the costs of the arbitration equally and each Party shall bear its own costs;
- (g) The arbitrator shall promptly transmit an executed copy of its decision to the Parties and the decision of the arbitrator shall be final, binding and conclusive upon the Parties;
- (h) The arbitrator shall determine the Dispute in accordance with the internal laws of the Province of British Columbia and applicable Canadian federal law, without giving effect to any conflict of law rules or other rules that might render such law inapplicable or unavailable; and
- Neither Party shall commence or voluntarily participate in any court action or proceeding relating to any Dispute except:
  - for enforcement of arbitral awards or orders as contemplated herein;

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- to restrict or vacate an arbitral decision based on corruption of the arbitrator; or
- to seek injunctive relief if an arbitrator has not then been appointed.

#### 10.7 Authority of Arbitrator

If the Dispute involves a matter on which agreement of the Parties is required and that this Agreement provides may be submitted for dispute resolution in the absence of agreement, each Party hereby expressly authorizes and directs the arbitrator to make the required determination. Any such determination by the arbitrator shall be deemed to have been the agreement of the Parties. No award or determination of an arbitrator may be inconsistent with the terms and conditions of this Agreement.

10.8 Equitable Remedies

The arbitrator shall adjudicate the Dispute, and may grant remedies in both law and equity. The Parties acknowledge that a declaratory judgment or damages may provide an inadequate remedy for breach of the provisions of this Agreement, and accordingly each Party shall be entitled to seek specific performance, injunction or other similar remedy to ensure full and proper performance by the other Party of its obligations under this Agreement. Subject to Section 10.6(i)(iii), such remedy may only be sought from the arbitrator appointed under Section 10.6(a).

#### 11. REMEDIES FOR BREACH

#### 11.1 Breach of Agreement

If FortisBC breaches this Agreement (a "Breach"), and the Breach is material or there are persistent Breaches (in either case, a "material Breach"), BC Hydro may issue a notice (a "Notice of Material Breach") and FortisBC shall have 7 days after delivery of the Notice of Material Breach to satisfy BC Hydro, acting reasonably, that the cause of the material Breach has been or will be addressed to BC Hydro's reasonable satisfaction within the 7 day period. If FortisBC fails to do so, BC Hydro may apply to the Commission for appropriate remedies. Such remedies may include adding additional and/or other charges intended to create FortisBC disincentives to transfers of Imbalance Energy under this Agreement. BC Hydro agrees that any such remedies shall apply only prospectively.

#### 11.2 Deemed Breach

If FortisBC does not provide timely and reliable information and accounting as required pursuant to this Agreement and/or the Master Accounting Agreement in connection with its performance of this Agreement, that itself shall be deemed a Breach of this Agreement.

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## 11.3 Good Faith

- (a) If FortisBC in good faith disputes that there has been a material Breach, then FortisBC may, provided it has given a Notice of Dispute within the 7 day period referred to in Section 11.1, submit the question for dispute resolution pursuant to Section 10.5(b) and the arbitrator shall have the authority to determine whether there has been a material Breach. BC Hydro shall only exercise its remedies under Section 11.1 if the arbitrator agrees that there has been a material Breach.
- (b) If FortisBC in good faith disputes that BC Hydro has acted reasonably in determining that it is not satisfied that the cause of a material Breach has been or will be addressed within 7 days then, provided FortisBC has given timely Notice of Dispute, BC Hydro's Chief Executive Officer shall give at least 14 days' written notice to FortisBC's Chief Executive Officer of BC Hydro's intention to apply to the Commission for appropriate remedies. The Chief Executive Officers shall meet to try to resolve the issues giving rise to BC Hydro's intention to apply to the Commission. If they fail to resolve the issues to their mutual satisfaction within such 14 days, BC Hydro may nevertheless apply to the Commission for appropriate remedies.

## 12. NOTICES

12.1 Notices

All notices, directions and other instruments required or permitted to be given under this Agreement shall be in writing, and shall be sufficient in all respects if delivered, or if sent by facsimile, or if sent by prepaid registered post mailed in British Columbia to the Parties at the following addresses respectively:

 to BC Hydro: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

> Attention: Executive Vice-President, Generation Facsimile Number: 604-623-4155

ACCEPTED:

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With a copy to: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Attention: Director of Legal Services Facsimile Number: 604-623-3606

(b) to FortisBC FortisBC Inc. 10<sup>th</sup> Floor 1111 West Georgia Street Vancouver, B.C. V6E 4M3

> Attention: Vice President, Energy Supply Facsimile Number: 604-592-7620

With a copy to: FortisBC Inc. 10th Floor 1111 West Georgia Street Vancouver, B.C.V6E 4M3

Attention: General Counsel Facsimile Number: 604-443-6540

Either Party shall have the right at any time to change its address by notice in writing sent to the other Party at the address in effect hereunder.

12.2 Delivery of Notices

Any notice, direction or other instrument shall be deemed to have been received on the following dates:

- (a) if sent by facsimile, on the Business Day next following the date the sender receives confirmation of successful transmission;
- (b) if delivered, on the Business Day next following the date of delivery; or
- (c) if sent by registered mail, on the seventh day following its mailing, provided that if there is at the time of mailing or within 7 days thereafter a mail strike, slowdown, lockout or other labor dispute which might affect the delivery, then any notice, direction or other instrument, shall only be effective upon actual delivery or if delivered or sent by facsimile.

ACCEPTED:

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#### 12.3 Electronic Notices

As an alternative to the methods of giving notice described in Section 12.1, a Party may give notices, directions and other instruments required or permitted to be given under this Agreement by electronic mail to the other Party's representative(s) identified in Section 12.1 who continues to be employed by the other Party and is not to the knowledge of the sending Party unavailable; provided (i) the notice, direction or other instrument is stated to be a notice, direction or other instrument required or permitted to be given under this Agreement, (ii) the notice, direction or other instrument is concurrently also given by electronic mail to the Corporate Secretary of the other Party. Any notice, direction or other instrument given by electronic mail shall be deemed to have been received on the Business Day next following the date of sending, provided that no such notice shall be effective unless such notice is actually received by the representative(s).

## 13. MISCELLANEOUS

#### 13.1 Time is of the Essence

If a Party persistently fails to perform any of its obligations hereunder by the time(s) provided for herein (and the result or effect of such failure is not provided for in this Agreement), then the other Party may, by notice to the Party, require that from the date specified in the notice, time shall be of the essence with respect to such obligations.

## 13.2 No Assignment Without Consent

- (a) Subject to Section 13.2(b), neither Party may sell, assign or otherwise transfer this Agreement or any of its rights, obligations or liabilities under this Agreement to any other person unless all such rights, obligations and liabilities are assigned, and then only with the prior consent in writing of the other Party.
- (b) FortisBC may, with the consent of BC Hydro (not to be unreasonably withheld, delayed or conditioned), assign this Agreement and all of its rights and obligations hereunder to any person to whom FortisBC has assigned its current responsibilities as system operator of the Entitlement Parties' System. For the purposes of this Section 13.2(b), it shall not be unreasonable for BC Hydro to withhold its consent if the proposed assignee is not an experienced and creditworthy system operator, with a history of prudent and reliable system operation, or if appropriate contractual arrangements among the Parties (including such assignee) are not agreed to in order to reflect the relationship between this Agreement and the other agreements between the Parties.

## 13.3 No Third Party Beneficiaries

Nothing in this Agreement, express or implied, is intended or shall be construed to confer upon or to give any person, other than the Parties and their respective

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permitted successors and assigns, any rights or remedies under or by reason of this Agreement.

#### 13.4 Further Assurances

Each of the Parties agrees that it shall take from time to time such actions and execute such additional instruments as may be reasonably necessary or convenient to implement and carry out the intent and purpose of this Agreement.

#### 13.5 No Consequential Damages

No arbitrator shall award any special, incidental, exemplary, punitive or consequential damages with respect to, arising out of, relating to or in any way connected with a Party's performance or non-performance under this Agreement, provided nothing in this Section 13.5 shall limit any damages or other remedies for any Breach or material Breach of this Agreement that may be expressly provided for herein.

## 13.6 Waiver

The failure of a Party to insist on the strict performance of any provision of this Agreement or to exercise any right, power or remedy upon a breach hereof shall not constitute a waiver of any provision of this Agreement or limit that Party's right thereafter to enforce any provision or exercise any right.

## 13.7 Governing Law

This Agreement and all the terms and conditions contained in it shall be governed and construed in accordance with the laws of British Columbia and, to the extent applicable, shall be subject to (a) the provisions of the *Utilities Commission Act*, as amended or re-enacted from time to time, and (b) the jurisdiction of the Commission.

#### 13.8 Reliance on Specified Indices

In the event that any provision of this Agreement relies on a specified index to determine or calculate a price or payment pursuant to such provision, and such index (i) ceases to exist or otherwise is no longer published or available to a Party (provided the Party subscribes to receive such index, where subscription is required), or (ii) ceases to be the index predominantly used to establish the market price for the applicable energy product in the applicable market, then the applicable index shall be such index that most closely applies to the provision and approximates the specified index (considering applicable factors, including delivery point, firmness of electricity, time of day and predominant use of such index by market participants), or such other index as the Parties may agree. If the Parties are unable to so agree within 30 days after the specified index ceases to exist or is no longer published or available to a Party or the foregoing notice is given, either Party may refer the matter to dispute resolution pursuant to Section 10. An arbitrator appointed under Section 10 is expressly authorized and directed to select a substitute index based on the foregoing criteria. Pending agreement on

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or determination of the substitute index, the Party entitled to be paid based on the index shall specify an interim index or pricing method, acting reasonably, and amounts so paid based on such interim index or pricing method shall be adjusted retroactively to the date the index ceased to exist or be published.

#### 13.9 Amendments

No amendment of this Agreement shall be valid unless made in writing and executed by the appropriate duly authorized signatories of the Parties (and approved by the Commission to the extent required by law) or unless ordered by the Commission in accordance with its authority under the Utilities Commission Act, either upon its own motion or upon the application of either Party. A Party seeking amendment of this Agreement by the Commission shall give reasonable prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission.

#### 13.10 Enurement

This Agreement shall be binding upon and shall enure to the benefit of the Parties and their respective successors and permitted assigns.

#### 13.11 Connterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

#### 13,12 Electronic Delivery

Delivery by a Party of an executed copy of this Agreement by electronic means shall be effective delivery.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

#### BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

80 By:

Authorized Signatory

## FORTISBC INC.

By:

Authorized Signatory

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ACCEPTED:\_\_\_\_\_ ORDER NO.\_\_\_\_\_ BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC

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or determination of the substitute index, the Party entitled to be paid based on the index shall specify an interim index or pricing method, acting reasonably, and amounts so paid based on such interim index or pricing method shall be adjusted retroactively to the date the index ceased to exist or be published.

## 13.9 Amendments

No amendment of this Agreement shall be valid unless made in writing and executed by the appropriate duly authorized signatories of the Parties (and approved by the Commission to the extent required by law) or unless ordered by the Commission in accordance with its authority under the Utilities Commission Act, either upon its own motion or upon the application of either Party. A Party seeking amendment of this Agreement by the Commission shall give reasonable prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission.

#### 13.10 Enurement

This Agreement shall be binding upon and shall enure to the benefit of the Parties and their respective successors and permitted assigns.

#### 13.11 Counterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

# 13.12 Electronic Delivery

Delivery by a Party of an executed copy of this Agreement by electronic means shall be effective delivery.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

#### BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By:

Authorized Signatory

FORTISBC INC Bv: Authorized Signatory John Walker 7901055 10 President & CEO

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ACCEPTED:

Appendix A BC Hydro Tariff Supplement No. 3 Attachment 3 Energy Export Agreement Effective: First Revision of Page 1 of 28

# **ATTACHMENT 3**

# ENERGY EXPORT AGREEMENT

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

and

FORTISBC INC.

DATED FOR REFERENCE May 21, 2013

ACCEPTED:\_\_\_\_\_
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COMMISSION SECRETARY

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ACCEPTED:

# ENERGY EXPORT AGREEMENT

THIS AGREEMENT is made as of the 21<sup>st</sup> day of May, 2013 (the "Reference Date"), to be effective on the Effective Date.

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, having its Head Office at 333 Dunsmuir Street, City of Vancouver, Province of British Columbia

("BC Hydro")

AND:

FORTISBC INC., a body corporate having an office at 10<sup>th</sup> Floor, 1111 West Georgia Street, City of Vancouver, Province of British Columbia

("FortisBC")

WHEREAS:

- A. BC Hydro and FortisBC are parties to a Power Purchase Agreement (the "Power Purchase Agreement") entered into concurrently with this Agreement under which BC Hydro will supply Electricity to FortisBC;
- B. Section 2.6(a) of the Power Purchase Agreement provides as follows:

"FortisBC shall not export or permit its customers to export (except as permitted under Section 2.5(a)(iii)) any Electricity (including capacity and/or energy comprised therein) in any hour during which FortisBC is taking Electricity from BC Hydro under this Agreement, except during the term of, and to the extent specifically agreed under, and in accordance with, the terms and conditions of the Energy Export Agreement.";

- C. FortisBC has entered into a capacity purchase agreement (the "WAX CAPA") with Waneta Expansion Limited Partnership ("WELP"), which is constructing and will own and operate the Waneta expansion project ("WAX"), a 335 MW powerhouse adjacent to, and that uses the hydraulic head of, the Waneta Dam, under which FortisBC will purchase certain Entitlement Capacity attributable to WAX pursuant to the Canal Plant Agreement;
- D. BC Hydro has entered into an Electricity Purchase Agreement dated October 1, 2010 with WELP under which BC Hydro will purchase all Entitlement Energy, and associated Entitlement Capacity, attributable to WAX pursuant to the Canal Plant Agreement;

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- E. FortisBC intends to use Entitlement Capacity it has purchased from WELP under the WAX CAPA, in part to meet such of its Service Area Load Requirements as are unmet after application by FortisBC of its existing electricity resources, including electricity resources purchased under the Power Purchase Agreement, to meet such load requirements;
- F. FortisBC also intends from time to time while it is taking Electricity under the Power Purchase Agreement, to export from the FBC Service Territory energy acquired from certain eligible sources, using the Entitlement Capacity that it has purchased from WELP under the WAX CAPA; and
- G. The Parties have agreed on certain circumstances in which FortisBC may export Electricity from the FBC Service Territory while taking Electricity under the Power Purchase Agreement, on the terms and conditions of this Agreement.

THIS AGREEMENT WITNESSES in consideration of the covenants and agreements set forth in this Agreement and of other good and valuable consideration, the Parties hereby covenant, agree and declare as follows:

## 1. DEFINITIONS AND INTERPRETATION

#### 1.1. Definitions

In this Agreement:

- (a) "Accounting Procedures" means the accounting procedures established from time to time under the Master Accounting Agreement;
- (b) "Agreement" means this Energy Export Agreement, as amended, restated and/or supplemented from time to time and includes any schedules or exhibits referred to in it as being attached to it;
- (c) "Breach" has the meaning ascribed to it in Section 4.1(a);
- (d) "Brilliant Power Purchase Agreement" means the agreement made as of the 4th day of April, 1996, between Brilliant Power Corporation (as assignee of Columbia Power Corporation and CBT Power Corp.) and FortisBC (then known as "West Kootenay Power Ltd."), as amended, restated and/or supplemented from time to time;
- (e) "Business Day" means any calendar day which is not a Saturday, Sunday or other day recognized as a statutory holiday in British Columbia;
- (f) "Canal Plant Agreement" means the Second Amended and Restated 2005 Canal Plant Agreement dated for reference November 15, 2011 among BC Hydro, FortisBC, Teck Metals Ltd., Brilliant Power Corporation, Brilliant Expansion Power Corporation and WELP, as amended, restated and/or supplemented from time to time;

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- (g) "Commission" means the British Columbia Utilities Commission established pursuant to the Utilities Commission Act (British Columbia), or a successor thereto;
- (h) "Contract Year" means a period commencing on October 1 and ending on the following September 30, provided that if this Agreement terminates earlier than September 30, 2033, the last Contract Year shall end on the earlier termination date;
- (i) "Day of Flow" means the calendar day on which, in accordance with standard scheduling practice in the WECC region and the WECC Preschedule Calendar, energy which is scheduled on a Preschedule Day is scheduled to flow; for greater certainty, a Day of Flow is a single calendar day even in the event that two or more calendar days are scheduled during the same Preschedule Day;
- (j) "Effective Date" has the meaning ascribed to it in Section 2.2(a);
- (k) "Electricity" means electric energy and its associated capacity;
- "Eligible Account Balance" for any hour means the balance of Eligible Energy recorded in the applicable FBC Eligible Exchange Account at the end of the immediately preceding hour;
- (m) "Eligible Energy" means energy acquired by FortisBC that meets the requirements of Section 3.4;
- "Entitlement Parties" means the parties to the Canal Plant Agreement, except BC Hydro;
- (o) "Entitlement Parties' System" means the contiguous, interconnected generation and transmission facilities and related protection, control and communication equipment located in British Columbia and owned by one or more of the Entitlement Parties or their affiliates, and includes all additions and modifications thereto and repairs or replacements thereof, and specifically includes the Waneta Expansion, even though it is connected to the Entitlement Parties' transmission facilities through facilities owned by BC Hydro;
- (p) "export", and all forms of the verb "to export", means any transaction whereby Electricity is determined and calculated in accordance with the Accounting Procedures to transfer out of the FBC Service Territory, and without netting such transfers against concurrent imports, but specifically excludes the following:
  - wheeling losses scheduled to BC Hydro;
  - (ii) Coordination Transfers to BC Hydro under the Canal Plant Agreement and
  - such other exceptions as the Parties may agree to from time to time, acting reasonably;

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- (q) "FBC Eligible Exchange Account" means one of the accounts established pursuant to Section 3.6 and "FBC Eligible Exchange Accounts" means both of such accounts;
- (r) "FBC Entitlement Capacity" means FortisBC's share of the Entitlement Capacity, as set out and described in Table 9 of the Canal Plant Agreement under "FBC Projects", as redetermined and/or adjusted under that agreement from time to time, plus Entitlement Capacity attributable to the Brilliant Plant and sold to FortisBC under the Brilliant Power Purchase Agreement, but specifically excludes WAX Capacity;
- (s) "FBC Entitlement Energy" means FortisBC's share of the Entitlement Energy, as set out and described in Table 9 of the Canal Plant Agreement under "FBC Projects", as redetermined and/or adjusted under that agreement from time to time, plus Entitlement Energy attributable to the Brilliant Plant and sold to FortisBC under the Brilliant Power Purchase Agreement;
- "FBC Service Territory" means the area in British Columbia served, directly or indirectly, by FortisBC from time to time, and connected by the Entitlement Parties' System;
- (u) "Imbalance Agreement" means the Imbalance Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- (v) "Master Accounting Agreement" means the Master Accounting Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, including the Accounting Procedures established pursuant to it, in each case as amended, restated and/or supplemented from time to time;
- (w) "material Breach" has the meaning ascribed to it in Section 4.5;
- "Mid-Columbia Powerdex Realtime Hourly Index Price" means for an hour the weighted average price reported in the Powerdex Realtime Mid-Columbia Power index, as published by Powerdex, Inc.;
- (y) "NERC" means the North American Electric Reliability Corp., or a successor organization;
- (z) "Notice of Material Breach" has the meaning ascribed to it in Section 4.5;
- (aa) "Notice of Suspension" has the meaning ascribed to it in Section 4.5;
- (bb) "Parties" means the parties to this Agreement and "Party" means either of them;
- (cc) "Power Purchase Agreement" has the meaning ascribed to it in Recital A;
- (dd) "Preschedule Day" means a day on which, in accordance with standard scheduling practice in the WECC region and the WECC Preschedule Calendar,

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Electricity is scheduled for delivery on one or more Day(s) of Flow; Preschedule Days and their corresponding Day(s) of Flow with respect to NERC holidays and any special scheduling days shall be as set forth in the WECC Preschedule Calendar;

- (ee) "Reference Date" has the meaning ascribed to it on the first page of this Agreement;
- (ff) "Service Area Load Requirements" means for any hour the load served by FortisBC, directly or indirectly, in the FBC Service Territory, as determined for each hour in accordance with the Accounting Procedures and, where the context requires, means the load in the FBC Service Territory that FortisBC has an obligation to serve;
- (gg) "WAX" has the meaning ascribed to it in Recital C;
- (hh) "WAX CAPA" has the meaning ascribed to it in Recital C;
- "WAX Capacity" in any hour means Entitlement Capacity attributable to WAX and purchased by and available to FortisBC under the WAX CAPA in that hour;
- "WAX Outage" means a partial or total reduction in WAX Capacity due to a cause beyond the reasonable control of the owner or operator of WAX, and, for greater certainty, excludes any planned outage;
- (kk) "WECC" means the Western Electricity Coordinating Council, or a successor organization;
- (11) "WECC Preschedule Calendar" means the WECC Scheduling Calendar published annually by WECC that identifies certain NERC holidays and any special scheduling days which affect normal preschedule timelines and the days upon which prescheduling will take place to accommodate these identified days; and
- (mm) "WELP" has the meaning ascribed to it in Recital C.

## 1.2. Canal Plant Agreement Definitions

Capitalized words and terms in this Agreement that are not defined herein but are defined in the Canal Plant Agreement shall have the meanings ascribed to them in the Canal Plant Agreement.

#### 1.3. Interpretation

In this Agreement, except where otherwise expressly provided:

(a) unless the context otherwise requires, words importing the singular include the plural and vice versa, words importing gender include all genders, "or" is not exclusive, "including" is not limiting, whether or not non-limiting language (such

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as "without limitation") is used with reference to it, a grammatical variation of a defined term shall have a corresponding meaning, and reference to any person includes such person's successors and assigns but, if applicable, only if the succession or assignment is permitted under this Agreement;

- (b) the inclusion of headings in this Agreement is for convenience only and shall not affect the construction or interpretation of this Agreement;
- any reference to an hour, day or month is a reference to a calendar hour, day or month, unless specified otherwise;
- (d) any reference to a specified Section, subsection or other subdivision of this Agreement is to the designated Section, subsection or other subdivision of this Agreement, unless the context otherwise requires;
- (e) any reference to a statute includes and is a reference to such statute and to the regulations made pursuant to it, with all amendments to them in force from time to time, and to any statute or regulations that may be passed which supplement or supersede such statute and such regulations;
- (f) all monetary amounts referred to in this Agreement are stated and shall be paid in Canadian currency; where indices used in this Agreement are denominated in US dollars, index amounts and US dollar amounts payable hereunder shall be converted from US dollars to Canadian dollars at the Bank of Canada noon spot rate on the applicable day(s); and
- (g) the language used in this Agreement is the language chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against either Party.

## 2. TERM AND CONDITIONS PRECEDENT

#### 2.1. Conditions Precedent to Agreement Becoming Effective

This Agreement shall not be effective unless each of the following conditions precedent has been satisfied:

- (a) on or before October 1, 2013:
  - the Commission has issued an order under Sections 58 to 61 of the Utilities Commission Act approving this Agreement, without imposing changes unless acceptable to both Parties; and
  - the Power Purchase Agreement has become effective in accordance with its terms; and
- (b) WAX Start-up has occurred.

ACCEPTED:

ORDER NO.\_\_\_\_\_\_ COMMISSION SECRETARY BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 76 of 128 - 7 -

## 2.2. Term of Agreement

- (a) This Agreement shall become effective at 2400 hours on the day (the "Effective Date") upon which the last of the conditions precedent described in Section 2.1 is satisfied and shall continue in force until the expiry or earlier termination of the Power Purchase Agreement. Termination of this Agreement shall not relieve either Party from any liability or obligation then accrued but unsatisfied.
- (b) Notwithstanding Sections 2.1 and 2.2(a), at any time on or after September 1, 2014 FortisBC may commence operating the FBC Eligible Exchange Accounts in accordance with Sections 3.6 and 3.7(a) as if this Agreement had become effective on September 1, 2014, for the limited purpose of recording Eligible Energy in the FBC Eligible Exchange Accounts. For greater certainty, FortisBC may not export Eligible Energy recorded in an FBC Eligible Exchange Account until the Effective Date.

#### 2.3. Support and Cooperation in Obtaining Commission Approval

FortisBC shall support BC Hydro's application for approval by the Commission of this Agreement, including intervening in support of the application, provided that FortisBC reserves the right to oppose any changes proposed during proceedings before the Commission with which FortisBC does not agree. FortisBC shall cooperate with BC Hydro and provide such assistance as BC Hydro may reasonably request towards obtaining approval of this Agreement by the Commission.

## 3. FORTISBC RIGHT TO EXPORT

- 3.1. Right to Export
  - (a) Pursuant to Section 2.6 of the Power Purchase Agreement, BC Hydro and FortisBC hereby agree that FortisBC may export Eligible Energy using WAX Capacity in accordance with this Agreement in any hour during which it is taking Electricity from BC Hydro under the Power Purchase Agreement, provided such exports:
    - do not exceed the amount of WAX Capacity available to FortisBC under the WAX CAPA for that hour;
    - do not exceed the Eligible Account Balance for that hour; plus (i) Eligible Energy purchases in the hour; minus (iii) Eligible Energy used to meet FortisBC's Service Area Load Requirements in that hour; and
    - demonstrably do not result in increased purchases of Electricity under the Power Purchase Agreement.
  - (b) The parties acknowledge and agree that the requirement in Section 3.1(a)(iii) is met as at the date of this Agreement if FortisBC complies with Sections 3.1(a)(i) and 3.1(a)(ii). Section 3.1(a)(iii) is not intended to restrict FortisBC from

ACCEPTED:

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increasing purchases of Electricity to the extent provided for in, and subject to, the Power Purchase Agreement.

- (c) FortisBC shall not export FBC Entitlement Energy in any hour during which FortisBC is taking Electricity under the Power Purchase Agreement, except Eligible Energy to the extent expressly permitted under this Agreement and in accordance with its terms.
- (d) FortisBC shall not sell, exchange or otherwise transfer FBC Entitlement Energy or Eligible Energy to another Entitlement Party or any other person if the effect of the sale, exchange or transfer would be that (i) the FBC Entitlement Energy is exported, or (ii) the FBC Entitlement Energy is used and a like amount of Electricity is exported, or (iii) the Eligible Energy is exported using FBC Entitlement Capacity, in any such case during any hour when FortisBC is taking Electricity from BC Hydro under the Power Purchase Agreement.
- (e) For greater certainty, FortisBC may sell, assign, provide scheduling rights to, or otherwise permit any person to use WAX Capacity (i) to export Entitlement Energy, including Eligible Energy in any hour during which FortisBC is not taking Electricity under the Power Purchase Agreement, and (ii) to export Entitlement Energy, except FBC Entitlement Energy, at any time whether or not FortisBC is taking Electricity under the Power Purchase Agreement, in either case subject to any requirements of the Canal Plant Agreement and any other applicable agreements.
- (f) BC Hydro acknowledges and agrees that nothing in this Agreement affects any right FortisBC has to export Electricity in any hour during which FortisBC is not taking Electricity from BC Hydro under the Power Purchase Agreement; provided such exports are in compliance with any applicable agreements to which FortisBC and BC Hydro are both parties.

# 3.2. Export During WAX Outage

Notwithstanding Section 3.1, BC Hydro and FortisBC hereby agree that during a WAX Outage FortisBC may export Electricity in accordance with this Agreement in any hour during which FortisBC is taking Electricity from BC Hydro under the Power Purchase Agreement, as follows:

- (a) for such period as may be specified in the applicable CPA Operating Procedure(s), using capacity in the form of operating reserves, provided the outage is an initiating event and FortisBC has taken all necessary steps to activate such reserves in accordance with such CPA Operating Procedure(s);
- (b) from the end of the period referred to in Section 3.2(a) until the end of the Day(s) of Flow covered by the schedule in effect when the WAX Outage occurred, FortisBC may export Electricity concurrently with an equivalent import that meets the requirements of Section 3.4 (but for greater certainty, may not export Eligible Energy from an FBC Eligible Exchange Account except to the extent

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there is WAX Capacity then available to FortisBC), in order to avoid having to cut a then existing export schedule; for greater certainty, new trades or schedules submitted after the WAX Outage occurred shall not be eligible for the exception in this Section 3.2(b); and

(c) from the end of the period referred to in Section 3.2(b) until the units affected by the WAX Outage are fully back in service, FortisBC shall not export Electricity in any hour during which it is taking Electricity from BC Hydro under the Power Purchase Agreement, except to the extent there is WAX Capacity then available to FortisBC in the event the WAX Outage is a partial outage.

## 3.3. FortisBC to Notify if Exports are not Eligible Energy

In any hour during which FortisBC is not taking Electricity from BC Hydro under the Power Purchase Agreement, any export by FortisBC shall be deemed to be an export of Eligible Energy from the applicable FBC Eligible Exchange Account until there is no Eligible Energy remaining in the applicable FBC Eligible Exchange Account, unless prior to the hour of such export FortisBC has notified BC Hydro (in accordance with procedures agreed upon by the Parties, failing which agreement, either Party may submit the matter for dispute resolution in accordance with Section 7) that such export is not an export of Eligible Energy.

#### 3.4. Eligible Energy

For purposes of this Agreement, "Eligible Energy" is, subject to Section 3.5, energy that is derived from any or all of the following:

- Electricity acquired by FortisBC from the wholesale energy markets outside of British Columbia which is scheduled and delivered into the FBC Service Territory;
- (b) Electricity acquired from a FortisBC customer that has self-generation, to the extent such purchases demonstrably do not result in increased purchases of Electricity under the Power Purchase Agreement;
- (c) Electricity acquired from generation facilities within British Columbia that are not directly connected to the Entitlement Parties' System, which is scheduled and delivered into the FBC Service Territory;
- (d) Electricity acquired from the wholesale energy market within British Columbia which is scheduled and delivered into the FBC Service Territory, to the extent not more specifically addressed in Section 3.4(c);
- (e) Electricity acquired from generation facilities in the FBC Service Territory constructed or acquired by a third party or by FortisBC, or in which FortisBC acquires or holds an ownership interest, in each case after October 1, 2013;
- (f) Entitlement Energy acquired by FortisBC from another Entitlement Party, other than Entitlement Energy purchased by FortisBC pursuant to the Brilliant Power

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Purchase Agreement, provided that (i) such energy has never been FBC Entitlement Energy, and (ii) the receipt of such energy is notified to BC Hydro in advance and recorded as a usage of Entitlement Capacity of such other Entitlement Party under the Canal Plant Agreement; and

 (g) other Electricity not described in Section 3.4(a) through (f), by agreement between the Parties, that demonstrably does not result in increased purchases of Electricity under the Power Purchase Agreement;

provided that energy shall not be Eligible Energy unless (i) if generated within the FBC Service Territory, (A) it is telemetered (and the telemetered data is made available to BC Hydro) and (B) if FortisBC's acquisition is less than all of the telemetered generation, or metered net flow, from the applicable facility, FortisBC has pre-notified BC Hydro (in the manner agreed between the Parties, failing which agreement, either Party may submit the matter for dispute resolution in accordance with Section 7) of the amount purchased from the facility each hour, and (ii) if delivered into the FBC Service Territory, it is scheduled and delivered in compliance with the CPA-Related Agreements (as defined in the Master Accounting Agreement).

Energy derived from sources other than those identified in Section 3.4(a) through 3.4(g) shall not be Eligible Energy. For greater certainty, Electricity taken under the Power Purchase Agreement and Imbalance Energy (as defined in the Imbalance Agreement) in any hour shall not be Eligible Energy.

3.5. Storage Facilities

In the event that FortisBC acquires the right to own, operate or otherwise utilize any generating facility within the FBC Service Territory that has the ability to store energy, in any amounts and in any form, (e.g. batteries, pumped storage, storage hydro, etc.) the generation from such facility shall only be Eligible Energy to the extent that the originating source of Electricity for such generation is a source described in Section 3.4 and the Accounting Procedures have been amended to include a procedure for demonstrating that the originating source of Electricity for any such generation is a source described in Section 3.4.

#### 3.6. FBC Eligible Exchange Accounts

For purposes of this Agreement, two accounts shall be established (one for the Storage Draft Season and one for the Storage Refill Season) (the "FBC Eligible Exchange Accounts") to enable the Parties to track the amount of Eligible Energy that is available to be exported in any hour. The FBC Eligible Exchange Accounts shall be subsets of the applicable Exchange Accounts under the Canal Plant Agreement. The balance of Eligible Energy in the applicable FBC Eligible Exchange Account at the end of any hour shall be the sum of:

(a) the Eligible Account Balance;

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- (b) plus, the total amount of Eligible Energy received in the FBC Service Territory in such hour and recorded in the applicable FBC Eligible Exchange Account;
- (c) minus, the total amount of Eligible Energy exported in such hour using WAX Capacity or sold, exchanged or otherwise transferred to another Entitlement Party or other person;
- (d) minus, the total amount of Eligible Energy exported in such hour using Entitlement Capacity other than WAX Capacity in any hour during which FortisBC is not taking Electricity from BC Hydro under the Power Purchase Agreement; and
- (e) minus, Eligible Energy used to meet the Service Area Load Requirements in such hour.

The balance in the applicable FBC Eligible Exchange Account at the end of any hour shall be determined for each hour in accordance with the Accounting Procedures, and the terms and conditions of this Agreement.

The Parties acknowledge and agree that:

- (f) any non-Canal Plant Agreement Electricity acquired by FortisBC and delivered into the FBC Service Territory in any hour shall be applied to meet the Service Area Load Requirements in priority to any Entitlement Energy and/or Entitlement Capacity usage;
- (g) notwithstanding the resource stacking order acknowledged in Section 3.6(f), for the purposes of this Agreement, a subsequent calculation shall be completed that deems Eligible Energy acquired by FortisBC to be the last resource used to meet the Service Area Load Requirements such that Eligible Energy can be stored in the applicable FBC Eligible Exchange Account; and
- (h) while the FBC Eligible Exchange Accounts are subsets of the applicable Exchange Accounts under the Canal Plant Agreement, this does not imply that the storage or draft transactions for these accounts will be directly related. For greater certainty it is acknowledged that the aggregate energy stored in the applicable Exchange Accounts can increase, decrease or stay the same while Eligible Energy is being stored in the applicable FBC Eligible Exchange Account.
- (i) Eligible Energy in an FBC Eligible Exchange Account shall be deemed to be available to FortisBC for export at the Point of Supply as defined in the General Wheeling Agreement, unless the Parties agree to a different location.
- 3.7. FBC Eligible Exchange Account Balance as at certain dates
  - (a) If at the time this Agreement becomes effective FortisBC is already operating the FBC Eligible Exchange Accounts pursuant to Section 2.2(b), then for the first hour after the Effective Date the Eligible Account Balance shall be determined as if this Agreement were already in effect during the immediately preceding hour.

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(b) If at the time this Agreement becomes effective FortisBC is not already operating the FBC Eligible Exchange Accounts pursuant to Section 2.2(b), then for the first hour after the Effective Date the Eligible Account Balance shall be deemed to be zero.

## 3.8. Maximum FBC Eligible Exchange Account balance

The balance in the applicable FBC Eligible Exchange Account at the end of any hour after the Effective Date shall not exceed the lesser of:

- (a) 93 GWh; or
- (b) the balance, in the aggregate, in the Entitlement Parties' balance in the applicable Exchange Account, plus 46.5 GWh;

as determined in accordance with the Accounting Procedures. For greater certainty, the balance in the applicable FBC Eligible Exchange Account at the end of any hour shall not be less than zero.

In addition, the sum of the FBC Eligible Exchange Account for the Storage Draft Season and for the Storage Refill Season, calculated in accordance with the Accounting Procedures, shall not exceed 93 GWh. If the balance in the applicable FBC Eligible Exchange Account exceeds any of the foregoing limits at the end of any hour, the excess amount shall be deemed to be removed from the applicable FBC Eligible Exchange Account and shall not be Eligible Energy.

The balance in the FBC Eligible Exchange Accounts shall be calculated hourly, and the account limits shall be applied hourly. For purposes only of tracking and applying the hourly FBC Eligible Exchange Account limits under this Agreement, the aggregate balance in the Entitlement Parties' applicable Exchange Accounts shall be calculated hourly, using the same methodology as the accounting methodology described in the Canal Plant Agreement. For this purpose, hourly Aggregate Entitlement Energy shall be determined by dividing monthly Aggregate Entitlement Energy by the number of hours in the month and subtracting adjustments for Unit Outages and Unit Derates (each as defined in the Canal Plant Agreement) for each hour, or in such other manner as may be agreed to by the Parties from to time to achieve accounting efficiencies.

If the aggregate balance in the Entitlement Parties' applicable Exchange Account exceeds the Exchange Account limits (as provided in the Canal Plant Agreement, but applied hourly) at the end of the hour, then the maximum increase in the FBC Eligible Exchange Account for that hour shall be equal to 46.5 GWh less the aggregate balance in the Entitlement Parties' applicable Exchange Account at the start of that hour, and any excess shall not be Eligible Energy.

Although the Canal Plant Agreement provides for the Exchange Account balances to be calculated at the end of each day, agrees (on its own behalf and not on behalf of any other Entitlement Party) that it will not plan to exceed the foregoing limits with respect to its use of the Exchange Accounts for any hour of any day.

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## 4. REMEDIES FOR BREACH OF AGREEMENT

#### 4.1. Payment for Certain Breaches

- (a) If FortisBC exports, or sells, exchanges or otherwise transfers Electricity in any hour during which FortisBC is taking Electricity from BC Hydro under the Power Purchase Agreement in breach of this Agreement, that shall be a "Breach" of this Agreement and for each MWh of Electricity so exported, sold, exchanged or otherwise transferred in Breach of this Agreement FortisBC shall pay BC Hydro an amount equal to the higher of (i) 150% of the Mid-Columbia Powerdex Realtime Hourly Index Price, and (ii) the profits earned by FortisBC in respect of any export, sale, exchange or transfer that was a Breach of this Agreement. The payment provided for in this Section 4.1 shall be in addition to the other rights and remedies under this Agreement.
- (b) If FortisBC Breaches this Agreement as described in Section 4.1(a), FortisBC shall promptly provide to BC Hydro all information that BC Hydro reasonably requests to verify the profits earned by FortisBC in respect of any export, sale, exchange or transfer that is a Breach of this Agreement.
- (c) If FortisBC persistently Breaches this Agreement, then, in addition and without prejudice to the other remedies under this Agreement, BC Hydro may apply to the Commission to amend this Agreement to include financial disincentives for Breaching this Agreement that are in addition to and/or different from the payments provided for in Section 4.1(a).
- (d) For greater certainty, if there is a Breach of this Agreement in any hour and a transfer of Imbalance Energy under the Imbalance Agreement in the same hour, FortisBC would be subject to both the payment under Section 4.1(a) and any applicable charge under the Imbalance Agreement.
- (e) If any amount becomes payable by FortisBC to BC Hydro hereunder as a result of a Breach, then BC Hydro may invoice FortisBC for such amount as soon as it becomes known. Invoices shall be due and payable upon receipt.

#### 4.2. Deemed Material Breach

Without limiting what other matters may constitute a Breach of this Agreement or what other Breaches may be material, if

- (a) there occur more than 4 Breaches (regardless of duration) as described in Section 4.1, that each involves more than 4 MWhs in any hour of the Breach, in any Contract Year; or
- (b) there occur one or more Breaches (of any volume) as described in Section 4.1 in more than 24 hours, in the aggregate, in any Contract Year; or
- (c) there occur one or more Breaches, where the aggregate amount of Electricity exported under all Breaches exceeds 75 MWh, in any Contract Year;

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then in each such case that shall be deemed to be a material Breach.

#### 4.3. Exception

Provided FortisBC is complying with its reporting obligations under the Master Accounting Agreement, including the Accounting Procedures thereunder, if there occurs a Breach (an "Inadvertent Breach") that is only discovered through after-the-fact accounting and demonstrably (i) is not intentional, and (ii) could not have been discovered earlier through reasonable diligence, then only the first hour of such Inadvertent Breach shall count for purposes of Sections 4.2(a), 4.2(b), and 4.2(c).

## 4.4. Reporting of Breach

FortisBC shall self-report to BC Hydro if it becomes aware it has committed a Breach of this Agreement. If BC Hydro becomes aware of an error, omission or discrepancy which is unknown to FortisBC, the disclosure of which would enable FortisBC to avoid a subsequent Breach, but BC Hydro fails to inform FortisBC of the error, omission or discrepancy, then BC Hydro shall not rely on the error, omission or discrepancy to allege a subsequent Breach that could have been avoided had BC Hydro so informed FortisBC. For purposes of this Section 4.4, BC Hydro shall only be considered to become aware of an error, omission or discrepancy if a BC Hydro or Powerex employee involved in administering this Agreement has actual knowledge of the error, omission or discrepancy and the significance of the error, omission or discrepancy for preventing subsequent Breaches.

#### 4.5. Notice of Material Breach/Notice of Suspension

If FortisBC Breaches this Agreement and the Breach is material, or if there are persistent Breaches (in either case, a "material Breach"), including any deemed material Breach as described in Section 4.2, BC Hydro may issue a notice (a "Notice of Material Breach") and FortisBC shall have 7 days after delivery of the Notice of Material Breach to satisfy BC Hydro, acting reasonably, that the cause of the material Breach has been or will be addressed to BC Hydro's reasonable satisfaction within the 7 day period. If FortisBC fails to do so, BC Hydro may issue a further notice (a "Notice of Suspension") and FortisBC's right to export Eligible Energy during any hour when it is taking Electricity from BC Hydro under the Power Purchase Agreement, and FortisBC's right to record Eligible Energy in an FBC Eligible Exchange Account or to transfer Eligible Energy from an FBC Eligible Exchange Account, shall, effective on the date specified in the Notice of Suspension, be suspended until such time as FortisBC has established to BC Hydro's satisfaction, acting reasonably (which may include consideration of previous Breaches and steps taken), that FortisBC has remedied the cause of the material Breach and put procedures in place designed to avoid a recurrence of the material Breach.

#### 4.6. Good Faith Dispute

(a) If FortisBC in good faith disputes that there has been a material Breach, then FortisBC may, provided it has given notice (a "Notice of Dispute") within the 7 day period referred to in Section 4.5, submit the question for dispute resolution,

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and BC Hydro shall only issue a Notice of Suspension if the arbitrator agrees that there has been a material Breach. In the case of a deemed material Breach referred to in Section 4.2, the arbitrator shall only have the authority to determine whether one or more of the Breaches referred to in Sections 4.2(a), 4.2(b) or 4.2(c) has occurred (and whether the exception in Section 4.3 applies), and not whether the number, frequency or volume of Breaches referred to in those sections give rise to a material Breach.

- (b) If FortisBC in good faith disputes that BC Hydro has acted reasonably in determining that it is not satisfied that the cause of a material Breach has been or will be addressed within 7 days of the relevant Notice of Material Breach then, provided FortisBC has given timely Notice of Dispute, before issuing a Notice of Suspension, BC Hydro's Chief Executive Officer shall give at least 14 days' written notice to FortisBC's Chief Executive Officer of BC Hydro's intention to issue a Notice of Suspension. The Chief Executive Officers shall meet to try to resolve the issues giving rise to BC Hydro's intention to suspend. If they fail to resolve the issues to their mutual satisfaction within such 14 days, BC Hydro may nevertheless issue a Notice of Suspension.
- 4.7. Termination Right
  - If:
  - (a) FortisBC exports Electricity while taking Electricity from BC Hydro under the Power Purchase Agreement in any hour, during a period when its right to do so is suspended pursuant to Section 4.5;
  - (b) FortisBC breaches Section 4.5;
  - (c) FortisBC's right to export Electricity while taking Electricity from BC Hydro under the Power Purchase Agreement in any hour is suspended for more than 30 days in any 12 month rolling period; or
  - (d) FortisBC's right to export Electricity while taking Electricity from BC Hydro under the Power Purchase Agreement in any hour is suspended more than 2 times during any 12 month rolling period;

then BC Hydro may terminate this Agreement, with the prior approval of the Commission. Before taking steps to terminate this Agreement, BC Hydro's Chief Executive Officer must give at least 30 days' written notice to FortisBC's Chief Executive Officer of BC Hydro's intention to terminate the Agreement. The Chief Executive Officers shall meet to try to resolve the issues giving rise to BC Hydro's intention to terminate. If they fail to resolve the issues to their mutual satisfaction within such 30 days, BC Hydro may apply to the Commission for approval to terminate the Agreement.

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#### 4.8. Deemed Breach

If FortisBC does not provide timely and reliable information and accounting, as required by this Agreement or the Master Accounting Agreement, in connection with its performance of this Agreement, that itself shall be deemed a Breach of this Agreement.

