Draft

BC Hydro Rate Design Workshop

SUMMARY 16 DECEMBER 2014 9 A.M. TO 11.45 A.M. BCUC Hearing Room Vancouver

TYPE OF MEETING	RDA Workshop No. 7 – Distribution Extension Policy
FACILITATOR	Anne Wilson, BCH
PARTICIPANTS	Association of Major Power Consumers of British Columbia (AMPC), B.C. Ministry of Energy and Mines, British Columbia Old Age Pensioners Organization (BCOAPO), British Columbia Sustainable Energy Association and Sierra Club B.C. Chapter (BCSEA), BCUC staff, Canadian Office & Professional Employees Union Local 378 (COPE 378), Commercial Energy Consumers Association of British Columbia (CEC), First Nations Energy and Mining Council (FNEMC), FortisBC Inc. (FortisBC), Linda Dong Associates (with FNEMC), Polygon Homes Ltd., Primary Engineering, Township of Langley, Urban Development Institute (UDI)
BC HYDRO ATTENDEES	Gordon Doyle, Sam Jones, Kevin Lim-Kong, Rena Messerschmidt, Craig Godsoe, Bryan Hobkirk, Anne Wilson
AGENDA	1. Introduction including review of draft agenda 2. Background 3. What should BC Hydro's maximum contribution cover 4. Options for updating BC Hydro's maximum contribution 5. Other issues: Extension fee refund and connection charges 6. Closing and next steps

MEETING MINUTES

ABBREVIATIONS

BCH ..... BC Hydro
BCUC..... British Columbia Utilities Commission
COS ..... Cost of Service
DCC ..... municipal Development Cost Charge
DCF..... Discounted Cash Flow
GS ..... General Service
IEPR..... Industrial Electricity Policy Review
kVA..... Kilovolt-ampere
kW..... Kilowatt
PG&E ..... Pacific Gas and Electric Company
PV ..... Present Value
RDA..... Rate Design Application
RRA..... Revenue Requirement Application
SET Guidelines.. BCUC 1996 System Extension Test Guidelines
SFD ..... Single Family Dwelling
SI..... System Improvement
TS 6 ..... Tariff Supplement No. 6
UCA..... Utilities Commission Act
WACC ..... Weighted Average Cost of Capital

1. *Introduction*

Anne Wilson opened the meeting by reviewing the agenda set out in slide 2 of the Workshop No. 7 slide deck.

2. Background

Gordon Doyle gave an overview of section 8 of BCH's Electric Tariff, which contains the Distribution extension provisions.

Gord also reviewed the major inputs to date informing BCH's review of Distribution extension policy: (1) the BCUC 2007 RDA decision; (2) stakeholder engagement to date, including the July/August 2014 sessions with developers and other Distribution customers; (3) the eight Bonbright criteria, with BCH emphasizing the following three criteria - fairness between new and existing customers and between new customers, customer understanding and acceptance, and practical and cost-effective to implement; (4) SET Guidelines together with the BCUC 2007 RDA decision interpretation to exclude the marginal cost of energy; and (5) jurisdictional assessment, which to date has proven more difficult than for Transmission extension policy because much of the detail appears to be the subject of business practices which are not readily accessible. As a result, the Distribution extension jurisdictional assessment is a work in progress.

Gord proposed that Distribution extension policy, together with Transmission extension policy, be part of a later RDA module to be filed sometime after the evidentiary phase of the main RDA filing had concluded.

