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February 25, 2011

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

Dear Ms. Hamilton:

RE: Project No. 3698617
British Columbia Utilities Commission (BCUC)
British Columbia Hydro and Power Authority (BC Hydro)
Residential Inclining Block (RIB) Rate Re-pricing Application
BC Hydro Final Submission

1. Introduction

BC Hydro writes to provide its submission concerning its RIB Rate Re-pricing Application (**Application**) pursuant to BCUC Order No. G-204-10. Part 2 of these submissions reviews what BC Hydro is applying for, and why it would be appropriate for the BCUC to give its approval, in the context of intervener submissions. Part 3 consists of BC Hydro's response to particular submissions of interveners.

In the Application, pursuant to sections 58 to 61 of the *Utilities Commission Act,*[1] BC Hydro applied for approval of a pricing principle under which BC Hydro would increase the three components of the RIB rate (Step-1 energy rate, Step-2 energy rate and Basic Charge) by the amount of any approved general rate increase (**Proposed Pricing Principle**). The Application also discussed an alternate pricing principle based on employing the class average rate change (**CARC**) plus 10 per cent (**CARC + 10%**) as a bill impact threshold (**Alternative Pricing Principle**). Although the Alternative Pricing Principle would be expected to result in slightly higher cumulative conservation than the Proposed Pricing Principle, it would also result in significantly higher bill impacts for some customers.[2]

Of the five interveners who have filed submissions, two support the Application (British Columbia Old Age Pensioners' Organization (**BCOAPO**) and Terasen Gas Inc., Terasen Gas (Vancouver Island) and Terasen Gas (Whistler) (collectively **Terasen Utilities**)) while two do not (Commercial Energy Consumers Association of B.C. (**CEC**) and B.C. Sustainable Energy Association and Sierra Club of B.C. (**BCSEA**)). It is not clear to BC Hydro whether Energy Solutions for Vancouver Island Society (**ESVI**) does or does

[1] R.S.B.C. 1996, c. 473.

[2] Response to BCUC IR 1.7.5 (refer to Exhibit B-2); and Application at pages 5-6 and 8.

not support the Application. Both CEC and BCSEA propose that the BCUC approve alternate pricing principles developed by BC Hydro. BCSEA supports a modified CARC + 10% principle with the Basic Charge increasing by inflation, similar to what was modelled in response to BCUC IR 1.4.3, but with the Step-1 energy rate increasing by at least inflation, rather than by general rate increases. CEC endorses a different principle, modelled by BC Hydro, wherein the maximum bill impact of the rate increase would be the higher of CARC or 10% (**Higher of CARC or 10% Principle**).[3]

2. Relief Sought by BC Hydro

2.1. Context

Conservation, and conservation rates, continue to be key components of BC Hydro's plan to address increasing electricity demand in the province. This is in accordance with government policy articulated in the *2007 Energy Plan*, with British Columbia's energy objectives as more recently set out in the Clean Energy Act [4], and with the direction set by the BCUC in its 2007 RDA Decision[5]. The pivotal role of conservation rates was expressed by the BCUC in that Decision as follows:

> "It is also abundantly clear that the Intervenors share the conclusion of BC Hydro's Shareholder and Executive that energy conservation plays a pivotal role in meeting the strategic objectives for BC Hydro and the Province, and that it is the only practical way to avoid dilution of the Heritage benefit with the ever increasing reliance on high marginal cost incremental supply. The Intervenors concerns are, in the Commission Panel's view, well founded, as, all else equal, the cost burden of the increased supply base will be borne by them.[6]"

The *Clean Energy Act* confirms the policy direction set by the BCUC and government with respect to BC Hydro's conservation rates[7], but it does not change the rate-setting provisions of the *Utilities Commission Act*[8], nor does it alter the considerations that the BCUC must take into account when setting rates. It is a well-known principle of rate design to give consideration to rate and bill stability[9] to be prepared to take a balanced

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[3] CEC Final Submission at page 10; CEC's proposal is to use a Higher of CARC or X% principle, where X would be determined by the BCUC based on the maximum bill impact to get the Step-2 price to LRMC by 2016. CEC submits that X will be in the range of 9 per cent to 12 per cent. BC Hydro's earlier modelling, shown at pages 4 and 5 of BC Hydro's supplemental response to BCUC IR 1.11.1, included an example of the Higher of CARC or X% principle, using X = 10 per cent. This modelling was extended to seven years in BC Hydro's supplemental response to CEC IR 1.5.2.

[4] S.B.C. 2010, c. 22, s. 2, particularly 2(b).