## 5. INFORMATION, ACCOUNTING AND AUDITS

#### 5.1. Information and Accounting

- (a) Each Party shall keep sufficient books and records in relation to its performance of this Agreement so as to enable the Parties (or an auditor) to determine or verify exports, amounts of Eligible Energy recorded in the applicable FBC Eligible Exchange Account, the Eligible Account Balance, WAX Capacity and FBC Entitlement Energy in any hour, all billing and payment amounts hereunder, and otherwise as may be required to implement and confirm (or for an auditor to confirm) compliance with this Agreement, and any related agreements.
- (b) Each Party shall provide access to the books and records described in Section 5.1(a) to an auditor appointed pursuant to and in accordance with the Master Accounting Agreement.
- (c) Each Party shall provide to the other Party and to an auditor appointed pursuant to and in accordance with the Master Accounting Agreement any and all information and accounting related to this Agreement as may reasonably be required (i) to implement and confirm compliance with this Agreement, (ii) to account for all billings and payments under this Agreement, and (iii) to account for transactions and matters to be accounted for under the Master Accounting Agreement.
- 5.2. Audits/Adjustments
  - (a) If a Party discovers that any amount paid or payable under this Agreement has been incorrectly determined then, subject to Section 3.7(j) of the Master Accounting Agreement, the Parties shall make correcting adjustments and adjusting payments, if any.
  - (b) If an audit under the Master Accounting Agreement shows that amounts paid or payable under this Agreement have been incorrectly determined, the Parties shall make correcting adjustments and adjusting payments, if any.
  - (c) If an audit under the Master Accounting Agreement shows that either Party has failed to comply with this Agreement, such audit findings may be used as evidence of a Breach of this Agreement for purposes of Section 4.

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## 6. CONTRACT REPRESENTATIVES

## 6.1. Contract Representative

The following persons are hereby appointed as the initial contract representatives ("Contract Representatives") under this Agreement:

- (a) for BC Hydro, Principal Engineer, Coordination Agreements; and
- (b) for FortisBC, Senior Manager, Power Supply & Planning.

Either Party may replace its Contract Representative by notice in writing to the other Party from time to time. The Contract Representatives shall be responsible for the relationship between the Parties under this Agreement.

#### 6.2. Authority of Contract Representatives

Each Contract Representative shall have the authority to make decisions with respect to actions to be taken by its Party in the ordinary course of day-to-day management of the obligations of such Party under this Agreement. The Contract Representatives shall have no authority, expressly or by course of conduct, to agree to amend this Agreement.

#### 6.3. Meetings of Contract Representatives

The Contract Representatives shall meet at least each quarter and otherwise upon the request of either Contract Representative. Where appropriate, the Contract Representatives may invite contract representatives under other agreements between the Parties to attend meetings.

#### 7. DISPUTE RESOLUTION

#### 7.1. Disputes

If any dispute, question or difference of opinion between the Parties arises out of or under this Agreement ("Dispute") including (i) the interpretation of any provision of this Agreement, (ii) any matter on which agreement of the Parties is required and this Agreement provides may be submitted for dispute resolution in accordance with this Section 7 in the absence of agreement, or (iii) any proposed amendment to this Agreement, then a Party may give to the other Party a notice ("Dispute Notice") specifying the Dispute and requiring its resolution under this Section 7. All Disputes shall be exclusively resolved in accordance with the provisions of this Section 7.

## 7.2. Contract Representatives to Seek Resolution

If the Dispute is not resolved within 7 days after a Dispute Notice is given to the other Party, each Party shall forthwith refer the Dispute to its Contract Representative and shall cause its Contract Representative to negotiate in good faith to resolve the Dispute.

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## 7.3. Referral to Senior Executives

If a Dispute is not resolved within 7 days of the Dispute being referred to the Contract Representative, or within 14 days after the Dispute Notice is given, whichever is earlier, the Parties shall seek to resolve the Dispute through their respective senior executives (at the vice president level or higher) before proceeding to resolve the Dispute through dispute resolution in accordance with Section 7.4. Each Party shall appoint a senior executive to undertake such informal process within 10 days of a Party notifying the other Party that the Contract Representatives have not timely resolved the Dispute through their respective appointed senior executives within 30 days after notification.

#### 7.4. Referral to Third Party for Resolution

If the Dispute is not resolved within 30 days of the Dispute being referred to the senior executives, or if either Party fails to appoint a senior executive for that purpose, then either Party may refer the Dispute for resolution in accordance with the following:

- (a) if the Dispute relates to any amendment to this Agreement proposed by either Party, then:
  - (i) BC Hydro may apply to the Commission; and
  - (ii) FortisBC may file a complaint with the Commission;

in respect of the proposed amendment and the other Party may intervene in such proceeding; and

- (b) if the Dispute relates to any other matter, then either Party may refer the Dispute to arbitration under the Commercial Arbitration Act (British Columbia) for resolution.
- 7.5. Arbitration Procedure

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The following rules shall apply to an arbitration under this Agreement:

- (a) The arbitration shall be conducted before one arbitrator mutually agreed to by the Parties or if the Parties are unable to agree upon a mutually acceptable arbitrator within 15 days after a demand for arbitration has been given, either Party may apply to the court pursuant to the Commercial Arbitration Act (British Columbia) for the appointment of a single arbitrator, and the provisions of the Commercial Arbitration Act (British Columbia) shall govern such appointment;
- (b) The venue for the arbitration shall be the venue selected by the arbitrator in Vancouver, British Columbia, unless otherwise agreed between the Parties;
- The arbitrator shall promptly fix the time, date and place of the hearing and notify the Parties;

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- (d) The arbitration shall be dealt with on an expeditious basis with both Parties using commercially reasonable efforts to obtain and implement a timely decision of the arbitrator;
- (e) Where provided for in this Agreement, or the Parties agree, the arbitrator shall be instructed to impose time limits of no more than 10 days on the production of documents, filing of evidence, examination of witnesses and filing of arguments, such that a decision may be rendered within 45 days of appointment of the arbitrator;
- (f) All costs of the arbitration shall be paid by the Parties in such amount and proportions as the arbitrator may determine, and if the arbitrator does not make an award of costs, the Parties shall bear the costs of the arbitration equally and each Party shall bear its own costs;
- (g) The arbitrator shall promptly transmit an executed copy of its decision to the Parties and the decision of the arbitrator shall be final, binding and conclusive upon the Parties;
- (h) The arbitrator shall determine the Dispute in accordance with the internal laws of the Province of British Columbia and applicable Canadian federal law, without giving effect to any conflict of law rules or other rules that might render such law inapplicable or unavailable; and
- Neither Party shall commence or voluntarily participate in any court action or proceeding relating to any Dispute except:
  - (i) for enforcement of arbitral awards or orders as contemplated herein;
  - to restrict or vacate an arbitral decision based on corruption of the arbitrator; or
  - (iii) to seek injunctive relief if an arbitrator has not then been appointed.

## 7.6. Authority of Arbitrator

If the Dispute involves a matter on which agreement of the Parties is required and that this Agreement provides may be submitted for dispute resolution in the absence of agreement, each Party hereby expressly authorizes and directs the arbitrator to make the required determination. Any such determination by the arbitrator shall be deemed to have been the agreement of the Parties. No award or determination of an arbitrator may be inconsistent with the terms and conditions of this Agreement.

#### 7.7. Equitable Remedies

The arbitrator shall adjudicate the dispute, and may grant remedies in both law and equity. The Parties acknowledge that a declaratory judgment or damages may provide an inadequate remedy for breach of the provisions of this Agreement, and accordingly each Party shall be entitled to seek specific performance, injunction or other similar remedy to

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ensure full and proper performance by the other Party of its obligations under this Agreement. Subject to Section 7.5(i)(iii), such remedy may only be sought from the arbitrator appointed under Section 7.5(a).

- 8. NOTICES
- 8.1. Notices

All notices, directions and other instruments required or permitted to be given under this Agreement shall be in writing, and shall be sufficient in all respects if delivered, or if sent by facsimile, or if sent by prepaid registered post mailed in British Columbia to the Parties at the following addresses respectively:

 to BC Hydro: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C.

V6B 5R3

Attention: Executive Vice-President, Generation Facsimile Number: 604-623-4155

With a copy to: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Attention: Director of Legal Services Facsimile Number: 604-623-3606

(b) to FortisBC: FortisBC Inc. 10<sup>th</sup> Floor 1111 West Georgia Street Vancouver, B.C. V6E 4M3

> Attention: Vice-President, Energy Supply Facsimile Number: 604-592-7620

With a copy to: FortisBC Inc. 10th Floor 1111 West Georgia Street Vancouver, B.C.V6E 4M3

Attention: General Counsel Facsimile Number: 604-443-6540

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Either Party shall have the right at any time to change its address by notice in writing sent to the other Party at the address in effect hereunder.

#### 8.2. Delivery of Notices

Any notice, direction or other instrument shall be deemed to have been received on the following dates:

- (a) if sent by facsimile, on the Business Day next following the date the sender receives confirmation of successful transmission;
- (b) if delivered, on the Business Day next following the date of delivery; or
- (c) if sent by registered mail, on the seventh day following its mailing, provided that if there is at the time of mailing or within 7 days thereafter a mail strike, slowdown, lockout or other labour dispute which might affect the delivery, then any notice, direction or other instrument, shall only be effective upon actual delivery or if delivered or sent by facsimile.

### 8.3. Electronic Notices

As an alternative to the methods of giving notice described in Section 8.1, a Party may give notices, directions and other instruments required or permitted to be given under this Agreement by electronic mail to the other Party's representative(s) identified in Section 8.1 who continues to be employed by the other Party and is not to the knowledge of the sending Party unavailable; provided (i) the notice, direction or other instrument is stated to be a notice, direction or other instrument required or permitted to be given under this Agreement, (ii) the notice, direction or other instrument is concurrently also given by electronic mail to the Corporate Secretary of the other Party. Any notice, direction or other instrument given by electronic mail shall be deemed to have been received on the Business Day next following the date of sending, provided that no such notice shall be effective unless such notice is actually received by the representative(s).

#### 9. MISCELLANEOUS

### 9.1. Time is of the Essence

If a Party persistently fails to perform any of its obligations hereunder by the time(s) provided for herein (and the result or effect of such failure is not provided for in this Agreement), then the other Party may, by notice to the Party, require that from the date specified in the notice time shall be of the essence with respect to such obligations.

## 9.2. No Assignment Without Consent

(a) Neither Party may sell, assign or otherwise transfer this Agreement or any of its rights, obligations or liabilities under this Agreement to any other person unless all such rights, obligations and liabilities are assigned, and then only with the prior consent in writing of the other Party.

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(b) Without limiting Section 9.2(a), a Party shall not sell, assign or transfer this Agreement or any of its rights, obligations and liabilities hereunder to any other person unless the Power Purchase Agreement is concurrently sold, assigned and transferred to the same person.

## 9.3. Reduction of FBC Entitlement Energy Upon Sale of Plant(s)

If FortisBC sells, assigns or transfers any of its Plants to a third party then, except to the extent that FortisBC is entitled to purchase Entitlement from the purchaser of such Plant(s), the FBC Entitlement Energy shall be reduced by the amount of Entitlement Energy to which the buyer of the Plant(s) becomes entitled under the Canal Plant Agreement.

#### 9.4. No Third Party Beneficiaries

Nothing in this Agreement, express or implied, is intended or shall be construed to confer upon or to give any Person, other than the Parties and their respective permitted successors and assigns, any rights or remedies under or by reason of this Agreement.

9.5. Further Assurances

Each of the Parties agrees that it shall take from time to time such actions and execute such additional instruments as may be reasonably necessary or convenient to implement and carry out the intent and purpose of this Agreement.

9.6. No Consequential Damages

No arbitrator shall award any special, incidental, exemplary, punitive or consequential damages with respect to, arising out of, relating to or in any way connected with a Party's performance or non-performance under this Agreement, provided nothing in this Section 9.6 shall limit any damages or other remedies for any Breach or material Breach of this Agreement that may be expressly provided for herein.

9.7. Waiver

The failure of a Party to insist on the strict performance of any provision of this Agreement or to exercise any right, power or remedy upon a breach hereof shall not constitute a waiver of any provision of this Agreement or limit that Party's right thereafter to enforce any provision or exercise any right.

#### 9.8. Governing Law

This Agreement and all the terms and conditions contained in it shall be governed and construed in accordance with the laws of British Columbia and, to the extent applicable, shall be subject to (a) the provisions of the *Utilities Commission Act*, as amended or reenacted from time to time, and (b) the jurisdiction of the Commission.

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#### 9.9. Reliance on Specified Indices

In the event that any provision of this Agreement relies on a specified index to determine or calculate a price or payment pursuant to such provision, and such index (i) ceases to exist or otherwise is no longer published or available to a Party (provided the Party subscribes to receive such index, where subscription is required), or (ii) ceases to be the index predominantly used to establish the market price for the applicable energy product in the applicable market, then the applicable index shall be such index that most closely applies to the provision and approximates the specified index (considering applicable factors, including delivery point, firmness of electricity, time of day and predominant use of such index by market participants), or such other index as the Parties may agree. If the Parties are unable to so agree within 30 days after the specified index ceases to exist or is no longer published or available to a Party or the foregoing notice is given, either Party may refer the matter to dispute resolution pursuant to Section 7.1. An arbitrator appointed under Section 7.5(a) is expressly authorized and directed to select a substitute index based on the foregoing criteria. Pending agreement on or determination of the substitute index, the Party entitled to be paid based on the index shall specify an interim index or pricing method, acting reasonably, and amounts so paid based on such interim index or pricing method shall be adjusted retroactively to the date the index ceased to exist or be published.

## 9.10. Amendments

No amendment of this Agreement shall be valid unless made in writing and executed by the appropriate duly authorized signatories of the Parties (and approved by the Commission to the extent required by law) or unless ordered by the Commission in accordance with its authority under the *Utilities Commission Act*, either upon its own motion or upon the application of either Party. A Party seeking amendment of this Agreement by the Commission shall give reasonable prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission.

### 9.11. Enurement

This Agreement shall be binding upon and enure to the benefit of the Parties hereto and their respective successors and permitted assigns.

#### 9.12. Counterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

#### 9.13. Electronic Delivery

ACCEPTED:

Delivery by a Party of an executed copy of this Agreement by electronic means shall be effective delivery.

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Appendix A BC Hydro Tariff Supplement No. 3 Attachment 3 Energy Export Agreement Effective: First Revision of Page 27 of 28

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By:

Authorized Signatory

FORTISBC INC.

By:

Authorized Signatory

7943528,43

ACCEPTED:

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Appendix A BC Hydro Tariff Supplement No. 3 Attachment 3 Energy Export Agreement Effective: First Revision of Page 28 of 28

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Appendix A BC Hydro Tariff Supplement No. 3 Attachment 4 Master Accounting Agreement Effective: First Revision of Page 1 of 32

# **ATTACHMENT 4**

# MASTER ACCOUNTING AGREEMENT

## BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

and

## FORTISBC INC.

DATED FOR REFERENCE

May 21, 2013

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ACCEPTED:\_\_\_\_\_

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## MASTER ACCOUNTING AGREEMENT

THIS AGREEMENT is made as of the 21<sup>st</sup> day of May, 2013 (the "Reference Date"), to be effective on the Effective Date.

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, having its Head Office at 333 Dunsmuir Street, City of Vancouver, Province of British Columbia

("BC Hydro")

AND:

FORTISBC INC., a body corporate having an office at 10<sup>th</sup> Floor, 1111 West Georgia Street, City of Vancouver, Province of British Columbia

("FortisBC")

WHEREAS:

- A. BC Hydro, FortisBC, Teck Metals Ltd ("Teck"), Brilliant Power Corporation ("BPC"), Brilliant Expansion Power Corporation ("BEPC") and Waneta Expansion Limited Partnership ("WELP") are parties to the Canal Plant Agreement, and certain of such parties are parties to the CPA-Related Agreements;
- B. BC Hydro and FortisBC are parties to the Non-CPA-Related Agreements;
- C. BC Hydro acts as the operator of the BC Control Area and the balancing authority in British Columbia and FortisBC operates an integrated generation and transmission system within the BC Control Area;
- D. The Parties have agreed to provide certain information and accounting with respect to both the CPA-Related Agreements and the Non-CPA-Related Agreements; and
- E. The Accounting Procedures established pursuant to this Agreement are intended to be adopted as an Operating Procedure under the Canal Plant Agreement, to the extent they are reasonably necessary to implement the Canal Plant Agreement.

THIS AGREEMENT WITNESSES that in consideration of the covenants and agreements set forth in this Agreement and of other good and valuable consideration, the Parties hereby covenant, agree and declare as follows:

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## 1. DEFINITIONS AND INTERPRETATION

### 1.1 Definitions

In this Agreement:

- (a) "Accounting Procedures" means the accounting procedures attached as Schedule A, including the Appendices thereto, as they may be amended from time to time in accordance with this Agreement;
- (b) "Agreement" means this Master Accounting Agreement, as amended, restated and/or supplemented from time to time, and specifically includes the Accounting Procedures;
- (c) "BC Control Area" has the meaning ascribed to it in the Canal Plant Agreement, and under current WECC and NERC rules is generally known as the "BC Hydro Balancing Authority area";
- (d) "BC Hydro System" means the interconnected generation and transmission facilities and related protection, control and communication equipment in British Columbia owned and/or operated by BC Hydro (excluding the Entitlement Parties' System), including all additions and modifications thereto and repairs or replacements thereof;
- (e) "Brilliant Power Purchase Agreement" means the agreement made as of the 4th day of April, 1996, between Brilliant Power Corporation (as assignee of Columbia Power Corporation and CBT Power Corp.) and FortisBC (then known as "West Kootenay Power Ltd."), as amended, restated and/or supplemented from time to time;
- "Business Day" means any calendar day which is not a Saturday, Sunday or other day recognized as a statutory holiday in British Columbia;
- (g) "Canal Plant Agreement" means the Second Amended and Restated 2005 Canal Plant Agreement dated for reference November 15, 2011 among BC Hydro, FortisBC, Teck, BPC, BEPC and WELP, as amended, restated and/or supplemented from time to time;
- (h) "Commercial Arrangements" means the commercial arrangements that are described in Section 3.5 of the Canal Plant Agreement and are in effect from time to time;
- "Commission" means the British Columbia Utilities Commission established pursuant to the Utilities Commission Act (British Columbia), or a successor thereto;
- (j) "CPA-Related Agreements" means:

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- the Canal Plant Agreement, including the Operating Procedures made pursuant to it;
- the BEPC CPA Scheduling Option Agreement made as of the 1<sup>st</sup> day of July, 2005 and the Teck Cominco CPA Scheduling Agreement made as of the 1<sup>st</sup> day of July, 2005;
- (iii) the Commercial Arrangements; and
- (iv) other agreements that BC Hydro and FortisBC agree to from time to time, each acting in good faith and in a reasonable manner;

each as they may be amended, restated and/or supplemented from time to time;

- (k) "Effective Date" means October 1, 2013, provided that the conditions precedent in Section 2.2 have then been met;
- "Energy Export Agreement" means the Energy Export Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- (m) "Entitlement Parties" means the parties to the Canal Plant Agreement, except BC Hydro;
- (n) "Entitlement Parties' System" means the contiguous, interconnected generation and transmission facilities and related protection, control and communication equipment located in British Columbia and owned by one or more of the Entitlement Parties or their affiliates, and includes all additions and modifications thereto and repairs or replacements thereof, and specifically includes the Waneta Expansion, even though it is connected to the Entitlement Parties' transmission facilities through facilities owned by BC Hydro;
- (o) "FBC Entitlement Energy" means FortisBC's share of the Entitlement Energy, as set out and described in Table 9 of the Canal Plant Agreement under "FBC Projects", as redetermined and/or adjusted under that agreement from time to time, plus Entitlement Energy attributable to the Brilliant Plant and sold to FortisBC under the Brilliant Power Purchase Agreement;
- (p) "FBC Service Territory" means the area in British Columbia served, directly or indirectly, by FortisBC from time to time, and connected by the Entitlement Parties' System;
- (q) "General Wheeling Agreement" means the General Wheeling Agreement, dated October 15, 1986, between FortisBC and BC Hydro, as amended, restated and/or supplemented from time to time;

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- (r) "Imbalance Agreement" means the Imbalance Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- (s) "Non-CPA-Related Agreements" means:
  - (i) the Power Purchase Agreement;
  - (ii) the Energy Export Agreement;
  - (iii) the Imbalance Agreement;
  - (iv) the General Wheeling Agreement; and
  - (v) other agreements that BC Hydro and FortisBC agree to from time to time, each acting in good faith and in a reasonable manner;

each as they may be amended, restated and/or supplemented from time to time;

- "NERC" means the North American Electric Reliability Corp., or a successor organization;
- (u) "Parties" means the parties to this Agreement and "Party" means either of them;
- (v) "Power Purchase Agreement" means the Power Purchase Agreement entered into between BC Hydro and FortisBC concurrently with this Agreement, as amended, restated and/or supplemented from time to time;
- (w) "Reference Date" has the meaning ascribed to it on the first page of this Agreement;
- "WECC" means the Western Electricity Coordinating Council, or a successor organization; and
- (y) "WEPAS" means BC Hydro's Wheeling, Entitlement, Purchases Accounting System, or any future replacement accounting system (by whatever name it is known).

#### 1.2 Canal Plant Agreement Definitions

Capitalized words and terms in this Agreement that are not defined herein but are defined in the Canal Plant Agreement shall have the meanings ascribed to them in the Canal Plant Agreement.

#### 1.3 Accounting Procedures Definitions

ACCEPTED:

In this Agreement, named reports, summaries, forms and similar documents, that are not defined in Section 1.1 or in the Canal Plant Agreement but are defined or described in the

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Accounting Procedures shall be as described in, and shall have the meanings ascribed to them in, the Accounting Procedures.

1.4 Interpretation

In this Agreement, except where otherwise expressly provided:

- (a) unless the context otherwise requires, words importing the singular include the plural and vice versa, words importing gender include all genders, "or" is not exclusive, "including" is not limiting, whether or not non-limiting language (such as "without limitation") is used with reference to it, a grammatical variation of a defined term shall have a corresponding meaning, and reference to any person includes such person's successors and assigns but, if applicable, only if the succession or assignment is permitted under this Agreement;
- (b) the inclusion of headings in this Agreement is for convenience only and shall not affect the construction or interpretation of this Agreement;
- any reference to an hour, day or month is a reference to a calendar hour, day or month, unless specified otherwise;
- (d) any reference to a specified Section, subsection or other subdivision of this Agreement or to an Appendix is to the designated Section, subsection or other subdivision of, or Appendix to, this Agreement, unless the context otherwise requires;
- (e) any reference to a statute includes and is a reference to such statute and to the regulations made pursuant to it, with all amendments to them in force from time to time, and to any statute or regulations that may be passed which supplement or supersede such statute and such regulations;
- all monetary amounts referred to in this Agreement are stated and shall be paid in Canadian currency; and
- (g) the language used in this Agreement is the language chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against either Party.

## 2. TERM AND CONDITIONS PRECEDENT

#### 2.1 Term of Agreement

Subject to Section 2.2, the term of this Agreement shall commence on the Effective Date and shall continue until the expiry or termination of the last of the CPA-Related Agreements and the Non-CPA-Related Agreements to expire or terminate.

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#### 2.2 Conditions Precedent to Agreement Becoming Effective

This Agreement shall not be effective unless each of the following conditions precedent has, on or before October 1, 2013, been satisfied:

- the Commission has issued an order under Sections 58 to 61 of the Utilities Commission Act approving this Agreement, without imposing changes unless acceptable to both Parties;
- (b) the Power Purchase Agreement has become, or will concurrently become, effective in accordance with its terms; and
- (c) Operating Procedure 20, in the form approved by the Parties as at the Reference Date (or in such other form as the Parties may subsequently agree), has been signed on behalf of all parties to the Canal Plant Agreement.

#### 2.3 Support and Cooperation in Obtaining Commission Approval

FortisBC shall support BC Hydro's application for approval by the Commission of this Agreement, including intervening in support of the application, provided that FortisBC reserves the right to oppose any changes proposed during proceedings before the Commission with which FortisBC does not agree. FortisBC shall cooperate with BC Hydro and provide such assistance as BC Hydro may reasonably request towards obtaining approval of this Agreement by the Commission.

## 3. INFORMATION/ACCOUNTING TO BE PROVIDED

## 3.1 Information/Accounting for Non-CPA-Related Agreements

FortisBC shall obtain and make available to BC Hydro hourly (segregated where reasonably required) energy and capacity information and accounting that BC Hydro reasonably requires to implement the Non-CPA-Related Agreements and/or to enable BC Hydro to confirm compliance by FortisBC with the Non-CPA-Related Agreements in accordance with their respective provisions.

### 3.2 Information/Accounting for CPA-Related Agreements

(a) FortisBC shall obtain and make available to BC Hydro (on its own behalf and on behalf of the other Entitlement Parties) hourly (segregated where so provided by the Accounting Procedures or the CPA-Related Agreements) energy and capacity information and accounting that BC Hydro reasonably requires to implement the CPA-Related Agreements and/or to enable BC Hydro to confirm compliance by the other parties to the CPA-Related Agreements (including FortisBC) with those agreements, in accordance with their respective provisions, provided that either (i) the applicable CPA-Related Agreement to which an Entitlement Party whose information and/or accounting is to be provided is a party, contemplates the provision of such information and accounting to BC Hydro, or (ii) the agreement and consent of any Entitlement Party whose information and accounting is to be

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provided by FortisBC has been obtained. FortisBC acknowledges and agrees that agreement and consent by Entitlement Party(ies) to such information and accounting being provided by FortisBC to BC Hydro is evidenced by Operating Procedure 20 in the form agreed between the Parties as at the Reference Date.

- (b) The Parties acknowledge and agree that the information and accounting required by Operating Procedure 20 is in addition to information and accounting requirements in other current Operating Procedures under the Canal Plant Agreement. If there are direct inconsistencies between the information and accounting required by Operating Procedure 20 and the other current Operating Procedures, the Parties shall use all reasonable efforts to ensure that such current Operating Procedures are amended as may be required to address such inconsistencies.
- (c) The Appendices to the Accounting Procedures set out and describe certain specific data points for information (and whether such information is to be aggregated or segregated) that, as at the Reference Date, the Parties reasonably believe is required for purposes of this Agreement, the CPA-Related Agreements and/or the Non-CPA-Related Agreements. FortisBC shall provide BC Hydro with such information as it relates to FortisBC in accordance with this Agreement. Subject to Section 3.2(a), FortisBC shall provide BC Hydro with such information as it relates to the other Entitlement Parties in accordance with this Agreement.

### 3.3 BC Hydro Information/Accounting

- (a) BC Hydro shall continue to provide FortisBC with hourly capacity information and accounting using WEPAS, as it may be updated from time to time. Such information and accounting shall be provided monthly, and otherwise as requested or as necessary to resolve accounting and/or billing discrepancies.
- (b) BC Hydro shall make available to FortisBC, from meters that BC Hydro owns or has access to, metering information that FortisBC reasonably requires in order to provide any of the information and accounting contemplated by this Agreement.
- (c) BC Hydro shall provide other information requested by FortisBC that is in BC Hydro's possession or control and that FortisBC reasonably requires to provide any of the information and accounting contemplated by this Agreement.

## 3.4 FBC Service Territory Load/Resource Accounting/ Metering

(a) FortisBC shall consolidate and provide to BC Hydro, all information and accounting required to demonstrate the balancing of loads and resources in the FBC Service Territory, including at each "point of interconnection" and "point of supply" under the General Wheeling Agreement. FortisBC shall obtain all necessary information and accounting from the other Entitlement Parties and other third parties (including BC Hydro) to demonstrate the balancing of loads and resources. BC Hydro shall use such information and accounting provided by

ACCEPTED:

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FortisBC, in conjunction with information BC Hydro obtains from other sources, to perform the requisite WEPAS accounting.

- (b) FortisBC shall make available to BC Hydro, from meters that FortisBC owns or has access to, metering information that BC Hydro reasonably requires in order to provide any of the information and accounting contemplated by this Agreement.
- (c) FortisBC shall comply with Operating Procedure 023 under the Canal Plant Agreement, which requires FortisBC to provide BC Hydro (Generation) with a forecast of the load on the Entitlement Parties' System for each hour, and to notify BC Hydro (Generation) of any forecast change in load that exceeds 10 MW, in each case in accordance with the same timelines as provided for in Operating Procedures under the Canal Plant Agreement. The Parties shall from time to time negotiate in good faith to establish a method of timely providing such information that is more efficient than the method provided for in Operating Procedure 023 as at the Reference Date, failing which either Party may submit the matter for dispute resolution in accordance with Section 10.

#### 3.5 Required Information

For greater certainty, FortisBC acknowledges and agrees that hourly energy and capacity information and accounting, including for transactions:

- (a) that use or commit Entitlement Capacity, directly or indirectly; and/or
- (b) that commit capacity, including Entitlement Capacity, for reserves; and/or
- (c) that affect scheduled and/or actual power flows into or out of the Entitlement Parties' System, including imports or exports between the FBC Service Territory and any adjoining control area or balancing authority area, and transfers between the BC Hydro System and the Entitlement Parties' System; and/or
- (d) that involve generation within the FBC Service Territory, that is to be recorded as Eligible Energy under the EEA; and/or
- (e) that involve FortisBC power flows over the BC Hydro System or BC Hydro power flows over the Entitlement Parties' System; and/or
- that involve a transfer of Entitlement Energy and associated Entitlement Capacity that is to be recorded as Eligible Energy under Section 3.4(f) of the Energy Export Agreement;

are reasonably required by BC Hydro to implement the CPA-Related Agreements and the Non-CPA-Related Agreements and/or to enable BC Hydro to confirm compliance with such Agreements in accordance with their respective provisions.

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## 3.6 Information May be Aggregated, Unless Otherwise Required

- BC Hydro acknowledges and agrees that information and accounting for (a) transactions referred to in Section 3.5 shall be provided (by FortisBC on its own behalf in the case of the Non-CPA Related Agreements, and on behalf of the Entitlement Parties (including FortisBC) in the case of the CPA-Related Agreements) on an aggregated hourly basis unless (i) in the case of the Non-CPA-Related Agreements, BC Hydro reasonably requires such information and/or accounting to be provided on a segregated basis (as between FortisBC, on the one hand, and the Entitlement Parties other than FortisBC, on the other hand) to implement and/or confirm compliance with such agreements and (ii) in the case of the CPA-Related Agreements, BC Hydro reasonably requires such information and/or accounting to be provided on a segregated basis to implement and confirm compliance with such agreement(s) and either (A) the applicable agreement(s), to which an Entitlement Party whose information and/or accounting is to be provided is a party, contemplates the provision of such information and accounting to BC Hydro on a segregated basis, or (B) the consent of any Entitlement Party(ies) (other than FortisBC) whose information and/or accounting is to be provided on a segregated basis by FortisBC has been obtained. FortisBC acknowledges and agrees that consent by the Entitlement Party(ies) to information and accounting being provided on a segregated basis is evidenced by Operating Procedure 20 (in the form agreed between the Parties as at the Reference Date).
- (b) FortisBC acknowledges and agrees that information and accounting for determining:
  - WAX Capacity usage, and Eligible Energy amounts, (as each of those terms is defined in the Energy Export Agreement) to implement and/or confirm compliance with the Energy Export Agreement;
  - (ii) FBC Entitlement Energy usage and Eligible Energy amounts, if and when FortisBC sells, exchanges, or otherwise transfers FBC Entitlement Energy or Eligible Energy to another Entitlement Party or any other person, to the extent required to confirm compliance with Section 3.1(d) the Energy Export Agreement;
  - (iii) Entitlement usage by or on behalf of an Entitlement Party, to implement and/or confirm compliance with the Commercial Arrangement(s) entered into by that Entitlement Party;
  - FortisBC imports into and exports from the FBC Service Territory, to the extent required to confirm compliance with any one or more of the Non-CPA Related Agreements; and
  - (v) exports by Entitlement Parties (other than FortisBC) or other persons, to the extent required to confirm compliance with Section 3.1(d) of the Energy Export Agreement; and

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 (vi) transfers of electrical energy that are deemed not to be transfers of Imbalance Energy pursuant to Section 5.4(e) of the Imbalance Agreement, unless the Parties have agreed on an alternative Accounting Procedure for determining such transfers;

must be provided on a segregated hourly basis for both capacity and energy amounts provided, in the case of a transaction described in paragraph (v) above, that the consent of the Entitlement Party(ies) (other than FortisBC) or other person whose information and/or accounting is to be provided on a segregated basis by FortisBC has been obtained. For greater certainty, "segregated" means the information is to be provided separately for a specific Entitlement Party, Plant or contract provision, as applicable to the extent reasonably required by BC Hydro to implement the CPA-Related Agreements or the Non-CPA-Related Agreements and/or to enable BC Hydro to confirm compliance with such agreements in accordance with their respective provisions.

#### 3.7 Timing of Information/Accounting

- (a) Information and accounting to be provided under this Agreement shall be provided "after-the-fact", except where required by the CPA-Related Agreements and/or the Non-CPA-Related Agreements to be provided in advance.
- (b) FortisBC shall provide information and accounting on a daily and weekly (which may be a compilation of after-the-fact daily information) basis as follows:
  - (i) FortisBC shall use reasonable efforts to provide the Hourly CPA Capacity Report and, if applicable, a Contingency Reserve Usage Form and Imbalance Exception Report, in respect of each day by 1200 hours on the Business Day immediately following such day and in any event shall provide such report and form by no later than 1600 hours on the second Business Day following such day; and
  - FortisBC shall provide the Daily and Hourly CPA Energy Accounting Report, in respect of each week (Monday to Sunday) by no later than 1600 hours on the second Business Day following the end of such week;

A report may include estimates if there are unreconciled meter errors, scheduling or other discrepancies, unavailable inputs, or disputes on inputs, provided that if it includes any estimate, FortisBC shall use reasonable efforts to identify the parts of the report that are estimates.

(c) BC Hydro shall provide the Monthly WEPAS Capacity Report providing the hourly capacity accounting in respect of each calendar month as soon as reasonably possible, and in any event by no later than the last day of the immediately following month; a report may include estimates if there are unreconciled meter errors, scheduling or other discrepancies, unavailable inputs, or disputes on inputs, provided that any estimate must be identified in such report;

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- (d) FortisBC shall provide the Monthly CPA Energy Accounting Report, the Monthly PPA Summary, the Monthly Imbalance Summary and the Monthly Metering Summary in respect of each calendar month as soon as reasonably possible, and in any event by no later than the last day of the immediately following month; a report may include estimates if there are unreconciled meter errors, scheduling or other discrepancies, unavailable inputs, or disputes on inputs, provided that any estimate must be identified in such report;
- (e) If any report provided under Sections 3.7(c) or 3.7(d) is based on estimates, the Party responsible for providing such report shall finalize such report as soon as possible, and in any event shall finalize it (or initiate dispute resolution pursuant to Section 10 if it involves a dispute that is not resolved) by the end of the calendar month after it was due to be provided;
- (f) BC Hydro shall review and notify FortisBC of any errors, omissions or discrepancies of which it becomes aware in:
  - (i) the Hourly CPA Capacity Report and, if applicable, the Contingency Reserve Usage Form and Imbalance Exception Report, provided by FortisBC in accordance with Section 3.7(b)(i) as soon as reasonably possible and in any event by no later than 5 Business Days after the day on which FortisBC provides such information and accounting to BC Hydro;
  - (ii) the Daily and Hourly CPA Energy Accounting Report provided by FortisBC in accordance with Section 3.7(b)(ii) as soon as reasonably possible and in any event by no later than 8 Business Days after the day on which FortisBC provides such Daily and Hourly CPA Energy Report to BC Hydro; and
  - (iii) the Monthly CPA Energy Accounting Report, the Monthly PPA Summary, the Monthly Imbalance Summary and the Monthly Metering Summary provided by FortisBC in accordance with Section 3.7(d) as soon as reasonably possible and in any event within 20 Business Days of receiving such information and accounting.
- (g) FortisBC shall review and notify BC Hydro of any errors, omissions or discrepancies of which it becomes aware in the Monthly WEPAS Capacity Report provided by BC Hydro in accordance with Section 3.7(c) as soon as reasonably possible and in any event within 10 Business Days of receiving such information and accounting.
- (h) It is acknowledged that the Monthly CPA Energy Reports are based on metered data whereas daily and weekly information is based on telemetered data. Further, after-the-fact information to be included in each Monthly CPA Energy Report may not be known until after the relevant month has ended. Accordingly, there may be slight discrepancies between (i) such monthly reports and (ii) such daily

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and weekly information. Any such discrepancies shall not be reconciled unless the differences are material.

- (i) Subject to Section 3.7(j), a Party may at any time inform the other Party of any material error, omission or discrepancy that it did not discover within the relevant time period described in Section 3.7(f) or 3.7(g), as applicable, and the Parties shall correct any such error, omission or discrepancy and make correcting adjustments and adjusting payments, if any. The Parties shall use good faith efforts to resolve any disputes with respect to such errors or omissions discovered, failing which either Party may submit the matter for dispute resolution in accordance with Section 10 and Section 10.4(e) shall apply.
- (j) If, within 12 months of the date a Party provides any information, accounting or report to the other Party in accordance with Sections 3.7(b), 3.7(c), or 3.7(d), as applicable, neither Party notifies the other of any errors, omissions or discrepancies in such information, accounting or report, then the Parties shall be entitled to assume that such information, accounting or report is accurate, and neither Party shall have any liability to the other Party for any error, omission or discrepancy subsequently discovered in such information or accounting.
- (k) Nothing in this Section 3.7 is intended to affect any obligations under the CPA-Related Agreements or the Non-CPA-Related Agreements that require scheduling notifications, estimated usage or other information to be provided in advance of an operating hour.
- (1) The Parties acknowledge and agree that the times specified in this Section 3.7 for providing reports and for reviewing and notifying a Party of errors, omissions or discrepancies may be adjusted from time to time in the Accounting Procedures by mutual agreement of their Technical Committee representatives, and the adjusted times shall thereupon govern, provided that a Party may, by reasonable notice to the other Party, reinstate the times provided for in this Agreement.

#### 3.8 Coordination of Accounting Systems

The Parties acknowledge that certain of the information and accounting in connection with the CPA-Related Agreements and the Non-CPA-Related Agreements is financially significant to both Parties, is complicated and/or is sequential, with the rights and obligations of the Parties for any time period potentially being impacted by prior information and accounting. Accordingly, the Parties agree to use all reasonable efforts to ensure that information and accounting to be provided by one Party to the other Party under this Agreement is provided in an efficient manner, and to coordinate their respective accounting systems for this purpose, including the utilization of a database software structure where the cost is warranted.

3.9 Costs

All costs of providing information and accounting under this Agreement shall be borne by the Party required to provide same.

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### 3.10 A Party Remains responsible for Information/Accounting, Notwithstanding Usage by Others

Unless agreed by the other Party, neither Party shall, by engaging a marketing agent, or otherwise providing any or all of its rights under a CPA-Related Agreement or a Non-CPA-Related Agreement (including rights to schedule imports or exports) to a third party, be relieved of responsibility for obtaining and providing the required information and accounting in relation to such agreement in accordance with this Agreement.

## 3.11 All Reasonable Efforts to Ensure Accuracy

Each Party shall use all reasonable efforts to ensure that information and accounting provided by the Party under this Agreement is complete and accurate and shall, subject to Section 3.7(j), promptly take steps to correct and reconcile any information and accounting that is found to be incomplete or inaccurate.

## 3.12 Confidentiality and Use of Information

- (a) Each Party ("Receiving Party") shall, except with the prior written consent of the other Party ("Providing Party"), keep confidential all information and accounting that is provided by the Providing Party (whether of the Providing Party itself or, where the Providing Party is FortisBC, of an Entitlement Party other than FortisBC, and whether aggregated or segregated) under any of this Agreement, the CPA-Related Agreements and/or the Non-CPA-Related Agreements, and that the Receiving Party reasonably believes the Providing Party intends should be kept confidential, other than information that is or becomes public through no breach of this Agreement by the Receiving Party ("Confidential Information"), and shall limit disclosure of the same to:
  - its directors, officers, employees, agents, professional advisors, consultants or affiliates (or any affiliates' respective directors, officers, employees, agents, professional advisors or consultants) who reasonably need such information or accounting for a purpose or purposes contemplated by this Agreement, the CPA-Related Agreements or the Non-CPA-Related Agreements; or
  - an auditor appointed pursuant to and in accordance with the provisions of this Agreement, the CPA-Related Agreements or the Non-CPA-Related Agreements.

Each Party will take all reasonable precautions to ensure that any such person to whom such Confidential Information is disclosed abides by the obligation of confidentiality under this Section 3.12(a). Nothing in this Section 3.12(a) shall limit disclosure required by law or in connection with regulatory requirements and/or filings.

(b) Neither Party shall use, or permit any person referred to in Section 3.12(a)(i) to use, Confidential Information provided under this Agreement by the other Party,

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if (i) such Confidential Information is market sensitive at the time of use, and (ii) such use would be contrary to laws, regulations, market rules or policies and procedures applicable to such Party or person, or would unduly discriminate against, or deliberately and unfairly prejudice, the other Party, provided that nothing in this Section 3.12(b) is intended to prevent a Party from enforcing its rights under this Agreement, the CPA-Related Agreements or the Non-CPA-Related Agreements.

(c) Nothing in this Section 3.12 is intended to derogate from the obligations of confidentiality under the Canal Plant Agreement with respect to Confidential Information provided pursuant to that agreement

#### 4. ACCOUNTING PROCEDURES

## 4.1 Parties to Develop and Maintain Accounting Procedures

BC Hydro and FortisBC shall develop and maintain Accounting Procedures from time to time that describe in reasonable detail the capacity and energy information and accounting that is required to be provided by the Parties, whether it is to be hourly, aggregated or segregated and the time and method of providing same, all pursuant to and in accordance with this Agreement.

#### 4.2 Accounting Procedures at Effective Date

The Accounting Procedures as at the Reference Date are attached as Schedule A. The Accounting Procedures have been developed to reflect the requirements of this Agreement, which the Parties agree are reasonably required to implement and/or confirm compliance with the CPA-Related Agreements and the Non-CPA-Related Agreements.

#### 4.3 Accounting for GWA Purposes

- (a) There shall be an allocation order of how resources shall be accounted for, and allocated to "points of interconnection" and "points of supply" as defined under the General Wheeling Agreement. The initial allocation order is set out in the Accounting Procedures as at the Reference Date;
- (b) The allocation order referred to in Section 4.3(a) may be changed by FortisBC only if there is a material change in the CPA-Related Agreements or the Non-CPA-Related Agreements or the Entitlement Parties' System that would adversely affect FortisBC's ability to meet its load at the "points of interconnection" or "point of supply", and provided that FortisBC has given notice to BC Hydro that is adequate in the circumstances.

#### 4.4 Certain Requirements for Accounting Procedures

In addition to the requirements of Section 4.1, the Accounting Procedures in place from time to time shall provide for the following:

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- there shall be one or more stacking orders of how resources shall be accounted for, such stacking orders to be consistent with requirements of this Agreement, the CPA-Related Agreements and the Non-CPA-Related Agreements;
- (b) the Party providing information for transactions shall provide the information on the basis of an hourly scheduling period, unless agreed otherwise by the Parties;
- (c) the Party providing information shall ensure that it is consistent across all timeframes, products and components, as appropriate and applicable;
- (d) FortisBC shall provide all its inputs into the required accounting, including FortisBC's hourly load, imports and exports between the FBC Service Territory and any adjoining control area or balancing authority area, and transfers between the BC Hydro System and the Entitlement Parties' System;
- BC Hydro shall provide all its inputs into the required accounting, including the WEPAS Report;
- (f) FortisBC shall report the amount of reserves it held, and was obligated to hold, under the CPA-Related Agreements;
- (g) FortisBC shall provide unit outage and derate information (including the starting and ending times for outages and derates) with respect to the Entitlement Parties' Plants;
- FortisBC shall provide hourly FBC Eligible Exchange Account (as defined in the Energy Export Agreement) balances;
- for the purposes only of tracking and applying the hourly FBC Eligible Exchange Account limits under Section 3.8 of the Energy Export Agreement, FortisBC shall calculate and provide the hourly aggregate balance in the Entitlement Parties' applicable Exchange Accounts under the Canal Plant Agreement;
- (j) there shall be a process for timely acceptance and sign-off by the Parties on the monthly reports;
- FortisBC shall provide telemetered and metered generation information, and document any differences between telemetered and metered records;
- treatment of station service losses (including WAX) and transmission losses, as appropriate and applicable;
- (m) upon request, each Party shall provide such other information as may be reasonably required to implement the CPA-Related Agreements and the Non-CPA-Related Agreements, and to confirm whether those agreements have been complied with; and

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 each Party shall ensure information and accounting meets legal obligations and is consistent with information filed or provided to regulatory authorities.

#### 4.5 Accounting Procedures Binding on the Parties

The Accounting Procedures in effect from time to time shall be binding on each of the Parties from the date agreed to by the Parties (or determined by an arbitrator if the Parties are unable to agree) until they are modified or replaced in accordance with this Agreement, and the Parties shall take all steps necessary to implement the Accounting Procedures. If any information or accounting that is reasonably required to implement the Non-CPA-Related Agreements and/or the CPA-Related Agreements and/or to enable the other Party to confirm compliance with their respective provisions is not provided for under the Accounting Procedures, the Parties shall, subject to Section 3.2, act reasonably and in good faith to timely provide such information and accounting pending amendments to the Accounting Procedures.

