BC hydro

2015 Rate Design Application

May 7, 2015 Workshop No. 10

Transmission Service Rate Structures

BC Hydro Summary and Consideration of Participant Feedback

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This memo documents customer stakeholder feedback concerning BC Hydro's May 7, 2015 Workshop 10 (the second Transmission Service rate structure workshop) and BC Hydro's consideration of this input. Workshop 10 was held in Vancouver, B.C. with customers also being provided an opportunity to listen into the discussions remotely through a webinar. A copy of the Workshop 10 presentation slides can be found on the BC Hydro regulatory website at http://www.bchydro.com/about/planning_regulatory/2015-rate-design.html. Customer input was received during the workshop as well as through feedback forms and written comments submitted during a subsequent 30-day comment period, which began with the posting of draft Workshop 10 notes on 26 May 2015.

BC Hydro considered all input it received. Where it conflicts, BC Hydro gives more weight to the views of Transmission Service customers who take service under the rates except on the few issues identified in this memo where there could be cost implications for other customer classes.

Between Workshop 5 (the first Transmission Service rate structure workshop, held on October 22, 2014) and Workshop 10 BC Hydro had a number of meetings concerning the proposed freshet rate pilot with Association of Major Power Consumers of British Columbia (**AMPC**) and various Transmission Service customers as follows:

- February 26, 2015 – meetings with ERCO Worldwide and Canexus Corporation (**Canexus**), two chemical manufacturing and handling companies with facilities in North Vancouver (both companies) and Nanaimo (Canexus), to discuss the freshet rate concept;
- March 19, 2015 – presentation to AMPC concerning the freshet rate concept which included discussion of whether there was interest in a Real Time Pricing (**RTP**) rate;

- April 1, 2015 – meeting with AMPC's consultant to discuss freshet rate baseline options;
- April 17, 2015 – conference call with Catalyst Paper (**Catalyst**), a pulp and paper company operating three mills located in Crofton, Port Alberni and Powell River, regarding freshet rate baseline options;
- May 4, 2015 – meeting with AMPC to further discuss freshet rate baseline options.

The feedback received at these meetings informed BC Hydro's proposal for the freshet rate pilot at Workshop 10.

The memo is structured as follows:

- Section 1 addresses the three aspects of the Rate Schedule (**RS**) 1823, the TSR default stepped rate, for which BC Hydro sought additional stakeholder comment;
- Section 2 addresses two potential voluntary options for TSR customers that at Workshop 5 BC Hydro committed to bring forward for further stakeholder engagement: RTP and the proposed freshet rate. Refer to section 2 of the Workshop 5 Consideration Memo[1] for why BC Hydro is not proposing to: (i) amend the existing voluntary Time of Use (**TOU**) rate – RS 1825; and (ii) pursue retail access at this time. In addition, the proposed industrial load curtailment pilot is not addressed in this memo. Section 2.2 of the Workshop 5 Consideration Memo lays out BC Hydro's legal view that load curtailment is a "demand-side measure" program as defined by section 1 of the *Clean Energy Act*, and is not a "rate" or a "service" as those terms are defined in section 1 of the *Utilities Commission Act* (***UCA***). While BC Hydro provided an update on the status of the load curtailment pilot and answered questions on this subject at

[1] https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/2015-03-13-bch-rda-wksp5-tsr1-pfb.pdf.

Workshop 10, the load curtailment pilot is not addressed any further in this memo;

- Section 3 canvasses the additional stakeholder feedback received concerning RS 1827, the Transmission Service rate for customers exempt from RS 1823; and
- Section 4 reviews the three other existing Transmission Service rates which were initially canvassed at Workshop 5: RS 1852 (modified demand); RS 1853 (independent power producer (**IPP**) station service); and RS 1880 (standby and maintenance);

Attachment 1 includes the Workshop 10 summary notes which provide a more detailed description of issues (including questions and answers).

Attachment 2 contains the feedback forms received during the written comment period.

1 RS 1823

RS 1823 is the default rate for Transmission Service customers, with F2016 rates as follows:

Energy Rate A	4.303 cents/kilowatt hour (**kWh**) (this is the flat rate for new accounts)
Energy Rate B Tier 1	3.836 cents/kWh
Energy Rate B Tier 2	8.503 cents/kWh
Demand	7.341 $/kilovolt-ampere (**kV.A**)

BC Hydro reviewed the legal context at Workshop 10 which was discussed at more length at Workshop 5; additional details are found in section 1 of the Workshop 5 Consideration Memo. Subsection 3(1) of Direction No. 7[2] restricts the British Columbia Utilities Commission's (**BCUC** or **Commission**) jurisdiction concerning core rate design elements of RS 1823 by requiring the Commission, in designing a

[2] B.C. Reg. 28/2014; copy at https://www.canlii.org/en/bc/laws/regu/bc-reg-28-2014/latest/bc-reg-28-2014.html.

stepped rate for BC Hydro's Transmission Service customers, to ensure that the rate is consistent with Recommendation #8 of the Commission's October 2003 Heritage Contract and Stepped Rates Report and Recommendations (**Heritage Contract Report**).[3] The B.C. Government accepted Recommendation #8, which provides that the stepped rate should be implemented according to the following principles:

- The Tier 2 rate should reflect BC Hydro's Long-Run Marginal Cost (**LRMC**);
- The quantity of power sold to Transmission Service customers should be set at 90 per cent, and the Tier 2 quantity should make up the remaining 10 per cent (referred to as the **Tier 1/Tier 2 90/10 split**); and
- The Tier 1 rate should be derived from the Tier 2 rate and the Tier 1/Tier 2 90/10 split to achieve, to the extent reasonably possible, revenue neutrality.

The energy LRMC used for Transmission Service rate purposes is set out in Table 1. Note there are no distribution losses associated with serving TSR customers and therefore distribution losses are not factored in. BC Hydro uses an inflation assumption of 2 per cent for F2017-F2019.

Table 1 Inflation Adjusted Range in Energy LRMC

Inflation (%/year)[4]		
Energy LRMC	**Lower Bound (cents per kWh)**	**Upper Bound ($/MWh)**
F2017	8.92	10.50
F2018	9.10	10.71
F2019	9.28	11.92

At Workshop 10 BC Hydro repeated its view that the Commission cannot unilaterally amend the Tier 1/Tier 2 90/10 split under its section 58 to 61 *UCA* rate setting

[3] *In the Matter of British Columbia Hydro and Power Authority: An Inquiry into a Heritage Contract for British Columbia Hydro and Power Authority's Existing Generation Resources and Regarding Stepped Rates and Transmission Access, Report and Recommendations*, October 17, 2003, section 3.0, especially pages 58 to 62; https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/heritage-contract.pdf.

[4] F2014 and F2015 inflation are -0.03% and 1.3% respectively, based on BC Consumer Price Index; Forecasted F2016 inflation is 1.9% and Forecasted F2017, F2018, and F2019 inflations are 2% per year based on December 2014 BC Treasury Board forecasts. Values exclude 6% distribution line loss.

power; instead, the Commission can only be given jurisdiction to review and make recommendations concerning this issue through a section 5 *UCA* inquiry review process, and only the Lieutenant Governor in Council can refer this matter to the Commission under section 5 of the *UCA*. At Workshop 10 BC Hydro confirmed that the B.C. Government has no plans to refer the RS 1823 Tier 1/Tier 2 90/10 split to the BCUC for a section 5 *UCA* review. Accordingly, while BC Hydro reported out on stakeholder Workshop 5-related written comments concerning the Tier 1/Tier 2 90/10 split and responded to questions at Workshop 10, BC Hydro did not solicit further comments on this topic as part of Workshop 10. The Tier 1/Tier 2 90/10 is not addressed any further in this memo.

At Workshop 10, BC Hydro discussed the following three RS 1823 issues it committed to bring forward for additional stakeholder engagement:

1. The demand charge definition of billing demand;
2. Definition of revenue (customer bill) neutrality, which differs from the forecast revenue neutral approach used for the Residential and Small General Service/Medium General Service (**MGS**)/Large General Service (**LGS**) rate classes;
3. Pricing principles for F2017-F2019. BC Hydro sought further comment on the three options presented at Workshop 5 (with modifications described in the Workshop 5 Consideration Memo):
   - Option 1, which is BC Hydro's preferred pricing principle: In F2017 Tier 2 is set to the lower end of the energy LRMC range set out above (i.e., 9.2 cents/kWh) and Tier 1 is set according to the bill neutrality definition. Thereafter the F2018 and F2019 general rate increases (**GRI**) would be applied to each pricing element of RS 1823 including the Tier 1 and Tier 2 rates. Despite the anticipated GRIs in those years being greater than the assumed 2 per cent inflation rate, the Tier 2 rate stays within the range of the inflation-adjusted LRMC in that time frame. Option 1 is not forecast

revenue neutral in F2017 because the Tier 2 rate rises more than the GRI to reach the lower end of LRMC. Option 1 is forecast revenue neutral in F2018 and F2019;

- Option 2: In F2017, F2018, and F2019 Tier 2 tracks the lower end of the LRMC range set out in Table 1 and Tier 1 is calculated per the definition of bill neutrality (and GRI is then applied to Tier 1 as long as Tier 2 tracks the lower end of the energy LRMC range). Option 2 is not forecast revenue neutral; and
- Option 3: BC Hydro proposed not advancing this option in the 2015 RDA. In F2017, all of GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level. For F2018, applying all of the GRI to Tier 2 results in Tier 2 being above the upper LRMC band. As a result, Tier 2 is capped at the upper LRMC band, and Tier 1 is adjusted accordingly. For F2019, both Tier 1 and Tier 2 are calculated as in F2018. Option 3 is not forecast revenue neutral.

The results for the three pricing options for F2017-F2019 are set out in Table 2. The Class Average Rate Change (**CARC**) is the rate caps set out in subsection 9(1) of Direction No. 7: 4 per cent in F2017; 3.5 per cent in F2018; and 3 per cent in F2019.

Table 2 F2017-F2019 Pricing Principle Options

	F2017 (cents/kWh)	F2018 (cents/kWh)	F2019 (cents/kWh)
Option 1			
Tier 1	3.95	4.088	4.211
Tier 2	9.20	9.522	9.808
Option 2			
Tier 1	3.95	4.014	4.237
Tier 2	9.20	9.380	9.570
Option 3			
Tier 1	3.836	3.920	4.050
Tier 2	10.227	11.04	11.260

1.1 Definition of RS 1823 Billing Demand

At Workshop 10 BC Hydro proposed continuing with the status quo definition of RS 1823 billing demand for the reasons set out in section 1.4.2 of the Workshop 5 Consideration Memo, and sought additional stakeholder comment. BC Hydro noted at Workshop 10 that groups representing customers who take service under RS 1823 – Canadian Association of Petroleum Producers (**CAPP**) and AMPC, who also speaks for Mining Association of BC on topics relating to RS 1823 - favour continuing with the current definition.

1.1.1 Participant Comments

Almost all stakeholders commenting on this topic agreed with BC Hydro's proposal, including from groups representing customers, and customers, taking service under RS 1823; refer, for example, to the feedback forms of AMPC and Sinclar Group Forest Products Ltd. (**Sinclar**), an integrated forest products company operating in northern British Columbia taking service under RS 1823, at Attachment 2. Commercial Energy Consumers Association of British Columbia (**CEC**), Canadian Office and Professional Employees Union Local 378 (**COPE 378**), First Nations Energy & Mining Council (**FNEMC**) and British Columbia Sustainable Energy Association and Sierra Club B.C. (**BCSEA**) all agree with BC Hydro's proposal. So does British Columbia Old Age Pensioners' Organization (**BCOAPO**) with the qualifier that the definition of High Load Hours (**HLH**) for billing demand (0600 to 2200 Monday to Saturday, except statutory holidays) is consistent with BC Hydro's system capacity requirements.

Catalyst suggests one potential change - that the peak kV.A be based on the peak hour and not the peak 30 minute period - to simplify customer administration and provide better representation of customers' load shapes.

BCUC staff notes that the definition aligns with industry practice and matches BC Hydro's peak period. BCUC staff state that although the RS 1823 demand charge recovers 65 per cent of demand-related costs and is thus higher than the

LGS and MGS demand charge cost recovery levels, a more detailed description of how RS 1823 remaining demand-related costs are recovered would be useful.

1.1.2 BC Hydro Consideration

In 2015 RDA Module 1, BC Hydro will propose no changes to the RS 1823 definition of billing demand. As noted above, there is virtually unanimous support for BC Hydro's proposal. In response to BCOAPO, and as noted in section 1.4.2 of the Workshop 5 Consideration Memo, the RS 1823 definition of billing demand aligns with BC Hydro's system capacity needs are a 16-hour block per day for a two week cold snap that can happen at least three times per year anytime during the winter (November to February).

BC Hydro considered Catalyst's suggested change. Currently, demand is calculated on a 30 minute basis – for each hour, the 30 minute interval is measured from the top of the hour to the bottom of the hour, then from the bottom of the hour to the top of the hour. Each 30 minute interval is comprised of six 5-minute intervals. For each 5 minute interval kilowatts are measured, the average is taken for each 5 minute interval and then the average of the six 5 minute intervals is taken. In BC Hydro's view, extending the demand period from 30 minutes to one hour could result in costs to both BC Hydro (BC Hydro billing and measurement system) and customers taking service under RS 1823 (customer load control systems). It is not clear to BC Hydro there is a benefit to moving to one hour. This is an issue BC Hydro will discuss with Catalyst prior to filing 2015 RDA Module 1.

BCUC staff desire a more detailed description of how RS 1823 remaining demand-related costs are recovered. By way of background, the RS 1823 demand charge is over 30 years old; its origin is RS 1821, the former flat rate for Transmission Service customers. The demand charge has always been increased by GRI in each year. To the best of BC Hydro's knowledge, there has been no increase in the level of demand-related cost recovery since the demand charge was put in place.

Demand charges are intended to recover some portion of demand-related costs as identified in a cost of service (**COS**) study. For Transmission Service customers, examples of demand-related costs included in BC Hydro's draft F2016 Fully Allocated COS study are:

- Approximately 45 per cent of hydroelectric generation costs including the cost of units built primarily for capacity (e.g., Revelstoke Unit 5, Mica Units 5 and 6);
- 100 per cent of thermal generation plant costs;
- 100 per cent of all costs associated with the transmission system.

The draft F2016 COS allocates the following costs to the Transmission Service rate class: about $570 million in energy cost, $130 million in generation demand cost, and $175 million in transmission demand cost for a total cost allocation of about $875 million

Total revenue from the class is about $890 million in F2016 and this includes:

- About $195 million in F2016 from demand charges, which represents about 65 per cent of the demand-related costs of about $305 million ($130 million + $175 million). Therefore, the balance of demand-related costs (about $110 million) is recovered in energy charges;
- About $695 million in energy revenue. The $110 million of demand-related costs recovered in energy charges, represents about a 15 per cent share of total energy revenue ($110 m/$695 m). Therefore, if these costs were instead recovered by the demand charge, Transmission Service rate class energy rates, including the RS 1823 rates, could be decreased by about 15 per cent. However, unlike with Step 2 of the Residential Inclining Block (**RIB**) rate, and the LGS and MGS Part 2 rates, the Commission does not have discretion as to whether the RS 1823 Step 2 rate should be within the energy LRMC range or below it as a result of subsection 3(1) of Direction No. 7 discussed above. In the

pricing principle options described below in section 1.2, the RS 1823 Tier 2 rate is set to be within at least the lower end of the energy LRMC and thus there is no trade-off possible between recovering more demand-related costs through the RS 1823 demand charge and letting the Tier 2 rate fall below the lower end of LRMC.

1.2 RS 1823 Pricing Principles for F2017 to F2019: Application of GRI

1.2.1 Participant Comments

Most stakeholders favour Option 1. AMPC states that Option 1 is the only reasonable option. AMPC notes that applying the GRI equally to all rate components has been the pricing principle followed for the RIB rate. Catalyst also supports Option 1 on the basis that Option 1 is simple and avoids GRI magnification on Tier 1 rates. Catalyst goes on to note that Option 3 would benefit Catalyst and any other RS 1823 customer who minimized Tier 2 energy through conservation measures.

Most non-Transmission Service customer organizations also support Option 1:

- BCSEA remains inclined toward Option 1 which appears to maintain revenue neutrality better, maintains the proportional price differential between Tier 1 and Tier 2, and is easily understood and accepted. BCSEA does not oppose BC Hydro's proposal to carry forward Option 2 as an alternative in the 2015 RDA and reject Option 3;
- BCOAPO prefers Option 1 to Option 2 and Option 3. BCOAPO advances that a standard approach with regard to the reference LRMC should be used for all rate classes, recognizing that there may be some differences by class due to differences in such matters as loss factors. BCOAPO also states that a serious attempt should be made to have 'tier 2 rates' for all classes set on a comparable basis (e.g., all set to the lower end, upped end or LRMC mid-point);

- FNEMC favours Option 1 on the basis that it adheres to the Bonbright criteria of customer understanding and acceptance, and rate stability (as it continues with the Direction No.6 approach for F2015-F2016), and maintains the differential between the Tier 1 and Tier 2 rates. FNEMC agrees that Option 3 should not be advanced for further consideration given the factors discussed in the Workshop 5 Consideration Memo.

CEC prefers Option 1 under revenue neutrality on a forecast basis and Option 2 under bill neutrality on the basis of fairness and to minimize under-recovery. CEC agrees that Option 3 should not be advanced.

Only COPE 378 unequivocally prefers Option 2. COPE 378 maintains that Option 2 is more consistent with past practice and the intention of RS 1823, which is that Tier 2 should be set and maintained within the LRMC range and Tier 1 should be calculated as a residual on a forecast basis. COPE 378 is of the view that loading more of the GRI onto Tier 1 is warranted as Tier 1 is "so far below an economically efficient price level" and can affect conservation efforts. COPE 378 agrees that Option 3 need not be advanced for further consideration.

Commission staff state that while BC Hydro has clearly set out its reasons for preferring Option 1, there are fewer reasons for BC Hydro to categorical conclude that Option 2 is preferred to Option 3 for purposes of presenting an alternative to Option 1. Commission staff suggest if Option 3 is eliminated from further advancement, BC Hydro should in the 2015 RDA provide information related to conservation at the Tier 2 rate set at the upper bound of the LRMC range. In addition, a comparison of all Tier 2 rates for the relevant rate classes should be available. Staff also ask BC Hydro to clarify the impact distribution costs have on the RIB Step 2 rate, which is higher than the upper end of the energy LRMC range.

1.2.2 BC Hydro Consideration

BC Hydro's preferred pricing principle remains Option 1 on the basis of the Bonbright customer understanding and acceptance, and rate stability, criterion.

Regarding the latter criterion, Direction No. 6 to the Commission[5] sets Option 1 as the pricing principle for F2015-F2016. With respect to the former criterion, AMPC and Transmission Service customers such as Catalyst favour Option 1. BC Hydro agrees with AMPC's observation that applying the GRI equally to all rate components was the pricing principle for RIB rate for two of the three RIB pricing principle applications (F2011, and most recently, F2015-F2016).[6] BC Hydro also agrees with BCSEA's and FNEMC's observation that Option 1 is the most easily understood option because the impact of GRI will be the same in percentage terms for all Transmission Service customers taking service under RS 1823. As indicated by BCSEA and FNEMC, Option 1 retains the current differential by increasing both Tier 1 and Tier 2 by GRI after Tier 2 is set to meet the lower end of the LRMC range set out in Table 1 above.

BC Hydro continues to reject Option 2 and Option 3 for the reasons advanced in section 1.3.2 of the Workshop 5 Consideration Memo. COPE 378 is the only Workshop 10 participant in advocating for Option 2 without qualification (CEC supports Option 1 if forecast revenue neutrality is adopted, and Option 2 if bill neutrality continues). It is not entirely clear what is meant by COPE 378's statement that Tier 1 is "far below an economically efficient price level". If COPE 378 means BC Hydro's energy LRMC range, Tier 1 by necessity will be below the LRMC range as a result of the RS 1823 rate structure and Direction No.7's mandating that the Tier 2 rate should reflect BC Hydro's LRMC. BC Hydro also notes that over the years the pricing principle would apply – F2017 to F2019 – the difference in rates arising from Option 1 and Option 2 is negligible.

BC Hydro accepts BCUC staff's observation that based on the reasons advanced to date, BC Hydro should not categorically conclude that Option 2 is preferred to

[5] B.C. Reg. 29/2014; https://www.canlii.org/en/bc/laws/regu/bc-reg-29-2014/latest/bc-reg-29-2014.html.

[6] F11 RRA, Appendix A1; http://www.bcuc.com/Documents/Proceedings/2010/DOC_24719_B-1_BCHydro-F11RR-Application.pdf; and BCUC Order G-13-14; http://www.bcuc.com/Documents/Orders/2014/DOC_40515_G-13-14-BCH-RIB-Rate-Re-Pricing-Reasons.pdf.

Option 3 for purposes of presenting an alternative to Option 1. BC Hydro also notes Catalyst's observation, and has decided that both Options 2 and 3 should be advanced in the 2015 RDA as alternatives to Option 1.