[5] *Re British Columbia Hydro and Power Authority 2007 Rate Design Application Phase-1* (October 26, 2007) BCUC Decision [2007 RDA Decision].

[6] 2007 RDA Decision at page 57.

[7] Response to ESVI IR 1.11.1.

[8] Response to ESVI IR 1.11.3.

[9] Paraphrased from James C. Bonbright, *Principles of Public Utility Rates*, Columbia University Press, March 1988 at 383 and following; refer also to the response to BCSEA IR 1.1.2.

approach. Maximizing conservation savings is not an objective of the RIB rate, despite the assertion of BCSEA.[10] As explained in section 2.3 of the Application, general rate increases are anticipated in the range of 43 to 45 per cent over the four-year period from F2012 to F2015.[11] It is within this context that BC Hydro compares the relative merits of the Proposed Pricing Principle, the Alternative Pricing Principle, and the Higher of CARC or 10% Principle.

The other important contextual elements are forward looking. In the next year BC Hydro will have before the BCUC a three-year revenue requirements application, the first since the integration of BCTC. At the same time, BC Hydro is also developing its 2011 Integrated Resource Plan (**IRP**), for presentation to the Lieutenant Governor in Council (**LGIC**) at the end of 2011. The 2011 IRP will describe BC Hydro's long-term load forecast, and the supply side and demand side resource-alternatives available to BC Hydro to meet that forecast. It will also set out BC Hydro's views on how the load-resource balance ought to be met, including the relative merits of potential new resources such as calls for energy, Site C, and increased demand side management (**DSM**). More-or-less at the same time, BC Hydro will be developing and filing a time-of-use (**TOU**) rate application. Each of these three filings has the potential to prove very significant to the issues engaged in a conservation rate filing, by establishing: general price levels; the need, if any, for further supply side or demand side resources; and new rate structures.

The CEC's submission[12] that these events "may or may not" affect the applicable considerations in a rate design proceeding significantly underestimates the importance of these events. The CEC's proposal that the proposed RIB Rate Report ought to be filed at the end of 2012 is unrealistic, as it fails to account for a revenue requirements decision in the first quarter of 2012; a TOU rate decision no earlier than mid-2012; and a response by the LGIC to the 2011 IRP sometime in 2012 or later.

One of the reasons for BC Hydro's proposed RIB Rate Report timing[13] is to allow the report to take into account the BCUC's decision on BC Hydro's TOU rate application and the implementation of smart meters. This proposed timing, in BC Hydro submission, addresses ESVI's submission number 4.0.[14]

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[10] Responses to BCSEA IRs 1.1.2, 1.4.1 and 1.8.2, in contrast to the BCSEA Submission of February 15, 2011, at item 1 at the bottom of the first page, and at item 1 on the second page.

[11] Application, at page 8 (refer to Exhibit B-1).

[12] CEC Final Submission at page 11.

[13] Application (Exhibit B-1), Appendix A - Draft Order, directive 3 specifies that the RIB Rate Report will be filed no later than December 31, 2013. Also, refer to the response to BCUC IR 1.1.1.

[14] ESVI Final Submission at page 5. BC Hydro has proposed that the RIB Rate Report will take into account at least the following three things: the BCUC's response to BC Hydro's TOU rate application, the BCUC's response to BC Hydro's imminent revenue requirements application, and the LGIC's response to the 2011 IRP. This list is not intended to be exhaustive, nor is it possible to set out an exhaustive list, as the RIB Rate Report will include the considerations that are relevant at that time.

2.2. Comparison of Pricing Principles

As the response to BCOAPO IR 1.2.1 indicates, modelling for the years F2011 through F2018 shows that both the Proposed and Alternative Pricing principles eventually achieve a run rate conservation of 1,486 GWh/year. However, the Alternative Pricing Principle would be expected to approach that run rate earlier, with the result that over the period from F2011 to F2018, the Alternative Pricing Principle would be expected to result in a cumulative conservation that is 1,470 GWh higher than that of the Proposed Pricing Principle. BC Hydro views this difference in cumulative conservation as an acceptable trade-off of choosing the Proposed Pricing Principle over the more aggressive Alternative Pricing Principle. It should be noted that both pricing principles reach the residential conservation run-rate level in the 2008 LTAP DSM Plan.[15] Conservation from residential rates is, of course, only one of several sources of conservation contemplated in the 2008 LTAP DSM Plan. As a result, the difference in cumulative conservation between the Proposed Pricing Principle and the Alternative Pricing Principle is not significant compared to the planned total cumulative conservation from all DSM.[16]