#### 4.6 Accounting Procedures to be Reviewed Periodically, and Amended as Required

The Accounting Procedures shall be reviewed from time to time at the request of a Party if it believes that they do not adequately meet the requirements of this Agreement, if there have been changes to the Non-CPA-Related Agreements, CPA-Related Agreements or if a Party reasonably believes that system, market or operational changes require changes to the Accounting Procedures. Agreed amendments shall become effective on the date specified therein. If the Parties are unable to agree on appropriate amendments to the Accounting Procedures within 90 days of a Party's request, then either Party may submit the matter for dispute resolution in accordance with Section 10.

#### 5. CPA-RELATED AGREEMENTS AND OPERATING PROCEDURE 20

#### 5.1 Accounting Procedures and Operating Procedure 20

It is intended that the Accounting Procedures form a single, integrated document providing for certain information and accounting in respect of both the Non-CPA-Related Agreements and the CPA-Related Agreements. The Canal Plant Agreement provides for the parties to that agreement to develop Operating Procedures from time to time that are reasonably required to implement the Canal Plant Agreement. It is the intent of the Parties that those parts of the Accounting Procedures from time to time that are reasonably required to implement the CPA-Related Agreements will be approved by the parties to the Canal Plant Agreement as Operating Procedure 20 under the Canal Plant Agreement. The Parties shall cause their representatives on the Canal Plant Agreement Operating Committee to vote to adopt Operating Procedure 20 (initially in the form agreed between the Parties as at the Reference Date) and shall use all reasonable efforts to have the other Entitlement Parties' representatives on the Canal Plant Agreement Operating Committee vote to adopt Operating Procedure 20, as it may be amended from time to time in accordance with this Agreement and/or the Canal Plant Agreement.

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Notwithstanding Section 2.2, the obligations of the Parties under this Section 5.1 shall be effective on the Reference Date.

#### 5.2 Information/Accounting for CPA-Related Agreements

FortisBC's obligation to provide information and accounting in respect of any CPA-Related Agreements to which it is not a party shall continue only for so long as it continues to be system operator in respect of the Plants of the other Entitlement Parties and the Entitlement Parties' System. If FortisBC ceases to be system operator, it must use commercially reasonable efforts to ensure that this obligation is assumed by the person who replaces FortisBC as the system operator.

5.3 Amendments to Accounting Procedures re: CPA-Related Agreements

If the Accounting Procedures are proposed to be amended from time to time (whether by agreement of the Parties or by determination of an arbitrator under Section 10), then, to the extent the amendments relate to the CPA-Related Agreements, the Parties shall give notice to the other Entitlement Parties under the Canal Plant Agreement. If the other Entitlement Parties (or those Entitlement Parties affected thereby) agree to the amendments, then the Accounting Procedures and Operating Procedure 20 shall be amended accordingly to incorporate the amendments. If the other Entitlement Parties affected thereby) do not agree to the amendments, then either Party (as a party to the Canal Plant Agreement) may dispute the failure to agree in accordance with Section 12 of the Canal Plant Agreement on the basis that the proposed amendments are, or are not, reasonably required to implement the CPA-Related Agreements. Regardless of the outcome of dispute resolution under the Canal Plant Agreement, BC Hydro and FortisBC shall nevertheless honour the amendments as between themselves.

## 6. THIRD PARTY INFORMATION/ACCOUNTING

6.1 Third Party Information

The Parties agree as follows:

- (a) Certain information and accounting which FortisBC makes available, or is obliged to make available, hereunder to BC Hydro is first made available to FortisBC by Entitlement Parties (other than FortisBC) who are party to one or more of the CPA-Related Agreements (the "Third Party Information");
- (b) FortisBC shall use commercially reasonable efforts consistent with its role as agent for the other Entitlement Parties and system operator of the Entitlement Parties' System to ensure that Third Party Information is accurate and timely provided by the other Entitlement Parties and shall cooperate and assist in having errors or issues relating to timely and accurate provision of such information and accounting corrected; and

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(c) FortisBC shall not be responsible or liable for any loss or damages whatsoever suffered or incurred by BC Hydro, arising from or in connection with BC Hydro's use of or reliance upon, any Third Party Information which FortisBC makes available hereunder to BC Hydro, unless and then only to the extent that such loss or damage is caused by the negligence or wilful misconduct of FortisBC in the collection or provision of such Third Party Information to BC Hydro.

### 6.2 Limitations on Providing Information

The obligation of a Party (the "Disclosing Party"):

- to obtain and provide information and accounting relating to agreements to which the Disclosing Party is not a party; and
- (b) to permit the other Party to conduct an audit of the Disclosing Party's records and transactions pursuant to Section 7.1 in relation to any agreement to which the Disclosing Party is not a party;

is subject to the relevant other Party first having authorized the Disclosing Party to release the applicable information and accounting to the other Party in relation to such agreement, if such authorization is required. In its dealings with any other relevant party, each Party shall use all reasonable efforts to obtain such authorization. The Disclosing Party shall require as a condition of any agreement it enters into after June 5, 2012 that it be permitted to provide, and the other relevant party be required to provide, the information and accounting described in this Agreement (including the Accounting Procedures) and permit the audit described in Section 7.

#### 6.3 Acknowledgement re CPA-Related Agreements

FortisBC acknowledges that Operating Procedure 20 provides the authorization to disclose information of or relating to the other Entitlement Parties in respect of CPA-Related Agreements.

## 7. INFORMATION AND AUDITS

## 7.1 Information

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- (a) FortisBC shall keep sufficient books and records in relation to its performance of those of the CPA-Related Agreements and the Non-CPA-Related Agreements to which it is a party, so as to enable an auditor to confirm FortisBC's compliance therewith.
- (b) FortisBC shall keep records of its third party purchases and sales and other transactions as may be required to verify the information and accounting required to be provided under this Agreement.

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## 7.2 Audits

Either Party (the "Auditing Party") shall be entitled to retain an independent third party auditor to audit the books, records, operations and transactions of the other Party (the "Audited Party"), on a confidential basis, to review the accuracy of information input into the Accounting Procedures and the accuracy, timeliness and appropriateness of the accounting outputs to enable the Auditing Party to confirm whether the Audited Party is in compliance with this Agreement and those of the CPA-Related Agreements and/or the Non-CPA-Related Agreements to which it is a party. The auditor shall not provide commercially sensitive information to the Auditing Party or any other person in the course of the audit or in the report of the results of its audit, but shall provide a report of the results of its audit to the Auditing Party, with a copy to the Audited Party. The Audited Party shall make available to any such auditor all applicable records for purposes of the auditor's review. The Auditing Party shall bear the costs of the audit, unless the audit shows that the Audited Party has failed to comply with this Agreement or any of the CPA-Related Agreements and/or the Non-CPA-Related Agreements to which it is a party, in which case the Audited Party shall pay the cost of the audit.

### 8. TECHNICAL COMMITTEE

#### 8.1 Establishment of Technical Committee/Members

A Technical Committee shall be established and maintained throughout the term of this Agreement, consisting of two representative of each Party, each of whom shall serve until notice has been given to the other Party of the selection of a successor.

#### 8.2 Alternate Members

Each Party may give notice to the other Party of an alternate who shall serve during the inability or absence of the representative of the Party giving notice.

#### 8.3 Role of Technical Committee

The Technical Committee shall determine all matters relating to administration and operation of this Agreement, the Power Purchase Agreement, Imbalance Agreement, General Wheeling Agreement and Energy Export Agreement, and shall consider and decide questions relating to operations under those agreements, the Accounting Procedures and the method of calculating and accounting for electricity taken, Exports, Point of Delivery allocations, and other similar matters. The Technical Committee:

- (a) may, from time to time, modify, terminate or replace the Accounting Procedures and shall modify, terminate or replace same as may be reasonably required to implement this Agreement, the Power Purchase Agreement, Imbalance Agreement, General Wheeling Agreement and Energy Export Agreement;
- (b) shall make such determinations, take such actions and perform such other roles and responsibilities as are contemplated by this Agreement, or as the parties direct; and

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(c) shall promptly notify the parties of all modifications or replacements of the Accounting Procedures and other actions and decisions taken by the Technical Committee pursuant to this Agreement.

The Technical Committee may recommend amendments to the Parties, but shall not have the authority to amend this Agreement, the Power Purchase Agreement, Imbalance Agreement, General Wheeling Agreement and Energy Export Agreement, either expressly or by course of conduct

#### 8.4 Coordination with Canal Plant Agreement Operating Committee

Where practical, at least one of a Party's representatives on the Technical Committee shall be one of the Party's representatives on the Operating Committee appointed under the Canal Plant Agreement. In any event, the Technical Committee shall work closely with the Operating Committee under the Canal Plant Agreement and shall work to ensure that operations under this Agreement, the Power Purchase Agreement, the Imbalance Agreement, the General Wheeling Agreement and the Energy Export Agreement are coordinated with the Canal Plant Agreement and that the Accounting Procedures are administered in a coordinated manner with the relevant Operating Procedure(s) under the Canal Plant Agreement.

8.5 Basis for decisions

No decision or action of the Technical Committee shall be effective unless it has been approved by the affirmative votes of all representatives of the Parties or by written instrument signed by all representatives of the Parties. In reaching decisions, the Technical Committee shall attempt to achieve a just and equitable resolution of disagreements consistent with this Agreement, the Power Purchase Agreement, Imbalance Agreement, General Wheeling Agreement and Energy Export Agreement and generally accepted utility practice.

The Technical Committee shall meet (in person at a location convenient to the parties or by telephone or video conference) as often as required to carry out its duties and responsibilities under this Agreement, and at least once each quarter, and shall keep, and promptly forward to each of the parties a copy of, written records of its meetings and determinations. Any Party may require that a meeting of the Technical Committee be held by giving notice of the time and location (or telephone or video conference arrangements) and notice of the topics to be discussed at the meeting, to the other parties at least 10 days prior to the date of the meeting. A quorum for a meeting of the Technical Committee shall be one representative or alternate representative of each Party, except that if a quorum has not been present at two consecutive meetings for which proper notice has been given, the quorum for the next meeting shall be those representatives or alternate representatives in attendance. The Technical Committee shall establish additional rules, procedures and terms of reference governing its own meetings and determinations.

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<sup>8.6</sup> Meetings

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## 9. CONTRACT REPRESENTATIVES

## 9.1 Contract Representative

The following persons are hereby appointed as the initial contract representatives ("Contract Representatives") under this Agreement:

- (a) for BC Hydro, Specialist Engineer, Generation Resource Management; and
- (b) for FortisBC, Power Supply Operations Manager.

Either Party may replace its Contract Representative by notice in writing to the other Party from time to time. The Contract Representatives shall be responsible for the relationship between the Parties under this Agreement.

#### 9.2 Authority of Contract Representatives

Each Contract Representative shall have the authority to make decisions with respect to actions to be taken by its Party in the ordinary course of day-to-day management of the obligations of such Party under this Agreement. The Contract Representatives shall have no authority, expressly or by course of conduct, to agree to amend this Agreement.

## 9.3 Meetings of Contract Representatives

The Contract Representatives shall meet at least each quarter and otherwise upon the request of either Contract Representative. Where appropriate, the Contract Representatives under other agreements between the Parties, or representatives of the Operating Committee under the Canal Plant Agreement, to attend meetings.

## 10. DISPUTE RESOLUTION

#### 10.1 Definition of Dispute

If any dispute, question or difference of opinion between the Parties arises out of or under this Agreement ("Dispute"), including: (i) the interpretation of any provision of this Agreement (including the Accounting Procedures); or (ii) the failure to agree whether all or any part of the Accounting Procedures are reasonably required to be amended or replaced and the terms thereof; or (iii) any matter on which agreement of the Parties is required and this Agreement provides may be submitted for dispute resolution in accordance with this Section 10 in the absence of agreement, then a party may give to the other party a notice ("Dispute Notice") specifying the Dispute and requiring its resolution under this Section 10. All Disputes must be resolved in accordance with the provisions of this Section 10.

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#### 10.2 Contract Representatives to Seek Resolution

If the Dispute is not resolved within 7 days after a Dispute Notice is given to the other party, each Party shall forthwith refer the Dispute to its Contract Representative and cause its Contract Representative to negotiate in good faith to resolve the Dispute.

#### 10.3 Referral to Senior Executives

If a Dispute is not resolved within 7 days of the Dispute being referred to the Contract Representatives or within 14 days after the Dispute Notice is given, whichever is earlier, the Parties shall seek to resolve the Dispute through their respective senior executives (at the vice president level or higher) before proceeding to resolve the Dispute through dispute resolution in accordance with Section 10.4. Each Party shall appoint a senior executive to undertake such informal process within 10 days of a Party notifying the other Party that the Contract Representatives have not timely resolved the Dispute and the Parties shall use commercially reasonable efforts to resolve the Dispute through their appointed senior executives within 30 days after notification.

#### 10.4 Referral to Arbitration

If the Dispute it not resolved within 30 days of the Dispute being referred to the senior executives, or if any party fails to appoint a senior executive for that purpose, then either party may submit the Dispute to arbitration under the *Commercial Arbitration Act* (British Columbia). The following rules shall apply to an arbitration under this Agreement:

- (a) The arbitration shall be conducted before one arbitrator mutually agreed to by the Parties, or if the Parties are unable to agree upon a mutually acceptable arbitrator within 15 days after a demand for arbitration has been given, either Party may apply to the court pursuant to the *Commercial Arbitration Act* (British Columbia) for the appointment of a single arbitrator, and the provisions of the *Commercial Arbitration Act* (British Columbia) shall govern such appointment;
- (b) The venue for the arbitration shall be the venue selected by the arbitrator in Vancouver, British Columbia, unless otherwise agreed between the Parties;
- The arbitrator shall promptly fix the time, date and place of the hearing and notify the Parties;
- (d) The arbitration shall be dealt with on an expeditious basis with both Parties using commercially reasonable efforts to obtain and implement a timely decision of the arbitrator;
- (e) Where provided for in this Agreement, or the Parties agree, the arbitrator shall be instructed to impose time limits of no more than 10 days on the production of documents, filing of evidence, examination of witnesses, filing of arguments, such that a decision may be rendered within 45 days of appointment of the arbitrator;

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- (f) All costs of the arbitration shall be paid by the Parties in such amount and proportions as the arbitrator may determine, and if the arbitrator does not make an award of costs, the Parties shall bear the costs of the arbitration equally and each Party shall bear its own costs;
- (g) The arbitrator shall promptly transmit an executed copy of its decision to the Parties and the decision of the arbitrator shall be final, binding and conclusive upon the Parties;
- (h) The arbitrator shall determine the Dispute in accordance with the internal laws of the Province of British Columbia and applicable Canadian federal law, without giving effect to any conflict of law rules or other rules that might render such law inapplicable or unavailable;
- Neither Party shall commence or voluntarily participate in any court action or proceeding relating to any Dispute except:
  - (i) for enforcement of arbitral awards or orders as contemplated herein;
  - to restrict or vacate an arbitral decision based on corruption of the arbitrator; or
  - (iii) to seek injunctive relief if an arbitrator has not then been appointed.
- 10.5 Authority of Arbitrator

If the Dispute involves the Accounting Procedures (including the failure to agree on any proposed amendment, termination or replacement thereof), or relates to a matter on which agreement of the Parties is required and that this Agreement provides may be submitted for dispute resolution in the absence of agreement, each Party hereby expressly authorizes and directs the arbitrator to make the required determination, including to amend or replace all or any part of the Accounting Procedures in order to resolve the Dispute, and such Accounting Procedures shall be binding on the Parties, until further amendments are agreed or determined by dispute resolution. Any such determination by the arbitrator shall be deemed to have been the agreement of the Parties. No award or determination of an arbitrator may be inconsistent with the terms and conditions of this Agreement.

10.6 Equitable Remedies

The arbitrator shall adjudicate the dispute, and may grant remedies in both law and equity. The parties acknowledge that a declaratory judgment or damages may provide an inadequate remedy for breach of the provisions of this Agreement, and accordingly each party shall be entitled to seek specific performance, injunction or other similar remedy to ensure full and proper performance by the other party of its obligations under this Agreement. Subject to 10.4(i)(iii), such remedy may only be sought from the arbitrator appointed under Section 10.4(a).

ACCEPTED:	
ORDER NO.	
	COMMISSION SECRETARY
<b>BC Hydro Application for Approval of N</b>	lew Power Purchase Agreement (PPA) with FortisBC
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### 11. REMEDIES FOR BREACH

11.1 Notice

If a Party (the "Non-Breaching Party") considers that the other Party (the "Breaching Party") has breached this Agreement, including the Accounting Procedures (a "Breach"), and (i) the Breach is material, or (ii) there are persistent Breaches (in each such case, a "material Breach") the Non-Breaching Party may give notice (the "Notice of Breach") to the Breaching Party identifying actions of the Breaching Party that the Non-Breaching Party considers to represent a material Breach. The Breaching Party shall within 15 days respond to the Notice of Breach, advising of the processes, procedures and controls that the Breaching Party shall implement to ensure that such Breaches will not recur in the future, or disputing the Notice of Breach. If the Breaching Party disputes the Notice of Breach, the Notice of Breach and the Breaching Party's response shall be referred for dispute resolution in accordance with Section 10. If the matter is not resolved in accordance with Section 10.2 or Section 10.3, either Party may submit the matter for arbitration pursuant to Section 10.4 and the arbitrator is authorized and directed to determine whether the Breaching Party has committed a material Breach of this Agreement and, if so, the processes, procedures and controls that the Breaching Party must implement to ensure that such Breaches will not recur in the future. In determining what processes, procedures and controls that the Breaching Party must implement, the arbitrator shall consider, among all other relevant factors, the cost to the Breaching Party of implementing such processes, procedures and controls.

#### 11.2 Second Notice

If the Breaching Party acknowledges or an arbitrator determines that the Breaching Party has committed a material Breach of this Agreement and the Non-Breaching Party again considers that the Breaching Party has committed a material Breach of this Agreement, then the Non-Breaching Party may give a further notice ("Second Notice") to the Breaching Party identifying actions of the Breaching Party that the Non-Breaching Party considers to represent a material Breach and the provisions of Section 11.1 shall again apply. If the matter is not resolved in the manner provided for in Section 11.1 and the arbitrator determines that the Breaching Party has committed a material Breach of this Agreement or that any processes, procedures or controls that the Breaching Party was to implement were not satisfactorily implemented, then the Non-Breaching Party may apply to the Commission for remedies that the Non-Breaching Party considers appropriate in the circumstances.

#### 11.3 Remedies under other Agreements Unaffected

The Parties acknowledge and agree that the foregoing remedies are intended to be in addition to any remedies they may have under any of the CPA-Related Agreements or the Non-CPA-Related Agreements.

<b>BC Hydro Application for Approval of New Pc</b>	wer Purchase Agreement (PPA) with FortisBC
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ACCEPTED:	

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### 11.4 Deemed Breach

If FortisBC does not provide timely and reliable information and accounting as required pursuant to this Agreement in connection with its performance of this Agreement, that itself shall be deemed a Breach of this Agreement.

- 12. NOTICES
- 12.1 Notices

All notices, directions and other instruments required or permitted to be given under this Agreement shall be in writing, and shall be sufficient in all respects if delivered, or if sent by facsimile, or if sent by prepaid registered post mailed in British Columbia to the Parties at the following addresses respectively:

 to BC Hydro: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

> Attention: Executive Vice-President, Generation Facsimile Number: 604-623-4155

With a copy to: British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Attention: Director of Legal Services Facsimile Number: 604-623-3606

(b) to FortisBC FortisBC Inc. 10<sup>th</sup> Floor 1111 West Georgia Street Vancouver, B.C. V6E 4M3

> Attention: Vice-President, Energy Supply Facsimile Number: 604-592-7620

With a copy to:

FortisBC Inc. 10th Floor 1111 West Georgia Street

ACCEPTED:

ORDER NO.

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Vancouver, B.C. V6E 4M3

Attention: General Counsel Facsimile Number: 604-443-6540

Either Party shall have the right at any time to change its address by notice in writing sent to the other Party at the address in effect hereunder.

12.2 Delivery of Notices

Any notice, direction or other instrument shall be deemed to have been received on the following dates:

- (a) if sent by facsimile, on the Business Day next following the date the sender receives confirmation of successful transmission;
- (b) if delivered, on the Business Day next following the date of delivery; or
- (c) if sent by registered mail, on the seventh day following its mailing, provided that if there is at the time of mailing or within 7 days thereafter a mail strike, slowdown, lockout or other labour dispute which might affect the delivery, then any notice, direction or other instrument, shall only be effective upon actual delivery or if delivered or sent by facsimile.
- 12.3 Electronic Mail Notices

As an alternative to the methods of giving notice described in Section 12.1, a Party may give notices, directions and other instruments required or permitted to be given under this Agreement by electronic mail to the other Party's representative(s) identified in Section 12.1 who continues to be employed by the other Party and is not to the knowledge of the sending Party unavailable; provided (i) the notice, direction or other instrument is stated to be a notice, direction or other instrument required or permitted to be given under this Agreement, and (ii) the notice, direction or other instrument is concurrently also given by electronic mail to the Corporate Secretary of the other Party. Any notice, direction or other instrument given by electronic mail shall be deemed to have been received on the Business Day next following the date of sending, provided that no such notice shall be effective unless such notice is actually received by the representative(s).

- 13. MISCELLANEOUS
- 13.1 Time is of the Essence

If a Party persistently fails to perform any of its obligations hereunder by the time(s) provided for herein (and the result or effect of such failure is not provided for in this Agreement), then the other Party may, by notice to the Party, require that from the date specified in the notice, time shall be of the essence with respect to such obligations.

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<b>BC Hydro Application for Approval of New</b>	w Power Purchase Agreement (PPA) with FortisBC
	COMMISSION SECRETARY
ORDER NO.	
ACCEPTED:	

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#### 13.2 No Assignment Without Consent

Neither Party may sell, assign or otherwise transfer this Agreement or any of its rights, obligations or liabilities under this Agreement to any other person unless all such rights, obligations and liabilities are assigned, and then only with the prior consent in writing of the other Party.

#### 13.3 No Third Party Beneficiaries

Nothing in this Agreement, express or implied, is intended or shall be construed to confer upon or to give any Person, other than the Parties and their respective permitted successors and assigns, any rights or remedies under or by reason of this Agreement.

#### 13.4 Further Assurances

Each of the Parties agrees that it shall take from time to time such actions and execute such additional instruments as may be reasonably necessary or convenient to implement and carry out the intent and purpose of this Agreement.

#### 13.5 No Consequential Damages

No arbitrator shall award any special, incidental, exemplary, punitive or consequential damages with respect to, arising out of, relating to or in any way connected with a Party's performance or non-performance under this Agreement, provided nothing in this Section 13.5 shall limit any damages or other remedies for any Breach or material Breach of this Agreement that may be expressly provided for herein.

#### 13.6 Waiver

The failure of a Party to insist on the strict performance of any provision of this Agreement or to exercise any right, power or remedy upon a breach hereof shall not constitute a waiver of any provision of this Agreement or limit that Party's right thereafter to enforce any provision or exercise any right.

#### 13.7 Governing Law

This Agreement and all the terms and conditions contained in it shall be governed and construed in accordance with the laws of British Columbia and, to the extent applicable, shall be subject to (a) the provisions of the *Utilities Commission Act*, as amended or reenacted from time to time, and (b) the jurisdiction of the Commission.

#### 13.8 Amendments

(a) No amendment of this Agreement shall be valid unless made in writing and executed by the appropriate duly authorized signatories of the Parties (and approved by the Commission to the extent required by law) or unless ordered by the Commission in accordance with its authority under the Utilities Commission Act, either upon its own motion or upon the application of either Party. A Party

ACCEPTED:	
ORDER NO	
BC Hydro Application for Approval of N	COMMISSION SECRETARY ew Power Purchase Agreement (PPA) with FortisBC
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seeking amendment of this Agreement by the Commission shall give reasonable prior notice thereof to the other Party and the Parties shall negotiate in good faith to reach agreement on appropriate amendments, if any, before applying to the Commission. For greater certainty, an amendment to the Accounting Procedures shall not be considered an amendment to this Agreement.

(b) Neither Party shall apply to the Commission for approval of or to object to any amendment of the Accounting Procedures agreed to or determined by an arbitrator pursuant to the terms of this Agreement.

13.9 Enurement

This Agreement shall be binding upon and enore to the benefit of the Parties hereto and their respective successors and permitted assigns.

13.10 Counterpart Execution

This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute but one and the same.

13.11 Electronic Delivery

Delivery by a Party of an executed copy of this Agreement by electronic means shall be effective delivery.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By: Authorized Signatory

FORTISBC INC.

By: Authorized Signatory

794199213

ACCEPTED:

ORDER NO.

### - 28 -

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IN WITNESS WHEREOF the Parties have executed this Agreement as of the day and year first above written.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By:

Authorized Signatory

FORTISBC INC. By: Authorized Signatory John Walker President & CEO

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ACCEPTED:

ORDER NO.

Appendix A BC Hydro Tariff Supplement No. 3 Attachment 5 General Wheeling Agreement Effective: First Revision of Page 1 of 1

# **ATTACHMENT 5**

PLACEHOLDER GENERAL WHEELING AGREEMENT

ORDER NO.\_\_\_\_\_\_COMMISSION SECRETARY BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 128 of 128

ACCEPTED:\_\_\_\_\_

# BC Hydro Application for Approval of New PPA with FortisBC

Appendix B

**Draft Order** 

## Appendix B

BRITISH COLUMBIA UTILITIES COMMISSION

G-

TELEPHONE: (604) 660-4700

BC TOLL FREE: 1-800-663-1385 FACSIMILE: (604) 660-1102

ORDER NUMBER

, 2013

STISH COLUMB
A A A A A A A A A A A A A A A A A A A
FILL COMMISSION

SIXTH FLOOR, 900 HOWE STREET, BOX 250 VANCOUVER, BC V6Z 2N3 CANADA web site: http://www.bcuc.com

## IN THE MATTER OF the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

# Application by British Columbia Hydro and Power Authority (BC Hydro) for Approval of New Power Purchase Agreement (PPA) with FortisBC

**BEFORE:** 

ORDER

## WHEREAS:

- A. The British Columbia Hydro and Power Authority ("BC Hydro") has been supplying electricity to FortisBC Inc. ("FortisBC") for 20 years pursuant to a Power Purchase Agreement dated October 1, 1993 ("1993 PPA") to meet a portion of FortisBC's load service obligations and at rates set by the British Columbia Utilities Commission ("Commission") as set out in BC Hydro Rate Schedule 3808;
- B. The 1993 PPA expires on September 30, 2013 pursuant to Commission Order Nos. G-27-93 and G-85-93;
- C. On May 24, 2013, BC Hydro filed with the Commission four new agreements between BC Hydro and FortisBC: a Power Purchase Agreement ("New PPA"), an Imbalance Agreement, an Energy Export Agreement and a Master Accounting Agreement, each dated May 21, 2013 and to replace the supply provided under the expiring 1993 PPA;
- D. BC Hydro requested that the Commission set the New PPA and associated agreements as rates pursuant to sections 58 to 61 of the *Utilities Commission Act* (the "Application");
- E. The New PPA and associated agreements do not change the basic parameters of the service BC Hydro has been providing to FortisBC for 20 years under the 1993 PPA; the New PPA continues to provide for up to 200 MW of capacity and 1,752 GWh/year of associated energy for FortisBC over a 20-term;
- F. The New PPA and associated agreements modernize the terms and conditions of the service BC Hydro has been providing to FortisBC by introducing improvements for current industry practices and current circumstances as described in the Application;

## Appendix B

BRITISH COLUMBIA UTILITIES COMMISSION

G-

Order Number

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- G. One of the modernizations proposed in the New PPA and a new Rate Schedule 3808 is two-step pricing for energy with the first tranche (up to 1,041 GWh/year) set at BC Hydro's energy price for customers taking electricity at transmission voltages and served under Rate Schedule 1827 pursuant to Commission order, and the second tranche (for energy exceeding 1,041 GWh/year up to the maximum 1,752 GWh/year) set at a proxy for BC Hydro's long-term marginal cost of new supply;
- H. In addition to the four new agreements submitting to the Commission, changes in the New PPA relative to the 1993 PPA required changes to the General Wheeling Agreement between BC Hydro and FortisBC dated October 15, 1986 and amended from time to time;
- I. On [date] BC Hydro submitted an amended General Wheeling Agreement to the Commission for approval as a supplement to the Application;
- J. The New PPA and associated agreements including the General Wheeling Agreement are a specialized package of arrangements reflecting the unique historical and ongoing relationships between BC Hydro and FortisBC in the context of the Canal Plant Agreement, which has been exempted from regulation under the Utilities Commission Act pursuant to Commission Order No. G-41-06;
- K. The New PPA and associated agreements are the result of years of bilateral, arms-length negotiations between BC Hydro and FortisBC, and apply to only the service BC Hydro provides to FortisBC and not to the service BC Hydro provides to any other customer;
- L. In a letter to the Commission dated May ●, 2013, FortisBC confirmed its support for the New PPA and associated agreements, and for the Commission approving the agreements as filed;
- M. [Summary of process]

NOW THEREFORE the Commission orders as follows:

- 1. The Power Purchase Agreement, Imbalance Agreement, Energy Export Agreement and Master Accounting Agreement are approved as filed in the Application.
- 2. Rate Schedule 3808 is approved as filed in the Application.
- 3. The amended General Wheeling Agreement is approved as filed on [date].

**DATED** at the City of Vancouver, in the Province of British Columbia, this day of , 2013.

BY ORDER

# BC Hydro Application for Approval of New PPA with FortisBC

Appendix C

**RS 3808 Black-lined** 

**BC Hydro** 

Rate Schedules

Effective: Thirteenth Revision of Page 76

## SCHEDULE 3808 – TRANSMISSION SERVICE – FORTISBC

<u>Availability</u> :	This schedule is available to FortisBC in accordance with the terms and conditions of the Agreement between BC Hydro and FortisBC entered into and deemed effective the 1st day of October <u>2013</u> 4993 (the "Power Purchase Agreement"). The <u>ContractTotal Nominated</u> Demand shall not exceed 200 MW in any hour.
Applicable in:	For Electricity delivered to FortisBC at each Point of <u>DeliveryInterconnection</u> and the Point of Supply as defined in the Power Purchase Agreement.
<u>Rate</u> :	Demand Charge: \$6.353 per kW of Billing Demand per Billing Month _plus
	Tranche 1 Energy Price: Energy Charge: 3.724¢ per kW.h
	<u>Tranche 2 Energy Price: of Purchase Energy per Billing Month</u> 12.97¢ per kW.h
Billing Demand:	The Demand for billing purposes in any Billing Month shall be the greatest of:
	<ol> <li>the maximum amount of Electricity (in kW) scheduled under the <u>Power Purchase Agreement, for any hour of the Billing month; <del>Total</del> <del>Purchase Capacity for that Billing Month, plus 1.2 times the Total</del> <del>Excess Capacity for that Billing month; or</del></u></li> </ol>
	2. 75% of the maximum amount of electricity (in kW) scheduled under the Power Purchase Agreement in any hour in the 11 months of the Term immediately prior to the Billing Month (or less than 11 months, if the Effective Date is less than 11 months prior to the Month); and
	times the sum of the highest Total Purchase Capacity registered in any of the preceding eleven months, plus 1.2 times the highest Total Excess Capacity in any of the preceding eleven months; or
	<ol> <li>50% of the <u>Contract Demand (in kW) for the Total Nominated</u> Capacity, plus 1.2 times the Total Excess Capacity for that Billing Month.     </li> </ol>
	If FortisBC has reduced the Contract Demand in accordance with the Power Purchase Agreement, the amount of Electricity specified in Section 2 above may not exceed an amount equal to 100% of the Contract Demand.
<u>Maximum</u> Tranche1 Amount	The Maximum Tranche 1 Amount for each Contract Year is 1,041 GW.h.
<u>Scheduled Energy</u> <u>Less Than or</u> Equal to Annual <u>Energy</u> <u>Nomination</u>	In any Contract Year, for the amount of the Scheduled Energy taken or deemed to be taken that is less than or equal to the Annual Energy Nomination, FortisBC shall pay: (a) The Tranche 1 Energy Price for each kW.h of such Scheduled Energy taken or deemed taken that is less than or equal to the Maximum
	Tranche 1 Amount; and
ACCEPTED:	

ORDER NO.\_\_\_\_\_

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 1 of 3

## Appendix C

BC Hydro

Rate Schedules Effective:

Thirteenth Revision of Page 76

(a)(b) The Tranche 2 Energy Price for each kW.h of such Scheduled Energy taken that exceeds the Maximum Tranche 1 Amount.

<del>(a)</del>

ACCEPTED:

ORDER NO.

COMMISSION SECRETARY

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 2 of 3

	Effective:	<b>BC Hydro</b> Rate Schedules 01 April 2013 Original Page 76-1
Scheduled Energy Exceeding the Annual Energy	In any Contract Year, for the amount of the Scheduled E deemed to be taken that exceeds the Annual Energy No shall pay:	
Nomination	(a) <u>150% of the Tranche 1 Energy Price, for each kW.h</u> <u>Energy taken or deemed taken that that exceeds the</u> <u>Nomination, but is less than or equal to the Maximur</u> <u>Amount; and</u>	Annual Energy
	(b) <u>115% of the Tranche 2 Energy Price, for each kW.h</u> <u>Energy taken that exceeds the Annual Energy Nomine</u> <u>exceeds the Maximum Tranche 1 Amount.</u>	
<u>Annual Minimum</u> <u>Take</u>	In any Contract Year, FortisBC shall schedule and take a Electricity equal to at least 75% of the Annual Energy No be responsible for any Annual Shortfall.	
<u>Note</u> :	The terms and conditions under which service is supplied contained in the Power Purchase Agreement. This school the same rate adjustments as Schedule 1827.	
<u>Taxes:</u>	The rates and charges contained herein are exclusive of Services tax and the Social Services tax.	the Goods and
Rate Rider:	The Deferral Account Rate Rider as set out in Rate Scheall charges payable under this Rate Schedule, before tax	
Rate Increase:	The Tranche 1 Energy Price and Demand Charge are su rate adjustments as Schedule 1827. Tranche -2 Energy changes as provided for in the Power Purchase Agreem	Price is subject to
	Effective April 1, 2013 the <u>Rates and Minimum Tranche</u> the Demand Charge under this schedule includes an inc before rounding, approved by BCUC Order No. G-77-12. Commission Order under section 44.2 of the Utilities Cou respecting BC Hydro's F2014 expenditures on DSM. Effect the Rates and Minimum Charge under these schedules i of 1.44% before rounding, approved by BCUC Order No only to a Commission order under section 44.2 of the Ut Act respecting BC Hydro's F2014 expenditures on DSM.	rease of 1.44% A <del>, subject only to a</del> mmission Act ective April 1, 2013 include an increase . G-77-12A, subject <i>ilities Commission</i>

ACCEPTED:\_\_\_\_\_

ORDER NO.\_\_\_\_\_

COMMISSION SECRETARY

Appendix C

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 3 of 3

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# BC Hydro Application for Approval of New PPA with FortisBC

Appendix D

RS 3808 Clean

**BC Hydro** 

Rate Schedules

Effective: Thirteenth Revision of Page 76

### SCHEDULE 3808 – TRANSMISSION SERVICE – FORTISBC

<u>Availability</u> :	This schedule is available to FortisBC in accordance with the terms and conditions of the Agreement between BC Hydro and FortisBC entered into and deemed effective the 1st day of October 2013 (the "Power Purchase Agreement"). The Contract Demand shall not exceed 200 MW in any hour.		
Applicable in:	For Electricity delivered to FortisBC at each Point of Delivery as defined in the Power Purchase Agreement.		
<u>Rate</u> :	Demand Charge:	\$6.353 per kW of Billing Demand per Billing Month plus	
	Tranche 1 Energy Price:	3.724¢ per kW.h	
	Tranche 2 Energy Price:	12.97¢ per kW.h	
Billing Demand:	The Demand for billing purposes in any Billing Month shall be the greatest of:		
	<ol> <li>Power Purchase Agreer</li> <li>75% of the maximum ar the Power Purchase Ag Term immediately prior if the Effective Date is le</li> <li>50% of the Contract Der</li> <li>If FortisBC has reduced the Cor Purchase Agreement, the amount</li> </ol>	f Electricity (in kW) scheduled under the ment, for any hour of the Billing month; mount of electricity (in kW) scheduled under reement in any hour in the 11 months of the to the Billing Month (or less than 11 months, ess than 11 months prior to the Month); and mand (in kW) for the Billing Month. htract Demand in accordance with the Power nt of Electricity specified in Section 2 above al to 100% of the Contract Demand.	
<u>Maximum</u> Tranche1 Amount	The Maximum Tranche 1 Amount for each Contract Year is 1,041 GW.h.		
<u>Scheduled Energy</u> <u>Less Than or</u> Equal to Annual	In any Contract Year, for the amount of the Scheduled Energy taken or deemed to be taken that is less than or equal to the Annual Energy Nomination, FortisBC shall pay:		
Energy Nomination	(a) The Tranche 1 Energy Price for each kW.h of such Scheduled Energy taken or deemed taken that is less than or equal to the Maximum Tranche 1 Amount; and		
	(b) The Tranche 2 Energy Price taken that exceeds the Max	e for each kW.h of such Scheduled Energy imum Tranche 1 Amount.	

ACCEPTED:\_\_\_\_\_

ORDER NO.\_\_\_\_\_

COMMISSION SECRETARY

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 1 of 2

BC Hydro

Rate Schedules

Effective: Original Page 76-1

Scheduled Energy Exceeding the Annual Energy Nomination	<ul> <li>In any Contract Year, for the amount of the Scheduled Energy taken or deemed to be taken that exceeds the Annual Energy Nomination, FortisBC shall pay:</li> <li>(a) 150% of the Tranche 1 Energy Price, for each kW.h of such Scheduled Energy taken or deemed taken that that exceeds the Annual Energy Nomination, but is less than or equal to the Maximum Tranche 1 Amount; and</li> <li>(b) 115% of the Tranche 2 Energy Price, for each kW.h of such Scheduled</li> </ul>
	Energy taken that exceeds the Annual Energy Nomination and also exceeds the Maximum Tranche 1 Amount.
<u>Annual Minimum</u> <u>Take</u>	In any Contract Year, FortisBC shall schedule and take an amount of Electricity equal to at least 75% of the Annual Energy Nomination, and shall be responsible for any Annual Shortfall.
<u>Note</u> :	The terms and conditions under which service is supplied to FortisBC are contained in the Power Purchase Agreement.
<u>Taxes:</u>	The rates and charges contained herein are exclusive of the Goods and Services tax and the Social Services tax.
Rate Rider:	The Deferral Account Rate Rider as set out in Rate Schedule 1901 applies to all charges payable under this Rate Schedule, before taxes and levies.
Rate Increase:	The Tranche 1 Energy Price and Demand Charge are subject to the same rate adjustments as Schedule 1827. Tranche 2 Energy Price is subject to changes as provided for in the Power Purchase Agreement.
	Effective April 1, 2013 the Tranche 1 Energy Price and the Demand Charge under this schedule includes an increase of 1.44% before rounding, approved by BCUC Order No. G-77-12A.

ACCEPTED:\_\_\_\_\_

ORDER NO.\_\_\_\_\_

BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 2 of 2

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# BC Hydro Application for Approval of New PPA with FortisBC

Appendix E

Comparison Table (1993 PPA vs. New PPA)

		1993 PPA	New PPA
Term		20 years (section 2.5)	20 years, and can be terminated early in certain circumstances (section 2.1)
Contract De	emand	200 MW, maximum	200 MW, maximum
		(section 7.1)	(section 1.1(r))
Points of D	elivery	The Points of Interconnection and the Points of Supply, as defined in the GWA (sections 3.1-3.2)	The Points of Interconnection and the Points of Supply, as defined in the GWA (section 3.1)
Scheduled	Energy	Take or pay for prescheduled amounts (section 8.2)	Take and pay for Scheduled Energy (section. 4.1)
Deliveries of Scheduled	of Energy not	Permitted, but FortisBC subject to Excess Energy Charges and Excess Demand Charges	Only Scheduled Energy is delivered to FortisBC (section 4.1)
			Any Imbalance Energy is in accordance w/Imbalance Agreement (section 6.5)
Pricing			
	Base rate	Energy charge (equivalent to RS 1827)	Tranche 1 Energy Price (equivalent to RS 1827), up to Maximum Tranche 1 amount; plus
Energy Charges		(section 8.2 and RS 3808)	Tranche 2 Energy Price (equivalent to BC Hydro LRMC) for energy above Maximum Tranche 1 amount
0			(sections. 7.1-7.4 and RS 3808)
	Excess Energy Charges	For energy taken above prescheduled amounts (Total Excess Energy), 1.15 times the Energy Charge (sections 8.3, 9.2-9.3 and RS 3808)	Not applicable. Energy deliveries under the PPA cannot exceed Scheduled Energy. Any excess deliveries are in accordance with the Imbalance Agreement.
Demand Charges	Base rate	Demand Charge (equivalent to RS 1827) and ratchet provisions similar to RS 1827 for Billing Demand. Demand charger and ratchets are calculated using prescheduled and unscheduled amounts. (section 6.2 and RS 3808)	Demand Charge (equivalent to RS 1827) and ratchet provisions similar to RS 1827 for Billing Demand. Demand charges and ratchets are calculated using Scheduled Energy. (sections 8.1-8.2 and RS 3808)

# Summary Comparison Table (1993 PPA vs. New PPA)

		1993 PPA	New PPA
	Excess Demand Charges	Ratchet provisions also include an additional charge of 1.2 times the amount capacity exceeding Nominated Demand (Total Excess Capacity) (sections 9.2-9.3 and RS 3808)	Not applicable. Energy deliveries to be allocated among the points of delivery with no Nominated Demand limitations.
Nominations	& Scheduling		
	Nominated Demand	By October 1 <sup>st</sup> of each year, FortisBC provides a Nominated Demand for each point of delivery for the 5 <sup>th</sup> ensuing year (sections 7.1-7.3)	Nominated Demand limitations removed to allow FortisBC to use the full amount of the Contract Demand, but transmission capacity issues for operational and planning purposes to be incorporated in amended/restated General Wheeling Agreement
Annual	Energy Nominations	None. However, any energy delivered in excess of a Nominated Demand deemed to be Excess Energy (sections 9.2-9.3)	By June 30 <sup>th</sup> each year, FortisBC to provide an Annual Energy Nomination for the following Contract Year (single nomination for all points of delivery)
Nominations and Forecasts			If the Annual Energy Nomination is exceeded, 1.5 times the Tranche 1 Energy Price and 1.15 times the Tranche 2 Energy Price
			"Take or pay" for 75% of Annual Energy Nomination
			Annual Energy Nomination can change by +/-20% each year
			(sections 5.1-5.4)
	Load Forecasts	By June 30 <sup>th</sup> of each year, parties to exchange forecasts for the next 10 years (section 5.2)	By June 30 <sup>th</sup> of each year, FortisBC to provide forecasts of load and annual PPA purchases for the next 10 years (section 9.2)
Energy	Daily Prescheduling	Hourly preschedule submitted for each day 2x per week (section 8.1)	Hourly preschedule submitted each day by 5:30am in accordance with industry scheduling practices (section 6.1)
Scheduling	Preschedule Changes and Deliveries	No preschedule changes. However, energy can be delivered in excess of prescheduled amount (section 8.3)	FortisBC is permitted real-time hourly changes for +/-25MW (and during freshet only +25MW) (section 6.2)

		1993 PPA	New PPA
	By FortisBC	No export or storage permitted while PPA energy is being delivered (sections 2.1, 8.3 and 9.4)	No export or storage permitted while taking Scheduled Energy, except in accordance with Energy Export Agreement (sections 2.5-2.6)
Limitations	By FortisBC self- generation customers	No sale of PPA energy to a FortisBC customer when such customer is selling self- generated electricity not in excess of its load (section 2.1)	No sale of PPA energy to a FortisBC customer when such customer is selling self-generated electricity not in excess of a customer-specific baseline, consistent with BC Hydro generator baseline principles (section 2.5)

# BC Hydro Application for Approval of New PPA with FortisBC

Appendix F

**1986 PPA Decision** 

## IN THE MATTER OF the Utilities Commission Act S.B.C. 1980, c. 60, as amended

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IN THE MATTER OF Matters in Dispute between British Columbia Hydro and Power Authority and West Kootenay Power and Light Company, Limited

## DECISION

October 15, 1986



M. Taylor, Chairman J.D.V. Newlands, Deputy Chairman D.B. Kilpatrick, Commissioner N. Martin, Commissioner

## BC Hydro Application for Approval of New PPA with FortisBC

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#### APPEARANCES

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K.C. MACKENZIE Counsel for the British Columbia L.F. HINDLE Hydro and Power Authority R.S. ANDERSON Counsel for West Kootenay Power G.K. MACINTOSH and Light Company, Limited **R.J. BAUMAN** Counsel for : City of Kelowna; The Corporation of the City of Grand Forks; The Corporation of the City of Penticton; The Corporation of the District of Summerland; The Corporation of the City of Nelson, Weyerhaeuser Canada Ltd. and Westar Timber Ltd. C. SANDERSON Counsel for the British Columbia Utilities Commission S.B. MOULD Association of B.C. Irrigation Districts MAYOR CHARLES LAKES City of Trail and Regional District of Kootenay Boundary CARL HENNE City of Castlegar MARTIN KRUYSSE **Community Economic Action Committee** MAYOR J. DRYSDALE Rossland ROBERT H. BRISCO MP for Kootenay West CHRISTOPHER D'ARCY MLA for Rossland-Trail ALLAN SCHULTZ British Columbia Hydro and Power J.P. SHEEHAN Authority C.F. FUSSEL D.R. FORREST GARY SALEBA West Kootenay Power and Light STEPHEN ASH Company, Limited **ROBIN SIDDALL** LILA IRVINE Town of Creston

(i)

APPEARANCES (Cont'd)

### COMMISSION STAFF

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**!** •

1

J. Grunau R. Brownell B. McKinlay J. Hague Dr. Y. Wong

CONSULTANT TO COMMISSION STAFF

HEARING OFFICER

COURT REPORTER

Dr. R.H. Sarikas

W.R. Harper

Allwest Reporting Ltd.

