

## Summary Notes

### BC Hydro Transmission Service Rate Design Workshop

October 11, 2018

Vancouver – BCUC Office

<b>Type of Meeting</b>	Transmission Service Rate Design Workshop – Customers and Interveners	
<b>Agenda</b>	<p>Welcome and Agenda – David Keir, Manager – Large Customer Rate Operations</p> <p>Welcome and Opening Remarks – Keith Anderson, VP Customer Service</p> <ol style="list-style-type: none"> <li>1. Rate Primer – David Keir, Manager – Large Customer Rate Operations</li> <li>2. RS 1823 – Pricing Principles – Anthea Jubb – Manager Tariffs</li> <li>3. Market Reference Priced Rates -- David Keir, Manager – Large Customer Rate Operations</li> <li>4. Load Attraction Rate – Anthea Jubb, Allan Chung, Regulatory Specialist</li> <li>5. Load Retention Rate -- David Keir, Manager – Large Customer Rate Operations</li> </ol> <p>Closing and Next Steps – Fred James, Chief Regulatory Officer</p>	
<b>Abbreviations</b>	<p>BCH BC Hydro</p> <p>BCUC BC Utilities Commission</p> <p>BPA Bonneville Power Administration</p> <p>CBL Customer Baseline Load</p> <p>COS Cost of Service</p> <p>F2018 Fiscal 2018</p> <p>F2020 Fiscal 2020</p> <p>GWh Gigawatt Hours</p>	<p>LNG Liquefied Natural Gas</p> <p>LRMC Long Run Marginal Cost</p> <p>MW Megawatt</p> <p>RDA Rate Design Application</p> <p>RS Rate Schedule</p> <p>RTP Real Time Pricing</p> <p>TS Tariff Supplement</p> <p>TSR Transmission Service Rate(s)</p> <p>Tx Transmission</p>

#### Meeting Minutes

##### Welcome and Introductions – David Keir and Keith Anderson

David started the workshop by welcoming everyone attending and those who are dialing in remotely. He acknowledged the different groups that are present and introduced the BCH panel that will be co-presenting with him. David went over the objectives for the day – he reviewed the agenda for the workshop and the objective to obtain feedback on two existing and three 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 24, 2018).

David introduced Keith Anderson for opening remarks.

Keith welcomed the group to the session and provided context for the workshop(s). He explained the key pressures which are impacting BCH's business and large industrial sectors. BCH has resource dependent customers and since the early 2000s have noticed a steady decline in our load – not a persistent concern but still a trend.

**Meeting Minutes**

Keith emphasized BCH's strategic focus 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. Keith 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 Commission 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><b>Paul Mason, DC Grid Development Corp.</b></p> <p>Appreciated the effort to look forward and to solicit input</p> <p><b>Question</b> - Wanted to know what are the possible impacts of additional storage either implemented by the utility or by customers, as storage will have an impact on use of Tx system by utility (peak shaving) and customers (avoiding step costs).</p> <p><b>Comment</b> - He has seen various waves of change, and when it's over, the next one is going to be storage.</p>	<p>Confirmed that Paul is not referring to hydro storage (i.e., dams) but battery storage and other forms of energy storage. [Customer confirmed, this is correct.]</p> <p>Acknowledged the need to be thoughtful about storage.</p>
2.	<p><b>Lok Chao Liu, Yotta Technologies Inc.</b></p> <p><b>Question</b> - Wanted clarification on the size of the surplus and the contribution of industrial load to total domestic load. He referred back to Keith Anderson's (page 7 slide) where the annual consumption for industrials was 16,000 GWh/yr and is now ~ 13,500 GWh/yr.</p> <p><b>Question</b> - Wanted clarification on BCH's installed generation capacity and current system peaks.</p> <p><b>Question</b> – Why are Manitoba Hydro rates lower than BCH's?</p> <p><b>Question</b> – What is the scale/size of the surplus? Like a thousand megawatts?</p>	<p>The industrial customer portion of BCH's total domestic load, by energy volume, is about 25 per cent.</p> <p>BCH has about 11,000 MW of installed generation, the majority of which is large hydro. In terms of peak demand, BCH is a winter peaking utility although summer peaks (due to AC loads) have been increasing. Peak loads occur during heavy load hours (typically 4 p.m. to 8 p.m.) on cold winter nights.</p> <p>Subject to check, peak domestic loads are ~ 8,500 MW*.</p> <p><b>*Updated Response:</b></p> <ul style="list-style-type: none"> <li>Peak Winter demand: 10,200 MW</li> </ul>

