

Summary Notes

BC Hydro Transmission Service Rate Design Workshop

October 16, 2018

Kamloops – Hotel 540

Type of Meeting	Transmission Service Rate Design Workshop – Customers	
Agenda	<p>Welcome and Agenda</p> <p>Workshop Objectives and Opening Remarks</p> <ol style="list-style-type: none"> 1. Rate Primer 2. RS 1823 – Pricing Principles 3. Market Reference Priced Rates 4. Load Attraction Rate 5. Load Retention Rate <p>Closing and Next Steps</p> <p>The workshop session was facilitated by David Keir.</p>	
Abbreviations	<p>BCH BC Hydro</p> <p>BCUC BC Utilities Commission</p> <p>CBL Customer Baseline Load</p> <p>COS Cost of Service</p> <p>F2019 Fiscal 2019</p> <p>F2020 Fiscal 2020</p> <p>F2024 Fiscal 2024</p> <p>HQ Hydro Quebec</p> <p>ISD In-Service Date</p> <p>IPP Independent Power Producers</p> <p>kVA Kilovolt-Ampere</p>	<p>LNG Liquefied Natural Gas</p> <p>LRMC Long Run Marginal Cost</p> <p>MW Megawatt</p> <p>MWh Megawatt Hour</p> <p>RDA Rate Design Application</p> <p>RIB Residential Inclining Block</p> <p>RS Rate Schedule</p> <p>RTP Real Time Pricing</p> <p>TS Tariff Supplement</p> <p>TSR Transmission Service Rate(s)</p>

Meeting Minutes

Welcome and Introductions – David Keir

David started the workshop by welcoming everyone attending, followed by a round of introductions. David went over the objectives for the day – he reviewed the agenda for the workshop and the objective to obtain feedback on 2 existing and 3 new transmission service rates. He recognized the experience in the room and advised that feedback matters – feedback is valuable and important to help inform BCH's rate proposals. David explained the process to provide feedback (verbal questions and comments at today's workshop) and written feedback (feedback form and/or written submission to be provided at end of workshop or sent back to BCH by October 24th, 2018).

Opening Remarks

David provided background and context for the rates workshop. He explained the key pressures which are impacting BCH's business and resource-dependent large industrial sectors. David emphasized BCH's strategic focus is on providing customers with affordable rates. Key initiatives to achieve this include surplus energy optimization and industry diversification. He provided context on how BCH is working to provide such opportunities, including through the provision of innovative industrial rates. He reaffirmed that the workshop is part of a consultative and collaborative engagement with existing and new industrial customers and impacted stakeholders. The purpose is to get feedback on BCH's rate proposals with the objective to advance innovative rate options to the BCUC that make sense and benefit all customers.

1. Agenda Item 1 Transmission Rates Primer

David provided an overview of BCH's portfolio of transmission service rates and tariffs for electricity supply. He identified the key billing determinants for rate-making (energy charge and demand charge) and cost-of-service principles used to determine these charges. He explained the distinction between firm and non-firm service. He described the system conditions that contribute to surplus energy and framed the opportunity for increasing domestic electricity sales as an alternative to export market sales during a period of surplus. David set out the core rate-making principles which are foundational to BCH's rate proposals and sought feedback on these principles. He advised that all rate proposals are subject to review and approval by BCH's regulator, the BCUC.

	Feedback	BC Hydro Response
1.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - From a strategic perspective, optimizing surplus through rates is a good approach. However, it depends on how complicated management of the rates can get (within our company).</p>	Acknowledged.

2. Agenda Item 2 RS 1823 (Stepped Rate) – Default Rate for Transmission Customers

David gave an overview of the RS 1823 Stepped Rate, including background on RS 1823 energy pricing principles and the 2015 RDA decision. He explained the illustrative rate impacts of re-pricing RS 1823 Tier 1 and Tier 2 Energy Charges if the Tier 2 rate is set to reflect a lower LRMC value. He described BCH's RS 1823 energy pricing principles proposal for F2020 and asked the audience to consider the question – “do you support maintaining ‘status quo’ RS 1823 pricing principles for F2020 (i.e., increase demand and energy charges uniformly by the general rate increase for F2020)?” Comments and observations followed.