(ii)

# BC Hydro Application for Approval of New PPA with FortisBC

W.I.RH

# DUPLICATE

IN THE MATTER OF the Utilities Commission Act S.B.C. 1980, c. 60, as amended

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IN THE MATTER OF Matters in Dispute between British Columbia Hydro and Power Authority and West Kootenay Power and Light Company, Limited

## DECISION

October 15, 1986

Before :

M. Taylor, Chairman J.D.V. Newlands, Deputy Chairman D.B. Kilpatrick, Commissioner N. Martin, Commissioner

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K.C. MACKENZIECounsel for the British ColumbiaL.F. HINDLEHydro and Power AuthorityR.S. ANDERSONCounsel for West Kootenay Power

Counsel for West Kootenay Power and Light Company, Limited

Counsel for : City of Kelowna; The Corporation of the City of Grand Forks; The Corporation of the City of Penticton; The Corporation of the District of Summerland; The Corporation of the City of Nelson, Weyerhaeuser Canada Ltd. and Westar Timber Ltd.

Counsel for the British Columbia Utilities Commission

Association of B.C. Irrigation Districts

City of Trail and Regional District of Kootenay Boundary

City of Castlegar

Rossland

Community Economic Action Committee

MAYOR J. DRYSDALE

ROBERT H. BRISCO

MARTIN KRUYSSE

G.K. MACINTOSH

**R.J. BAUMAN** 

C. SANDERSON

S.B. MOULD

CARL HENNE

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CHRISTOPHER D'ARCY

MAYOR CHARLES LAKES

ALLAN SCHULTZ J.P. SHEEHAN C.F. FUSSEL D.R. FORREST

GARY SALEBA STEPHEN ASH ROBIN SIDDALL

LILA IRVINE

MP for Kootenay West MLA for Rossland-Trail

- . . . . . . . . . . . .

British Columbia Hydro and Power Authority

West Kootenay Power and Light Company, Limited

Town of Creston

(i)

APPEARANCES (Cont'd)

COMMISSION STAFF

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J. Grunau R. Brownell B. McKinlay J. Hague Dr. Y. Wong

CONSULTANT TO COMMISSION STAFF

HEARING OFFICER

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Dr. R.H. Sarikas

W.R. Harper

Allwest Reporting Ltd.

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### INTRODUCTION

This Decision is directed to resolution of the specific issues in dispute between the British Columbia Hydro and Power Authority ("B.C. Hydro" or "Hydro") and West Kootenay Power and Light Company, Limited ("WKPL"), which have precluded completion of the longer-term contractual arrangements desired by both parties. It focuses essentially on determination by the Commission of the just and reasonable rates for power and for wheeling services to be provided by B.C. Hydro to WKPL for a transition period, together with the appropriate terms and conditions to be associated with the rates in both the transition and longer-term periods of the required contract. The Decision therefore, while providing the principles on the basis of which the contract is expected to be drawn between the parties, leaves the actual choice of words reflecting those principles, for the parties themselves to decide.

In the absence of definitive and documented supply alternatives and system plans by WKPL, this Decision is based on the premise and WKPL's declared intention, that B.C. Hydro will be WKPL's sole supplier of future incremental power requirements until at least the year 1990. It is the firm belief of the Commission, however, that it is the duty and responsibility of every regulated public utility to be ultimately free to seek out and obtain the lowest cost, secure sources of supply consistent with the markets to be served. Where this is not undertaken by the utility the shareholders must be prepared to bear the ultimate responsibility and related costs.

Accordingly, this Decision is not to be interpreted as directing or restricting either party as to future system plans or alternatives. If WKPL ultimately undertakes a transition from total dependency to partial dependency or no dependency on B.C. Hydro for its incremental power requirements, the principles adopted and rates, terms and conditions in this Decision will continue to apply. The Commission recognizes and accepts, however, that circumstances may arise requiring changes to the Terms and Conditions and rates specified in this Decision, to ensure that they remain just and reasonable to both parties.

### SECTION 1.0 BACKGROUND

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### 1.1 Matters in Dispute

A hearing into various matters in dispute between West Kootenay Power and Light Company, Limited ("WKPL") and British Columbia Hydro and Power Authority ("B.C. Hydro" or "Hydro") began May 12, 1986. The hearing was originally set for December 11, 1985 but was adjourned\* to April 18, 1986 upon application by B.C. Hydro. The hearing was adjourned once more to May 12, 1986 as a result of extensive additional evidence filed by B.C. Hydro on March 25, 1986.

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The issues the Commission is asked to resolve can be stated simply as the appropriate power purchase and wheeling rates B.C. Hydro should charge WKPL, and the appropriate terms and conditions required to render those rates just, reasonable and not unduly discriminatory. Those issues are inevitably difficult, involving not only technical complexities but also in this instance, recognition of the historical relationship between the utilities and the principle of fairness.

The issues at the hearing, which are formally identified in the Adjournment Decision, are as follows:

- (a) The November 7, 1985 application of WKPL pursuant to Sections 28, 32, 88 and 100 of the Utilities Commission Act ("the Act") to allow wheeling of WKPL power over B.C. Hydro facilities between South Slocan and delivery points at Vernon, Princeton and Creston at existing rates. Further, to allow emergency wheeling over B.C. Hydro facilities in the event of the loss of the Waneta-Boundary (transmission) line.
- (b) The November 22, 1985 complaint of WKPL pursuant to Section 64 of the Act that B.C. Hydro Rate Schedule 1211 proposed to be charged for service to WKPL is unjust and unreasonable.

\* The Commission's decision allowing the adjournment is dated December 18, 1985 (the "Adjournment Decision").

- (c) The November 29, 1985 application by B.C. Hydro pursuant to Section 67 of the Act to establish rates with respect to the unexecuted General Wheeling Agreement.
- (d) The complaint of WKPL in connection with B.C. Hydro's proposed General Wheeling Agreement rates.

#### 1.2 West Kootenay Power and Light Company, Limited

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West Kootenay Power and Light Company, Limited is an electric utility regulated under the provisions of the Utilities Commission Act. The Company was incorporated by an Act of the British Columbia Legislature on May 8, 1897 and is authorized to generate, transmit and distribute power within a radius of 150 miles of Rossland, British Columbia. WKPL serves residential, commercial, irrigation, street lighting, and industrial customers in an area roughly described as extending from Princeton in the west to Creston in the east, and from the U.S. Boundary north to Kelowna and Kaslo. The Company supplies wholesale power to electric utility operations conducted by the Cities of Grand Forks, Kelowna, Nelson and Penticton, and the District of Summerland. Princeton Light and Power Company, Limited, a privatelyowned utility serving Princeton and vicinity, purchases its electric power requirements from WKPL.

WKPL is a wholly-owned subsidiary of Cominco Ltd. ("Cominco"), which owns all of the common shares and about 30 percent of the preferred shares. Cominco owns two hydro-electric power plants, Brilliant and Waneta, which are managed by WKPL. In 1982, Cominco sold three smaller power plants to WKPL for \$20 million, as authorized by Ministerial order of the Government of British Columbia. It also gave WKPL an option to construct additional generation at the Brilliant and Waneta sites; undertook to provide 75 average annual megawatts on a firm basis to 1990 and gave WKPL the right of first refusal to buy the remaining power plants and any power generated which was surplus to Cominco's requirements, until 2005.

The WKPL/Cominco integrated system consists of the following generation plants:

<u>Plant No</u> .	Name	Capacity MW	Energy Entitlement (GWh)*	Location
1	Lower Bonnington	41.4	329.3	Kootenay River
2	Upper Bonnington	59.4	429.6	Kootenay River
3	South Slocan	53.2	422.9	Kootenay River
4	Corra Linn	51.2	343.2	Kootenay River
5	Brilliant**	128.9	853.4	Kootenay River
6	Waneta**	373.9	2,465.4	Pend d'Oreille River

\* Source - Canal Plant Sub-Agreement

\*\* Cominco Facilities

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#### 1.3 B.C. Hydro

B.C. Hydro is the 5th largest corporation in Canada in terms of net assets. It was created as a Crown corporation by Act of the Provincial legislature on March 30, 1962 as the successor, by amalgamation, of the British Columbia Electric Company Limited and the British Columbia Power Commission, which had been the two major suppliers of electricity in the Province of British Columbia prior to that time.

The two electric utilities were amalgamated in order to facilitate integrated planning, generation and distribution of power in response to the growing requirements of the province. As well, the existence of a single major utility was considered necessary to the financing and construction of the large hydro-electric generating projects and other developments that would form the future base of the provincial power supply.

The principal components of the development strategy in the years immediately following the 1962 amalgamation were the dams and power plant constructed under the Columbia River Treaty with the United States, and the W.A.C. Bennett Dam and Gordon M. Shrum generating station on the Peace

River. Major high voltage transmission lines were also required to bring the power from remote power sites to the load centres where population and industry were located. Other significant generation and transmission projects followed as required.

B.C. Hydro built and operates the Canal Plant on the Kootenay River to optimize the total generating capacity of the Kootenay River system. Under the Canal Plant Agreement entered into in August 1972, B.C. Hydro gave average peak and average energy assurances to WKPL/Cominco to the year 2005 as an entitlement in exchange for water rights on the Kootenay River.

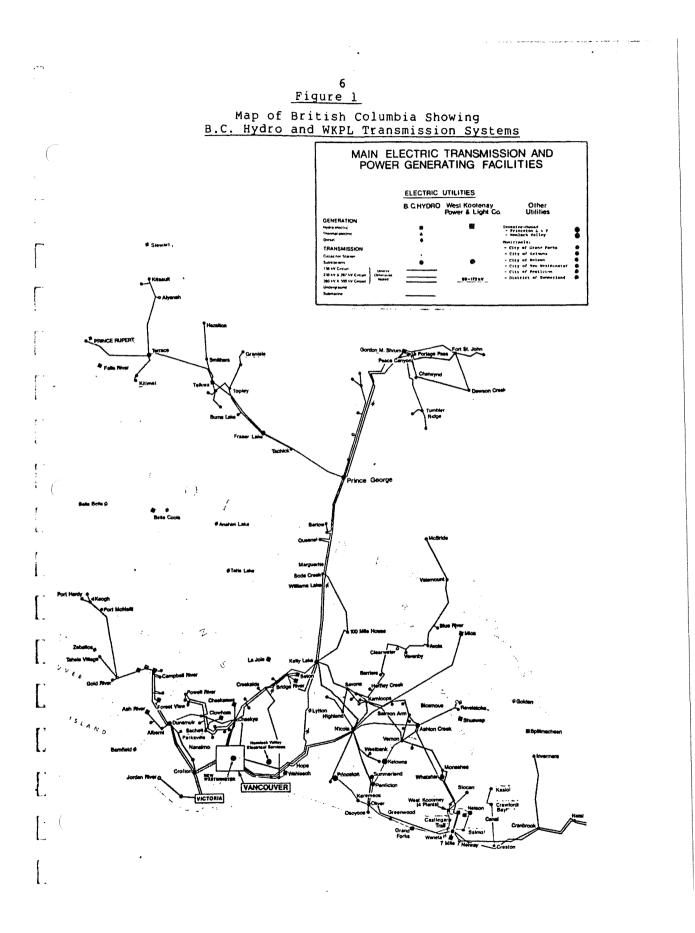
B.C. Hydro now owns and operates an electric service that supplies approximately 90 percent of the people of British Columbia. The percentage of the total market supplied with energy actually generated by the utility, however, is significantly less because of privately owned generation, of which the facilities of Cominco and Alcan are examples. B.C. Hydro became subject to general regulatory jurisdiction under the Utilities Commisson Act when the Act was proclaimed September 11, 1980. The maps in Figures 1 to 3 indicate the generation and transmission systems of both WKPL and B.C. Hydro.

1.4 Background to the Dispute

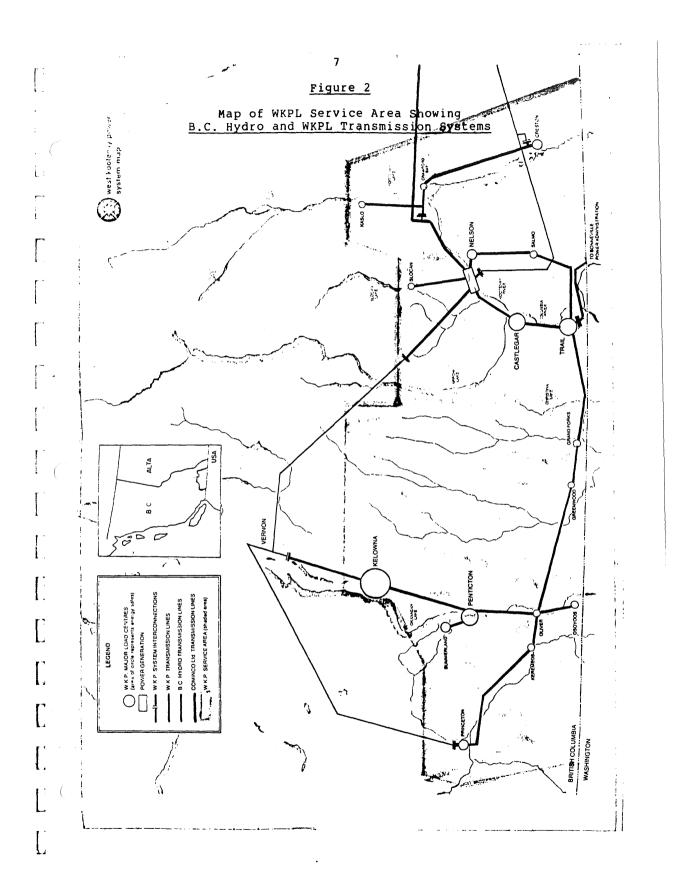
#### 1.4.1 Power Purchases

The aforementioned issues have been the subject of discussion between WKPL and B.C. Hydro for a number of years. The history of WKPL's purchases of power from B.C. Hydro is particularly complex. While power purchases are contemplated in the August 1, 1972 "Canal Plant Agreement" between B.C. Hydro and WKPL, purchases did not actually begin until 1978 pursuant to a "once only" agreement dated November 29, 1978, which provided for the sale of power at \$1.00/kilowatt per month based on nominated capacity plus plant incremental costs for thermal supply. Thereafter, each year WKPL and B.C. Hydro entered into new "once only" agreements for sale and purchase of power. The price has steadily increased so that by 1984/85 it reached \$3.782/kilowatt per month.

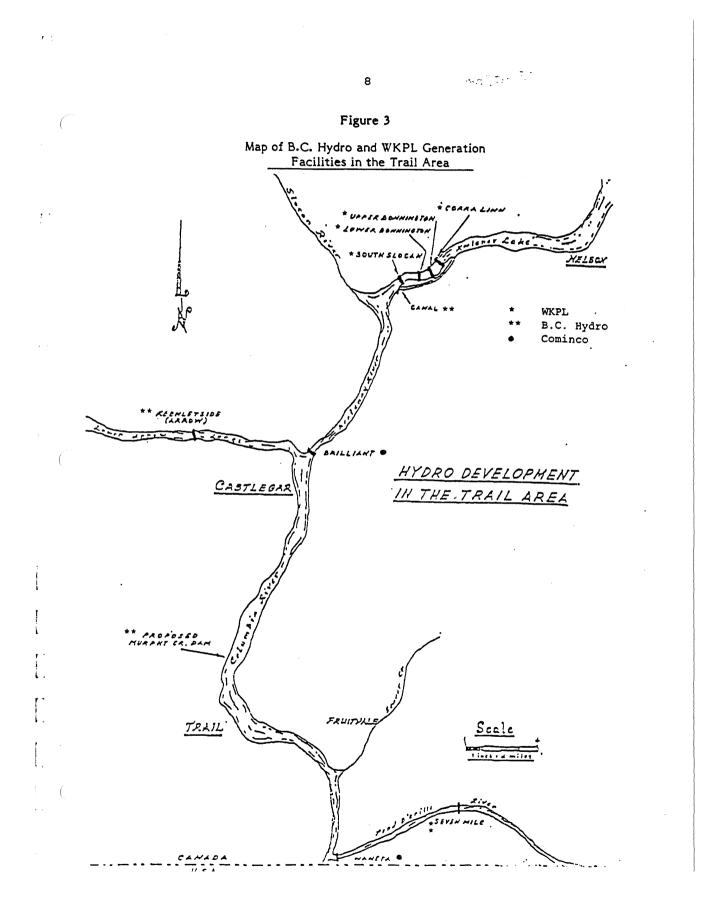
## BC Hydro Application for Approval of New PPA with FortisBC



# Appendix F



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Prior to 1978, WKPL obtained its entire power supply from owned generation and Cominco. (The Koch Creek Wheeling Agreement with B.C. Hydro had been in place since 1956.) Since that date, WKPL has been purchasing its incremental needs exclusively from B.C. Hydro at negotiated rates. It has on occasion attempted to obtain power from Bonneville Power Administration ("BPA") but B.C. Hydro has matched BPA's "full surplus" price thus ensuring its status as sole supplier of WKPL's incremental needs.

After the Commission was established in September of 1980, B.C. Hydro filed with the Commission Rate Schedule 3807 covering rates, including terms and conditions applicable to these "once only" arrangements with WKPL.

During the period that B.C. Hydro has been supplying power to WKPL, the parties have from time to time attempted to negotiate a longer-term contract to govern the purchase of power from B.C. Hydro by WKPL. Commencing in June of 1984, a renewed effort was made to resolve the long-term issue. This effort was continued until a November 12, 1985 meeting between the chief executive officers of the two companies failed to produce an agreement.

On July 10, 1985, during the course of the 1984/85 negotiations, B.C. Hydro advised WKPL that it would not enter into another "once only" annual contract. On October 18, 1985, B.C. Hydro advised that if a new long-term rate was not agreed on, B.C. Hydro Rate Schedule 1211 would be applied to WKPL.

On November 7 and 22, 1985, WKPL sought interim orders from the Commission compelling B.C. Hydro to wheel power and to supply power based on Rate Schedule 3807. The Commission, acting on B.C. Hydro's assurance that Rate Schedule 1211 was the most appropriate of its existing filed rate schedules to apply to WKPL issued Interim Orders G-88-85 and G-89-85, which respectively compelled B.C. Hydro to wheel power and to supply it on the basis of Rate Schedule 1211. These Orders were intended to ensure WKPL could obtain sufficient power to serve its customers on an uninterrupted basis.

Occasional willingness by the BPA to supply WKPL suggests that it could be an alternate supplier of power if the correct institutional and economic circumstances existed. Other domestic generators of electricity might also be able to provide some or all of WKPL's incremental needs if B.C. Hydro could not or would not sell power to WKPL at competitive prices. The most significant factor in determining how much power is required from B.C. Hydro, however, is the extent to which Cominco is able or willing to sell to WKPL. Currently, Cominco has an obligation to supply an annual average of 75 MW firm to 1990. After 1990, Cominco has agreed to provide firm power on the basis of a 3-year rolling nomination. In addition, it is obliged to offer WKPL the right of first refusal to purchase any surplus energy it has from time to time. These obligations are imposed by Cabinet Order-in-Council but may be amended by Cabinet upon application by Cominco.

### 1.4.2 Wheeling

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Wheeling is the term used to describe transactions involving electric power in which the owner of a transmission line transmits from one location to another and for a specified charge or rate, energy owned by others for use by the energy owner or a third party. The original wheeling agreement between B.C. Hydro and WKPL, the Koch Creek Agreement, was signed on August 31, 1956. The contract provided for the joint use of existing B.C. Hydro facilities between Whatshan and Vernon and the construction of a new 138 kv. transmission line between Whatshan and South Slocan. (Exhibit #6, p. 28).

Initially there was no charge to WKPL for wheeling, since Cominco was selling power to the then B.C. Power Commission and using B.C. Power Commission facilities for delivery. By 1965 WKPL's wheeling requirements had increased and Cominco's sales had terminated. A supplementary agreement established a firm rate of \$6,500/mo. for a 30 MW wheeling reservation. In 1985 a further amendment to the contract regarding wheeling rate was negotiated based on the original "hypothetical line" concept. Although the Koch Creek Agreement

gave WKPL access to 30 MW of transmission facility which was sufficient for a number of years after 1965, it has since become apparent that further wheeling will be necessary. (Exhibit #6, p. 29).

In 1977 WKPL negotiated for additional wheeling, mainly to avoid construction of their own facilities. B.C. Hydro was constructing a transmission grid to serve its own generation at the Canal Plant, Seven Mile, Mica and Revelstoke, and would have surplus capacity available to serve WKPL. Increased use of the system seemed to be mutually advantageous for both parties at the time, and a formula for the rate was developed based on a "hypothetical line". (Exhibit #6, pp. 30-31). Although the 1977 General Wheeling Agreement remained unsigned, the conduct of both parties was consistent with that Agreement until December 1, 1985 when B.C. Hydro applied to implement a new Wheeling Rate Schedule 1007. WKPL filed a complaint regarding this proposal and wheeling, therefore, became an issue requiring resolution by the Commission.

At the hearing, WKPL testified that wheeling will diminish, and increased power purchases from B.C. Hydro will be required to satisfy the load in the Creston and Okanagan areas. (Exhibit #6, pp. 30-31).

In summary, WKPL has historically obtained a relatively stable amount of power from Cominco and looked to B.C. Hydro for all its incremental needs. In the absence of contractual obligations, the Commission concludes that WKPL's future power purchase patterns are likely to be considerably more volatile, as the amount of power available from Cominco becomes less certain after 1990, and since the size of WKPL's incremental requirement will increase as its overall load increases.

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### SECTION 2.0 GENERAL PRINCIPLES GOVERNING THE RELATIONSHIP BETWEEN B.C. HYDRO AND WKPL : HISTORY, RATE-MAKING, PUBLIC INTEREST AND POLICY

### 2.1 Introduction

Numerous references were made by the proponents and various intervenors to the historical, current and future relationship between WKPL and B.C. Hydro. A number of participants made reference to this evidence in support of their submissions, in respect of the legal principles which should govern transactions between the two companies. In reviewing these submissions, the Commission has had regard to two overriding rate-making principles: efficient resource allocation and fairness.

For purposes of efficient resource allocation, the rate charged by B.C. Hydro to WKPL should represent the most economically efficient resolution of the dispute from the provincial point of view. This rate should be the one that carries the lowest marginal cost in supplying power to the WKPL service area, calculated on the basis of a reasonably long time frame (eg. 20 years). Ideally, this rate should be charged to all customers for the referenced group, which in this case is the province.

Efficient resource allocation does not necessarily ensure fairness. The issue of fairness usually centres on whether a particular group of customers is unfairly bearing the costs of a given project or policy. Social goals in this context include safeguarding existing employment and encouragement of new industry. In this case income distribution concerns include cross-subsidy between B.C. Hydro and WKPL, to the extent that the rates charged by B.C. Hydro are higher or lower than the marginal cost of providing service. Income distortion may also result from the use of rates based on average depreciated original costs, which fail to reflect current replacement costs. Impacts on income distribution are typically more difficult to assess, since any effects diffuse through the economy.

From society's perspective a rate must be established which represents a reasonable compromise towards achievement of these often conflicting goals. The positions taken by B.C. Hydro, WKPL and intervenors on how this might best be accomplished are summarized as follows:

### 2.2 B.C. Hydro's Position

B.C. Hydro argued that WKPL is a competing utility which should not be viewed as just another customer of B.C. Hydro (Tr. 1,949 and 1,953). In support of its position B.C. Hydro referred to the Canal Plant Agreement and the history of nominations and actual sales between the parties and the fact that both utilities have their own service areas (Tr. 160 and 195). Indeed, B.C. Hydro maintained throughout the hearing that it had no legal obligation to serve WKPL (Tr. 233), although it did acknowledge a "good neighbour" obligation (Tr. 284).

B.C. Hydro asked the Commission to arbitrate the matters in dispute (Tr. 151) and accepted that, pursuant to the Utilities Commission Act, the Canal Plant Agreement and applicable regulatory principles, the Commission is obliged to determine the just and reasonable rates to be charged for power sold to WKPL by B.C. Hydro. B.C. Hydro further argued that in the circumstances, to be just and reasonable the rate should allow it to charge the opportunity cost of foregone export sales in the short term, and the incremental cost of those facilities which WKPL's anticipated requirements made necessary in the longer term.

B.C. Hydro acknowledged that the proposed rates for WKPL were based on different criteria than for all other B.C. Hydro customers (Tr. 230) but maintained that it would not change its rate proposal regardless of WKPL's legal status (ie. customer or competitor) (Tr. 234). B.C. Hydro took this position on the basis that the Commission had the power to set rates even if they were not strictly cost-based (Tr. 238 and 390).

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Thus, B.C. Hydro's position was that the situation between WKPL and B.C. Hydro is unique and that WKPL should therefore be treated differently than its customers (Tr. 205, 393-395). In particular, B.C. Hydro submitted that WKPL should not have the benefit of the average cost of B.C. Hydro's system (Tr. 363-65) but rather should pay the greater of the opportunity cost or the incremental cost of any sales B.C. Hydro makes to it.

In terms of economic efficiency, B.C. Hydro's position was that in the long-term the public interest would be best served by a rate reflecting its long-run marginal costs, thereby providing the appropriate price signals. Such a rate would ensure that the projects with the lowest long-term costs, whether WKPL's or Hydro's, would be implemented first. B.C. Hydro emphasized this aspect of the pricing issue because WKPL does have realistic supply alternatives in potential expansion at Brilliant or Waneta, and at one time could have acquired parts of the Canal Plant and/or the Revelstoke project (Tr. 1,956-7).

In the medium term, B.C. Hydro proposed an energy rate based on the marginal cost of operating the Burrard thermal plant. B.C. Hydro's proposed short-term rate (to 1990) was not based on marginal cost (i.e. supply side considerations) but rather on costs to B.C. Hydro based in part on foregone revenues from export sales. Although B.C. Hydro claimed that foregone revenue is a cost to B.C. Hydro customers, they acknowledged that it is an opportunity cost based on market or demand considerations, rather than an out-of-pocket expense (Tr. 755-56).

From the perspective of fairness, B.C. Hydro argued that its proposed rates were derived to prevent any adverse impacts on B.C. Hydro's customers. Indeed, the demand charge component in the proposed rate attempts to obtain payment for benefits WKPL has received in the past (Tr. 364). Hydro further argued that the demand rate it proposed was not only lower than the rates that would be involved in any of WKPL's alternatives (Tr. 1,966), but also more efficient and fair since it would allow WKPL's customers to share in the benefits of Hydro's economies of scale.

#### 2.3 WKPL's Position

WKPL's position was diametrically opposed to that of B.C. Hydro. WKPL argued that B.C. Hydro had an obligation to serve WKPL under the Utilities Commission Act in the same way it must serve its other customers. WKPL further submitted that once that obligation exists, B.C. Hydro must treat it in a manner consistent with the Act. In particular, B.C. Hydro must provide a service to WKPL at a rate which is consistent with Section 65(1) of the Act, requiring that the rate be not unjust, unreasonable or unduly discriminatory (Tr. 2,003-4).

WKPL argued that it would be unduly discriminatory to charge WKPL on an opportunity or marginal cost basis, when the evidence indicated that no other customer of B.C. Hydro is being charged on such a basis. WKPL argued that in the absence of any evidence by B.C. Hydro to justify a distinction, WKPL's rates should be based on the same principles employed to determine the charge to large industrial customers or other distribution customers such as the City of New Westminster (Tr. 2,004). WKPL also argued that B.C. Hydro's service area extends to the entire province (Tr. 2,004).

WKPL further maintained that the criteria of economic efficiency can only be met with short-run marginal cost pricing, that B.C. Hydro has not built any facilities dedicated to supply WKPL's needs (Tr. 2,012), and that rates based on short-run marginal cost pricing would therefore be very low indeed (Tr. 1,385). It was WKPL's position that B.C. Hydro's proposed demand ratchet at a time of surplus would induce inefficiency, by sending out a price signal that would compel the implementation of expensive peak shaving measures at a time when the province is faced with significant surplus energy (Tr. 2,014).

WKPL conceded that additional generation options are available to it but argued that a fair and equitable rate from B.C. Hydro was required, to permit valid comparison with these options (Tr. 1,025). WKPL also pointed out that none of the options will resolve its short-term problems because the required planning horizons range up to five years (Tr. 1,027).

With regard to fairness and equity, Hydro had testified that its declared objective of no increases in rates for five years excluded WKPL's service area and customers (Tr. 2,002). WKPL argued that its exclusion was unfair and would result in WKPL's customers suffering income losses, directly due to higher electricity rates, and indirectly due to possible loss of employment opportunities and a lower resulting potential for economic growth. WKPL, however, conceded that if B.C. Hydro's proposals were accepted, the extent of the impacts, at least in later years, would be less than those shown in WKPL's Exhibit 64A. This was attributable to a reduction in requirements due to price impacts and load management, as well as WKPL exercising less costly alternative supply options (Tr. 1,878-81).

### 2.4 Intervenors

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#### 2.4.1 The City of Kelowna, et al Position

The City of Kelowna submissions were largely supportive of those of WKPL. That is they also asserted that WKPL is a customer which B.C. Hydro was obliged to serve, and as such could not be discriminated against. The City went further than WKPL, however, and argued that there was a "cardinal jurisdictional constraint . . . that rates must be cost based" (Tr. 2,059). The City took the position that its submission would stand even if WKPL were found to be something other than a traditional utility customer of Hydro. This position was taken because Hydro had made its application to the Commission under Section 67 of the Act and the only jurisdiction that section gives the Commission is a jurisdiction to set cost-based rates (Tr. 2,071).

Based on that analysis of the law, the City argued that the Commission did not have the jurisdiction to accept B.C. Hydro's proposed rates because they were not based on cost. The City therefore concluded that the Commission should accept WKPL's proposal for modification of Rate Schedule 1821 as yielding the appropriate rate (Tr. 2075).

### 2.4.2 Regional District of Kootenay/Boundary

The Regional District supported the position of WKPL in its attempt to negotiate a long-term contract with B.C. Hydro for power purchase. In their view, WKPL is in the unenviable position of having to rely on only one supplier for all its incremental power needs and that B.C. Hydro's proposed rates were unreasonable and unacceptable. The District argued that WKPL had historically served the region well while B.C. Hydro had not, noting that B.C. Hydro is also exempt from property taxation despite the negative impacts on the region from several of B.C. Hydro's installations. Finally, the Regional District testified that the region has suffered severely from the recession and a lower power rate is critical for economic renewal. The regional district urged the Commission to assist WKPL in obtaining a satisfactory long-term contract with B.C. Hydro for power purchase (Tr. 1,123-7).

### 2.4.3 <u>City of Trail</u>

The City of Trail fully endorsed the submission by the Regional District of Kootenay/Boundary. In addition, the City raised a concern that an increase in power rates of the proposed magnitude would further adversely affect the local economy and increase the unemployment rate in the Greater Trail area, currently in excess of 20 percent. In the past, the City of Trail has borne much of the social cost of B.C. Hydro's construction locally, such as the loss of the City's water supply due to the Keenleyside project. The City and its citizens have been tolerant in accepting the adverse impacts of B.C. Hydro's installations and argued that they should at least have the benefit of maintaining their lower power rates (Tr. 1,144-51).

#### 2.4.4 Association of B.C. Irrigation Districts

This Association, identified as a public body administered under the Municipal Act, has as its principal function the supply of water for irrigation. The Association expressed serious concern with respect to B.C. Hydro's proposed rates since power costs are a major component of irrigation districts' budgets, involving up to 40 percent of their annual operating costs. The Association testified that if WKPL were to increase its rates by the total 81 percent over 10 years implicit in B.C. Hydro's proposed rates, there would be a 35 percent increase in the irrigation districts' operating costs. The farmers served by the irrigation districts would then have to bear the impacts of the rate increase. The Association indicated that those farmers were already paying twice as much for their water in comparison to those on gravity irrigation systems. While no data was available, the Association was concerned with the ultimate impacts on the farmers.

The Association urged the Commission to reject B.C. Hydro's proposed marginal cost-based rates as unfair to British Columbians living in WKPL's service area, and argued that B.C. Hydro's proposed wheeling rates are also unreasonable. It was the Association's position that the industrial rate schedule should be used as the rate for power purchases by WKPL from B.C. Hydro, and that there should be no charges under the wheeling agreement (Tr. 1,158-65).

### 2.4.5 City of Rossland

The City of Rossland addressed the history of WKPL in the region and its role in economic growth and development of the area. In their view, WKPL has always met its obligations and requests for services with money provided by user rates and private borrowing. It built its dams with little environmental impact, and paid taxes locally, provincially, and federally. WKPL's power rates have always been one of the very few attractions in the region for industry.

The City of Rossland testified that B.C. Hydro entered the Kootenays in the 1960's to implement the Columbia River Treaty by building the Mica, Duncan and Keenleyside dams. Residents in the West Kootenays lost the Arrow Lakes Valley, with 2,000 people displaced, 20,000 acres of valuable agricultural land destroyed, and 50 miles of natural beaches wiped out. Compensation for such losses was hard-fought and in the end proved next to negligible. Two additional new dams were constructed by B.C. Hydro when the Canal Agreement was negotiated. The people of the Kootenays have been left with environmental and social impacts, with negligible compensation, and the feeling that they have been used, for someone else's benefit. Given that background, the City argued that B.C. Hydro has an historical obligation to WKPL to provide power at reasonable rates, and that the rates proposed by B.C. Hydro are excessive and unfair (Tr. 1,170-5).

### 2.4.6 The Town of Creston

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The Town of Creston testified that WKPL has served the region well and its relations with local industries are excellent. It further testified that B.C. Hydro's proposed rates for the purchase of power by WKPL would have an extremely negative effect on existing industries, as well as on the region's growth potential. Creston attracts retired people and they look at property taxes and utility rates when choosing a place for retirement. Low and stable power rates at Creston are important for it to continue to attract seniors. Creston therefore urged the Commission to settle the dispute in a way that would maintain the region's ability to compete (Tr. 1,179-84).

### 2.4.7 The City of Castlegar

The City of Castlegar fully supported the brief submitted by the Regional District of Kootenay/Boundary (Tr. 1,194).

#### 2.4.8 R.H. Brisco, M.P.

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Mr. Brisco, M.P. for Kootenay West testified that any increase in WKPL's rates due to B.C. Hydro's proposed rates for power purchase would further depress the regional economy which has already suffered from a severe recession. He further testified that historically, B.C. Hydro had taken more out of the region than it has given back. The construction of dams by B.C. Hydro in the region has caused serious environmental and social impacts with little or no compensation. He noted also that B.C. Hydro does not contribute to Kootenay West financially, in spite of its operations and installations in the area. Finally, Mr. Brisco suggested that B.C. Hydro has not negotiated with WKPL in good faith and as efficiently as it could have (Tr. 1,197-214).

### 2.4.9 City of Penticton

The City of Penticton argued that B.C. Hydro's proposed rates are unacceptable indicating that they would induce a 17 percent increase in 1987 alone. In the region, wage increases have been minimized or rolled back and the unemployment rate is high. The City testified that the region has generally higher transportation and production costs than other parts of the province and the only competitive advantage has been a lower cost for hydro-electric power. B.C. Hydro's proposal would destroy this regional advantage. (Tr. 1,228-37).

#### 2.4.10 Westar Timber Limited

Westar testified that its operations in the region employ over 700 people. All of its operations are faced with rising costs, and falling prices. The company has been trying to reduce its operating costs in every area. Additional cost increases arising from B.C. Hydro's proposed rates will seriously affect the company's operations (Tr. 1,237-41).

#### 2.4.11 Community Economic Action Committee

The Action Committee is a citizen group organized to promote positive economic activity in the Greater Trail area. The Committee testified that the last recession had severely depressed the local economy. In 1981, there were 11,000 people employed in the Trail area. Today the number has dropped to about 6,500. Investment in the area is non-existent. The Community Action Committee urged the Commission to assist in protecting the remaining economic base of the area by limiting rate increases to those that are reasonable (Tr. 1,263-7).

### 2.4.12 C. D'Arcy, M.L.A.

Mr. D'Arcy made a submission to the Commission on behalf of his constituents in the Rossland/Trail area. He argued that this dispute is actually a dispute between B.C. Hydro and the people and industries of the South Okanagan, Similkameen, Boundary, West Kootenay and Creston Valleys. He maintained that B.C. Hydro wishes to charge the people of these areas high rates for reserved power that may not be needed for much of the year. Mr. D'Arcy agreed that B.C. Hydro's customers should not be required to subsidize WKPL's customers, but argued that the people in WKPL's service area should not be held to ransom by B.C. Hydro. In his view B.C. Hydro should be able to evaluate its cost of maintaining winter and emergency demand capability for all British Columbians in a way satisfactory to the Commission and defensible to the public. This cost of reserve power capability should be rolled into all regulated power rates on a prorated total sales basis regardless of whether the power is sold to Hydro's customers or another utility (Tr. 1,274-8).

### 2.4.13 Other Intervenors

The Commission received various other written briefs which were not examined at the hearing. All of these were considered by the Commission in reaching its decision.

### BC Hydro Application for Approval of New PPA with FortisBC

### 2.5 Commission Summary and Conclusion

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The Commission's jurisdiction to determine a just and reasonable rate for sales by B.C. Hydro to WKPL is accepted by all parties. Under the Act, the Commission may only approve rates which are just, reasonable and not unduly discriminatory. Accordingly, whether WKPL is viewed as a customer of B.C. Hydro in the traditional rate-making sense or is viewed as a competing utility, B.C. Hydro can only charge a rate which, in the judgement of the Commission and in the particular circumstances, is just, reasonable and not unduly discriminatory. For this reason, the Commission believes it is not essential to precisely characterize the nature of the relationship between B.C. Hydro and WKPL.

The parties clearly differ in their view as to how the Commission should determine what is just, reasonable and not unduly discriminatory. Both B.C. Hydro and WKPL would have the Commission consider the history of the relationship between the parties but would have the Commission draw very different conclusions from that history. In essence, B.C. Hydro's view of that history leads them to conclude that it would be just and reasonable to charge WKPL on an incremental cost basis. B.C. Hydro implied that, although this was unlike the treatment afforded any of its other customers, it was not unduly discriminatory because of the unique historical relationship between the parties. WKPL, on the other hand, argued that a review of the history simply underlines the need to treat WKPL as any other customer would be treated.

Thus, in the Commission's view the dispute comes down to this: Is it unduly discriminatory for B.C. Hydro to structure its rates to WKPL based on the greater of opportunity cost and marginal cost when it does not treat its other customers in this way?

The Commission believes that the principal factor tending to support distinguishing between the principles used to set WKPL rates and those of other B.C. Hydro customers, is that WKPL has other supply sources available to it, including expansion of its own generating capacity, Cominco surplus power, and purchases from other utilities.

In practical terms, WKPL's alternate supply sources in the short-term are limited. A two to five year lead time is required for WKPL to expand its own generating capacity. Access to supply from other utilities is uncertain, given the absence of a general third party wheeling arrangement and WKPL's transmission constraints. Supply from Cominco is limited and uncertain. On the basis of the evidence presented at the hearing, it appears to the Commission that WKPL will be a captive customer of B.C. Hydro for some of its needs, at least until the end of the decade.

Other factors deemed pertinent by the Commission and which distinguish WKPL from other B.C. Hydro customers are:

- In recent years, WKPL has provided electrical energy at rates considerably lower than in the rest of British Columbia. The communities served by WKPL have, in part at least, developed as a result of those low rates.
- 2. WKPL has required and will continue to require primarily a peaking service from B.C. Hydro until 1990 at least.

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3. B.C. Hydro will likely have a firm surplus of energy and capacity until the end of the decade and possibly beyond.

The Commission has concluded that the low rates enjoyed in the WKPL service area will not exist indefinitely. WKPL has indicated that even if their proposed rates were accepted, WKPL rates would equal those of B.C. Hydro by 1995 (Exhibits #64 and 64A). Unless less costly alternative sources are found, the Commission concludes that the issue is not whether WKPL's rates will in fact approach those of B.C. Hydro, but only how quickly.

WKPL's peaking requirements also make it unique amongst the major purchasers from B.C. Hydro. There is currently no large customer under either Rate Schedules 1821 or 1211 with a load factor as low as WKPL's. The load factor improves as WKPL requirements from B.C. Hydro grow. Clearly, supply availability from Cominco affects WKPL's load factor with regard to purchases from B.C. Hydro. It also appears that, at least until the end of the decade, B.C. Hydro will have a firm surplus of capacity and energy. Thus, there are no direct costs to Hydro of supplying WKPL during this period but rather only that cost represented by sales foregone in the export market.

From the evidence, the Commission is of the view that all of the foregoing factors should remain reasonably constant until at least the end of the decade but may well alter fundamentally after that time. The Commission therefore concludes that a rate can not be determined that will be appropriate for the whole term of the contract. Accordingly, the Commission has developed a transitional rate for the period to 1990. Section 3 of this Decision details the basis for the transitional rate. In Section 4, the terms and conditions necessary to make that rate just and reasonable during the transitional period, have been specified by the Commission.

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In summary, the Commission concludes that during the transitional period, fairness to both parties will be ensured by rates that are considerably lower than those in existing Schedules 1211 and 1821 and only marginally lower than Schedule 3807. Moreover, economic efficiency and the public interest should be adequately supported during this period by the terms and conditions set out in Section 4.0 of this Decision and relating to the transitional rates determined by the Commission.

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Beyond 1990 the Commission concludes that the principles employed in determining the power purchase rate should be the same as those used to determine the rates applicable to other B.C. Hydro customers. The contract should, therefore, provide for renegotiation of the rate after 1990. In negotiating with respect to rates for the period beyond 1990, the parties should bear in mind the Commission's conclusion that the long-term rate should not be based on incremental costs. The Commission concludes that the terms and conditions attached to the transitional rate should reflect the unique characteristics of the B.C. Hydro/WKPL relationship, and should remain for the long-term.

### SECTION 3.0 THE RATE FOR PURCHASED POWER

The current level of rates for power purchased by WKPL was established by negotiation, and in relationship to the level of charges to B.C. Hydro's large industrial customers and customers in the export market. B.C. Hydro indicated in 1985 that it would not enter into another ad hoc arrangement and offered WKPL electricity at rates WKPL felt were unacceptable. Both parties now desire rates that will be appropriate for the longer term.

#### 3.1 B.C. Hydro's Position

The rates for power purchased by WKPL, as proposed by B.C. Hydro, are not designed to meet the same average cost criteria as for other customers (Tr. 363). The proposed rate is not based on historical costs. Instead, B.C. Hydro chose to utilize opportunity costs to 1990 (Tr. 178-179) by linking the energy segment of the rate to the projected selling price in the export market (Tr. 188). In support of this Hydro testified that, historically, WKPL had not been paying its fair share for existing B.C. Hydro facilities (Tr. 213-214) and that the proposed rates were just and reasonable because they would regain some of the lost revenue from unfair rates approved in the past (Tr. 365).

Between 1990 and 1995, Hydro proposed to relate the energy charge to the cost of operating the Burrard thermal plant (Tr. 228-229). Beyond 1995, the energy charge would be determined by the marginal cost of incremental supply from Hydro's next generation project (Tr. 1960-61). Hydro's proposed demand charge throughout the period is based on Rate Schedule 1821.

Hydro's proposed rates are:

Demand Charge - \$3,918/MW/mo Energy Charge - 30 mills/kWh

Various other proposed charges having to do with minimum energy, excess peak demand, additional energy demand, etc. are considered in Section 4.