	Feedback	BC Hydro Response
		<ul style="list-style-type: none"> <li>Peak Summer demand: 7,500 MW</li> </ul> <p>Confirmed that Manitoba Hydro's rates are currently lower than BCH's.</p> <p>The energy surplus varies from year to year and on a planning basis vs actual basis. Forecast is based on average water. Actual depends on system conditions - which are highly variable. For context, the surplus energy volume from most recent fiscal year (F2018) was just over 5,000 GWh.</p>
3.	<p><b>Paul Kan, BC Jobs, Trade and Technology</b></p> <p><b>Question</b> - Asked how will recent LNG Canada announcement impact on our load?</p>	<p>Deferred to LNG Canada representative in the room. Phase 1 has an expected electrical load of ~ 120 MW.</p> <p>LNG Canada load will be considered in BCH's load forecast. It's a relatively large unique site load but still modest in terms of overall system load and impact on available surplus.</p>
4.	<p><b>Doug Barbour, Harmac Pacific Site</b></p> <p><b>Comment</b> - Referring to Keith's slide (page 7), most sectors are stable or perhaps increasing. Just pulp and paper has shown a big swing (decline) based on historical view.</p>	<p>Referring to slide 7, the pulp and paper sector represents <math>\approx</math> 8,000 GWh in fiscal 2007 and it's reduced to about 4,000 GWh in fiscal 2018. The decline has been offset, in part, by growth and mining in oil and gas. Speaks to the need for diversification.</p>
5.	<p><b>Frederick Grootendorst, LNG Canada</b></p> <p><b>Comment</b> - Provided an observation on the apparent size of the delta between marginal energy value for surplus exports (\$30/MWh, illustrative) and embedded cost tariff rates (\$65/MWh).</p> <p><b>Question</b> - How do you balance the concept of having marginal rates for short term loads versus requirements from companies like LNG that have really long requests for firm power at loads or prices that are about double? How do you balance short-term versus long-term loads?</p> <p><b>Comment</b> - What we're looking for is just lower rates that you can count on for a very long time.</p>	<p>Acknowledged the insightful comments and the importance of ensuring pricing is cost-reflective and aligned with service characteristics (i.e., firm vs non-firm).</p> <p>Acknowledged that large industrial operations require reliable firm service and price certainty – need to know that power will be there.</p> <p>Confirmed that BCH will need to explore nuances of pricing, term and service characteristics as we consider different rate options.</p>

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

Anthea gave an overview of the RS 1823 Stepped Rate, including background on RS 1823 energy pricing principles and the 2015 RDA decision. She 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. She described BCH's RS 1823 energy pricing principles proposal for fiscal 2020 and asked the audience to consider the question – “do you support maintaining ‘status quo’ RS 1823 pricing principles for fiscal 2020 (i.e., increase demand and energy charges uniformly by the general rate increase for fiscal 2020)?” Comments and observations followed.