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	FEEDBACK	RESPONSE
1.	**COPE 378** On slide 10, BCH references the BCUC 2007 RDA decision and section 5(d) of Direction No. 7, which provides that BCH electricity will be made available to its customers on a 'cost of service' basis. Cost of service does not exclude marginal cost.	Slide 10 is a summary of the BCUC 2007 RDA decision[1] on this matter. The BCUC accepted BCH's (and other intervenor) arguments that new customers are entitled to share in the benefits of the Heritage resources. As a result, the BCUC set aside the effect of the incremental cost of energy in the SET Guidelines-related DCF calculations.
2.	**COPE 378** (Dr. Shaffer) BCH should ensure consistency in the calculation of the BCH contribution in the Transmission extension and Distribution extension contexts. The two extension policies should be reviewed together, with the same criteria used to assess outcomes. This may be the basis for a later Transmission extension/Distribution extension RDA module. For example, the result of TS 6 is that no new Transmission service customer has had to contribute to System Reinforcements. Have residential and/or commercial customers had to contribute to SI?	Agreed. Unlike BCH's contribution under TS 6, BCH's Maximum Contribution is applied to both SI and extension costs in the Distribution context. Depending on the specific project circumstances and connection requirements, some new customers have been allocated a portion of SI costs.
3.	**CEC** Has BCH considered the limitations to the postage stamp[2] concept? BCH needs to consider what the limits are – is there a standard deviation from average type of view?	***Revised response*** In the 2007 RDA, BCH stated that it considered postage stamp rates to be a fundamental rate design objective, arguably subject to only two exceptions: (1) in Zone II BCH limits the amount of energy available at Zone I (integrated system) rates; and (2) BCH limits the amount that BCH will contribute toward the cost of new extensions, effectively limiting the postage stamp treatment of the costs of extensions.[3]
4.	**UDI** Does BCH consider developers to be 'new customers'?	Yes. 'New customer' is the entity/person making the connection to the BCH system, and in many cases this is the developer.

[1] ***Note to readers***: The relevant parts of the 2007 RDA decision are: *In the Matter of British Columbia Hydro and Power Authority: 2007 Rate Design Application, Phase-1*, Decision, 26 October 2007 (2007 RDA decision), pages 157 and 185-187; a copy of the 2007 RDA decision is found at BCH's 2015 RDA website under 'Resources'.

[2] Postage stamp rates are a method of cost allocation where any rate class charge is the same anywhere on the interconnected system, regardless of the geographic region in BCH's service area. BCH has used postage stamp rates in its rate class design dating back to its creation.

The IEPR in a task force issue paper on postage stamp rates stated that "this [postage stamp] approach to rate-making provides equal opportunity to obtain electrical service regardless of whether customers are existing or new or where they are located in the system. Postage stamp rates ensure that no one industry or corporation has an advantage over others and that new entrants may compete on an equal basis with existing customers. Postage stamp rates remove economic disincentives that might otherwise exist for new development. Postage stamp rate-making is simple to administer and provides customers with cost certainty relative to other approaches". (http://www.empr.gov.bc.ca/EPD/Documents/Task%20Force%20Issue%20Paper-Postage%20Stamp%20Rates-FINAL.pdf).

[3] Refer to Exhibit B-3 in the 2007 RDA proceeding, BCH's response to BCUC Information Request 1.62.3, copy available at http://www.bcuc.com/Documents/Proceedings/2007/DOC_15082_B-3_BCH-IRs-Round-1.pdf.

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3. What Should BCH's Maximum Contribution Cover

Sam Jones and **Kevin Lim-Kong** provided an overview of BCH's Maximum Contribution and what it applies to. BC Hydro's Maximum Contribution approach was compared to other jurisdictions, with category 1b (SaskPower and Manitoba Hydro) also using a revenue-based approach whereas category 2 utilities contribute up to 'x' meters of extension line. BCH does not favour option 2 for the reasons set out on slide 18 of the Workshop No. 7 slide deck.

Three SI cost allocation options were discussed: option 1 (status quo); option 2 (BCH assigned all SI costs); and option 3 (DCC model).