	Feedback	BC Hydro Response
1.	<p>Michael Towers, Tolko Industries Group</p> <p>Question - Does this historical load profile include the potential LNG Kitimat project?</p>	LNG Canada project load is not included in historical load. Phase 1 load (to be served from the grid) is approximately 120 MW with estimated ISD of 2024. This represents only about 1/3 of total plant load – the balance of plant load will use gas drives for compression.

	Feedback	BC Hydro Response
2.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - What is driving the projected rate increase for F2020? Who determines the LRMC?</p> <p>Question - What is Rate Rider used for?</p>	<p>BC Hydro is a cost of service regulated utility. We recover costs through rates approved by the BCUC. Capital expenditures and IPP energy acquisition are some of the big ticket cost items for recovery.</p> <p>The 5% rate rider (Deferral Account Rate Rider) is a surcharge on all customer bills used to pay down BC Hydro's deferral accounts. Deferral accounts are used to recover such things as variances between forecast and actual energy costs.</p>
3.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - The Rate Rider should be kept as a separate surcharge, for transparency and accountability.</p> <p>Question - Is there pressure from other rate classes (e.g., Residential) for re-pricing the stepped rate?</p> <p>Question - When was last Cost of Service done?</p>	<p>Acknowledged.</p> <p>No. The re-pricing driver is to update RS 1823 pricing principles for which BCUC approval expires at the end of F2019.</p> <p>The last Fully Allocated Cost of Service Study that BC Hydro filed with the BCUC was for F2016 actual costs and revenues.</p>
4.	<p>James Myers, Teck Resources</p> <p>Comment - It doesn't seem like your rates are balanced for TSR customers. BCH is over collecting on energy and under collecting on demand. There is an imbalance.</p>	<p>Based on the F2016 Actuals FACOS study, overall, the revenue to cost ratio for transmission service customers is estimated to be close to unity - which means that approximately 100% of the allocated cost of transmission service is being recovered from the class. However, there is an imbalance within RS1823 as the demand charge under recovers demand related costs and the energy charge over recovers energy related costs.</p>
5.	<p>Dennis Maltais, Catalyst Paper</p> <p>Question - Catalyst prefers the current stepped rate design; we prefer it stay the way it is.</p>	<p>Acknowledged</p>
6.	<p>George Emery, Canshield Data Centre</p> <p>Question – Who is pushing for the adjustment of</p>	<p>The adjustment to the Tier 1 price would arise if</p>

	Feedback	BC Hydro Response
	the Tier 1 price? Is it the commercial customers?	BCH sets the Tier 2 price to reflect a lower LRMC value. Tier 1 is calculated residually. The math is based on the legislation that sets out the criteria for RS 1823 rate design.
7.	<p>Michael Able, Gibraltar Mines</p> <p>Question - What is driving long term marginal cost of energy down?</p>	A lower LRMC is predicated on a number of complex factors.

3. Agenda Item 3 Market Reference Priced Rates (Seasonal) - RS 1892 Freshet Rate Pilot

David provided an overview of the Freshet Rate pilot and the system conditions that drive an energy surplus during the freshet period of May-July. He presented information regarding system conditions, market pricing and baseline determination. He explained how the Freshet Rate design overlays non-firm freshet service with firm RS 1823 service and how incremental energy is determined and priced. He provided a summary of results for years 1-3 of the pilot and reviewed the rate economics (gross and net benefits). David walked participants through questions specific to the Freshet Rate on Slide 37 and asked for comments and feedback.

	Feedback	BC Hydro Response
1.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - High freshet market prices in July are a killer – it's a potential risk for our industry.</p> <p>Question - Were the July price spikes due to the forest fires?</p> <p>Question - Isn't there an opportunity for BCH to mitigate those price risks? Can Powerex move power into those markets when the prices are high and the revenue could be used to offset the risk of price hikes?</p> <p>Comment - Consider capping customer prices at the tariff rate so there's extra flow available for Powerex to sale to California market.</p>	<p>Acknowledged.</p> <p>The July 2018 market price spike was due primarily to hot weather and the associated increase in air conditioning loads on the West Coast. It serves as a reminder that market prices can be volatile.</p> <p>Powerex acts to optimize the value of high-priced markets for BCH ratepayers. BCH provides market pricing to participant customers on a day-ahead basis so they have price transparency. Customers can mitigate market price risk by reducing load to baseline. All else being equal, any surplus energy not sold domestically is available for Powerex sale, subject to transmission intertie constraints.</p> <p>It is not clear how this would create extra flow – on any given day, if the domestic customer takes the power with a price cap in place, that volume of energy would not be available for market export.</p>
2.	<p>James Myers, Teck Resources</p> <p>Comment - When market prices are low, it's a benefit to the customer and when they are high it's a benefit to BCH. During high-priced periods, if you sell power to the market and give customers a</p>	Acknowledged.

