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December 22, 2005

Mr. Robert J. Pellatt  
Commission Secretary  
British Columbia Utilities Commission  
Sixth Floor – 900 Howe Street  
Vancouver, BC V6Z 2N3

Dear Mr. Pellatt:

**RE: British Columbia Hydro and Power Authority (BC Hydro)  
Transmission Service Outstanding Matters Application**

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BC Hydro respectfully submits the enclosed Transmission Service Outstanding Matters Application (TSOM). BC Hydro has set out in section one of the TSOM the purposes of the Application, approvals sought from the British Columbia Utilities Commission, and contact information.

Yours sincerely,



Joanna Sofield

Chief Regulatory Officer

Enclosure (20)

- cc. Intervenors, BC Hydro Revenue Requirements Application  
Project No. 3698385  
Intervenors, BC Hydro Transmission Service Rate Application  
Project No. 3698360



**BRITISH COLUMBIA HYDRO AND POWER AUTHORITY**

# **Transmission Service Outstanding Matters Application**

Submission to the  
British Columbia Utilities Commission  
December 2005

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1 **1.0 Introduction**

2 **1.1 Purpose of Application**

3 In Order No. G-79-05, the British Columbia Utilities Commission (“BCUC”) approved the  
4 Negotiated Settlement (the “Transmission Settlement”) dated June 15, 2005 with respect  
5 to BC Hydro’s March 10, 2005 Transmission Service Rate Application. In accordance  
6 with the terms of the Transmission Settlement, the new Stepped Rate and optional  
7 Time-of-Use Rate for transmission customers, and the related Customer Baseline Load  
8 Determination Guidelines, will come into effect on April 1, 2006.

9 The purpose of this Transmission Service Outstanding Matters Application (the  
10 “Application”) is to address and obtain BCUC approval of BC Hydro’s proposals  
11 respecting the outstanding matters from the Transmission Settlement.

12 **1.2 Organization of Application**

13 Section 2 of the Application identifies the outstanding matters from the Transmission  
14 Settlement. BC Hydro’s proposals respecting each of the outstanding matters are  
15 discussed in Section 3 of this Application.

16 The proposed Transmission Service Rate Schedules are addressed in Section 4 of the  
17 Application, and the proposed Transmission Service Rate Schedules are included in  
18 Appendix A.

19 Appendices B and C contain revisions to the Time of Use (TOU) Transmission Service  
20 Agreement and the Customer Baseline Load (CBL) Determination Guidelines,  
21 respectively, arising from the proposed changes to the TOU Transmission Rate.

22 Appendix D contains the evidence related to the Standby Rate 1880 that was filed in the  
23 March 2005 Transmission Service Rate Application.

24 **1.3 Approvals Sought**

25 Pursuant to the *Utilities Commission Act*, R.S.B.C. 1996, c.473, as amended, and in  
26 particular sections 58 and 61 thereof, BC Hydro hereby applies for an order of the BCUC  
27 approving the following:

- 1       • The Transmission Service Rate Schedules attached as Appendix A to this  
2       Application, to be effective on April 1, 2006;
  
- 3       • The Time of Use Transmission Service Agreement (Electric Tariff Supplement  
4       No. 72) attached as Appendix B to this Application, to be effective on April 1,  
5       2006; and
  
- 6       • The Customer Baseline Load Determination Guidelines attached as Appendix C  
7       to this Application, to be effective on April 1, 2006.

#### 8       **1.4 Proposed Expedited Process**

9       The changes to the transmission rates<sup>1</sup> that BC Hydro is proposing in this Application  
10      arise from consultations that BC Hydro had with interested parties pursuant to the  
11      commitments made in the Transmission Settlement.

12     The transmission rates that BC Hydro is proposing in this Application are revenue-  
13     neutral to the transmission rates contained in the Transmission Settlement, and  
14     therefore do not result in any cost-shifting to other customer classes.

15     BC Hydro believes that the changes to the transmission rates proposed in this  
16     Application, and the related revisions to the TOU Transmission Service Agreement and  
17     the CBL Determination Guidelines, should be implemented on April 1, 2006, at the same  
18     time as the transmission rates contained in the Transmission Settlement.

19     The Transmission Settlement contemplated that the matters covered by this Application  
20     would be included in BC Hydro's Rate Design Application. However, in the interests of  
21     implementing the changes proposed in this Application and the rates approved in the  
22     Transmission Settlement at the same time (April 1, 2006), BC Hydro is filing this  
23     Application separate from the Rate Design Application. BC Hydro believes the matters  
24     covered by the two applications are distinct from each other, and the Commission can  
25     review them in separate processes.

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<sup>1</sup> In this Application, all references to "transmission rates" refer to rates charged to transmission-connected customers of BC Hydro.

1 Based on the discussions that BC Hydro has had with affected parties, BC Hydro  
2 understands that there is support for the changes proposed in this Application. BC Hydro  
3 therefore respectfully suggests that the Commission consider an expedited written  
4 process to dispose of this Application. BC Hydro could implement the changes proposed  
5 in this Application on April 1, 2006 if a final decision from the Commission was available  
6 by March 1, 2006.

7 All communications regarding this proceeding should be directed to:

8 Joanna Sofield  
9 Chief Regulatory Officer  
10 BC Hydro  
11 333 Dunsmuir Street  
12 Vancouver, BC V6B 5R3  
13  
14 Phone: (604) 623-4046  
15 Email: [regulatory.group@bchydro.com](mailto:regulatory.group@bchydro.com)

16 Respectfully submitted,

17 Dated at Vancouver, British Columbia, this 22<sup>nd</sup> day of December, 2005.

18 BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

19 Per:



20 \_\_\_\_\_  
21 Joanna Sofield  
22 Chief Regulatory Officer  
23

1 **2.0 Transmission Settlement**

2 The Transmission Settlement included the following provisions, which are addressed in  
3 this Application:

4 **5. Standby/Maintenance Rate Schedule 1880**

5 It was agreed that Rate Schedule (“RS”) 1880 will not be modified as part of this  
6 Application except for non-substantive amendments arising necessarily as a result of  
7 replacing RS 1821 with RS 1823. Participants are concerned about the potential for cost  
8 increases to affected customers if the changes proposed by BC Hydro respecting  
9 availability of the rate are made at this time.

10 It is therefore agreed that BC Hydro will address Standby and Maintenance rates,  
11 including their availability, as part of its next general rate design application. If resolution  
12 of such application is delayed beyond mid-2006, BC Hydro may make a separate  
13 application that addresses any modifications to Standby and Maintenance rates.

14 **6. Other Matters for BC Hydro’s Next General Rate Design Application**

15 Some participants raised concerns respecting other provisions of the proposed Rate  
16 Schedules. Those concerns are not resolved by this Settlement Agreement and will be  
17 addressed by BC Hydro in the comprehensive general rate design Application that it  
18 intends to file by December 16, 2005. In relation to that Application:

19 a. Prior to filing its general rate design application BC Hydro will initiate  
20 meetings with customers on the development of time-of-use rates, including  
21 consideration of demand-response rates.

22 BC Hydro will address modifications to the time of use rate in its next  
23 general rate design application.

24 For clarity, Time of Use Rate Schedule 1825 submitted by BC Hydro in  
25 its Application is accepted.

26 b. Prior to filing its general rate design application BC Hydro will initiate  
27 meetings with customers on demand aggregation and the appropriate means  
28 of determining the demand of a customer.

1 BC Hydro will address the appropriate level of demand charges, and the  
2 appropriate means of determining demand, in its next general rate  
3 design application.

4 c. Prior to filing its general rate design application BC Hydro will initiate  
5 meetings with BCTC and customers, including interested IPPs, to address  
6 further modifications to Retail Access provisions, including consideration of  
7 enabling customers to meet their load requirements partially through third  
8 party suppliers who wish to utilize the Open Access Transmission Tariff of  
9 the British Columbia Transmission Corporation.

10 BC Hydro will include any modification to its Retail Access provisions in  
11 its next general rate design application.

12 For clarity, the Retail access provisions submitted by BC Hydro in the  
13 TSR Application are accepted.

14 d. Some participants had concerns with the current definition of Force Majeure  
15 as found in their Electric Supply Agreements (“ESAs”) and the impact thereof  
16 on the CBL for the Stepped Rate. However, Force Majeure has implications  
17 that go beyond the Stepped Rate proposal.

18 Any modifications respecting Force Majeure may be brought forward at  
19 the time of BC Hydro’s next general rate design application.



1 **3.0 Outstanding Matters from the Transmission Settlement**

2 **3.1 Standby/Maintenance Rate**

3 The evidence, including responses to information requests, that BC Hydro filed with the  
4 BCUC respecting the Standby/Maintenance Rate 1880 as part of the March 2005  
5 Transmission Service Rate application, is reproduced in Appendix D of this Application.

6 In that application, BC Hydro proposed that the price for Standby/Maintenance be equal  
7 to the Dow Jones Daily Mid-Columbia indices (High Load Hour (HLH) and Low Load  
8 Hour (LLH)) plus a 0.3 cents/kWh adder. BC Hydro had proposed the use of the Dow  
9 Jones Daily Mid-Columbia indices as indicative of BC Hydro's short-run marginal cost of  
10 energy.

11 However, some stakeholders are concerned about the potential volatility of the Mid-C  
12 prices, particularly given the inability to control the timing of forced outages of on-site  
13 generation. Some stakeholders prefer a fixed dollar-per-incident fee as a means of  
14 recovering BC Hydro's administrative costs, rather than an adder to the energy charge.

15 BC Hydro recognizes the inability to control the timing of forced outages of on-site  
16 generation. To address the concern raised by stakeholders regarding the potential  
17 volatility of Mid-C prices, BC Hydro is now proposing that standby/maintenance energy  
18 be priced at the Tier 2 price of the Stepped Rate (Rate 1823), which represents  
19 BC Hydro's long-run marginal cost of energy. BC Hydro also accepts that a per-incident  
20 charge better reflects the causation of the administrative costs associated with Rate  
21 1880. Accordingly, BC Hydro is now proposing that there be a \$150 charge per incident  
22 included in Rate 1880, rather than an adder to the energy charge.

23 BC Hydro also proposes to change the definition of the Reference Demand to reflect  
24 BC Hydro's proposed change to the determination of Billing Demand for transmission  
25 customers, as discussed in Section 3.3 below.

26 It is BC Hydro's understanding that the Standby/Maintenance Rate as modified in this  
27 Application is widely supported by the affected stakeholders.

1 **3.2 Time of Use Rate**

2 BC Hydro initiated meetings with stakeholders on the development of time of use rates,  
3 as was agreed in section 6(a) of the Transmission Settlement. Stakeholders made  
4 various suggestions regarding the Demand CBL, the number of CBL periods and the  
5 Tier 1 price in each CBL period.

6 The Demand CBL is addressed in the next section on Demand Determination.

7 The Time of Use Rate approved in the Transmission Settlement includes 16 CBL  
8 periods – two for each of the four winter months (HLH and LLH for each month), and one  
9 for each of the remaining months in the year. Stakeholders suggested that fewer CBL  
10 periods would simplify the rate and provide more flexibility to shift load between months.

11 BC Hydro agrees that collapsing the number of CBL periods would simplify the rate and  
12 provide more flexibility, since the 90% Tier 1 and 10% Tier 2 split would be applied to a  
13 CBL that covers several months. This change is consistent with the flexibility afforded  
14 stepped rate customers, who each have a single CBL.