	FEEDBACK	RESPONSE
1.	**COPE 378** (Dr. Shaffer) Regarding slide 15, has it been difficult to differentiate between service connections which are always covered by the new customer, and extensions?	No, it has not been difficult – service connections are the last bit of wire connecting the new customer to BCH distribution infrastructure. The difficulty has been in differentiating extensions from SI.
2.	**CEC** How is BCH's Maximum Contribution for SFD calculated?	BCH's Maximum Contribution for residential customers is based on a 20 year PV calculation of the following ratio: total Distribution capital–related costs assigned to residential customers in the COS study divided by the number of residential customers. The reference to 'SFD' is a labelling issue – BCH's Maximum Contribution is based on all residential customer accounts. BCH will revise the SFD labelling issue in section 8.3 of the Electric Tariff as part of the 2015 RDA.
3.	**BCOAPO** (Mr. Pullman) PG&E does not appear on BCH's jurisdictional assessment; our understanding is that PG&E's contribution is per meter and not per SFD.	To date, BCH has confined its jurisdictional assessment to Canadian utilities as set out on slide 12 of the Workshop No. 7 slide deck. ***Revised response*** PG&E's Distribution extension provisions are found in Electric Rule No. 15 of its tariffs. Part C.3 provides: "The allowance for Distribution Line Extensions, Service Extensions, or a combination thereof, for Permanent Residential Service is $1,918 per meter or residential dwelling unit".[4]
4.	**AMPC** BCH should further investigate Alberta, and in particular review ATCO Electric with a rural-based residential customer base and ENMAX which has an urban residential customer base. BCH will likely need to contact both utilities as some important considerations are not likely found in accessible electric tariffs.	Agreed. BCH reviewed ATCO Electric's Distribution Tariff and understands that ATCO Electric uses a revenue-based approach. BCH also understands that ATCO Electric's general philosophy is that "up to some reasonable limit, the cost of a new extension should be included with the other costs of the electric system and recovered through rates charged to all customers".[5]
5.	**UDI** Regarding category 2 utilities, do they require SI-related payments from new customers?	BCH's understanding is that the practice is mixed.

[4] http://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_15.pdf.

[5] ATCO Electric, *Customer Guide to New Extensions* (October 2014), page 30; copy available at http://www.atcoelectric.com/Services/Documents/Customer_Guide_to_New_Extensions.pdf.

6.	**AMPC** The 'straw that breaks the camel's back' is a common problem that has to be grappled with. It should not matter in what order new customers apply. Does BCH consider the outcome on slide 21 to be fair? Intergenerational equity is important as well – previous generations of new customers benefited from a BCH contribution toward the cost of new extensions.	The 2007 RDA focused on the new customer/existing ratepayer fairness issue, and not fairness between new customers. BCH is considering options such as the DCC model for SI cost sharing among new customers. Agreed.
7.	**UDI** It is critical for developers to know the costs; right now, BCH's Distribution extension policy is perceived to be a 'crap shoot' by developers. The DCC model is how municipalities address the need for cost certainty.	
8.	**FNEMC** (Ms. Dong) SI cost allocation is dependent on when new customer makes a request. Is queue management an issue?	Queue management is less of an issue in the Distribution context as compared to the Transmission context due to how spread out the BCH Distribution system is and the large number of feeders (about 1,300).
9.	**UDI** Is there a hybrid approach between SI cost recovery options 2 and 3?	No. Options 2 and 3 are mutually exclusive – under option 2 all SI costs are allocated to BCH; under option 3 SI costs are first allocated between BCH and new customers, and then the new customer portion is distributed among new customers.
10.	**UDI** Is there a way to get around charging developers and instead get payment from the ultimate end use customer?	This raises billing and other issues, and is not a SI cost allocation issue. BCH has concerns with this; for example, BCH's exposure would increase if units go unsold and there would be significant customer relationship issues. In addition, the BCH Maximum Contribution would not automatically go to developer. Nevertheless, BCH will consider this and report back to stakeholders through its Workshop No. 7 consideration memo sometime in March 2015.
11.	**CEC** Is there a way for BCH to provide data on infill growth vs. green-field growth on the Distribution system? A significant portion of growth being infill could be problematic for the DCC model.	***Revised response*** For the purpose of this question, 'green-field growth' is understood to mean growth requiring an Extension while 'infill growth' is understood to mean growth requiring only a Service Connection.[6] BCH does not see infill growth as problematic for purposes of the DCC model. There is a lag between when construction of an extension is started and when meters for that extension are ultimately installed, and accordingly the following figures are indicative only. In F2014: (1) There were approximately 22,500 new residential meter installations; (2) There were 1,531 extensions where at least one SFD was planned to be constructed; and (3) A total of 19,409 SFDs were estimated to be constructed as part of the above 1,531 extensions.