BCUC staff and BCOAPO made several comments concerning the energy LRMC and rate structure pricing. BCUC staff request that in the 2015 RDA BC Hydro set out a comparison of all 'Tier 2 rates' for the relevant rate classes. BC Hydro did so at Workshop 1 (first presentation, slide 13). Refer to Table 3 below:

Table 3 Rate Pricing Comparison

Rate Structure	RIB Step 2 rate	MGS and LGS Part 2 rate	RS 1823 Tier 2
Pricing (F2016)	11.95 cents/kWh	9.90 cents/kWh	8.503 cents/kWh[7]

BC Hydro generally agrees with BCOAPO that a standard approach with regard to the reference LRMC should be used for all rate classes, recognizing that there may be some differences by class due to differences in such matters as loss factors. At Workshop 1[8] BC Hydro noted that pricing for the Step 2 RIB rate, LGS and MGS Part 2 rates and Tier 2 of RS 1823 are currently based on different vintages of BC Hydro LRMC:

- The Step 2 RIB rate is based on the 2013 Integrated Resource Plan (I**RP**) energy LRMC, which in turn is based on DSM and renewal of IPP electricity purchase agreements (**EPAs**) as the incremental resources to be acquired over the next 10 years; and
- The RS 1823 Tier 2 rate, and the LGS and MGS Part 2 energy rate, are all based on the F2006 Open Call for Tenders plant gate price resulting from EPAs awarded for green-field IPP projects.

[7] Unlike RIB Step2 and MGS/LGS Part 2 rate, the RS 1823 Tier 2 Rate is not adjusted for distribution losses.

[8] Presentation slide deck 1, slide 13; https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/rate-design-application-workshop-presentation-may8-2014.pdf.

BC Hydro will use the 2013 IRP energy LRMC range for purposes of ratemaking in the 2015 RDA, thus ensuring more consistency. When the LRMC for ratemaking purposes was based on power acquisition processes such as the F2006 Open Call for Tenders, the green-field IPP acquisition-related plant gate prices were grossed up for line losses. The 2013 IRP energy LRMC range of 8.5 cents per kilowatt hour (**/kWh**) to 10.0 cents/kWh ($F2013) is based on DSM and IPP EPA renewals adjusted for delivery to the Lower Mainland, and therefore BC Hydro only adjusts for distribution-related losses for six of the seven rate classes (but not for the Transmission Service rate class).

In response to BCUC staff's request that BC Hydro clarify the impact distribution costs have on the RIB Step 2 rate, BC Hydro notes that the Commission in the 2008 RIB Decision concluded that the LRMC for RIB rate-making purpose should not include the incremental costs of distribution.[9] BC Hydro expects that BCUC staff are referring to distribution losses; BC Hydro reviewed distribution losses and finds that they are still reasonably close to 6 per cent of distribution load. The source of distribution loss information will be described in the COS portion of the 2015 RDA. Table 4 sets out the energy LRMC range including distribution losses for comparison purposes to Table 1.

Table 4 Range in Energy LRMC with Distribution Losses[10]

Fiscal Year	Lower End of Energy LRMC Range (*cents/kWh*)	Upper End of Energy LRMC Range (*cents/kWh*)
F2013	8.5	10.0
F2013 (*Distribution loss 6 per cent*):	*9.01*	*10.60*
F2017	9.46	11.13
F2018	9.65	11.35
F2019	9.84	11.58

[9] *In the Matter of British Columbia Hydro and Power Authority: Residential Inclining Block Rate Application*, Reasons for Decision to Order G-124-08, 24 September 2008, pages 107-108; http://www.bcuc.com/Documents/Proceedings/2008/DOC_19754_BCH-RIB-Decision-WEB.pdf.

[10] F14 and F15 inflation are -0.03% and 1.3% respectively, based on BC CPI; Forecasted F16 inflation is 1.9% and Forecasted F17, F18, and F19 inflations are 2% per year based on December 2014 BC Treasury Board forecasts. Values include 6% distribution line loss.

Aside from distribution losses and the differing rate structures, BC Hydro also notes that the adoption of RIB pricing principles by the Commission also somewhat explains the difference between the RIB Step 2 rate and the RS 1823 Tier 2 rate. For example, on December 21, 2010 BC Hydro filed an application for approval of a RIB pricing principle from F2012 onward under which BC Hydro would uniformly increase the three components of the RIB by the amount of any approved GRI. BCUC Order G-45-11[11] rejected BC Hydro's request and instead set the following RIB pricing principle for the F2012 to F2014 period: Step-2 energy rate increases up to the higher of the CARC or 10 per cent bill impact, subject to the Step-1 energy rate increasing by no less than the annual rate of inflation; and the Step-1 energy rate calculated residually but increases by no less than the annual rate of inflation.

1.3 Revenue Neutrality

At Workshop 10, BC Hydro again described the bill neutrality methodology, which was implemented by the Commission pursuant to Order G-79-05 as part of the BC Hydro Transmission Service Rate Negotiated Settlement Agreement (**TSR NSA**)[12] so that if a customer does not change its energy usage relative to Customer Baseline Load (**CBL**), the customer's bill should remain unchanged after implementation of the stepped rate and the same as if it was on the otherwise – applicable flat rate for new Transmission Service customers. BC Hydro stated that revenue neutrality is closely tied to the RS 1823 pricing principle. In this regard, BC Hydro reviewed the revenue impacts associated with the three pricing options for F2017-F2019 relative to forecast revenue neutrality in Attachment 4 to the Workshop 5 Consideration Memo:

[11] BCUC Order G-45-11, Reasons for Decision, Appendix A, page 3 of 19; http://www.bcuc.com/Documents/Proceedings/2011/DOC_27176_G-45-11_BCH-RIB-Re-Pricing-Reasons.pdf

[12] http://www.bcuc.com/Documents/Proceedings/2005/DOC_8278_G-79-05_BCHydro_TSRA%20Reasons%20for%20Decision.pdf.

- Option 1 under-recovers revenue by $2.2 million, $2.3 million and $2.4 million for F2017, F2018 and F2019 respectively;[13]
- Option 2 under-recovers revenue by $2.2 million, $1.4 million and $0.9 million for F2017, F2018 and F2019 respectively; and
- Option 3 under-recovers revenue by $8.8 million, $12.0 million and $11.7 million for F2017, F2018 and F2019 respectively.

BC Hydro stated at Workshop 10 that given its preference for pricing principle Option 1 and the fact that the difference between forecasted revenue neutrality and bill neutrality is not significant under Option 1, BC Hydro favoured maintaining the current definition of revenue neutrality which results in bill neutrality, and requested additional feedback.

1.3.1 Participant Comments

AMPC and customers taking service under RS 1823 support continued use of customer bill neutrality as the basis for RS 1823. AMPC ties the current definition of revenue neutrality resulting in bill neutrality when consumption is equal to a customer's CBL to the choice of pricing principle; AMPC states that the bill neutrality most closely resembles the "across the board approach" described in its feedback form where GRI is applied equally to all three RS 1823 rates (pricing principle Option 1). AMPC argues that adoption of the forecast revenue neutrality approach is unacceptable to customers taking service under RS 1823 as it unfairly results in what AMPC calls "clawback penalties" imposed on customers that have successfully conserved energy in response to the Tier 2 rate price signal.

All non-Transmission Service customer participants except BCSEA favour revising the definition of revenue neutrality for RS 1823 to be consistent with that of other

[13] These under recoveries occur because Tier 2 is set at the lower end of the LRMC range in F2017. This results in an 8.2 per cent rise in the Tier 2 rate ($85/MWh in F2016 to $92/MWh in F2017) and only a 3.0 per cent increase in the Tier 1 rate. If only F2018 and F2019 were examined, there would be no under recovery because Option 1 is forecast revenue neutral in those years.

rate classes. While these participants recognize that the difference between forecasted revenue neutrality and bill neutrality is not significant under pricing principle Option 1, they maintain that as a matter of principle BC Hydro should adopt forecast revenue neutrality; refer to the feed-back forms of COPE 378, FNEMC, CEC and BCOAPO. BCSEA states there are two factors which support its change of position from Workshop 5 (it now supports BC Hydro's proposal of continuing with bill neutrality if pricing principle Option 1 is adopted): (1) Option 1 is forecast revenue neutral in F2018 and F2019; (2) BC Hydro does not expect substantial differences in conservation between the two approaches.

Commission staff state that Transmission Service customers have not provided reasons for their preference for bill neutrality (is it bill certainty for Demand Side Management (**DSM**) investments or a lower Tier 1 energy rate?). BCUC staff also ask whether non-Transmission Service customer participants only reason for favouring forecast revenue neutrality is consistency, and whether the under-recovery revenue under pricing principle Option 1 for F2017-F2019 respectively should be addressed as part of any rate rebalancing proposal.

1.3.2 BC Hydro Consideration

BC Hydro favours continuing with the current customer bill neutrality approach. Customer bill neutrality appears to work well with respect to attaining substantial conservation to the benefit of all BC Hydro customers as well as participating Transmission Service customers; aligns with Policy Action No. 21 of the 2002 Energy Plan; and is the basis upon which Transmission Service customers accepted RS 1823 as part of the 2005 TSR NSA process and BC Hydro's 2008 TSR Re-pricing Application approved by BCUC Order G-97-08. BC Hydro also analyzed the Transmission Service revenue-to-cost (**R/C**) ratios for purposes of determining its position on revenue neutrality. The F2014 Fully Allocated COS shows the Transmission Service class R/C ratio as 104.4 per cent using the 2007 RDA Decision COS methodology; the Transmission Service rate class R/C ratio is

101.5 per cent for F2016 using the F2016 COS study methodology. In both case the Transmission Service R/C ratios are above 100 per cent, indicating that the Transmission Service rate class is not being subsidized by other rate classes.

In response to BCUC staff, BC Hydro notes AMPC's comments in its feedback form; Transmission Service customers appear to prefer bill neutrality both for bill certainty for DSM investments and a lower Tier 1 energy rate as compared to pricing principle Option 2. The 2015 RDA will not include a rate rebalancing proposal as a result of Order in Council 405 dated July 14, 2015 (B.C. Reg. 140/2015) which amends section 9 of Direction No. 7 by directing the Commission that in setting BC Hydro's rates for F2017-F2019, the Commission must not set rates for BC Hydro for the purpose of changing the R/C ratio for a class of customers.

2 Two Potential Transmission Service Rate Options: RTP and Freshet Rate

BC Hydro canvassed additional stakeholder feedback on two potential Transmission Service customer rate options: RTP (section 2.1 below); and a freshet rate (section 2.2).

2.1 RTP

In section 2.4 of the Workshop 5 Consideration Memo, BC Hydro outlined its view that section 14 of Direction No. 7 does not prevent the Commission from setting a RTP rate (in contrast to retail access) because Transmission Service customers would be buying some portion of electricity from BC Hydro (based on Mid-Columbia or other market pricing). As a result, at Workshop 10 BC Hydro asked participants for their view on whether BC Hydro should apply to the Commission to establish an optional Transmission Service RTP rate. To assist with feedback, BC Hydro set out the following in section 2.4 of the Workshop 5 Consideration Memo:

- The main ingredients of a RTP rate design. BC Hydro assumed a new RTP would be a 'hybrid rate' with firm service for the CBL and maximum demand,

and non-firm service for incremental usage above CBL. BC Hydro stated that it would be difficult to integrate a stepped rate structure into RTP – the CBL could be priced at the stepped rate, but the marginal price signal would be spot market pricing and not BC Hydro's energy LRMC. The hybrid RTP rate would be asymmetrical if customers receive an energy LRMC price signal for saving energy (i.e., Tier 2 credit) but then receive a market price signal for increasing energy consumption;

- The results of its Canadian industrial rate jurisdictional survey, which showed that of electric utilities with similar market structures to BC Hydro's, only Nova Scotia Power offers a RTP rate to its industrial customers; and
- The history of and BC Hydro's concerns with a RTP rate.

On March 19, 2015 BC Hydro met with AMPC to among other things determine if there was interest in RTP. AMPC responded that it agreed that the concerns laid out by BC Hydro in section 2.4 of the Workshop 5 Consideration Memo were valid concerns, and that it was not interested in pursuing RTP at this time.

2.1.1 Participant Comments

No Transmission Service customer submitting comments on this topic believes BC Hydro should pursue RTP at this time. Catalyst wants BC Hydro to make the freshet rate pilot a priority, and states that there is limited interest in RTP if it only applies to the RS 1823 Tier 2 component. AMPC reiterates in its feedback form that it agrees with BC Hydro's concerns with RTP. Sinclar expresses no interest in a RTP rate in its feedback form.

BCSEA, BCOAPO and FNEMC oppose BC Hydro pursuing RTP for Transmission Service customers at this time. BCOAPO sees RTP as incompatible with RS 1823, which attempts to price incremental use (savings) at BC Hydro's energy LRMC as opposed to the spot market which would be the outcome of a RTP rate.

CEC does not advocate for RTP, but is of the view that the concerns raised by BC Hydro in section 2.4 of the Workshop 5 Consideration Memo can be addressed. For example, CEC states that the legal issue raised by BC Hydro concerning subsection 3(1) of Direction No. 7 and the accompanying Recommendation #14, which provides that Transmission Service customers eligible for the prior RS 1821 flat rate and taking firm service from BC Hydro must do so under RS 1823 or RS 1825 (excepting the exempt Transmission Service customers), is mitigated if incremental use is non-firm. CEC also believes that DSM is for firm use and thus not in conflict with incremental non-firm "economically valuable production".

COPE 378 acknowledges that there are significant issues with RTP but is of the view that Transmission Service customers should be given a RTP option provided that they are willing to take the risk of doing so and no costs are imposed on other customers.

Commission staff state that assuming there is no legal barrier, if BC Hydro decides to offer RTP as an option, it should include in the 2015 RDA an analysis of the interactions between RTP and the proposed freshet rate and the consequences of RTP on BC Hydro revenue and other rate classes.

2.1.2 BC Hydro Consideration

BC Hydro will not be pursuing RTP as an option for Transmission Service customers as part of the 2015 RDA given the noticeable lack of demand for such a rate by such customers. Only COPE 378, which does not represent any Transmission Service customers, thinks that more consideration of RTP as an alternative to the proposed freshet rate is warranted because RTP would be better than pursuing a freshet rate.

BC Hydro continues to be of the view that any RTP rate would be complex and raises significant legal and policy issues for the reasons set out in section 2.4 of the Workshop 5 Consideration Memo. In addition, and in response to COPE 378, if incremental consumption is priced at spot market, there may be negative impacts on

non-participants to the extent that incremental consumption is already included in BC Hydro's load forecast and BC Hydro has already taken steps to acquire resources (or advance resources) to meet the load growth. This would likely necessitate a number of features to hold non-participating customers harmless, including: (i) a term requiring participating Transmission Service customers who terminate RTP to wait for some period of time from the date of termination before the customer could reapply for BC Hydro firm service for incremental demand; and (ii) exit fees (charged when a Transmission Service customer purchases part of their load from a third party). These fees can help BC Hydro avoid stranded investments by recovering costs that have been incurred by BC Hydro to serve the customer's full load).

Furthermore, BC Hydro pointed out at Workshop 10[14] that during the freshet period spot market prices are often significantly below the RS 1823 Tier 1 rate, especially during LLH, and are generally closer to the Tier 1 rate during other months of the year. This suggests that a freshet rate, based on incremental consumption during the May to July freshet period, may yield comparable benefits for Transmission Service customers as a year round RTP rate based on non-firm service for incremental consumption.

2.2 Freshet Rate

BC Hydro sought feedback on a number of freshet rate design considerations, including whether shifting from non-freshet to freshet months should qualify for the freshet rate.

2.2.1 Participant Comments

Many stakeholders agree there may be merit in a freshet rate including representatives of BC Hydro's residential, General Service and Transmission

[14] Refer to Slides 21 and 37 of the Workshop 10 slide deck presentation; https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/2015-05-07-bch-rda-wkshp-presentation.pdf.

Service customers. AMPC agrees that the freshet rate is an appropriate mechanism for dealing with surplus energy while Catalyst states it's a "creative solution to a seasonal issue that has the potential to provide benefits to all ratepayers". Sinclar is in favour of BC Hydro pursuing a freshet rate. FNEMC also supports the rate but states it should provide benefits to non-participants and not adversely impact BC Hydro's trading activities. BCOAPO agrees the freshet rate concept is "worthy of further consideration" while CEC suggests the freshet rate be applicable "for incremental use on a non-firm basis" and at a minimum be "revenue neutral" for other ratepayers.

COPE 378 alone expresses "fundamental concern" with the proposed rate, questioning the appropriateness of shifting and suggesting it would be better for BC Hydro to give Transmission Service customers access to market based/seasonal and TOU pricing for some or all of their load rather than develop a freshet rate.

BCSEA does not take a definitive position on the merits of the proposed freshet rate pilot and wants more "information on whether it would affect conservation and efficiency measures". BCUC staff question whether BC Hydro has explored alternatives such as targeted improvements to telemetry or modelling that may improve operation of the system.

The following is a summary of stakeholder comments regarding key features of the proposed freshet rate:

Proposed May to July period

Almost all stakeholders support BC Hydro's proposed freshet period of May to July. Catalyst, BCOAPO, Sinclar, FNEMC and AMPC all agree with BC Hydro's proposed time period. CEC agrees May to July is an appropriate period but asked BC Hydro to consider extending the period to include March and April.

COPE 376 states there is some risk in defining a set period as market price patterns could change in the future. BCUC staff request more information on water condition variability and the presence of location specific freshets.

Structure of the rate (proposed pilot program and non-firm component)

On the assumption the freshet rate is implemented, there was broad support for the proposed structure as described on slide 24 of the Workshop 10 presentation slide deck. Catalyst, AMPC, Sinclar, BCOAPO and CEC support BC Hydro's proposal. CEC asks whether the freshet rate should be available to customers in low water years. FNEMC agrees with the general structure but suggests BC Hydro set a "quantity limit" or have the ability to suspend the pilot as a protection against any gaming. BCUC staff have a number of questions regarding the structure of the rate including:

- What are the objectives for the rate?
- Are there transmission customers that BC Hydro cannot serve under the freshet rate because of a system constraint?
- Does "non-participants" refer to non-Transmission Service customers or are there situations in which Transmission Service customers may also be "non-participants"?
- When should the rate be beneficial for non-participants and when should it be neutral?

Pricing

With the exception of COPE 378, stakeholders, including AMPC, Catalyst, FNEMC, CEC and BCOAPO support product option 2 as described on slide 26 of the Workshop 10 slide deck presentation. BCOAPO favors option 2 because BC Hydro "should not have to engage in hedging activities (with associated administration costs) to protect itself" and rate derivation would be less transparent under option 1 if

the price include a markup for hedging activities. BCSEA and Sinclair take no position between options 1 and 2 but support BC Hydro's proposal to develop one pricing option, given the complexities involved.

There is near unanimous support among stakeholders for the proposed $0/MWh price floor. However, there is disagreement on the need for a wheeling fee. Catalyst and AMPC argue the wheeling fee is unnecessary as the freshet rate may avoid wheeling costs rather than incur them, while other stakeholders such as BCOAPO, CEC and BCSEA support the concept of a wheeling fee. FNEMC recommends that BC Hydro charge for Bonneville Power Administration (**BPA**) losses in addition to the wheeling fee while the CEC suggests BC Hydro consider "whether it should collect a fee for providing the (freshet) service".

Baselines

There was near unanimous support among stakeholders for Baseline option 3 as Catalyst, CEC, BCOAPO and BCSEA acknowledge it provides a better price signal than option 1. FNEMC finds that Baseline options 3 and 4 send a better price signal than option 1 and asks BC Hydro to provide more information on different baseline durations (3 months, monthly, daily, hourly) and variability between using a 1 year or 3 year average.

CEC states that option 1 should be retained as an alternative while BCOAPO observes that the average prices in baseline option 1 (slide 27) are inconsistent with the pricing of product option 2 (slide 26). COPE 378 reiterates that it has fundamental concerns with the proposed rate while AMPC does not take a position between the different baseline options.

Shifting

Catalyst and AMPC support allowing incremental load caused by shifting consumption to qualify for the rate while other stakeholders such as BCOAPO and

BCSEA state that shifting "should be assessed after completion of the pilot and before any decisions are made regarding the permanent introduction of a Freshet Rate" and "may be more complicated than its worth". CEC suggests that shifting could be allowed but any lost revenues (possibly the differential between the RS 1823 Tier 1 rate and average market prices in the non-freshet period) be "recovered in the subsequent years' rates". FNEMC does not support including shifting in the proposed pilot because it "has the ability to negatively impact non-participants". FNEMC points out that the financial impacts of shifting, as estimated by BC Hydro on slide 36 of the Workshop 10 presentation, are based on monthly forward prices and do not reflect the fact that daily prices could be meaningfully less than the RS 1823 Tier 1 rate in non-freshet months.

Stakeholders disagree on the value of shifting and whether a reduction in load during non-freshet months should be valued at the RS 1823 Tier 2 rate or the Tier 1 rate. CEC argues that shifting should be valued at the "specific rate" to determine the revenue loss while Catalyst and AMPC support valuing the load reduction at Tier 2 regardless of whether DSM initiatives were the cause of the reduction or not. Catalyst notes that a Tier 2 value is appropriate because the annual CBL process does not discriminate on when energy was saved while AMPC is of the view that "it would be most consistent with conservation rate design methodology to value a load reduction at the Tier 2 rate, regardless of it being deemed a specific DSM measure or otherwise". COPE 378, FNEMC, BCOAPO and BCSEA all agree that the "Tier 1 rate is the appropriate basis otherwise there may be material negative impact on other customers. COPE 378 feels the reduction should be valued "in a way that protects other customers".

Evaluation criteria

No stakeholder disagrees with BC Hydro's proposed evaluation questions listed on slide 39 of the Workshop 10 presentation or the proposal to prepare a preliminary and final evaluation report for submission to the Commission. BCUC staff request a

"rigorous" evaluation to determine whether the pilot rate had positive or negative impacts on non-participating customers. COPE 378, FNEMC and BCUC staff suggest the evaluation contain a cost-benefit analysis. BCSEA submits that benefits to non-participants should be evaluated along with the impact of the rate on conservation and efficiency measures. CEC suggests BC Hydro examine whether there was any free rider incremental usage during the freshet and whether BC Hydro can calculate the revenue loss from shifting based on actual prices. FNEMC suggests BC Hydro assess whether the rate should be opened to other rate classes. Catalyst recommends that BC Hydro assess how quickly customers respond to changes in market prices and what it would take for them to become more responsive. AMPC and BCOAPO have no comments regarding the proposed evaluation questions.