	Feedback	BC Hydro Response
1.	<p><b>David Austin, Clean Energy Association of BC.</b></p> <p><b>Comment</b> – Perhaps BCH should get rid of the two tier rate because long run marginal cost is now dropping, which is not what you thought would happen, but it is. What good is the rate if that happens? LMRC in Site C was \$60 MWh.</p>	<p>Rate and bill stability is important to us.</p> <p>The updated long run marginal cost value is yet to be determined.</p>
2.	<p><b>Michael Filippelli, ERCO Worldwide</b></p> <p><b>Comment</b> - At a minimum, I expect BCH would use the long run marginal cost of Site C, which is supposed to be ~ \$60/MWh.</p> <p><b>Question</b> - Asked if: (a) the status quo is a 2 per cent rate increase and; (b) Tier 2 was revised to be priced lower, BCH would be collecting an additional 6.5 per cent from the industrial class (e.g., based on the Tier 1 rate increase of 6.5 per cent in the scenario where Tier 2 is re-priced to \$80/MWh).</p> <p><b>Question</b> - Would that mean that BCH was over collecting? What would you do with the surplus revenue that you would get as a result of this re-pricing?</p>	<p>Confirmed that rate and bill stability for our customers are important to BCH, and is a consideration for our pricing principles application for fiscal 2020.</p> <p>With respect to the long run marginal cost of energy, that work is underway and it will be some time until we're able to report out on what that expected value is.</p> <p><i>Reference information re: Site C costs:</i></p> <ul style="list-style-type: none"> <li>• Site C unit Energy cost before adjustment = \$83/MWh</li> <li>• Adjusted UEC = \$34/MWh</li> <li>• Commission Assumptions Site C UEC = \$44</li> <li>• High load forecast = \$54</li> </ul> <p>Clarified that the 2 per cent general rate increase is a place holder value and an assumption only for the purpose of the illustrative rate examples.</p> <p>In terms of any future repricing, we would not be designing repricing to over collect from the industrial class.</p>
3.	<p><b>Bill Andrews, BC Sustainable Energy Association</b></p> <p><b>Question</b> - Asked for clarification of the portion of the energy bill under 1823 that is billed at Tier 2.</p> <p>The question was clarified to mean: “<i>what percentage of total industrial customer loads billed under RS 1823 are at the Tier 1 rate versus the Tier 2 rate?</i>”</p>	<p>~ 80 per cent of customers served under RS 1823 have an Energy CBL and are billed for energy under the stepped rate (Energy Charge B: Tier 1 and Tier 2).</p> <p>20 per cent of customers served under RS 1823 don't have an Energy CBL (because they're new and don't have sufficient load history or their load is</p>

	Feedback	BC Hydro Response
		<p>changing - growing or shrinking) and so are billed for energy under the flat rate (Energy Charge A). Collectively, last year (fiscal 2018) results for RS 1823: ~ 94 per cent Tier 1 energy and 6 per cent Tier 2 energy.</p>
4.	<p><b>Brett Robinson, Rockford Energy Corporation and Sea to Sky Energy Solutions</b></p> <p>Acknowledged good discussion and comments on Stepped Rates.</p> <p><b>Question</b> - As a previous big consumer of electricity (Brett was formerly President of Canfor Pulp), how will BCH give relief to existing customers?</p> <p><b>Comment</b> - The world is increasingly commoditized and many of BCH's industrial customers are commodity-based such that cost is where they compete.</p> <p><b>Question</b> - If an existing customer is paying default rates and a competitor is able to access discount rates, will you give them (existing customers) the best available rate so you're not harming business?</p> <p><b>Comment</b> - A reduced Tier 2 price would not reflect the original intent of the stepped rate. Tier 2 was put in place to incent conservation - by dropping the cost significantly on the second tier this would run counter to the original intent of the rate and negatively impact the economics of conservation investments.</p>	<p>Responded that RS 1823 is the default rate for firm service and our primary consideration for the proposed status quo pricing principles is centered on rate and bill stability for the provision of firm service to our existing customers.</p> <p>In subsequent segments, BCH will present some optional rates designed to provide competitive pricing and optionality for customers.</p> <p>Acknowledged as a fair comment - BCH's evaluation of the RS 1823 is that it has been effective in promoting and maintaining energy conservation - any changes to pricing principles going forward will need to consider these impacts - including further analysis and discussion of re-pricing scenarios with customers.</p>
5.	<p><b>Brandon Grossatti, Theorem Power</b></p> <p><b>Question</b> - Asked for clarification on the baseline determination and adjustment treatment for new companies / industries to take service under RS 1823 (stepped rate or flat rate).</p> <p><b>Question</b> - How does BCH establish the baseline and what are the provisions to address growth? If I'm in a growth industry, and I'm trying to continue to grow, when is that baseline set?</p> <p><b>Comment</b> - in other provinces / jurisdictions, there isn't this stepped rate and Tier 2, and as such, the pricing is more clear.</p>	<p>Criteria for Energy CBL determination and adjustment are set out in Tariff Supplement 74 (CBL Determination Guidelines). New customers are served under RS 1823 Energy Charge A (flat rate) for a minimum of 12 Billing Periods until they have sufficient operating history for an energy baseline (CBL) to be determined.</p> <p>Customer growth can be addressed through credit adjustments to the baseline (referred to as Plant Capacity Increase) or a return to the flat rate until the load growth has normalized. All else being equal, TSR customer load growth is priced at the flat rate, not the Tier 2 rate.</p>
6.	<p><b>Matt Good, Midgard Consulting</b></p> <p><b>Question</b> - Tier 1 was meant to incent conservation ... won't reducing Tier 2 impact</p>	<p>RS 1823 has been effective in promoting and maintaining conservation and we would have to</p>