15 Therefore, BC Hydro is proposing to modify the Time of Use Rate so that there are only  
16 4 CBL periods as follows:

- 17 • Winter HLH (November through February),
- 18 • Winter LLH (November through February),
- 19 • Spring (May and June), and
- 20 • Remainder (all other months).

21 In the Time of Use Rate approved in the Transmission Settlement, the Tier 1 price varies  
22 slightly throughout the year. Stakeholders suggested that using the same Tier 1 price  
23 throughout the year would simplify the rate. BC Hydro agrees and is therefore proposing  
24 to modify the Tier 1 price on Rate 1825 to be equal to the Tier 1 price on Rate 1823 for  
25 all CBL periods.

26 The following table summarizes the proposed TOU Rate:

1  
2

**Table 2-1  
Proposed TOU Rate**

	<b>Hours</b>	<b>Tier 1 Price cents/kWh</b>	<b>Tier 2 Price cents/kWh</b>	<b>Weighted Average cents/kWh</b>
Winter HLH	1,600	2.428	6.120	2.797
Winter LLH	1,280	2.428	5.403	2.726
Spring	1,464	2.428	4.602	2.645
Remainder	4,416	2.428	5.403	2.726
<b>Total/Wtd.Avg.</b>	<b>8,760</b>	<b>2.428</b>	<b>5.400</b>	<b>2.725</b>

3 Under BC Hydro's proposed TOU Rate, the annual weighted average Tier 1 and Tier 2  
4 prices are the same as the Tier 1 and Tier 2 prices in the Stepped Rate RS 1823, and  
5 the annual overall weighted average price in the TOU Rate is the same as the single  
6 price in the Exempt Rate RS 1827.

7 BC Hydro is also proposing related changes to the TOU Transmission Service  
8 Agreement (Electric Tariff Supplement No. 72), as included in Appendix B, and the CBL  
9 Determination Guidelines, as included in Appendix C.

10 It is BC Hydro's understanding that the above proposed modifications to the Time of Use  
11 Rate are widely supported by the affected stakeholders.

12 With respect to demand response rates, BC Hydro filed a curtailable service option  
13 related to transmission deferral in BC Hydro's 1996 Industrial Services Application. The  
14 generic terms and conditions for this curtailable service option were approved by BCUC  
15 Order G-76-96.

16 In 1999, BC Hydro reached a negotiated settlement with stakeholders, which was  
17 included in BCUC Order G-115-99, on a Price Dispatched Curtailment Program. Under  
18 this program, BC Hydro offers participants the opportunity to voluntarily curtail load to  
19 enable BC Hydro to take advantage of export opportunities when the market price of  
20 electricity is high and BC Hydro has transmission capacity to reach the export market.  
21 There are approximately 10 customers currently enrolled in the Price Dispatched  
22 Curtailment Program.

1 Furthermore, BC Hydro is currently working with stakeholders to develop a firm  
2 curtailment product on a pilot basis during the upcoming winter season. Similar to the  
3 Price Dispatched Curtailment Program, BC Hydro is treating this firm curtailment product  
4 as a call for resources, and not as a tariff.

5 Thus, BC Hydro is not proposing any tariff-based curtailment options as part of this  
6 Application.

### 7 **3.3 Demand Determination**

8 Under the Stepped Rate RS 1823, the demand charge is based on the customer's  
9 highest actual half-hour demand, whereas under the TOU Rate RS 1825, the demand  
10 charge is based on the higher of the customer's actual half-hour demand or the Demand  
11 CBL.

12 Stakeholders suggested that eliminating the Demand CBL provisions in TOU Rate RS  
13 1825 would simplify the rate and eliminate a potential disincentive to shift load from HLH  
14 to LLH. With a Demand CBL, a customer peaking in HLH's would not benefit from a  
15 reduction in HLH peak demand. Furthermore, a customer peaking in the LLH might  
16 experience an increase in demand charges from a shift of load from HLH to LLH,  
17 thereby diluting or even eliminating the incentive to respond to the diurnal TOU price  
18 signal.

19 Therefore, to simplify the TOU Rate RS 1825 and to provide a better price signal to all  
20 transmission customers to shift load from HLH to LLH, BC Hydro is proposing that the  
21 billing demand for all transmission customers be based on the highest actual half-hour  
22 demand in the HLH period. This proposed billing demand has the following advantages:

- 23 • It results in a fair allocation of demand-related costs within the transmission class,  
24 since customers who peak during the HLH period will contribute more in demand  
25 charges than customers who peak in the LLH period.
- 26 • It provides a price signal that encourages all transmission customers to shift peak  
27 demand to LLH.
- 28 • It simplifies the rate by eliminating the need for Demand CBLs.

1 • It eliminates the risk that shifting energy from HLH to LLH in response to the TOU  
2 price signal could result in an increased demand charge.

3 • It simplifies the choice between the Stepped Rate and the optional TOU rate, since  
4 the demand charge would be the same under both rates.

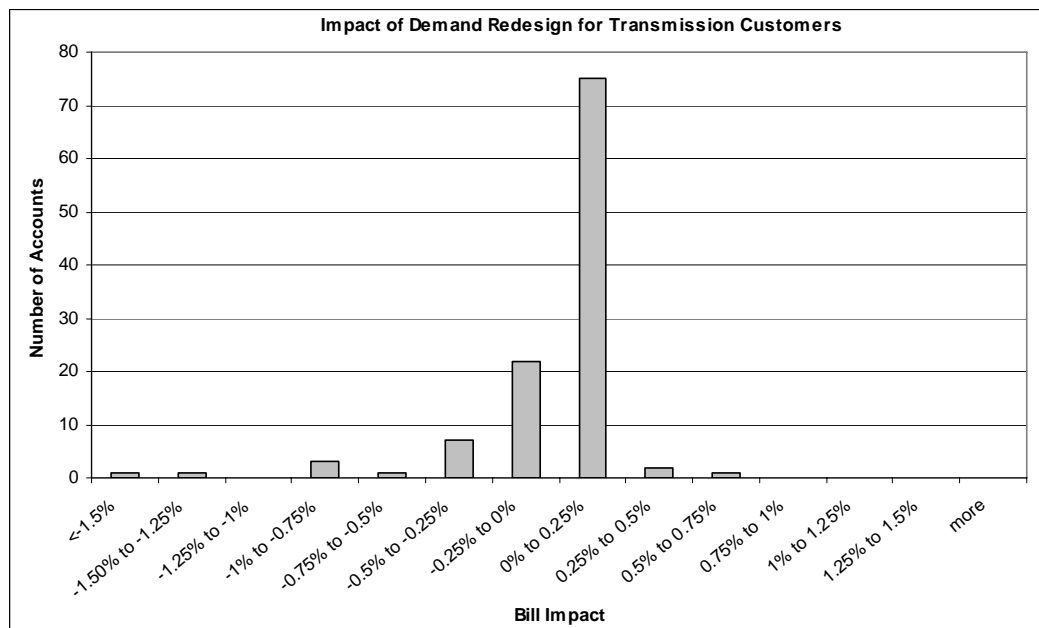
5 Changing the billing demand to the highest actual half-hour demand in the HLH period  
6 would reduce the total kW-months billed, since some customers in the transmission  
7 class currently peak in the LLH period.

8 Therefore, to implement the new definition of billing demand in a manner that recovers  
9 the same total demand-related revenue from the transmission rate class, an increase  
10 from the current demand charge is required.

11 Based on actual data for all transmission customers for F2005, if the definition of billing  
12 demand were changed to be the highest actual half-hour demand in the HLH period,  
13 then in order to collect the same total revenue from the class as was actually collected in  
14 F2005, the demand charge would have to be increased from \$4.625/kV.A to  
15 \$4.650/kV.A.

16 The following figure illustrates the distribution of bill impacts of the proposed definition of  
17 billing demand and the corresponding increase in the demand charge:

18 **Figure 3-1**  
19 **Impact of Demand Redesign for Transmission Customers**



**BC Hydro 2005 Transmission Rate Design Application**

1 Under BC Hydro's proposed change to the determination of Billing Demand, the majority  
2 of the bill impacts fall in the range from -0.25% to +0.25%.

3 BC Hydro proposes to maintain the current demand ratchet for the Stepped Rate RS  
4 1823, and to use the same demand ratchet for the TOU Rate RS 1825. The current Rate  
5 RS 1825 does not include a demand ratchet since the billing demand is the greater of  
6 the highest actual demand in the Billing Period or the Demand CBL. With the elimination  
7 of the Demand CBL, the same demand ratchet should apply under both the Stepped  
8 Rate and the optional TOU Rate.

9 BC Hydro will monitor whether this demand ratchet is sufficient for the transmission rate  
10 class, particularly if there are cases where load shifting results in a material reduction in  
11 the HLH demand.

12 It is BC Hydro's understanding that the above proposed modifications to the  
13 determination of demand for transmission customers are widely supported by the  
14 affected stakeholders.

### 15 **3.4 Retail Access**

16 Under the retail access provisions approved in the Transmission Settlement, retail  
17 access customers who arrange for transmission service from BCTC must expose their  
18 full load to retail access.

19 Stakeholders expressed interest in the ability to obtain transmission service from British  
20 Columbia Transmission Corporation (BCTC) for only a portion of their load.

21 BC Hydro is willing to accommodate partial retail access provided that BC Hydro has  
22 access to the information necessary to properly bill such a customer for imbalance  
23 service.

24 Therefore, BC Hydro is proposing to modify the Energy Imbalance Rate 1890 by adding  
25 the following special condition:

26 Energy Imbalance service under this Schedule is available for Retail Access  
27 energy delivered by BCTC provided that the customer authorizes BCTC to  
28 provide the hourly energy schedule booked with BCTC to BC Hydro, for billing  
29 purposes.

1 It is BC Hydro's understanding that the above proposed modification to the Energy  
2 Imbalance Rate 1890 addresses the desire for partial retail access and is widely  
3 supported by the affected stakeholders.

#### 4 **3.5 Force Majeure**

5 It is BC Hydro's understanding that the party that raised this issue in the discussions that  
6 lead to the Transmission Settlement is now satisfied with the current wording of the  
7 Force Majeure clause in the Electricity Supply Agreement.

1 **4.0 Rate Schedules**

2 The Transmission Service Rate Schedules proposed by BC Hydro are included in  
3 Appendix A. All changes from the currently approved transmission rates have been  
4 highlighted, except that those for Rate Schedule RS 1880 have been highlighted from  
5 the rate as proposed in the March 2005 Transmission Service Rate Application. In  
6 addition, the following items have been deleted from the currently approved rates:

- 7 • the references to the “Demand CBL” on Rate Schedule RS 1825;
- 8 • the separate definition of “Reference Demand” on Rate Schedule RS 1880 for  
9 customers on Rates RS 1823 or RS 1827; and
- 10 • the obsolete references to the “interim period” on Rate Schedule RS 3808.

11 Although BC Hydro is not proposing any changes to the IPP Station Service Rate RS  
12 1853, this Rate Schedule has been included in Appendix A to provide a complete set of  
13 the Transmission Service rates.