The main benefit of the Proposed Pricing Principle over the Alternative Pricing Principle is the less onerous customer bill impacts. Tables 1 and 2 in the Application show that the Proposed Pricing Principle holds bill impacts for all residential customers at the annual revenue requirement rate increase, whereas in each modelled year the Alternative Pricing Principle results in some customers experiencing bill impacts greater than the applicable revenue requirement rate increase. For example, in F2012 under the Alternative Pricing Principle, about 1.4 per cent of customers would experience an estimated bill increase of between 22.5 and 25 per cent that year. For this group of customers, the average annual adverse bill impact would be approximately $1,000 in F2012 (compared to F2011).[17] Under the Alternative Pricing Principle, approximately 28 per cent of residential customers in F2012 would experience higher annual increases than the rest of the class, and higher than the approved general rate increase.

The Higher of CARC or 10% Principle lies between the other principles, with higher customer bill impacts than the Proposed Pricing Principle (but more moderate bill impacts than the Alternative Pricing Principle)[18], and with more cumulative conservation

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[15] The 2008 LTAP DSM Plan indicates a total run-rate conservation of 1,422 GWh/year from residential rates by F2020 (refer to the response to BCUC IR 1.7.6).

[16] Response to BCUC IR 1.7.6 notes that in the 2008 LTAP Evidentiary Update DSM Plan, the cumulative acquired energy savings from all sources from F11 to F18 is 37,750 GWh, whereas the difference in cumulative conservation between the two pricing principles analyzed in the Application is only 1,470 GWh (i.e., less than four per cent of the total planned conservation).

[17] Response to BCUC IR 1.6.1.

[18] The Application at pages 5 and 6 shows the bill impacts for the Proposed Pricing Principle and the Alternative Pricing Principle. The Supplemental Response to CEC IR 1.5.2 shows the bill impacts for the Higher of CARC or 10% Principle, which are more moderate than for the Alternative Pricing Principle in years F2013 through F2016, as they are clustered closer to the revenue requirement rate increase for those years. For years F2017 and F2018, the bill impacts shown for the Higher of CARC or 10% Principle are the same as for the Alternative Pricing Principle.

than the Proposed Pricing Principle (but less than the Alternative Pricing Principle).[19] On balance, BC Hydro prefers the Proposed Pricing Principle.

BC Hydro submits that the benefit of choosing the Proposed Pricing Principle over the Alternative Pricing Principle or the Higher of CARC or 10% Principle, namely, avoided bill impacts for customers, is large, whereas the cost in forgone cumulative conservation is relatively small. BC Hydro submits that it is therefore appropriate for the BCUC to approve the Proposed Pricing Principle. In effect, this will defer consideration of more aggressive conservation pricing for the residential rate class in the short-term, at a time when general rate increases are significant.

2.3. Long Run Marginal Cost

In the Application, BC Hydro made assumptions about its Long Run Marginal Cost (**LRMC**) for the purposes of modelling different pricing principles. Specifically, the LRMC used for modelling purposes was based on the levelized weighted-average plant-gate price for firm energy in the 2009 Clean Power Call report (**CPC Report**), grossed up for line losses, and adjusted for inflation.[20] Changes to BC Hydro's actual LRMC will be heavily dependent on whether there are calls for power over the next several years. BC Hydro has no current plans for further calls for power over the modelled period, although the need for future power acquisition processes is one of the issues to be addressed in the 2011 IRP.[21] In the absence of any plans for future calls, or the identified need for any at this time, it would be speculative to model a LRMC based on assumptions about the results of such calls. However, rather than assume no change in LRMC over the modelled period, BC Hydro assumed the LRMC would increase in line with inflation. Given the fact that no calls are currently planned, BC Hydro submits that this is a reasonable assumption for modelling purposes.

The CEC made extensive submissions on BC Hydro's LRMC assumptions for modelling purposes, perhaps under the mistaken impression that BC Hydro was proposing to reflect those modelling assumptions in the Proposed Pricing Principle.[22] To be clear, under the Proposed Pricing Principle, each element of the RIB rate, including the Step-2 energy rate, would increase annually by the approved general rate increase, regardless of whether the LRMC actually increases by inflation, or by some greater amount. Indeed, given annual average rate increases of about 10 per cent per year, the Proposed Pricing

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[19] The Supplemental Response to CEC IR 1.5.2 shows, for the Higher of CARC or 10% Principle, the total conservation each year over the period from F2011 to F2018 inclusive, which adds to a cumulative conservation of 9,450 GWh. The response to BCOAPO IR 1.2.1 shows that over the same period, the Proposed Pricing Principle has a cumulative conservation of 8,784 GWh, and the Alternative Pricing Principle has a cumulative conservation of 10,254 GWh.