### 3.2 WKPL's Position

WKPL contended that the power purchase rate should be developed on an average cost basis (Tr. 1,038). As a cost of service study was not available, WKPL proposed that modifications to Rate Schedule 1821 would be an appropriate basis for determining the power rate.

WKPL's proposed modifications involved removing local transmission costs (Exhibit 6, p. 20). Since the necessary information from B.C. Hydro was not available, WKPL developed an approximation of these charges based on WKPL's 1983 cost of service study. The elimination of transmission charges reduced the demand component in Schedule 1821 by \$828 per MW (Exhibit 6, p. 23). WKPL, therefore, proposed reducing the demand charge from \$3,918/MW/mo. to \$3,100/MW/mo. The proposed energy charge remained the same as the sum of Rate Schedules 1821 and 1899 at 22.39 mills/kWh (Exhibit 6, p. 22). No nomination requirement or ratchet clause was included in the rate, but a long-term agreement to the year 2005 was sought.

WKPL's proposed rates are:

Demand Charge	-	\$3,100/MW/mo.		
Energy Charge	-	22.39 mills/kWh		

3.3 Commission Summary and Conclusions

As indicated heretofore in Section 2, the circumstances pertaining to WKPL and B.C. Hydro, at least in the medium term to 1990, in the Commission's view and to avoid inequities to either party, will require special rates appropriate to a transition period. These rates will not burden B.C. Hydro's other customers, since B.C. Hydro appears to be in a firm capacity and energy surplus

position until at least 1990. There is adequate evidence on the record from which to establish such a transitional rate. Beyond the transition period, the conceptual and methodological basis for establishing appropriate longer-term power rates have been set out in Section 2.5.

The Commission concludes that the transitional rate should lie within the range determined by the cost to WKPL of providing its own peaking supply as the upper limit, and B.C. Hydro's short-run marginal cost as the lower limit. Based on the evidence, WKPL's alternative source of peaking supply would be gas turbines. The cost of new turbines, therefore, provides the basis for the appropriate upper limit, while B.C. Hydro's short-run marginal cost comprising only the variable operating costs associated with generating more electricity from firm surplus water, is the appropriate lower limit.

Between these two limits, the evidence discloses a number of alternatives. These alternatives, in descending order of cost\* and related rates, are as follows:

- new gas turbine

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- used gas turbine
- B.C. Hydro Rate Schedule 1211
- B.C. Hydro proposed rates
- shared benefits (new gas turbine and water fee)
- shared benefits (old gas turbine and water fee)
- WKPL proposed rates
- B.C. Hydro short-run marginal cost

Table 1 contains WKPL's forecast capacity and energy requirements to the year 1990. Table 2 and Figure 4 indicate the total power costs for each of the alternatives listed above. Figures 5 and 6 present a breakdown of the demand and energy costs contained in Table 2. Table 3 and Figure 7 provide the cost per megawatt of measured or consumed demand.

<sup>\*</sup> Annual total revenue requirements were obtained by using the WKPL load resource balance, as shown in Exhibit 8, Tab 5 and cost figures were obtained from Exhibits 8 and 32.

### Table 1

# WKPL Requirements from B.C. Hydro

# Capacity Requirements from B.C. Hydro in MW (1986-1990)

Month	1986	1987	1988	1989	1990
January	135	140	174	190	203
February	118	125	150	170	182
March	0	34	55	69	80
April	Ō	6	23	37	46
May	0	. 0	0	0	0
June	0	0	0	Ō	ō
July	0	0	0	0	Ó
August	0	0	0	0	Ó
September	0	0	22	36	43
October	0	0	19	39	47
November	65	76	90	106	118
December	90	100	124	142	152
	408	481	<u>657</u>	<u>789</u>	871

# Energy Requirements from B.C. Hydro in GWh (1986-1990)

Month	1986	1987	1988	1989	1990
January	8	46	23	42	80
February	7	43	18	34	64
March	8	0	5	11	8
April	0	0	0	4	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0 -
October	0	0	0	0	0
November	4	9	19	26	32
December	_6	14	<u>28</u>	<u>46</u>	52
	33	112	<u>93</u>	163	236

Source: WKPL Exhibit 8, Tab 5

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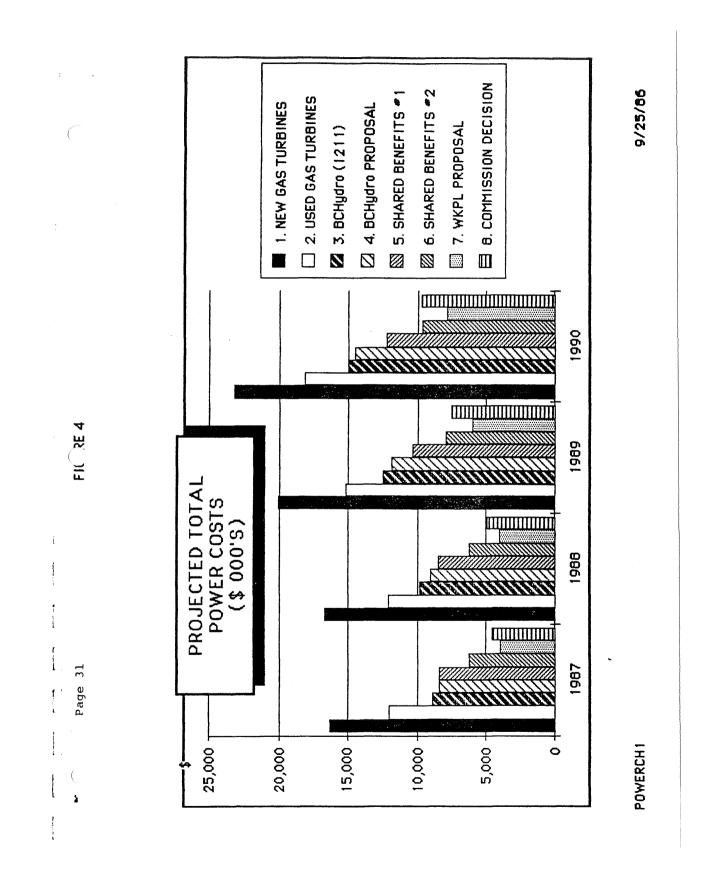
# Table 2

Total Power Costs (\$000)

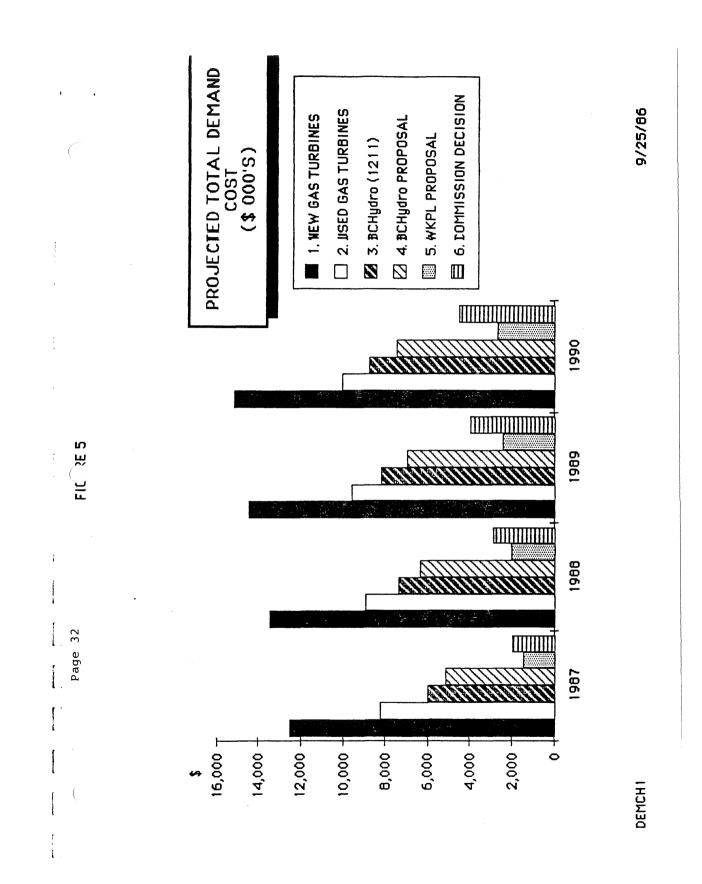
				Rate	1986	1987	1988	1989	1990
	(1)	New Gas				12510.7	13500.4	14511.2	15208.5
		Turbines	E R	100%		3841.6	3189.9	5590.9	8094.8
			Tot	al		16352.3	16690.3	20102.1	23303.3
	(2)	Used Gas	-			8257.3	8960.4	9622.9	10108.81
		Turbines	E			3841.6	3189.9	5590.9	8094.8
			Tot	al		12098.9	12150.3	15213.8	18203.61
	(3)	BC Hydro	D	6010	5712.51	6016.0	7416.3	8221.7	8816.7
		(1211)	E R	26.4 50%	871.2	2956.8	2455.2	4303.2	6230.4
			Tot		6583.71	8972.8	9871.5	12524.9	15047.1
						1100000	0.723.545		
	(4)	BC Hydro		3918	4958.23	5152.2	6382.4	6993.6	7473.6
		(Prop'd)	E R	30.0 7 <i>5%</i>	990.0	3360.0	2790.0	4890 <b>.</b> 0	7080.0
			Tot	al	5948.23	<u>8512.2</u>	9172.4	11883.6	14553.6
	(5)	Shared**							
	(2)	Benefits	1			8476.5	8574.9	10488.7	12285.3
•	(6)	Shared*** Benefits	÷	2	6350.2	6324.8	8044.6	<u>9735.5</u>	
	(7)	WKPL	D	3100	1264.8	1491.1	2036.7	2445.9	2700.1
			E R	22.4 0%	739.2	2508.8	2083.2	3651.2	5286.4
			ĸ	0.6				. <u></u>	
			Tot	al	2004.0	<u>3999.9</u>	4119.9	6097.1	7986.5
	(8)	SRMC	E	5.37		601.44	<u>499.4</u>	<u>875.32</u>	1267.32
	(9)	BCUC	D		1428.0	2005.0	2933.0	3766.0	4561.0
		Dec'n	E		739.0	2509.0	2083.0	3651.0	5286.0
			R		0%	10%	20%	30%	40%
		Total			2167.0	4514.0	5016.0	7417.0	9847.0
	*	D = E =		emand ergy					
		R =	Ra	tchet					
	**	(5) =	(1)	+ (8)		***(	(6)=(2) + (8)		
				4			2		

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## Appendix F



# BC Hydro Application for Approval of New PPA with FortisBC

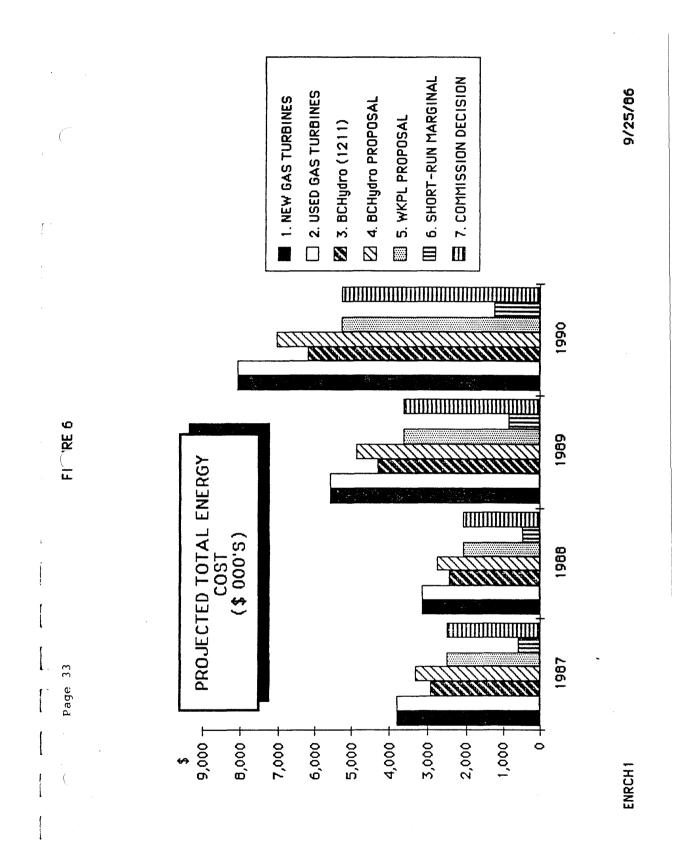


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# Appendix F

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# Appendix F



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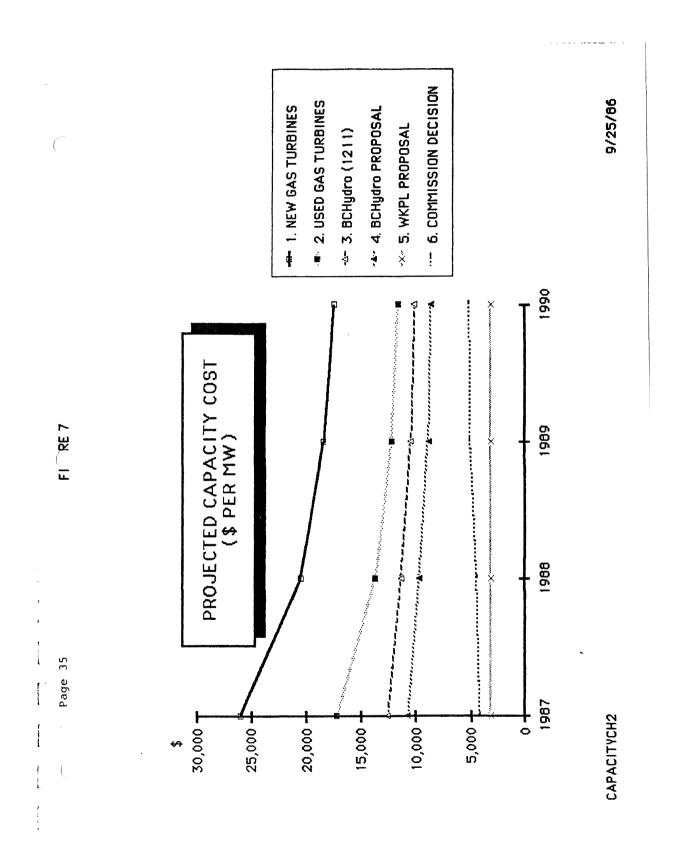
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## Table 3

Projected Capacity Costs per MW of Registered Demand
(\$/MW)

		1986	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
1.	New Gas Turbine	-	26,010	20,548	18,392	17,460
2.	Used Gas Turbine	-	17,166	13,638	12,196	11,606
3.	B.C. Hydro (1211)	14,002	12,507	11,288	10,421	10,123
4.	B.C. Hydro (Prop.)	12,132	10,711	9,715	8,864	8,580
5.	Shared Benefits #1	-	13,000	10,274	9,196	8,730
6.	Shared Benefits #2	-	8,583	6,819	5,210	5,061
7.	WKPL (Proposed)	3,100	3,100	3,100	3,100	3,100
8.	Commission	3,500	4,169	4,464	5,053	5,236

# Appendix F



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After careful consideration of all of the aforementioned factors, the Commission concludes that the fair transitional rate for power purchased by WKPL from B.C. Hydro will include a demand charge of \$3500/MW per month and an energy charge equal to the sum of such charges in Rate Schedules 1821 and 1899 or approximately 22.4 mills per kWh. The resulting effective cost per MW is shown in Table 4, and is based on WKPL's capacity forecast and an escalating ratchet clause. The Commission would note that B.C. Hydro Rate Schedules 1211 and 1821 as well as WKPL's wholesale rate schedules all contain demand ratchets. The Commission's basis for its ratchet provision is in Section 4 of this Decision.

The transitional power purchase rate thus determined by the Commission lies in the acceptable range as defined heretofore on page 28 and should permit a relatively smooth transition to the longer-term rate. The Commission concludes that the resulting effective rates are fair to both parties to the dispute. The Commission further concludes that since those rates take into account the historic factors and relationships as well as mutual benefits and the implications of rate impacts on the local economy, that the rates as determined herein are in the public interest. Moreover, by limiting those impacts to gradually increasing levels, such rates will provide both the time and the incentive for WKPL to fulfill its responsibility to undertake effective system planning without further delay.

Comparison of the results of the B.C. Hydro and WKPL proposals with those as determined by the Commission Decision, in terms of the demand, energy and total costs involved, is provided in Tables 2 and 3 and graphically in Figures 4 to 7 inclusive.

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## Table 4

# Projected Effective Capacity Cost per MW and Total Capacity Cost Based on Commission Rate

Year	Ratchet (%)	Aggregate Billing Demand (MW)	Total Demand Cost (\$000's)	Aggregate Registered Demand (MW)	Cost per MW of Registered Demand (\$)
1986	0	408	1,428	408	3,500
1987	10	573	2,005	481	4,169
1988	20	838	2,933	657	4,464
1989	30	1,139	3,987	789	5,053
1990	40	1,303	4,561	871	5,236

#### SECTION 4.0 POWER PURCHASE TERMS AND CONDITIONS

In this case and because of the unique circumstances involved, the terms and conditions to be attached to the rate to be paid by WKPL for purchased power are of particular importance. The Commission has determined only the principles which are to be applied in developing an appropriate contract. The precise wording of the contract should be worked out between the parties for final approval by the Commission when the contract is filed. The principal issues are:

- capacity and energy nominations and penalties
- demand ratchet
- term of contract

#### 4.1 B.C. Hydro's Position

It was B.C. Hydro's position that some of its current facilities are in place, in part, due to WKPL over-estimates of their requirements. B.C. Hydro argued that WKPL should pay for those committed plants, whether or not WKPL makes use of them (Tr. 162). Hydro therefore proposed to include a demand nomination and a firm energy nomination for each nomination period for the term of the proposed Power Purchase Agreement to 1990 (Exhibit/#5, Volume 2, Tab 6). It suggested a nomination period of one year from October 1 to September 30, until 1990. Shorter nomination periods to September 30, 1986 and between October 1, 1990 to December 31, 1990 were also included.

Hydro testified that historically WKPL has overestimated its forecast requirements (Tr. 205-06). To ensure that some risk is borne by WKPL, Hydro's latest proposal stipulates a 75 percent demand ratchet on nominated capacity (Exhibit 7, Volume 2, Tab 1). This would ensure that fixed capacity costs would be met (Tr. 202-03). Hydro also testified that the 75 percent demand ratchet makes the rate compatible with the rates paid by other customers served at the same voltage level (Tr. 70), and that Hydro is reluctant to put forward a different rate (especially a capacity rate) since this

would encourage other Rate Schedule 1821 customers to demand the same treatment (Tr. 771). Hydro's original demand ratchet of 90 percent was based on a contract term to 2005. The revised demand ratchet of 75 percent was for the contract term to 1990 and was based in part on alternative energy costs (Tr. 801).

Hydro's proposed billing demand or ratchet clause is as follows:

- 1. Nominated demand if the current month is the peak month.
- 2. 75% of the nominated demand if the current month is other than the peak month.
- 3. 75% of the maximum demand of the Purchase Power Agreement in any one of the immediately preceding eleven months, providing that the maximum demand was greater than the nominated demand.

Hydro also proposed a 100 percent take or pay on energy as well as penalties for both capacity or energy requirements in excess of the nominations. The excess peak demand penalty is 10 percent and the additional energy rate is the higher of  $3.3\phi$  per kWh or 105 percent of Burrard Thermal Plant costs (Exhibit 5, Volume 2, Tab 1, Exhibit 21).

4.2 WKPL's Position

WKPL essentially took the position that it should not be subject to any demand ratchet, and that the term of the contract should be to 2005. WKPL also argued that nominations are unnecessary, since it is experiencing steady load growth, and demand from B.C. Hydro is relatively firm (Exhibit 21).

In Exhibit 68 WKPL did, however, propose conditions under which supply and demand may be changed.

Specifically, WKPL proposes that additions to future firm supply may be made, subject to the following conditions:

1. In any manner, with six years' notice in writing;

- 2. Without notice where it can be reasonably determined by B.C. Hydro that there will be no adverse economic impacts on B.C. Hydro from any surplus which results;
- 3. Additions from third party resources under 10 megawatts;
- 4. Any addition with B.C. Hydro's prior written approval; and
- 5. Any addition to cover losses from an event of force majeure.

Conditions proposed by WKPL under which it can increase or reduce demand through load management are as follows:

- 1. No notice required for changes under one MW.
- 2. Three years' notice is required for changes over 10 MW.
- 3. Varying periods are required for changes between 1 and 10 MW.

With regard to B.C. Hydro's requirement for a demand ratchet, WKPL argued that it would be inappropriate in its case since ratchets are usually only employed by the supplying utility where specific facilities are dedicated solely to serve a group of customers. In such cases, minimum bills or demand ratchets are implemented to ensure recovery of the fixed costs of the dedicated facilities. Since Hydro's facilities are "backbone" in nature, having many purposes other than service to WKPL, there should be no demand ratchet (Exhibit 6, Vol. 1, p. 24).

WKPL also opposed the ratchet for the following additional reasons: (Tr. 1,334-36)

- 1. Past rates have not included a ratchet and such rates were deemed to be fair and reasonable by B.C. Hydro.
- 2. B.C. Hydro has surplus capacity and has never really been capacity constrained, although it has been energy constrained.
- 3. The impact on WKPL customers may not be in the provincial interest.
- 4. B.C. Hydro has installed very limited facilities exclusively for WKPL.

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- 5. B.C. Hydro's rate proposal is inconsistent since energy is priced on marginal cost basis and demand is not. If demand rates were based on short-run marginal cost, they would be substantially lower.
- 6. WKPL has an extremely low load factor of approximately 2 percent and therefore merits special consideration.

Take or pay on energy was opposed by WKPL since this would prevent use of Cominco power (Tr. 879). WKPL testified that a long term contract of 20 years was required in order to permit adequate planning for future system expansion (Tr. 1,024-27, 1,040).

#### 4.3 Commission Summary and Conclusions

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The Commission's views on the relationship between WKPL and B.C. Hydro centre on the fact that the circumstances between WKPL and B.C. Hydro are unique. This uniqueness should be reflected in the terms and conditions of the contract, as distinct from the rate charged. The Commission maintains that although WKPL is not an incremental customer, WKPL is nevertheless a utility with the responsibility and obligation to undertake system planning functions. Alternative supply sources include Brilliant and Waneta expansion, gas turbine, thermal, and generation by private industry or other utilities. The WKPL load as seen by B.C. Hydro is equal to the WKPL native load, less WKPL supply inclusive of supply from alternative sources. Both load and generation are subject to the vagaries of weather and rainfall, and in particular WKPL's supply is subject to the power requirements of Cominco. Accurate forecasting by WKPL therefore becomes particularly important since the timing of future additions to B.C. Hydro generating capacity and related facilities may be adversely affected by poor demand forecasting or variations in Cominco supply.

The Commission also notes that since WKPL can now expect service from B.C. Hydro, there are costs to B.C. Hydro for supplying such service. Since B.C. Hydro's system is expected to remain base load hydraulic generation, it is unlikely to be capacity limited for their firm market.

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There are, however, future transmission constraints as well as certain capacity costs which are inherent in B.C. Hydro's system. These cost considerations tempered by WKPL's low load factor lead the Commission to conclude that an escalating demand ratchet during the transitional period, with a peak demand ratchet of 50 percent thereafter, are just, reasonable and not unduly discriminatory provisions of the required contract.

In light of the foregoing, the Commission has determined that the required contract between the parties must include the following:

- The term of the contract shall be from the date of this Decision to September 30, 2005.
- 2. Both parties shall supply annually a ten-year forecast of load resource balance including a program for resource acquisition, transmission and firm loads. The degree of detail shall be decided upon by mutual agreement.
- 3. WKPL shall nominate both capacity and energy, effective immediately on a five-year rolling basis.
- 4. The demand ratchet clause shall provide for the following ratchets:

Year	% Ratchet
1986	Zero
1987	10
1988	20
1989	30
1990	40
Thereafter	50

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There shall be a 90 percent take or pay provision on energy nominations.

- 6. During the transition period, nominations shall be binding for a two-year period. Thereafter, nominations are binding for a five year period. Changes beyond the third and sixth year nominations, for the transitional period and post-transitional period respectfully, may be undertaken in the immediately following year so that the previous third and sixth years become the current second and fifth years, and so on. Changes to nominations during the transition period shall be unconstrained. Thereafter, changes shall be as shown in Appendix B of this Decision.
- 7. For both excess capacity and energy requirements there shall be a 10 percent penalty provision applicable to each. However, an excess capacity requirements penalty shall be applicable only if B.C. Hydro is capacity-limited with regard to firm sales. Excess energy requirements penalties shall be applicable only if those requirements are attributable to changes in WKPL's supply from other sources (eg. Cominco or other utilities).
- 8. The only allowed changes in the above stipulated rates shall be those approved for B.C. Hydro on either an interim or permanent basis for Rate Schedules 1821 and 1899. Such changes shall be applied on the same percentage basis applicable to those schedules.

#### SECTION 5.0 WHEELING RATE

WKPL requires wheeling because its generation is remote from a significant part of its load and lacks sufficient transmission capacity to transmit the energy which it generates in its own facilities. WKPL therefore uses B.C. Hydro's transmission lines for wheeling to avoid the need to construct transmission facilities of its own.

B.C. Hydro and WKPL have been unable to agree on either the rate or the terms and conditions which should govern the provisions of a wheeling service to WKPL. Sections 5 and 6 review their positions and present the Commission's determination of the wheeling rates and associated terms and conditions.

### 5.1 B.C. Hydro's Position

B.C. Hydro testified that it has provided wheeling services to WKPL for a number of years and that firm wheeling services have been provided under the terms and conditions of two unsigned Draft General Wheeling Agreements (1977 and 1980). B.C. Hydro argued that the 1977 and 1980 Drafts are obsolete because they are based on a methodology employing a single circuit notional line which is not consistent with the quality of service WKPL now receives from B.C. Hydro (Tr. 314-19). Power is in fact wheeled over a complex network of 230 and 500 kV lines, stations, and transformers within B.C. Hydro's south interior region and was identified by B.C. Hydro as the specified system (Tr. 316, 447-65).

B.C. Hydro also identified the following factors that in their view have rendered the 1977 Draft obsolete:

- 1. The Draft uses 1977 first year costs;
- 2. The assumption of the notional line does not reflect the higher level of security and reliability actually provided by the existing system;

- 3. There are 18 line terminals in the actual wheeling path instead of two as represented in the notional lines;
- 4. No transformation charge is included in the 1977 rates yet power is wheeled through five transformers in the actual system;
- 5. While the transfer capability of the actual complicated network is difficult to determine, a deemed value of 250 MW is used in the 1977 method; and
- 6. A rate based on transfer capability will not reflect the actual cost of wheeling.

Citing these deficiencies, Hydro proposed a wheeling rate based on the average embedded costs of a specified portion of its regional transmission system. B.C. Hydro further proposed that a percentage of use method (rather than the percentage capacity method) should be used to assign these costs, as this method allocates all of the annual costs of transmission facilities among each of the firm users (Tr. 261, 417). B.C. Hydro acknowledged that its present south interior network has temporary excess capacity that is unavoidable (Tr. 510) but argued that it is appropriate that WKPL should share in the cost of this unavoidable capacity since it benefits in having spare capacity available to it rather than having to provide its own facilities which would also have spare capacity (Exhibit #3).

B.C. Hydro argued that its proposed wheeling rates, based on average costs for a specified system allocated on the usage basis, are fair and reasonable (Tr. 269). B.C. Hydro testified that the single contingency criteria planning of their transmission system provides WKPL with benefits beyond those it would be realizing if it had built its own system (Tr. 414-15). B.C. Hydro acknowledged, however, that the incremental cost of wheeling WKPL electrical energy is essentially zero (Tr. 601).

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B.C. Hydro's preferred method of determining wheeling rates for WKPL was based on computer-simulated load flows for their specified system with no loop flow (ie. the line open). These load flows assumed a 20 MW load analyzed separately for each point of interconnection; namely Vernon, Creston and Princeton (Exhibit 5, Volume 2, pp. 36-70). B.C. Hydro testified that it is impossible to define typical load flows that result in typical loop flows since loop flows are sometimes clockwise and other times counter-clockwise, depending on the time of year (Tr. 625-31).

B.C. Hydro's proposed firm annual wheeling rates are:

To Vernon	\$61,100 per megawatt
To Creston	\$30,200 per megawatt
To Princeton	\$75,000 per megawatt

Although B.C. Hydro did not apply to have wheeling rates determined on the basis of shared benefits, they did address this issue in Argument. Hydro proposed that the benefits attributable to WKPL's avoided cost should be based on the cost of a stand-alone system constructed today (Tr. 549-50), and urged the Commission to keep two factors in mind in determining how those benefits should be shared, as WKPL gains benefits from using B.C. Hydro's transmission system which would have been unattainable had WKPL built its own transmission lines. Firstly, WKPL has greater flexibility since, had it built its own system, it would be paying the fixed costs related thereto for the life of the transmission line, regardless of WKPL's transmission requirements. Secondly, WKPL's reliability by using B.C. Hydro's system is much higher than for any stand-alone system (Tr. 1,976-77).

#### 5.2 WKPL's Position

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Although WKPL was prepared to accept most of the clauses contained in the draft General Wheeling Agreement (Exhibit F), it did not agree with the method B.C. Hydro proposed for determining the wheeling rate. It was WKPL's position that employment of the specified system, the method of

allocating costs and the 1985 dollar costs as proposed by B.C. Hydro were incorrect for the circumstances which actually prevail in this case.

WKPL argued for a point-to-point or deemed transmission path, which was considerably smaller than B.C. Hydro's specified system (Exhibit 8, Volume 3, Tab 3, pp. 46-47, Tr. 1,373-75, 2,028) and a capacity allocator on a line by line basis (Tr. 1,636).

WKPL also testified that their requirement for wheeling is inversely related to the amount of power purchased from B.C. Hydro for the designated points of delivery of that power, so that, as WKPL increases power purchases from B.C. Hydro, the need for wheeling will diminish (Tr. 1,856). Accordingly, in WKPL's view declining wheeling requirements ruled out justification for additional transmission line construction.

WKPL further testified that as B.C. Hydro's surplus transmission capacity decreased, so would WKPL's wheeling requirements, due to increased generation at the Canal Plant, Seven Mile, Mica and Revelstoke, resulting in a natural fit which would be advantageous to both parties (Exhibit 6, Volume 1, Tab 4, pp. 30-31).

In view of the foregoing WKPL proposed the following annual general wheeling rates:

To Vernon	\$10,729 per megawatt
To Creston	\$ 5,560 per megawatt

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Although WKPL did not seek wheeling rates determined on the basis of shared benefits, they did address this issue during the hearings. It was argued that WKPL's avoided costs should be determined on the basis of the cost of the notional system in 1977 (Tr. 1,109). This would take into account such historical factors as WKPL's provision to B.C. Hydro of the required transmission rights of way and WKPL's expectation that wheeling rates would be determined as in the draft 1977 General Wheeling Agreement (Tr. 1,363).

#### 5.3 Commission Summary and Conclusions

The Commission concludes that except for the cost of establishing interconnections, the wheeling service requested by WKPL will not affect the timing or extent of B.C. Hydro transmission investment. Thus, there is no burden on other B.C. Hydro customers as a result of currently projected wheeling activity. This, in effect, means that B.C. Hydro's short-run marginal costs of providing wheeling services for WKPL are negligible and, the Commission concludes, establishes a fair lower limit for the wheeling rate. Use by WKPL of B.C. Hydro facilities will result in a substantial avoided cost for WKPL. That avoided cost fairly establishes the upper limit of any wheeling rate that might be imposed.

In the Commission's view, a wheeling rate within this range and designed to meet the test of fairness should be established on either an allocated cost of service basis, or on the basis of sharing of benefits between the two parties. In either case the wheeling rate should lie within the upper and lower limits. Indeed B.C. Hydro agreed that, however determined, the wheeling rate to be acceptable should be below the avoided costs and above the marginal cost. The Commission notes that Hydro acknowledged that they had not checked to see if their proposed rate met that test (Tr. 374).

In any calculation of cost-based wheeling rates, a determination of costs to be included and an equitable method of assigning those costs to wheeling service and other users must be made. The range of allocated costs cited in evidence at the hearing included the costs relating to the following:

- a specified system
- a notional line
- a deemed path

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The question of "postage-stamp" wheeling rates, while briefly mentioned at the hearing, was not seriously considered in any detail. Postage-stamp rates would require inclusion of all facilities involved in the transmission system, which the Commission concludes is inappropriate in this case.

The specified system proposed by B.C. Hydro includes only those transmission lines and related facilities identified by B.C. Hydro in Exhibit #3, Tab 2, page 62 as providing the present link between WKPL's generation and its load centres.

WKPL's approach, using the concept of a deemed path, identifies a route in the specified system adequate to carry the full amount of load to be wheeled. This is similar to the notional line approach, which involves a hypothetical line connecting the point of entry and exit of the wheeled power and which is adequately sized to transmit the requisite amount of power.

Whichever approach is used, cost allocation can be based on the relative usage by each party at the time of peak demand as proposed by B.C. Hydro, or on the basis of wheeling demand as a percentage of the capacity of the line or other facility as proposed by WKPL. Capacity of the facility can be established in terms of thermal, voltage level, or stability limits. WKPL uses thermal limits while B.C. Hydro recognizes whichever limitation applies to each element of its specified system. Costing may be performed on an aggregate, or as has been done by B.C. Hydro, on a distance-related basis.

The Commission has a number of concerns with respect to the approach to costing employed by the two proponents. These concerns are related not only to their cost allocation methodology, but also to the assumed operating conditions in B.C. Hydro's specified system with respect to loop flows and the potential for double-counting in the B.C. Hydro method.

With respect to allocation, in the Commission's view the use of a specified system with the allocation methodology as proposed by either WKPL or B.C. Hydro poses certain conceptual problems. Specifically, the load flow on a particular line under normal conditions can be relatively small. However, the magnitude of the load flow on such a line under contingency outage conditions elsewhere, however, may be quite large. This is evident in the B.C. Hydro integrated system load flow data when cases with and without loop flow are

compared (Exhibit #5, Tab 1, pp. 36-70). Thus, if B.C. Hydro's flow in a line is small relative to capacity, then if the usage allocation method proposed by B.C. Hydro is applied, a modest wheeling flow could result in the allocation of nearly all of the cost of the line to the wheeling customer. This has a bearing on the reasonableness of including such lines in the specified system, and in the Commission's opinion must be recognized in the setting of rates and charges.

The Commission also recognizes that allocation of wheeling cost on the basis of a percentage use of capacity is biased in favour of the wheeling customer, unless each line segment is used to full capacity. If there is a substantial amount of surplus capacity, the wheeling customer does not pay for it, even though he may benefit.

The allocation process by B.C. Hydro used the absolute value of the component flows in the line segments. This allocates the same cost to the wheeling load whether that load increases the total load on a line segment or transformer, or reduces it due to counterflow. The Commission concludes that such methodology, while not totally devoid of merit, means that if a wheeling load on a line segment is zero, no cost is allocated to the wheeling load. If, however, the wheeling load in fact reduces the total line loading through a negative or counterflow wheeling load, a cost penalty is nevertheless incurred by the wheeling load.

With regard to the exclusion of loop flows, the B.C. Hydro proposal allocated the cost of the specified system, on the basis of no loop flow in the BPA system by assuming that the ties with BPA are open. The Commission, however, concludes that since those ties are normally closed, this condition must be taken into account in the allocation of costs.

Moreover, the evidence indicates that the individual line segments of the specified system have different costs and that both the wheeling and B.C. Hydro load flows traverse the entire length of each line segment.

With respect to the potential for double-counting, B.C. Hydro's approach was to calculate the line flows on the specified system on the basis of a 20 MW assumed wheeling load, independently for the Creston, Vernon and Princeton wheeling paths. The results were then prorated based upon the actual wheeling load of 21 MW for Creston, 70 MW for Vernon and 1 MW for Princeton. The Commission concludes that this can lead to double-counting in the allocation process if, for example, a Creston wheeling flow were to run counter to a Vernon wheeling flow.

In order to circumvent or at least alleviate these problems, the Commission has made an alternative calculation based on the following steps:

- The Commission has assumed that the ties between B.C. Hydro and BPA are closed, as shown in B.C. Hydro's Exhibit #5, Tab 1. In this Exhibit, B.C. Hydro has provided load flow data for wheeling, given the existence of loop flows.
- 2. The Commission has analysed costs on a line by line basis using the relative flows of B.C. Hydro and WKPL in the respective line segment or transformer. Also, since the allocation has been performed on a line by line basis, the use of distance as a factor has been obviated. The Commission also assigned zero costs to any line for which total line flow was negligible or negative as a result of wheeling load.
- 3. The Commission then prorated wheeling loads based on the combined wheeling flow to the three wheeling load centres; Creston, Vernon and Princeton, before allocating the costs to the above three factors.

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The results of the Commission's allocation process are recorded in Table 6 and displayed in the graph in Figure 8. Appendix B shows the calculations in greater detail.

The Commission notes that B.C. Hydro's proposed wheeling rate is very much higher than that resulting from the avoided cost approach (ref. Figure 8). Even after adjustments to the loop flows and combined wheeling load on B.C. Hydro's specified system (as made by the Commission), the resulting rate is still, in the Commission's view, unjustifiably higher than that produced by the avoided cost approach. The Commission therefore concludes that B.C. Hydro's proposed wheeling rates are not just or reasonable.

In the circumstances, the Commission finds the shared benefits approach, based on WKPL's avoided costs, to be the appropriate methodology to determine the wheeling rates in this case. With respect to that approach, the Commission has concluded that the passage of time has been such that any attempt to attribute responsibility for failure of the 1977 negotiations to either party, would be inappropriate. Moreover, there is little evidence to justify attempting to identify or interpret the respective expectations of the parties as to the shared benefits at that earlier time.

The Commission does recognize, however, the benefits available to WKPL by buying rather than building additional transmission capacity. Such benefits, attributable principally to avoidance of the "lumpiness" of capital expenditures required for the construction alternative, and to the greater security provided by utilizing the B.C. Hydro system, in the Commission's view are both tangible and significant. Accordingly, the Commission has concluded in favour of the shared benefits approach, as developed from WKPL's avoided cost, in this instance leaning in the direction of a wheeling rate based on the avoided cost of a notional transmission line deemed to have been built by WKPL in 1985.

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On that basis, the Commission has determined that the firm wheeling rates shall be as follows:

Vernon	\$19,000/MW/year
Creston	\$11,000/MW/year
Princeton	\$45,000/MW/year

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The graph on page 54 shows projected general wheeling total costs as proposed by WKPL and B.C. Hydro. Several other options considered at the hearing are also shown, including the notional line costs in 1977 and 1985 dollars, the combined case developed by the Commission and the Commission Decision.

# Table 5

## Forecast Wheeling Demand and Total Wheeling Costs

		YEAR				
	1986	<u>1987</u>	1988	1989	<u>1990</u>	
		Pea	k Demand (l	<b>₩₩)</b>		
Vernon	55	65	69	69	79	
Creston	18	13	13	12	13	
Princeton *	1	1	1	1	1	

Source: WKPL Exhibit #64A \* An estimate only

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## Total Cost (\$000)

1.	WKPL Proposal	690	770	813	806	920	
2.	B.C. Hydro Proposal	3,979	4,364	4,609	4,653	5,220	
3.	Notional Line 1977	1,053	1,168	1,232	1,222	1,393	
4.	Notional Line 1985	1,856	2,059	2,172	2,156	2,456	
· 5.	Combined Method	2,512	3,056	3,211	2,723	3,600	
6.	BCUC Decision	1,288	1,473	1,499	1,488	1,689	

# BC Hydro Application for Approval of New PPA with FortisBC

## **Appendix F**

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## Table 6

## Wheeling Rates

1. WKPL Proposal:

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 Vernon
 \$10,729 / MW / yr

 Creston
 \$5,560 / MW / yr

## 2. BCH Proposal:

Vernon	\$61,100 / MW / yr
Creston	\$30,200 / MW / yr
Princeton	\$75,000 / MW / yr

## 3. Notional Line Constructed in 1977:

Vernon Creston \$16,109 / MW / yr \$9,258 / MW / yr

# 4. <u>Notional Line Constructed in 1985</u>: Vernon Creston

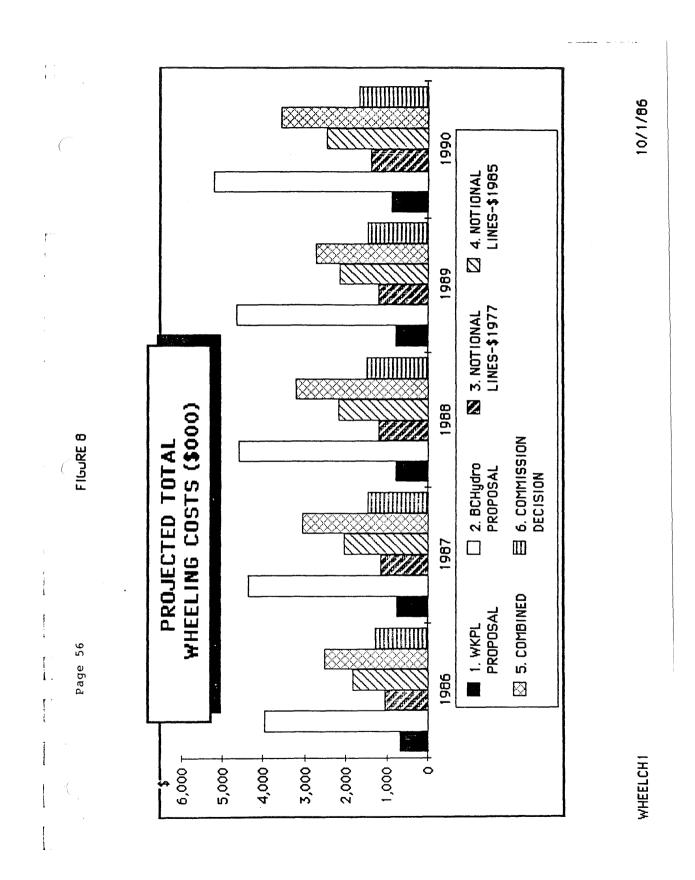
\$28,400 / MW / yr \$16,360 / MW / yr

## 5. <u>Combined Method</u>: (Zero Cost if Negative Flow, with Loop Flow)

Vernon	\$31,800 / MW / yr
Creston	\$39,200 / MW / yr
Princeton	\$58,000 / MW / yr

## 6. BCUC Decision:

Vernon	\$19,000 / MW / yr
Creston	\$11,000 / MW / yr
Princeton	\$45,000 / MW / yr



# BC Hydro Application for Approval of New PPA with FortisBC

#### SECTION 6.0 WHEELING TERMS AND CONDITIONS

In this section the issues related to determination of appropriate terms and conditions to be attached to the wheeling rates are reviewed. As indicated heretofore in the Introduction, this Decision is confined to determination of the principles which are to be incorporated into the required contract. The Commission expects the precise wording of the contract to be worked out between the parties for final approval when the contract is filed. The principal issues are firm versus non-firm wheeling and nominations. Non-firm wheeling includes interruptible wheeling as well as wheeling for foreseen and unforeseen outages.

#### 6.1 B.C. Hydro's Position

B.C. Hydro proposed to terminate ad hoc wheeling (Tr. 428). In the 1977 General Wheeling Agreement there is an ad hoc wheeling rate clause specifying the basis on which B.C. Hydro establishes the rate applicable to incidental transmission of electrical energy for WKPL, using excess capacity as available [Exhibit 3, Tab 13, Clause (n)(iii)]. It was Hydro's view that WKPL's nominations should be set high enough to eliminate the need for ad hoc wheeling (Tr. 433). Hydro argued that WKPL should not be allowed to backstop a firm wheeling requirement of 35 MW which WKPL obtains under the interruptible wheeling rate in the Koch Creek Wheeling Agreement, with ad hoc wheeling under the General Wheeling Agreement. Hydro contended that the principle regarding firm wheeling is clear; namely that firm wheeling requirements must be supported by firm nominations (Tr. 1,983).

Hydro also proposed that firm nominations include requirements for the planned outages required for maintenance and installation (Tr. 4,309, 1985-86).

With regard to emergency wheeling due to forced outages, B.C. Hydro initially proposed that a separate contract be negotiated (Tr. 431). In final argument, however, Hydro stated that for sudden and accidental forced outage

occurrences that are repaired with reasonable diligence, Hydro is prepared to supply emergency wheeling on an "as available" basis at the current de facto rate of one mill per kWh (Tr. 1985).

### 6.2 WKPL's Position

WKPL proposed that ad hoc wheeling, as defined in the 1977 draft General Wheeling Agreement, be continued (Tr. 2030). This proposal would provide WKPL with security and continuity of supply in their service area (Tr. 1366). WKPL did agree, if WKPL's wheeling rate proposal is accepted (Tr. 1869), to increase its firm nomination by 35 MW which would firm up the 35 MW of interruptible under the Koch Creek Wheeling Agreement.