[6] The SET Guidelines at page 3 defined infill growth as follows: "Infill growth refers to the addition of new customers who attach to the existing distribution system, and thus only require a connection from the street to their premises in order to receive service. Infill growth may require reinforcement of the system in order to provide adequate service, but does not require a system extension"' copy available at http://www.bcuc.com/Documents/Guidelines/2007/DOC_15386_1996_Utility_System_Extension_Test_Guidelines.pdf.

12.	**Primary Engineering** Has BCH looked at SaskEnergy's cost allocation where major mains are covered by a standard charge? It seems similar to the DCC model.	To date, the only gas utility distribution extension approach BCH has examined is FortisBC. BCH will look at the SaskEnergy approach.
13.	**BCOAPO** The DCC model also appears to be similar to the old Terasen Gas approach where the equivalent of SI costs are not looked at individually but rather are looked at annually and as an average.	See FortisBC comment below.
14.	**FortisBC** This method continues to be in use at FortisBC (gas), where the annual average improvement charge is used, and is similar to the DCC model.	
15.	**BCSEA** Under the DCC model, are the costs for new customers the same on a per unit basis?	Yes.
16.	**FNEMC** (Ms. Dong)/**UDI** If a customer comes in at less than 500 kVA, do they have to make a payment toward SI costs? The 500 kVA threshold is treated differently under options 1 and 3 and this is a potential concern. Developers would favour option 1 treatment (maintain 500 kVA threshold) for option 3.	No; refer to slide 14 of the Workshop No. 7 slide deck.
17.	**UDI** For option 3, is it possible to see cost numbers with and without the elimination of the 500 kVA threshold?	Yes; BCH commits to modelling the request.
18.	**COPE 378** BCH raises postage stamp concerns re: if BCH were not to use a system-wide approach to option 3 and were instead to differentiate the DCC based on region. Option 1 also violates postage stamp principles; COPE 378 sees options 1 and 3 as the same in this regard. COPE 378 is not necessarily against the postage stamp approach; we are only raising questions regarding a regional perspective.	BCH does not agree. Currently BCH is examining a BCH service area-wide DCC model as option 3. Under a regionally-differentiated DCC model (option 3a), the intent would be to divide BCH's service area into different regions and charge different SI costs depending on the average SI cost for each region. Under option 1, while customer costs may differ based on location, that is a function of a need for some limit on BCH's Maximum Contribution, and there is no intention to violate postage stamp rates.

19.	**FNEMC** FNEMC is interested in how local governments can differentiate the level of DCCs in their areas. FNEMC's concern is that rural areas have the burden of higher costs under BCH's current Distribution extension approach.	BCH understands that a local government area-wide DCC is the default practice. Local governments can differentiate by sector. An example is separating high-density development areas from other areas.[7] BCH is concerned with regionally-differentiated rates. BCH identified B.C. Government support[8] for postage stamp rates at Workshop No. 1, and that as a consequence it would not propose regionally-differentiated rates as part of its 2015 RDA. BCH will model some sort of regionally-based DCC but it may be that SI average costs are higher in 'rural regions' under such an approach, leading to a higher DCC.
20.	**Primary Engineering** When BCH mentions SI costs, are we talking about load or the number of units?	To date, BCH allocates SI costs based on load.
21.	**UDI** Developers have to get loans from banks to construct their projects and banks will base their decisions on pre-sales contracts; could BCH do something similar in lieu of requiring the posting of security?	***Revised response*** BCH seeks stakeholder feedback on when security should and should not be taken when individual developments require significant SI. Per section 8.4 of the Electric Tariff, customers with expected loads greater than 100 kW can be required to provide guarantees in a form acceptable to BCH. In practice, security is rarely requested.