[20] Application at page 2.

[21] Response to BCUC IR 1.3.1.

[22] For example, the CEC Final Submission at pages 3 and 5 seems to indicate that BC Hydro is applying for approval of a methodology for changing the LRMC proxy in future years. This is incorrect.

Principle increases the Step-2 energy rate at the same rate – 10 per cent per year – that the CEC submits is supported by the evidence on the record of this proceeding.[23]

2.4. Effective Period for the Proposed Pricing Principle

Despite the fact that BC Hydro used a seven-year period for modelling, this does not mean that if approved, the Proposed Pricing Principle would be in effect for that entire period, with no opportunity for re-evaluation. To the contrary, and as discussed above, BC Hydro has proposed that it provide a RIB Rate Report within twelve months of the later of the BCUC's TOU decision and the government's response to the 2011 IRP, but by December 31, 2013 in any event.[24] BC Hydro expects to file the proposed RIB Rate Report between June 2013 and the end of December 2013[25], which would be in time for new pricing principles to be established for the beginning of F2015, if the BCUC so determined. BC Hydro submits that this satisfies ESVI's primary concern, which is about the timing in which BC Hydro will return to the BCUC to re-visit the RIB Rate pricing principles.[26] While the proposed RIB Rate Report may or may not include a pricing application, BC Hydro assumes that even if it does not, interveners who wish to comment on the RIB Rate Report would be allowed to do so and that their comments would be heard by the BCUC. The BCUC would of course have the final say in whether and when the RIB rate ought to be revisited.

3. Response to Specific Intervener Submissions

3.1. Response to BCSEA

The stated primary objective of BCSEA's proposed RIB re-pricing formula is to maximize cumulative conservation savings, subject to appropriate bill impact constraints.[27] Leaving aside for the moment the question of what constitutes an appropriate bill impact constraint, BC Hydro submits that there is no legislative requirement to maximize conservation savings as described. BC Hydro respectfully disagrees with the notion that a pricing principle would be flawed for not adhering to such an objective.[28] BC Hydro also disagrees with the proposition that by increasing the Basic Charge annually by inflation, BCSEA's proposed formula has "left alone" the Basic Charge.[29] BC Hydro submits that its proposal of applying the general rate increase is "to leave the Basic

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[23] CEC Final Submission, bottom of page 3. Note, however, that BC Hydro does not accept the proposition that a 10 per cent per year increase in LRMC is supported by the evidence.

[24] Application at page 10, and draft order at Appendix A.

[25] Response to BCUC IR 1.1.1.

[26] ESVI Final Submission at page 1.

[27] BCSEA Final Submission, page 1, point 1 near the bottom of the page.

[28] Responses to BCSEA IRs 1.1.2 and 1.8.2, in contrast to BCSEA Final Submission, page 2, point 1.

[29] BCSEA Final Submission, page 2, point 6.

Charge alone"[30], and that applying only the rate of inflation would set the Basic Charge artificially low.

As to BCSEA's assertion that BC Hydro's focus on conservation run-rates is misplaced, BC Hydro's conservation targets are expressed as run-rates and are based on the 2008 LTAP targets, which are conservation run-rate targets.[31] The BCSEA's submission on this point is without merit.

BCSEA asserts that "customers paying only Step 1 have substantially lower average ability to pay than customers paying Step 2." BC Hydro submits that there is no evidence of this in the current proceeding, and that there is no indication of the acceptance of any such evidence in the BCUC's Reasons for Decision on Order No. G-124-08 (**2008 RIB Rate Decision**). BC Hydro notes that while smaller-consuming customers are less price responsive, reflected in a smaller own-price elasticity, price elasticity and "ability to pay" are discrete ideas.

Contrary to BCSEA's assertion that "CARC going forward is only loosely estimated", BC Hydro submits that for the first three years of modelling – the time period before the proposed RIB Rate Report – CARC is not loosely estimated. Whatever the precise rate increases BC Hydro will be applying for in its revenue requirements application, the evidence is clear that they will be about 10 per cent per year, on average, for the next three years.[32]

3.2. Response to CEC

The CEC asserts that under the Proposed Pricing Principle there is "no price signal to reflect the anticipated costs of new supply" and similar comments.[33] The assertion is without merit, as the Step-2 energy rate was established to better reflect the LRMC of new supply than the otherwise applicable flat rate, and will continue to increase annually by about 10 per cent per year under the Proposed Pricing Principle.