Take-up

Catalyst has no comments regarding take-up while AMPC believes that "comments at this stage would be premature". CEC suggests BC Hydro focus efforts on getting uptake without shifting. BCOAPO and BCSEA have no comments regarding take-up while COPE 378 advances that a freshet rate with market prices for incremental consumption will likely have "limited" take-up. BCUC staff ask whether BC Hydro's discussions with customers indicated take-up will be concentrated in specific areas with common characteristics like snowpack and storage, and whether the proposed May to July freshet period was chosen based on customer discussions.

2.2.2 BC Hydro Consideration

BC Hydro agrees with most stakeholders that the freshet rate should be developed. BC Hydro intends to include a specific proposal that the rate be initiated as a two year pilot as part of 2015 RDA Module 1. BC Hydro sees March 1, 2016 as the deadline for participating in Year 1 and March 1, 2017 as the deadline for participating in Year 2. Accordingly, as part of the 2015 RDA BC Hydro will propose that the freshet rate pilot regulatory review process consist of one round of

information requests followed by a Streamlined Review Process in early January 2016 so that the Commission can issue an order no later than the first week of February 2016 to ensure BC Hydro has time to make any Commission-mandated adjustments. This proposed regulatory review process is designed to ensure the freshet rate pilot is in place prior to the 2016 freshet period.

In response to COPE 378's suggestion that the development of TOU or RTP rates would be better options, BC Hydro notes that Transmission Service customers support BC Hydro's approach. As noted in section 2.1.2 above, Catalyst comments that "a freshet rate is a priority over the introduction of a new [RTP] program at this time" and AMPC agrees with BC Hydro's concerns regarding RTP as set out in section 2.4 of the Workshop 5 Consideration Memo. No Transmission Service customer has advocated for a RTP rate at this time.

COPE 378 does not address the reasons advanced by BC Hydro in section 2.1.2 of the Workshop 5 Consideration Memo why BC Hydro will not be revising RS 1825, the existing TOU rate, as part of the 2015 RDA. The reasons include first and foremost the lack of Transmission Service customer demand for such revisions (at Workshop 5 and related feedback, AMPC rejected BC Hydro spending time amending RS 1825). In addition, it is unlikely there can be a significant enough difference between on-peak and off-peak rates to encourage a change in consumption patterns, and Canadian electric utilities with market structures similar to BC Hydro do not offer their industrial customers voluntary TOU rates. In contrast, the jurisdictional survey revealed that a number of Canadian electric utilities operating in similar market structures offer their industrial customers 'surplus energy rates' including Manitoba Hydro, Hydro Quebec, New Brunswick Power and Nova Scotia Power; refer to Table 4 of the Workshop 5 Consideration Memo.

In response to BCSEA, BC Hydro believes it is possible for the freshet rate and conservation and efficiency to complement each other and coexist. Increases in load during the freshet can be done in an "efficient" manner if businesses shift load from

non-freshet months or find ways to minimize the size of a load increase. Incremental load during the freshet will be considered non-firm while reductions in load that attract DSM incentives are firm.

BCUC staff question whether BC Hydro has explored alternatives such as targeted improvements to telemetry or modelling that may improve operation of the system. BC Hydro continually reviews and validates its telemetry, data quality control, weather forecasts and hydrologic modeling processes to obtain improvements to the forecasts of inflows to its system basins. For example, a review of all BC Hydro's climate and hydrometric monitoring network identified a number of improvements that could help to fill some gaps in high elevation snow monitoring in the Peace and Columbia regions. BC Hydro is installing new snow and climate stations in these regions, utilizing new monitoring technologies to try to fill these gaps. However, the operational challenges associated with freshet period inflows cannot be solved even with 100 per cent forecast accuracy, because the issue relates to the timing of inflows into run-of-river IPPs and BC Hydro owned facilities that have limited flexibility to store the surplus for future release. For example, during the freshet the diurnal variation due to snowmelt causes the peak inflow to occur overnight, when loads and market prices are at their lowest.

Structure of the rate (proposed pilot program and non-firm component)

BC Hydro plans to adopt the rate structure described on slide 24 of the Workshop 10 presentation. In response to BCUC staff's first question, BC Hydro provides the following objectives for the freshet rate, which were discussed at Workshops 5 and 10:

1. Respond to 2013 Industrial Electricity Policy Review task force recommendations and BC Government response that "A rate design review process will be launched to examine ways to provide industrial customers with more options to reduce their electricity costs"; and as per 2013 IRP

Recommended Action 5 to investigate incentive-based mechanisms to encourage existing industrial customers to expand existing operations;

2. Increase the ability to import cheap electricity in freshet periods to assist in the management of the freshet oversupply in the BC Hydro system:

   - Increasingly, the BC Hydro system faces minimum generation constraints during the freshet which often prevent the import of low cost electricity that could have otherwise been stored for use in a higher valued period;

3. Recover what BC Hydro would otherwise obtain on the export market, but with potential economic benefits for B.C.;

4. Option to reduce freshet spills at BC Hydro facilities:

   - More information on spill benefits from the rate is provided on pages 31 and 32 of this Consideration memo. Spill benefits are not expected to be significant and are therefore a secondary driver of the proposed rate.

Regarding BCUC staff's second question, BC Hydro does not foresee any system constraints that would prevent it from providing incremental energy to freshet pilot customers. Since the U.S. intertie is in service a high percentage of the time, BC Hydro would likely be able to import power, if necessary, to serve freshet load. In addition, all nine of BC Hydro's transmission regions are winter peaking (F2014 data) and any incremental freshet load in the May to July period is unlikely to be constrained by transmission availability. In any event, the freshet rate is non-firm – BC Hydro will agree to provide electricity under the freshet rate pilot to the extent it has the energy and capacity to do so, and BC Hydro may refuse service under the freshet rate pilot in circumstances where BC Hydro does not have sufficient energy or capacity to do. This is the reason why BC Hydro will propose no demand charge as part of the freshet rate.

In response to BCUC staff's third and fourth questions, rates that aren't universally accessible by all rate classes are typically developed to keep non-participants

harmless (neutral). BC Hydro defines non-participants to comprise all customers not on the proposed freshet rate, including Transmission voltage customers on RS 1827, and customers from other rate classes. BC Hydro's position is that the rate should, to the extent practicable, keep non-participants harmless. BC Hydro does not accept that non-participants must benefit from the freshet rate, although given the chronic nature of the freshet surplus problem, this may be the case. In situations where there's a risk of harm to non-participants (shifting for example) BC Hydro believes it is appropriate for a rate to provide potential benefits to non-participating customers. For example, the freshet rate's proposed wheeling fee (discussed on pages 32-33 of this memo) provides a nominal benefit to non-participants if incremental freshet load is served either from system storage or a reduction in exports rather than higher imports from the U.S. market.

Proposed May to July period

There is broad stakeholder support for BC Hydro's proposal to use the May to July period for the freshet pilot. The evidence presented on slides 20 to 22 of the Workshop 10 slide deck presentation demonstrates that there is generally: surplus freshet energy between May and August; import constraints between May and August; and lower than normal electricity prices between May and July, especially in light load hours (**LLH**). Taken together these facts support a May to July freshet period for the purposes of the two year pilot.

In response to CEC's suggestion to limit the availability of the freshet rate in a low water year, BC Hydro notes that low water years still have freshet periods, but they tend to occur earlier in the season as snow packs are smaller and tend to melt faster. BC Hydro considered shortening the freshet period in low water years, but indications point to customer take-up of the freshet rate pilot being relatively low, within the range of 5 to 30 average megawatts[15] BC Hydro specified on slide 38 of

[15] An average megawatt (aMW) is a unit of energy output over a year that is equal to the energy produced by the continuous operation of one megawatt of capacity over a period of time.

the Workshop 10 presentation. If water conditions are below normal, Mid-Columbia (**Mid-C**) market prices are likely to be higher which, all else equal, would further reduce take-up of the proposed freshet rate and reduce any risk associated with offering the rate for the three freshet months in a low water year.

BCUC staff indicate that Workshop 10 slide 20 assumes normal water conditions and that it would be helpful for BC Hydro to also show a high and low water impact and whether high or low water conditions may show a longer or shorter freshet period. BCUC staff also requested further comments from BC Hydro regarding location-specific freshets, storage, spill history, generating facilities, and transmission configurations will be helpful in understanding whether May to July is the appropriate period for the Freshet Rate. BC Hydro notes that the overwhelming majority of spill within the system occurs in the freshet period. Spill history at BC Hydro's largest run-of-river dam, Seven Mile, is provided below in Figures 1 and 2. The Seven Mile facility accounts for a large proportion of BC Hydro's spill capability.

Figure 1 Generation History

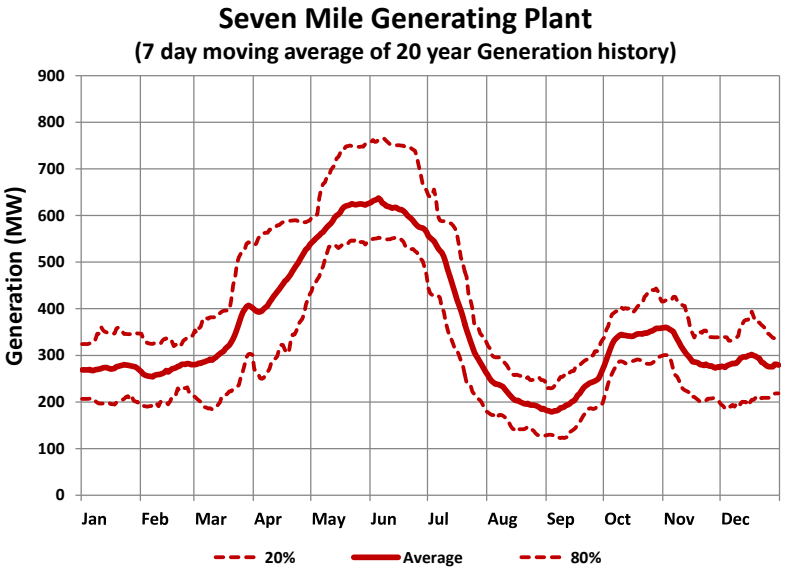
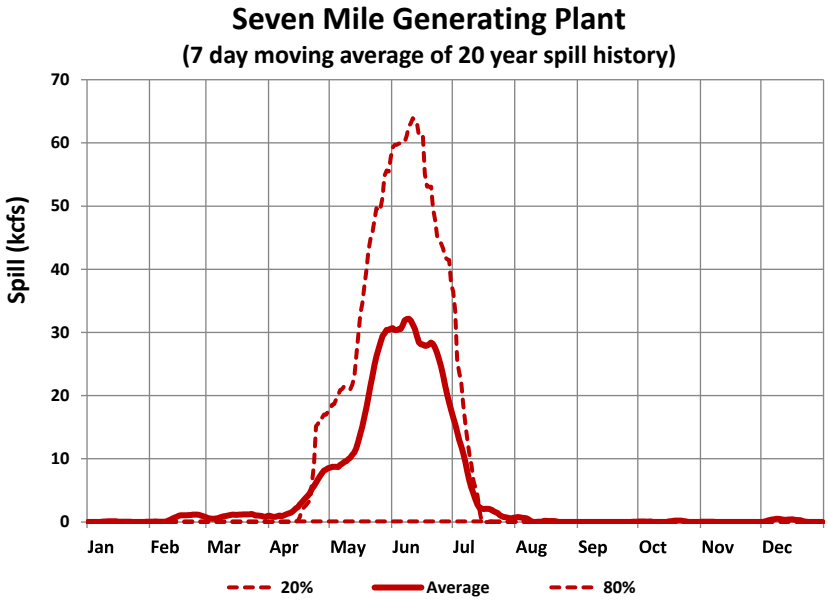


Figure 2 Spill History



The issue associated with the freshet oversupply is related to the combination of the large volume of surplus (non-flexible) energy passing through IPP run-of-river projects, low spring-summer system loads and depressed spot market prices. As a result of the coincidence of these three factors, BC Hydro is forced to sell energy into external markets at exceptionally low prices.

The oversupply challenge is primarily a system issue. While there is some degree of location-specific timing of the freshet, from the perspective of the consolidated system, the May-July period is the critical window. Transmission configuration and constraints will usually not play a role.

Pricing

BC Hydro believes there is significant support for product option 2 and has decided to only develop that option. Product option 2 provides customers greater flexibility relative to product option 1.

BC Hydro will include the proposed price floor and wheeling fee in the rate structure as part of the freshet rate pilot proposal. Despite concerns from Catalyst and AMPC, BC Hydro believes the wheeling fee is a useful feature of the rate because it:

- Recovers a portion of cost associated with importing additional power to serve freshet load. Slide 23 of the Workshop 10 presentation showed that BC Hydro is often a net importer during freshet hours, especially during LLH periods;
- Is consistently priced with both BC Hydro's Open Access Transmission Tariff's (**OATT**) Energy Imbalance and Loss Compensation rate schedules which include Bonneville Power Administration wheeling fees regardless of whether the energy supplied to OATT customers comes from storage, through reduced exports, or through increased imports;
- Is much simpler to administer relative to a weighted average approach of import/export hours as the latter would be impractical given variability in import/export behaviour across the five year period shown on slide 23 of the Workshop 10 presentation;
- Still gives participating Transmission Service customers approximately 85 per cent of the value associated with the freshet rate as shown on slide 32 of the Workshop 10 presentation while providing a small benefit (about 15 per cent of the value on average over the modelled 5 year period) for non-participating ratepayers.

BC Hydro also notes that a majority of stakeholders support the proposed wheeling fee.

In addition to the wheeling fee, FNEMC suggests BC Hydro charge for BPA losses. BC Hydro does not believe this is necessary because BPA applies only a 1.9 per cent loss adjustment to every kWh delivered across their system[16] and this is

[16] See Schedule 9 of BPA's OATT at: https://www.bpa.gov/transmission/Doing%20Business/Tariff/Documents/bpa_oatt.pdf.

relatively minor when compared against the wheeling fee. Notably, BC Hydro's OATT Energy Imbalance tariff includes the BPA wheeling fee but not BPA losses when setting "Buy" prices for energy imbalances on the BC Hydro transmission system. For simplicity and consistency with its existing OATT tariffs, BC Hydro believes the freshet rate should only include the wheeling fee.

Note that BC Hydro considered and rejected an administration charge because: (1) a single administration charge covering the freshet period is insignificant relative to the total bill; and (2) BC Hydro estimates that the administration cost would be comparable to the cost of administering RS 1823.

Baselines

BC Hydro believes there is significant support for baseline option 3. Subsequent to Workshop 10 BC Hydro had further discussions with AMPC, Catalyst and chemical producers as noted at the beginning of this memo. All of these parties agree with the principles underlying Baseline option 3. BC Hydro considered FNEMC's suggestion to evaluate the length of different baseline periods (3 months, monthly, daily, hourly) but continues to believe that baseline option 3, which measures incremental usage over the entire freshet period in both HLH and LLH, is the most appropriate method because it simplifies the baseline setting process, gives customers flexibility to shift between HLH and LLH in the freshet, and avoids the need for penalty mechanisms if customers increase consumption in a given week or month but decrease consumption in other periods such there was no overall gain in freshet purchases.

BC Hydro's proposal is to examine freshet load data from 2015 before making a determination on an appropriate baseline period is also generally acceptable to stakeholders. At this time BC Hydro believes 2015 consumption is reasonably "normal' for customers most likely to use the freshet rate. In situations where 2015 consumption is deemed "abnormal", the BCUC could approve baselines, set on alternative time periods that are mutually acceptable to customers and BC Hydro.

Shifting

Although shifting is a complex issue and there may be some negative impacts on non-participating customers, BC Hydro believes shifting load from non-freshet periods to freshet periods should be eligible for the two year freshet pilot so long as there is incremental freshet consumption. BC Hydro considers shifting is necessary to facilitate Transmission Service customer take up of the proposed two year pilot and to test whether a freshet rate is an appropriate mechanism to help mitigate over supply conditions in HLH freshet periods and to enable increased imports during periods of minimum generation constraints when market prices can be very low.

The primary risk associated with shifting is a loss to non-participating customers if the reduction in load in the non-freshet period reduces revenue (valued at the RS 1823 Tier 1 or Tier 2 rate depending on a customer's position relative to their RS 1823 CBL) more than it increases export revenues (assuming the reduction in load results in higher exports valued at the Mid-C price). BC Hydro demonstrated during Workshop 10 that market prices during the non-freshet period have often been close to the Tier 1 rate.

Since Workshop 10 BC Hydro determined it is impractical to value shifting at the Tier 1 rate and instead proposed at Workshop 12[17] held on July 30, 2015 to bill reductions in non-freshet load under the existing RS 1823 tariff, which results in the reduction being valued at either the Tier 1 or Tier 2 rate depending on the customer's load relative to their CBL. There are a variety of reasons for the new proposal:

- Under the existing RS 1823 rate and Tariff Supplement (**TS**) 74 (TS 74 is the Customer Baseline Load Determination Guidelines) there is no requirement for a customer's reduction in Tier 2 energy purchases to be permanent. Customers

[17] Refer to slides 58-59 of the Workshop 12 slide deck presentation; https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/01_2015-07-30-wksp-12-pres.pdf.

currently have an opportunity to save Tier 2 energy if they pursue DSM, temporarily reduce load, temporarily increase their self-generation or make permanent changes to load or self-generation;

- Administratively, it will be difficult to determine the causes of a drop in RS 1823 load and whether shifting really occurred. Consider a case where a 10 MW customer reduces its hourly load in April to 8 MW (non-freshet) and temporarily increases it to 12 MW for the month of May (freshet period) before returning to the normal 10 MW of load in June. There is no net change in consumption over April and May and the customer has shifted load. If this same customer undertakes an expansion effective September 1st and increases load to 13 MW there will be incremental consumption during the freshet and incremental consumption across the billing year. To BC Hydro, it will appear that no shifting has occurred and it would be very difficult to understand whether the April drop in load is a result of shifting energy to the freshet, shifting energy to the expansion that began September 1st, a production issue or some other factor not tied to the incremental consumption in May.

The financial impact of shifting on non-participating ratepayers is expected to be small. Using the take-up range of 5 aMW to 30 aMW that BC Hydro discussed at workshop 10, the impact from shifting on non-participating ratepayers could range between $200,000[18] and $4.3 million.[19] The high end of this range represents a worse-case scenario as among other things it is based on the 30 aMW high bookend of the take-up range, and does not account for the wheeling charge. The impact from shifting is probably much less than this, because the most likely users of the rate (chemical producers and some large forestry producers) are consuming, on average, very close to 90 per cent of their respective CBLs and would be at risk of a

[18] Low end estimated assuming shifting results in a tier 1 revenue reduction: ($38/MWh Tier 1 rate - $20/MWh market price) * 2200 hours * 5 aMW.

[19] High end estimated assuming shifting results in a tier 2 revenue reduction: ($85/MWh Tier 2 rate - $20/MWh market price) * 2200 hours * 30 aMW.

downward adjustment in their RS 1823 CBL if they shifted any more than ~1 to ~3 per cent of their load into the freshet period.

BC Hydro introduced this new proposal at Workshop 12, and is awaiting comments on this topic (comments are due on August 14, 2015). In their Workshop 10 feedback forms, CEC and FNEMC advanced respectively the following as possible measures to mitigate risk to non-participants:

1. CEC suggests BC Hydro recover any losses from shifting from participating customers in the second year of the pilot. BC Hydro does not believe this is feasible because BC Hydro does not know the specific non-freshet time period in which the customer reduced load and, consequently, can't precisely measure the losses to non-participants[20]. Monthly baselines could be used to estimate a load reduction in the non-freshet period, but an assessment of whether the load reduction was associated with shifting vs. some other reason would be required. In addition, such baselines would turn the freshet rate into a seasonal TOU rate, which makes for a more complicated rate structure;
2. FNEMC recommends a cap, such as capping the amount of energy that can be shifted from the non-freshet to the freshet. BC Hydro considered capping the amount of shifted energy but reiterates that freshet take-up is expected to be small and there are practical limitations with measuring shifting as described on page 36 of this memo. To better monitor take-up of the freshet rate, BC Hydro is proposing to draft an additional evaluation report in Fall 2016 as shown in Table 5 below.

Evaluation criteria

The additional evaluation questions suggested by stakeholders are helpful and BC Hydro will include them as part of the proposed evaluation. In terms of report

[20] Despite this, as part of evaluating the Freshet Rate BC Hydro will make a concerted effort to identify shifting and to estimate financial impacts on non-participants, if any.

timing, after considering feedback from both Workshop 10 and Workshop 12, BC Hydro proposes the following:

Table 5 Freshet Pilot Reports

Report	Original BC Hydro Proposal	Revised proposal
Preliminary evaluation report	Fall 2017	*Report A*: Fall 2016 - Report take-up of the pilot in year 1 and identify total sales and revenue under the rate. *Report B*: Fall 2017 - Report take-up of the pilot in year 2 and identify total sales and revenue under the rate. Report the impact of shifting in Year 1, which BC Hydro can only do at the end of F2017.
Final evaluation report	Spring 2018 – after two full billing years have passed	*Report C*: Spring 2018 – summary of take-up and shifting over the two year pilot program.