# **Appendix A**

**Proposed Transmission Rate Schedules  
April 1, 2006**

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**SCHEDULE 1823 – TRANSMISSION SERVICE – STEPPED RATE**

Availability: For all purposes. Supply is at 60,000 volts or higher. Customers being supplied with electricity under Schedule 1825 (Transmission Service Time-of-use) may only revert to service under this Schedule as permitted under Schedule 1825.

Applicable in: Rate Zone 1 excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: Demand Charge: \$4.650 per kV.A of Billing Demand per Billing Period.

Plus

Energy Charge:

- A. For new Customers and Customers supplied with Electricity under Schedule 1821 for less than 12 Billing Periods as of the date this Schedule becomes effective:

2.725 ¢ per kW.h for all kW.h per Billing Period

This rate will apply until the Customer has been supplied with Electricity under this Schedule, or under Schedule 1821 together with this Schedule, for 12 Billing Periods, after which the Customer will be supplied with Electricity at the Rate specified in Part B below.

- B. For Customers supplied with Electricity under Schedule 1821 for 12 Billing Periods or longer as of the date this Schedule becomes effective, or supplied with Electricity under Schedule 1821 together with this Schedule, for 12 Billing Periods:

2.428 ¢ per kW.h applied to all kW.h up to and including 90% of the Customer's CBL in each Billing Year.

5.400 ¢ per kW.h applied to all kW.h above 90% of the Customer's CBL in each Billing Year.

Note: Customers previously supplied with electricity under Schedule 1825 will be subject to the rates in Part B above from the time the Customer commences taking service under this Schedule.

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Billing Year: The Billing Year is the 12 billing month period starting with the first day of the Billing Period which commences nearest to April 1<sup>st</sup> in each year, and ending on the last day of the 12<sup>th</sup> Billing Period thereafter.

Billing Demand: The Demand for billing purposes shall be:

1. the highest kV.A Demand during the High Load Hours (HLH) in the Billing Period; or
2. 75% of the highest Billing Demand for the Customer's Plant in the immediately preceding period of November to February, both months included; or
3. 50% of the Contract Demand stated in the Electricity Supply Agreement for the Customer's Plant,

whichever is the highest value, provided that for new Customers the Billing Demand for the initial 2 Billing Periods shall be the average of the daily highest kV.A Demands for the Customer's Plant.

The HLH period is defined as the hours from 06:00 to 22:00 Monday to Saturday, except for Statutory Holidays.

The LLH period is defined as all other hours.

Statutory Holidays for the purpose of this Schedule are New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day and Christmas Day.

Monthly Minimum Charge: \$4.650 per kV.A of Billing Demand

Customer Baseline Load: The Customer Baseline Load (CBL) is the Customer's historic annual energy consumption in kW.h as approved by the British Columbia Utilities Commission. The Customer's CBL will initially be determined by BC Hydro, and be subject to revision from time to time, in accordance with the criteria and procedures set forth in B.C.Hydro's "Customer Baseline Load (CBL) Determination Guidelines". All CBL's will be subject to final approval of the British Columbia Utilities Commission.

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**Aggregation of Customer Baseline Load:** A Customer having two or more operating plants may elect to have a single aggregated CBL determined for all or any combination of its operating plants in accordance with the CBL Determination Guidelines. Thereafter, BC Hydro will issue a single bill for all operating plants included in the aggregation, and the energy charge payable will be determined on the basis of the aggregated CBL. However, the Demand Charge will continue to be determined separately for each operating plant.

**Energy Determination under Retail Access:** If the customer has entered into a Retail Access Program Agreement that is in effect, the quantity of Schedule 1823 energy is defined as the total metered kW.h consumption of the Customer's Plant less the Net Scheduled Output. The Net Scheduled Output is the Gross Scheduled Output adjusted by the Energy Loss Adjustment Factor of 6.28%. The Net Scheduled Output and Gross Scheduled Output are as defined in the Retail Access Program Agreement. If the Net Scheduled Output is greater than the total metered kW.h consumption of the Customer's Plant, then the quantity of Schedule 1823 energy is zero.

**Special Conditions:** The following Special Conditions are applicable to this Schedule:

1. If any initial, revised, or aggregate CBL for a Customer has not been determined by BC Hydro and approved by British Columbia Utilities Commission by the time the CBL would become effective, BC Hydro may determine the CBL on an interim basis, and apply the CBL so determined for purposes of any Billing Periods and bills rendered to the Customer until such time as the CBL has been finally determined and approved by the British Columbia Utilities Commission, whereupon BC Hydro will make any necessary billing adjustments.
2. If a Customer taking service at the rates in Part B of the Energy Charge rate section above terminates service under this Schedule prior to the end of a Billing Year, the Customer's CBL or aggregate CBL will be prorated for the portion of the Billing Year during which the Customer was taking service, and the prorated CBL or aggregate CBL will be used for purposes of applying the rates in Part B to all electricity consumption during the Billing Year up to the time of termination. BC Hydro will make any necessary billing adjustments and bill the Customer for the difference (if any) owing.

**Taxes:** The Rates and Monthly Minimum Charge contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

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Note: The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements 5 and 6.

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## **SCHEDULE 1825 – TRANSMISSION SERVICE – TIME-OF-USE (TOU) RATE**

Availability: For customers who provide notice by February 15<sup>th</sup> of each year and who at the time of application are eligible to take service under Schedule 1823 (Stepped Rate) at the energy charge rates set out in Part B of the Rate section of that Schedule, and who have entered into a TOU (Transmission Service) Agreement by March 15<sup>th</sup> of that year. Customers will start service under Schedule 1825 as of the Billing Period that starts closest to April 1<sup>st</sup>.

Applicable in: Rate Zone 1 excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: Demand Charge: \$4.650 per kV.A of Billing Demand per Billing Period

Billing Demand: The Demand for billing purposes shall be:

1. the highest kV.A Demand during the High Load Hours (HLH) in the Billing Period; or
2. 75% of the highest Billing Demand for the Customer's Plant in the immediately preceding period of November to February, both months included; or
3. 50% of the Contract Demand stated in the Electricity Supply Agreement for the Customer's Plant,

whichever is the highest value.

The HLH period is defined as the hours from 06:00 to 22:00 Monday to Saturday, except for Statutory Holidays.

The LLH period is defined as all other hours.

Statutory Holidays for the purpose of this Schedule are New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day and Christmas Day.

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Energy  
Charge:

Winter HLH Period

2.428 ¢ per kW.h applied to all kW.h up to and including 90% of the Customer's Winter HLH Period CBL.

6.120 ¢ per kW.h applied to all kW.h above 90% of the Customer's Winter HLH Period CBL.

The Winter Period is the 4 Billing Periods starting with the first day of the Billing Period which commences nearest to November 1st each year and ending on the last day of the 4<sup>th</sup> Billing Period thereafter.

Winter LLH Period

2.428 ¢ per kW.h applied to all kW.h up to and including 90% of the Customer's Winter LLH Period CBL.

5.403 ¢ per kWh applied to all kW.h above 90% of the Customer's Winter LLH Period CBL.

The Winter Period is the 4 Billing Periods starting with the first day of the Billing Period which commences nearest to November 1st each year and ending on the last day of the 4<sup>th</sup> Billing Period thereafter.

Spring Period

2.428 ¢ per kW.h applied to all kW.h up to and including 90% of the Customer's Spring Period CBL.

4.602 ¢ per kW.h applied to all kW.h above 90% of the Customer's Spring Period CBL.

The Spring Period is the 2 Billing Periods starting with the first day of the Billing Period which commences nearest to May 1<sup>st</sup> each year and ending on the last day of the 2<sup>nd</sup> Billing Period thereafter.

Remaining Period

2.428 ¢ per kW.h applied to all kW.h up to and including 90% of the Customer's Remaining Period CBL applicable.

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5.403 ¢ per kW.h applied to all kW.h above 90% of the Customer's Energy CBL applicable in the Billing Period.

**Customer  
Baseline Load:**

The Remaining Period is all Billing Periods that are not within the Winter months or the Spring months.

The Customer Baseline Load (CBL) is the Customer's historic consumption (in kW.h) as approved by the British Columbia Utilities Commission. For purposes of this Schedule, the Customer's CBL will consist of four separate CBLs – one each for the Winter HLH Period, the Winter LLH Period, the Spring Period and the Remaining Period. The Customer's CBL will initially be determined by B.C.Hydro, and be subject to revision from time to time, in accordance with the criteria and procedures set forth in BC Hydro's "Customer Baseline Load (CBL) Determination Guidelines". All CBL's will be subject to final approval of the British Columbia Utilities Commission.

**Aggregation of  
Customer  
Baseline  
Load:**

A Customer having two or more operating plants may elect to have a single aggregated CBL determined for all or any combination of its operating plants in accordance with the CBL Determination Guidelines. Separate Energy CBL values will be determined for each plant, and the values so determined will then be aggregated. Thereafter, BC Hydro will issue a single bill for all operating plants included in the aggregation, and the energy charge payable will be determined on the basis of the aggregated Energy CBL values. However, the Demand Charge will continue to be determined separately for each operating plant.

**Energy  
Determination  
under Retail  
Access:**

If the customer has entered into a Retail Access Program Agreement that is in effect, the quantity of Schedule 1825 energy is defined as the total metered kW.h consumption of the Customer's Plant less the Net Scheduled Output. This calculation is done separately for the HLH and LLH periods in the Winter Months. The Net Scheduled Output is the Gross Scheduled Output adjusted by the Energy Loss Adjustment Factor of 6.28%. The Net Scheduled Output and the Gross Scheduled Output are as defined in the Retail Access Program Agreement. If the Net Scheduled Output is greater than the total metered kW.h consumption of the Customer's Plant, then the quantity of Schedule 1825 energy is zero.

**Definitions:**

Statutory Holidays for the purpose of this Rate Schedule are New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day, and Christmas Day.

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Special  
Conditions:

1. Service under this rate schedule will be provided only while the TOU (Transmission Service) Agreement is in effect.
2. If any initial, revised, or aggregate CBL for a Customer has not been determined by BC Hydro and approved by British Columbia Utilities Commission by the time the CBL would become effective, BC Hydro may determine the CBL on an interim basis, and apply the CBL so determined for purposes of any Billing Periods and bills rendered to the Customer until such time as the CBL has been finally determined and approved by the British Columbia Utilities Commission, whereupon BC Hydro will make any necessary billing adjustments.
3. In accordance with the TOU (Transmission Service) Agreement, the Customer will have a period of 30 days following approval of the Customer's initial CBL by the British Columbia Utilities Commission within which the Customer may, by written notice to BC Hydro, withdraw from taking service under this Schedule, and revert to taking service under Schedule 1823 (Stepped Rate) instead. This right of withdrawal is available only when the Customer first subscribes to take service under this Schedule, and is applicable only in respect of the initial CBL determination. If the Customer exercises this right of withdrawal Schedule 1823 will apply from the commencement of the Billing Year, and BC Hydro will make any necessary billing adjustments.
4. Customers taking service under Schedule 1852 may not also take service under this Schedule.

Taxes:

The rate charges contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note:

The terms and conditions under which service is supplied are contained in the Electricity Supply Agreement (Electric Tariff Supplement 5) as amended by the TOU (Transmission Service) Agreement (Electric Tariff Supplement 72).