The CEC also asserts that "… BC Hydro is advising that it will not be increasing DSM spending to support the rate" and that "… BC Hydro advises that … [the F2012-F2014 revenue requirements application] … will have lower rates than contained in the NSA decision."[34] Neither assertion is supported by the referenced BC Hydro IR responses, nor by anything else on the record.

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[30] In BCUC Reasons for Decision to Order No. G-124-08, at page 118, the BCUC said that BC Hydro stated that it introduced the Basic Charge in March 1977, and that since 1977 the Basic Charge has increased by general rate increases.

[31] Response to BCUC IR 1.7.6.

[32] Application at page 8.

[33] CEC Final Submission at page 2.

[34] CEC Final Submission at page 7.

The CEC submitted that "all rate classes should be provided similar price signaling in the same timeframe to be reasonable and fair."[35] BC Hydro takes this to mean that the CEC would have the same LRMC-based marginal rate at all times for all customer classes having conservation rates. This suggestion fails to take into account that, based on the considerations that were appropriate for each rate class, the classes have different rate structures, with different parameters, different phase-in periods, and different ways of calculating residual pricing. These rate structures came about through different regulatory processes, and on different timelines. Furthermore, there are important differences in the characteristics of each rate class. It would be ill-advised to treat them with a "one-size fits all" approach.

3.3. Response to BCOAPO

The BCOAPO has pointed out that one effect of choosing the Proposed Pricing Principle over the Alternative Pricing Principle is that BC Hydro will have to purchase a small amount more of market energy (or sell a small amount less). Because the forecast price of market energy is currently less than either the Step-1 or Step-2 rate, in the short-term the Proposed Pricing Principle may be expected to result in a net positive contribution to BC Hydro's revenue requirements as compared to the Alternative Pricing Principle.[36] However, the net positive contribution would be quite small, given the small difference in conservation between the two pricing principles. BC Hydro does not see this effect as being material for the purposes of the Application, because even where conservation costs ratepayers a small amount more in the short-run, conservation helps to keep rates lower in the long-run by avoiding the need to make large capital expenditures to serve load growth. In this regard, BC Hydro generally supports the proposition that in a conservation rate design proceeding the long-term planning context is more relevant than the short-term effect on utility margins. However, and contrary to the submissions of the CEC on this point[37], the difference between the long-term benefits of conservation and the short-term costs (where market prices are less than customer rates) has nothing to do with the actual LRMC, or the LRMC used for modelling purposes, so long as LRMC is greater than the utility's average embedded cost.

3.4. Response to ESVI

In response to ESVI's concern about the adequacy of BC Hydro's response to ESVI IR 1.14.1, BC Hydro submits that, as a procedural matter, the time for ESVI to object to IR responses has passed. BC Hydro answered the IR, and it would not be fair to other participants for BC Hydro to give new evidence on specific IRs at this time. Intervener concerns about the regional effects of applying a RIB rate to the residential rate class were canvassed in the course of the proceeding on the 2008 RIB Rate Application. The BCUC considered the evidence in light of those intervener concerns, and came to the following conclusion in the 2008 RIB Rate Decision:

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[35] CEC Final Submission at page 12.

[36] Refer to BCOAPO IR 1.3.1.

[37] CEC Final Submission at page 8.

> "The Commission Panel has also considered the evidence and submissions on regionally differentiated rates and determines that there is insufficient evidence before it to justify any departure by BC Hydro from setting rates on the postage stamp principle.[38]"

Nothing in the Proposed Pricing Principle changes this aspect of the RIB rate.

4. Conclusion

As the modelling shows, the Proposed Pricing Principle is expected to meet the run-rate conservation levels set out in the 2008 LTAP DSM Plan, and to achieve only slightly less cumulative conservation than the other alternatives. The Proposed Pricing Principle will have more moderate customer bill impacts than any of the other alternatives presented. BC Hydro remains persuaded that the Proposed Pricing Principle is the most appropriate approach at this time, given that general rate increases over the next three years are projected to be relatively large. BC Hydro submits that, in light of the reasons in these submissions, it is appropriate for the BCUC to approve the Proposed Pricing Principle and to grant the relief that BC Hydro is seeking.

Yours sincerely,

Joanna Sofield
Chief Regulatory Officer

dr/ma

Copy to: BCUC Project No. 3698617(RIB Rate Re-pricing Application) Registered Intervener Distribution List.

[38] 2008 RIB Rate Decision at page 80.