3 Additional Stakeholder Comment on RS 1827 - Customers Exemption from Stepped Rates

There are two issues. The first concerns RS 1827, the Transmission Service rate for exempt customers. There are four exempt customers: City of New Westminster (**New West**), University of British Columbia (**UBC**), Simon Fraser University (**SFU**) and Vancouver Airport Authority (**YVR**), accounting for about 6 per cent of Transmission Service class sales. RS 1827 consists of a flat energy charge which in F2016 is 4.303 cents/kWh, and a demand charge that is the same as under RS 1823.

At Workshop 10, BC Hydro outlined why it proposed to continue with RS 1827. BC Hydro also reiterated its legal position with respect to RS 1827. As discussed above in this memo, subsection 3(1) of Direction No. 7 states that “[i]n designing rates for the authority's transmission rate customers, the commission must ensure that those rates are consistent with Recommendations #8 to #15 inclusive in the [Heritage Contract Report]”. The B.C. Government accepted

Recommendation #15,[21] which provides "[t]hat Aquila [now FortisBC Inc.], [New West] and UBC, as entities that distribute all or a significant portion of their load to others, be exempted from the application of stepped rates at this time and form a new rate schedule(s)". It is BC Hydro's view that the Commission cannot unilaterally transfer New West and/or UBC to RS 1823 or set a stepped rate for New West and/or UBC under its section 58 to 61 *UCA* rate setting power; instead, the Commission can only be given jurisdiction to review and make recommendations concerning this issue through a section 5 *UCA* inquiry review process, and only the Lieutenant Governor in Council can refer this matter to the Commission under section 5 of the *UCA*. At Workshop 10 BC Hydro communicated that the B.C. Government was considering this matter. The B.C. Government has since communicated to BC Hydro that it has no plans to refer the exemption for New West and UBC from stepped rates and their taking service under RS 1827 to the BCUC for a section 5 *UCA* review.

The Commission has jurisdiction under sections 58 to 61 of the *UCA* with regard to SFU and YVR. The Commission established their exemption from stepped rates in Commission Order G-10-06,[22] on the basis that SFU and YVR share similar characteristics to New West and UBC in that they distribute a significant portion of their load to others, and that exempting SFU and YVR is consistent with Recommendation #15.

The second issue concerns whether the four exempt customers and FortisBC should continue to be considered part of the Transmission Service rate class. As part of the Workshop 5 Consideration Memo, BC Hydro agreed with AMPC and Commission staff that rate class treatment of the four exempt customers and FortisBC is in scope for the 2015 RDA. BC Hydro outlined that it would examine the load characteristics,

[21] Heritage Contract Report, supra, note 3, section 3.4, pages 54 to 56, and section 3.6, pages 62 to 63.

[22] Copy available at http://www.bcuc.com/Documents/Orders/2006/DOC_10718_G-010-06_BCH_Transmission%20Service%20Rates.pdf.

service characteristics and other possible factors for creating a separate rate class for the four exempt customers and FortisBC. Among other things, BC Hydro would undertake a R/C ratio assessment for FortisBC, each of the four exempt customers and each RS 1823 customer to whether there is intra-class variability in R/C ratios. BC Hydro also committed that if it were to propose creating separate rate class(es) for FortisBC and some or all of the exempt customers, it would notify these parties and as part of the Workshop 12 feedback process, solicit comments on any proposal.

3.1 Participant Comments

On the subject of RS 1827, New West reiterates its Workshop 5 written comments that the issue of New West's exemption from stepped rates is outside the Commission's jurisdiction and therefore any changes to New West's exemption require the B.C. Government to order a section 5 *UCA* inquiry. New West states that there has been no material change to the circumstances which underpinned the B.C. Government's granting of the exemption to New West. New West advances that exemption from RS 1827 is a minor issue in the 2015 RDA; and that any change would have a minor impact on other ratepayers and little to no impact on conservation initiatives undertaken by New West. New West notes that it provided BC Hydro information on New West's historic and on-gong DSM efforts [this is included as Attachment 2 to the Workshop 5 Consideration Memo].

On the topic of whether some or all of the exempt customers should remain part of the Transmission Service rate class, New West comments that it understands BC Hydro will be undertaking further stakeholder engagement at Workshop 12. New West questions BC Hydro's proposal to look at individual R/C ratios for Transmission Service customers as part of its examination of factors for creating a separate rate class for the four exempt customers and FortisBC.

As part of the Workshop 5 feedback process, the other three exempt customers (UBC, SFU and YVR) took the position that a review of the reasons for exemption

should not be examined as part of the 2015 RDA. A common element of their respective responses is that application of RS 1823 or a stepped rate has not been required to induce investment in energy efficiency since a significant amount of DSM projects have been undertaken to date while receiving electrical service under RS 1827. These three exempt customers continue to take this position.

A few non-exempt customer participants commented on RS 1827 and/or the rate class issue:

- BCOAPO and BCSEA support BC Hydro's proposal to continue with the status quo RS 1827 rate. BCOAPO states that aside from the new BC Hydro-FortisBC Power Purchase Agreement (**PPA**) (BCOAPO is referring to the new PPA, approved in 2014, which BCOAPO advances is more aligned with RS 1823 than the previous (1993) PPA),[23] circumstances do not appear to have changed materially from when the decisions were made that the four exempt customers should take service under RS 1827;
- CEC agrees that RS 1827 should continue but adds the qualifier that the Commission should recommend to the B.C. Government that this be predicated on the four exempt customers undertaking what CEC refers to as "significant DSM initiatives" to continue to qualify for RS 1827. CEC refers to section 3.2 of the Workshop 5 Consideration Memo and in particular the evidence that the four exempt customers have undertaken DSM in the absence of a stepped rate, and states "[t]he interesting issue about price signal for conservation and efficiency is that conservation and efficiency improvement is less related to price than to culture";
- COPE 378 has no opinion on RS 1827 but states that it is surprised by BC Hydro's statement in Workshop 10 that switching the four exempt

[23] On 20 May 2013 BC Hydro applied to the Commission requesting approval to replace the 1993 PPA under RS 3808 with a new PPA. The Commission approved BC Hydro's application pursuant to BCUC Order G-60-14; http://www.bcuc.com/Documents/Proceedings/2014/DOC_41321_05-06-2014_BCH_PPA-RS%203808-TS-No-2-and-3_Decision.pdf.

customers to a tiered rate would have no impact on conservation efforts (in contrast to the BC Hydro's stated impact of RS 1823 on RS 1823 customers);

- AMPC continues to indicate that while it is not questioning RS 1827 itself, the issue of whether the four exempt customers and FortisBC should be considered part of the TSR rate class should be reviewed. AMPC argues that a separate wholesale class comprised of FortisBC and New West would allow for clear identification of their R/C ratios.

Commission staff ask whether a flat rate such as RS 1827 has been as effective as stepped rates in promoting conservation for large sophisticated customers whose characteristics are, among other things, re-selling of electricity. Commission staff believe that this may be relevant for considering rate structures for LGS and MGS customers.

3.2 BC Hydro Consideration

Continuation of RS 1827

In 2015 RDA Module 1 BC Hydro will propose continuing with RS 1827 (status quo) for the reasons set out in section 3.2 of the Workshop 5 Consideration Memo. In addition, as noted above the B.C. Government confirmed that it has no plans to refer the exemption for New West and UBC from stepped rates and their taking service under RS 1827 to the Commission for a section 5 *UCA* review, and accordingly there is no viable stepped rate alternative to RS 1827 for New West and UBC. BC Hydro also notes that no stakeholder opposes its proposal to continue with the status quo RS 1827 for all four exempt customers. BC Hydro agrees with BCOAPO that there does not appear to be any significant change in circumstance for any of the four exempted customers since their original exemption from stepped rates in 2006. All customers continue to resell energy to others.

Concerning COPE 378's observation, for UBC, SFU and YVR, exposure to stepped rates was not required to induce significant DSM efforts, and all three organizations

have developed a culture of conservation within their respective organization. For example, as part of their written feedback for Workshop 5, UBC indicated that since 2002, DSM efforts to date have resulted in savings of about 40 GWh annually, or about 13 per cent of load. Similarly, SFU indicated that since 2007, DSM efforts have resulted in electricity savings of 6 GWh per year and natural gas savings of 20,000 GJ per year. YVR indicated in their Workshop 5 feedback that despite its recent expansion and passenger growth their annual load has remained virtually unchanged over the past 5 years, and peak demand in 2014 was 5 per cent less than it was in 2009.

Rate Class

BC Hydro is using the following criteria to assess whether FortisBC and some or all of the four exempt customers should: (1) remain part of the Transmission Service rate class; or (2) be placed in new rate class(es) but continue receive service under their respective rates (RS 3808 in the case of FortisBC; RS 1827 in the case of the four exempt customers):

Question	**Criteria**
Is the cost of serving FortisBC and some or all of the four exempt customers meaningfully different than other Transmission Service customers?	- Load profile and load factor - Peak during the time of BC Hydro's winter peak - Customer size

Differences in the cost of serving different Transmission Service customers will be primarily driven by customer load shapes and usage during the winter peak periods.

Figure 7 of the Workshop 5 Consideration Memo compared the winter peak loads against load factor and showed that three of the exempt customers – UBC, SFU and YVR – are not that different from other Transmission voltage customers.

Accordingly, in the 2015 RDA BC Hydro will not be proposing to separate these three exempt customers from the Transmission Service rate class.

An argument can be made that FortisBC and New West are significantly different because they have much lower load factors (e.g., FortisBC has a load factor around 30 per cent and New West has a load factor of about 55 per cent) and have load shapes that are highly coincident to BC Hydro's system peak. BC Hydro also undertook a jurisdictional review of other Canadian electric utilities to determine how they treat sales to other utilities for COS/rate class purposes. FortisBC resells power to municipal utilities within its service territory and FortisBC identifies these utilities as a separate rate class within its COS study.[24] Other surveyed utilities have separate rate classes for "other utility sales" in their COS studies. An example is SaskPower's 2013 COS study and related 2014-2015-2016 Rate Application, which reports sales to City of Saskatoon and Swift Current as separate rate classes.[25] Finally, BC Hydro reviewed its prior COS treatment; in the 1991 COS, there was a separate rate class for West Kootenay Power and Light Company (now FortisBC).[26]

BC Hydro presented its proposal to create separate rate classes for FortisBC and New West at Workshop 12. BC Hydro communicated its proposal to New West and FortisBC beforehand. New West was notified on July 15, 2015; BC Hydro discussed its proposal and recommend that New West attend Workshop 12 (which it did). BC Hydro met with New West on July 29, 2015 to discuss among other things the proposal. BC Hydro notified FortisBC of its proposal on July 3, 2015. Since this was the first time BC Hydro presented this proposal, BC Hydro stressed at Workshop 12

[24] Refer to Appendix A, page 12 of FortisBC's 2009 RDA; http://www.bcuc.com/Documents/Proceedings/2009/DOC_23627_B-1_FortisBC%202009%20Rate%20Design%20Application.pdf. The Commission decided that all of FortisBC's wholesale customers should be a single rate class for COS purposes; *In the Matter of FortisBC Inc.: 2009 Rate Design and Cost of Service Analysis*, Decision, 19 October 2010, page 18; http://www.bcuc.com/Documents/Proceedings/2010/DOC_26325_FortisBC-2009-RDA_WEB.pdf.

[25] Section 4.0 of SaskPower 2014-2015-2016 Rate Application (October 2013); http://www.saskpower.com/wp-content/uploads/2014-15-16_rate_application.pdf.

[26] In 2004, Fortis Inc. acquired all the distribution, transmission and generation assets of the West Kootenay Power and Light Company and renamed it FortisBC Inc.

that this is a topic BC Hydro is specifically seeking feedback on with a due date of August 14, 2015. To assist with feedback, BC Hydro sent out the following table on August 6, 2015. BC Hydro will also seeks feedback on whether it's more appropriate to wait for the F2019 COS filing it proposed at Workshop 12 as that the potential impacts of creating separate rate classes for FortisBC and New West (such as possible rate rebalancing from F2020 onward if appropriate) will be better understood.

	DESCRIPTION	DISCUSSION
Alternative 1: Preferred	Create separate rate classes for both FortisBC and New Westminster in the COS study.	• It is common for other utility sales to be placed in a separate rate class in COS studies; • Previous BC Hydro COS studies considered other utility sales as a separate rate class; • The load profiles of both of these utilities resembles a residential customer rather than an industrial customer as load factors and R/C ratios are meaningfully different than the Transmission Service rate class average; • Both customers are large relative to the Transmission Service rate class average; • Enhances transparency; • BC Hydro proposes to create two separate rate classes because FortisBC has generation and a hybrid utility/customer relationship with BC Hydro while New Westminster has no generation assets and a customer relationship with BC Hydro.
Alternative 2	Create a combined "Other utility sales" rate class for these two utilities	• FortisBC's load factor is meaningfully less than New Westminster as FortisBC has the ability to access external markets and has its own generation while New Westminster purchases all of its power from BC Hydro; • Simpler than Alternative 1.

	DESCRIPTION	DISCUSSION
Alternative 3	Status quo – FortisBC and New Westminster remain in the Transmission Service rate class	• Simpler than Alternatives 1 and 2; • Removing these two utilities from the Transmission Service rate class has a small impact (+1.2%) on the remaining Transmission Service rate class R/C ratio; • The analysis on slide 40 of the Workshop 12 presentation showed that the differential between an individual customer's R/C ratio and the Transmission Service rate class average is greater for some customers (#12 and #13 on Slide 40) than it is for these two utilities (note that #12 and #13 are smaller than the two utilities)

4 Review of RS 1852, RS 1853 and RS 1880

At Workshop 10 BC Hydro again reviewed the three interruptible TSR rates:

- RS 1852 (Modified Demand) – First implemented in 2000,[27] and available at BC Hydro's discretion to Transmission Service customers in locations: (1) that are transmission constrained; and/or (2) market opportunities arise which allow for a different HLH time period. The energy charge is the same as RS 1823. The excess demand rate is the same as RS 1823 (7.341 $/k.VA) but the calculation under RS 1823 is modified to reflect a distinct morning and afternoon peak to define HLH;
- RS 1853 (IPP Station Service) – First implemented in 2001,[28] and available to IPP customers served at transmission voltage for forced outages, scheduled maintenance requirements and black-start re-energization of generators. Energy is provided on an 'as available' basis at Mid-C market rates. There is no demand charge associated with RS 1853 because the service is non-firm. There is a minimum monthly charge to recover costs incurred by BC Hydro under RS 1853; and

[27] Commission Order G-82-00.
[28] Commission Order G-12-01.

- RS 1880 (Standby and Maintenance) – Implemented prior to 1991, RS 1880 was originally designed as an ad-hoc service to complement RS 1821 (the default TSR prior to the creation of RS 1823). RS 1880 is available to Transmission Service customers with self-generation for the replacement of energy due to outages of the customer's on-site generation. Energy is provided on an "as available" basis at the RS 1823 Tier 2 price. There is no demand charge associated with RS 1880 because the service is non-firm. There is an administrative charge to recover the incremental costs incurred by BC Hydro resulting from a customer's request for service under RS 1880. This charge has been unchanged since it came into effect in early 2006.

BC Hydro noted that while there were a few questions concerning these three rates in the Workshop 5-related written feedback, to date no stakeholder had advocated for changes to any of the three rates. BC Hydro sought additional feedback on whether it should continue with the status quo.

4.1 Participant Comments

No participant disagreed that BC Hydro should continue with the status quo RS 1853 and RS 1880, including AMPC and Catalyst. The only issue identified concerned whether the energy charges for RS 1880 and RS 1853 should be aligned. Catalyst recommends that the two energy charges should be consistent "to provide the appropriate price signal for scheduling generator maintenance". BCOAPO comments that when viewed separately, the status quo appears reasonable for both RS 1880 and RS 1853 as in both cases there appears to be no real concerns expressed by customers. BCOAPO accepts the status quo because in the case of RS 1880, it was Transmission Service customers who requested the energy charge pricing on the basis that it produced a more stable (if higher) rate. COPE 378 has no comment except to state that it assumes the RS 1880 and RS 1853 administrative charges and other terms and conditions keep BC Hydro financially whole.

Regarding RS 1852, AMPC states that there is insufficient information to comment, and asks BC Hydro to reconcile RS 1852's two 4 hour daily peak demand periods with BC Hydro's statements that the daily peak period is 16 hours. Catalyst comments that it assumes RS 1852's two 4 hour daily peak demand periods are based on BC Hydro's planning data, and asks whether providing additional clarity on where RS 1852 is available might lead to greater take-up. CEC advances that RS 1852 should be explored and refined to better match BC Hydro's system demand issues.

BCUC staff have several comments on the three rates:

- BCUC staff state that RS 1880 appears to be beneficial to self-generating customers, although the 'as available' energy supplied at the RS 1823 Tier 2 rate is likely above cost. BCUC staff ask if whether, as part of the RS 1880 review, BC Hydro would agree that the recently approved shore power rate is in scope for the 2015 RDA. BCUC staff suggest that BC Hydro should assess whether the RS 1853 rate should be at RS 1823 Tier 2 like RS 1880;
- BCUC staff ask that BC Hydro evaluate the cost-benefit of maintaining RS 1852 given that only one customers is taking service under this rate, including whether there is likely to be additional up-take of RS 1852.

4.2 BC Hydro Consideration

RS 1880 and RS 1853

BC Hydro is proposing no changes to either RS 1880 or RS 1853 for purposes of the 2015 RDA except to increase the respective administration and minimum monthly charges to reflect inflation. As noted by BCOAPO, the status quo appears reasonable for both RS 1880 and RS 1853 as in both cases there appears to be no real concerns expressed by customers.

Concerning the possibility of amending RS 1880 to base the energy charge on a Mid-C hourly index to be consistent with RS 1853 or amending RS 1853 to base the energy charge on RS 1823 Tier 2 rate to be consistent with RS 1880, BC Hydro notes the following:

- On the one hand, there is an argument that the reference for the cost of providing energy for non-firm service is the spot market. As noted in section 4.3 of the Workshop 5 Consideration Memo, as part of the 2005 TSR Application BC Hydro proposed the Dow Jones Daily Mid-C indices (HLH and LLH) plus a 0.3 cents/kWh adder as a reasonable proxy for its opportunity cost of replacement standby/maintenance energy given that the amount of down time for customer's on-site generation is typically short (from a few hours to repair minor problems to a few weeks for maintenance work). The 0.3 cents/kWh adder was meant to cover what were likely to be minor fixed costs as well as administration costs.[29] The setting of RS 1880 was deferred to the subsequent TSR Outstanding Matters Application, in which BC Hydro stated that "some stakeholders are concerned about the potential volatility of the Mid-C prices, particularly given the inability to control the timing of forced outages and on-site generation".[30] Consequently, BC Hydro proposed that the RS 1880 energy charge should be the same as the RS 1823 Tier 2 price, and a $150 administration charge in lieu of an energy adder. Commission Order G-19-06 approved BC Hydro's RS 1880 proposal.[31] The 2013 Integrated Resource Plan (**IRP**) Mid-C spot market forecast price for 2020 is 3.3 cents/kWh, which

[29] BC Hydro 2005 TSR Application, page 1-34; http://www.bcuc.com/Documents/Proceedings/2005/DOC_7161_B-1_Transmission%20Service%20Application.pdf.

[30] Section 3.1 of the 22 December 2005 TSR Outstanding Matters Application, page 3-1; copy available at the 2015 RDA website under 'Resources': https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/2005-12-22-bch-ts-outst-mtrs-appl.pdf.

[31] http://www.bcuc.com/Documents/Orders/2006/DOC_10727_G-019-06_BCH_Transmission%20Service%20Outstanding%20Matters%20Appl.pdf.

compares to the F2016 energy charge of 8.503 cents/kWh for RS 1880.[32] Using the volume of RS 1880 electricity sales during F2015, annual revenues from RS 1880 electricity sales would decline by about $2 million dollars if a spot market price was used in place of the RS 1823 Tier 2 price;[33]

- On the other hand, basing the RS 1880/RS 1853 energy charges on the RS 1823 Tier 2 rate rather than lower spot market prices helps ensure that any additional incremental costs are recovered from customers using the non-firm services. While BC Hydro believes the respective RS 1880 $150 per incident administration charge and RS 1853 $41.37 (F2016) minimum monthly charge are reasonable, and while labour costs associated with administering these two rate schedules are minor, it is difficult to say with certainty whether these charges under or over recover actual labour costs.

BC Hydro also notes the following that put RS 1853 and RS 1880 into context. During F2014 30 transmission voltage IPPs took service under RS 1853. Total energy sales were 14.4 gigawatt hours (**GWh**) at an average price of $40.32 per megawatt hour, resulting in revenues of about $0.6 million. Users of RS 1853 are typically gas-thermal and wind generation IPP facilities; this is consistent with the fact that these facilities have greater service station requirements compared to run-of-river hydro plants when they are nor operating or when they are starting up generation. During F2014, 39.7 GWh of energy was sold under RS 1880 as a result of 287 customer plant planned and unplanned outages. Revenues associated with these energy sales were about $3 million.

BCUC staff ask if BC Hydro is amenable to including review of the three shore power rates (RS 1280, RS 1891 and TS 86, referred to as the **Shore Power Rates**) as part of 2015 RDA Module 1. BC Hydro is strongly opposed to this broadening of

[32] The RS 1853 energy rate is the sum over the billing period of the hourly energy consumed multiplied by the entry in the ICE Mid-C peak and Mid-C off-peak weighted average index price as published by ICE in the ICE Day Ahead Power Price Report that corresponds to the time when consumption occurred, during the hour.