### 6.3 Commission Summary and Conclusions

The Commission concludes that firm wheeling requirements must in fairness be supported by firm nominations, and that such nominations should be on a 5-year rolling basis. The Commission further concludes that a nomination penalty is not required, but the billing demand charge for wheeling should reflect the greater of nominated demand and capacity actually utilized. Firm wheeling should include peak period planned outages for maintenance and construction, but not requirements for unforeseen outages or any other bona fide emergency. This should not affect the firm nomination requirement, since planned outages for maintenance and construction will normally be undertaken during off-peak periods.

B.C. Hydro and WKPL were ultimately in agreement that bona fide emergency wheeling should be charged at one mill per kilowatt hour and the Commission concurs. The Commission concludes that, for firm wheeling requirements, WKPL should nominate for five years.

#### SECTION 7.0 COMPARATIVE IMPACT ON WKPL'S UNIT COSTS FOR PURCHASED POWER

For illustrative purposes only, the impacts on WKPL's unit costs for purchased power of the rates and related terms and conditions as proposed by WKPL and by B.C. Hydro, are compared in Table 7 on page 60 to those determined by this Decision.

Table 7 displays the costs to WKPL in mills per kWh and the resulting percentage increases by year to 1990, based on the data provided in WKPL's Exhibit #64A. The Commission notes and concurs with WKPL's testimony (Tr. 1,878-81) that the ultimate impacts on WKPL's revenue requirements and hence rates to its customers, at least in the later years, would be less than those indicated by Exhibit #64A since those impacts do not reflect the effect of price elasticity for any forecast other than that forming the basis for the WKPL proposal. Thus, if it is assumed that the WKPL forecasts for both demand and energy are reasonable for the level of rates for purchased power projected by WKPL, the impact on revenue requirements of any higher rates would be less than indicated in Exhibit #64A. Under such circumstances, therefore, the indicated spread between the results for WKPL, B.C. Hydro and the Commission would be less than illustrated by Table 7.

Accordingly, and in light of the available evidence, the Commission concludes that the rates determined by this Decision are just, reasonable and not unduly discriminatory.

## Table 7

# Summary of Illustrative Rate Increases

	1986	1987	1988	<u>1989</u>	<u>1990</u>
B.C. Hydro Proposal					
Average Rate (mills/kWh) Percent Increase	30.2	35.8 18.6	35.8 0	36.8 2.7	40.8 10.8
WKPL Proposal					
Average Rate (mills/kWh) Percent Increase	30.2	31.8 5.2	31.8 0	32.4 2.0	35.8 10.6
Commission Decision					
Average Rate (mills/kWh) Percent Increase	30.2	32.3 7.1	32.5 .5	33.4 2.7	37. 10.8

Source: WKPL's Exhibit #64A

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#### SECTION 8.0 THE DECISION - SUMMARY

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In summary, this Decision provides for the following :

- A transitional period, from the date of this Decision to December 31, 1990, during which the rate paid by WKPL for power purchased from B.C. Hydro will rise gradually in response to an increasing ratchet on the demand charge portion of the rate.
- The 1986 demand charge shall be \$3,500/MW/month reflecting zero ratchet, rising by 1990 to reflect a ratchet of 40% applicable to WKPL's peak billing demand in that year (Ref. Table 4, page 37 of this Decision).
- 3. The energy charge shall be the sum of the energy charges provided in Rate Schedules 1821 and 1899 for any given year, or approximately 22.4 mills/kWh in 1986.
- 4. The terms and conditions relating to both the specified transitional and to any longer-term rates for purchased power, shall be as determined in Section 4.3 of this Decision and set out in Order No. G-61-86 attached.
- The rates to be charged for firm wheeling of WKPL power by B.C. Hydro, shall be as follows:

Vernon	\$19,000/MW/year
Creston	\$11,000/MW/year
Princeton	\$45,000/MW/year

6. The terms and conditions relating to the wheeling rates shall be as defined in Section 6.3 of this Decision and Order No. G-61-86 attached.

 All of the foregoing rates shall be subject to whatever percentage increases or decreases in rates result from general rate applications by B.C. Hydro.

The Commission emphasizes that its determination of the foregoing specific transitional rates for purposes of settling a dispute, does not relieve WKPL from its overriding responsibility for obtaining the lowest-cost, secure long-term sources of supply. The rates specified by this Decision are intended to provide WKPL with a basis for comparison with other supply alternatives, arising from the intensified system planning activity by WKPL which the Commission now expects the utility to undertake without further delay.

The Commission will further expect that without further delay B.C. Hydro and WKPL will produce and file with the Commission a contract covering the period to the year 2005, reflecting the principles, terms and conditions as determined by this Decision and, for the transitional period to 1990, based on the rates specified in this Decision as just and reasonable in the circumstances, and in the public interest.

DATED at the City of Vancouver, in the Province of British Columbia, this 15<sup>th</sup> day of October, 1986.

D.V ANDS, Deputy Chairmar

D.B. KI oner

N. MARTIN, Commissioner

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# UTILITIES COMMISSION ORDER

BRITISH COLUMBIA

NUMBER \_\_\_\_\_\_\_

## PROVINCE OF BRITISH COLUMBIA BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF the Utilities Commission Act, S.B.C. 1980, c. 60, as amended

and

IN THE MATTER OF Matters in Dispute between British Columbia Hydro and Power Authority and West Kootenay Power and Light Company, Limited

BEFORE:

M. Taylor, Chairman; J.D.V. Newlands, Deputy Chairman; D.B. Kilpatrick, Commissioner; and N. Martin, Commissioner	) ) ) ) October 15, 1986 ) )
Commissioner	)

#### ORDER

WHEREAS Commission Orders No. G-88-85 and G-89-85 established that a public hearing of certain matters in dispute between B.C. Hydro and Power Authority ("B.C. Hydro") and West Kootenay Power and Light Company, Limited ("WKPL") should commence on December 11, 1985; and

WHEREAS the said hearing was adjourned to April 18, 1986 in accordance with the Commission's Adjournment Decision dated December 18, 1985 following an Application by B.C. Hydro; and WHEREAS the said hearing was adjourned to May 12, 1986 as a result of extensive evidence filed on March 25, 1986 by

B.C. Hydro; and

WHEREAS the hearing enabled the Commission to review the following issues, formally identified in the aforementioned Adjournment Decision, as follows:

The November 7, 1985 application of WKPL pursuant to Sections 28, 32, 88 and 100 of the Utilities Commission Act ("the Act") to allow wheeling of WKPL power over B.C. Hydro facilities between South Slocan (a) and delivery points at Vernon, Princeton and Creston at existing rates. Further, to allow emergency wheeling over B.C. Hydro facilities in the event of the loss of the Waneta-Boundary (transmission) line.

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FOURTH FLOOR, 800 SHITHE STREET WANCOUVER & C. VEZ SEL CANADA, TELEPHONE, 1604) 560-4700, TELEX 04-54536

**BC Hydro Application for Approval** of New PPA with FortisBC

			SH CULUMBIA S COMMISSION
	2		G-61-86
(b)	Section 64 of the Act	complaint of WKPL pursu that B.C. Hydro Rate Sc harged for service to WM le.	hedule
(c)	pursuant to Section	application by B.C. Hyd 7 of the Act to establis nexecuted General Wheeli	h rates
(d)		, in connection with B.C. ling Agreement rates; ar	
		on has considered the ev	dence
uceć at	the hearing.		
	NOW THEREFORE the Co	mission hereby orders B.	C. Hydro
Power	Authority and West Koot	nay Power and Light Com	any,
ited as	follows:		
1.	which will recognize	nter into a long-term co a transitional period to blowed by a conventional cluding 2005.	)
2.	power purchased by W predicated on a Dema month and an Energy charges in Rate Sche approximately 22.4 m	period the rate for elec (PL from B.C. Hydro will ad Charge of \$3,500 per M charge equal to the sum ( bules 1821 and 1899, or ( .lls per kWh, with the fu and Ratchet clause will a	be W per of such currently orther
	Year	% Ratchet	
	1986 1987 1988 1989 1990 Thereafter	<b>Zero</b> 10 20 30 40 50	
<ol> <li>Firm wheeling rates covering the energy over the transmission factories</li> <li>will be as follows:</li> </ol>			
	To Vernon To Creston To Princeton	\$19,000/MW/Year \$11,000/MW/Year \$45,000/MW/Year	
	Cuch firm wheeling r	ates will require firm	

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		BRITISH COLUMDIA						
		UTILITIES COMMISSION						
		ORDER						
·	3	NUMBER						
4	I. The contract for the aforementioned r purchased by WKPL from B.C. Hydro and	ates for power for wheeling of						
:	WKPL energy over B.C. Hydro transmission facilities is to be concluded between the two parties as soon as possible and will cover the period from the date of							
	this Order to December 31, 2005. Suc include terms and conditions covering	h contract shall purchased power						
	rates as specified in Section 4.3 of issued concurrently with this Order, conditions covering wheeling as speci 6.3 of the Decision.	and terms and						
· · · ·	Future changes in the rates determine Decision shall be limited to and appl percentage basis as any future approv	ied on the same						
ţ	Rate Schedules 1821 and 1899.							
	DATED at the City of Vancouver, in th							
Britis	n Columbia, this 15th day of October, 1986.							
	BY ORDER							
		In						
:	Chairman							
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#### APPENDIX A

#### AVOIDED COST - ANNUAL RATE FOR FOR "NEW" GAS TURBINES

1. Avoided Cost was determined on the basis of Exhibit #32 which is a cost estimate to install two gas turbines of 40 MW (41.2 MW) in the Okanagan.

eg.	New Equipment			<u>1987</u>	
	Rate Base			24.42	
	Required Revenue				8.03
	Fuel				.75
	Required Revenue without Fuel				7.28
	Ratio of Required	7.28	= .29812		

Annual cost for the operation of the gas turbines.

Cost of maintenance for gas turbines is \$250,000 over three years.

24.42

 $24,420,000 \times .29812 + 1/3 (250,000) =$ 

7,280,090 + 83,333.3 = 7,363,424

The cost per MW per month is :

Revenue to Rate Base

\$7,363,423 / 82.4 MW / 12 mo. = \$7,446.83/MW/mo.

From Exhibit #8, Volume 3, peak capacity purchase from B.C. Hydro in 1987 is 140 MW.

Total demand cost in 1987 is  $7,446.83 \times 140 \times 12 = \frac{12,510.67 \times 10^{3}}{2}$ 

From Exhibit #8, Volume 3, Tab 5, total energy is 112 GWh.

Total Energy cost in 1987 is 112 GWh x  $3.43 c/kWh = \frac{$3.841.6 \times 10^{3}}{}$ 

Therefore, total demand and energy cost in 1987 is:

Demand =  $$12510.7 \times 10^{3}$ 

Energy =  $\frac{$3841.6 \times 10^{3}}{}$ 

BC Hydro Application for Approval of New PPA with FortisBC

#### APPENDIX B

#### NOMINATIONS IN SUBSEQUENT YEARS FOR POST-TRANSITIONAL PERIOD

By May 31st in each year of this Agreement, the nominated firm capacity and energy for each point of interconnection shall be provided by WKPL according to the following schedule:

- (a) The former sixth year's nominations may be varied by + or 5% to become the new fifth year's nominations.
- (b) The former seventh year's nominations may be varied by + or 10% to become the new sixth year's nominations.
- (c) The former eighth year's nominations may be varied by + or 15% to become the new seventh year's nominations.
- (d) The former ninth year's nominations may be varied by + or 20% to become the new eighth year's nominations.
- (e) The former tenth year's nominations may be varied by + or 25% to become the new ninth year's nominations.
- (f) The new tenth year's nominations.

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APPENDIX C Page 1 of 7

#### COMBINED WHEELING CALCULATION

The three specific areas of cost transmission lines, line terminals and transformers are allocated to the three take-off points (Creston, Vernon and Princeton) by the following method:

1. Transmission Lines

Wheeling with loop flow was taken from Exhibit #5, Volume #2, pg. 27-70.

Step #1

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Wheeling flow under the design of 20 MW was determined for Creston, Vernon and Princeton.

Wheeling Flow = (Line Flow with Wheeling - Line Flow No Wheeling)

Step #2 - "Individual Wheeling Basis"

Wheeling loop flows under the design of 20 MW adjusted for 21/20 MW - Creston, 70/20 MW - Vernon and 1/20 MW - Princeton.

Step #3 - "Combined Wheeling Basis"

The wheeling flows in Step #2 were added together.

Step #4 - (Individual and Combined Wheeling)

A MW\*km calculation was determined for:

B.C. Hydro: Line Flow with no Wheeling x Line Distance (km)

WKPL: Wheeling Flow after Wheeling x Line Distance (km)

Step #5 - Allocation of Costs

A summary of annual transmission line costs were taken from Exhibit #7, Tab 13.

The annual cost of the line was allocated to B.C. Hydro and WKPL based on the WKPL (MW \* km) and B.C. Hydro (MW \* km).

A zero cost was inserted if the flow was negative.

Allocation to WKPL	z	WKPL (MW * km)	x	Annual Cost of Line
		WKPL (MW*km) + BCH (MW*km)		

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APPENDIX C Page 2 of 7

#### 2. Line Terminals (Individual & Combined)

Costs for transformers and line terminals were taken from Exhibit #7, Tab 13.

Step #1

A percentage of the total line terminal cost for each station was allocated to each of the 13 lines on the basis of the number of lines emanating from the respective system.

#### Step #2 - (Individual & Combined)

The cost allocation to WKPL and B.C. Hydro for each terminal was made on the same percentage basis as the individual basis transmission line and then combined.

#### 3. Transformers (Individual & Combined)

Allocation of cost to WKPL and B.C. Hydro were established by the following calculation:

#### Usage for 20 MW Wheeling

(adj. to individual basis) No Wheeling + Usage for 20 MW Wheeling (adj. to individual basis) x Cost of Transformers

The "Individual Wheeling Basis" provides for transmission lines, line terminals and transformers to be assigned to WKPL for the three take-off points (Creston, Vernon and Princeton).

The "Combined Wheeling Basis" provides totals for transmission lines, line terminals and transformers. The individual costs are downgraded by a ratio of the total in the combined system to the total on an individual basis. This method is intended to approximate simultaneous wheeling at all of the take-off points under loop flow conditions (as shown in the following tables).

The annual rate (\$/MW/yr) is then :

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Creston	824/21	=	39,200
Vernon	2232/70	=	31,900
Princeton	51.8/1	=	51,800

	(6)		Total	2,026.0	469.4	612.4	3,107.8					Ž	APPENDIX C Page 3 of 7
( *	(8)	P L Combined Basis	Princeton	32.27/	13.38/	6.3	51.8	1	51,800				
	(1)	O W K P L Com	Vernon	1,423.34/	378.75/	430.06/	2,232.0	70	31,900				
With Loop Flow ative Flow	-	ATEDT	Creston	570.51/	77.42/	176.1 <sup>3/</sup>	824.0	21	39,200				
Specified System - With Loop Zero Cost if Negative Flow	(4) (5)	ALLOCA Basis	Princeton Total	43.2 2,713.1	15.3 538.8	7.3 717.3	65.8 3,969.2	1			<pre>ine 1, col. (5)] ine 2, col. (5)] ine 3, col. (5)]</pre>	<pre>ine 1, col. (5)] ine 2, col. (5)] ine 3, col. (5)]</pre>	ine 1, col. (5)] ine 2, col. (5)] ine 3, col. (5)]
Spec	(8)	Individual		1,905.9	434.7	503.7	2,844.3	70			col. (9)/Line col. (9)/Line col. (9)/Line	col. (9)/Line col. (9)/Line col. (9)/Line	col. (9)/Line col. (9)/Line col. (9)/Line
	(2)		Creston	5 764.0	88.8	206.3	1,059.1	21			x [Line l, x [Line 2, x [Line 3,	x [Line l, x [Line 2, x [Line 3,	x [Line 1, x [Line 2, x [Line 3, x [Line 3,
[ [	(1)		Particulars	Transmission Lines	Line Terminals	Transformers	TOTAL	ММ	Annual Rate (\$/MW)	)tes:	Line 1, col. (2) ; Line 2, col. (2) ; Line 3, col. (2) ;	Line 1, col. (3) : Line 2, col. (3) : Line 3, col. (3) :	Line 1, col. (4) Line 2, col. (4) Line 3, col. (4)
			Line	Ţ	2	£	4	'n	9	Footnotes:	1/ 2/ 3/	4 5 / 6 /	77 79 79

BC Hydro Application for Approval of New PPA with FortisBC

			6.	Bpecified Bystee 21MU	stee ···································	th Loop Flew			t.			
	(2)	(2)	Ð	(2)	3	6	Ē	£	(10) Annual	(11)	(12)	(13)
	From	Te	Line Flow No Wheeling	Line Flow With Wheeling	Wheeling Flav	Line Diet. KH	NKPL MM - KM	BCH NW - KH	Cost of line or Station (# 000)	Alloc to WKPL (\$ 000)	Allec to BCH (\$ 000)	Allac te Total (\$ 000)
1	NIC	PCTN	35.4	35.6	0.0	89.32	0.0	3,179.8	484.3	0.0	184.3	1.984
	ACK	TH ANA	130.0	130.0	0.0	49.57	0.0	444.1	775.4	0.0	175.4	775.4
		VNT 02 MIY	130.0	130.0	• •	44.57	0 C	444°4	5 989 191	 		6 - 40 F
	NLY		4.04	104.7	13.0		938.0	6.331.2	6.38° 6	6	554.7	638. ¢
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BC Hydro Application for Approval of New PPA with FortisBC

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BC Hydro Application for Approval of New PPA with FortisBC

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# BC Hydro Application for Approval of New PPA with FortisBC

Appendix G

**1993 PPA Decision** 



IN THE MATTER OF the Utilities Commission Act S.B.C. 1980, c. 60, as amended

and

IN THE MATTER OF An Application by

British Columbia Hydro and Power Authority for Rate Schedule 3808 and Revised Power Purchase Agreement with West Kootenay Power Ltd.

# DECISION April 22, 1993

# **BEFORE:**

Dr. M.K. Jaccard, Chairperson L.R. Barr, Deputy Chairperson K.L. Hall, Commissioner

BC Hydro Application for Approval of New PPA with FortisBC

## **EXECUTIVE SUMMARY**

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In the Commission's view, the B.C. Hydro/WKP relationship is best characterized as a hybrid, in which WKP is partly a customer of B.C. Hydro and partly an independent utility. As a customer, WKP has the right to a specified amount of electricity from B.C. Hydro at the rates extended by B.C. Hydro to comparable transmission customers. As an independent utility within British Columbia, WKP has the responsibility for its own resource planning and the right to meet all of its growing electricity requirements with purchases from B.C. Hydro at rates that are reflective of fair market arrangements.

On October 1, 1993 Rate 3807 will be terminated and replaced by a new rate comparable to the rate applied to other B.C. Hydro transmission customers (currently Rate 1821), and an amended Power Purchase Agreement. The new rate will be called Rate 3808, described herein as "modified Rate 3808". The new energy and demand charges will be identical to those of Rate 1821. From October 1, 1993 to September 30, 1995, the Demand Ratchet will be 50 percent. Thereafter it will rise in equal annual increments to 75 percent by 2000.

To accompany Rate 3808, the Commission directs B.C. Hydro and WKP to negotiate an amended Power Purchase Agreement. To guide the negotiations, the Commission presents its views, based on the hearing evidence, on items of controversy in recent negotiations between B.C. Hydro and WKP. On or before August 1, 1993, B.C. Hydro and WKP are to report on their negotiations and present their respective views on any items of disagreement. Other parties will then be allowed to comment on the outcome of these negotiations. By October 1, 1993, the Commission will issue a final Decision on the terms of the amended Power Purchase Agreement.

Modified Rate 3808 will have a 200 MW Customer Demand Limit, taking effect after a two year transition period. From October 1, 1993 to September 30, 1995, there will be no limit on the energy and capacity which WKP will be able to purchase under modified Rate 3808. After October 1, 1995, excess demand charges may be applied by B.C. Hydro to WKP consumption that exceeds the 200 MW Customer Demand Limit, if such consumption is not pursuant to a separate agreement between B.C. Hydro and WKP.

For service above 200 MW that is offered pursuant to a separate agreement between B.C. Hydro and WKP, the rates shall be those established by negotiations between B.C. Hydro and WKP on a utility to utility basis. Such agreements shall be filed with the Commission pursuant to Section 67 of the Act. The Commission will ensure, upon receipt of a filed agreement, that the terms and conditions thereof, including the rates therein, are reflective of fair market arrangements.

(ii)

To ensure alternative supply market opportunities for WKP, the Commission directs B.C. Hydro to provide WKP with reasonable wheeling access, at rates reflective of fair market arrangements, for non B.C. Hydro electricity supplies intended to serve WKP's customers, be these supplies intra or extra provincial.

The Commission declines jurisdiction in the demand billing dispute and energy nomination dispute applications of WKP.

The Commission issued a letter on February 26, 1993 outlining the principle elements of this Decision to assist WKP and intervenors in the WKP Revenue Requirements hearing which began on March 8, 1993 (Appendix D).

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- List of Exhibits
- Letter of February 26, 1993
  - BC Hydro Application for Approval of New PPA with FortisBC

#### **1.0 INTRODUCTION**

British Columbia Hydro and Power Authority ("B.C. Hydro") supplies power to West Kootenay Power Ltd. ("WKP") under B.C. Hydro's Electric Tariff Rate Schedule 3807 ("Rate 3807"), filed with the British Columbia Utilities Commission ("the Commission"). Purchases under Rate 3807 are in accordance with the terms and conditions of the Power Purchase Agreement ("the PPA") between B.C. Hydro and WKP, dated October 15, 1986, also filed with the Commission.

On December 11, 1992, B.C. Hydro applied to the Commission for Orders that would terminate Rate Schedule 3807 and the October 15, 1986 PPA, and replace them with a proposed Rate Schedule 3808 and a new PPA, on an effective date to be determined by the Commission.

Under Commission Order No. G-119-92, dated December 17, 1992, the Application was set down for a public hearing to commence at 9:00 a.m. on Monday, February 8, 1993, in Castlegar, B.C. The hearing was completed with Final Argument in Vancouver on February 19, 1993.

On February 26, 1993 the Commission issued a letter (Appendix D) which presented the principal elements of the final Decision, so as to assist WKP with its Revenue Requirements hearing in early March, 1993.

#### 1.1 Background

WKP is an electric utility authorized to generate, transmit and distribute power within a radius of 150 miles of Rossland, B.C. The company serves some 116,000 customers in an area extending from Princeton in the west to Creston in the east and from the U.S. Boundary north to Kelowna and Kaslo. Approximately 40 percent of the customers are served indirectly through the sale of power to municipal distribution utilities in the communities of Grand Forks, Kelowna, Nelson, Penticton and the District of Summerland and through a private company, Princeton Light and Power Company, Limited ("PLP"), serving Princeton and vicinity.

Electricity is supplied primarily by WKP from its own four plants on the Kootenay River, purchases from Cominco Ltd. ("Cominco") and purchases from B.C. Hydro. The major growth in the system is in the Okanagan and, increasingly, electricity to serve this area must be moved

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long distances from the generating sources on the Kootenay River or purchased from B.C. Hydro.

WKP began the development of hydroelectric energy in the West Kootenay area with the construction of a dam and generating facilities on the Kootenay River in 1898. This plant was reconstructed in 1928. Three more plants were built on the river in 1907, 1929 and 1932. These three plants were subsequently purchased from Cominco by WKP in 1982. Cominco constructed other hydroelectric plants on the Kootenay River at Brilliant in 1944 and at Waneta on the Pend d'Oreille River in 1954. WKP operates and maintains these plants for Cominco under an operating agreement.

Shortly after the formation of B.C. Hydro in 1962, Canada entered into the Columbia River Treaty ("the Treaty") with the United States. The Treaty sets out how the downstream benefits derived from the construction of dams controlling the flow and storage of water on the Columbia and Kootenay River systems are to be allocated. In August 1972 B.C. Hydro, Cominco and WKP entered into the Canal Plant Agreement. In this agreement B.C. Hydro gave average peak and average energy entitlements to Cominco and WKP to September 30, 2005, in return for water rights on the Kootenay River. If the agreement is not extended or renewed, WKP is entitled to resume independent operation of its hydroelectric plants under its existing water licenses. These water licenses pre-date the Treaty so that any entitlement under the Canal Plant Agreement would not be affected by any water diversion from the Kootenay River that may take place under the Treaty.

In 1974, B.C. Hydro constructed the Canal Plant on a canal by-passing the four WKP plants on the Kootenay River. In 1981, Cominco and WKP executed the Canal Plant Sub-Agreement which specifies the division of annual capacity and energy entitlements to be received from B.C. Hydro based on the historic average generation of the WKP and Cominco plants. The Canal Plant Agreements integrate the WKP and Cominco facilities with the B.C. Hydro grid, and is made necessary partly because of water regulation required by the Treaty and partly because of the construction of the Kootenay Canal Plant by B.C. Hydro. To provide maximum efficiency in the use of the water resource at the Canal Plant, effective control of Kootenay River water flow rests with B.C. Hydro and the power available to WKP and Cominco is no longer related to the production of their respective power plants. Agreements determine their monthly capacity and

#### BC Hydro Application for Approval of New PPA with FortisBC

energy entitlements. Subsequent to the Treaty, B.C. Hydro also constructed a plant at 7-Mile on the Pend d'Oreille River.

In addition to the facilities actually in place, an opportunity exists to construct additional generating facilities at both the Brilliant and Waneta dam sites. Whether these facilities should be constructed by Cominco, WKP, B.C. Hydro or a private developer will be a matter of public policy and certification by the B.C. Government.

Location	Owner	Name Plate Capacity
Kootenay River		
Plants No. 1, 2, 3, 4	WKP	190 MW
Canal Plant	B.C. Hydro	530 MW
Brilliant	Cominco	125 MW
Pend d'Oreille River		
Waneta	Cominco	375 MW
7-Mile	B.C. Hydro	600 MW

The following table summarizes the existing capacity of the seven dams:

The locations of the hydroelectric generating facilities are shown on the attached map.

# 1.1.1 WKP Power Resources

In 1991 WKP negotiated two new power supply agreements with Cominco to replace a Consolidated Sale of Surplus Power Agreement which had covered the period from 1980 to 1991. The first of these, the Long-Term Firm Power Supply Agreement, provides for the purchase by WKP of 75 annual average MW from Cominco, on a firm take-or-pay basis until September 30, 2005. WKP is entitled to utilize, on an hourly basis, any unused Cominco capacity at no cost.

The second agreement, the 1999 Firm Power Supply Agreement, provides for the purchase by WKP of a further 38 average annual MW from Cominco, on a firm take-or-pay basis, until December 31, 1999. This second block of power is higher in price than the first block purchased under the long-term agreement.

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Purchases of power by WKP from B.C. Hydro are largely for seasonal peaking purposes and vary from maximum levels in the winter months to zero in some of the summer months, resulting in a low load factor. In 1992 WKP had a peak load of approximately 600 MW, while the four WKP plants on the Kootenay River have a total installed capacity of only 190 MW. WKP's own resources, therefore, supplied only about 32 percent of its capacity requirements. Purchases from Cominco supplied a further 42 percent of the capacity requirements and purchases from B.C. Hydro were 26 percent (Exhibit 55).

Energy sales of 2,480 gigawatt hours ("G.Wh") were supplied 55 percent from WKP's own generation facilities, 35 percent was purchased from Cominco and 10 percent from B.C. Hydro. The chart on the map illustrates the sources of capacity and energy for WKP's power supply in 1992.

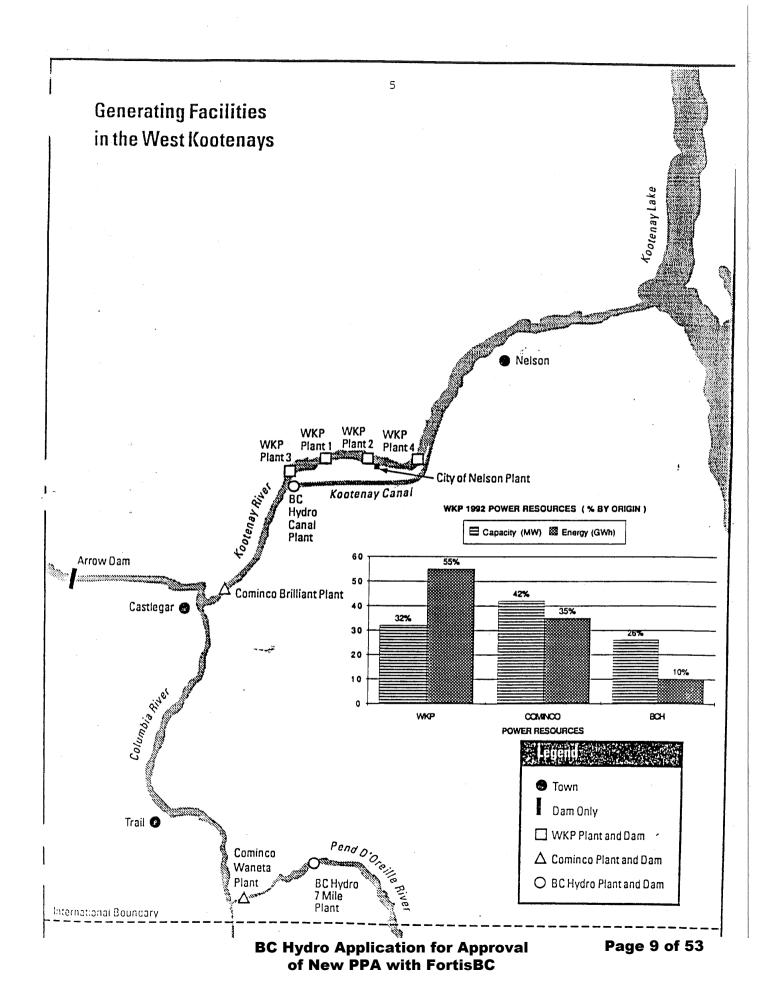
The area served by WKP is expected to have an increasing need for electricity due mostly to its growing population. The major growth area is centred in the South Okanagan. Sales are forecast to increase 8.6 percent over the next five years, from 2,480 G.Wh in 1992 to 2,693 G.Wh in 1997, alleviated only by any reduction in power consumption achieved through Demand Side Management ("DSM") programs.

1.2 The Period 1986 to 1992

1.2.1 The 1986 Commission Decision

The rates, terms and conditions of a long-term PPA between B.C. Hydro and WKP became the subjects of a public hearing in 1986. Following the issuance on October 15, 1986 of the Commission Decision and Order No. G-61-86, B.C. Hydro and WKP signed the PPA. The Commission Decision set the rates, terms and conditions for a transitional period to expire at the end of 1990. In the 1986 Decision, the Commission concluded that beyond 1990 the principles employed in determining the power purchase rate should be the same as those used to determine the rates applicable to other B.C. Hydro customers. The Commission directed both parties to enter into a long-term contract which recognized a transitional period to the end of 1990, followed by a conventional period to the end of 2005.

# Appendix G



For the transitional period, the rate for electric power purchased was based on a demand charge of \$3,500 per MW per month and an energy charge equal to the sum of energy charges in Rate Schedules 1821 and 1899. Rate 1821 is B.C. Hydro's standard industrial rate for transmission service customers and Rate 1899 was the water rental fee. These two Rates have since been consolidated into the present Rate 1821. A further provision was that there be a Demand Ratchet clause. This provides that the demand charge for monthly billing purposes shall be for the highest demand set in the current month, or a charge equal to a percentage of the highest billing demand set in any one of the preceding 11 months, whichever is the highest value. This percentage was set at 0 in 1986 and increased to 50 percent over five years.

Future changes in the rates were to be limited to, and applied on, the same percentage basis as any future approved changes in Rate Schedules 1821 and 1899.

The Order also set out firm wheeling rates covering the transmission of WKP energy over the transmission facilities of B.C. Hydro to Vernon, Creston and Princeton. WKP was required to make firm nominations for both capacity and energy, and for wheeling requirements, on a five year rolling basis. There was also a 90 percent take-or-pay provision for energy nominations, but not for capacity. For both excess energy and excess capacity requirements there was a 10 percent penalty provision. However, these penalties were to be applied only under certain specific circumstances.

In 1989 B.C. Hydro applied to the Commission for a Reconsideration of elements of the 1986 Decision. In early 1990 this was denied.

#### 1.2.2 The Gas Turbine Plant

In its 1986 Decision the Commission emphasized that the rates set by its Order were transitional rates set for the purpose of settling a dispute. The Decision also emphasized that this did not relieve WKP from its over-all responsibility for obtaining the lowest-cost, secure long-term source of supply.

In response to this direction, WKP undertook a resource study in 1987 which indicated that a gas turbine would be the lowest-cost alternative source of new supply. WKP applied on December 15, 1987 to the Minister of Energy, Mines and Petroleum Resources for an Energy

Project Certificate for a gas-turbine plant to be installed in the South Okanagan area. The Minister of Energy, Mines and Petroleum Resources, with the concurrence of the Minister of Environment and Parks, referred the Application to the Commission for review at a public hearing. Following a number of delays and amendments to the Application, the hearing was eventually held in Oliver, B.C. commencing November 22, 1988.

In its Report, issued February 24, 1989, the Commission recommended that, subject to the negotiation of a long-term natural gas fuel contract, and subject to certain environment-related conditions, the Application be approved for construction, but only at a site more suitable than that within the Village of Oliver as proposed in the Application. If an alternative site could not be located, and if the above conditions could not be met, the Commission recommended that the preferred resource for WKP would be continued power purchases from B.C. Hydro in accordance with the terms and conditions of the 1986 Decision. The government chose not to issue the conditional certificate due to the large uncertainties remaining with the Application.

# 1.2.3 <u>The Principles of Agreement</u>

In the early months of 1990, B.C. Hydro and WKP began negotiations for new rates, terms and conditions, but were unable to agree before the end of the transition period. Consequently, the Commission extended the transition period rates under Rate 3807 to September 30, 1991, by Commission Order No. G-22-90. New negotiations began in 1991 when B.C. Hydro and WKP mutually attempted both to revise the rate for power purchases and to establish a new inter-utility relationship. This resulted in the "WKP/B.C. Hydro Principles of Agreement 1991 to 2010" ("the POA") which set out, in a manner that was not legally binding, a proposed new rate and its supporting terms and conditions. The POA, dated September 27, 1991, was filed with the Commission on October 8, 1991. Commission Order No. G-96-91 accepted the filing and established a deferral account for an approved interim rate for supply to WKP at the previous level of Rate 3807 effective October 1, 1991 until such time as a power purchase agreement based on the POA was negotiated by the parties and given approval by the Commission.

B.C. Hydro and WKP expended considerable time and effort in an attempt to reach an agreement based on the POA. However, it became apparent in August of 1992 that an impasse had been reached. On August 10, 1992, WKP advised the Commission that the parties had been unable to reach a mutually acceptable agreement and requested a Commission Inquiry under Section 97 of

the Utilities Commission Act ("the Act"). On August 11, 1992, B.C. Hydro advised both WKP and the Commission that the negotiations had failed, that it was discarding the POA and that it would be filing an application for a new rate.

In the POA, the parties articulated their intention to "... co-ordinate their planning so that their customers would enjoy the benefits available from a 'single utility' approach towards facilities and programs." They also agreed that "... the relationship between the parties will be on an interutility commercial transaction basis." (Exhibit 1, Appendix C).

The POA contemplated a two-tier rate for the power purchased by WKP from B.C. Hydro. The initial demand and energy charges in Block 1 were to be each equal to approximately 63 percent of the charges in Rate 3807. The maximum Block 1 demand was set out in a table commencing at a total of 113 MW in 1992, building up to a maximum of 200 MW in year 2000, and then declining to 0 by year 2010. The annual energy allowance was to be set at 246 G.Wh in 1993, 179 G.Wh in 1994, 220 G.Wh in 1995 and rising to 580 G.Wh in year 2000, before dropping to 0 in year 2010, as shown in the following table.

The initial Block 2 demand rate was to be set at 155 percent of Rate 3807 and the Block 2 energy rate at 129 percent of Rate 3807. Both the Block 2 demand and energy rates were related to B.C. Hydro's long-run incremental cost. The Block 1 and Block 2 estimates for demand and energy, added together, were equal to WKP's five year rolling nominations for power.

The rates for Block 1 demand and energy were to increase over time by the same percentages as B.C. Hydro's standard industrial Rate 1821, plus an additional 1.5 percent increase at the time of each general revenue requirement increase. The rates for Block 2 demand and energy charges were to increase on October 1 of each year by the Consumer Price Index for B.C. for the previous twelve month period. The POA rates were designed to bring the total cost of B.C. Hydro purchases to WKP over the life of the agreement to approximately 5 percent less than they would have been under a continuation of Rate 3807.

As the table shows, the POA would result in the B.C. Hydro/WKP relationship being transformed over an 18 year period. There would be no WKP purchases from B.C. Hydro at the customer rate by 2010.

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Year Ending September 30	Maximum Block 1 Demand (MW)	Allowance Annual Energy (GW.h)
1992	113	199
1993	124	246
1994	102	179
1995	116	220
1996	129	273
1 <b>997</b>	143	337
1998	157	396
1999	163	435
2000	200	580
2001	175	568
2002	175	568
2003	177	560
2004	183	586
2005	189	614
2006	151	491
2007	113	368
2008	76	246
2009	38	123
2010	. 0	0
		6989

There was general agreement between the parties on the principles and two-tier rate set out in the POA. However, the agreement collapsed when the parties failed to agree on a number of conditions in the revised PPA. In response to an information request from the Wholesale Customers as to which issues were still outstanding when negotiations on the revised PPA broke down, B.C. Hydro replied that the major issues involved monthly nomination, pre-scheduling, exports and storage (Exhibit 3, Question 6, p. 1).

WKP wanted to remove the monthly nomination requirement that B.C. Hydro stipulated in the revised PPA. B.C. Hydro claimed that WKP was either unable or unwilling to meet inter-utility pre-scheduling arrangements requested by B.C. Hydro and did not offer a reasonable energy nomination procedure as an alternative. Exports and storage were sensitive issues because WKP would not agree to an explicit provision in the proposed contract which required that energy purchased from B.C. Hydro be used only to supplement WKP's own resources to meet its domestic needs and was not to be removed from the WKP service area, and that energy purchased by WKP from B.C. Hydro was not to be stored.

WKP indicated that it did not accept that there were so many areas of disagreement. In its view, the only remaining issue at the time negotiation ceased concerned pre-scheduling of nominations and the associated penalties (T. 950, 951).

#### **1.3** The Application

B.C. Hydro applied on December 11, 1992 for Orders that:

- "(a) Electric Tariff Rate Schedule 3807 ("Rate 3807"), filed with the British Columbia Utilities Commission ("BCUC"), be terminated and replaced with Rate Schedule 3808 ("Rate 3808") attached hereto as Appendix A;
- (b) its Power Purchase Agreement (the "PPA") with West Kootenay Power Ltd. ("WKP") dated 15 October 1986, also filed with the BCUC be terminated and be replaced with a new PPA (the "New PPA") substantially in the form attached hereto as Appendix B; and
- (c) the rate to be charged WKP for electricity supplied from and including October 1, 1991 to and including the day immediately preceding the day the BCUC determines as the effective date of Rate 3808 and the New PPA be calculated in accordance with Rate 3807 and the PPA, as amended from time to time during the said period."

In its Application, B.C. Hydro argued that Rate 3807 was intended to be effective for the transition period only. It contended that the continuation of Rate 3807, along with the associated terms and conditions of the PPA, was now "unfair, unjust, unreasonable, insufficient and unduly discriminatory for several reasons" (Exhibit 1, p. 6). B.C. Hydro described these reasons as follows.

- (i) Circumstances have changed. B.C. Hydro was in a supply surplus position in 1986 and remained so until 1990. B.C. Hydro is now in a reasonable load/resource balance.
- (ii) WKP was expected to be captive to B.C. Hydro as a source of supply to 1990 due to lack of wheeling and to lead times required for resource acquisition and development. The transition period was designed to give WKP time to become less dependent on B.C. Hydro. Instead, WKP's reliance on B.C. Hydro grew during the transition period.
- (iii) The PPA allows WKP to schedule the purchase of firm energy without having to pay for capacity.

- (iv) The long-term capacity nominations, combined with the 50 percent ratchet provisions of the PPA, were designed to give B.C. Hydro reasonable estimates of WKP's requirements, but have proven to be ineffective.
- (v) WKP requires only partial supply from B.C. Hydro and, with access to other sources, WKP's requirements are more unpredictable than for other customers. In spite of this, WKP's demand ratchet is only 50 percent, while for other transmission customers the demand ratchet is 75 percent.
- (vi) The PPA requires long-term energy nominations with a 90 percent take-or-pay provision. This has presented difficulties to both B.C. Hydro and WKP.
- (vii) B.C. Hydro's cost-of-service studies indicate that Rate 3807 and the PPA recover only about 50 percent of the embedded costs of supplying WKP.

#### 1.3.1 Proposed Rate Schedule 3808 and the New PPA

Rate Schedule 3808, as applied for by B.C. Hydro, is a modified version of B.C. Hydro's Rate 1821, the rate applicable to major transmission customers. In presenting the proposal for B.C. Hydro, Mr. Epp stated:

"Rate 1821 and the old Power Purchase Agreement have only been modified as necessary to provide a fair return to B.C. Hydro, for consistency with other customers' contracts, and to provide for West Kootenay Power's unique characteristics as a utility purchaser from B.C. Hydro." (T. 153)

Under Rate 3808, the demand charge component would increase 12 percent over the present Rate 3807 but the energy charge would remain the same. The requirement for ten year capacity nominations would be relaxed to five year nominations. The requirement for ten year energy nominations on a 90 percent take-or-pay basis would be changed to weekly pre-scheduling given two days in advance. There would be a 25 percent excess charge on energy taken in excess of pre-scheduled amounts and on capacity taken in excess of nominations.

Under Rate 3808 there would be a capacity limit of 115 MW (the "Customer Demand Limit"). If WKP exceeded this limit it would pay an annualized ratcheted demand charge plus a 25 percent penalty. The demand ratchet on any purchased capacity would increase from 50 percent under Rate 3807 to 75 percent, becoming the same as for B.C. Hydro's other major transmission customers.

Therefore, for demand above 115 MW, WKP would face a cost determined by the effect of the 75 percent demand ratchet and the 25 percent penalty charge. These two effects are demonstrated in the following table. The combination of the Demand Ratchet and the Excess Demand Charge could result in a total cost of approximately 11.5 times the unit demand charge on consumption over the Customer Demand Limit.

#### Effect of Demand Ratchet on Cost of Additional Unit of Peak Demand

Per Unit Demand Charge for 1 Peak KW	= 1.00
Ratcheted Per Unit Charge for the Next 11 Months at 75 Percent Ratchet: 11 x .75 x 1	= 8.25
Normal Demand Charge for Additional Unit of Peak Demand	= 9.25

Effect of 25 Percent Excess Demand Charge on Cost of Additional Unit of Peak Demand

25 percent Excess Demand Charge: .25 x 9.25

= 2.31

The 115 MW was WKP's average capacity requirement from B.C. Hydro during the 1985-1990 transition period, which was the time allowed by the Commission for WKP to plan to reduce its reliance on B.C. Hydro. B.C. Hydro stated that 115 MW was not the total limit of capacity that B.C. Hydro would sell to WKP but only the limit that B.C. Hydro proposed to sell under Rate 3808 without WKP incurring penalties.

The proposed PPA allowed WKP to export any of its own energy if it wished, but it prohibited the export or storage of energy purchased from B.C. Hydro. If WKP were to export while taking energy from B.C. Hydro, it would incur an excess charge. However, WKP would be free to export from its own sources of supply when it was not taking energy from B.C. Hydro.

#### 2.0 PRINCIPLES OF RATEMAKING BETWEEN B.C. HYDRO AND WKP

#### 2.1 The B.C. Hydro/WKP Relationship: Utility to Customer or Utility to Utility?

The basic requirement of this Decision is to set the rate at which WKP purchases electricity from B.C. Hydro. However, what may seem like a straightforward Decision is, in reality, fraught with complexity. The relationship between WKP and B.C. Hydro is certainly unique in British Columbia and it is also a relationship that does not completely match situations elsewhere in North America. This section describes the principal elements of the WKP/B.C. Hydro relationship.

There are many examples in Ontario or the U.S. Northwest where a large generating utility (Ontario Hydro, Bonneville Power Authority) sells electricity to local distribution utilities. In these cases, the local distribution utility is generally treated as if it were comparable to a major industrial customer, paying a price that reflects the average cost to the generation utility of producing that electricity and delivering it at high voltages. While some of these local distribution utilities have limited generation capability, they are generally not expected to engage in significant resource planning and resource development in the future. This responsibility is left to the generation utility. In British Columbia the relationship between B.C. Hydro and the municipal distribution utility of New Westminster is of this type.