	Feedback	BC Hydro Response
	conservation?	consider conservation in our analysis

**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 through questions specific to the freshet rate on Slide 37 and asked for comments and feedback.

	Feedback	BC Hydro Response
1.	<p><b>Carlo Dal Monte, Catalyst Paper</b></p> <p><b>Comment</b> - Mid-C market price spike in late July resulted in prices close to CAD \$300/MWh. Noted that the trend is for Mid-C market prices to be lower in March and April and spike higher in July (based on the past two freshet periods) in response to warm temperatures and air conditioning loads.</p> <p><b>Comment</b> - one of the challenges with the seasonal net: gross ratio (seasonal settlement) is that there is no certainty on pricing. Even though there is a day-ahead price to drive a load response, the actual value you receive on that day will be negatively impacted by the seasonal ratio. Customers who are making a financial decision on May 01 won't know the actual number (i.e., net daily volume of freshet energy * market price) until July 31.</p>	<p>Acknowledged the July price spike and the prevailing market conditions (warm temperatures and air conditioning loads) associated with the price event.</p> <p>Acknowledged the issue re: seasonal vs monthly settlement and confirmed that this is one of the questions for consultation in the feedback form.</p> <p>Advised that baseline adjustment is another potential alternative to address unexpected load reductions that occur during the freshet period and which have the potential to reduce the value of prior load increase efforts.</p>
2.	<p><b>Lok Chao Liu, Yotta Technologies Inc.</b></p> <p><b>Question</b> - Wanted clarification on pricing logic. Asked if BCH's rationale is to encourage industrial plants to use more during night time hours compared to daytime hours.</p>	<p>Confirmed the intent of freshet rate pricing is to provide customers with a price signal to increase load / use more.</p>
3.	<p><b>David Austin, Clean Energy Association of BC</b></p> <p><b>Question</b> - As part of the 2015 RDA, BCH was supposed to file a detailed study to describe the freshet problem. What was the outcome of that study?</p>	<p>Confirmed that this question was considered in BCH's Year 1 Evaluation Report on the Freshet Rate. The report was filed with the BCUC.</p> <p>Refer to 'Appendix D of the Year 1 Evaluation Report – it provides a detailed analysis of the Freshet issue and the solutions that BCH is using to mitigate it.</p>