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**SCHEDULE 1827 – TRANSMISSION SERVICE – RATE FOR EXEMPT CUSTOMERS**

Availability: For all purposes. Supply is at 60,000 volts or higher. Only for City of New Westminster and University of British Columbia.

Applicable in: Rate Zone 1 excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: Demand Charge: \$4.650 per kV.A of Billing Demand per Billing Period.

Plus

Energy Charge: 2.725 ¢ per kW.h for all kW.h in a Billing Period.

Billing Demand: The Demand for billing purposes shall be:

1. the highest kV.A Demand during the High Load Hours (HLH) in the Billing Period; or
2. 75% of the highest Billing Demand for the Customer's Plant in the immediately preceding period of November to February, both months included; or
3. 50% of the Contract Demand stated in the Electricity Supply Agreement for the Customer's Plant,

whichever is the highest value.

The HLH period is defined as the hours from 06:00 to 22:00 Monday to Saturday, except for Statutory Holidays.

The LLH period is defined as all other hours.

Statutory Holidays for the purpose of this Schedule are New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day and Christmas Day.

Monthly Minimum Charge: \$4.650 per kV.A of Billing Demand

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Taxes: The Rates and Monthly Minimum Charge contained herein are exclusive of the Goods and Services Tax and Social Service Tax.

Note: The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements 5 and 6.

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## **SCHEDULE 1852 – TRANSMISSION SERVICE – MODIFIED DEMAND**

Availability: To all customers supplied with electricity at 60,000 volts or higher who are taking service under Rate Schedule 1823 at the time of application, and are a party to a Modified Demand Agreement which is in force. The annual subscription period for new subscribers is from September 1 to October 31.

Applicable in: Rate Zone I excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: Billing Demand

The Demand for billing purposes shall be:

1. The highest kV.A demand in the Billing Period during the High Load Hours (HLH); or
2. 75% of the highest Billing Demand for the Customer's Plant in the immediately preceding period of November to February, both months included; or
3. 50% of the Contract Demand stated in the Electricity Supply Agreement for the Customer's Plant,

whichever is the highest value,

where:

“High Load Hours (HLH)” means

- (i) in the case of a customer who is in a location, as determined by BC Hydro, which will allow BC Hydro to curtail load to alleviate a potential local or regional transmission constraint, or take advantage of a market opportunity, 06:00 hours to 10:00 hours and 16:00 hours to 20:00 hours, Monday to Friday, and
- (ii) in the case of a customer who is in a location, as determined by BC Hydro, which will allow BC Hydro to take advantage of a market opportunity, the hours of 06:00 to 22:00 hours, Monday to Friday.

“Low Load Hours (LLH)” means all hours that are not High Load Hours.

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### Excess Demand Charge

\$4.650 per kV.A of metered kV.A Demand in excess of the Maximum Demand Level during the Low Load Hours is applicable to this Rate Schedule,

where:

“Maximum Demand Level” means the Maximum Demand Level(s) stated in the Modified Demand Agreement. For a customer referred to in item (i) of the definition of High Load Hours, separate Maximum Demand Levels will be stated for (i) the Low Load Hours from 10:00 hours to 16:00 hours Monday to Friday and (ii) all other Low Load Hours. For a customer referred to in item (ii) of the definition of Low Load Hours, a single Maximum Demand Level will be stated for all Low Load Hours.

The highest Maximum Demand Level will not exceed 95% of Contract Demand stated in the Customer’s Electricity Supply Agreement, and is subject to local transmission availability.

### Taxes:

The Rates contained herein are exclusive of the Goods and Services Tax and Social Services Tax.

### Special Conditions

1. The provisions of Rate Schedule 1823 and the ESA continue to apply, except to the extent necessary to avoid conflict with this Rate Schedule and the Modified Demand Agreement. In the case of conflict between this Schedule or the Modified Demand Agreement and Rate Schedule 1823 and the ESA, the provisions of this Schedule and the Modified Demand Agreement shall govern.

2. Upon two occurrences of the following:

If for any Billing Period the total energy consumed under RS1852, during the LLH, is greater than the LLH CBL Energy by 10% or more,

The highest kV.A demand in the Billing Period during the High Load Hours (HLH) will be adjusted by a factor of the ratio of the average monthly LLH energy of the two Billing Periods which satisfied the condition above over the LLH CBL Energy. The adjustment of the highest kV.A. demand will be in effect starting from the month immediately following the month of the second occurrence and continue for 12 months. The LLH CBL Energy will be recalculated using the consumption history of the most recent twelve Billing

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Periods,

where:

“LLH CBL Energy” means the highest monthly energy consumption during the LLH over the last twelve Billing Periods, or an estimate will be made if insufficient data is available.

3. For the purpose of determining the minimum amount of Minimum Reduction, as stated in the Modified Demand Agreement, the general guideline will be 50% of the difference between the Maximum Demand Level and the LLH CBL Demand, but shall be in all cases, no less than 10MW.
  4. For the purpose of determining the Maximum Number of Demand Reduction Transactions, as stated in the Modified Demand Agreement, the Maximum Duration multiplied by the Maximum Number of Demand Reduction Transactions shall be at least 48 hours.
-

**SCHEDULE 1853 – TRANSMISSION SERVICE – IPP STATION SERVICE**

Availability: For Customers who are Independent Power Producers (IPPs) served at transmission voltage subject to the Special Conditions below.

Applicable in: Rate Zone I excluding Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate:                    Energy Charge:     The sum, over the Billing Period, of the hourly energy consumed multiplied by the entry in the Dow Jones Mid-Columbia (Mid-C) Firm Electricity Price Index for HLH and LLH that corresponds to the time when consumption occurred, during that hour.

Minimum Monthly Charge:                    \$26.21

Taxes:                    The Rate and Minimum Charge contained herein are exclusive of the Goods and Services Tax and the Social Services Tax.

Special Conditions:                    BC Hydro agrees to provide Electricity under this Schedule to the extent that it has energy and capacity to do so.

BC Hydro may, without notice to the Customer, terminate the supply of Electricity under this Schedule if at any time BC Hydro does not have sufficient energy or capacity.

Prior to taking Electricity under this Schedule, the Customer may be required to obtain approval from BC Hydro. BC Hydro will advise the Customer of the need to obtain approval prior to the taking of energy under this Schedule.

Electricity taken under this Schedule is to be used solely for maintenance and black-start requirements and shall not displace Electricity that would normally be generated by the Customer.

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**SCHEDULE 1880 – TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY**

Availability: For Customers supplied with Electricity under Schedules 1823, 1825, 1827, and 1852 subject to the Special Conditions below.

Applicable in: Rate Zone I excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: The Rate per Period of Use shall be:

Administrative Charge:

\$150.00 per Period of Use

Energy Charge:

For each hour during the Period of Use the Energy Charge is the Schedule 1880 Energy metered consumption (in kW.h) multiplied by 5.400 ¢ per kW.h.

Period of Use: A period of consecutive hours during which Electricity is taken under this Schedule which may extend into subsequent Billing Periods. The Period of Use is as defined by the Customer when making the request to BC Hydro for service under Schedule 1880.

Reference Demand: The HLH Reference Demand is defined as the highest kV.A Demand in the HLH for the current Billing Period prior to the Period of Use. If the Period of Use extends over an entire Billing Period, the highest kV.A Demand in the HLH from the prior Billing Period will be used in determining the HLH Reference Demand.

The LLH Reference Demand is defined as the highest kV.A Demand in the LLH for the current Billing Period prior to the Period of Use. If the Period of Use extends over an entire Billing Period, the highest kV.A Demand in the LLH from the prior Billing Period will be used in determining the LLH Reference Demand.

For the purpose of the Reference Demand, the HLH and LLH periods are as defined per Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

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Schedule 1880 Energy Determination On an hourly basis, the kW.h consumption which exceeds the HLH High kW.h/hr or LLH High kW.h/hr which corresponds to that hour.

The HLH High kW.h/hr is defined as the product of the HLH Reference Demand multiplied by the Power Factor for the half hour when the HLH Reference Demand occurred.

The LLH High kW.h/hr is defined as the product of the LLH Reference Demand multiplied by the Power Factor for the half-hour when the LLH Reference Demand occurred.

For the purpose of the Schedule 1880 Energy Determination, the HLH and LLH periods are as defined per Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

Taxes: The Rates contained herein are exclusive of the Goods and Services Tax and the Social Service Tax.

Special Conditions: 1. BC Hydro agrees to provide Electricity under this Schedule to the extent that it has energy and capacity to do so.

2. BC Hydro may, without notice to the Customer, terminate the supply of Electricity under this Schedule if at any time during the Period of Use BC Hydro does not have sufficient energy or capacity.

3. This Schedule is only for the following purposes:

To provide Electricity which the Customer would otherwise generate when all or part of the Customer's electrical generating plant is curtailed.

Electricity used for this purpose may be taken on an instantaneous basis when the impact of the instantaneous pickup of loads normally provided by the Customer's electrical generation units does not occur after BC Hydro has advised the Customer that a period of system constraint or potential system constraint exists.

During periods of potential system constraints, BC Hydro will require Customers to arm load shedding relays to ensure that the loss of Electricity production from a Customer's electrical generation unit will not result in a demand greater than the Customer's Maximum kV.A Demand on BC Hydro's system. BC Hydro may require the Customer to provide it with control of these

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load shedding relays. During periods of potential system constraints, upon a Customer's request, BC Hydro will endeavour to provide Electricity normally provided by the Customer's electrical generation unit.

The Customer is required to advise BC Hydro within 30 minutes of taking energy under this schedule for this purpose. If the Customer fails to advise BC Hydro the subsequent measured demand and energy will be billed under Rate Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

4. Electricity taken under this Schedule shall not displace Electricity otherwise to be taken by this Customer under Schedule 1823, Schedule 1825, Schedule 1827 or Schedule 1852.

Electricity taken under this Schedule shall not displace Electricity that would normally be generated by the Customer for the purpose of re-sale.

5. In addition to the charges specifically set out in this Schedule, the Customer shall pay for any additional facilities required to deliver Electricity under this Schedule provided that BC Hydro obtains the prior consent of the Customer for construction of the additional facilities.
6. A Customer may be required to allow BC Hydro to install metering and communication equipment to measure the electricity output of the Customer's self-generation unit.
7. BC Hydro will bill for Electricity taken under Schedule 1880 at the same time it bills for Electricity taken under Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

Note: The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements 5 and 6.

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## **SCHEDULE 1890 – TRANSMISSION SERVICE – ENERGY IMBALANCE**

Availability: For Customers supplied with Electricity under Schedule 1823 and 1825 who have entered into a Retail Access Program Agreement which is in effect, subject to the Special Conditions below.

Applicable in: Rate Zone I excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Energy Charge / Credit: Winter Months  
The Energy Charge / Credit is the sum of (i) the HLH Energy Imbalance Price times the HLH Incremental Energy, and (ii) the LLH Energy Imbalance Price times the LLH Incremental Energy.

### Remaining Months

The Energy Charge / Credit is the Energy Imbalance Price times the Incremental Energy.

The Energy Charge / Credit is a charge to the Customer if the sum is greater than zero, and a credit to the Customer if the sum is less than zero.

Winter months are the 4 Billing Periods starting with the first day of the Billing Period, which commences nearest to November 1st each year, and ending on the last day of the 4<sup>th</sup> Billing Period thereafter. Remaining months are Billing Periods that are not within the Winter months.