[33] $85.03/MWh - $33.00/MWh] x 38,400 MWh ≅ $2 million.

the scope. At Workshop 1, BC Hydro identified two general categories of topics BC Hydro believes are out of scope for purposes of developing the 2015 RDA, one of which was matters recently reviewed by the Commission. Stakeholders generally agreed with this category. The Commission's June 25, 2015 decision[34] approving BC Hydro's application for Shore Power Rates clearly falls into this category given how recent the Commission review and Decision were. In addition, a second review of the Shore Power Rates would cause unnecessary uncertainty for Port Metro Vancouver and Prince Rupert Port Authority who made good faith requests for non-firm shore power service which underpinned BC Hydro's Shore Power Rates application.

RS 1852

With respect to AMPC's desire for more information, BC Hydro notes it set out the origin and mechanics of RS 1852 in section 4.2 of the Workshop 5 Consideration Memo.

BC Hydro agrees with CEC's comment that RS 1852 should be refined to better match BC Hydro's system demand issues. BC Hydro is of the view that the RS 1852 definition of HLH used for billing demand should be amended. RS 1852 came into effect in September 2000 and the HLH definition was designed around Vancouver Island's 'two peak' system load (6 a.m. to 10 a.m. and 4 p.m. to 8 p.m.). Vancouver Island is the only region in BC Hydro's service area that has this 'two-peak' system load. Currently, the South Peace is transmission constrained, and as illustrated in Figure 3 below, the South Peace does not have a two peak system load.

[34] BCUC Order G-111-15 and Reasons for Decision; http://www.bcuc.com/Documents/Proceedings/2015/DOC_43962_06-25-2015_BCH-Shore-Power-Decision_G-111-15.pdf.

Figure 3 South Peace Peak Demand Period

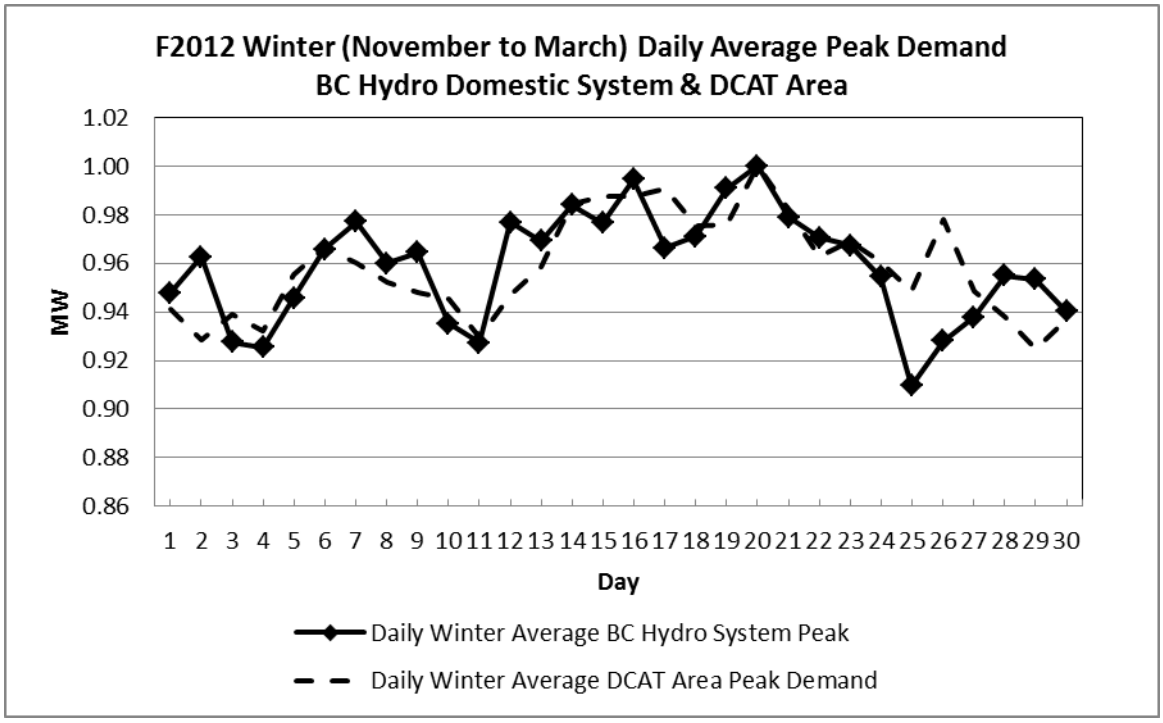


Figure 3 shows a unitized daily winter average peak demand for BC Hydro's domestic system relative to the substation and transmission customer loads that make up the 'Dawson Creek/Chetwynd Area' (**DCAT**, comprised of Dawson Creek and Groundbirch area). There is not much of a difference between the two profiles.

Areas that may be transmission constrained in the future include the Lower Mainland (depending on the number of liquefied natural gas proposals that proceed) and the North Coast/Prince Rupert region.

Accordingly, BC Hydro prefers to have discretion to determine the HLH period(s) that will apply based on customer location/region because transmission constraints change over time by location. BC Hydro would retain special condition 2 of RS 1852 to limit the amount that load can grow by, or shift into, LLH. The value of any curtailment to BC Hydro is expected to be greatest during the winter period. Thus BC Hydro would continue to choose the deadline to encourage interested customers to sign up before the winter period begins; the annual subscription period for new

subscribers is from September 1 to October 31. In response to Catalyst, BC Hydro proposes to retain the discretion currently part of the definition of HLH in RS 1852 ("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" [emphasis added]) but agrees that making customers aware of which regions are transmission constrained could in the future result in more take-up of RS 1852. Toward this end, BC Hydro met with AMPC on September 30, 2014 and CAPP on October 9, 2014 to discuss among other things whether there was interest in 'local' load curtailment program in the South Peace. Both AMPC and CAPP indicated limited interest in such a program, which in essence would be akin to RS 1852.

In response to BCUC staff, while only one Transmission Service customer has taken service under RS 1852 at any one time, BC Hydro believes there is value in maintaining RS 1852 as an option pursuant to which participating Transmission Service customers benefit from the availability of demand flexibility within the transmission limits set out in the Modified Demand Agreement (TS 54) during LLH at no incremental cost in exchange for mandatory demand reductions by the Transmission Service customer at BC Hydro's request. Maintaining RS 1852 is consistent with the B.C. Government's response to several 2013 Industrial Electricity Policy Review task force recommendations that "[a] rate design review process will be launched to examine ways to provide industrial customers with more options to reduce their electricity costs". In addition, the costs of administering RS 1852 are not materially different than the costs of administering an RS 1823 account.

BC hydro

2015 Rate Design Application

May 7, 2015 Workshop No. 10
Transmission Service Rates
Workshop No. 2
BC Hydro Summary and Consideration of Participant Feedback

Attachment 1

Workshop No. 10
Summary Notes

BC Hydro Rate Design Workshop

SUMMARY

7 MAY 2015 | 9 AM TO 12.30 P.M. | BCUC Hearing Room Vancouver

TYPE OF MEETING	RDA Workshop 10 – Transmission Service Rate Structures
FACILITATOR	Anne Wilson, BCH
PARTICIPANTS	BCUC staff, Canexus Corporation, Canfor, Catalyst Paper, Clean Energy BC, Commercial Energy Consumers Association of British Columbia (CEC), City of New Westminster (New Westminster), CLEAResult, Canadian Office and Professional Employees Union Local No. 378 (COPE 378), ERCO Worldwide, First Nations Energy and Mining Council/Linda Dong Associates (FNEMC), FortisBC Energy Inc. (FortisBC), Kruger Products LP, Midgard Consulting, Port Metro Vancouver, Simon Fraser University (SFU), Sinclair, Valard Power, Vancouver Airport Authority, West Fraser Mills
BC HYDRO ATTENDEES	Anne Wilson, Gordon Doyle, Craig Godsoe, Greg Simmons, Justin Miedema and Jeff Christian (Lawson Lundell)
AGENDA	1. Introduction 2. Rate Schedule 1823 3. TSR Voluntary Rate Options 4. Rate Schedule 1827 5. Next steps

MEETING MINUTES

ABBREVIATIONS

aMW…….Average Megawatt
BCH……..BC Hydro
BCUC……BC Utilities Commission
BPA…….Bonneville Power Administration
CBL…….Customer Baseline Load
COS……..Cost of Service
DSM……..Demand Side Management
EPAs…….Electricity Purchase Agreements
GWh…….Gigawatt hour
GS ……..General Service
HLH……..Heavy Load Hours
IEPR…….Industrial Electricity Policy Review
IPP……..Independent Power Producer
IRP…….BCH's 2013 Integrated Resource Plan
kW……..Kilowatt
KWh…….Kilowatt hour
LLH…….Light Load Hours
LGS…….. Large General Service
LRMC…..Long Run Marginal Cost
MGS…….. Medium General Service
MW……Megawatt
R/C……Revenue/Cost
RDA……..Rate Design Application
RIB …….. Residential Inclining Block
RRA……Revenue Requirement Application
RS……..Rate Schedule
RTP……Real Time Pricing rate
SCGT……Simple Cycle Gas Turbine
TS……..Tariff Supplement
TOU……Time of Use rate
TSR …….. Transmission Service Rate
UCA……*Utilities Commission Act*

The **March 2015 Memo** is referenced throughout the notes. This Consideration Memo can be found on the BCH 2015 RDA website as part of the October 22, 2014 TSR workshop materials.[1]

1. *Welcome*

Anne Wilson opened the meeting by reviewing the workshop outline set out at slide 2 of the Workshop 10 slide deck.

[1] http://www.bchydro.com/about/planning_regulatory/2015-rate-design/workshops.html.

BC Hydro Rate Design Workshop

SUMMARY 7 MAY 2015 9 AM TO 12.30 P.M. BCUC Hearing Room Vancouver

2. Presentation: Introduction

Gordon Doyle noted that the B.C. Government has no plans to refer the RS 1823 Tier 1/Tier 2 90/10 split to the BCUC for a section 5 UCA review. The B.C. Government is in the process of deciding whether to refer the RS 1827 to a section 5 UCA review.

Gord also provided an update on BCH's Transmission service three-year load curtailment pilot to commence on October 1, 2015. The load curtailment pilot is a DSM program and not a rate, and therefore will not be addressed in the 2015 RDA.

	FEEDBACK	RESPONSE
1.	**COPE 378** If the load curtailment pilot is not a rate, does BCH believe that no upfront BCUC approval is required?	Yes, BCH is of the view no up-front BCUC approval is required prior to commencing the pilot. The costs of the load curtailment pilot can be reviewed by the BCUC and stakeholders as part of the section 44.2 UCA DSM expenditure filing which would be filed with the BCUC sometime in 2016.
2.	**COPE 378** When would stakeholders be able to see the terms and conditions of the load curtailment pilot?	BCH is working with AMPC to finalize the terms of the pilot program. Once these discussions conclude, BCH will circulate copies of the pilot term sheet and later the generic contract to interested stakeholders. Individual pilot contracts will not be circulated as these would contain confidential financial and commercial information.
3.	**CEC** Was the $88/kW-year reference cost of a SCGT adjusted for the characteristics of load curtailment?	Yes, the pilot price will be adjusted down to account for the fact that load curtailment is not available all year. However, most of the capacity value from curtailing occurs in the peak winter months. If pilot participants curtail during these months as required, they will receive most of the value of a SCGT depending on the number of hours bid in.
4.	**BCUC staff** Does the $88/kW-year cost of a SCGT referenced in the load curtailment pilot include the cost of gas?	No. The $88/kW-year reference is a Unit Capacity Cost based on capital costs.

3. Presentation: RS 1823

Greg Simmons provided an overview of the three issues reading RS 1823: (1) the Tier 1/Tier 2 90/10 split; (2) pricing principles for F2017-F2019 and the related issue of bill neutrality/forecast revenue neutrality; and (3) the demand charge.

	FEEDBACK	RESPONSE
1.	**COPE 378** Is BCH concerned if all TSR customers favor the Tier 1/Tier 2 90/10 split?	BCH favors maintaining the Tier 1/Tier 2 90/10 split for a number of reasons including TSR customer support, which is part of the Bonbright customer understanding and acceptance criterion. Refer to Pages 8 to 10 of the March 2015 Memo for more information.
2.	**BCOAPO** Has BCH done a Bonbright assessment of a Tier 1/Tier2 80/20 split?	Yes. Refer to slides 9 and 10 of the Workshop 10 presentation deck and the March 2015 Memo, pages 8 to 9. It is not clear a Tier 1/Tier 2 80/20 split is more efficient given that the Tier 1 price is lower than with a Tier 1/Tier 2 90/10 split and the lack of increased conservation (with the 80/20 split cannibalizing existing TSR DSM programs, albeit at potentially lower cost), and the Tier 1/Tier 2 80/20 split does not fare well on the Bonbright customer understanding and acceptance criterion given TSR customer opposition.

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3.	**BCSEA** It appears that moving to Tier 1/Tier 2 80/20 split would be more cost-effective than a Tier 1/Tier 2 90/10 split and TSR DSM programs because rate structures are lower cost than DSM programs. How does BCH decide whether something is a program vs. a rate structure?	Rates are often less costly than programs; however, rate structures are blunt instruments and programs give BCH and TSR customers greater flexibility to tailor to the specific TRS customer requirements/facility.
4.	**BCUC staff** Staff agree with BCH's position that the B.C. Government has no interest in the BCUC reviewing the Tier 1/Tier 2 90/10 split if it does not refer the 90/10 split to the BCUC per section 5 of the UCA.	
5.	**BCUC staff** Why would BCH move to target revenue neutrality? Is there any additional conservation?	BCH believes there would be no change in conservation if forecast revenue neutrality was used. Conservation savings are tied to the pricing principles which are discussed on slides 12 to 14. TSR customers have already achieved significant conservation savings under the bill neutrality method and TSR customers have indicated that they strongly prefer the status quo bill neutrality definition.
6.	**CEC** Can BCH expand on the impacts to other customers if a different revenue neutrality method is chosen?	Refer to the pricing principles slide 14 where this information is provided. In addition, the October 22, 2014 workshop presentation slide deck had a numerical example showing potential impacts on other ratepayers.[2]
7.	**BCSEA** Did BCH test different ways to set Tier 1 under a 80/20 split?	No. For purposes of the 2013 IRP, BCH followed the directives of HC2,[3] the predecessor of Direction No. 7, which by reference to Heritage Contract Report recommendation #8 requires that Tier 1 be derived from Tier 2 and achieve to the extent reasonably possible, revenue neutrality.
8.	**FNEMC** Revenue neutrality for other customer rate classes is calculated using forecast revenue neutrality. Is there inconsistency with having RS 1823 based on bill neutrality?	By increasing both Tier 1 and Tier 2 by the general rate increase (Option 1 on slide 12), BCH's preferred pricing principle is consistent with the 2013 RIB Re-pricing Application and forecast revenue neutrality. As noted on slide 12, Option 1 is modified in F2017 only for the purpose to ensure Tier 2 is set within BCH's energy LRMC range. There are minimal differences between the bill neutral ($2 million shown on slide 14 which represents 0.3% of TSR revenues) and forecast revenue neutral approaches. As noted in BCH's response to Question 5 above, there is no additional conservation from the forecast revenue approach. BCH believes the existing bill neutrality method is simpler for TSR customers to understand and for BCH as it relates to CBLs. Although consistent methodologies between rate classes are desirable, BCH believes that selecting pricing principle Option 1 largely addresses this issue.

2 Refer to slides 16 to 20 of the Workshop 3 presentation slide deck; http://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/2014-10-22-bch-rda-tsr-1-wkshp.pdf.

3 Heritage Special Direction No. HC2 to the BCUC, B.C. Reg. 158/2005, repealed by Direction No. 7, B.C. Reg. 28/2014; copy of Direction No. 7 available at https://www.canlii.org/en/bc/laws/regu/bc-reg-28-2014/latest/bc-reg-28-2014.html.

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9.	**BCOAPO** Why would BCH use the lower end of LRMC for RS 1823 Tier 2 pricing but use the upper end of the range of LRMC in the RIB rate?	BCH tested moving Tier 2 to the upper end of the LRMC range through pricing principle Option 3, but Option 3 performs worse on all Bonbright criteria except perhaps efficiency as compared to pricing principles Options 1 and 2. It is uncertain whether Option 3 would deliver increased conservation as compared to Options 1 and 2. Refer to the March 2015 Memo, page 18. Under almost all scenarios Step 2 of the RIB rate is higher than the upper end the LRMC range. This occurs, in part, because the RIB rate recovers distribution costs, which are not applicable to transmission voltage customers.
10.	**COPE 378** Why does BCH prefer pricing principles Option 1?	Option 1 performs better under the Bonbright criteria of customer acceptance and rate stability. There is little difference between Option 1 and 2 in terms of under-recovery ($2 million or 0.3% of TSR revenues, which were about $700 million in F2014).
11.	**ERCO Worldwide** Does the TSR energy charge cover any demand costs?	Yes, the TSR energy charge recovers some demand-related costs. You can roughly think of the TSR energy charge as recovering generation energy and demand costs, and the demand charge recovering transmission cost. In F2016 transmission costs are about $172 million while demand revenue is $176 million. However, a significant portion of generation costs in the COS study is demand related. BCH estimates that the F2016 RS 1823 demand charge would recover 65% of demand related costs with the balance recovered by the energy charge.
12.	**CEC** If there is a shortfall, how would it be recovered?	From a big picture standpoint, there is no shortfall as the R/C ratio for the transmission rate class is 101.5% in the draft F2016 COS study. To the extent there's a difference between forecast revenues and actual revenues, the difference would be captured in the non-heritage deferral account.
13.	**BCOAPO** On slide 11, the revenue differences are relatively small. Is bill neutrality more than 5%?	No, because the revenue forecast is not based on the Tier 1/Tier 2 90/10 split and is instead derived using an actual forecast of Tier 1 and Tier 2 purchases.
14.	**COPE 378** In COPE 378's view, the fact the TSR R/C ratio is greater than one is not a strong basis to defend the use of different pricing principles or definitions of revenue neutrality between rate classes. Does BCH agree?	The differences between pricing principles Options 1 and 2 are relatively small with little to no difference in conservation savings. BCH sees no compelling reason to deviate from the pricing principles used in Direction No. 6 as they have TSR customer support and have minimal impacts on other ratepayers. BCH believes the TSR R/C ratio is relevant when assessing whether other customer classes are harmed by a particular rate design.

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4. Presentation: Freshet Rate and Other TRS Rate Options

Justin Miedema used system characteristics and market prices to explain why BCH believes the May to July freshet period is most appropriate. Justin then walked through a variety of topics including: BCH's proposal for a two-year fresher rate pilot, two product options for the rate, possible baselines, estimated benefits to participating customers and non-participating customers, the impacts of shifting, take-up, and possible evaluation reports submitted to the BCUC at the end of the pilot.

Justin also explained why BCH proposes no changes to the existing RS 1825 TOU rate, and opposes RTP and retail access at this time but is seeking further feed-back on RTP.

	FEEDBACK	RESPONSE
1.	**BCSEA** Why are IPP inflows not much higher during the freshet? How are IPPs paid for their freshet energy?	On a percentage basis, IPP inflows increase more than the BCH heritage hydroelectric system during the freshet. In January IPP inflows equate to about 900 GWh per month and reach a peak of about 1800 GWh per month during the freshet period. ***Revised Response*** BCH uses a 3 X 12 table to shape EPA pricing by time of delivery; this was done for example for the 2009 Clean Power Call. IPPs are generally paid less than their EPA bid price for energy delivered during the freshet period. There was a freshet specific limitation as part of the 2009 Clean Power Call: delivery of firm energy in system freshet could not exceed 25% of total annual firm energy contracted.
2.	**BCSEA** Does the freshet rate conflict with DSM?	No. BCH addressed this in its response to Question 7 of the freshet rate portion of the summary notes for the October 22, 2014 TSR workshop. Refer to Attachment 1 to the March 2015 Memo. BCH generally undertakes DSM to achieve a firm reduction in load. DSM savings are subtracted from the load forecast, which helps defer the need for future infrastructure. The freshet rate is different because incremental load is entirely non-firm, both on energy and capacity, and it will not be included in BCH's load forecast and will not advance the need for future infrastructure. In addition, DSM is typically focused on achieving a continuous reduction in load, on a year round basis, across multiple years while the proposed freshet rate is focused on incremental load, over a three-month period, for the duration of a two-year pilot.
3.	**FNEMC** Would incremental consumption be confined to the freshet period?	Yes. Providing customers with market prices for their incremental consumption year round is a RTP rate, which BCH does not support for the reasons discussed on slide 40. Note in particular there are likely to be negative impacts to non-participating ratepayers with a TSR RTP, in contrast to the proposed freshet rate. Furthermore, a year round rate could require monthly baselines to measure incremental consumption, which would complicate the rate.
4.	**BCSEA** Does BCH expect customers to reduce their RS 1823 purchases if they choose the freshet rate?	This is a possible outcome from the freshet rate. Customers could reduce their RS 1823 purchases in non-freshet months, shift their load, and consume more during the freshet period. With shifting, there is no net change in the customer's annual consumption.