	Feedback	BC Hydro Response
4.	<p><b>Raj Anand, Imperial Metals Corporation</b></p> <p><b>Question</b> - Why do we only collect \$3/MWh when BPA wheeling is \$6/MWh?</p>	<p>Provided context as to the determination of the \$3/MWh wheeling rate. Advised that in initial discussions with customers in 2015, the US\$5.15/MWh BPA wheel fee was proposed (convert to CAD\$6/MWh). This wheel fee was a proxy for the cost of power delivery to/from the BC border and Mid-C.</p> <p>To address circumstances where BCH might be buying from market (and paying the wheel fee) or selling to market (and avoiding the wheel fee), the negotiated settlement for the rate resulted in the fee being split equally between participants and BCH.</p>
5.	<p><b>Matt Good, Midgard Consulting</b></p> <p><b>Question</b> - Asked about freshet baseline adjustment provisions. Specifically, he wanted to understand how baseline increases and decreases were determined?</p>	<p>Advised that the freshet period (May-July) of calendar 2015 is the default baseline determination period. Baseline adjustments are considered to reflect non-normal events.</p> <ul style="list-style-type: none"> <li>• Baseline decreases can apply for subsequent DSM project investments that reduce energy consumption.</li> <li>• Baseline increases can apply for subsequent load growth projects for which the customer has requested CBL adjustment treatment under RS1823 (such as plant capacity increase or new equipment) and which would otherwise be a 'free rider' load increase.</li> </ul>
6.	<p><b>Bill Andrews, BC Sustainable Energy Association</b></p> <p><b>Question</b> - Asked if the gross and net estimate of the revenue from the pilot included the BCH staff time for processing all these adjustments and calculations?</p> <p><b>Question</b> - Asked if the administrative aspect of the program was reasonable?</p>	<p>Confirmed that the ~ \$2M/yr. net benefit to ratepayers does not include staff time for processing baseline adjustments and billing.</p> <p>There is no incremental cost for rate administration since existing staff resources are used to administer and manage the rate.</p>
7.	<p><b>Carlo Dal Monte, Catalyst Paper</b></p> <p><b>Comment</b> - Regarding the seasonal vs monthly settlement methodology and potential risk of load shifting (via moving to monthly settlement). Advised that the annual CBL reset mechanism of the stepped rate provides in-built protection against load shifting from RS 1823 to freshet. This existing mechanism serves to protect BCH and ratepayers.</p>	<p>Agreed. There is an annual CBL reset trigger as part of TS 74 (90 per cent of CBL) – so if a customer was to shift 1823 energy into freshet, and was operating at or near the 90 per cent of CBL level, that customer would face an increased risk of CBL reset, which is a very big hammer.</p>

	Feedback	BC Hydro Response
8.	<b>Penny Cochrane, Clearesult</b>  <b>Comment</b> - Freshet rate is still a pilot ... you would expect that the administration cost would be incremental.	Acknowledged.

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

David provided background and context for BCH's 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: proposed elements and criteria of the Incremental Energy Rate. Refer to Slides 42 and 43 in the presentation.

	Feedback	BC Hydro Response
1.	<b>Bill Andrews, BC Sustainable Energy Association</b>  <b>Question</b> - Is this a pilot or a permanent rate?	We view it as a possible three-year pilot.
2.	<b>Jim Quail, MoveUP (COPE 378)</b>  <b>Question</b> - as a follow up to Bill Andrew's question, if you run a pilot and you're projecting the surplus will only last five to 10 years, what's the basis for anything beyond a pilot term that's meaningful? i.e. what is the long term view?	We need to be thoughtful about the magnitude and the duration of the surplus as it relates to the rate.
3.	<b>Kellen Foreman, ENCANA Services Company Ltd.</b>  <b>Question</b> - For a sector or company that's growing year by year, how would the baseline be calculated? Is it adjusted for load growth?	Example: 50 MW load today, growth = 20 MW, total load of 70 MW tomorrow:  Base load of 50 MW is served under 1823. Incremental load of 20 MW could be served under the incremental energy rate, but it would be non-firm service (i.e., no security of firm electricity supply for the load increase and the load would be exposed to the risk of higher market prices).  For customers that need security and certainty of electricity supply, it would be better to request firm service for the load increase under 1823.
4.	<b>Matt Good, Midgard Consulting</b>  <b>Question</b> - Asked about the experience of freshet users re: interruptions? Asked if interruptions could be driven by capacity issues (e.g., transmission constraints) rather than energy shortage. Can	There have been no system constraints, and no interruptions, during the 3yr period of the Freshet rate pilot.



	Feedback	BC Hydro Response
	Powerex cause interruptions for export market sales?	Confirmed that intent of non-firm service is for interruptions to be based on transmission / physical constraints (i.e., not for financial/market reasons)

**4. Agenda Item 4 - Load Attraction Rate**

Anthea provided an overview of the load attraction rate. She covered the potential pricing, availability, term, rate cap and how performance and evaluation will be completed. Anthea emphasized that our current environment provided opportunities to attract new loads and diversify the industrial customer base. Anthea reiterated Keith's opening remarks on the opportunity for surplus energy optimization. Her emphasis was on the choices available to industrial customers to invest in new plants and the role of electricity pricing in making these investment decisions.