4. *Options for Updating BCH's Maximum Contribution*

Kevin reviewed the 2007 RDA decision's setting of BCH's current Maximum Contribution (set out in section 8.3 of BCH's Electric Tariff), and described the impact of modifying the three inputs: (1) the discount rate, which is set to BCH's WACC (now at 7% nominal); (2) the discount period, which currently is 20 years; and (3) the Distribution costs, which among other things are based on the F2008 COS.

	FEEDBACK	RESPONSE
1.	**BCUC staff** When BCH refers to a useful life of 40 years for Distribution plant, is it referring to average life or expected life?	Expected life.
2.	**BCOAPO** (Mr. Pullman) We would be interested in how BCH develops its 7% WACC.	***Revised response*** Refer to Attachment 1.
3.	**BCOAPO** What assumptions has BCH made for RRA escalation after the Direction No. 7 rate caps for F2017-F2019?	For purposes of Workshop No. 7, BCH does not yet have RRA placeholders for F2020 onwards. BCH will develop these. The figures on slides 27-39 of the Workshop No. 7 slide deck are for illustrative purposes.

[7] Refer to *Development Cost Charge Guide for Elected Officials*, page 26; copy available at http://www.cscd.gov.bc.ca/lgd/intergov_relations/library/DCC_Elected_Officials_Guide_2005.pdf.

[8] Slide 5 of Workshop No. 1 slide deck. Refer to the November 2013 B.C. Government's response to IEPR recommendation #9 (http://www.newsroom.gov.bc.ca/downloads/Backgrounder_Industrial_Electricity_Policy_Review_Report.pdf) and to Exhibit C3-1, the B.C. Ministry of Energy and Mines' intervention in the FortisBC Common Rates, Amalgamation Rate Design Reconsideration proceeding (http://www.bcuc.com/Documents/Proceedings/2013/DOC_35100_C3-1_MEM_IntervenerReg.pdf).

4.	**BCOAPO** (Mr. Pullman) Are there any SMI-related impacts in the F2013 COS referenced in the slides?	There are no SMI-related impacts in the F2013 COS. Amortization begins in F2015.

5. *Other Issues: Extension Fee Refund and Connection Charges Update*

Rena Messerschmidt discussed issues with the current extension fee refund approach. Under section 8.5 of the Electric Tariff, unused BCH contributions are allocated as extension fee refunds to previous customers (sometimes referred to as 'pioneers') that have paid for extensions that go on to serve subsequent customer additions.

Rena also presented updated connection charges based on F2016 values.