Incremental Energy means:

An amount of energy equal to the Net Scheduled Output in a Billing Period minus the Net Actual Output in that Billing Period. For the Winter Months, this calculation is done separately for the HLH and LLH periods within a Billing Period.

Incremental Energy may, for each Billing Period, and, where applicable, for the HLH and LLH in a Billing Period, have a value greater than or less than zero. The terms Net Scheduled Output and the Net Actual Output are as defined in the Retail Access Program Agreement.

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<u>Energy Imbalance Price:</u>	<u>Pricing Period</u>	<u>Tier 1 Price (¢ / kW.h)</u>	<u>Tier 2 Price (¢ / kW.h)</u>
	Mar to Apr	2.428	5.403
	May to June	2.428	4.602
	July to Oct	2.428	5.403
	Nov to Feb	2.428	6.120 (HLH) / 5.403 (LLH)

Pricing Period as used in the table above means (i) for the Winter months, the HLH or LLH as applicable, and (ii) for the Remaining months, all hours in the Billing Period.

Where the Incremental Energy is a positive number, the Energy Imbalance Price is the Tier 2 Price, for the respective Pricing Period.

Where the Incremental Energy is a negative number, for Incremental Energy between 0% and -10% of the Net Scheduled Output, the Energy Imbalance Price is the Tier 2 Price for the respective Pricing Period. For Incremental Energy less than -10% of the Net Scheduled Output, the Energy Imbalance price is the Tier 1 Price.

The HLH period is defined as the hours from 06:00 to 22:00 Monday to Saturday, except for Statutory Holidays. The LLH period is defined as all other hours.

Statutory Holidays for the purpose of this Schedule are New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day, and Christmas Day.

Special Conditions:

1. If the Customer's metered consumption in any Billing Period is less than the aggregate Net Actual Output of all Third Party Retail Suppliers listed in Appendix 1 to the Customer's Retail Access Program Agreement during that Billing Period, no Energy Imbalance charge is payable for that Billing Period. For the Winter Months, this determination is done separately for the HLH and LLH periods within a Billing Period.
2. Energy Imbalance service under this Schedule is available for Retail Access energy delivered by BCTC provided that the customer authorizes BCTC to provide the hourly energy schedule booked with BCTC to BC Hydro, for billing purposes.

Taxes:

The Rates contained herein are exclusive of the Goods and Services Tax and the Social Service Tax.

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Note: The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements 5 and 6.

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**SCHEDULE 3808 – TRANSMISSION SERVICE – FORTISBC**

Availability: 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 1993 (the "Power Purchase Agreement"). The Total Nominated Demand shall not exceed 200 MW.

Applicable in: For Electricity delivered to FortisBC at each Point of Interconnection and the Point of Supply as defined in the Power Purchase Agreement.

Rate:

<u>Demand Charge:</u>	\$4.650 per kW of Billing Demand per Billing Month
	plus
<u>Energy Charge:</u>	2.725¢ per kW.h of Purchase Energy per Billing Month.

Billing Demand: 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. 75% 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.

Excess Energy Charge: 1.15 times the Energy Charge per kW.h for each kW.h of Total Excess Energy.

Taxes: 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 FortisBC are contained in the Power Purchase Agreement. This Schedule is subject to the same rate adjustments as Schedule 1827.

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# **Appendix B**

## **Time of Use Transmission Service Agreement**



**TIME OF USE (TOU) TRANSMISSION SERVICE AGREEMENT**

THIS TOU (TRANSMISSION SERVICE) AGREEMENT made as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_,

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY, a corporation having its head office at 333 Dunsmuir Street, Vancouver, British Columbia ("B.C. Hydro")

AND:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

("the Customer")

WHEREAS

- A. B.C. Hydro is supplying or will supply Electricity to the Customer pursuant to an Electricity Supply Agreement between B.C. Hydro and the Customer dated \_\_\_\_\_ (the "Principal Agreement");
- B. The Customer wishes to take Electricity supply under B.C. Hydro's Rate Schedule 1825 (Transmission Service Time-of-use),

NOW THEREFORE the parties hereto agree that with effect as and from \_\_\_\_\_, and for so long as this TOU (Transmission Service) Agreement remains in effect, the Principal Agreement shall be supplemented and be deemed to be amended by this TOU (Transmission Service) Agreement as follows:

- 1. The definition of "Billing Demand" in subclause 1(a) of the Principal Agreement is deemed to be deleted and of no effect.
- 2. Wherever in the Principal Agreement reference is made to Schedule 1821, or (as applicable) Schedule 1823, the same shall be deemed to refer to Schedule 1825.
- 3. For purposes of Schedule 1825 the Customer's CBL will consist of "Energy CBL" values determined for the Customer's Plant for the Winter HLH Period, the Winter LLH Period, the Spring Period and the Remaining Period in accordance with BC Hydro's "Customer Baseline Load (CBL) Determination Guidelines". All CBL's will be subject to final approval of the British Columbia Utilities Commission.

4.
  - (a) This TOU (Transmission Service) Agreement shall be in force for an initial term ("Initial Term") of three Billing Years commencing from the start of the Billing Year commencing nearest April 1, 20\_\_ and, unless terminated at the end of the Initial Term in accordance with section 4(b), shall extend indefinitely on a Billing Year by Billing Year basis, until terminated at the end of any Billing Year in accordance with section 4(b).
  - (b) Either party may terminate this Agreement at the end of the Initial Term, or at the end of any subsequent Billing Year, by giving the other party not less than 1 year's notice of termination.
  - (c) Notwithstanding anything in clause 4 of the Principal Agreement, while this TOU (Transmission Service) Agreement is in effect the Principal Agreement may only be terminated concurrent with termination of this TOU (Transmission Service) Agreement, and subject to the period of termination notice provided for in subclause 4(b) above; but this TOU (Transmission Service) Agreement may be terminated without the Principal Agreement also being terminated, in which case the unamended Principal Agreement shall govern the supply of electricity by B.C. Hydro to the Customer.
5. The Customer will have a period of 30 days following approval of the Customer's initial CBL by the British Columbia Utilities Commission within which the Customer may, by written notice to B.C. Hydro, withdraw from taking service under this Schedule, and revert to taking service under Schedule 1823 (Stepped Rate) instead. This right of withdrawal is available only when the Customer first subscribes to take service under Schedule 1825, and is applicable only in respect of the initial CBL determination. If the Customer exercises this right of withdrawal Schedule 1823 will apply from the commencement of the Billing Year, and B.C. Hydro will make any necessary billing adjustments.
6. The Principal Agreement, as supplemented and deemed amended by this TOU (Transmission Service) Agreement, shall continue in full force and effect.
7. This TOU (Transmission Service) Agreement will be governed by and interpreted in accordance with the laws of British Columbia.
8. Each of the parties agrees that it shall take from time to time such actions and sign or execute such additional instruments as may be reasonably necessary or convenient to implement and carry out the intent and purpose of this TOU (Transmission Service) Agreement.
9. This TOU (Transmission Service) Agreement shall be binding upon and enure to the benefit of each of the parties hereto and their respective successors and permitted assigns.

10. The Customer's account number is \_\_\_\_\_.

IN WITNESS WHEREOF the parties hereto have signed this TOU (Transmission Service) Agreement as of the date first above written.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By: \_\_\_\_\_

Title: \_\_\_\_\_

Print Name: \_\_\_\_\_

Customer: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Print Name: \_\_\_\_\_

# **Appendix C**

## **Customer Baseline Load Determination Guidelines**

1 **CUSTOMER BASELINE LOAD DETERMINATION GUIDELINES**

2 **1.0 Overview**

3 The purpose of these Customer Baseline Load (CBL) Determination Guidelines is to describe  
4 the criteria and procedures that will guide BC Hydro in the determination of the CBL for each  
5 customer plant taking electricity service under Rate Schedule 1823 (Stepped Rate) or Rate  
6 Schedule 1825 (Transmission Time-of-Use (TOU) Service).

7 In general, the intent will be to determine an initial CBL that will be representative of the  
8 customer's historic annual consumption prior to the customer commencing service under the  
9 applicable rate schedule. The CBL will then be subject to revision annually, and at other times to  
10 reflect long term changes affecting the customer's plant, in order to ensure that the CBL  
11 continues as an appropriate baseline to encourage electricity conservation and efficiency of use  
12 while not discouraging economic growth.

13 All CBLs will be subject to final approval by the British Columbia Utilities Commission (the  
14 "Commission"). In the event of disagreement between BC Hydro and the customer as to the  
15 appropriate CBL, the customer can raise the disagreement with respect to its CBL with the  
16 Commission.

17 BC Hydro recognises that these CBL Determination Guidelines may not capture all adjustments  
18 that may be justifiable within the principles of the tariff. Hence, in circumstances where  
19 customers propose adjustments that are not defined in these CBL Determination Guidelines,  
20 and where the Commission is in agreement, BC Hydro will amend the tariff practice to  
21 accommodate similar adjustments in the future. To the extent that the sum of the adjusted  
22 CBL's exceed reasonably anticipated consumption of the non-exempt customers, CBLs may be  
23 prorated.

1   **2.0   Definitions**

2   (a) **Billing Period** means a period of from 27 to 35 consecutive days as defined in the  
3       customer's Electricity Supply Agreement (Tariff Supplement 5), and used by BC Hydro for  
4       billing purposes.

5   (b) **Billing Year** means the twelve monthly Billing Periods starting with the first day of the Billing  
6       Period which commences nearest to April 1<sup>st</sup> in each year, and ending on the last day of the  
7       12<sup>th</sup> Billing Period thereafter.

8   (c) **Demand Side Management (DSM)** means capital projects relating to energy efficiency,  
9       energy conservation, and load displacement.

10   (d) **Energy Savings Persistence** means the lesser of the life of the demand-side management  
11       project or ten years from the implementation of Stepped Rates, where implementation of the  
12       project occurred after November 25, 2002.

13  
14       For projects producing annual energy savings of greater than 10 GWh, BC Hydro may, at  
15       the end of the ten year period, call upon the customer to provide evidence of the ongoing  
16       nature of the project's annual savings. For projects producing annual energy savings of less  
17       than 10 GWh, BC Hydro may, at the end of the ten year period, call upon the customer to  
18       provide evidence of the ongoing nature of the project's annual savings, subject to a \$10,000  
19       administrative fee, refundable if the extension of the CBL adjustment is approved by the  
20       BCUC.

21       In either case, where the energy savings continue after the end of the ten years the Energy  
22       Savings Persistence will be extended to be equal to the life of the demand side  
23       management project.

24   (e) **Force Majeure** is as defined in the customer's Electricity Supply Agreement.

25   (f) **Net Scheduled Output** is as defined in the Retail Access Program Agreement.

1 **3.0 Initial CBL Determination**

2 **3.1 RS1823 – Stepped Rate**

3 3.1.1 For customers taking service under RS1823 a single "Energy CBL" will be  
4 determined. This Energy CBL will be representative of normal historic  
5 annual energy consumption by the customer's plant, and will be applied as a  
6 cumulative annual threshold for purposes of the stepped rate structure in  
7 RS1823. Consumption under RS1880 is excluded for these purposes.

8 3.1.2 The initial Energy CBL, which will be effective upon implementation of  
9 RS1823, will be determined on the basis of the customer's energy  
10 consumption for the twelve Billing Periods of calendar 2005.

