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May 30, 2016

BC HYDRO
2015 RATE DESIGN

EXHIBIT A-32

Ms. Sarah Khan
Staff Lawyer
The British Columbia Public Interest Advocacy Centre
208 – 2090 West Pender Street
Vancouver, BC V6E 2N7

Dear Ms. Khan:

Re: British Columbia Hydro and Power Authority
Project No. 3698781/G-156-15
2015 Rate Design Application Module 1
British Columbia Utilities Commission Information Request to
The British Columbia Old Age Pensioners Organization *et al.*

Further to your May 9, 2016 filing of intervener evidence, enclosed please find Commission Information Request No. 1.

In accordance with the amended Regulatory Timetable established in Order G-50-16, please file your responses electronically with the Commission by Wednesday, June 22, 2016.

Yours truly,

Original signed by:

Laurel Ross

EC/cms
Enclosure

British Columbia Utilities Commission
INFORMATION REQUEST NO. 1 TO
THE BRITISH COLUMBIA OLD AGE PENSIONERS ORGANIZATION *ET AL.*

British Columbia Hydro and Power Authority
2015 Rate Design Application Module 1

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A. DIRECT TESTIMONY OF ROGER COLTON

**1.0 Reference: Exhibit C2-12, Colton Evidence p. 13, pp. 17-18
The need for an essential services usage block**

On page 17, Mr. Colton states “In addition, section 60 of the Utilities Commission Act (“UCA”), subsection 60(1)(b), provides that the Commission “must have due regard in the setting of a rate. . .to encourage public utilities to increase efficiency, decrease costs and enhance performance” (2015 Rate Design Application, at p. 2-4). While the Company asserts that this “efficiency criterion” applies only to the procurement of energy and capacity resources (BCOAPO IR 1.7.1), there is nothing in the language of the statute which supports this limitation.”

And at page 13, he states “The proposal for an Essential Services usage block, however, is not based exclusively on affordability concerns. It is a mechanism through which BC Hydro can simultaneously address affordability concerns, improve cost reflectivity in rates, and improve the efficiency of its operations and reduce overall operating costs.”

- 1.1 Would Mr. Colton or BCOAPO lay out the legal requirement for the rate design requirements for an essential services block for low income residential customers in the province of B.C.?
- 1.2 In Mr. Colton’s opinion, is the BCUC required to create an essential services block or is it something that should be done because it is deemed to be consistent with efficient rate making?
- 1.3 Would it not be preferable to have an explicit BC Government policy or Directive to implement low income assistance programs before the Commission initiates an essential services program? If not, why not? If yes, what actions has BCOAPO taken with Government to secure such a policy or Directive?
- 1.4 Was the Ontario Electricity Support Program (OESP) initiated by that Government or did the Ontario Energy Board initiate the program without endorsement by the Ontario government?

**2.0 Reference: Exhibit C2-12, Colton Evidence, p. 4
Purpose of testimony**

In Mr. Colton’s direct testimony, he lists his purposes as the examination of: (1) the reasonableness of an Essential Services usage block within the RIB Step-1 rate, (2) establishing and funding a crisis intervention fund, (3) the role of considering low-income DSM, and (4) the reasonableness of a series of proposed low-income Terms and Conditions.

Mr. Colton concludes that the need for an initial block is required to serve an affordability need.

- 2.1 Please provide examples, if any, of the use of an essential services usage block in other utilities in jurisdictions in Canada and the justification and/or requirements for providing such services on affordability grounds.
- 2.2 Please describe the use of an essential services usage block in other jurisdictions in North America outside Canada. Please provide the justification and/or requirements for providing such services on affordability grounds.

**3.0 Reference: Exhibit C2-12, Colton Evidence pp. 5-6
The need for an essential services usage block**

On page 5, Mr. Colton states “There is no dispute in this proceeding that income and usage are directly related. The Company reports that its “2013 RIB Evaluation Report found that average per-capita disposable income for the Province of B.C. has a statistically significant effect on consumption.” BC Hydro further notes that its 2014 REUS indicates that “electricity consumption varies with household income (i.e., overall there is a positive correlation). This relationship is statistically significant.”

On page 6, Mr. Colton states that the median low-income consumption is only 71 percent as high as the median consumption of residential customers as a whole. He further states that this difference between residential consumption as a whole and low-income consumption is evident over differing customer characteristics.