Although there are similarities, WKP does not completely fit the model of a local distribution utility.

- (i) Unlike local distribution utilities, such as New Westminster's, the WKP service territory is distinct from that of B.C. Hydro. Thus, WKP has local distribution utilities within its service territory (Penticton, Princeton, Nelson, Kelowna, etc.) but the WKP service territory is considered to be outside of the B.C. Hydro service territory.
- WKP generates more than half of its electricity requirements and purchases most of the rest from Cominco; only about 10 percent of its energy is currently provided by B.C. Hydro. In contrast, the New Westminster utility purchases all of its electricity from B.C. Hydro, just as most Ontario distribution utilities purchase all of their electricity from Ontario Hydro.

- (iii) The customers of WKP are charged lower rates than customers of B.C. Hydro, largely because of the low cost of power from WKP's and Cominco's largely depreciated hydro resources. The New Westminster utility is required by contract to charge the same rates as B.C. Hydro (T. 584).
- (iv) WKP has historically acknowledged its responsibility to plan and develop generation resources, a responsibility generally not imposed on local distribution utilities (e.g. New Westminster). This responsibility was emphasized in the B.C. Utilities Commission Decision of October, 1986.

"The Commission maintains that although WKP is not an incremental customer, WKP is nevertheless a utility with the responsibility and obligation to undertake system planning functions." (p. 41)

Thus, B.C. Hydro differs from Ontario Hydro and Bonneville Power Authority by being fully integrated as a large operator, wholesaler and distribution utility. WKP is distinguished from other local distribution utilities since it is a generator of a significant portion of its power requirements and it acts as a wholesaler of power to other local distribution utilities.

- (v) The Kootenay Canal Plant Agreement, signed between B.C. Hydro and WKP states that, from 1985 to 2005, the conditions of electricity provision from B.C. Hydro to WKP are to be determined by "mutual agreement", a term that is subject to alternative interpretations. In the hearing, B.C. Hydro's policy witness, Mr. Epp, suggested that this term implied that B.C. Hydro only has a temporary and limited obligation to provide electricity to WKP, which terminates in 2005.
- (vi) Finally, the POA signed between WKP and B.C. Hydro in 1992 demonstrated a willingness of WKP management to cease to be a customer of B.C. Hydro by the year 2010. According to the POA, after 2010 WKP would only purchase power from B.C. Hydro at an inter-utility negotiated rate, more likely to reflect the incremental cost of supply to B.C. Hydro.

The above points describe the ways in which WKP is not comparable to a typical local distribution utility in its relationship to B.C. Hydro. However, there are other factors which make it difficult

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to conclude that this relationship should be characterized as strictly that which might exist between independent utilities.

- (i) The 1992 Annual Report of B.C. Hydro states that its corporate mission is to "support the development of British Columbia through the efficient supply of electricity." The B.C. Hydro policy witness, Mr. Epp, agreed that this implies a responsibility of B.C. Hydro to all citizens in B.C., including those served by WKP (T. 214).
- (ii) B.C. Hydro has important hydro facilities in the WKP service area, which further suggests a responsibility to the people of the Kootenay region. The issue is complicated as it combines both regulatory and broader public policy concerns. For example, some intervenors from the Kootenay area argued that B.C. Hydro should either be paying more local and regional taxes (a public policy concern) or providing more low priced electricity to WKP (a regulatory concern).
- (iii) The Commission Decisions of 1986 and 1990 emphasized the responsibility of B.C. Hydro to serve WKP and to treat it as a customer. However, as noted above, these two Decisions also emphasized the responsibility of WKP for system planning and development and, moreover, the unique characteristics of the B.C. Hydro/WKP relationship, as demonstrated by the following quotes from the 1986 Decision.

"The Commission believes that the principal factor tending to support distinguishing principles used to set WKP rates and those of other B.C. Hydro customers, is that WKP has other supply sources available to it, including expansion of its own generating capacity, Cominco surplus power, and purchases from other utilities." (BCUC, 1986, p. 23)

"The Commission concludes that the terms and conditions attached to the transitional rate should reflect the unique characteristics of the B.C. Hydro/WKP relationship, and should remain for the long-term." (BCUC, 1986, p. 25)

Thus, the complexity of the B.C. Hydro/WKP relationship was clearly a problem for the Commission, a problem that was not resolved by the 1986 and 1990 Decisions.

"The rates specified by this Decision are intended to provide WKP with a basis for comparison with other supply alternatives, arising from the intensified system planning activity by WKP which the Commission now expects the utility to undertake without further delay." (BCUC, 1986, p. 62)

While the final comment of the 1986 Decision was that WKP should begin intensified system planning, including supply alternatives, the Decision's requirement that B.C. Hydro meet WKP's growing electricity needs at a customer rate effectively precluded system planning (with the exception of transmission and distribution). Because the incremental cost of new electricity in British Columbia is above its average cost from already built facilities, it was more economical for WKP to meet all of its incremental electricity requirements with purchases from B.C. Hydro than to develop generation resources as long as WKP paid only the average embedded costs of B.C. Hydro's facilities.

#### 2.2 Issues Raised in Discussion of Rate 3808

The ambiguity in the relationship between B.C. Hydro and WKP led to very different points of view in this hearing.

#### 2.2.1 B.C. Hydro Position

The B.C. Hydro position in the hearing was that WKP is a utility and that B.C. Hydro is not obligated to treat it as it does other customers. Rates need not be determined by average cost, but may instead reflect B.C. Hydro's incremental supply cost. B.C. Hydro recognized that the Commission Decisions of 1986 and 1990 compelled it temporarily to supply WKP at least in part as a customer. However, B.C. Hydro argued that the term "*mutual agreement*" in the Kootenay Canal Plant Agreement limited the obligation after the year 1985 and, further, that the obligation ended with the agreement's termination in 2005. However, B.C. Hydro acknowledged that its mission statement gave it an obligation to provide electricity to the customers of WKP, since they are British Columbians.

'Wallace:

And would you agree that B.C. Hydro generated electric power should be available, providing the appropriate economics are there, to meet the needs of the whole province, not simply particular areas of the province?

*Epp*: Yes." (T. 214)

B.C. Hydro maintained that because WKP is an independent utility with generation development responsibilities, the obligation to serve only implies service as would occur between freely

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negotiating utilities (based on incremental cost) and not that between a utility and its customers (based on average cost). Thus, B.C. Hydro distinguishes between its obligation to WKP, the utility, and its obligation to provide electricity to the customers of WKP.

B.C. Hydro's approach is reflected in the Rate 3808 application. The provision of 115 MW of capacity was selected since it was the average of WKP's demand requirements from B.C. Hydro over the period 1986 to 1990, the transition period referred to in the 1986 Commission Decision. The 115 MW block in proposed Rate 3808 is specified only to the year 2005, but is silent for the period thereafter. Until 2005, the penalty provision in proposed Rate 3808 is designed to force WKP to negotiate the purchase of all requirements in excess of the 115 MW Customer Demand Limit on a utility to utility basis, at rates that reflect B.C. Hydro's revenue opportunities from that electricity, as noted by Mr. Epp in his opening remarks.

"West Kootenay Power will still be able to purchase additional power from B.C. Hydro. West Kootenay, like any other accessible Canadian utility has the advantage, as a utility, of fair market access to B.C. Hydro's surplus that may be potentially exported." (T. 154)

"Should WKP enter into agreements with any other utilities for the purchase of power, B.C. Hydro is willing to wheel that power on B.C. Hydro's transmission lines" (T.151).

In its application and in cross-examination, B.C. Hydro raised cost recovery as a key principle of ratemaking with respect to WKP. B.C. Hydro argued that Rate 3807 only recovered about 50 percent of the cost of serving WKP, based on a four year average over the period 1987 to 1990 (Exhibit 1, Appendix F).

#### 2.2.2 <u>WKP Position</u>

WKP stated in the hearing that it is a customer of B.C. Hydro with the same rights as other customers to acquire electricity from B.C. Hydro at B.C. Hydro's average cost of production. In support of this argument, WKP cited the B.C. Hydro mission statement and the BCUC Decisions of 1986 and 1990.

WKP recognized that purchasing electricity at average cost, as intended by Rate 3807, fails to provide a signal to WKP of the higher incremental provincial cost incurred if B.C. Hydro must

develop additional resources. Therefore, WKP presented the concept of a Resource Development Credit, modelled on an arrangement that has been developed to govern the relations between Bonneville Power Authority and its local distribution utilities.

"The Resource Development Credit is offered as a conceptual idea to take away the disincentive from West Kootenay Power [of] the pricing signal associated with Schedule 3807." (T. 1014)

The Resource Development Credit provides a credit to WKP if it develops resources (demand-side management or supply) that cost less than B.C. Hydro's incremental cost of new supply. WKP would still purchase electricity at prices comparable to those of other customers, but would have an incentive to develop its own demand and supply resources that are cost-effective from a provincial perspective. However, in cross-examination, the WKP witness, Mr. Saleba, recognized that there have been problems in implementing the Bonneville credit program and agreed that the Resource Development Credit was still at a conceptual level (T. 1014).

Finally, WKP suggested that an alternative to the Resource Development Credit would be the pricing structure suggested in the POA (T. 1434). The POA had similarities to B.C. Hydro's 1991 industrial rate proposal in that customers would see a total bill that reflected average cost of supply but with a two-tiered rate. With Block 2 of the two-tiered rate set to reflect B.C. Hydro's long-run incremental cost, Block 1 would be adjusted to a level below average cost, such that the total bill would equal the average cost of serving that customer.

In explaining its willingness to enter into the POA, given its argument that it should have the full rights of other customers of B.C. Hydro, WKP's policy witness, Mr. Ash, claimed that the Decision in the POA to agree to the elimination by 2010 of WKP's customer purchases from B.C. Hydro was done because B.C. Hydro was insistent on that point and WKP felt it had no alternative. Moreover, Mr. Ash pointed out that the POA was silent on what obligations existed, if any, after 2010; for WKP this was considered to protect in part its status as a customer (T. 1187).

WKP was critical of B.C. Hydro's assertion that Rate 3807 only recovers about half of the cost of serving WKP. WKP stated that there are several factors that significantly lower B.C. Hydro's cost of serving it, relative to most other transmission customers. These include: (1) WKP's service territory is close to major B.C. Hydro generation facilities, with consequent lower

transmission costs; (2) WKP takes electricity from B.C. Hydro at a relatively high voltage even for a transmission customer; (3) WKP argues that, as an energy critical system, B.C. Hydro should allocate its costs of service to capacity and energy in a 10/90 ratio, instead of 30/70, thereby reducing the charges to WKP with its high demand and relatively small energy requirements from B.C. Hydro (Exhibit 21, p. 23).

#### 2.2.3 Other Intervenors' Positions

In addition to the positions of B.C. Hydro and WKP, intervenors from the Kootenay region made a plea that the Commission place considerable weight on the regional fairness issue in its consideration of ratemaking principles. Their arguments can be summarized by the following points.

- The Kootenay region has borne a substantial physical impact from the development of B.C. Hydro's hydroelectric generation facilities.
- (ii) Evidence was presented to indicate that B.C. Hydro does not pay local and regional property taxes equivalent to what it would pay as a private corporation (Exhibit 39, T. 843).
- (iii) Because WKP is a private utility, it pays federal and provincial corporate income taxes, which is not the case for B.C. Hydro.
- (iv) For reasons (i) through (iii), intervenors from the Kootenays argued that they should be compensated by either higher grants (in lieu of taxes) from B.C. Hydro or lower rates for WKP purchases from B.C. Hydro (T. 509, 627).
- (v) The location of generation facilities in the Kootenays means that the cost of transmission to that region is less than to B.C. Hydro customers in the Lower Mainland. This was presented as another reason for B.C. Hydro to charge a lower price to WKP for electricity.
- (vi) Much of the growth in WKP sales has occurred in the Okanagan region. This growth requires WKP to seek more electricity from B.C. Hydro or develop its own resources. Because the incremental cost of either these additional purchases or new resources is higher

than the average WKP cost of production, the growth creates an additional upward pressure on WKP rates. Some of the intervenors from the Kootenays suggested that the Commission seriously consider either regional rates for WKP customers, with lower rates for those in the Kootenays where growth has been slower, or separation of the Okanagan region from WKP and its transfer to B.C. Hydro (T. 271, 678, 1381).

Intervenors also expressed concern about the implications of proposed Rate 3808 for other principles of ratemaking. It was suggested by some that the 115 MW Customer Demand Limit proposed in Rate 3808 would not allow WKP enough time to find reasonable cost alternatives for demand in excess of 115 MW. If WKP exceeded the 115 MW limit, it would incur high cost penalties from B.C. Hydro which would in turn lead to rate shock. This concern was in part fostered by a community leaders brief, disseminated by WKP prior to the hearing, in which WKP calculated the effect on its customers' rates if it were to continue to meet all of its surplus needs from B.C. Hydro at Rate 3808, including penalties for demand in excess of 115 MW. The total effect was estimated as a one time rate increase of 16.8 percent (Exhibit 43, Tab 1). The counter argument of B.C. Hydro was that it is legitimate to set very high penalties when it is reasonably known that the customer (in this case WKP) has the options and capability to easily avoid them (T. 790). B.C. Hydro argued that WKP has several options to acquire the capacity needed above the 115 MW Customer Demand Limit of the Rate 3808 application, and that these would not lead to dramatic increases in rates (T. 183, 240, 570, 658).

Another concern of B.C. Hydro, WKP and most intervenors was that the rate charged by B.C. Hydro should encourage efficiency of energy resource development in the province. Both B.C. Hydro and WKP admitted that this would have been achieved under the POA but not under current Rate 3807. As noted in Sections 2.2.1 and 2.2.2, B.C. Hydro and WKP presented alternative proposals for achieving the correct pricing signal, based upon their positions on the appropriate relationship between the two utilities. B.C. Hydro would place an effective limit of 115 MW of demand on purchases by WKP at the customer rate. WKP proposed a Resource Development Credit consistent with a total utility/customer relationship with B.C. Hydro. There was no consistent position by intervenors, although again the overriding concern from the Kootenay region was that electricity rates to WKP customers not rise dramatically.

One final concern of B.C. Hydro, WKP and most intervenors was the introduction of stability in the B.C. Hydro/WKP relationship. Over the years, a great deal of time and effort has been

devoted by both utilities and intervenors to ongoing negotiations and disputes. The Commission heard strong argument in the hearing that this Decision resolve the relationship far into the future, so that both utilities could get on with their resource planning and development responsibilities.

#### **3.0 COMMISSION FINDINGS**

#### 3.1 The B.C. Hydro/WKP Relationship: A Hybrid

It is the Commission's view that the ratemaking principle that most appropriately reflects the unique relationship between B.C. Hydro and WKP is one which characterizes that relationship as a hybrid, in which WKP is partly a customer of B.C. Hydro and partly an independent utility. While B.C. Hydro has customer obligations to WKP, there are limits to these obligations. Beyond these limits, the relationship is to be that which would exist between two independent utilities. This conclusion in favour of a hybrid characterization plays a predominant role in the Commission's final evaluation of the alternatives presented at the hearing, as detailed in the following sections of this chapter.

- **3.2** Evaluation of Alternative Options
  - 3.2.1 Rate 3807 with Modifications

WKP argued that the Commission should reject the Rate 3808 Application. This would leave Rate 3807 in place. However, Rate 3807 does not provide WKP with a price signal of the incremental cost to B.C. Hydro of new electricity supply resources. WKP acknowledged this, and in response presented the Resource Development Credit proposal as a companion to a continued Rate 3807.

From the limited evidence in the hearing, the Commission is not confident that the Resource Development Credit could be developed at this time into a workable component of the rates to be charged to WKP.

- (i) The Resource Development Credit concept is predicated on the assumption that the B.C. Hydro/WKP relationship is most appropriately characterized solely as a utility/customer relationship. The Commission does not concur with this interpretation.
- (ii) There are challenges in terms of sharing the risks and costs between WKP and B.C. Hydro (T. 1182).

(iii) A similar concept, initiated in 1984 by Bonneville Power Authority for its customers, has had, as yet, negligible success (T. 1027). However, it has recently been modified, and the Commission will monitor its future progress.

The Commission believes that the Rate 3807 option, including the Resource Development Credit concept, is inconsistent with the Commission's interpretation of the appropriate relationship between B.C. Hydro and WKP.

#### 3.2.2 Duplicating the Principles of Agreement ("POA")

A second option is for the Commission to reject the Rate 3808 Application as constituted and replace or modify it with a rate that essentially duplicates the major conditions that were agreed to between B.C. Hydro and WKP in the POA. This option has the advantage of recognizing many elements that, as late as 1992, were acceptable to both WKP and B.C. Hydro. In effect, the POA would have resulted in WKP being transformed over 18 years from a customer of B.C. Hydro, with a two-tiered rate structure based on average cost, to an independent utility which only acquires electricity from B.C. Hydro based on the incremental value of that electricity to B.C. Hydro.

As noted, this proposal had an advantage in that the POA was acceptable to both parties. Moreover, the two-tier pricing inherent in the POA is consistent with the Commission's view that marginal consumption should reflect the future costs of new generation facilities. In its 1992 Rate Design Decision the Commission has endorsed such pricing for B.C. Hydro's residential customers and has encouraged B.C. Hydro to refine the concept of a similar Industrial Rate Proposal.

However, while both parties signed the POA, their respective interpretations of its implications have differed. B.C. Hydro and WKP were unable to translate the concepts in the POA into a legally binding PPA. Although there was disagreement at the hearing on the reasons for the eventual breakdown in negotiations, it was clear that there were numerous areas where the parties had inconsistent interpretations of the POA (T. 559, 950, 1273). Furthermore, neither party is in agreement on what the POA implies after the year 2010. Mr. Epp expressed B.C. Hydro's interpretation that there would be no obligation to serve WKP after 2010, while Mr. Ash stated that, because the POA is silent on the post 2010 period, the customer obligations of B.C. Hydro toward WKP would remain (T. 1075, 1187).

There is an important additional challenge in attempting to duplicate the POA in this Decision. Some of the conditions surrounding the prices and quantities in the POA have changed since 1991, and new agreements with respect to these values may be more appropriate. For example, B.C. Hydro's 1993 "The Cost of New Electricity Supply in British Columbia" (Exhibit 2, BCUC Question 25E) shows that B.C. Hydro's estimate of its long-run incremental cost has changed. Special Direction No. 8 from the provincial government changes the calculation of B.C. Hydro's cost of capital. B.C. Hydro has new estimates of the cost of serving WKP and WKP has changed its energy and capacity forecast.

Finally, another concern is that, as noted, the POA contemplated a transformation of the B.C. Hydro/WKP relationship from a 100 percent utility/customer arrangement to a 100 percent utility/utility arrangement. If both parties continued to desire this, the Commission would have explored further how the concepts in the POA could be incorporated in this Decision for the benefit of consumers of each utility. WKP, however, argued in the hearing that it does not wish to lose its status as a customer of B.C. Hydro and previous Commission Decisions have supported, in part, WKP's right to that status.

The Commission rejects the POA as a viable option on which to base this Decision. Firstly, B.C. Hydro and WKP were, themselves, never able to translate the POA into a legally binding PPA. Secondly, there have been numerous changes in circumstances since September 27, 1991 when the POA was signed which materially affect the appropriateness of its provisions, especially with respect to quantities and prices. Finally, the POA is not consistent with the Commission's views as to the appropriate long-term relationship between B.C. Hydro and WKP.

### 3.3 Modified Rate 3808

## 3.3.1 Introduction

A key objective in this Decision is to establish a relationship between B.C. Hydro and WKP that is consistent with past practices and agreements, yet can be made workable and predictable into the foreseeable future. In the Commission's view, B.C. Hydro has an ongoing obligation to serve WKP. The relationship is, however, best characterized as a hybrid in which WKP is to be treated partly as a customer of B.C. Hydro and partly as an independent utility.

As a customer, WKP has a right to a specified amount of electricity from B.C. Hydro at the rates extended by B.C. Hydro to comparable customers. As an independent utility within British Columbia, WKP has the responsibility for its own resource planning and the right to meet all of its growing electricity requirements with purchases from B.C. Hydro at rates reflective of fair market arrangements on a utility to utility basis. The Commission therefore establishes modified Rate 3808 as set out below.

## 3.3.2 The Limit of B.C. Hydro's Customer Obligation to WKP

In its Rate 3808 application, B.C. Hydro suggested that an appropriate demand limit for its customer obligation to WKP was the average of WKP's demand requirements during the period 1986 to 1990, the transition period specified in the Commission Decision of 1986. However, this rationale for determining the Customer Demand Limit is difficult to justify in view of the Decision that a hybrid relationship is appropriate for the long-term. Indeed, it is problematic to specify any fixed limit because the future validity of this limit depends on assumptions about WKP load growth and WKP resource options.

In modifying the B.C. Hydro proposed Customer Demand Limit of 115 MW, the Commission considered the arguments presented by WKP for the size of Block 1 of the POA. Mr. Ash of WKP pointed out that Block 1 peaked at a maximum level of 200 MW by the year 2000 to ensure that the Block 2 requirement was at least large enough to justify the development by WKP of any of its resource options that were cost-effective relative to B.C. Hydro's long-run incremental cost (T. 1081). Thus, WKP agreed in the POA that its maximum customer reliance on B.C. Hydro would never exceed 200 MW. The Commission also noted that in the period prior to the year 2000, a Customer Demand Limit of 200 MW would further ensure that Rate 3808 could not lead to the dramatic price increases envisioned in the community leaders brief distributed by WKP. While the cost of electricity under modified Rate 3808 with a 200 MW Customer Demand Limit will exceed the cost of electricity under Rate 3807 or the POA, neither of these latter two cover the cost of serving WKP as a customer, as calculated by B.C. Hydro's current cost allocation methodology.

The Commission determines that, after September 30, 1995, the Customer Demand Limit under modified Rate 3808 is to be set at 200 MW. The energy limit is to be determined by WKP's use of the available capacity.

B.C. Hydro's Rate 3808 application proposes a PPA which has a termination date of 2005. However, this Decision of the Commission seeks to provide long-term stability to the B.C. Hydro/WKP relationship, and 2005 is too soon in terms of utility planning requirements.

The Commission requires that the PPA to accompany modified Rate 3808 have a term of at least 20 years with a provision for negotiated renewals thereafter.

There was concern expressed by WKP and other intervenors that immediate implementation of the Customer Demand Limit would impose short-term problems for WKP. There would be little time for WKP to put in place the necessary peak supply contracts or peak demand reduction measures (e.g. interruptible contracts, water heater controls) to meet its capacity requirements in excess of the Customer Demand Limit. In response to this concern, B.C. Hydro made an offer in the hearing to have no Customer Demand Limit for WKP for the next two years, subject to firm annual nominations (T. 1286). While the increase of the Customer Demand Limit from 115 MW to 200 MW, as directed by this Decision, reduces the concern addressed above, it is not entirely eliminated.

The Commission directs that there shall be no Customer Demand Limit on the B.C. Hydro capacity and energy available for purchase by WKP from October 1, 1993 to September 30, 1995. B.C. Hydro's rates for all service during this period shall be those applicable to services below the Customer Demand Limit, as described in Section 3.3.3 of this Decision. Purchases during this period will also be governed by the amended PPA, referenced in Section 3.3.4 of this Decision.

#### 3.3.3 <u>Conditions of Supply to the 200 MW Customer Demand Limit</u>

B.C. Hydro argued that it had followed the Commission's earlier directions in modelling Rate 3808 after Rate 1821, the general rate applied to transmission customers (ie. industrial

customers and the City of New Westminster). Thus, the energy and capacity charges of Rate 3808 are identical to those of Rate 1821.

The energy and capacity charges of modified Rate 3808 shall be as applied for by B.C. Hydro. Changes in these charges will match those in Rate 1821, or its equivalent.

The nature of WKP's load and its other resources has resulted in B.C. Hydro being primarily called upon to provide seasonal peaking capacity, at a very low load factor. This is why, in 1992, B.C. Hydro supplied 30 percent of WKP's peak capacity requirement, but only 10 percent of its energy requirement. In its application and in the hearing, B.C. Hydro argued that the 50 percent capacity ratchet of Rate 3807 provided an inadequate signal to WKP of the costs to B.C. Hydro of providing seasonal peaking capacity. Other 1821 customers, with much higher load factors, face a 75 percent ratchet, as do the local distribution utilities supplied by WKP (T. 510). WKP argued that, because B.C. Hydro's hydro-based system is rarely capacity critical, peaking requirements from WKP do not incur a high cost. Also, WKP argued that an increase in the demand ratchet from 50 percent to 75 percent would prove costly in the short-term as it has few opportunities to reduce peak demand or acquire peaking resources (T. 1157).

The Commission agrees that, as B.C. Hydro moves toward load balance, and, through short-term exports and exchanges, to a fuller utilization of capacity, a more appropriate level for the demand ratchet is 75 percent, in line with other transmission customers. However, the adjustment of the ratchet should occur gradually, to allow WKP time to evaluate and implement the demand and/or supply peaking options that may prove more cost-effective than meeting peaking requirements under Rate 3808. Therefore, the demand ratchet will increase in equal increments from 50 percent in 1995 to 75 percent by 2000.

October 1, 1995 to September 30,	1996	55 percent
October 1, 1996 to September 30,	1997	60 percent
October 1, 1997 to September 30,	1998	65 percent
October 1, 1998 to September 30,	1999	70 percent
From October 1, 1999		75 percent

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After October 1, 1999 the size of the demand ratchet shall be identical to that under Rate 1821.

## 3.3.4 Establishment of an Amended PPA

The Commission directs B.C. Hydro and WKP to negotiate amendments to the PPA to incorporate the Commission's findings and directions as set out in other sections of this Decision. In addition, B.C. Hydro and WKP are directed to negotiate such further amendments as may be necessary to address those ancillary issues which are of concern to them.

On or before August 1, 1993, B.C. Hydro and WKP shall jointly file with the Commission, and shall serve on each of the other registered intervenors, a report respecting these negotiations. The report shall contain either a copy of the complete draft Amended Power Purchase Agreement (the "Amended PPA"), as agreed to by both B.C. Hydro and WKP, or an incomplete draft Amended PPA, with an identification of those clauses where B.C. Hydro and WKP are still in dispute and the preferred wording of each of these two parties in regard to each such clause. In both instances, B.C. Hydro and WKP may provide such explanations as each of them deem appropriate, both in support of their joint position in regard to clauses that are not in dispute, and in support of their individual positions in regard to clauses that are in dispute.

Following the issuance of this report, the other registered intervenors shall have until August 15, 1993 to file with the Commission their comments on the contents of the report. Following receipt of these comments, the Commission shall issue its Decision with respect to the Amended PPA by October 1, 1993.

To assist in this process, the Commission offers the following observations concerning the evidence presented at the hearing. These observations are not intended to restrict the negotiations between B.C. Hydro and WKP, or the subsequent comments by the other registered intervenors. Instead, they are offered simply to facilitate the resolution of some of the items that, in the context of prior discussions, seemed to be points of contention between B.C. Hydro and WKP.

- (i) With regard to the notice requirements for capacity nominations, the Commission's impression of the evidence submitted to date indicates that a five year notification period is appropriate, on the basis that B.C. Hydro would use reasonable efforts to accommodate changes requested by WKP if such requests are made two years in advance of the proposed changes.
- (ii) With regard to the determination of WKP's annual peak demand, for capacity billing purposes, the Commission's impression of the evidence submitted to date supports the use of the coincident peak method but some adjustment may be required to recognize capacity constraints at various points of interconnection.
- (iii) With regard to the penalty charges for capacity demand taken in excess of the nominated amounts, the Commission's impression of the evidence submitted to date indicates that these charges should not be unduly punitive but should be sufficient to insure prudent resource acquisition by WKP. In this regard, the Commission views the proposed 25 percent charge as excessive.
- (iv) With regard to the billing arrangements under modified Rate 3808, the Commission's impression of the evidence submitted to date indicates that all energy purchases should be associated with capacity purchases.
- (v) With regard to the pre-scheduling of WKP's energy purchase requirements, the Commission's impression of the evidence submitted to date supports the establishment of an energy take-or-pay pre-scheduling requirement with excess energy penalty charges. The Commission's view is based on the evidence that the monthly billing of entitlements and the 50 G.Wh account provide WKP with adequate flexibility, such that prudent scheduling would not result in excess charges. Similar to its view with respect to capacity nominations, the Commission believes the excess charges should not be unduly punitive but should be sufficient to insure prudent scheduling. In this regard, the Commission views the proposed 25 percent charge as excessive.
- (vi) With regard to either the storage or export sales of energy and capacity which WKP purchases from B.C. Hydro the Commission's impression of the evidence submitted to date indicates that such practices should be prohibited if there is sufficient flexibility in the

monthly billing of entitlements and the 50 G.Wh account to accommodate over nominations or prescheduling.

As indicated above, the Commission recognizes that the evidence presented at the hearing was given in a different context than that which will exist as a result of this Decision and the Commission will take this into account when considering further the submissions of B.C. Hydro, WKP and the other registered intervenors in respect of the terms and conditions to be included in the Amended PPA.

## 3.3.5 WKP Access to B.C. Hydro and Non-B.C. Hydro Resources Purchases Above the 200 MW Customer Demand Limit

One key objective of this Decision is to ensure that provincial electricity resources to meet the needs of B.C. Hydro customers and WKP customers are developed in a manner that is optimal from a provincial viewpoint. B.C. Hydro's policy witness, Mr. Epp, acknowledged B.C. Hydro's obligation to meet the full electricity requirements of the British Columbians served by WKP. Although this Decision creates a Customer Demand Limit of 200 MW, it is the Commission's view that the crown corporation has a further obligation to provide any additional energy that WKP wishes to purchase to serve its customers.

Recognizing the special nature of the relationship between B.C. Hydro and WKP, the Commission directs that any additional agreements between B.C. Hydro and WKP for supply in excess of the 200 MW Customer Demand Limit shall be negotiated on a utility to utility basis, but filed with the Commission for approval pursuant to Section 67 of the Act. The Commission will ensure, upon receipt of a filed agreement, that the terms and conditions thereof, including the rates therein, are reflective of fair market arrangements.

A general indication of fair market arrangements would be B.C. Hydro's opportunity cost, information that is available to the Commission. Thus, for shorter term arrangements, the appropriate indicator may be the value to B.C. Hydro of short-term exports, while for longer term arrangements, the appropriate indicator may be B.C. Hydro's long-run incremental cost. The fairly negotiated rate will provide WKP with the correct price signal of the provincial value of the resources that B.C. Hydro will develop.

To ensure competitive supply opportunities, it is desirable that WKP have access to other potential suppliers. To achieve this, WKP needs reasonable access to wheeling services from B.C. Hydro with wheeling charges that reflect fair market arrangements.

The Commission directs B.C. Hydro to provide WKP with reasonable wheeling access and fair wheeling charges for non-B.C. Hydro electricity supplies intended to serve WKP's customers, be these supplies intra or extra provincial.

## 3.3.6 <u>Overview</u>

The Commission believes that this Decision establishes the basis for a fair and reasonable business relationship between these two utilities from the following points of view:

- (i) The obligations of B.C. Hydro to WKP are clarified and stabilized.
- (ii) B.C. Hydro receives more revenue from the resources allocated to serving WKP than it would have under the POA or Rate 3807.
- (iii) WKP faces the provincial long-run incremental cost when conducting its integrated resource planning.
- (iv) WKP partly and indefinitely retains its status as a customer of B.C. Hydro, which it would have lost under the POA.
- (v) Relative to the POA, WKP's purchases from B.C. Hydro will be more costly in the shortterm but less costly in the long-term, with the continuing guarantee of the 200 MW customer limit. This guarantee reduces the risk that WKP's rates will exceed those of B.C. Hydro in the long-term.
- (vi) The option of obtaining all incremental supply resources from B.C. Hydro reduces the risks to WKP rates if its own resource options prove to be relatively more expensive than originally estimated.

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(vii) Future interaction between WKP and B.C. Hydro has an opportunity to be free of the misunderstandings and the excessive regulatory and negotiation costs of the last decade. First, the electricity price under the 200 MW Customer Demand Limit is determined through B.C. Hydro's rate hearings and resulting changes to Rate 1821. Second, the price for electricity above the 200 MW Customer Demand Limit will be negotiated in the same way that B.C. Hydro or other suppliers negotiate contracts. With Commission oversight, and with wheeling access guaranteed by the Commission, WKP will be in a better position to ensure that negotiated rates are reflective of fair market arrangements.

## 3.4 The Argument for Regional Principles of Ratemaking

The Commission is not able to accept, at this time, the arguments of those other intervenors who stated that the rate for B.C. Hydro sales to WKP should be based in part upon regional principles of ratemaking. The Commission believes that, if it were to examine the issue of whether or not B.C. Hydro or WKP ratemaking should include regional considerations, this should occur in a forum in which the entire province has an opportunity for input. This process would need to examine several issues.

First, should rates reflect on a regional basis the cost of providing service? Other intervenors argued that because B.C. Hydro has substantial generation facilities located in the Kootenay region, the cost of transmission is lower and this should be reflected in the rates charged to that region, in particular B.C. Hydro's rate to WKP. This issue obviously has implications for all regions of the province, and the Commission determination would set a ratemaking principle for not just B.C. Hydro but also WKP. Indeed, other intervenors also suggested that WKP set regional rates to reflect differences in the cost of serving the Kootenay and Okanagan regions. The issue of regional rates extends beyond B.C. Hydro and WKP to encompass the Commission's approach to ratemaking with respect to all energy utilities in the province.

Second, should rates reflect uncompensated costs that may differ from region to region? Other intervenors argued that B.C. Hydro does not compensate the Kootenay region for the full assessed value of its facilities. B.C. Hydro pays less local and regional tax than would a private firm. Some other intervenors argued that the reservoirs, transmission lines and water flow charges create uncompensated impacts. Again, this issue has implications for all regions of the province.

Third, should rates reflect the comparative economic well-being of different regions? Other intervenors argued that the Kootenays are an economically disadvantaged region in the province, and that rates should be set to help certain regions. This, too, is an issue that cannot be examined in only one region of the province; it has far reaching implications for the ratemaking principles that this Commission applies to the entire province, as well as for public policy initiatives undertaken by government.

Fourth, how are the boundaries determined for each region? Some other intervenors suggested alternative regions within the WKP service area. Because rates could differ significantly between neighbouring regions, this issue can be problematic.

The arguments for regional rates are not without merit. But the Commission is generally aware that there are many counter-arguments and challenges, and these were not examined in detail in the Rate 3808 hearing.

A key concern is the authority for a utility commission to make Decisions that may have significant equity implications for society. This Commission adheres to the general principle that it should diverge from cost-based principles of ratemaking only with extreme caution. To the extent that it can be shown that the issues are primarily of a public policy nature, the Commission should refer the issue to the political process. Thus, for example, the Commission is more likely to be receptive to arguments that regional rates are justified on the basis of cost of service. In contrast, the arguments for (1) additional compensation for the use of local resources and (2) efforts to offset a depressed regional economy must meet stricter criteria. Because these issues are properly the domain of public policy, the Commission must be careful not to interfere with government policies with respect to regional economic development and resource development compensation.

Although the Commission does not accept the arguments that modified Rate 3808 should be in part set in accordance with regional principles of ratemaking, the Commission recognizes the concerns expressed at the hearing. The Commission is open to revisiting this issue in upcoming hearings, preferably hearings in which all regions of the province participate.

## 3.5 Contractual Disputes Between WKP and B.C. Hydro

## 3.5.1 The Demand Billing Dispute

On October 14, 1992, WKP made an application pursuant to Section 97 of the Act for the Commission to conduct an inquiry to determine the demand charges applicable to WKP for 1992. By Order No. G-119-92, the matter was referred to this hearing for determination.

The dispute between WKP and B.C. Hydro with respect to the demand charge issue arises from the different views of the two utilities concerning which contractual arrangement should form the basis for the charges. It was the position of WKP that the charges for 1992 should be based on a peak demand calculated using the coincident peak method and not the non-coincident peak method that had been specified as part of the October 15, 1986 PPA. WKP stated that the coincident peak method had been discussed in negotiations with respect to a PPA to support the POA and WKP expected that a revised PPA would be negotiated and applied retroactively. WKP noted that the Commission had issued Order No. G-96-91, establishing a deferral account to collect any charges under Rate Schedule 3807 that were in excess of those under the proposed POA.

Although this might normally be seen as a contractual dispute, WKP argued that the Commission had jurisdiction to settle this dispute since WKP stated that the 1986 PPA had expired September 30, 1991(T. 1446, 1447).

B.C. Hydro claimed that the provisions contained in the PPA of October 15, 1986 between WKP and B.C. Hydro (as amended by Order No. G-22-90) were applicable and that this agreement was not replaced or permanently modified by Order No. G-96-91. With the subsequent collapse of the POA, B.C. Hydro stated that the 1986 PPA was the only approved agreement in effect. As a result, B.C. Hydro maintained that the Commission did not have jurisdiction to determine this matter but that it was a matter for the courts to decide.

## 3.5.2 Nominations Dispute

On September 4, 1992 WKP applied to the Commission for relief from the take-or-pay provisions of the 1986 PPA for the 1991/92 test year. WKP stated that it had nominated more energy than it required for the 1991/92 operating year due to the effect of four factors: exceptionally warm weather, more energy available from Cominco than had been estimated by Cominco, smaller

demand from Celgar than had been reasonably anticipated, and greater success than hoped for in DSM (T. 1447). When the over-nomination became apparent, WKP stated that it tried to mitigate the \$2.9 million impact by exporting the surplus energy, first through Cominco and then through Powerex. WKP said that it was blocked in both these attempts by B.C. Hydro and claimed that B.C. Hydro exported the energy (T. 1449).

As with the demand billing dispute described above, WKP argued that the Commission had jurisdiction to settle this dispute since the 1986 PPA, which contained the take-or-pay provisions related to nominations, had expired.

In opposing the Application for relief, B.C. Hydro stated that WKP was actually applying for relief from its own nominations of energy and capacity, which B.C. Hydro characterized as a contractual rather than a rate issue. Furthermore, B.C. Hydro stated that it had been agreed that those nominations would survive no matter the outcome of the negotiations surrounding Rate 3807 and the associated PPA (Exhibit 1, Testimony of Zak El-Ramly, p. 4). As indicated in the preceding section, B.C. Hydro disagreed with WKP's argument that there was no contract in effect at the time of the over-nomination, stating that the PPA was necessarily associated with the rate under which WKP was being charged (T. 1476) and that, therefore, the Commission lacked jurisdiction to decide this matter. B.C. Hydro argued that it was required by law to collect rates which were in effect whether it wished to collect them or not (T. 1475).

### 3.5.3 Commission Determination

The Commission believes that the courts should make the decision as to what contractual terms were in place at the time the two matters in dispute arose. Therefore, the Commission declines jurisdiction.

The Commission finds support for its decision to decline jurisdiction in these matters in a recent decision of the B.C. Supreme Court, <u>MacMillan Bloedel v. British Columbia Hydro and Power</u> <u>Authority</u>, unreported, April 12, 1991, Vancouver Registry No. C892798. This case relied on the B.C. Court of Appeal decision in <u>Crestbrook Pulp and Paper v. Columbia Natural Gas</u> <u>Limited</u> (1978) 5 W.W. R.1.

DATED at the City of Vancouver, in the Province of British Columbia this 22 day of April, 1993.

Dr. M.K. Jaccard Chairperson

Bar R

L.R. Barr Deputy Chairperson

Hall

K.L. Hall Commissioner

# Appendix G

BRITISH	COLUMBIA
UTILITIES	COMMISSION

TELEPHONE: (604) 660-4700

BC TOLL FREE: 1-800-663-1385

FACSIMILE: (604) 660-1102

ORDER

NUMBER G-27-93

SIXTH FLOOR, 900 HOWE STREET, BOX 250 VANCOUVER, B.C. V6Z 2N3 CANADA

#### AN ORDER IN THE MATTER OF the Utilities Commission Act, S.B.C. 1980, c. 60, as amended

and

#### An Application by British Columbia Hydro and Power Authority

for Rate Schedule 3808 and

#### Revised Power Purchase Agreement with West Kootenay Power Ltd.

April 22, 1993

<b>BEFORE:</b>	M.K. Jaccard, Chairperson;	)
	L.R. Barr, Deputy Chairperson; and	)
	K.L. Hall, Commissioner	)

#### WHEREAS:

- A. On October 10, 1991, British Columbia Hydro and Power Authority ("B.C. Hydro") filed for Commission approval an Agreement in Principle ("the Agreement") entered into between B.C. Hydro and West Kootenay Power Ltd. ("WKP") for bulk electricity supply for the period from October 1, 1991 to September 30, 2010. Supply under the Agreement was intended to replace supply under Rate Schedule 3807, the availability of which expired on September 30, 1991 under Commission Order No. G-22-90; and
- B. Commission Order No. G-96-91 established a deferral account and approved an interim rate for supply to WKP at the level previously charged under Rate Schedule 3807 effective October 1, 1991 until final approval of the Agreement was given. The Order included the Agreement and ensuing contract as a separate phase of B.C. Hydro's Rate Design Application and Public Hearing that commenced January 13, 1992; and
- C. WKP and B.C. Hydro were unable to reach agreement into long-term power supply during the public hearing. Commission Order No. G-36-92 authorized the Decision into B.C. Hydro's Application for Rate Design of Electric Tariffs and advised that the matter of Rates and Supply Agreement to WKP would be the subject of a future Commission Order, and
- D. On August 10, 1992, WKP advised the Commission that the parties had been unable to reach a mutually acceptable contract after 11 months of negotiations and requested a Commission Inquiry under Section 97 of the Utilities Commission Act ("the Act"); and
- E. On August 11, 1992, B.C. Hydro notified WKP that the negotiations had failed, that the Agreement must be discarded, and that, in the near future, B.C. Hydro would submit an application to the Commission regarding WKP; and
- F. On September 4, 1992, WKP requested that B.C. Hydro be directed to relieve WKP of take or pay provisions of the October 15, 1986 Power Purchase Agreement for the 1991/92 operating year (the "Nominations Dispute"); and
- G. On October 14, 1992, WKP requested an Inquiry under Section 97 of the Act to determine the Demand Charges applicable to WKP for 1992 (the "Demand Billing Dispute"); and

.../2

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BRITISH COLUMBIA UTILITIES COMMISSION

ORDER G-27-93

H. On December 11, 1992, B.C. Hydro applied to the Commission for Orders that terminate Electric Tariff Rate Schedule 3807 and the October 15, 1986 Power Purchase Agreement with WKP and replace them with a proposed Rate Schedule 3808 and new Power Purchase Agreement ("the Application") on an effective date to be determined by the Commission; and

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- I. Commission Order No. G-119-92 set the Application down for public hearing which commenced on February 8, 1993 in Castlegar, B.C. and concluded in Vancouver on February 18, 1993; and
- J. On February 26, 1993 the Commission made its preliminary Decision on the Application and issued a letter to all parties to the proceeding.

NOW THEREFORE the Commission orders as follows:

- 1. The interim rate for supply to WKP established under Order G-96-91 is confirmed as firm to September 30, 1993.
- 2. The Commission will accept, subject to timely filing by B.C. Hydro, an amended Electric Tariff Rate Schedule 3808 as detailed in the Decision, to be effective October 1, 1993 and will also accept the cancellation of Rate Schedule 3807 effective the same date.
- 3. B.C. Hydro and WKP will enter into negotiations leading to a revised Power Purchase Agreement to incorporate the findings and directions as set out in the Commission's Decision. On or before August 1, 1993 B.C. Hydro and WKP shall jointly file with the Commission, with copies to Registered Intervenors, a report respecting these negotiations.
- 4. The Commission declines jurisdiction concerning the Demand Billing Dispute and the Nominations Dispute, as discussed in the Decision.
- 5. B.C. Hydro and WKP will comply with the other directions incorporated in the Commission's Decision issued concurrently with this Order.

DATED at the City of Vancouver, in the Province of British Columbia, this 23 - I day of April, 1993.

BY ORDER

Dr. Mark K. Jaccard Chairperson

BC Hydro Application for Approval of New PPA with FortisBC

## APPENDIX A

## **GLOSSARY OF TERMS**

## Capacity (Power)

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Rate at which electricity can be instantaneously produced, expressed in kilowatts or megawatts.

#### **Coincident Peak**

Peak capacity demand of a customer which coincides with the peak capacity demand established by a system (see Non-Coincident Peak).

#### **Customer Demand Limit**

Maximum amount of capacity which a customer is allowed to take according to the customer relationship specified by a rate schedule and its supporting power purchase agreement.

#### **Demand Ratchet**

Factor which is multiplied by the peak demand in the peak billing period in order to set a minimal billing rate in non-peak billing periods. For example, if the peak demand in January is 100 MW, a Demand Ratchet of .75 results in a minimum demand of 75 MW for billing purposes in all other months.

#### **Demand-Side Resources**

Change of practice or equipment that modifies a customer's use of electricity. Demand-side resources include conservation, load management and fuel substitution options.