	Feedback	BC Hydro Response
	cap price, you will be able to sell more than you otherwise would.	
3.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - BCH should sell to domestic customers and should not interrupt the service on high market-priced days.</p>	Acknowledged.
4.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - BCH should help industrial customers to take advantage of freshet season pricing.</p>	Acknowledged.
5.	<p>Devon Marshall, Domtar</p> <p>Comment - Generator turndown during freshet would depend on operations and production schedule and the terms of our contract.</p>	Acknowledged.
6.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - The current seasonal reconciliation is an issue for us. Poor production days can negate everything we have done earlier in the period and wipe out the benefits.</p>	Noted. Monthly vs. seasonal settlement is a common feedback theme to address this. Another solution might be for the customer to request for baseline adjustment to remove the impact of unusual downtime events.
7.	<p>Michael Towers, Tolko Industries Group</p> <p>Question - What is the rationale behind the \$3 wheeling fee?</p>	This pricing concept is based on a negotiated settlement for the initial design (50% of then ~ C\$6/MWh Bonneville Power Administration wheel fee to move power from Mid-C to the BC border). The pricing reflects a risk adjustment / contribution to margin rather than an actual wheeling fee. This helps to balance risks and benefits for all ratepayers.
8.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - In response to the question on whether BCH should continue to offer the Freshet Rate: it's hard to say. For our particular circumstance, last year, we ended up revenue neutral. It is good to have options, but we may not be able to participate.</p>	Acknowledged.
9.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - Risks and benefits should be shared between customers and BCH; there seem to be some imbalances where BCH wins but the customer is cost-exposed – that doesn't seem fair.</p> <p><i>Confirmed that the comment relates to the consideration of price caps for incremental</i></p>	Acknowledged.

	Feedback	BC Hydro Response
	<i>domestic load during periods of high market prices.</i>	
10.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - In response to the ability to continue to participate in the Freshet Rate: I am uncertain at this time whether some of our sites can participate, because the baselines are too high.</p>	BCH can review your baselines to determine if any adjustments should be made. The customer is responsible to make a case and present evidence for an adjustment. BCH will apply to the BCUC for the approval of any baseline adjustments.
11.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - BCH should continue offering the Freshet Rate as a pilot until the rates are “tweaked”.</p>	Acknowledged.
12.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - We prefer monthly reconciliation over the current seasonal reconciliation for the Freshet Rate.</p> <p>Comment - On baseline determination for new customers – 2 years of freshet history energy before a customer can participate / have a freshet baseline determined seems reasonable.</p>	<p>Noted. We are proposing to keep freshet reconciliation on a seasonal basis and implement the monthly reconciliation for the annual Incremental Energy Rate.</p> <p>Acknowledged.</p>
13.	<p>James Myers, Teck Resources</p> <p>Comment - Having a normal baseline history depends on the plant. Our plant runs pretty steady, but others may have variations.</p>	Acknowledged.
14.	<p>George Emery, Canshield Data Centre</p> <p>Question - Regarding baseline assignments, if a plant is sold and then re-purposed for a different use, how would baseline assignment make sense?</p>	<p>When a plant is sold, we’re proposing that the existing site freshet baselines would be assigned to the new owner. This treatment applies to the RS 1823 Energy CBL currently. If the site is repurposed, the new owner can request a review of the assigned baseline(s) to ensure they remain appropriate and reflect normal site operations.</p> <p>Where there is a change in site ownership <u>during</u> the freshet period, our view is that this should be an automatic opt-out / termination under the Freshet Rate. This is because freshet energy is reconciled on a seasonal basis and neither owner has control over the actions of the other during the shared freshet period.</p>

	Feedback	BC Hydro Response
15.	<p>Dennis Maltais, Catalyst Paper</p> <p>Question - If you opt out all energy is rebilled under RS 1823, what happens to demand?</p>	<p>Customers can opt-out of freshet at any time between 1 May and 31 July. Our practice has been to re-bill only energy volumes and not kVA demand so as not to create undue risk for participants retroactively.</p>