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5.	**BCOAPO** How does additional freshet load increase the ability to import more? How would excess production during the freshet be measured?	If BCH is in a net import position, which often occurs during low cost LLH periods, incremental load may be served by additional imports from the U.S. market. A baseline would be established based on the TSR customer's "normal" consumption in previous freshet periods. Incremental consumption above the baseline would be eligible for the freshet rate.
6.	**CEC** Can BCH provide a similar table to the one on slide 23, except for imports?	Such a table will be 1 minus the percentage of hours with exports. BCH is rarely in a zero MW net import or export position because it has numerous interconnection points with the U.S., Alberta and FortisBC.
7.	**FortisBC** What is the expected take-up range for the rate?	This is discussed on slide 38.
8.	**COPE 378** Will there be cost shifting under this rate? Can the rate be neutral for other ratepayers?	By creating a non-firm freshet rate, BCH ensures that no resources are acquired to serve any incremental freshet load; service will be on as available basis and TSR customers will be interrupted if BCH does not have available energy and/or capacity. Furthermore, the incremental load will not be included in BCH's load forecast. During the freshet, BCH is often exporting power to the U.S. market (refer to slide 23). If BCH can sell non-firm power to TSR customers for a price at or above the U.S. market price, the transaction can be neutral or even beneficial for other ratepayers and there should be no cost shifting.
9.	**BCUC staff** The load curtailment pilot could benefit other rate classes to the extent there's a reduction in generation capacity costs. Can BCH demonstrate any benefits for non-participating customers with the freshet rate?	Yes. BCH is seeking feedback on the inclusion of a U.S. wheeling charge that would apply in all hours to create a net benefit for non-participating customers and simplify application of the rate (applying the fee only in hours with net imports would be administratively more complex and there be no direct benefits to non-participants). Wheeling costs are "sunk costs" in that Powerex already owns long term firm import transmission from Mid-C to the U.S. border. The wheeling fee would ensure there's a notional contribution from users of the freshet rate towards these costs during times of import. During times of export, the fee would be to the benefit of non-participating customers.
10.	**CEC** Is BCH seeking feedback on freshet rate product options 1 and 2? CEC noted that product option 1 would be difficult for customers. CEC is interested in a freshet rate for GS customers.	Yes. BCH is planning to address GS rate options as part of RDA Module 2 but will note CEC's interest at the June 25, 2015 GS rate workshop. Page 46 of the March 2015 Memo responds to a previous suggestion from the CEC to broaden availability of the freshet rate. The reason why BCH is addressing TSR rate options as part of Module 1 is because such options have been already explored through the 2013 IEPR. In addition, there is significant uncertainty with respect to the LGS and MGS default rates, and BCH's view is the LGS and MGS default rates must be known through a BCUC decision on Module 1 before GS rate options are pursued.
11.	**BCOAPO** How will incremental production be determined?	Baselines will be used to measure "normal" freshet consumption. The four baseline options are discussed starting on slide 27.

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12.	**BCUC staff** Would average prices apply under product Option 1? Staff notes that product Option 1 would be more complicated than product Option 2 if baseline Option 2 is chosen. BCUC staff note that baseline Option 3 works best for product Option 2.	Yes.
13.	**CEC** Would the daily HLH and LLH prices be applied to each hour in the day?	Yes.
14.	**CEC** Are there any impacts on Powerex's trading ability?	On slides 25 and 26 BCH suggested TSR customers could advise of any large increases in freshet purchases, 48 hours in advance, so this can be reflected in BCH's trade behavior. On slide 38, BCH indicated that freshet take up is expected to be between 5 aMW and 30 aMW, between 0.1% and 0.5% of the 5,500 aMW of system load during the F2014 freshet. As a result, BCH anticipates no meaningful impacts on trading ability.
15.	**Canfor** Would there be separate baselines for HLH and LLH under baseline option 3?	Potentially yes as this could encourage customers to shift consumption within the freshet from HLH to LLH periods, even without a net increase in freshet energy consumption. However, RS 1823 billing is already complicated and BCH will further investigate the feasibility of using separate HLH and LLH baselines.
16.	**BCSEA** Would the principles of TS 74 be used to adjust CBLs over time?	Yes, BCH could apply the principles of TS 74 to establish the initial freshet period baselines and to maintain them over time.
17.	**BCOAPO** Why would BCH wait until the end of F2016 before selecting the freshet baseline period?	BCH would wait until the end of the F2016 freshet period (i.e., July 31, 2015) so it can evaluate the most appropriate period of "normal" freshet consumption.
18.	**FortisBC** Would transmission losses be recovered under the rate?	The wheeling fee would recover transmission associated with importing power to serve incremental freshet load. Any incremental transmission losses associated with the freshet rate are expected to be small. If the incremental energy is imported from the U.S., the wheeling distance (and associated losses) is likely small, especially if chemical plants are the primary users of the freshet rate. Furthermore, charging the wheeling fee in all hours would likely more than cover any incremental loss costs associated with using the freshet rate.
19.	**BCSEA** Would 1 MW of incremental usage equate to about 9 GWh? With reference to BCH's average 5 MW to 30 MW range of incremental freshet load, what is the corresponding incremental energy?	No, the freshet rate would only apply for a three-month period (about 2200 hours) so 1 MW of incremental average consumption equates to about 2.2 GWh. The corresponding energy gain is: • 5MW * 730 hours * 3 months = 10.9 GWh/year; • 30 MW * 730 hours * 3 months = 65.7 GWh/year.
20.	**BCOAPO** Would the freshet rate have an administration charge?	BCH will consider this option, but administration costs are likely comparable to RS 1823 if the baseline principles follow TS 74. Furthermore, the billing system already uses Mid-C price information to bill IPPs on RS 1253 and RS 1853.

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21.	**FNEMC** How would gains to non-participants be accounted for in BCH's revenue requirement?	When BCHs revenue requirement is created using a forecast of customer sales and revenues by rate classes. BCH's forecasts for F2017 and beyond will be prepared in fall 2016 and they may include additional loads and revenues expected under the freshet rate. If actual freshet load and revenues are different from these forecasts, the variance would be captured in the non-heritage deferral account. If the freshet rate includes features that benefit non-participating customers (i.e., a wheeling fee applied across all hours whether BCH is importing, exporting, or using storage to serve incremental freshet energy), the revenue from such a fee could be estimated and BCH could use actual, after-the-fact net import/export behavior to estimate the proportion of the revenue that's to the benefit of non-participants.
22.	**COPE 378** Isn't it ironic for BCH to pursue DSM and have a rate that encourages incremental energy use?	DSM reduces firm load while incremental energy under the freshet rate is non-firm and does not add to BCH's resource needs. Refer to the response to Question 2 above from BCSEA in this freshet section of these workshop notes.
23.	**BCOAPO** Shifting makes sense but would BCH consider imposing a premium to ensure non-participating customers benefit?	BCH could consider this, but BCH will not know when shifting is happening. Monthly or seasonal baselines, across the entire non-freshet period (9 months of the year), would be required to measure when reductions in load occur and the financial impacts on non-participants. This would complicate the rate. Multiple customers have advocated for keeping the rate understandable and reasonably simple given that it's being done on a pilot basis and is being designed to be neutral or even beneficial to non-participating customers.
24.	**BCSEA** Do other jurisdictions have similar "freshet type" rates?	Manitoba Hydro has a surplus energy program. The purpose of that program is to sell power to customers for the same price that Manitoba Hydro would otherwise receive on the export market, thereby making the transaction financially neutral to the utilities' other ratepayers. Refer to Table 4 on page 23 of the March 2015 Memo.
25.	**Canfor** Do other jurisdictions have time differentiated rates?	Generally speaking, other Canadian utilities similarly situated to BCH (vertically integrated monopolies) do not offer industrial customers time-differentiated rates such as TOU or RTP. Nova Scotia Power offers a RTP. Manitoba Hydro is exploring a TOU rate. The most common industrial rate option in such jurisdictions is an interruptible rate option. Refer to Table 4 on page 23 of the March 2015 Memo.
26.	**New Westminster (ClearResult)** Is it true that BCH collects no revenue if energy is spilled?	Yes, the value of spilled energy is zero. Provided market prices are positive, BCH would rather generate than spill water on the hydroelectric system. When market prices are negative, BCH will avoid exporting if possible and may use spills to mitigate any over supply of water. On certain reservoirs, spilling can have some negative environmental impacts; however, the impact from spills on the BCH system (as a whole) is primarily a financial one.
27.	**New Westminster (ClearResult)** Would the wheeling charge be a Point to Point transmission charge?	The wheeling charge would recover a share of the long term firm Point to Point transmission cost that Powerex already owns (and pays for) on the BPA system from Mid-C to the U.S.-B.C. border. This Point to Point transmission enables imports from the U.S. market into B.C.

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28.	**FNEMC** If there was an intertie constraint that prevented BCH from supplying freshet energy, how much notice would be given of the curtailment constraint? 48 hours?	BCH has requested 48 hours' notice for large increases in freshet load to reflect the additional load in trading decisions made on the day ahead market (where most trading occurs). If there is an intertie constraint on the U.S.-B.C. intertie, BCH will notify freshet customers if it needs to interrupt the incremental load.
29.	**BCUC staff** Will BCH quantify impacts on non-participating customers?	Yes, the evaluation reports will contain an estimate.
30.	**BCUC staff** A pilot freshet rate seems like the right approach. BCH should avoid making it too complicated and identify any weaknesses as well.	Agreed.
31.	**Sinclair Forest Products Group** Could a customer with a load displacement contract decrease their generation to take advantage of this rate?	Probably not. Page 41 and 42 of the March 2015 Memo contain an example showing that a turn down of contracted generation is unlikely to benefit customers with EPAs because it would reduce their sales to BCH.
4.	***Presentation: Other Existing TSR rates: RS 1827, RS 1852, RS 1853 and RS 1880***	
	Greg Simmons explained that there are legal restrictions preventing the BCUC from moving University of British Columbia and New Westminster from RS 1827 to RS 1823 or a stepped rate as a result of section 3 of Direction No. 7, which references Heritage Contract Report #15. Greg indicated that BCH is examining the rate class treatment of the four exempt RS 1827 customers and FortisBC and will report back to stakeholders at a workshop scheduled for the end of July to solicit feed-back. BCH's initial observations on the rate class topic are found in section 3.2 of the March 2015 Memo. Greg also discussed RS 1852, RS 1853 and RS 1880.	
32.	**CEC** Does BCH have an estimate of DSM savings for each customer on RS 1827?	Yes, all customers on the RS 1827 rate have undertaken DSM initiatives. Refer to section 3.1 of the March 2015 Memo.
33.	**AMPC** Is BCH planning to create a separate rate class for New Westminster and FortisBC?	BCH has not made a final determination and is assessing intra-class variability for the TSR and GS rate classes. For example, BCH grouped customers by industry and calculated R/C ratios for chemical producers and terminals. BCH is considering calculating R/C ratios for each transmission voltage customer to better assess intra-class variability and report back to stakeholders at the July 30, 2015 workshop.
34.	**Catalyst paper** Can a customer continue to take service under RS 1852 if a transmission constraint is resolved?	BCH would reassess whether the TSR customer should remain on RS 1852.
35.	**BCUC staff** How many customers are on RS 1852 and what's the size of the load?	Currently, there is one customer taking service under RS 1852 and the customer accounts for between 4% and 6% of TSR sales. BCH cannot give a more precise load estimate to protect customer confidentiality.
36.	**Canfor** Why is the RS 1853 rate based off Mid-C market prices?	The rate is non-firm and similar to RS 1880 which provides non-firm energy to self-generating customers. In the case of RS 1880, BCH originally proposed to set the rate off Mid-C market prices, but customers preferred using Tier 2 prices.

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37.	**CEC** Do any other customers get Mid-C prices?	Currently, IPP customers on RS 1253 and RS 1853 have rates priced off market prices. Non-firm energy sold to IPPs should be priced off the mid-C market because non-firm energy from the IPPs is typically sold to BCH at a Mid-C market price. This ensures that non-firm energy is consistently valued whether it flows from BCH to the IPP or from the IPP to BCH.

5. Next Steps

Anne Wilson thanked everyone for making the time to participate in the workshop and reviewed the ways that feedback can be submitted to BCH. ***Note to Readers:*** the 30-day written comment period starts on May 26, 2015 with the posting of these summary notes.

Gordon Doyle high-lighted the two timing issues associated with TSR: (1) BCH will seek a BCUC order as part of 2015 RDA Module 1 that the freshet rate pilot be approved on or about January 15, 2016 to ensure the pilot is in place for the 2016 freshet period; and (2) RS 1823 pricing principles expire on April 1, 2016.

BC hydro

2015 Rate Design Application

May 7, 2015 Workshop No. 10
Transmission Service Rates
Workshop No. 2
BC Hydro Summary and Consideration of Participant Feedback

Attachment 2

Workshop No. 10
Feedback Forms

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	Wherever possible, rate designs should be based on a targeted level of revenue from each class as informed by revenue to cost (R/C) ratios that are the generally accepted measure of interclass transfers and the primary purpose of conducting a FACOSS. The regulator may establish target R/C ratio bandwidths (e.g.within 95% to 105% of full cost recovery) and from time to time legislation may even direct particular R/C ratios by rate class. As a practical outcome however, residential classes are typically allowed to remain at or below the bottom of any allowed range, with small to medium general service customers at or above the top of such ranges. There seems to be a universal acceptance transfers between these classes that date back to the original utility franchise agreements. In contrast, large industrial rates are rarely targeted at anything other than 100% cost recovery, as their size, energy intensity and competitive market conditions do not allow any margin to over or under recover costs. In the event of an interim increase intended to have the same percentage impact on all classes, the simplest and fairest approach is to apply that overall increase percentage "across the board" to each element of every rate class, including both energy rates where they are tiered. "Revenue neutrality" increase calculations by rate class are an unnecessary complication that do nothing to assist fairness or reduce existing interclass transfers in the base rates. The current definition of revenue neutrality resulting in bill neutrality when consumption is equal to the customer baseline load most closely resembles the fair "across the board" approach described above. The alternative neutrality definition based on revenues achieved for each class is unacceptable as it unfairly results in "clawback" penalties imposed on rate classes that successfully conserve energy in response to the marginal energy price signal.

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	Option 1 is the only reasonable approach and no other option need be advanced for consideration. RS 1823 Tier 2 is a forecast approximation of the theoretical long run marginal cost (LRMC) - just as it is for other rate classes where a similar GRI debate does not arise. LRMC is not well defined in the rate design context, and is usually replaced by a somewhat arbitrary and often contentious proxy such as an RFP for specific IPP sources. BC Hydro has frequently acknowledged that LRMC will vary significantly over time with changes in market, technical and legislative conditions (eg restrictions on gas use and market purchases) and that a reasonable estimate for rate-making purposes could vary by 30% or more in the interval between RDAs. Hopefully this margin exceeds by an order of magnitude any interim GRI made between full rate design applications. There is nothing sacrosanct, fixed or mathematically constant about the level chosen for Tier 2, and it therefore serves no useful purpose to hold this one rate design variable as a constant in any general rate increase calculation.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	Yes

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	Yes
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	Yes
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	Yes
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	The preferred option is one that allows a flow-through of market energy prices as close to real time as possible.

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	It is not clear why it would be reasonable to add a BPA wheeling fee if the source of the freshet energy is over-supply within BC, and the alternative to a freshet sale would be an export sale to Mid-C where wheeling charges could be incurred or to spill the water. In other words the wheeling fee appears to be an avoided cost of the freshet rate and a credit – not an incurred cost. A floor price of $0/MWh is reasonable if it is assumed that BC Hydro would never sell and would hold or spill when the market price is negative.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	The issue of effective price signals and baselines are complex and require more work. It is too early to comment on the efficacy of these two approaches.
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	Yes, to the extent that the shift provides a system benefit.
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	It would be most consistent with conservation rate design methodology to value a load reduction at the Tier 2 rate, regardless of it being deemed a specific DSM measure or otherwise.
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	A major role of the pilot is to evaluate the take-up. Comments at this stage would be premature.

Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	No

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	Yes
Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	The continuation of the exemptions seems to be a matter of legislation and not customer opinion. If the exempt customers are to continue on a flat rate by legislative fiat, then it is only reasonable to do so on a separate wholesale rate where their revenue to cost ratios can be clearly identified, and their rate design appropriately customized to their needs and characteristics.
B. RS 1880 – Standby and Maintenance Supply	

BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	Yes
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	Yes
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	There is insufficient information to comment. Please reconcile the two separate 4 hour daily peak demand periods of RS 1852 with BC Hydro statements made elsewhere that the daily peak period is an irreducible single one of 16 hours.

Additional Comments:

CONSENT TO USE PERSONAL INFORMATION

I consent to the use of my personal information by BC Hydro for the purposes of keeping me updated about the 2015 RDA. For purposes of the above, my personal information includes opinions, name, mailing address, phone number and email address as per the information I provide.

Signature:_____ Date: _____

Thank you for your comments.

Comments submitted will be used to inform the RDA Scope and Engagement process, including discussions with Government, and will form part of the official record of the RDA.

You can return completed feedback forms by:

Mail: BC Hydro, BC Hydro Regulatory Group – "Attention 2015 RDA", 16th Floor, 333 Dunsmuir St. Van. B.C. V6B-5R3

Fax number: 604-623-4407 – "Attention 2015 RDA"

Email: bchydroregulatorygroup@bchydro.com

Form available on Web: http://www.bchydro.com/about/planning_regulatory/regulatory.html

Any personal information you provide to BC Hydro on this form is collected and protected in accordance with the ***Freedom of Information and Protection of Privacy Act***. BC Hydro is collecting information with this for the purpose of the 2015 RDA in accordance with BC Hydro's mandate under the ***Hydro and Power Authority Act***, the BC Hydro Tariff, the ***Utilities Commission Act*** and related Regulations and Directions. If you have any questions about the collection or use of the personal information collected on this form please contact the BC Hydro Regulatory Group via email at: bchydroregulatorygroup@bchydro.com

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization: Sarah Khan and Erin Pritchard, on behalf of BCOAPO *et al.*

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic / Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	BCOAPO continues to favour the use of a common definition of "revenue neutrality" for all classes. Given that Revenue Neutrality on a Forecast Basis is used for all other classes, the same approach should be used for the RS1823 Class. Furthermore, as RS1823 customers currently consume at 95% of their CBLs on an overall basis (May 7th, Slide 9), BCOAPO finds it difficult to understand both the comment (Slide 10) that the revenue differences are "small" between this approach and Option 1 calculations as well as the revenue impact differences shown in Appendix 4 of BCH's October 2014 Summary and Consideration of Participant Feedback Memo.

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	First, in BCOAPO's view a standard approach with regard to the reference LRMC should be used in establishing the applicable Tier 2 rates for all customer classes, recognizing that there will be differences in the reference LRMC value by class due to differences in such matters as the loss factors applicable to each class. Also, there should be a standard approach used for all customer classes as to whether or not avoided costs for Transmission and Distribution will be included in the determination of the reference LRMC for those customer classes with tier 2 rates – recognizing that some classes also pay demand charges. Finally, to the extent there is a range of values associated with the LRMC for each customer class, a serious attempt should be made to have the tier 2 rates for all classes set on a comparable basis with reference to this range (e.g. all set at the lower end, upper end or mid-point). It is BCOAPO's understanding that, based on these principles, the Tier 2 rate for the RS1823 class is low relative to Residential Tier 2 rate. As a result, Option 1 is preferred over Option 2 as the Tier 2 will increase at a faster rate and, in doing so. more quickly align itself over time with the basis for the referenece rate applied to the Residential class. (Note: This assumes BC Hydro maintains its current view regarding the setting of the Residential Tier 2 rate and does not propose to reduce it). With respect to Option 3, while it would align even more quickly the RS1823 and Residential Tier 2 rates based on their relative LRMC reference values, the revenue shortfalls are considerably more significant using BC Hydro's definition of "revenue neutrality" and individual customer bill impacts would be materially greater. Given these considerations, Option 1 is also preferred over Option 3 at this point in time.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	BCOAPO agrees. In doing so, BCOAPO assumes that the High Load Hours align not only with BC Hydro's generation capacity requirements but also the timing of its Transmission system capacity requirements and that there are no parts of the transmission system where load in other hours would be defining "capacity requirements".

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	BCOAPO notes that at this stage BC Hyrdro is proposing a two-year pilot to "test" the concept of a Freshet Rate. Given this context, BCOAPO agrees that there could be merit in a Freshet Rate to "help" deal with surplus energy during freshet periods and that the rate in worthy of further consideration, including a pilot project. However, participating customers must be aware that it is only a pilot and therefore the future of the rate and the currently proposed terms & conditions are by no means assured.
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	BCOAPO agrees with the proposed 3-month period on the basis that it represents those months where the Mid-C prices are generally low AND system energy exceeds load. In doing so. BCOAPO notes (see slide 21) that historically the mid-C HLH prices in July have been materially higher than those in May or June and, indeed, approximate those in the other hours of the year.
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	Yes.

Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	Based on current information, BCOAPO favours Option 2 over Option 1. BC Hydro should not have to engage in hedging activities (with the associated administration costs) to protect itself against differences between forecast and actual under such a "voluntary" rate. Also, the rate derivation is less transparent if it includes a "markup" for hedgeing activities . Furthermore, use of Option 2 is more likely to reduce the risk of losses and produce benefits for other ratepayer classes from the program.

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	Yes. These two provisions are the only ones that ensure BC Hydro's benefit exceeds that which would occur if the excess was simply exported via PowerEx. Part of the evaluation of the Pilot should include a full assessment of the overall net benefits to other rate payer classes.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	BCOAPO agrees that Option 3 sends a better price signal. Furthermore, the description of Option 1 suggests the average price is used – which is inconsistent with pricing approach proposed under Option 2 on slide 26. Indeed, given the apparent variation in spot prices over the three month period (see Slide #21) BCOAPO does not believe it would be appropriate to charge all usage based on the average value as the description under Option 1 suggests would occur.
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	In principle no, the concept behind the Freshet Rate is to generate additional sales during this period and the pricing is based on the opportunity cost of such incremental sales. However, the analysis presented on Slide 36 suggests that the export revenues to be gained from such shifting will approximate the lost revenues from Tier 1 rates. If shifted energy is allowed to qualify then this is one of the issues that should be assessed after the completion of pilot and before the any decisions are made regarding the permanent introduction of a Freshet Rate.

Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	The Tier 1 Rate is the appropriate basis. It is clear from Slide 36 that if the energy reduction in the non-freshet months due to shifting is valued at the Tier 2 rate or even a blended rate then there could be a material negative impact on other customer classes from the introduction of a Freshet Rate.
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	No Comments
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	No Comments

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	Yes. BCOAPO sees offering firm power on a real-time basis based on short-term market prices as incompatible with the current RS1823 rate design which attempts to price incremental use (savings) at long-run marginal costs.

Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	Yes subject to the additional materials to be reviewed at the July meeting. Apart from the new PPA with FortisBC, circumstances do not appear to have changed materially from when the decision was made that the four customers should be on RS1827. In the case of FortisBC, the new PPA results in a "rate" that is more aligned with RS1823 in form than its previous "rate".

B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	When viewed separately, BC Hydro's proposals with respect to RS1880 nd RS1853 both appear reasonable as, in both cases, there appear to be no real concerns expressed by the customers about the rates and circumstances have not changed materially from when they were initially approved. However, both rates are meant to provide supplementary service under essentially the same types of circumstances – i.e., during periods when the customer's generation (be it a load customer or IPP) is out of service. As a result, it is not immediately apparent why a fundamentally different approach is taken as between the two rates. It would appear that in the case of RS1880 the customers "requested" the current approach on the basis that it produced a more stable (if likely higher) rate. Based on this rationale, BCOAPO accepts the continuation of the status quo for both rates.
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	See preceding comments.
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	No specific views at this time.

Additional Comments:

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

CONSENT TO USE PERSONAL INFORMATION

I consent to the use of my personal information by BC Hydro for the purposes of keeping me updated about the 2015 RDA. For purposes of the above, my personal information includes opinions, name, mailing address, phone number and email address as per the information I provide.

Signature: _____ Date: June 29, 2015

Thank you for your comments.

Comments submitted will be used to inform the RDA Scope and Engagement process, including discussions with Government, and will form part of the official record of the RDA.

You can return completed feedback forms by:

Mail: BC Hydro, BC Hydro Regulatory Group – "Attention 2015 RDA", 16th Floor, 333 Dunsmuir St. Van. B.C. V6B-5R3

Fax number: 604-623-4407 – "Attention 2015 RDA"

Email: bchydroregulatorygroup@bchydro.com

Form available on Web: http://www.bchydro.com/about/planning_regulatory/regulatory.html

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BC hydro
FOR GENERATIONS

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

BC Sustainable Energy Association and Sierra Club of BC

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	In BCSEA-SCBC's Oct 2014 comments they said "The definition of revenue neutrality should be consistent between customer classes. The target revenue approach, based on forecast load, appears to be a fair and appropriate way to obtain enough revenues to cover the cost of service." However, two factors support a change of position. BC Hydro says that Option 1 (Bill Neutrality) is forecast revenue neutral for F18-F19 (2015-03-13 Consideration Memo, p. 12); or that "revenue differences are relatively small in all but the most extreme cases" (2015-05-07 Slides, p.11). BC Hydro also says that "BC Hydro does not expect substantial differences in conservation between the two approaches" (2015-03-13 Consideration Memo, p. 13). Accordingly, BCSEA-SCBC are currently inclined to support Option 1.

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	In their October 2014 comments, BCSEA-SCBC said: "BCSEA-SCBC believe the pricing principles applied should be aimed at supporting the basic purpose of the transmission service inclining block rate, i.e. to encourage the adoption of energy conservation measures by sending a price signal, and to support BC Hydro's DSM programs. BCSEA-SCBC understand that BC Hydro believes there would be minimal differences in DSM achieved through pricing principle Options 1, 2 and 3. BCSEA-SCBC are inclined toward Option 1, which appears to maintain revenue neutrality better, and which would maintain the proportional price differential between Tiers 1 and 2. At this time, we are inclinded to believe that this would be preferable to either widening or narrowing the differential." In the May 2015 workshop, BC Hydro said it prefers Option 1; would carry forward Option 2 as an alternative; and would reject Option 3. Option 2 results in a narrowing of the differential between Tier 1 and Tier 2, which may negatively impact conservation initiatives by TSR customers (see 2015-03-13 Consideration Memo, p.18). Option 3 (described in the column to the left) is not forecast revenue neutral (2015-03-13 Consideration Memo, p.18). BCSEA-SCBC do not disagree with BC Hydro's proposal to prefer Option 1; carry forward Option 2 as an alternative; and reject Option 3. BCSEA-SCBC are inclined to support Option 1 (general rate increase applied equally to Tier 1 and Tier 2) because it maintains the Tier 1/Tier 2 rate differential and is easily understood and accepted.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	In their October 2014 comments, BCSEA-SCBC said: "No preference, at the present time. It seems reasonable for the definition of billing demand to be related to an approximation of high load periods, such as the HLH definition used by BC Hydro, as long as that does not prevent the possibility of recovery by the transmission rate demand charge of a higher (or lower, if justified) percentage of the total system demand costs than the current 65%." BC Hydro states: "In response to CEC and YVR, BC Hydro analyzed its system requirements, and as indicated at Workshop No. 5, BC Hydro's system capacity needs are a 16-hour block per day for a two week cold snap that can happen at least three times per year anytime during the winter (November to February)." And: "BC Hydro also notes that its definition of billing demand aligns with industry practice in terms of defining HLH 0600 to 2200 Monday to Saturday, excluding statutory holidays." (2014-03-13 Consideration Memo, p.20) BC Hydro also says the existing TSR RS 1823 demand charge recovered 64% of BC Hydro's costs based on draft F16 COS results, compared with 53% for LGS and 15% for MGS. (ibid.) BCSEA-SCBC agree with favouring no change in the RS 1823 demand charge.

Topic II: Voluntary Options	
A. Freshet Rate	

Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	In their October 2014 comments, BCSEA-SCBC said: "Maybe. BCSEA-SCBC understand that there are in theory potential cost benefits to transmision service customers and [to] BC Hydro as a whole, if BC Hydro can sell more electricity during the freshet period. More information is needed on the potential benefits to the BC Hydro system, and on the nature of the benefit that transmission service customers might receive (e.g. what beneficial use would these customers be likely to make of occasional volumes of cheap power, and how valuable would it be to them?). "At this point, we have two high level concerns: 1. Encouraging industrial customers to consume more energy during the freshet period could potentially undermine DSM price signals and programs; and 2. Achieving a freshet rate that was attractive to potential customers would be a complex process, involving many variables and potential side-effects, as well as negotiation with customers, such that it may be problematic to capture in actuality the theoretically achievable benefits." BC Hydro has further developed the freshet rate concept in consultation with AMPC members, with updates in the 2015-03-13 Consideration Memo and at the May 2015 workshop. BC Hydro targets having a freshet rate pilot (2 years) ready for the 2016 freshet. The concept is non-firm, May to July period. BC Hydro says the freshet rate would provide financial and operational benefits to BC Hydro (and ratepayers): • Increase the ability to import cheap electricity in Light Load Hour (LLH) periods to maximize trade benefits • Reduce probability of spills at BC Hydro facilities • Recover what BC Hydro would otherwise obtain on the export market, but with potential economic benefits for B.C.

	• Shifting within the freshet period (HLH to LLH) (2015-05-07 Workshop Slides, p.19) Non-participant benefits accrue from charging an all-hours wheeling rate (Slide 32); but the size of the non-participant benefits is modest. BC Hydro says TSR customers have expressed interest in a freshet rate; confirmed at the Workshop. (But it understood that no commitments would be made until the terms are finalized.) The pricing details are complex to determine. A workshop participant noted that a TSR customer's willingness to aggressively shift load to take advantage of the freshet rate would be limited by the customer's CBL and more volumes in Tier 2 in future years. BCSEA-SCBC reserve judgment on the freshet rate concept at this point. We don't necessarily reject the idea. But we want more information on whether it would affect conservation and efficiency measures.
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	Yes. Without commenting on whether there should be a freshet rate, if there is to be a freshet rate then the May to July period is supported by the evidence regarding the typical months during which BC Hydro has surplus energy.
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	Without commenting on whether there should be a freshet rate, if there is to be a freshet rate then the suggestions of a two-year pilot and the rate being for interruptible service above a baseline are reasonable.

Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	BCSEA-SCBC take no position between freshet rate product Option 1 and Option 2. That said, it makes sense for BC Hydro to develop only one option, given the complexities involved. And it makes sense to develop an option that TSR customers have the most potential interest in pursuing.

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	It makes sense that a freshet rate based on Mid-C prices would include a wheeling fee and that there should be a price floor.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	It is understood that the question relates to different options for measuring "incremental freshet energy," i.e., energy that is incremental to what the customer is deemed to customarily receive during the freshet period. It is understood that only incremental freshet energy would be charged at the freshet rate, and the non-incremental freshet energy would be charged at the existing rate (generally RS 1823). BC Hydro says that option 3 (daily average) provides a better price signal than option 1 (average over the freshet period.) That seems correct, in BCSEA-SCBC's view. The proposed factors for establishing customer baselines for a freshet rate (Slide 30) appear reasonable, and BCSEA-SCBC have no specific comments.
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	In BCSEA-SCBC's view, while there may be theoretical benefits to the BC Hydro system of incenting customers to shift load from the non-freshet to the freshet period, designing a rate to achieve these benefits without adversely affecting other TSR customers and other rate classes may be more complicated than it's worth, particularly before the results of the proposed pilot project are known (if it occurs).

Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	To confirm, Slide 38 provides comments on take-up regarding a freshet rate as such, not just a freshet load-shifting concept. BCSEA-SCBC have no comments on Slide 38.
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	Additional questions could include: * What if any non-participant benefits resulted from implementation of the pilot freshet rate? * What effect if any did the pilot freshet rate have on conservation and efficiency measures being implemented or not implemented by customers participating in the pilot freshet rate?

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	BCSEA-SCBC do not support BC Hydro pursuing a real time pricing option for transmission customers at this time.

Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	RS 1827 is a flat rate, introduced as an exception when the RS 1823 two-tier rate was approved. Four customers are on RS 1827: City of New Westminster, UBC, SFU and YVR. Direction No. 7 requires exemption from stepped rates for the City of New Westmister and UBC – no mention is made of SFU and YVR. BC Hydro proposes to continue with the status quo regarding RS 1827. (Slide 40) BCSEA-SCBC support continuation of the status quo regarding RS 1827.
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	BCSEA-SCBC have no comments on RS 1880 at this time.
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	BCSEA-SCBC support continuation of the status quo regarding RS 1853. The rationale for basing the charge on Mid-C market prices, as set out in the TSR 2 summary notes, is reasonable.
D. RS 1852 – Modified Demand	

BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	"There is currently one TSR customer taking service under RS 1852." (2014-03-13 Consideration Memo, p.62) BCSEA-SCBC have no comment on RS 1852 at this time.

Additional Comments:

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

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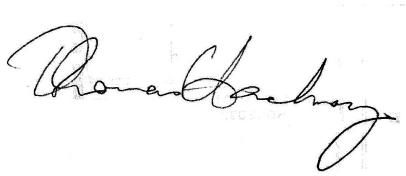

Signature:_____ _____ Date: _____22 June 2015_____

Thank you for your comments.

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2015 Rate Design Application (RDA) – May 7, 2015
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Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	Slide #11 notes that RS 1823 customers favour Bill Neutrality while other stakeholders support Revenue Neutrality. Despite BC Hydro's belief that no further conservation savings would be added if rate neutrality is used, Staff note that no reasons were given for the transmission customers' preference of Bill Neutrality, i.e., is it because of bill certainty for DSM investment or it is because of the lower rates enjoyed under Bill Neutrality? Are there additional arguments provided by the other stakeholders for their preference to change the default stepped rate from Bill Neutrality other than consistency with the other rate classes and the accompanying $6.3 million in revenue collection from the TSR class? Would it be appropriate for these issues be addressed under rate rebalancing?

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	While the underlying reasons for BC Hydro's preference for Option 1 are clearly stated, there are fewer reasons presented by BC Hydro to conclude categorically that Option 2 is preferred to Option 3. In eliminating Option 3 from further advancement to the final draft of the 2015 rate design application, good information related to conservation at the Tier-2 rate at upper bound LRMC and comparison of Tier-2 rate among all rate classes would not be available. Commission staff observe that under Option 1, a periodic review of the tier 2 price to LRMC would be required. The table on slide 14 seems to indicate that prices are within a reasonable band given the range in LRMC estimate. Commission staff note that Tier 2 in the RIB rate (April 28, 2015 Workshop presentation slide #28) is higher than Tier 2 in the TSR rate. It will be helpful for BC Hydro to clarify the impact that distribution costs have on the RIB tier 2 rate that is aligned to the LRMC.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	Commission staff have no preference but note the definition of HLH is aligned with industry practice and demand charge conditions match the peak period and cutomers' historical consumption and contract demand. Although the 65% cost recovery is higher than LGS and MGS, a more detailed description of how the remaining demand-related cost is recovered (e.g., effect on energy charge) will be useful.

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	Commission staff are of the view that the freshet rate is but one of the many mechanisms to deal with surplus of energy during freshet periods. Commission staff would like to see, in addition to the discussion of a freshet rate, an examination of alternative mechanisms. For example, targeted improvements to telemetry and modelling of certain watersheds, weather and physical systems to support BC Hydro's ability to optimally operate and schedule its system. The discussion should address the various ways to alleviate the problem that could result in a lower cost and greater benefit than implementing a freshet rate which could further complicate customers with individual consumption baseline.

Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	The slides indicate that the conditions in the May to July period are highly beneficial for a freshet rate. The figure on slide #20 assumes normal water conditions. It would be helpful to also show a high and low water impact and whether high or low water conditions may show a longer or shorter freshet period. Slide #20 shows that the system inflows begin March/April and end August/September. It would be helpful for BC Hydro to clarify if this reflects the global system or whether different locations have location-specific inflows periods. It is not clear if the May to July period is addressing location-specific problems or specific TSR customers' requirements? Further comments regarding location-specific freshets, storage, spill history, generating facilities, and transmission configurations will be helpful in understanding whether May to July is the appropriate period for the Freshet Rate.

Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	Commission staff note the stated 'concept' in slide #19 as well as the stated intended effect is to lower the energy charge for incremental consumption during the freshet period. Nonetheless, a more definitive statement of the objectives of the Freshet Rate will be helpful in determining the appropriateness of the elements of the rate. Please confirm that obtaining further information to identify those customers BC Hydro thinks would increase and/or shift consumption during a specific period at a specific problem location is an objective of the 2-year Pilot. What are the other objectives? Commission staff believe that whether the elements on slide #24 are appropriate or not should be dependent on the objectives of the Pilot study. Slide #24 refers that the rate could be designed on a "as available" basis. Commission staff would like BC Hydro to explain if there would be willing transmission customers that BC Hydro may not be able to serve under the Freshet Rate, not because of unavailable energy during freshet, but because of location specific transmission, generation and/or water resource constraints? What is the precise intention of the 4th bullet in slide #24? Are 'non-participating customers' (i) transmission customers who can take incremental freshet energy that BC Hydro is not able to serve due to location constraint? or are they (ii) ineligible because they are non-transmission customers? Or (iii) transmission customers who cannot take advantage of the freshet rate because of their own circumstances? It would be useful to describe under what circumstances BCH would include some benefit for non-participating customers and under what circumstances the rate should be designed to be neutral to non-participating customers.

Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	It appears from Slides #25 and #26 that under Option 2 the price risk and volume risk are with customers instead of BC Hydro. Commission staff also note that Option 1 will incur a hedging cost and it may deter some customers because of advance commitment requirement. Under Option 1, with knowledge of the contracted volume far in advance, BC Hydro should be able to better serve customers by reconfiguring transmission in the sub-systems, if required.

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	These conditions safeguard impacts to other customers and appear to result in small benefits to non-particpating customers. The benefits should be tracked during the Pilot so that future pricing will be beneficial (or at least do no harm) to non-participating customers.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	Baselines can be somewhat arbitrary to apply to a future period because they can be subject to some level of gaming or legitimate readjustment from customers. For example, some customers may want to shift shutdowns to non-freshet periods. Given that the freshet rate product is dependent on availability of volume and market prices (even for fixed prices for the year), Commission staff observe that a longer consumption history, or at least a departure from the one-year consumption history that is the RS 1823 CBL may be necessary.

Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	A more definitive statement on the objectives of the ~~f~~Freshet ~~r~~Rate is helpful when determining whether shifting should qualify for the Freshet Rate. The stated purpose in the Consideration Memo from March 2015 says the Freshet Rate is to encourage TSR customers to increase consumption during BC Hydro's freshet period. Is it also an objective to encourage TSR customers to decrease consumption (by shifting) during non-freshet periods? If it is an objective, then it should qualify. Under the scenario when customers shift and market prices are < TSR Tier 1 price resulting in negative revenue impact, could program design offset the shifting revenue risk to non-participating customers? At what point would the shifting trigger a CBL review? Are there major shifts like a plantoverhaul that should be accounted for?
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	Slide #34 says that only if shifted energy was removed from the long term load forecast could a Tier 2 credit be justified. Would BC Hydro clarify under what circumstances would it be able to remove the shifted energy from the long term load forecast?
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	The second bullet in slide #38 indicates that BC Hydro has held discussions with AMPC and customers to better assess take-up of the rate. Can BC Hydro comment if the likely users of the Pilot are located in areas with common characteristics and features related to storage, snowpacks, etc.? Is the proposed freshet period chosen because of dicussions with these customers?

Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	Commission staff are of the view that the post-Pilot evaluation of the "positive or negative impacts on non-participating customers" should be rigorous. For example, each of the possible benefits from slide 31 should be valued (avoiding spill, wheeling fee revenue, $0/ MWh price floor, etc.) The negative impact of the freshet Pilot should also be measured (i.e., admin cost, added complexity). The evaluation should also include a cost-benefit analysis.

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	Assuming that there is no legal barrier, it will be helpful to include the possible interactions between a freshet rate and RTP if both become options for a TSR customer, and the consequences on BC Hydro revenue and other rate classes.
Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	Slide #44 indicates that these customers have invested in DSM and BC Hydro questions whether significant additional conservation could be achieved by transferring them to a stepped rate. A reasonable follow-up question is whether flat rates have been as effective as stepped rates in promoting conservation for large sophisticated customers whose characteristics are, among other things, re-selling of electricity. Commission staff believe that the comment on this slide may be relevant when considering the rate structures for MGS & LGS.

B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	The rate appears to be beneficial to self generation customers and the "as available" supply at Tier 2 price is likely supplied at above cost by BC Hydro. Commission staff note that this Standby and Maintenance Rate (RS 1880) is the rate applied to cruise ships using shore power rate. The purpose of the shore power rate is to disincent shipping vessels from using self-generation power, whereas the RS 1880 was implemented to incent customers to use self-generation. Does BC Hydro agree that shore power rate would be in-scope for the 2015 RDA?
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	BC Hydro should provide reasons or justification regarding whether the rate should be Tier 2 of RS 1823, like RS 1880?
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	This rate has only one customer. Is it likely that there will be more uptake? In the event that this modified demand RS is terminated, what would be the bill impact on the customer? What other rate would this customer transition to? BCH should also evaluate the cost-benefit of maintaining this RS.

Additional Comments:

A minor correction. On Slide 7 in the May 7, 2015 presentation slide deck, under the first bullet, the date 22 October 2015 should instead read '22 October 2014'.

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2015 Rate Design Application (RDA) – May 7, 2015
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Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	CPC (Catalyst Paper Corp) prefers a pricing principle that clearly ties the class revenue to the rate it pays. Recent FACOS studies have shown that revenue to cost ratio for the industrial rate class has been steadily climbing over the past few years and there should be movement to rebalance the revenues.

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☒ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	CPC supports Option 1 to simplify rate administration and avoid GRI magnification on Tier 1 rates. Option 3 would benefit CPC and any other customers who have minimized Tier 2 energy through active conservation.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☒ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	The only change that CPC would suggest is that the peak kV.A be based on the peak hour, not the peak 30 minute period. An hourly peak would simplify administration and provide a better representation of a customer's load shape (i.e., reduce the impact of a short term process upset). Typically a peak is set during a start-up or process upset, setting a 30 minute peak during that period adds insult to injury. If the peak is set due to a good production run that peak will typically extend over several hours and is more indicative of a longer term load on the system.

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☒ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	CPC feels it is a creative solution to a seasonal issue that has the potential to provide benefits to all ratepayers.
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	Yes
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	yes
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	Preference is for Option 2 – only one option should be developed for the pilot.

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	The wheeling fee does not make sense since this is not an opportunity cost for BCH but actually a cost savings since the wheeling fee is paid to a 3rd party. The $0/MWh floor is reasonable.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	Yes – those are the leading alternatives Option 3 does send a better pricing signal. BCH's comments are a reasonable approach. Setting a demand baseline will require some consultation and should follow similar principles to any other demand response programs presently being contemplated.
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	Yes
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	It should be valued at Tier 2 since in the annual CBL settlement process does not discriminate based on when the energy was saved. Otherwise it becomes difficult to separate DSM impacts from perceived or real load shifting.
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	No – the comments are reasonable given the early stage of development.
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	One additional question would be: "how quickly did you respond to changes in market prices, what would it take to become more responsive?"

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	Yes, at this time CPC feels a focus on establishing a successful Freshet Rate is a priority over introducing a new program at this time. There is limited interest in RTP if it only applies to the Tier 2 energy component.
Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☒ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	Yes – the only comment is that the energy cost for RS1880 should be consistent with RS 1853 to provide the appropriate proce signal for scheduling generator maintenance.