### Energy

Amount of power produced or used over a period of time, expressed in kilowatt hours, megawatt hours or gigawatt hours.

### Integrated Resource Planning ("IRP")

Planning process, used by regulated energy utilities, that equally compares options that involve changes in supply resources and changes in energy demand. The outcome of the process is an "integrated resource plan" (usually covering 15 to 20 years) and an "action plan" (usually two years).

#### Load Factor

Ratio of the average load over a designated period of time to the peak load occurring in that period.

#### Nominations

Firm energy and/or capacity forecasts required and committed to by the buyer of electricity and which, once received and accepted, the seller is obligated to supply.

## GLOSSARY OF TERMS (Continued)

#### Non-Coincident Peak

Peak capacity demand of a customer at any time other than when the system peak capacity demand is established (see Coincident Peak).

#### **Power Purchase Agreement ("PPA")**

Agreement under which the terms and conditions for the sale and purchase of electricity are established. Three versions of a PPA were discussed during this hearing. The first was the PPA established on 15 October in 1986 to support Rate 3807. The second, of which there were several competing versions, was the draft amended PPA to support the two tier rate structure contemplated by the POA. The third PPA contained those draft amendments supporting B.C. Hydro's proposed Rate 3808.

#### Prescheduling

Short-term (e.g. weekly) energy Nominations, generally specified on an hourly basis.

**Principles of Agreement ("POA")** 

Agreement reached between B.C. Hydro and WKP on September 27 1991 to facilitate the establishment of a new Power Purchase Agreement.

#### Storage

Storage of energy within connected systems for delivery at a future time.

#### Supply-Side Resources

Resources that make possible the provision of increased electricity, or improve the efficiency of the utilities' system, through such options as new power plants, cogeneration facilities and improvements in transmission systems and distribution upgrades.

#### Take-or-Pay

Contract condition which requires the buyer of the electricity to pay for firm Nominations of energy whether or not the buyer takes delivery of the energy.

## Appendix G

## APPENDIX B

## APPEARANCES

M. MOSELEY

A.W. CARPENTER C. SANDERSON

G.K. MACINTOSH, Q.C.

R.B. WALLACE

P. KACIR

W. GERMAINE

A. CARREL

**B. HUTCHINSON** 

G. MCDANNOLD

E. BEALE

J. HALL

D.F. ANDREWS

C. WEAFER

D. SCARLETT

D. GEORGE

C. EVANS

D. SWANSON

S. SANTORI

**Commission** Counsel

British Columbia Hydro and Power Authority

West Kootenay Power Ltd.

City of Kelowna; District of Summerland; City of Grand Forks; Celgar Pulp Company; Canpar Industries; Slocan Forest Products; Kalesnikoff Lumber

City of Nelson

Nelson and District Chamber of Commerce

The Corporation of the City of Rossland

Town of Creston

Regional District of Central Kootenay and Kootenay Boundary

Keremeos Irrigation District and Fairview Heights Irrigation District

Princeton Light & Power Company, Limited

Sampower Electric Corporation

Consumers' Association of Canada (B.C. Branch); B.C. Old Age Pensioners' Organization; Counsel of Senior Citizens' Organizations of B.C.; Federated Anti-Poverty Groups of B.C.; West End Seniors' Network

Kootenay Okanagan Electric Consumers Association

Himself

M.L.A. - Nelson/Creston

Association of British Columbia Irrigation Districts

City of Trail

BC Hydro Application for Approval of New PPA with FortisBC

## APPEARANCES (Continued)

J. BLACK Himself W. RAMSDEN City of Nelson L. MOSELEY **R. COFFEY** West Kootenay Economic Coordinating Group L. PETTIJOHN British Columbia Chamber of Commerce F. LAUER British Columbia Fruit Growers Association **R. HENDERSON** Regional District of Central Kootenay G. WILLIAMS Regional District of Kootenay Boundary

B. MCKINLAY D. EMES R. RERIE F. JAMES

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**Commission Staff** 

Court Reporters & Hearing Officer

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# APPENDIX C

## LIST OF EXHIBITS

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British Columbia Hydro and Power Authority Application Volume II	2
British Columbia Hydro and Power Authority Application Volume III	3
Affidavit of Publication of Robert Farnan	4
Letter from B.C. Hydro's counsel to Commission dated January 29, 1993	5
Letter from West Kootenay Power's counsel to Commission dated February 1, 1993	6
Letter from Commission to B.C. Hydro's counsel dated February 2, 1993	7
Letter from counsel for wholesale and industrial customers to Commission dated February 3, 1993	8
Letter from West Kootenay Power's counsel to wholesale and industrial customers' counsel dated February 4, 1993	9
Letter from wholesale and industrial customers' counsel to West Kootenay Power's counsel dated February 4, 1993	10
Letter from B.C. Hydro's counsel to Commission dated February 5, 1993	11
Graph BCH Sales to WKP	12
Graphs titled BCH Sales to WKP in \$Millions and BCH Sales to WKP in cents per kWh	12A
Kootenay Canal Plant Agreement	13
Presentation of Corporation of the City of Rossland	14
Presentation of Association of B.C. Irrigation Districts	15
Special Direction No. 8 to the B.C. Utilities Commission	16
Submission of the Mayor and Council of the City of Trail	17
Submission of Princeton Light and Power Company, Limited	18

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West Kootenay Volume 4	24
Written statement of the City of Nelson	25
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West Kootenay Power 1987 Resource Study	26
Extract from Commission December 18, 1991 Decision being pages 13, 14 and 15	27
West Kootenay Volume 5, BCH Information Request No. 1	28
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Submission of the Town of Creston	30
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Submission of British Columbia Fruit Growers' Association	34
Witness Aid B.C. Hydro response to BCUC Request No. 1 - Question 8	35
Facsimile message to Dr. Zak El-Ramly dated November 5, 1991	36
Submission of Regional Districts of Central Kootenay and Kootenay Boundary	37

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· · · · · · · · · · · · · · · · · · ·	Exhibit <u>No.</u>
Answer to Information Request to the Regional Districts of Central Kootenay and Kootenay Boundary	38
Regional District of Central Kootenay and Kootenay Boundary Summary of Tax Analysis	39
Extract from West Kootenay Power community leaders briefing booklet	40
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Submission by Mr. J. Hall	53
Letter dated August 11, 1992 from B.C. Hydro to West Kootenay Power	54
Draft Annual Report for West Kootenay Power for year ended December 31, 1992	55
Draft Power Purchase Agreement with B.C. Hydro, November 5, 1991 Facsimile	56
Draft Power Purchase Agreement, July 3, 1992 Letter	57
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. E. M. P.

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Draft contract dated February 4, 1992	61
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Draft contract dated February 25, 1992	63

## **Appendix G**

APPENDIX D



SIXTH FLOOR, 900 HOWE STREET, BOX 250 VANCOUVER, B.C. CANADA V6Z 2N3 TELEPHONE: (804) 660-4700 BC TOLL FREE: 1-800-663-1385 FACSIMILE: (804) 660-1102

ROBERT J. PELLATT COMMISSION SECRETARY

## VIA FACSIMILE

February 26, 1993

Mr. Thom M. Thompson Manager, Corporate Affairs British Columbia Hydro and Power Authority 16th Floor, 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Dear Mr. Thompson:

Re: British Columbia Hydro and Power Authority Application for Commission Approval - Rate Schedule 3808 and Power Purchase Agreement - West Kootenay Power Ltd.

As you are aware, the hearing of the above-captioned application ended on February 19, 1993.

The Commission has not, as yet, concluded its decision-making process in respect of the B.C. Hydro application. However, for the benefit of B.C. Hydro, and the participants in the forthcoming hearing concerning the West Kootenay Power Ltd. ("WKP") 1992/1993 Revenue Requirements application, the Commission is prepared, at this time, to advise all interested parties of the following elements of its decision.

- 1. In the Commission's view, B.C. Hydro has an ongoing obligation to serve WKP. The relationship is, however, a hybrid one in which WKP is to be treated partly as a customer of B.C. Hydro and partly as an independent utility.
- 2. From October 1, 1993 to September 30, 1995, B.C. Hydro's rates for service to WKP shall be comparable to those charged to B.C. Hydro's transmission service customers but with a demand ratchet of 50 percent. There will be no limit on the energy and capacity which WKP will be able to purchase under these rates during this time period.
- 3. After September 30, 1995, B.C. Hydro's rates for service to WKP shall be as follows:
  - (a) for service below 200 MW, the rates shall be comparable to those charged to B.C. Hydro's transmission service customers, with the demand ratchet increasing in equal steps from 50 percent in 1995 to 75 percent in 2000;
  - (b) for service above 200 MW that is offered pursuant to a separate agreement between B.C. Hydro and WKP, the rates shall be those established by negotiations between B.C. Hydro and WKP on a utility to utility basis; and

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- (c) for service above 200 MW that is not made pursuant to an agreement of this type referenced in subparagraph 3(b), the rate will incorporate an excess charge above the rates applicable for service below 200 MW.
- 4. All of the rates referenced in paragraphs 2 and 3 shall be filed with the Commission pursuant to Section 67 of the <u>Utilities Commission Act</u>. In its forthcoming decision, the Commission shall deal with additional terms and conditions in respect of the services referenced in paragraph 2 and subparagraphs 3(a) and (c). With respect to the service referenced in subparagraph 3(b), the Commission will ensure, upon receipt of a filed agreement, that the terms and conditions thereof, including the rates therein, are reflective of fair market arrangements.
- 5. The Commission will also ensure that B.C. Hydro provides WKP with fair wheeling charges for non-B.C. Hydro supplies.
- 6. The Commission declines jurisdiction over the demand billing dispute and nomination dispute applications by WKP.

As indicated, these elements will be more fully addressed in the Commission's forthcoming decision, which will be rendered in due course.

Yours truly,

Robert J. Pellatt

RJP/dl

Р. *х* 

cc: Mr. Robert Hobbs, Corporate Secretary West Kootenay Power Ltd. Registered Intervenors

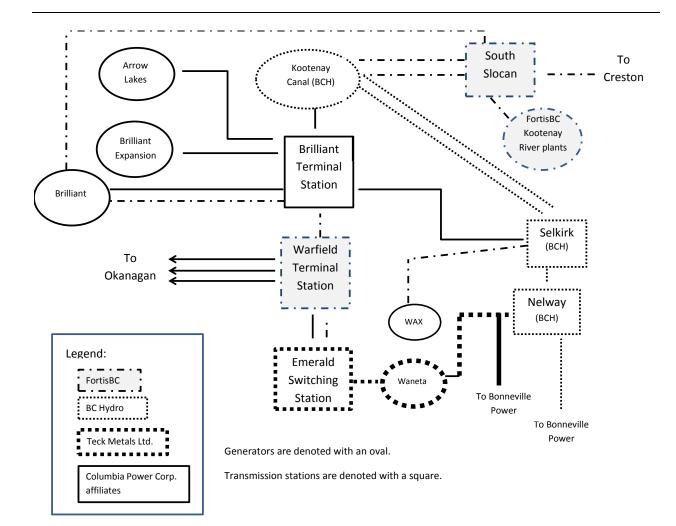
BCH/Service-WKP/BCH Instructions

BC Hydro Application for Approval of New PPA with FortisBC Page 53 of 53

# BC Hydro Application for Approval of New PPA with FortisBC

Appendix H

High Level Schematic of Canal Plant Agreement Generation and Interconnection to the BC Hydro System



# BC Hydro Application for Approval of New PPA with FortisBC

Appendix I

# 1993 PPA

# (Unofficial Consolidated Version)

# POWER PURCHASE AGREEMENT

# MADE AS AT THE 1<sup>st</sup> DAY OF

## **OCTOBER 1993.**

- BETWEEN: BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, having its Head Office at 333 Dunsmuir Street, City of Vancouver, Province of British Columbia (hereinafter called "B.C. HYDRO");
- AND: WEST KOOTENAY POWER LIMITED, a body corporate having its Head Office at Waneta Plaza, 1290 Esplanade, City of Trail, Province of British Columbia (hereinafter called "WEST KOOTENAY POWER").

## WHEREAS:

- (a) West Kootenay Power and B.C. Hydro serve adjacent areas in British Columbia and have various points of electrical system interconnection which permit the transfer of electricity to and from their respective systems.
- (b) West Kootenay Power, B.C. Hydro and Cominco Ltd. ("Cominco") entered into an agreement dated 1 August 1972 ("Canal Plant Agreement") which set out certain rights and obligations.
- (c) West Kootenay Power and B.C. Hydro entered into an agreement dated 15 October 1986 regarding wheeling (the "General Wheeling Agreement").
- (d) West Kootenay Power desires to purchase electricity from B.C. Hydro to supplement its resources to meet West Kootenay Power's domestic load requirements.
- (e) B.C. Hydro is willing to sell to West Kootenay Power, electricity, at such rates and under the terms and conditions specified in this Agreement.
- (f) B.C. Hydro and West Kootenay Power entered into a previous power purchase agreement dated 15 October 1986 (the "1986 Agreement").
- (g) On 16 December 1992, B.C. Hydro applied to the British Columbia Utilities Commission (the "Commission") to, inter alia, terminate and replace the 1986 Agreement.
- (h) This Agreement replaces and supercedes the 1986 Agreement pursuant to Commission Order No. 6-27-93, dated 22 April 1993, (the "Order").

THIS AGREEMENT WITNESSES that in consideration of the covenants and agreements set forth in this Agreement and of other good and valuable consideration, the parties hereby covenant, agree and declare as follows:

1 BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 1 of 20

# 1. DEFINITIONS

- 1.1 In this Agreement:
  - (a) "Agreement" means this Agreement, as amended from time to time, and any schedules or exhibits referred to in it as being attached to it;
  - (b) "Billing Month" means a calendar month;
  - (c) "Capacity Purchases" means transactions (other than under this Agreement) whereby West Kootenay Power purchases Electricity to meet its service area load during the Heavy Load Hours and returns the energy associated with such purchase within 168 hours of the commencement of the transaction during Light Load Hours.
  - (d) "Effective Date" means Oct 1, 1993, the date on which the Order specified that this Agreement would be in full force and effect;
  - (e) "Electricity" means inclusively electric capacity and electric energy unless the context requires otherwise;
  - (f) "Excess Energy" shall have the meaning ascribed to it and shall be determined in accordance with Sections 8.3, 8.4, 9.2, 9.3 and 9.4 as the situation dictates;
  - (g) "Excess Capacity" for each Point of Interconnection and for the Point of Supply shall have the meaning ascribed to it and shall be determined in accordance with Sections 9.2, 9.3 and 9.4, as the situation dictates;
  - (h) "Heavy Load Hours" means the hours of 07:00 to 22:00;
  - (i) "Interim Period" means 1 October 1993 through 30 September 1995;
  - (j) "Light Load Hours" means the hours of 22:00 to 07:00;
  - (k) "Nominated Demand" for each Point of Interconnection and the Point of Supply means the maximum rate as nominated by West Kootenay Power expressed in kilowatts at which B.C. Hydro is obligated to supply to such Point during any given Nomination Period;
  - (1) "Nomination Period" means the period from the Effective Date to 30 September 1994 and each succeeding twelve month period thereafter;

- (m) "Point of Interconnection" means a point exclusive to the Point of Supply, as identified in accordance with Section 3.1;
- (n) "Point of Interconnection Excess Capacity" shall have the meaning ascribed to it and shall be determined in accordance with Sections 9.2 and 9.4 as the situation dictates;
- (o) "Point of Interconnection Purchase Capacity" shall have the meaning ascribed to it and shall be determined in accordance with Section 9.2;

Section 1.1(p) was amended by the insertion of the new Section 1.1(p) on April 5, 2004, as follows:

- (p) "Point of Supply" means:
  - (i) the point where West Kootenay Power's 63kV Line 13 interconnects with B.C. Hydro's Line 60L225 between West Kootenay Power's South Slocan Substation and B.C. Hydro's Kootenay Canal Substation;
  - (ii) the point where West Kootenay Power's 230kV Line 79 (referred to by B.C. Hydro as Line 2L288) interconnects with B.C. Hydro's Kootenay Canal Substation; and
  - (iii) the point where West Kootenay Power's 63kV Line 12 (referred to by B.C. Hydro as Line 60L227) interconnects with B.C. Hydro's Kootenay Canal Substation.

# For purposes of this Agreement, the above-numerated points will, except in respect of Sections 4 and 10, be deemed, collectively, to be a single point of supply.

- (q) "Point of Supply Excess Capacity" shall have the meaning ascribed to it and shall be determined in accordance with Section 9.3 and 9.4 as the situation dictates;
- (r) "Point of Supply Purchase Capacity" shall have the meaning ascribed to it and shall be determined in accordance with Section 9.3;
- (s) "Purchase Energy" shall have the meaning ascribed to it and shall be determined in accordance with Sections 8.2 and 8.3;
- (t) "System Capacity Deficit" shall have the meaning ascribed to it in Section 9.1;
- (u) "Total Excess Capacity" means, for any given Billing Month, the sum of the maximum Excess Capacity for each Point of Interconnection and for the Point of Supply. (The maximum Excess Capacity for a Point of Interconnection is the greater of the Excess Capacity as determined in Section 9.2 for that Point of Interconnection or the

3 BC Hydro Application for Approval of New Power Purchase Agreement (PPA) with FortisBC Page 3 of 20 maximum hourly Excess Capacity as determined in Section 9.4 for that Point of Interconnection. For the Point of Supply, the maximum Excess Capacity is the greater of the Excess Capacity as determined in Section 9.3 or the maximum hourly Excess Capacity for the Point of Supply as determined in Section 9.4);

- (v) "Total Excess Energy" means the sum of the hourly Excess Energy;
- (w) "Total Purchase Capacity" shall be the total sum of the Points of Interconnection Purchase Capacities and the Point of Supply Purchase Capacity as such values are determined under Sections 9.2 and 9.3;
- (x) "Total Purchase Energy" means the sum of the hourly Purchase Energy, excluding Process Energy, for all hours of the Billing Month;
- (y) "Total Nominated Demand" means the sum of Nominated Demand for each Point of Interconnection and the Nominated Demand for the Point of Supply which has been nominated by West Kootenay Power in accordance with Sections 7.1, 7.2 and 7.3;
- (z) "Utilized Entitlement Resources" means the West Kootenay Power entitlement resources (as defined in the Canal Plant Sub-Agreement between Cominco and West Kootenay Power dated August 10, 1981) utilized on each hour;
- (aa) "Wheeling" and all forms of the verb "to Wheel" means the transmission by B.C. Hydro of West Kootenay Power's Electricity from the Point of Supply to the Points of Interconnection to serve West Kootenay Power's loads in its service area.

# 2. PURPOSE AND TERM OF THE AGREEMENT

# Section 2.1 was amended by the insertion of a new language after language contained in Section 2.1(a) on May 6, 2009, as follows:

- 2.1 (a) The Electricity purchased under this Agreement is solely for the purpose of supplementing West Kootenay Power's resources to enable it to meet its service area load requirements and shall not be Exported or stored provided that nothing contained herein shall prohibit West Kootenay Power from storing its entitlement resources in its entitlement account pursuant to the Canal Plant Agreement; and
  - (b) shall not be sold to any FortisBC customer when such customer is selling self generated electricity which is not in excess of its load.

For greater certainty, paragraph (b) above is to prevent FortisBC selfgenerating customers from purchasing power at regulated embedded cost rates and simultaneously selling an equivalent amount of power into available domestic and export markets.

- 2.2 "Export" and all forms of the verb "to Export" means, for the purposes of this Agreement, any transaction by or on behalf of West Kootenay Power whereby Electricity leaves the West Kootenay Power service area save and except for the following:
  - (a) Wheeling losses scheduled to B.C. Hydro;
  - (b) Emergency exchanges as defined by the Northwest Power Pool;
  - (c) Capacity Purchases by West Kootenay Power; and
  - (d) Such exceptions as the parties may agree to provided that any dispute in this regard shall be referred to the Commission or such person as the Commission may designate from time to time.
- 2.3 This Agreement replaces the 1986 Agreement as of the Effective Date.
- 2.4 Pursuant to the Order, certain of the provisions contained herein are to have no force and effect during the Interim Period, and those provisions shall be specifically identified herein. All other provisions shall be applicable as of the Effective Date.
- 2.5 This Agreement shall continue until 30 September 2013 unless previously terminated as provided in Section 13.1 or renewed by the parties on mutually acceptable terms. Termination of the Agreement shall not relieve either party from any liability or obligation then accrued but unsatisfied.

## 3. POINTS OF INTERCONNECTION AND SUPPLY

- 3.1 The Points of Interconnection between B.C. Hydro and West Kootenay Power at which Electricity may be purchased under this Agreement are listed in Appendix I, which may be amended from time to time by mutual agreement. The Parties recognize that such an amendment may require a renegotiation of the nomination provisions contained herein.
- 3.2 Electricity may also be purchased at the Point of Supply.

# 4. INTERCONNECTED OPERATION

4.1 Provision of Generation Reserves

B.C. Hydro and West Kootenay Power shall provide reserves for their respective systems in accordance with Northwest Power Pool requirements except that B.C. Hydro shall be responsible for supplying those reserves associated with the firm sales to West Kootenay Power under this Agreement.

4.2 Maintenance of Voltage

B.C. Hydro shall operate its system facilities to maintain, under normal conditions and in accordance with generally accepted utility practices, the voltage at the Point of Supply and each Point of Interconnection within plus or minus 10 percent of the nominal voltage (500, 230, 138, 63 kV) provided that the West Kootenay Power flow taken at each Point of Interconnection is not greater than the Nominated Demand together with the nominations under the General Wheeling Agreement and is between unity power factor and 0.95 power factor, leading.

4.3 Reactive Power (var) Requirement

West Kootenay Power shall plan and use its reasonable efforts to operate in accordance with generally accepted utility practices to operate at reasonable reactive power (var) flow at the Point of Supply and zero var flow at each Point of Interconnection. If, in B.C. Hydro's opinion, actual operation indicated that excessive var flows occur at any of these Points, B.C. Hydro shall have the right to give notice to West Kootenay Power to either rectify the situation or pay for the supply, installation and operation of var flow equipment necessary to rectify the situation.

4.4 Loop Operations

All purchases under this Agreement shall be to radially-connected West Kootenay Power service areas (excluding the Point of Supply) except that if closed loop operation is desirable:

- (a) West Kootenay Power shall give advance notice to B.C. Hydro of that need;
- (b) B.C. Hydro shall make reasonable efforts to accommodate West Kootenay Power and shall give notice to West Kootenay Power of the times and extent to which closed loop operation will be acceptable to B.C. Hydro; and
- (c) B.C. Hydro, in consultation with West Kootenay Power, shall correct for the effect of loop flows by making appropriate adjustments for billing purposes for periods of closed loop operation.
- 5. PLANNING AND OPERATING INFORMATION

5.1 General Information Requests

B.C. Hydro and West Kootenay Power agree to cooperate in the full exchange of such planning and operating information as may be reasonably necessary for the timely and efficient performance of the parties' obligations or the exercise of rights under this Agreement. Such information shall be provided on a timely basis and no reasonable request shall be refused. *Section 5.1 was amended by the insertion of the following at the end of the existing Section 5.1 on April 1, 2005:* West Kootenay Power acknowledges and agrees that planning and operating information related to other agreements may be required by B.C. Hydro for the purpose of administering and implementing this Agreement. West Kootenay Power agrees to provide to B.C. Hydro, either directly or via the British Columbia Transmission Corporation, planning and operating information information, as reasonably requested by B.C. Hydro and as may be reasonably necessary for the purpose of administering and implementing the Agreement.

5.2 Load-Resource Forecasts

By 30 June of each year, B.C. Hydro and West Kootenay Power shall exchange a forecast for the next ten years of loads and resources for their respective electrical systems. These forecasts shall include programs for resource acquisition, transmission and firm loads. The degree of detail in these forecasts shall be decided by mutual agreement.

## 6. USAGE OF PURCHASED CAPACITY AND PURCHASED ENERGY

- 6.1 B.C. Hydro shall, subject to Section 2.1, deliver energy to West Kootenay Power with associated capacity at all times and such capacity shall be used in the determination of billing demand. West Kootenay Power shall not take delivery of energy without associated capacity. Energy delivered under this Agreement is not returnable. Energy delivered under this Agreement shall be delivered to the Points of Interconnection and the Point of Supply with no charge for losses above and beyond the loss component built into Rate Schedule 3808.
- 6.2 The Total Purchase Capacity and Total Excess Capacity together with Total Purchase Energy and Total Excess Energy shall be paid for by West Kootenay Power in accordance with B.C. Hydro Electric Tariff Rate Schedule 3808 as amended or replaced from time to time.
- B.C. Hydro shall not be obligated to reserve for or supply to West Kootenay Power Excess Capacity or any energy associated with such Excess Capacity.B.C. Hydro shall use reasonable efforts to supply Excess Capacity to meet

West Kootenay Power's service area load requirements in accordance with Section 2.1 herein.

Section 6.4 was inserted on April 1, 1999, to clarify that wheeling is charged for deliveries for WKP Native Load Customers and was then subsequently deleted on April 1, 2005. This language is now effectively contained in a letter agreement dated March 21, 2005 as between FortisBC and BCTC (approved by BCUC Order No. G-34-05).

6.4 For the purposes of this clause, and this clause only, capitalized items shall have the same meaning as contained in B.C. Hydro's Tariff Supplement No. 30 Terms and Conditions applicable to wholesale transmission service.

When the B.C. Hydro Transmission System is used b West Kootenay Power or an agent to transmit power purchased from an person other than B.C. Hydro to serve West Kootenay Power's Native Load Customers, to a Point of Interconnection or to the Point of Supply (as defined in the General Wheeling Agreement between B.C. Hydro and West Kootenay Power dated October 15, 1986), West Kootenay Power shall pay to B.C. Hydro an amount equal to the Hourly Price for Reserved Capacity which would been payable for transmission of that energy under Rate Schedule 3001, times the amount of energy delivered.

## 7. RESERVATION AND NOMINATIONS

7.1 Total Nominated Demand

During each year of this Agreement West Kootenay Power shall provide power purchase nominations to B.C. Hydro in accordance with Sections 7.2 and 7.3. If nominations are not received by B.C. Hydro in accordance with Sections 7.2 and 7.3 for any Nomination Period then the Nominated Demand for such Nomination Period shall be deemed to be the same as the Nominated Demand for the immediately preceding Nomination Period. The Total Nominated Demand for any Nomination Period shall not exceed 200 MW except for the Interim Period during which there shall be no limit on Total Nominated Demand.

7.2 Initial Nominations

Prior to the Effective Date of this Agreement, West Kootenay Power shall provide to B.C. Hydro for each of the initial five Nomination Periods, the Nominated Demand for each Point of Interconnection and for the Point of Supply. Such nominations for each Point of Interconnection and for the Point of Supply shall apply for each month of the Nomination Period in question.

7.3 Subsequent Nominations

Prior to 1 October of each subsequent year of this Agreement, West Kootenay Power shall provide B.C. Hydro with the then ensuing fifth Nomination Period nominations for Nominated Demand for each Point of Interconnection and for the Point of Supply. Such nominations for each Point of Interconnection and for the Point of Supply shall apply for each month of the said Nomination Period.

7.4 System Supply

Subject to Section 6.3 above, B.C. Hydro shall reserve on its system the amounts of capacity and associated energy resources necessary to meet the Nominated Demands, the Total Nominated Demand and the associated energy for each Nomination Period and, if requested by West Kootenay Power, shall supply capacity and associated energy up to the Nominated Demands for each Point of Interconnection and the Point of Supply for each Nomination Period.

7.5 Changes to Nomination Amounts

WKP may, on two years written notice, request changes to the Nominations made pursuant to this Section. B.C. Hydro shall make reasonable efforts to accommodate such changes.

### 8. PRESCHEDULING AND ENERGY ACCOUNTING

- 8.1 West Kootenay Power shall preschedule its energy requirements in the following manner:
  - (a) By 14:00 hours Pacific Time on each Thursday of each week West Kootenay Power shall provide B.C. Hydro with an hourly preschedule of West Kootenay Power's energy purchase requirements (not exceeding levels associated with Nominated Demand) from B.C. Hydro for delivery for the period commencing Sunday at 00:00 hours and ending on the next following Thursday at 24:00 hours.
  - (b) By 14:00 hours Pacific Time on each Wednesday of each week West Kootenay Power shall provide B.C. Hydro with an hourly preschedule of West Kootenay Power's energy purchase requirements (not exceeding levels associated with Nominated Demand) from B.C. Hydro for delivery for the period commencing Friday at 00:00 hours and ending on the next following Saturday at 24:00 hours.
  - (c) If B.C. Hydro does not receive a preschedule for any period defined above, then West Kootenay Power's energy requirement preschedule for such period shall be deemed to be the same as it was for the immediately preceding like period. The parties may make alternative

arrangements to accommodate Statutory Holidays by mutual agreement.

- 8.2 The Purchase Energy for each hour shall be the prescheduled energy for that hour.
- 8.3 If West Kootenay Power's requirements from B.C. Hydro for any hour exceed the amount prescheduled for that hour then the amount that exceeded the prescheduled amount shall be Excess Energy for that hour.
- 8.4 West Kootenay Power shall not Export any Electricity out of its service area during any given hour while West Kootenay Power is taking energy requirements from B.C. Hydro under this Agreement for that hour. If West Kootenay Power Exports Electricity out of its service area during hours in which it is taking energy from B.C. Hydro, then for those hours the Purchase Energy shall be zero and the greater of the prescheduled energy requirement of West Kootenay Power's requirement from B.C. Hydro for those hours shall be deemed to be Excess Energy.

### 9. CAPACITY ACCOUNTING

- 9.1 System Capacity Deficit
  - (a) The System Capacity Deficit shall be calculated for each and every hour during the term of this Agreement, as the greater of:
    - (i) zero, or
    - the gross West Kootenay Power service area hourly load, including export schedules and losses scheduled to B.C. Hydro under the General Wheeling Agreement, minus the total capacity resources dispatched with associated energy by West Kootenay Power, excluding capacity purchased under this Agreement;
  - (b) The total capacity resources dispatched by West Kootenay Power on an hourly basis in accordance with paragraph 9.1(a)(ii) shall be:
    - Utilized Entitlement Resources; plus
    - firm capacity obtained from any other West Kootenay Power resource not covered by the Canal Plant Agreement, excluding capacity purchased under this Agreement; plus
    - the capacity purchased from Cominco; plus
    - any other firm capacity transactions not covered under this Agreement.
- 9.2 Points of Interconnection Accounting

For each hour excluding hours during which West Kootenay Power is Exporting, the capacity required at each Point of Interconnection shall be calculated as the difference between the recorded demand at the Point of Interconnection and the sum of the capacity Wheeled to the Point of Interconnection from the Point of Supply under the terms and conditions of the General Wheeling Agreement together with the capacity associated with transactions not covered under this Agreement. The maximum capacity so required during all hours of any given Billing Month at each Point of Interconnection shall be its Point of Interconnection Purchase Capacity for that month, so long as it does not exceed the Nominated Demand for that Point of Interconnection. If in any month the maximum capacity so determined exceeds the Nominated Demand for that Point of Interconnection then the Point of Interconnection Purchase Capacity for that month at such point shall be the Nominated Demand for that Point of Interconnection and the capacity required which exceeds the Nominated Demand shall be the Point of Interconnection Excess Capacity for such point and the energy associated therewith shall be deemed Excess Energy.

- 9.3 Point of Supply Accounting
  - (a) For each hour, the capacity required at the Point of Supply shall be calculated as the greater of:
    - (i) zero, or
    - (ii) the System Capacity Deficit minus the sum of the capacity required in the concurrent hour at all Points of Interconnection.
  - (b) The maximum capacity so required during the Heavy Load Hours of each day of any given Billing Month, excluding hours during which West Kootenay Power is Exporting, shall be the Point of Supply Purchase Capacity for that month, so long as it does not exceed the Nominated Demand for the Point of Supply. If in the Heavy Load Hours in any given Billing Month the maximum capacity exceeds the Nominated Demand then the Point of Supply Purchase Capacity for that month shall be the Nominated Demand for the Point of Supply and the capacity required which exceeds the Nominated Demand shall be the Point of Supply Excess Capacity for that month, and the energy associated with such Excess Capacity shall be deemed Excess Energy.
  - (c) Notwithstanding the Nominated Demand for the Point of Supply, West Kootenay Power may, during the Light Load Hours only, exceed such nomination without incurring excess charges provided that the maximum capacity during Light Load Hours for any given Billing Month does not exceed the lesser of 175MW or the maximum hourly System Capacity Deficit during the Heavy Load Hours of that Billing Month. If such levels are exceeded, the excess shall be deemed Point

of Supply Excess Capacity for that month, and the energy associated with such Excess Capacity shall be deemed Excess Energy.

9.4 Exports

The capacity required at each Point of Interconnection and the Point of Supply during any hour of the Billing Month during which West Kootenay Power is Exporting shall be deemed to be Excess Capacity for that Point of Interconnection and the Point of Supply as the case may be and the associated energy shall be deemed to be Excess Energy in accordance with Section 8.4.

### 10. METERING FACILITIES

- 10.1 Metering
  - (a) The Electricity purchased under this Agreement shall be measured and recorded at each Point of Interconnection and at the Point of Supply by energy and demand meters having one hour integrating intervals, which meters shall be of types approved for revenue metering by the Canadian Department of Consumer and Corporate Affairs and shall comply with the provisions of the *Electricity and Gas Inspection Act*, as amended from time to time.
  - (b) Each party shall, if possible, make available to the other party the second set of secondaries of the metering transformers owned by it for the purpose of installing backup metering, telemetering and control equipment as may be mutually agreed by the parties and shall provide space for the location of such equipment. In cases where backup meters are installed, the parties shall designate one meter to be used for revenue billing.
- 10.2 Tests of Metering Installations
  - (a) Each party shall, at its expense, test its metering components associated with Agreement as provided by the *Electricity and Gas Inspection Act* and field test the metering installation at least once every two years. If requested to do so, each party shall make additional tests or inspections of such installations, the expense of which shall be paid by such other requesting party unless such additional tests or inspections show the measurements of such installations to be registering outside the prescribed limit of error. Each party shall give reasonable notice of the time when any such test or inspection is to be made to the other party who may have representatives present at such test or inspection. Any component of such installations found to be defective or inaccurate shall be adjusted, repaired, or replaced to provide accurate metering.

- (b) If a meter is found to be not functioning accurately, the Electricity purchased shall be determined as provided for in the *Electricity and Gas Inspection Act*.
- 10.3 Access to Equipment and Facilities
  - (a) If any equipment or facilities associated with any Point of Supply or Point of Interconnection and belonging to a party to this Agreement are or are to be located on the property of the other party, a permit to install, test, maintain, inspect, replace, repair, and operate during the term of this Agreement and to remove such equipment and facilities at the expiration of said term, together with the right of entry to said property at all reasonable times in such term, is hereby granted by the other party.
  - (b) Each party shall have the right, by giving suitable notice, to enter the property of the other party at all reasonable tunes for the purpose of reading any and all meters mentioned in this Agreement which are installed on such property.
  - (c) If either party is required or permitted to install, test, maintain, inspect, replace, repair, remove, or operate equipment on the property of the other, the owner of such property shall furnish the other party with accurate drawings and wiring diagrams of associated equipment and facilities, or, if such drawings or diagrams are not available, shall furnish accurate information regarding such equipment or facilities. The owner of such property shall notify the other party of any subsequent modification which may affect the duties of the other party in regard to such equipment, and furnish the other party with accurate revised drawings, if possible.
- 10.4 Ownership of Facilities
  - (a) Except as otherwise expressly provided, ownership of any and all equipment installed or previously installed by either party on the property of the other party shall be and remain with the installing party.
  - (b) Each party shall identify all equipment which is installed by it on the property of the other, by permanently affixing thereto suitable markers plainly stating the name of the owner of the equipment so identified. Within a reasonable time subsequent to initial installation, and subsequent to any modification of such installation, representatives of the parties shall jointly prepare an itemized list of said equipment so installed.

### 10.5 Inspection of Facilities

Each party may, for any reasonable purpose under this Agreement, inspect the other party's electric installation at any reasonable time after giving suitable notice. Such inspection, or failure to inspect, shall not render such party, its officers, agents, or employees, liable or responsible for any injury, loss, damage, or accident resulting from defects in such electric installation, or for violation of this Agreement. The inspecting party shall observe written instructions and rules posted in facilities and such other necessary instructions or standards for inspection as the parties agree to. Only those electric installations used in complying with the terms of this Agreement shall be subject to inspection.

### 11. INVOICES AND PAYMENT

- 11.1 B.C. Hydro shall render a billing invoice monthly which is due and payable upon presentation.
- 11.2 If the amount due on any invoice has not been paid in full after 20 days from the billing date shown on the invoice, a late payment charge shall be applied to the unpaid balance, and the resulting amount will be shown and identified on the next invoice to be rendered. The late payment charge shall be as specified in B.C. Hydro's Electric Tariff, as amended from time to time.

### 12. TECHINICAL COMMITTEE

- 12.1 There shall be established and maintained throughout the term of this Agreement, a Technical Committee consisting of one representative of each party, each of whom shall serve until notice has been given to the other party of the selection of a successor.
- 12.2 Each party may give notice to the other party of an alternate who shall serve during the inability or absence of the representative of the party giving notice.
- 12.3 The Technical Committee shall determine all matters relating to administration and operation of this Agreement and shall decide questions that arise in operations under this Agreement.
- 12.4 In reaching decisions the Technical Committee shall attempt to achieve a just and equitable resolution of disagreements based upon generally accepted utility practice and shall not vary or extend in any way the provisions of the Agreement.
- 12.5 The Technical Committee shall keep a written record of its decisions and shall promptly forward to each of the parties a copy of the written record.

### 13. INVOLUNTARY AMENDMENT AND TERMINATION

13.1 If an applicable statutory or regulatory provision of any legislative body or governmental agency having requisite authority, or an order of a court of competent jurisdiction, renders or declares the purchases provided by this Agreement to be illegal or alters the arrangements or provisions of this Agreement, the Agreement shall terminate or be amended as the case may be, at a time the circumstances so provide.

### 14. FORCE MAJEURE

14.1 Neither party to this Agreement shall be considered to be in default in the performance of any of its obligations under this Agreement to the extent that performance of those obligations is prevented or delayed by any cause which is beyond the reasonable control of the party prevented or delayed by that cause. If either party is delayed or prevented from its performance at any time by any act, omission or neglect of the other party or its representatives, or by an act of God or the public enemy, or by expropriation or confiscation of facilities, compliance with any order of any governmental authority or order of a court of competent jurisdiction, acts of war, rebellion or sabotage, fire, flood, explosion, riot, strike or other labor dispute beyond the reasonable control of the party or any unforeseeable cause beyond the control and without the fault and negligence of the party, the party so prevented or delayed shall give notice to the other party of the cause of the prevention or delay but, notwithstanding giving of that notice, the party shall promptly and diligently use its best efforts to remove the cause of the prevention or delay.

### 15. INDEMNITY

- 15.1 Each party shall indemnify and save harmless the other party from and against any and all of the following:
  - (i) claims including those under any statute for the protection of workers, demands, awards, judgments, actions and proceedings by whomsoever made, brought or prosecuted; and
  - (ii) fines, delays, expenses and costs suffered or incurred by that other party;

by reason of any act or omission of the first party (its successors or assigns) servants, agents, invitees and licensees or any of them arising out of, or in connection with this Agreement.

15.2 Notwithstanding Section 15.1, neither party, its servants or agents, shall be liable to the other party for any loss, injury, damages or expense of the other

party caused by or resulting from any suspension, discontinuance or defect in the supply of Electricity, or the maintenance of unvaried frequency or voltage alleged or caused by an act or omission of the other party, its servants or agents, except for direct loss or damage to the physical property of one party resulting from willful misconduct or negligent acts or omissions by the other party, its servants or agents.

#### 16. NOTICES

- 16.1 All notices, directions and other instruments required or permitted to be given under this Agreement (except those given pursuant to Section 12) shall be in writing, and shall be sufficient in all respects if delivered, or if sent by telecopier, or if sent by prepaid registered post mailed in British Columbia to the parties at the following addresses respectively:
  - (a) to B.C. Hydro British Columbia Hydro & Power Authority 333 Dunsmuir Street Vancouver, B.C. V6B 5R3

Attention: Secretary Telecopy Number 623-2742

(b) to West Kootenay Power West Kootenay Power Limited 1290 Esplanade Trail, B.C. V1R 4I 4

> Attention: Secretary Telecopy Number 364-1270

Either party shall have the right at any time to change its address by notice in writing sent to the other party at the address in effect hereunder.

- 16.2 Any notice, direction or other instrument shall be deemed to have been received on the following dates:
  - (a) if sent by telecopier, on the business day next following the date of transmission:
  - if delivered, on the business day next following the date of delivery; or (b)
  - (c) if sent by registered mail, on the seventh day following its mailing, provided that if there is at the time of mailing or within seven days

thereafter a mail strike, slowdown, lockout or other labor dispute which might affect the delivery, then any notice, direction or other instrument, shall only be effective upon actual delivery or if delivered or sent by telecopier.

### 17. GOVERNING LAW

17.1 This agreement and all the terms and conditions contained in it shall be subject to the provisions of the *Utilities Commission Act of British Columbia*, as amended or re-enacted from time to time and to the jurisdiction of the Commission.

### 18. ENUREMENT

18.1 This Agreement shall be binding upon and shall enure to the benefit of the parties and their respective successors and permitted assigns.

## IN WITNESS WHEREOF THE PARTIES HAVE HEREUNTO EXECUTED THIS AGREEMENT

The Common Seal of BRITISH COLUMBIA HYDRO AND POWER AUTHORITY was affixed in the presence of:

Authorized Signatory

Authorized Signatory

The Common Seal of WEST KOOTENAY POWER LIMITED was affixed in the presence of:

Authorized Signatory

Authorized Signatory

Appendix 1 was amended by the insertion of the new Appendix 1 on December 13, 2002, as follows:

### APPENDIX 1

**Points of Interconnection** 

The Points of Interconnection between B.C. Hydro and West Kootenay Power at which electricity may be purchased under this Agreement are as follows:

- (a) West Kootenay Power's 230 kV bus at the Lambert Substation (the "Creston Point of Interconnection").
- (b) B.C. Hydro's 230 kV bus at the Vernon Substation and West Kootenay Power's 230 kV bus at the Vaseux Lake Terminal Station (collectively, the "Okanagan Point of Interconnection"). For the purposes of this Agreement, deliveries at the Okanagan Point of Interconnection will be summed and treated as a single delivery point.
- (c) West Kootenay Power's tap on B.C. Hydro's transmission line 1L251 near Princeton (the "Princeton Point of Interconnection").

### SCHEDULE 3808

### TRANSMISSION SERVICE (5000 kV .A and over) WEST KOOTENAY POWER LTD.

Availability: This schedule is available to West Kootenay Power Ltd. in accordance with the terms and conditions of the Agreement between B.C. Hydro and West Kootenay Power entered into and deemed effective the 1st day of October 1993 (the "Power Purchase Agreement"). The Total Nominated Demand shall not exceed 200 MW except during the Interim Period.

<u>Applicable in</u>: For Electricity delivered to West Kootenay Power at each Point of Interconnection and the Point of Supply as defined in the Power Purchase Agreement.

Rate:Demand Charge:\$4.625 per kW of Billing Demand per<br/>Billing Month

plus

Energy Charge: 2.725 cents per kW.h of Purchase Energy per Billing Month.

<u>Billing Demand</u>: The Demand for billing purposes in any-Billing Month shall be the greatest of:

- 1. the Total Purchase Capacity for that Billing Month, plus 1.2 times the Total Excess Capacity for that Billing month; or
- 2. the appropriate percentage defined in the table below, times the sum of the highest Total Purchase Capacity registered in any of the preceding eleven months, plus 1.2 times the highest Total Excess Capacity in any of the preceding eleven months; or
- 3. 50% of the Total Nominated Capacity, plus 1.2 times the Total Excess Capacity for that Billing Month.

### SCHEDULE 3808

# TRANSMISSION SERVICE (5000 kV .A and over)WEST KOOTENAY POWER LTD(Con't).

Billing Demand Computation Table:

	<b>Billing Month</b>	Billing Month	
	October 1993 -	through September 1995	50%
	October 1995 -	through September 1996	55%
	October 1996 -	through September 1997	60%
	October 1997 -	through September 1998	65%
	October 1998 -	through September 1999	70%
	October 1999 -	through September 2013	75%
<u>Excess Energy</u> <u>Charge:</u>	1.15 times the Energy Charge per kW.h for each kW.h of Total Excess Energy		
<u>Taxes:</u>	The Rates and Charges contained herein are exclusive of the Goods and Services Tax and Social Services Tax.		
Note:	The terms and conditions under which service is supplied to West Kootenay Power are contained in the Power Purchase Agreement. This Schedule is subject to the same rate adjustments as Schedule 1821.		