Allan provided a jurisdictional overview of various load attraction and load retention rate options offered by a selection of North American utilities. He described the rate offer, availability and justification.

Anthea asked for feedback on prospective pricing, availability criteria, terms, caps and evaluation approaches.

	Feedback	BC Hydro Response
1.	<p><b>David Austin, Clean Energy Association of BC</b></p> <p><b>Questions:</b></p> <ol style="list-style-type: none"> <li>1. Were the criteria for these rates driven by location?</li> <li>2. Is there an option for customers to be considered under this rate for a change in "energy use" i.e., for a fuel-switch from gas to electricity?</li> </ol>	<p>At this time, BCH is considering criteria based on location, not fuel choice. Applicants would need to demonstrate that they would not otherwise locate to BC but for the rate incentive. BCH will consider whether fuel choice should also be a criteria (i.e., but for the rate, customer would choose gas for power instead of electricity).</p>
2.	<p><b>Penny Cochrane, Clearesult</b></p> <p><b>Question</b> - Asked if there would be discounts on the interconnection costs?</p>	<p>The standard interconnection process/costs (Per TS 6) that apply to all Tx connected loads would apply to new customers. This proposed rate is specific to electricity supply</p>
3.	<p><b>Carlo Dal Monte, Catalyst Paper</b></p> <p><b>Question</b> - Asked if the rate would be available for indirect interconnections?</p>	<p>This is to be confirmed – but at this time BCH anticipates that indirect interconnection service customers would potentially be eligible</p>
4.	<p><b>Gary Fors, Howe Sound Pulp and Paper Corporation</b></p> <p><b>Question</b> - Asked if existing facilities with idle capacity would be eligible</p>	<p>At this time, BCH is considering making the rate available to new facilities only.</p> <p>As noted on slide 55, BCH is considering adopting eligibility criteria that would make the rate available only to facilities for which the discounted electricity rate will not undermine the competitiveness of existing BCH customers (industries) who produce a</p>

	Feedback	BC Hydro Response
		commodity product that is priced according to a market index. This eligibility criteria would protect the competitiveness of existing customers, but also mean that re-starts of idle facilities would not likely be eligible.
5.	<p><b>Doug Barbour, Harmac Pacific Site</b></p> <p><b>Question</b> - How long would the rate be available to new customers?</p>	As noted on slide 57, the load attraction rate may be open for three years only.
6.	<p><b>Anitra Paris, CEBC</b></p> <p><b>Question</b> - Asked why the RTP Rate was terminated?</p>	During the California energy crisis in 2000 market prices increased significantly. Because of the high prices, customers applied to terminate their RTP service and return to standard industrial rates. RTP was available until 2005 when BCH requested it be terminated as part of the 2005 Stepped Rate application – and removed from the portfolio of transmission tariffs.
7.	<p><b>Penny Cochrane, Clearesult</b></p> <p><b>Comment</b> - On the load attraction and load retention aspects of the rate. Load attraction was targeted at potential customers; these customers have not made any economic contribution to BCH or ratepayers. Load retention was likely targeted at long term customers that BCH hoped to continue to retain the load.</p> <p><b>Question</b> - Penny questioned why previous BCH load retention rates pegged at commodity prices were not part of the rates presented. She further referenced the Nova Scotia Power Load Retention Tariff as presented and wondered if it was confusing to refer to retention with attraction.</p>	<p>Acknowledged BCH has had previous market based pricing initiatives in the past. However, the RTP rate was the only one which had a load attraction and load retention component.</p> <p>The jurisdictional review presented includes load retention and load attraction rates.</p> <p><i>Additional Response:</i></p> <p>BCH notes that the question may refer to prior legislation (<i>Power for Jobs Act</i>) which provided for a customer-specific electricity rate that was indexed to commodity price (e.g., natural gas, copper, etc.). The Power for Jobs rate was set by government and administered by BCH.</p>
8.	<p><b>Carlo Dal Monte, Catalyst Paper</b></p> <p>(Referring to Slide 51 to load attraction pricing)</p> <p><b>Question</b> - Asked if on the load attraction rate there would be a discount for new customers on the RS 1823 Tier 1 or RS 1823A blended rate?</p>	Advised that new customers would not have a CBL determined – the intent is that they would be served under RS 1823A such that the discount would apply to the flat energy rate, not the stepped rate.
9.	<p><b>Brett Robinson, Rockford Energy Corporation</b></p> <p><b>Question</b> - Asked if there would be any penalties if a customer opts to leave after the fixed discount period (or surplus) ends</p>	The determination of whether or not penalties or security should apply for customers who opt to leave after receiving the load attraction discount will be based on the outputs of the ratepayer