C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	Yes – the only comment is that the energy cost for RS1880 should be consistent with RS 1853 to provide the appropriate proce signal for scheduling generator maintenance.
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	CPC assumes that these peaks are based on BCH's planning data. The only question is whether there will be some additional clarity on where RS1852 is available for customers.

Additional Comments:

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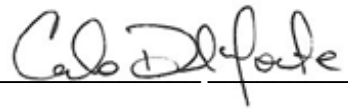
Signature:  Date: ____June 29, 2015_____

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2015 Rate Design Application (RDA) – May 7, 2015
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Name/Organization: Commercial Energy Consumers Associatiaon of BC (CEC)

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Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	On the basis of fairness and avoidance of discrimination between rate classes, the definition of revenue neutrality should be the same for all rate classes. Per slide 13, there is little difference between bill neutrality and revenue neutrality on a forecast basis if Option 1 GRI pricing is used. Therefore, revenue neutrality on a forecast basis would be preferable with Option 1 for GRI.

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☒ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☒ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	Option 1 is preferred under revenue neutrality on a forecast basis. Option 2 is preferred under Bill Neutrality on the basis of fairness and to minimize under recovery. Option 3 should not be advanced.

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☒ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	Agree for the reasons BC Hydro states.

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☒ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	A freshet rate is an appropriate mechanism to deal with surplus energy provided that the rate is applicable for incremental use of energy on a non-firm basis, and is revenue positive, or at a minimum revenue neutral. The rates should be available to TRS and GS customers.
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	Agree that May to July is appropriate and suggest BC Hydro consider March to April period as a potential extension. This may increase reservoir capacity to carry some of the freshet.
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	Yes, a non-firm service for incremental load would be appropriate. BC Hydro should consider whether or not in a low snow-pack year it should reserve an opportunity to limit the use of the freshet rate.
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	Option 2 appears to be a better design from the customer perspective, and is preferred over option1 .

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	Yes. BC Hydro should consider whether it should collect a fee for providing the service.
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	Options 1 and 3 are sufficient as alternatives. Option 3 would be a better price signal to customers. BC Hydro's after the fact adjustment would make sense, and BC Hydro's approach seems reasonable.
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	BC Hydro should only allow shifting where the lost revenues (if any) are recovered in the subsequent years' rates.
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	The shifting should be valued at the specific rate to determine the revenue loss in the off-freshet period.
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	As the amount of uptake that would be derived from shifting could be critical to revenue loss potential, BC Hydro should focus on uptake without shifting.

Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	Bullet 1.Does lower cost option refer to lower cost than existing rates or lower cost than incremental use rates? Bullet 3. How much was incremental freshet use without shifting? Additional Questions: Was there free rider incremental use during the freshet period? What was the revenue loss for shifting to freshet use based on actual prices?

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	RTP may be more appropriate than BC Hydro is evaluating. 1. The legal issue is mitigated if this is an incremental use non-firm rate 2. Saving at tier 2 for firm use is not in conflict with incremental consumption for non-firm use. 3. DSM is for firm use, and not in conflict with incremental non-firm economically valuable production. 4. Incremental non-firm use is easier to define than if it involves offsets to firm use.

Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☒ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	1827 for exempt customers should continue, but the BCUC should recommend that this be predicated on significant DSM initiatives being undertaken in order to continue to qualify for the exempt rate. The interesting issue about price signal for conservation and efficiency is that conservation and efficiency improvement is less related to price than to culture.
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	Yes.
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	Yes.
D. RS 1852 – Modified Demand	

BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	Yes this modified demand should be explored and refined further to better match BC Hydro's system demand issues.

Additional Comments:

CONSENT TO USE PERSONAL INFORMATION

I consent to the use of my personal information by BC Hydro for the purposes of keeping me updated about the 2015 RDA. For purposes of the above, my personal information includes opinions, name, mailing address, phone number and email address as per the information I provide.

Signature: _____ Date: ___June 29, 2015_____

Thank you for your comments.

Comments submitted will be used to inform the RDA Scope and Engagement process, including discussions with Government, and will form part of the official record of the RDA.

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2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	
B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	

Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☒ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	The City of New Westminster (CNW) would reiterate its earlier comments that the issue of CNW's exemption from stepped rates is outside the jurisdiction of the Commission and any changes to this exemption would require a Section 5 inquiry to be ordered by the B.C. government. There has been no material change in circumstances to change the position adopted by the government in subsection 3(i) of Direction 7 to the Commission pertaining to this exemption. CNW notes that exemption from RS 1827 is a minor issue in the 2015 RDA and any change would have no impact on BC Hydro ratepayers and little to no conservation impact on CNW as in the absence of stepped rates conservation efforts are ongoing. We provided details of its historic and on-going DSM-related efforts as part of its written feed-back which were provided as Attachment 2 to BC Hydro's consideration memo on the October 22, 2014 Workshop No. 5, BC Hydro Summary of Consideration of Participant Feedback Memorandum. CNW agrees with the BC Hydro position set out at page 58 of its Memorandum on the October 22, 2015 Workshop No. 5 when it stated:

	"BC Hydro proposes to continue with the structure of RS 1827 (status quo) for the following reasons. While overall the RS 1827 energy charge is not an efficient rate as it is below BC Hydro's energy LRMC range, there does not appear to be any significant change in circumstance for any of the four exempted customers since their original exemption from stepped rates in 2006. All customers continue to resell energy to others. In addition, in BC Hydro's view, in March 2015 the B.C. Government through Direction No. 7 reaffirmed Recommendation #15 and the exemption of UBC and CNW. *Leaving aside the legal issue identified above with respect to CNW and UBC, it is questionable whether incremental energy conservation could be obtained by transferring some or all of the four exempt customers to RS 1823 or a stepped rate. All four RS 1827 customers commented that they have undertaken a significant amount of energy conservation through DSM initiatives, and have plans to continue to do so in the future."* On the Rate Class issue, CNW understands there will be further consultation with stakeholders. CNW notes it is not common practice of rate design to do revenue to cost ratios for individual customers and that there is significant commonality with the existing 1827 class.
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	

C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	

Additional Comments:

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Signature:_____ Date: _____

Thank you for your comments.

Comments submitted will be used to inform the RDA Scope and Engagement process, including discussions with Government, and will form part of the official record of the RDA.

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2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	*We see no justification for the bill neutrality option as opposed to forecast neutrality as is used for every other sector. While the diffference is not quantitatively significant, we think as a matter of principle (fairness and consistency across rate classes) BC Hydro should adopt the forecast neutrality option.*

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	*We prefer option 2. It is consistent with past practice and the intention of the two-tier rate structure. Tier 2 should be set and maintained at the LRMC (or within the range for that) and Tier 1 should be calculated as a residual on a forecast neutrality basis. Aside from consistency with past practice, this will have the effect of loading more of the GRI on Tier 1, which in our view is warranted as it is so far below an economically efficient price level and can affect conservation efforts (particularly for customers operating near 90% of their CBL theshold).* *We agree option 3 need not be advanced for further consideration.*

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☐ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	*We agree.*

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	*We have concerns with the proposed freshet rate. If it results in load shifting there can be adverse impacts on other rate classes (because of a shift from the 1823 to freshet rate), and if it is intended to apply only to incremental consumption (above the CBL) it is likely to have very limited application.* *We think it would be better if TS customers were given the option to go on market based/seasonal and TOU pricing for some or all of their load but not be able to shift from that to firm 1823 supply (or vice versa) except under well defined notice and financial terms that protect the reliability and cost of supply to other customers.*
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	*See comment above. In addition we would add that there is some risk in defining a set freshet period because of changing weather conditions and sources of supply. Market price patterns could be quite different in the future than we have seen in the past.*
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	*See comment above.. we have fundamental concerns about the proposed rate*
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	*See comment above.. we have fundamental concerns about the proposed rate*

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	*See comment above.. we have fundamental concerns about the proposed rate*
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	*See comment above.. we have fundamental concerns about the proposed rate*
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	*We do not support this as it may adversely affect other customers*
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	*If this is allowed the energy reduction should be valued in a manner that protects other customers.*
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	*BC Hydro is in a better position to judge this than us, but our general expectation is that if the freshet rate is designed to be limited to truly incremental consumption the take-up will be limited.*
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	*In addition to the questions raised we think it would be useful to have a benefit-cost assessment of the program impacts on participants, non-participants and BC Hydro (including Powerex) and to assess what changes or different approaches might offer greater benefits for all affected parties.*

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	*We recognize there are significant issues with RTP and retail access, but we think more consideration of these issues is warranted to give industry the option of accessing market based pricing, provided they are willing to take the risk of doing so and not imposing costs and risks on other customers. We think this would be better than pursuing a freshet rate.*
Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No ☐ Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	*We have no opinion on this but are surprised by the assessment that switching to a tiered rate would have no impact on the conservation efforts of these customers (in contrast to the stated impact on 1823 customers)*
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	*We have no opinion on this.We assume the terms and charges are intended to keep BC Hydro financially whiole.*

C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	*We have no opinion on this.We assume the terms and charges are intended to keep BC Hydro financially whiole.*
D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	*We have no opinion on this.*

Additional Comments:

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I consent to the use of my personal information by BC Hydro for the purposes of keeping me updated about the 2015 RDA. For purposes of the above, my personal information includes opinions, name, mailing address, phone number and email address as per the information I provide.

Signature:_____ Date: _____

Thank you for your comments.

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2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

BC First Nations Energy and Mining Council (FNEMC)

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	*FNEMC continues to support a change to the existing definition of revenue neutrality to bill neutrality for RS 1823 to maintain consistency with the other customer rate classes. The intention would be to provide consistent and transparent treatment across all customer classes to the extent circumstances permit.* *Another alternative would be to change Residential, Small General Service, Medium General Service and Large General Service rate classes from revenue neutrality to bill neutrality to be consistent with RS 1823. Please provide information on the rate impacts and any other associated implications.*

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? X Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	*Option 1. Maintaining this approach adheres to the Bonbright principles of customer understanding and acceptance and rate and bill stability criteria. In addition maintaining the price differentials between Tier 1 and 2 provides the price signals to encourage energy conservation.* *Option 3 should not be advanced for further consideration given the factors discussed in the Consideration memo including not being revenue neutral, large under-recovery of revenues, etc.*

B. Demand Charge – Definition of Billing Demand	
BC Hydro favours no changes to the definition of billing demand (peak kV.A during High Load Hour (HLH) in billing period (i.e., 0600 to 2200 Monday to Saturday, except Statutory Holidays)) on the basis that it is well aligned with BC Hydro's capacity requirements. Do you agree? ☒ Yes ☐ No ☐ No preference. If you are of the view that the definition of billing demand should be changed, please set out your suggested changes in the column to the right. (Refer to slide 15)	*Yes. This definition of Billing Demand is consistent with BC Hydro's system capacity requirements and industry standard practise.*

Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☒ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	*Yes – agree that the Freshet Rate is an appropriate mechanism to deal with surplus energy during freshet periods provided this results in incremental energy sales during the freshet periods and an overall increase in annual energy sales from the TSR customer, provides benefits to non-participating parties and does not adversely impact BC Hydro's other means of addressing surplus energy such as Powerex's other trading activities, BC Hydro system operations, etc.*
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	*Conceptually FNEMC supports BC Hydro's proposal for the Freshet Rate. However would like more rate details as the tariff is being developed especially with respect to such issues as baseline development, pricing, customer ability to use the rate (i.e. shifting, increase production, etc.) and other operational details.*
Do you agree with the proposed elements of the Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	*Yes. However FNEMC would like BC Hydro to set a quantity limit for sales (HLH & LLH) under this pilot and/or ability for BC Hydro to suspend the pilot as a protection against any potential gaming associated with the use of this rate (for example, through shifting if this is allowed).*

Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	*For the purposes of the pilot, agree that BC Hydro only implement one product option in order to minimize operational and administrative costs. In order to ensure that there is sufficient participation in the program to create a meaningful pilot, FNEMC supports BC Hydro implementing the program with the most customer support which seems to be Option 2 based on the information presented in the workshop.*

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	*Transmission costs should also include the BPA transmission losses in addition to the BPA Point to Point rate which could be a significant cost depending upon the prevailing market power prices.*

Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	*If the main objective is to provide customers a real time price signal, do not agree that Option 1 is a leading alternative since it does not provide the customer the appropriate real time price signal to make operational decisions to increase electricity consumption.* *Of the options BC Hydro presented, Options 3 (Daily Average) and 4 (Daily based on actual daily loads) appear to send better real time price signals than Option 1.* *In terms of the baseline used to measure incremental freshet energy (slide 27) would like further information/impact of using various terms of baselines such as 3 month freshet period, monthly, daily, HLH and LLH. Using a baseline closer tied to when the customer increases electricity consumption would seem to be a better measure to determine a customer's incremental freshet energy.* *In terms of setting the baseline (slide 30), it would be helpful to see some analysis of the variability between using a 1 or 3 year average. However, since RS 1823 is the underlying rate schedule it might be appropriate to use the 1 year average for consistency.*

Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	*No. As discussed in workshop #1, the basis for offering the Freshet Rate was to provide incremental sales which would provide overall benefits to non-participants and increase BC Hydro sales of surplus energy. Shifting provides the customer the "free" option to increase energy purchases in the Freshet period and reduce higher-priced energy purchases in other months since the customer would only likely exercise the Freshet Rate if market prices are below the RS 1823 rate.* *The graph on slide 36 indicates that the financial impact of shifting may be moderate given the spot market Freshet Rate pricing. However this graph only shows forward monthly pricing and not daily spot prices which could differ significantly from the forward monthly pricing and therefore the financial impact from shifting could be much greater. In order to account for the potential revenue loss risk to BC Hydro through shifting, BC Hydro should receive additional payment associated with the Freshet Rate for the financial risk it is assuming.* *Shifting has the ability to negatively impact non-participants and therefore should not qualify for the Freshet Rate under the proposed structure as presented by BC Hydro.*
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	*Should BC Hydro allow shifting, shifted energy should be valued as a reduction in Tier 1 or possibly at a discount to Tier 1 to account for the value of the shifting option to the customer.*
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	*Another comment to include in BC Hydro's expectations for take-up is the "as available" nature of the product so customer take-up will depend upon BC Hydro's ability to supply freshet energy which depends on market conditions, system operations, etc.*

Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	*The sample evaluation questions will depend upon the final developed Freshet Rate. However, some comments include the following:* - *Cost-benefit analysis in terms of the program costs and the freshet revenues (including costs of program development, administration, regulatory, etc.).* - *Evaluation of BC Hydro system benefits as a result of increasing energy sales during freshet.* - *Financial impact of shifting should shifting be included in the Freshet Rate.* - *Assessment of opening up the Freshet Rate to other rate classes.*

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	*FNEMC acknowledges BC Hydro's concerns regarding the RTP rate. We concur with BC Hydro that experience with the Freshet Rate will provide direction regarding some of the issues associated with RTP/retail access.*

Topic III: Other Rate Schedules	
A. RS 1827 – Exempt Rate	
BC Hydro proposes to continue with RS 1827 (status quo). Do you agree? ☐ Yes ☐ No X Uncertain/No Opinion. Please provide reasons for your response in the column to the right. Note that BC Hydro will be addressing the issue of whether the four exempt customers and FortisBC should be separate rate class(es) at the July 30, 2015 workshop.	
B. RS 1880 – Standby and Maintenance Supply	
BC Hydro proposes to continue with RS 1880 (status quo). Do you agree? Please provide reasons for your response in the column to the right.	*No comment.*
C. RS 1853 – IPP Station Service	
BC Hydro proposes to continue with RS 1853 (status quo), including basing the energy charge on Mid-C for the reasons set out in the workshop summary notes. Do you agree? Please provide reasons for your response in the column to the right.	*No comment.*
D. RS 1852 – Modified Demand	

BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	*No comment.*

Additional Comments:

FNEMC submits these comments to BC Hydro on a without prejudice basis.

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

CONSENT TO USE PERSONAL INFORMATION

I consent to the use of my personal information by BC Hydro for the purposes of keeping me updated about the 2015 RDA. For purposes of the above, my personal information includes opinions, name, mailing address, phone number and email address as per the information I provide.

Signature:_____ Date: _____

Thank you for your comments.

Comments submitted will be used to inform the RDA Scope and Engagement process, including discussions with Government, and will form part of the official record of the RDA.

You can return completed feedback forms by:

Mail: BC Hydro, BC Hydro Regulatory Group – "Attention 2015 RDA", 16th Floor, 333 Dunsmuir St. Van. B.C. V6B-5R3

Fax number: 604-623-4407 – "Attention 2015 RDA"

Email: bchydroregulatorygroup@bchydro.com

Form available on Web: http://www.bchydro.com/about/planning_regulatory/regulatory.html

Any personal information you provide to BC Hydro on this form is collected and protected in accordance with the ***Freedom of Information and Protection of Privacy Act***. BC Hydro is collecting information with this for the purpose of the 2015 RDA in accordance with BC Hydro's mandate under the ***Hydro and Power Authority Act***, the BC Hydro Tariff, the ***Utilities Commission Act*** and related Regulations and Directions. If you have any questions about the collection or use of the personal information collected on this form please contact the BC Hydro Regulatory Group via email at: bchydroregulatorygroup@bchydro.com

BC hydro
FOR GENERATIONS

2015 Rate Design Application (RDA) – May 7, 2015
Transmission Service Rates Workshop No. 2 - Feedback Form

Name/Organization:

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
Topic I: Rate Schedule (RS)1823	
A. Revenue Neutrality and RS 1823 Pricing Principles for F2017 to F2019: Application of General Rate Increases (GRI)	
1. Given BC Hydro's preferred pricing principle Option 1, BC Hydro favours maintaining the current definition of revenue neutrality which results in bill neutrality when a customer's consumption is equal to its Customer Baseline Load. The alternative definition, which is used for Residential, Small General Service, Medium General Service and Large General Service rate classes, requires rates to set so that a target level of revenue is achieved for the rate class (refer to slides 10 to 11) Please provide any comments in the column to the right.	

	Comments (Please do not identify third-party individuals in your comments. Comments bearing references to identifiable individuals will be discarded due to privacy concerns).
2. Which approach for applying GRI to RS 1823 Tier 1/Tier 2 do you prefer? ☐ Option 1: GRI is applied equally to Tier 1 and Tier 2 rates; ☐ Option 2: GRI is applied to blended rate and Tier 1 rate is calculated residually holding Tier 2 rate constant at Long-Run Marginal Cost (LRMC) and using 90/10 split; ☐ No preference. Please provide reasons for your view in the column to the right, including whether you agree that Option 3 (for F2017, GRI is applied to Tier 2 and Tier 1 is held constant at F2016 level; for F2018, apply all GRI to Tier 2 so that Tier 2 is at upper end of LRMC) should not be advanced for further consideration. Refer to slides 12 to 14 and section 1.3.2 of the March 2015 Consideration memo).	

B. Demand Charge – Definition of Billing Demand	
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Topic II: Voluntary Options	
A. Freshet Rate	
Do you agree that a Freshet Rate is an appropriate mechanism to deal with surplus of energy during freshet periods? ☐ Yes ☐ No ☐ No Opinion. Please explain your response in the column to the right.	yes
Do you support BC Hydro's proposal for the Freshet Rate to cover the May to July period because it's a period where inflows exceed load, market prices are generally low, differentials between HLH and Low Load Hour pricing are typically high, and BC Hydro faces import constraints? (Refer to slides 20, 21, and 22)	yes
Do you agree with the proposed elements of the Freshet Rate? (Refer to slide 24) • Non-firm service for incremental load above a baseline? • Two-year pilot program?	yes
Do you support product Option 1 or product Option 2? To minimize implementation and administration costs, do you agree that only one of these options should be developed for the pilot program rather than both? (Refer to slides 25 and 26).	One option

BC Hydro has proposed to add a wheeling fee, based on Bonneville Power Administration's Point to Point rates, to the Mid-Columbia (Mid-C) price and apply a price floor of $0/MWh to the market price. Do you agree with these proposals? (Refer to slides 25, 26, and 32, and the QA from workshop notes).	
Do you agree that baseline Options 1 and 3 are leading alternatives? Do you agree that Option 3 would send better price signals to customers relative to Option 1? Do you have any comments on BC Hydro's proposed approach to baselines? (Refer to slide 30).	
Should shifted energy qualify for the Freshet Rate if customers consume less in non-freshet months and more during the freshet? (Refer to slides 33 to 37).	
Under shifting, should the energy reduction in non-freshet months be valued at Tier 1, blended rate, or Tier 2 rate? BC Hydro has proposed valuing the reduction at Tier 1 if it is caused by a non-Demand Side Management (DSM) event. Reductions in load arising from additional self-generation or DSM initiatives would continue to be eligible for Tier 2 savings. (Refer to slide 34).	
Do you have comments on BC Hydro's expectations for take-up? (Refer to slide 38)?	
Do you have comments on the Sample evaluation questions for the pilot program? The proposal for an interim and final evaluation report? (Refer to slide 39).	

B. Real Time Pricing (RTP)	
Do you agree with BC Hydro's concerns a RTP rate ? If no please identify how RTP could address the issues raised by BC Hydro. (Refer to slides 40, 42 and section 2.4 of the March 2015 Consideration Memo).	
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D. RS 1852 – Modified Demand	
BC Hydro seeks stakeholder feedback on the RS 1852 demand definition (i.e., 'two peak's – one from 6 a.m. to 10 a.m. – another from 4 p.m. to 8 p.m.). Please provide your views in the column to the right.	

Additional Comments:

BC Hydro has not answered my question regarding the Freshet rate and how it would effect my LDA contract with hydro if we used the May to July time line to do our annual shut down of the generator.

CONSENT TO USE PERSONAL INFORMATION

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