4. Agenda Item 3 Market Reference Priced Rates (Annual) RS XX Incremental Energy Rate

David provided background and context for BCH prior “Real Time Pricing” (RTP) Rate from 1996/97. RTP was an annual rate option available to all transmission customers which priced load above an established baseline at market-referenced prices. He provided a high-level explanation of how the RTP rate worked. He highlighted similarities and differences with the Freshet Rate. David further explained the proposed principles for an annual market priced rate (non-firm service) that would overlay with the RS 1823 Stepped Rate (firm service). David then presented a ‘strawman’ rate design to facilitate a discussion re: the proposed elements and criteria of the Incremental Energy Rate. Refer to Slides 42 and 43 in the presentation.

	Feedback	BC Hydro Response
1.	<p>Dennis Maltais, Catalyst Paper</p> <p>Question - How many big users have incremental opportunity that would be able to use more on the Incremental Energy Rate?</p>	<p>A number of large industrial customers have idle capacity that is not cost-effective to run at Tier 2 prices; some customers have generator turndown capability; some customers have electrification projects. These are examples of identified customer opportunities that we’re aware of to increase load under this rate option.</p>
2.	<p>James Myers, Teck Resources</p> <p>Comment - Electrification requires capital. It may make sense to tie it to the Incremental Energy Rate, but, if something were to happen to the market prices, it would no longer make sense to run it unless there is an opportunity to convert to RS 1823.</p>	<p>Market prices don’t provide certainty. There is a provision under TS 74 for new equipment load due to electrification. The customer would need to make a baseline adjustment request within 90 days to preserve the ability to capture that investment under the stepped rate.</p>
3.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - Our primary opportunity to increase load would be to turn down generation.</p>	<p>Acknowledged.</p>
4.	<p>Michael Able, Gibraltar Mine</p> <p>Comment - Mine loads are pretty steady; electrification projects would be the only load growth option, but that would require justification.</p>	<p>Acknowledged.</p>
5.	<p>Cory Weiss, New Gold</p> <p>Comment - We have a pebble crusher which is offline and, dependent on energy prices, could be</p>	<p>Acknowledged.</p>

	Feedback	BC Hydro Response
	utilized to increase load.	
6.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - In theory, we have under-utilized capacity but it's hard to make those decisions quickly as we always require advance notice. Even with the option to choose which months to participate, the benefit is still subject to market prices, which are variable; there isn't enough notice for our plants to make a change.</p>	Acknowledged.
7.	<p>James Myers, Teck Resources</p> <p>Comment - Our plant doesn't like change. Change is hard. We could increase load via capital investments, but it's hard to justify capex on a variable market price.</p>	Acknowledged.
8.	<p>Gord Palmer, Canoe Forest Products</p> <p>Comment - Our plant runs flat out; there isn't much opportunity to do anything different.</p>	Acknowledged.
9.	<p>Caleb Rink, Itel Network</p> <p>Comment - Our data centre customer loads need firm, reliable power when they are online. It's critical that they stay online.</p>	Acknowledged.

5. Agenda Item 4 Load Attraction Rate

David provided a high-level overview of the rationale, principles and objectives for a Load Attraction Rate. He advised that regulated utilities in other jurisdictions offer load attraction and retention rates. He emphasized that our current environment provides opportunities to attract new loads and diversify the industrial customer base.

David explained potential pricing, availability, term, caps, risk mitigation and performance, evaluation and reporting criteria. The emphasis for review and discussion was on availability criteria and principles of fairness / undue discrimination / free ridership as between new and existing customers in the same industry.

	Feedback	BC Hydro Response
1.	<p>Gord Palmer, Canoe Forest Products</p> <p>Comment - RS 1823 was brought in to conserve and now you're in a surplus. Consider lowering your TSR rates if you want to attract load.</p>	If we lowered RS1823 rates across the board, we may not collect sufficient revenue to recover costs. The premise of the load attraction rate is to recover our marginal cost of service in the short-term, and the embedded cost of service over the long-term.