	Feedback	BC Hydro Response
		<p>benefits modelling.</p> <p>As noted on Slide 53 we are modelling ratepayer benefits using two methods:</p> <ol style="list-style-type: none"> <li>1. Embedded costs – measure of fairness and the extent that new load contributes to BCH's cost of service for all ratepayers</li> <li>2. Marginal costs – a measure of economic efficiency and extent to which the new load contributes to reducing rates for other taxpayers</li> </ol>
10.	<p><b>Bill Andrews, BC Sustainable Energy Association</b></p> <p><b>Question</b> – could a customer join 3 years into the program and start a new 6-year schedule? Or do they all need to join in year 1 to get full value?</p>	<p>The benefits to ratepayers of this type of offer are linked to BCH being in a surplus situation. We would see the discount ending the earlier of say five years or when BCH is no longer in surplus.</p> <p>If the surplus situation continues for a number of years out into the future, then applicant in year one may get five years of discounted electricity and an applicant in year three may also get five years of discounted electricity. For clarity, five years is used for illustrative purposes.</p>
11.	<p><b>Linda Dong, Zone II Ratepayers Group</b></p> <p><b>Question</b> - Asked if BCH is considering this as a pilot or permanent rate?</p>	<p>BCH is currently considering the rate as a pilot. Recognizing that with any new initiative there are unknown risks, we are considering the risk management, monitoring and evaluation approaches shown on Slide 57</p> <p>Potential solutions to mitigate risks:</p> <ol style="list-style-type: none"> <li>1. Consider having the rate available for three years only;</li> <li>2. Have a maximum cap on potential new load (say 500 GWh, for example)</li> <li>3. Annual monitoring of load, revenue ratepayer benefits, incremental administration costs, etc.</li> </ol>
12.	<p><b>Kellen Foreman, Encana</b></p> <p><b>Question</b> - Asked if the surplus was provincial or regional?</p>	<p>The analysis undertaken for the rates presented today is all based on a service territory level assessment, not a region specific assessment</p>
13.	<p><b>David Austin, Clean Energy Association of BC</b></p> <p>Relating to Slide 54</p> <p><b>Questions:</b></p>	<p>For the first question, and with respect to the Hydro-Quebec survey, BCH uses the flat RS 1823 Energy Charge A rate for the large power customer</p>

	Feedback	BC Hydro Response
	<p>1. Was the Hydro Quebec survey on slide 54 based on Tier 1 pricing or Tier 2 as well?</p> <p>2. Did the survey look at jurisdictions where retail access was allowed?</p> <p>Comment: We do not see industrial rates (in the HQ survey) from de-regulated jurisdictions like Texas and Alberta.</p>	<p>calculation, which is equal to 90 per cent * Tier 1 rate and 10 per cent * Tier 2 rate.</p> <p>Alberta would use the wholesale market price. Not sure which other jurisdictions in the survey allow retail access.</p>
14.	<p><b>Penny Cochrane, Clearesult</b></p> <p><b>Question</b> - Asked if BCH was aware that other jurisdictions bundle the pricing to include tax breaks?</p>	<p>BCH's understanding is that some jurisdictions do offer electricity rate discounts as part of a broader package of offers with government (such as tax breaks to attract new business to a region). However the load attraction rate discussed today is a BCH initiative only.</p>