- 3.1 The essential services block is proposed to be part of the existing residential rate schedule. Would it be a better alternative to offer this usage block in a newly created residential rate schedule? Please discuss.
- 3.2 While there may not be dispute that income and usage are correlated, would Mr. Colton please provide the cause-effect analysis that low income has an effect on consumption. Could the low consumption be caused by other factors such as dwelling size or family size? Does Mr. Colton have data related to income elasticity on electricity demand in addition to price elasticity on electricity demand? If so, please provide the research results on income elasticity and the source of the research.

**4.0 Reference: Exhibit C2-12, Colton Evidence, p. 7
The need for an essential services usage block**

On page 7 Mr. Colton states “The Company readily concedes that low usage is associated with greater non-responsiveness to price changes. The Company states that its RIB design assumptions include that “customers with a higher level of consumption tend to have a higher responsiveness to price.”

- 4.1 Please confirm that Mr. Colton is suggesting that because low use customers have less room to make further reductions in energy usage, it is one of the reasons for Mr. Colton to propose the essential services usage block.
- 4.2 Has Mr. Colton considered instead the alternative of leaving alone the energy component of the rate design but allowing low-income customers to be exempt from the fixed basic charges? If not, why not? If so, please discuss the pros and cons of this rate design versus the complexity of setting a usage block and assessing the discount for this block.

**5.0 Reference: Exhibit C2-12, Colton Evidence p.10
The need for an essential services usage block**

On page 10, Mr. Colton states “As I reported in my Hydro-Quebec research, identified above, these observations were confirmed in the context of a Canadian province. An analysis by the Energy Research Group, a research institute within the Department of Electrical and Computer Engineering (Dalhousie University, Halifax, Nova Scotia), presented to the Nova Scotia Utility and Review Board (UARB), explained...”

- 5.1 Please provide the findings of the regulatory tribunals in Quebec and Nova Scotia regarding the relationship between low usage of low income customers and higher efficiency of usage by the low income customers (i.e., lower demand costs per unit of consumption and lower energy costs per unit of consumption)?
- 5.2 Would these arguments hold true in B.C. where the low residential Tier 1 rate does not reflect the full cost of demand or energy?
- 5.3 Does either of Quebec or Nova Scotia have inclining block residential rates?
- 5.4 Has either province implemented an equivalent of the essential services block? If yes, please explain the programs.

**6.0 Reference: Exhibit C2-12, Colton Evidence pp.14, 15 & 17
Establishing the essential services usage block**

On page 14, Mr. Colton states “I recommend that the Essential Services usage block be set at 400 kWh a month, 4,800 kWh per year.”

And at page 15, he notes that BC Hydro’s definition of low use “varies between 370 kWh per month and 380 kWh per month.”

At page 17, he notes that fewer than 30% of residential customers have annual usage below 4,800 kWh.

- 6.1 To the best of Mr. Colton’s knowledge, what level of end-use service would 400 kWh provide for a family living in an apartment in BC Hydro’s service regions? Would it typically cover refrigeration, hot water, lighting and stove? Should the usage block be region-specific?
- 6.2 What would the current bi-monthly bill be for a family consuming 400 kWh/month (basic charge plus energy)?
- 6.3 What is the proportion of the 30% of residential customers currently consuming under 4,800 kWh that fits the definition of low income?
- 6.4 Please identify the cut-off levels for other low income programs operating in Canada and also for those operating in the US?

**7.0 Reference: Exhibit C2-12, Colton Evidence, p. 20
Establishing essential services usage block discount - ECAP**

On page 20, Mr. Colton states “Energy efficiency investments are an effective *supplement* to the distribution of bill affordability assistance to address low-income energy needs over the long term.”

- 7.1 Does BCOAPO or Mr. Colton have any information on the effectiveness of ECAP for low income customers?
- 7.2 Are such programs in Canada and the US effective for low income apartment renters? Please discuss.

**8.0 Reference: Exhibit C2-12, Colton Evidence, pp. 27-34
Intake, eligibility and income verification**

Mr. Colton proposes a three stage process of income verification and program administration.

- 8.1 Are there other intake processes in the US that BC Hydro should review before implementing an essential services usage block?
- 8.2 Would BC Hydro be expected to fund the third party enrolment process and administration? If yes, what would this cost likely be and has it been factored into the total costs of the program?
- 8.3 If the program is being administered by a third party is there not a risk of cost escalation and inappropriate enrolment? Please discuss the experiences in Ontario and the U.S.

**9.0 Reference: Exhibit C2-12, Colton Evidence, p. 36
Essential services usage block**

Mr. Colton is proposing that the essential services usage block be a monthly usage block of 400 kWh with a discount of \$0.04/kWh.