	Feedback	BC Hydro Response
2.	<p>Michael Towers, Tolko Industries Group</p> <p>Comment - If BCH is in a surplus and can't get attractive prices for the surplus energy, then this rate would make sense.</p> <p>Comment - Would not be happy if LNG is eligible for discounted rate and industry has to compete with them for gas.</p>	<p>Acknowledged.</p> <p>The draft eligibility criteria we are proposing would likely screen out LNG facilities.</p>
3.	<p>Corey Weiss, New Gold</p> <p>Question - What does Hydro Quebec do?</p>	<p>HQ has a variety of industrial rate options: Economic Development Rate; Load Retention Rate; Industrial Revitalization Rate; Load Curtailment Rate; Electricity Discount Program, etc.</p>
4.	<p>Dennis Maltais, Catalyst Paper</p> <p>Question - Why wouldn't BCH allow a plant restart to participate on this rate? Could a restart participate in the annual market rate?</p>	<p>Our current thinking is that providing plant restarts with a rate discount would adversely impact the competitiveness of existing industry, which would be unfair. Restart loads would be eligible for the annual market reference-priced rate, recognizing that the service would be non-firm.</p>
5.	<p>Caleb Rink, Intel Networks</p> <p>Comment - New customers are looking for ways to reduce the cost and risk of capital investment. It will take more than lower supply rates to do this.</p>	<p>Acknowledged.</p>
6.	<p>Michael Towers, Tolko</p> <p>Comment - There is a danger with restarts – I'm not convinced this would benefit all existing rate payers. Restarts should have access to the incremental load rate.</p> <p>Comment - For this rate, I would prefer to see a discount on the energy charge and keep a fixed demand charge. Transition back to standard rates is a function of economics – customers will choose the lowest cost option.</p>	<p>Acknowledged.</p> <p>Acknowledged.</p>
7.	<p>Dennis Maltais, Catalyst Paper</p> <p>Comment - Provided everyone has the same opportunity to invest, we might be indifferent.</p>	<p>Acknowledged.</p>
8.	<p>Cory Weiss, New Gold</p> <p>Question - Do customers on the mining deferral program qualify?</p>	<p>We will take this away for consideration.</p>

6. Agenda Item 5 Load Retention Rate

David provided an overview of the Load Retention Rate from BCH 1996 Industrial Service Application (which was incorporated into BCH RTP Rate – RS 1848). He discussed eligibility criteria, CBL adjustment considerations and special conditions for load retention. He reviewed Hydro Quebec’s load retention rate eligibility criteria and pricing. He asked participants to review and consider the questions on Slide 63.

	Feedback	BC Hydro Response
1.	<p>Dennis Maltais, Catalyst Paper</p> <p>Question – Slide 49: How does BC Hydro’s Load Retention Rate compare to other jurisdictions in Canada and across North America?</p>	<p>BC Hydro’s 1996/97 load retention rate was based on market prices. Current (non-discounted RS 1823 rates) put BCH in about 5th place in North America, but there’s still a substantial gap between BCH and jurisdictions such as Quebec and Manitoba.</p>
2.	<p>Michael Towers, Tolko</p> <p>Question - Is the Load Retention Rate proposed to be available indefinitely? Or does it have a specific timeframe?</p> <p>Comment - There should be a high threshold to access the Load Retention Rate – wherever you land on the specific qualifications, the door should be hard to open.</p>	<p>Our current thinking is to use an annual test of eligibility, to confirm that the customer still meets the eligibility criteria.</p> <p>Acknowledged.</p>
3.	<p>Cory Weiss, New Gold</p> <p>Question - With the load retention energy charge plus 10% premium, is BCH making a profit? Is this what Hydro Quebec does?</p>	<p>The HQ load retention rate considers a 10% premium to the standard energy charge, with no demand charge. BCH needs to ensure that any Load Retention Rate would recover the cost of service to ensure there is no harm to non-participant ratepayers.</p>

Closing and Next Steps

David thanked everyone for their attendance and participation in the workshop and provided a timeline for next steps.

- Deadline for submission of feedback forms is October 24, 2018.
- Summary notes (minutes) of the session will be circulated to participants for review and comment.
- Next rate design workshop will be in Vancouver only (target date November 19, 2018).

	Feedback	BC Hydro Response
1.	<p>James Myers, Teck Resources</p> <p>Question – Will the proposed November 19th session also be presented at other cities, or just in Vancouver?</p>	<p>We confirmed that the next workshop is planned for Vancouver only. Customers may participate in the November 19th workshop via webcast.</p>