11 3.1.3 If the customer's plant or operations were affected by Force Majeure events  
12 during the twelve Billing Periods of calendar 2005, BC Hydro will adjust the  
13 historic data to remove the effect of these events. Normally, BC Hydro will  
14 use data from the days, weeks, or months prior to the event to make the  
15 adjustment; however, BC Hydro may also refer to appropriate data from the  
16 same period during the prior year for guidance in making the adjustment.

17 3.1.4 Adjustments will also be made to the Energy CBL to reflect:

18 3.1.4.1 *BC Hydro funded DSM Projects.* For projects with an in-service  
19 date during the twelve Billing Periods of calendar 2005, the Energy  
20 CBL will be decreased to reflect the impact of the project over a full  
21 year's operations;

22 3.1.4.2 *Customer funded DSM Projects.* For projects with an in-service  
23 date between November 25, 2002 and the end of the last Billing  
24 Period of calendar 2005, and delivering verified energy savings of  
25 at least 0.3 GWh /year, the Energy CBL will be increased to  
26 remove the impact of the project over a full year's operations;

27 3.1.4.3 *Customer Buy-Back of BC Hydro DSM Project Incentives.* For  
28 projects with a Power Smart Agreement signed after November

1 25, 2002 and with annual energy savings of at least 0.3 GWh,  
2 the customer has the option of converting the BC Hydro funded  
3 project into a customer funded project by paying back a pro-  
4 rated portion of the project incentive to BC Hydro together with  
5 interest. To avail itself of this option the customer must notify BC  
6 Hydro of its election by December 31, 2005, and the Energy  
7 CBL will then be adjusted in the same manner as under  
8 paragraph 3.1.4.2. The customer must repay the pro-rated  
9 portion of the incentive plus accrued interest by March 31, 2006.

10 3.1.4.4 Plant Capacity Increases. If the customer has completed capital  
11 investments in its plant during the twelve Billing Periods of  
12 Calendar 2005, which have resulted in a permanent increase in  
13 plant capacity, the Energy CBL will be increased to reflect the  
14 impact of the capacity increase over a full year's operations so  
15 that the customer will not be penalized for its investment in the  
16 form of the higher stepped rate. To qualify, the plant capacity  
17 increase must have resulted in a verified increase in the annual  
18 energy consumption by the customer's plant of at least 5% over  
19 the pre-project annual consumption or 10 GWh, whichever is less.

## 20 **3.2 RS1825 – Time of Use Rate**

21 3.2.1 For customers taking service under RS1825, "Energy CBL" values will be  
22 determined, which will be representative of the normal historic demand and  
23 energy consumption of the customer's plant. There will be one Energy CBL  
24 for each of the **Spring Period (May and June)** and **Remaining Period**  
25 **(March, April, and July to October)** within a Billing Year. There will be a  
26 separate Energy CBL for the HLH and LLH periods for the Winter Period  
27 (November to February) within a Billing Year. The Energy CBL values so



1                   determined will be applied for purposes of the TOU Rates in RS1825.  
2                   Consumption under RS1880 is excluded for these purposes.  
3           3.2.2   The Energy CBL values, which will be effective upon implementation of  
4                   RS1825, will be determined on the basis of the customer's demand and  
5                   energy consumption for the twelve Billing Periods in calendar 2005.  
6           3.2.3   In any case where the events or circumstances described in paragraphs  
7                   3.1.3 and 3.1.4 would apply if the customer were taking service under  
8                   RS1823, BC Hydro will adjust the Energy CBL values in the same manner  
9                   as for customers taking service under RS1823, except that any  
10                  adjustments will be allocated to the Winter HLH Period, the Winter LLH  
11                  Period, the Spring Period and the Remaining Period Energy CBL values as  
12                  applicable.

1   **4.0   CBL Revisions**

2   **4.1   RS1823 – Stepped Rate**

3   Once the Stepped Rate and the TOU Rate are in effect, the CBLs will be subject to revisions at  
4   the end of each Billing Year. Revisions to the CBLs can also occur within a Billing Year for BC  
5   Hydro funded DSM projects and for significant plant expansions. The guidelines for these  
6   revisions are as follows.

7   4.1.1.       The Energy CBL for RS1823 customers will be subject to revision at the  
8               beginning of each Billing Year as follows:

9               4.1.1.1.    If the total energy billed under RS 1823 in the previous Billing Year is  
10                           between 90.0% and 110.0%, inclusive, of the customer's Energy CBL,  
11                           then the customer's Energy CBL will remain unchanged for the current  
12                           Billing Year.

13              4.1.1.2.   If the total energy billed under RS 1823 in the previous Billing Year is less  
14                           than 90.0% of the customer's Energy CBL or more than 110.0% of the  
15                           customer's Energy CBL, then the following adjustments, where  
16                           applicable, will be applied to the customer's previous year's actual energy  
17                           billings under RS 1823:

- 18                           • If the customer's plant or operations were affected during the previous  
19                           Billing Year by Force Majeure, the customer's previous year's actual  
20                           energy billed will be further adjusted in the same manner as would have  
21                           been made for the initial Energy CBL determination.
- 22                           • In the case of customers taking retail access service, the customer's  
23                           previous year's actual energy billings under RS 1823 will be further  
24                           increased by the amount of the Net Scheduled Output (as defined in the  
25                           customer's Retail Access Agreement) of the current Billing Year.
- 26                           • For customers with self-funded DSM projects that realize an energy  
27                           savings of at least 0.3 GWh/year, the customer's previous year's actual  
28                           energy billings under RS 1823 will be further increased to  
29

- 1 reflect the annual energy savings from the project (applicable for the  
2 duration of the project's Energy Savings Persistence).
- 3 • Where the Commission has approved an adjustment as described in  
4 paragraph 6.2.2, the customer's previous year's actual energy billings  
5 under RS 1823 will be further adjusted by that amount.
- 6 4.1.1.2.1 If the customer's adjusted energy billings under RS 1823 are  
7 between 90.0% and 110.0%, inclusive, of the customer's Energy  
8 CBL, then the customer's Energy CBL will remain unchanged for  
9 the current Billing Year.
- 10 4.1.1.2.2 If the customer's adjusted energy billings under RS 1823 are less  
11 than 90.0% of the customer's Energy CBL or more than 110.0% of  
12 the customer's Energy CBL, then the customer's Energy CBL for  
13 the current Billing year will be reset to the customer's adjusted  
14 energy billings under RS1823.
- 15 4.1.2 The Energy CBL for RS1823 customers will be subject to further revision  
16 between Billing Year anniversary dates as follows:
- 17 4.1.2.1 *BC Hydro funded DSM Projects Completed during the Billing*  
18 *Year.* The Energy CBL will be decreased in successive steps as  
19 follows:
    - 20 4.1.2.1.1 The current year's Energy CBL will be decreased effective as of  
21 the start of the first Billing Period following the in-service date, in  
22 proportion to the energy savings that will be realized from the  
23 project between the in-service date and the end of the Billing  
24 Year, and
    - 25 4.1.2.1.2 At the start of the next Billing Year, the Energy CBL will be further  
26 decreased to reflect any further annual energy savings that will be  
27 realized from the project and that were not reflected in the  
28 adjustment made under paragraph 4.1.2.1.1.



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2 subject to the same terms as for RS1823 customers, as provided in  
3 paragraph 4.1.1; except that the Energy CBL for each  
4 period will each be adjusted by the ratio of the actual energy  
5 consumed in the prior billing year to the annual energy CBL for the prior  
6 billing year.

7 4.2.2 The Energy CBL for RS1825 customers will be subject to further revision  
8 between Billing Year anniversary dates in the same manner and subject to the  
9 same terms as for RS1823 customers, as provided in paragraph 4.1.2; except  
10 the Energy CBL values, and any Energy CBL revisions will be apportioned to the  
11 **Winter HLH Period, the Winter LLH Period, the Spring Period and the Remaining**  
12 **Period** Energy CBL values, where applicable.

1  
2 **5.0 Aggregation / Disaggregation of CBLs**

3 **5.1 RS1823 and RS1825 - Determination of Initial Aggregated CBL**

4 5.1.1 Customers with two or more operating plants can choose to aggregate any  
5 combination of their operating plants and have an aggregated Energy CBL  
6 determined for the plants. All plants within an aggregation must be taking service  
7 from BC Hydro under the same rate schedule.

8 5.1.2 If a customer wishes to aggregate or disaggregate its operating plants effective  
9 with the implementation of RS1823 and RS1825, the customer must notify BC  
10 Hydro no later than February 15, 2006. The aggregation or disaggregation will be  
11 effective as of the commencement of the 2006 Billing Year. Thereafter, customers  
12 may only elect to make any new aggregations, or to disaggregate or revise any  
13 existing aggregations, by giving at least six month's prior notice to BC Hydro of  
14 their election, listing the plants to be aggregated / disaggregated. The effective  
15 date of the aggregation / disaggregation will be the first day of the Billing Year  
16 following expiry of the customer's notice.

17 5.1.3 BC Hydro will determine individual Energy CBLs for all operating plants included  
18 within an aggregation, and the resulting individual Energy CBLs will then be  
19 aggregated to establish the aggregated Energy CBL.

20 5.1.4 Only Energy CBLs may be aggregated.

21 **5.2 RS1823 and RS1825 - Aggregated CBL Revisions**

22 5.2.1 Aggregated Energy CBLs will be subject to revision at the beginning of each  
23 Billing Year and between Billing Year anniversary dates in the same manner as  
24 for individual customer plants taking service under RS1823 or RS1825 on an  
25 unaggregated basis.

26 5.2.2 For the purpose of annual Energy CBL revisions the customer's total  
27 aggregated energy billed under RS 1823 or RS 1825 for the previous

1 Billing Year will be compared to the aggregated Energy CBL, and if the  
2 total aggregated energy billed under RS 1823 or RS 1825 is outside the  
3 thresholds specified in paragraph 4.1.1.2, the Energy CBLs for each plant  
4 within the aggregation will be revised based on the energy consumed by  
5 each plant for the previous Billing Year adjusted in accord with the  
6 provisions of paragraph 4.1.1.2. The individual Energy CBLs so  
7 determined will then again be aggregated to establish the new  
8 aggregated Energy CBL for the next Billing Year.

9 5.2.3 Revisions to aggregated Energy CBLs between Billing Year anniversary dates will  
10 be made in the same manner and subject to the same terms as for individual  
11 plants taking service under RS1823 or RS1825, as provided in paragraphs 4.1.1  
12 and 4.2.1. The individual Energy CBLs will be revised for the plant or plants  
13 affected, and aggregated to establish the revised aggregated Energy CBL.

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**6.0 General**

**6.1 Verification of Energy Savings and Capacity Changes**

6.1.1 In the case of BC Hydro funded DSM projects, BC Hydro will normally verify energy savings attributable to the project under the procedures specified in the funding agreement with the customer. This will include a "Measurement and Verification Report" ("M&V Report") prepared by BC Hydro approximately one year following project completion. If the M&V Report indicates that the actual energy savings for the project are greater or less than the savings used for purposes of any prior CBL adjustments, the applicable CBL will be further adjusted to reflect the actual savings.