- 9.1 Is the block cumulative, i.e., if a low-income customer consumes less than 400 kWh a month, whether the surplus could be included in the next billing period? Why or why not?

**10.0 Reference: Exhibit C2-12, Colton Evidence, pp.36-37
Crisis intervention fund**

Mr. Colton explains the Crisis Intervention Program as follows “A crisis intervention program would involve providing funds when a low-income customer faces a situation that threatens the continuing ability of that customer to take electric service. Such a crisis situation may, but need not necessarily, involve providing a grant to prevent the disconnection of service for nonpayment. In the alternative, a crisis intervention grant might respond to a level of arrears that the program administrator deems is of sufficient size that the customer will never be capable of retiring them in full. Moreover, a crisis situation might involve circumstances where a customer is already “off-system” and lacks sufficient funds to make an arrearage payment, along with paying a reconnection charge and possibly a cash security deposit.”

- 10.1 Is this fund an essential component of implementing an essential services usage block? Why or why not?
- 10.2 Would it not be better and less costly to allow BC Hydro the ability to further extend low cost credit and/or debt forgiveness to essential services block customers rather than implementing a crisis intervention fund operated by an independent third party? Why or why not?
- 10.3 If the program is being administered by a third party is there not a risk of cost escalation and inappropriate enrolment? Please discuss the experiences in Ontario and the U.S. for the REACH program.

**11.0 Reference: Exhibit C2-12, Colton Evidence, pp. 36-37
Crisis intervention fund**

Mr. Colton proposes a residential bill rider of \$0.25/month to fund the crisis intervention fund at roughly \$5.4 million/year.

- 11.1 How was this funding limit determined?
- 11.2 What is the funding mechanism and limits for the Ontario program? Are there any other such programs in Canada?
- 11.3 Would a customer be eligible to access this funding more than once or more than once per year? Is an upper limit being contemplated?
- 11.4 Assuming a customer defaults on one bimonthly bill of 800 kWh, how many such defaults could be funded per year? How does this compare with the current level of defaults experienced by BC Hydro?

**12.0 Reference: Exhibit C2-12, Colton Evidence, Part 4 Terms and Conditions, pp. 63-68;
Exhibit B-5, BCOAPO IR 1.192.1, Attachment 1, Section 5.3, pp. 31-36
Cost effectiveness as the appropriate business case analysis**

On pages 63-64 of his direct testimony, Mr. Colton states “BC Hydro inappropriately seeks to impose a cost-benefit ratio restriction on the proposed Terms and Conditions” in reference to BC Hydro’s “Assessment of Potential Low Income Terms & Conditions” filed as Attachment 1 to BCOAPO IR 1.192.1.

In Section 5.3 of BC Hydro’s “Assessment of Potential Low Income Terms & Conditions” filed as Attachment 1 to BCOAPO IR 1.192.1, BC Hydro provides an analysis of the “cost-effectiveness of BC Hydro’s collection processes, as well as to the degree in which low income terms and conditions could improve their effectiveness.”

- 12.1 Please clarify whether Mr. Colton’s testimony is that BC Hydro has not performed a cost-effectiveness analysis in addition to a cost-benefit analysis or if Mr. Colton does not agree with the method and/or results of BC Hydro’s cost-effectiveness analysis.
 - 12.1.1 If his testimony is that BC Hydro has not performed a cost-effectiveness analysis, please explain the basis for this testimony.
 - 12.1.2 If his testimony is that he does not agree with the method and/or results of BC Hydro’s cost-effectiveness analysis, please explain why and include specific references to BC Hydro’s analysis.

BC Hydro states on page 36 of its “Assessment of Potential Low Income Terms & Conditions” that it “cannot definitively conclude that low income terms and conditions are a cost-effective response to bad debt and collection costs.”

On page 68 of Mr. Colton’s direct testimony he states: “Overall, a utility such as BC Hydro can be expected not only to collect more money through the Terms and Conditions discussed below, but to spend less money in the process of collection in doing so.”

- 12.2 Please confirm, or explain otherwise, that based on his direct testimony he disagrees with BC Hydro's assertion that it cannot definitively conclude that low income terms and conditions are a cost-effective response to bad debt and collection costs.
- 12.3 Please specifically explain the differences in the analysis provided in Mr. Colton's direct testimony compared to BC Hydro's analysis in response to BCOAPO IR 1.192.1, with specific references to both analyses, which support his conclusion that a utility such as BC Hydro can be expected to collect more money through his proposed Terms and Conditions and to spend less money in the collection process.