**5. Agenda Item 5 - Load Retention Rate**

David provided an overview of the Load Retention Rate from BCH's 1996 Industrial Service Application (which was incorporated into BCH's 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><b>Carlo Dal Monte, Catalyst Paper</b></p> <p><b>Comment</b> - At Tier 1, BCH industrial customers are still ranked at #5 in Canada and at the blended rate ranked at #7. As a result, general lowering of rates (i.e., non-specific customer treatment) would help with the ranking and would potentially provide less trade exposure than a customer specific rate. For instance, Port Hawkesbury was reviewed under countervailing duty.</p>	<p>Acknowledged.</p>
2.	<p><b>Lok Chao Liu, Yotta Technologies Inc.</b></p> <p><b>Question</b> - Asked what was causing the \$10 difference in our prices compared to Manitoba. The cost of energy in Manitoba is \$35/MWh and demand is \$7.50/kVA whereas the cost of energy in BC is \$47/MWh.</p>	<p>Noted. The energy charge is lower in Manitoba. Cost obligations and power purchase agreements as between the utilities may account for a portion of the energy price difference.</p>
3.	<p><b>Frederick Grootendorst, LNG Canada</b></p> <p><b>Comment</b> - Support general rate decreases. When rate reductions are targeted, it is hard to get the balance right.</p>	<p>Acknowledged.</p>

	Feedback	BC Hydro Response
4.	<b>Matt Good, Midgard Consulting</b>  <b>Question</b> - Is this envisioned to be a firm service?	Yes, this rate is designed as firm service
5.	<b>Kellen Foreman, Encana Services Company</b>  <b>Comment</b> - The rate is fair. The goal is for customers in the Oil and Gas sector to use cleaner fuels. Prices are depressed and so gas is almost free to them. There is not a lot of incentive to electrify. Carbon tax would have to go up to \$100 a tonne to influence a change in behavior. Customers have the ability to invest in other jurisdictions that offer better prices.	Acknowledged
6.	<b>Bill Andrews, BC Sustainable Energy Association</b>  <b>Question</b> - Asked Fred James (BCH) if the concept is that the load retention rate would provide a net benefit overall to ratepayers (or no net harm)?	Yes, same rate making principles would apply. The “no-harm” principle is a foundational component of our load retention rate.
7.	<b>Kellen Foreman, Encana Services Company</b>  (Re: Q4 of Slide 63) <b>Comment</b> – While he doesn’t have plant restart opportunity at his facilities, he agrees that load for plant restarts should be eligible for the load retention rate. <b>Comment</b> – Asks BCH and the province to consider the value of the retained load during a period of surplus; if valuable, re-starts should be eligible	Acknowledged.
8.	<b>Gary Fors, Howe Sound Pulp and Paper</b>  <b>Comment</b> - Eligibility criteria is counter-intuitive ... all else being equal, re-starts should be considered as new load and prioritized over a new entrant.	Acknowledged.
9.	<b>Jouni Martiskainen, Catalyst Paper</b>  (Re: question #5 about plant expansions on Slide 63) <b>Question</b> - What is the utility benefit to BCH of re-starting an idled 100 MW facility vs attracting a new greenfield 100 MW facility?	There are multiple variables that could impact the outcome. BCH will need to consider the rationale and impacts if the load retention rate were to be made available for plant restarts.

	Feedback	BC Hydro Response
10.	<b>Jim Quail, MoveUP (COPE 378)</b>  <b>Comment</b> – BCH is looking for ways to maximize a temporary surplus. What industry wants is guaranteed long term cheaper electricity. Several years ago, the Province prepared a report on industrial electricity rates (Industrial Electricity Policy Review). One of the points in that report was that where government sees electricity prices as a means to achieve policy objectives (such as GHGs, EPAs, etc.), then the costs should be on taxpayers and not ratepayers. Beyond soaking up the surplus, how does long term viability for these customers happen without a government ‘top up’?	Acknowledged.

#### Closing and Next Steps – Fred James

Fred thanked everyone for attending and participating in the workshop discussions. Fred outlined the next steps in terms of the engagement and informed all attendees that the deadline to have feedback forms and written submissions to BCH was October 24, 2018. He advised that the next TSR design workshop in Vancouver is scheduled for November 2018. The workshop will cover proposed pricing, availability and terms for the Load Attraction and Load Retention rates.

Fred explained BCH’s plan to file an application for the freshet rate (together with the Final Evaluation Report) in November 2018. BCH plans to request Commission approval of the Freshet Rate by February 2019 so that the freshet rate would be available for fiscal 2020 and beyond.