6.1.2 For the purpose of assessing plant capacity changes and customer funded DSM projects, and determining whether the investments have resulted in energy consumption changes beyond the specified thresholds, BC Hydro may require that the impact on consumption be verified by a study ("Impact Study") prepared by an acceptable third party retained and paid for by the customer. For DSM projects, the Impact Study will apply the same criteria as BC Hydro would apply in evaluating a DSM project. The customer will deliver a copy of the Impact Study report to BC Hydro for review. BC Hydro will not be bound to accept the conclusions of the Impact Study, but may also rely on metering /billing data, or other available data, in making its determination. If BC Hydro determines that a second Impact Study is required to verify the change in consumption, BC Hydro will pay the cost of the second study.



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## **6.2 Filing of CBL Determinations for Approval / Disputes**

6.2.1 BC Hydro will submit all CBL determinations to the customer for review and comment prior to filing the CBL determinations with the Commission for approval.

6.2.2 If the customer proposes adjustments that are not defined in these CBL Determination Guidelines, BC Hydro will discuss the proposed adjustments with the customer. In cases where BC Hydro agrees with the customer's proposed adjustments and they are consistent with BC Hydro's overall rate design principles, BC Hydro will file the proposed CBL with the Commission. In cases where BC Hydro does not agree with the proposed adjustments and they are not consistent with BC Hydro's overall rate design principles, BC Hydro will file the CBL in accordance with the CBL Determination Guidelines. The customer can file its proposed CBL with the Commission and indicate that its CBL is under dispute. In these circumstances, BC Hydro will provide information where requested by the Commission. However, the Commission will determine the final CBL.

This process recognises that BC Hydro cannot anticipate precisely all adjustments that may be justifiable within the principles of the tariff. Where the Commission accepts an adjustment not previously accommodated in the tariff, BC Hydro will amend the tariff practice to accommodate similar adjustments in the future. To the extent that the sum of the adjusted CBL's exceed the reasonably anticipated consumption of the non-exempt customers, CBLs may be prorated.

6.2.3 If the customer disagrees with the CBLs as determined by BC Hydro, the customer can raise its dispute with the CBLs to the Commission. In that event, BC Hydro will file its CBL determination(s) with the Commission for approval, and the customer can notify the Commission that the determination(s) are under dispute. For billing purposes, BC Hydro will use the filed CBL determinations until

1  
2           such time as the CBL values have been finally determined and approved by the  
3           Commission, whereupon BC Hydro will make any necessary retroactive billing  
4           adjustments.

5   **6.3    RS1825 Initial CBL Determination - Customer Right of Withdrawal**

6           6.3.1   The customer will have a period of 30 days following approval of the customer's  
7           initial CBL by the British Columbia Utilities Commission within which the  
8           customer may, by written notice to B.C. Hydro, withdraw from taking service  
9           under Schedule 1825, and revert to taking service under Schedule 1823  
10          (Stepped Rate) instead. This right of withdrawal is available only when the  
11          customer first subscribes to take service under Schedule 1825, and is applicable  
12          only in respect of the initial CBL determination. If the customer exercises this  
13          right of withdrawal Schedule 1823 will apply from the commencement of the  
14          Billing Year, and B.C. Hydro will make any necessary billing adjustments.

15   **6.4    Change of Ownership of a Facility**

16          6.4.1.   The CBL and CBL adjustments which have been determined for a facility, and  
17          which have been approved by the Commission, are maintained for the facility  
18          even if there has been a change of ownership of the facility.

19          6.4.2.   If a facility's load is part of an aggregated CBL and if there is a change of  
20          ownership of the facility, the facility's load will be disaggregated and an  
21          individual CBL will be determined for the facility. If the original owner chooses to  
22          keep its remaining facilities aggregated, a new adjusted aggregated CBL will be  
23          derived to reflect the removal of the sold facility. Otherwise the original owner  
24          may choose to disaggregate its CBL and have individual CBLs for each of its  
25          remaining facilities.

# **Appendix D**

**Standby Rate Evidence from the  
March 2005 Transmission Service  
Application**

1 **6.0 Standby / Maintenance Rate**

2 As part of this Application, BC Hydro is proposing changes to Rate Schedule 1880  
3 (Transmission Service – Emergency, Maintenance, and Special Supply) to conform with  
4 HSD #2 and the Government’s Energy Plan (see Tab E).

5 RS1880 was originally designed as an ad-hoc service to complement the base RS1821  
6 tariff. The energy provided under RS1880 is non-firm and is offered only on an as-  
7 available basis.

8 The following discusses BC Hydro's proposed changes to RS1880.

9 **6.1 Availability**

10 Currently RS1880 can be used in the following instances:

- 11 • Replacement of energy due to outages of customer’s on-site generation;
- 12 • Increased energy usage due to unanticipated short-term sales; and
- 13 • Increased energy usage due to a make-up of production after abnormal  
14 operating conditions.

15 The ad-hoc consumption of electricity by the customer for the purposes of making an  
16 unanticipated short-term sale or recovering lost production after an interruption in the  
17 production process are indistinguishable from the energy consumed by the customer in  
18 its normal course of production. Policy Action #21 of the Energy Plan implies that energy  
19 consumption at the margin should reflect BC Hydro’s cost of new supply. To be  
20 consistent with the intent of the Energy Plan, BC Hydro considers that the marginal price  
21 signals provided under the Stepped Rate and the TOU rate should also apply to  
22 unanticipated short-term sales.

23 For abnormal process interruptions, the production lost, as well as the energy not  
24 consumed in the process, is made up at a later time. As such in the context of the CBLs  
25 in Stepped Rates and TOU, there should be little impact, assuming the quantity of  
26 energy required for the make-up is similar to what would have been consumed had there  
27 been no interruption and that the recovery is done within the same CBL period.

1 Therefore, for reasons mentioned above, BC Hydro proposes that the energy services  
2 provided for unanticipated short-term sales and abnormal production make-up will be  
3 subject to the Stepped Rate or the TOU Rate.

4 For customers with on-site generation, BC Hydro recognizes there may be times when  
5 the output from the on-site generation may be curtailed due to unexpected equipment  
6 failures or scheduled maintenance of the generator. BC Hydro proposes to continue to  
7 provide a standby / maintenance service on an as-available basis to minimize the  
8 interruption of the customer's production as a result of its on-site generation curtailment.

9 It should be noted that while the customer's on-site generation is curtailed, the customer  
10 will require more electricity from BC Hydro should it wish to maintain existing production  
11 levels. Although the source of the electricity is different (more from BC Hydro and less  
12 from its on-site generation), the overall electricity requirement for the customer's site  
13 remains virtually the same for the same production level. From the Energy Plan  
14 perspective, this is not seen as incremental energy and thus can be distinguished from  
15 the incremental energy consumed for unanticipated short-term sales.

16 Therefore, BC Hydro proposes to limit the availability of RS1880 to that of replacement  
17 of energy due to outages of the customer's on-site generation for the purpose of  
18 maintaining production at the customer's plant.

## 19 **6.2 Price**

20 The demand and energy rates charged under RS1880 are basically a 10% premium  
21 over those of RS1821 with minimum charges. The demand charge is applied over the  
22 number of hours in the Period of Use. The RS1880 kVA demand is calculated as the  
23 difference between the peak kVA demand during the Period of Use and the previous  
24 peak kVA under RS1821.

25 The amount of down time for a customer's on-site generation is typically short – from a  
26 few hours to repair minor problems to a few weeks for maintenance work. To prevent  
27 cost shifting to other customers from the provision of this ad-hoc service, BC Hydro is  
28 proposing that the Dow Jones Daily Mid-Columbia indices (HLH and LLH) plus a 0.3

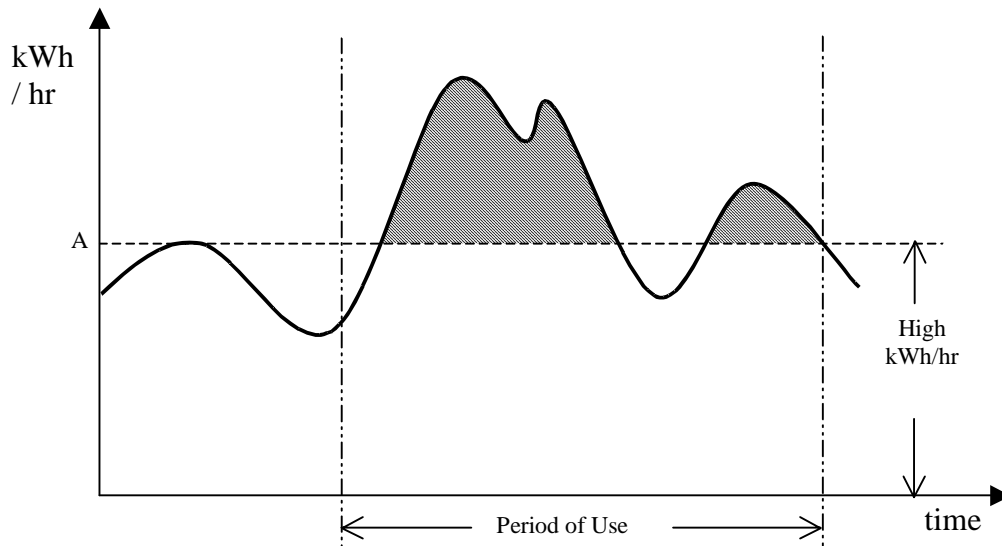
1 cents / kWh adder would be a reasonable and transparent proxy for its opportunity cost  
2 of replacement standby / maintenance energy. The 0.3 cents / kWh adder represents a  
3 contribution to the fixed costs of the system as well as additional administrative costs  
4 and any transmission costs associated with energy purchases in the wholesale market.

5 As the service is non-firm and the proposed energy charge is representative of  
6 BC Hydro's opportunity cost, BC Hydro is proposing to remove the demand and  
7 minimum charges from RS1880.

### 8 **6.3 Billing Determinants**

9 BC Hydro is proposing that any energy consumed within the Period of Use that is above  
10 the High kWh/hr be deemed as energy charged under RS1880. The High kWh/hr is  
11 defined as the peak kVA demand prior to the Period of Use adjusted for power factor.  
12 The Period of Use is as defined by the customer in its request to BC Hydro for RS1880  
13 service.

**Figure 1**  
**Energy Determination for Customer on Stepped Rate**



In Figure 7, the shaded areas above Point A would be considered as energy taken under the standby / maintenance service.

For the TOU Rate, there would be a separate HLH High kWh/hr and LLH High kWh/hr within the Period of Use, defined as the previous HLH and LLH peak kVa demand, respectively, prior to the Period of Use, adjusted for power factor. In the HLH of the Period of Use, energy consumed above the HLH High kWh/hr would be considered as energy taken under RS1880. In the LLH of the Period of Use, energy consumed above the LLH High kWh/hr would be treated in the same fashion.





SCHEDULE 1880

TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY

Availability: For Customers supplied with Electricity under Schedules 1823, 1825, 1827, and 1852 subject to the Special Conditions below.

Applicable in: Rate Zone I excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: The Rate per Period of Use shall be:

Energy Charge:

For each hour during the Period of Use the Energy Charge is (i) the Schedule 1880 Energy metered consumption (in kW.h) multiplied by (ii) the sum of 0.300¢ per kW.h and the entry in the Dow Jones Mid-Columbia (Mid-C) Firm Electricity Price Index for the HLH and LLH that corresponds to the time when the consumption occurred.