	FEEDBACK	RESPONSE
1.	**COPE 378** Would the DCC model remove the extension fee refund issue?	No. The DCC model addresses SI cost sharing. The DCC model does not address cost sharing of extensions, particularly as it relates to subsequent customers being added over time.
2.	**BCSEA** What happens if the $5000 threshold is exceeded?	Under section 8.5 of the Electric Tariff, if the extension fee is less than $5,000, the customer is automatically refunded 20% of the extension fee and is not eligible for any future refund. If the extension fee is greater than $5,000, the customer must apply for a refund within 5 years, and no more than once per year. The customer will be refunded the excess BCH Maximum Contribution(s), if any, of subsequent customers who connect to the extension.
3.	**UDI** The extension fee refund is similar to local government latecomer charges, the term of which was recently extended from 10 to 15 years, and there is no discount. BCH should model option 1 – extend pioneer period to 10 years – with no discount. In addition, local governments automatically address this without the developer having to apply. A possible option is that for larger refunds, say $25,000 and greater, BCH automatically addresses without a customer having to apply.	BCH will model option 1 without the discount set out on slide 44 of the Workshop No. 7 slide deck. BCH would need to take into account the difference in volumes between BCH extension fee refund requests and local government latecomer schemes/agreements. BCH will undertake this work for purposes of its Workshop No. 7 consideration memo.
4.	**CEC** Are there any extension fee refund models that do not require a threshold?	***Revised Response*** Option 2 from slide 43 (applying BCH's Maximum Contribution to eligible pioneers before the new customer) is an option that may not need a threshold to implement; however this option would be administratively challenging to implement.
5.	**BCOAPO** (Mr. Pullman) The Demand-Side Measures Regulation contains a definition of low income household and has provisions to address low income households. Could low income households be exempt from extension payments?	Section 59 of the UCA sets out a fair, just and not unduly discriminatory test which is binding on BC Hydro (and the BCUC through section 60 of the UCA). In BCH's view, this test precludes consideration of customer income in a rate setting context because rates would be based on the personal characteristics of the customer divorced from the cost to deliver electricity to the premises or more generally from any characteristics of the service to which the rate relates.[9]

[9] Refer to section 2.1.2 of BCH's Workshop No. 3 consideration memo at the BCH 2015 RDA website for additional detail.

6.	**COPE 378** The legal test is *undue* discrimination.	Agreed.
7.	**BCSEA** What are the costs of administering extension fee refunds vs. the revenues generated by the extension fees themselves? Would it be cost-effective to not charge new customers extension fees in the first place?	***Revised Response*** Total extension fees averaged about $48 million per year over the period of F2012-F2015. The costs of administering extension fee refunds are a fraction of this.
8.	**BCOAPO** How many of the 4,200 average number of extensions set out on slide 45 are residential vs. GS?	***Revised response*** The following is drawn from a period covering about 45 months: 13% have more than one billing rate (mixed use); 10% had a blank billing rate value (for a variety of reasons, including project staging); Out of the remaining designs with only one rate the breakdown is: 52% residential; 44% GS; and 2.8% other (street lighting, irrigation).
6. *Closing and Next Steps*		
Anne Wilson thanked everyone for making the time to participate in the workshop and reviewed the next steps set out at slide 50 the Workshop No. 7 slide deck, including the 45 day written comment period commencing with the posting of these workshop notes on [12 January 2016]. Meeting adjourned at 11.45 A.M.		
FEEDBACK		**RESPONSE**
1.	**BCSEA** Is BCH neutral concerning new customer attachments to the system or is BCH trying to encourage new customer attachments?	To date, BCH has been agnostic concerning new customer attachments to the system.

Attachment 1: BC Hydro (BCH) Weighted Average Cost of Capital (WACC) Calculation – F2016

In light of variables in the 10 Year Rate Plan that start in F2018, BCH is in the process of changing its WACC methodology. Early indications suggest that BCH does not anticipate significant changes to the WACC rate of 7% (nominal) at this time.

Deemed Equity: 30%; Section 1 of Direction No. 7 defines "deemed equity" to mean; "for any fiscal year, the product obtained by multiplying the rate base relating to that year by 30%".

Return on Equity: BCH's allowed rate of return of 11.84% for F2015, F2016 and F2017 is set out in subsection 4(d)(i) of Direction No. 7.

Debt: BCH's forecasted marginal debt costs for the purpose of the WACC calculation are based on a long-term economic outlook.

Table 1 shows the calculation of the BCH WACC.

Table 1: BCH WACC Calculation

	% of capital	Rate
Equity	30%	11.84%
Debt	70%	4.82%
Total (nominal dollars)	100%	7% (rounded)