For the purpose of the Energy Charge, HLH is defined as the period from 06:00 to 22:00 hours each day. LLH is defined as the period from 22:00 to 06:00 hours each day.

Period of Use: A period of consecutive hours during which Electricity is taken under this Schedule which may extend into subsequent Billing Periods. The Period of Use is as defined by the Customer when making the request to BC Hydro for service under Schedule 1880.

SCHEDULE 1880

TRANSMISSION SERVICE –STANDBY AND MAINTENANCE SUPPLY (Cont'd)

Reference  
Demand:

- a) For Customers taking Electricity under Schedule 1823 or 1827:

The Reference Demand is defined as the highest kV.A Demand under Schedule 1823 or 1827, whichever is applicable, for the current Billing Period prior to the Period of Use. If the Period of Use extends over an entire Billing Period, the highest kV.A Demand under Schedule 1823 or 1827, whichever is applicable, from the prior Billing Period will be used in determining the Reference Demand.

- b) For Customers taking Electricity under Schedule 1825 or 1852:

The HLH Reference Demand is defined as the highest kV.A Demand under Schedule 1825 or 1852, whichever is applicable, in the HLH for the current Billing Period prior to the Period of Use. If the Period of Use extends over an entire Billing Period, the highest kV.A Demand under Schedule 1825 or 1852, whichever is applicable, in the HLH from the prior Billing Period will be used in determining the HLH Reference Demand.

The LLH Reference Demand is defined as the highest kV.A Demand under Schedule 1825 or 1852, whichever is applicable, in the LLH for the current Billing Period prior to the Period of Use. If the Period of Use extends over an entire Billing Period, the highest kV.A Demand under Schedule 1825 or 1852, whichever is applicable, in the LLH from the prior Billing Period will be used in determining the LLH Reference Demand.

For the purpose of the Reference Demand, the HLH and LLH periods are as defined per Schedule 1825 or 1852, whichever is applicable.

SCHEDULE 1880

TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY (Cont'd)

Schedule 1880  
Energy  
Determination:

- a) For Customers taking Electricity under Schedule 1823 or 1827:

On an hourly basis, the kW.h consumption which exceeds the High kW.h/hr.

The High kW.h/hr is defined as the product of the Reference Demand multiplied by the Power Factor for the half-hour when the Reference Demand occurred.

- b) For Customers taking Electricity under Schedule 1825 or 1852:

On an hourly basis, the kW.h consumption which exceeds the HLH High kW.h/hr or LLH High kW.h/hr which corresponds to that hour.

The HLH High kW.h/hr is defined as the product of the HLH Reference Demand multiplied by the Power Factor for the half hour when the HLH Reference Demand occurred.

The LLH High kW.h/hr is defined as the product of the LLH Reference Demand multiplied by the Power Factor for the half-hour when the LLH Reference Demand occurred.

For the purpose of the Schedule 1880 Energy Determination, the HLH and LLH periods are as defined per Schedule 1825 or 1852, whichever is applicable.

SCHEDULE 1880

TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY (Cont'd)

Taxes: The Rates contained herein are exclusive of the Goods and Services Tax and the Social Service Tax.

Special  
Conditions:

1. B.C. Hydro agrees to provide Electricity under this Schedule to the extent that it has energy and capacity to do so.
2. B.C. Hydro may, without notice to the Customer, terminate the supply of Electricity under this Schedule if at any time during the Period of Use B.C. Hydro does not have sufficient energy or capacity.
3. This Schedule is only for the following purposes:

To provide Electricity which the Customer would otherwise generate when all or part of the Customer's electrical generating plant is curtailed.

Electricity used for this purpose may be taken on an instantaneous basis when the impact of the instantaneous pickup of loads normally provided by the Customer's electrical generation units does not occur after B.C. Hydro has advised the Customer that a period of system constraint or potential system constraint exists.

During periods of potential system constraints, B.C. Hydro will require Customers to arm load shedding relays to ensure that the loss of Electricity production from a Customer's electrical generation unit will not result in a demand greater than the Customer's Maximum kV.A Demand on B.C. Hydro's system. B.C. Hydro may require the Customer to provide it with control of these load shedding relays. During periods of potential system constraints, upon a Customer's request, B.C. Hydro will endeavour to provide Electricity normally provided by the Customer's electrical generation unit.

SCHEDULE 1880

TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY (Cont'd)

Special  
Conditions:  
(Cont'd)

The Customer is required to advise B.C. Hydro within 30 minutes of taking energy under this schedule for this purpose. If the Customer fails to advise B.C. Hydro the subsequent measured demand and energy will be billed under Rate Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

4. Electricity taken under this Schedule shall not displace Electricity otherwise to be taken by this Customer under Schedule 1823, Schedule 1825, Schedule 1827 or Schedule 1852.

Electricity taken under this Schedule shall not displace Electricity that would normally be generated by the Customer for the purpose of re-sale.

SCHEDULE 1880

TRANSMISSION SERVICE – STANDBY AND MAINTENANCE SUPPLY (Cont'd)

Special  
Conditions:  
(Cont'd)

5. In addition to the charges specifically set out in this Schedule, the Customer shall pay for any additional facilities required to deliver Electricity under this Schedule provided that B.C. Hydro obtains the prior consent of the Customer for construction of the additional facilities.
6. A Customer may be required to allow B.C. Hydro to install metering and communication equipment to measure the electricity output of the Customer's self-generation unit.
7. B.C. Hydro will bill for Electricity taken under Schedule 1880 at the same time it bills for Electricity taken under Schedule 1823, 1825, 1827 or 1852, whichever is applicable.

Note:

The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements 5 and 6.

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British Columbia Hydro and Power Authority Transmission Service Rates Application	

1.19.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

Section 6.3 states that any energy consumed within the Period of Use that is above the High kWh/hr should be deemed as energy charged under RS 1880.

1.19.1 Please confirm that the service taken under the High kWh/hr will be taken at the customer's regular rate schedule (RS 1823, RS 1825, RS 1827 or RS 1852). If not, please explain why not.

RESPONSE:

**Confirmed.**

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1.19.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

Section 6.3 states that any energy consumed within the Period of Use that is above the High kWh/hr should be deemed as energy charged under RS 1880.

1.19.2 Please confirm that the energy consumed within the Period of Use that is above the High kWh/hr and that will be charged as RS 1880 will only apply to customers who are RS 1880 customers as well as RS 1823, RS 1825, RS 1827 or RS 1852? If not, please explain why not.

RESPONSE:

**Confirmed.**



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1.19.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

Section 6.3 states that any energy consumed within the Period of Use that is above the High kWh/hr should be deemed as energy charged under RS 1880.

1.19.3 Are there circumstances where the Mid-C price plus the 0.3 cents adder charged under RS 1880 will be less than the otherwise applicable rate under RS 1823, RS 1825, RS 1827 or RS 1852? If so, is that an appropriate outcome? Why or why not?

RESPONSE:

**The marginal energy rates for RS 1827 and RS 1852 are based on embedded costs (i.e., the energy rate is flat). The marginal energy rates for RS 1823 and RS 1825 are based on BC Hydro's long-term energy acquisition cost. The Mid-C price reflects the daily electricity price of the wholesale electricity market in the Pacific Northwest. At any point in time, the daily Mid-C index price can be higher or lower than the customer's applicable base rate. The use of RS 1880 service is non-firm and of a relatively short-term nature (from a few hours to repair minor problems to a few weeks for maintenance work). As such, BC Hydro believes that the Dow Jones Daily Mid-C indices plus a 0.3 cent adder would be a reasonable and transparent proxy for its short-term opportunity cost for acquisition of the energy required to provide this short-term non-firm service. This pricing structure will prevent cost shifting to other customers from the provision of this non-firm service.**

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1.20.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

BC Hydro proposes to eliminate the demand and minimum charges on RS 1880, and that the price for the energy be based on the Mid-C indices plus an adder of 0.3 cents per kWh which is intended to be a proxy for BC Hydro's opportunity costs for the service. The Application also states that the 0.3 cents/kWh adder represents a contribution to the fixed costs of the system as well as additional administrative costs and any transmission costs associated with energy purchases in the wholesale market.

1.20.1 Please provide additional detail about the determination of the 0.3 cents/kWh adder and the costs of the components (i.e., contribution to fixed costs, administrative costs, additional transmission costs) that make up the 0.3 cents.

RESPONSE:

**The proposed 0.3 cents / kWh adder is BC Hydro's assessment of a reasonable contribution toward the recovery of fixed costs, additional administrative cost of the tariff, and any incremental transmission costs associated with energy purchases from the wholesale market, based on experience with similar tariffs in other jurisdictions.**

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1.20.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

BC Hydro proposes to eliminate the demand and minimum charges on RS 1880, and that the price for the energy be based on the Mid-C indices plus an adder of 0.3 cents per kWh which is intended to be a proxy for BC Hydro's opportunity costs for the service. The Application also states that the 0.3 cents/kWh adder represents a contribution to the fixed costs of the system as well as additional administrative costs and any transmission costs associated with energy purchases in the wholesale market.

1.20.2 Does BC Hydro agree that this service effectively provides assurance to a customer that he will be able to meet 100% of his production requirements even in the event of an outage of the on-site generation?

RESPONSE:

**No. The service provided under RS 1880 is non-firm. BC Hydro will endeavour to provide this service to the best of its ability. BC Hydro may curtail the provision of this service when it does not have sufficient energy or capacity. During such times, subject to supply availability, the customer may still be served up to its Maximum kV.A Demand and would be billed per its base rate.**

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1.20.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

BC Hydro proposes to eliminate the demand and minimum charges on RS 1880, and that the price for the energy be based on the Mid-C indices plus an adder of 0.3 cents per kWh which is intended to be a proxy for BC Hydro's opportunity costs for the service. The Application also states that the 0.3 cents/kWh adder represents a contribution to the fixed costs of the system as well as additional administrative costs and any transmission costs associated with energy purchases in the wholesale market.

1.20.3 Does the proposed rate reflect the value of the service?

RESPONSE:

**Value of service was not the driving factor in the design of this rate. BC Hydro cannot readily assess the value of service from the customer's perspective as it changes significantly from time to time given the market conditions of the customer's product.**

**The value of service to the customer may or may not be higher than the rate charged for the service; but the customer will only take this service if its value is greater than the rate.**

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1.20.0 Reference: Application, p. 1- 34 - Standby/Maintenance Rate

BC Hydro proposes to eliminate the demand and minimum charges on RS 1880, and that the price for the energy be based on the Mid-C indices plus an adder of 0.3 cents per kWh which is intended to be a proxy for BC Hydro's opportunity costs for the service. The Application also states that the 0.3 cents/kWh adder represents a contribution to the fixed costs of the system as well as additional administrative costs and any transmission costs associated with energy purchases in the wholesale market.

1.20.4 How will the revenue from this rate be treated? (e.g. is the actual historical or forecast revenue from the rate used to offset the forecast costs to be recovered from RS 1823 and RS 1825?)

RESPONSE:

**As in the past, the revenue from this rate remains with the transmission voltage rate class for revenue requirement and rate design purposes. For reference, the actual revenue collected from RS 1880 in F2005 was \$2.8m and the total revenue collected from the transmission voltage class was \$620m.**