**13.0 Reference: Exhibit C2-12, Colton Evidence, Part 4 Terms and Conditions, pp. 68-77;
Exhibit B-5, BCOAPO IR 1.192.1, Attachment 1, pp. 45-52
Cold weather shutoff protections**

On page 77 of Mr. Colton's direct testimony he concludes that "the termination of service during British Columbia's cold weather months is an inherently dangerous activity" and he recommends that "BC Hydro adopt a system of restrictions on the termination of service during the cold weather period of November 1 through April 1 of each winter heating season irrespective of income."

On pages 51 and 52 of BC Hydro's "Review of Proposed Low Income Terms & Conditions" filed as Attachment 1 to BCOAPO IR 1.192.1, BC Hydro lists the following two considerations underpinning its proposals related to winter disconnections: (i) restrictions on winter disconnections should be regional; and (ii) restrictions should be based primarily on temperature rather than on a date range, particularly in warmer regions.

- 13.1 Please provide a detailed discussion of the reasonableness of BC Hydro's proposals stated in the above preamble (i.e. regional restrictions and restrictions based on temperature as opposed to a date range).
- 13.2 In consideration of the historical weather and temperature patterns in British Columbia, please explain why Mr. Colton considers it reasonable for BC Hydro to adopt restrictions on winter disconnections for a time period as broad as November through March.

BC Hydro further states on page 46: "B.C.'s weather conditions are different than those in the rest of the country, with the Lower Mainland and Vancouver Island rarely reaching freezing temperatures. Accordingly, the drivers and program conditions for a winter disconnection moratorium are very different depending on location. Any potential moratorium should reflect these differences."

- 13.3 Please discuss the reasonableness of BC Hydro's assessment that BC's weather conditions are different than those in the rest of Canada.
- 13.4 Please discuss the impact, if any, that BC's weather conditions may have on the need for restrictions on winter disconnections.

**14.0 Reference: Exhibit C2-12, Colton Evidence, Part 4 Terms and Conditions, pp. 83-88; Exhibit B-5, BCOAPO IR 1.192.1, Attachment 1, pp. 40-44
Deferred payment arrangements**

On page 87 of Mr. Colton’s direct testimony, he recommends “several modifications to BC Hydro practices and procedures that will improve both the effectiveness and the efficiency of the Company’s use of deferred payment plans as a collection tool.”

He further states on page 87 that these modifications are specifically for payment plans offered to customers with income less than 100 percent of LICO and include: (i) setting down payments at ten percent of the outstanding delinquency; and (ii) offering a payment plan term of not less than 12 months.

14.1 Please provide a fulsome explanation of how his first proposed modification (i.e. setting down payments at ten percent of a customer’s outstanding delinquency) will improve the effectiveness and the efficiency of BC Hydro’s use of deferred payment plans.

14.2 Please explain how he determined the appropriate quantum of the down payment (i.e. 10 percent of the outstanding delinquency).

BC Hydro states the following on page 44 of its “Review of Proposed Low Income Terms & Conditions”:

BC Hydro recognizes there are situations in which a repayment term longer than three months is appropriate but is opposed to establishing mandatory terms for Installment Plans. Instead, BC Hydro proposes to investigate the practicality of providing collections agents with the authority to offer longer payment terms, for example, up to 6 or 8 months, provided that the outstanding balance would be paid before the next winter heating cycle.

14.3 Please explain why Mr. Colton considers a payment plan term of not less than 12 months to be most appropriate for achieving improved efficiency and effectiveness of collections. Why is a minimum payment plan term of 12 months required to achieve improved efficiency and effectiveness?

14.3.1 As part of this response, please discuss the reasonableness of BC Hydro’s suggestion of a payment plan term which allows for the outstanding balance to be paid before the next winter heating cycle and discuss the risks, if any, of customers carrying forward unpaid balances from one winter heating season into the next heating season.

**15.0 Reference: Exhibit C2-12, Colton Evidence, Part 4 Terms and Conditions, pp. 105-117
Reform security deposits**

On page 110 of Mr. Colton’s direct testimony, he states the following:

I recommend that the Company’s proposal to impose cash security deposits on all new residential customers be denied. While I do not disparage the Company’s efforts to control uncollectible accounts, the tool that the Company proposes here (i.e., to impose deposits on all new residential customers) is not reasonably related to accomplishing the end the Company purports to seek.”

- 15.1 Please confirm, or explain otherwise, that his statement in the above preamble that BC Hydro proposes to impose deposits on all new residential customers should be interpreted as all new residential customers without established credit.

On page 112 of Mr. Colton’s direct testimony, he states the following: “Aside from the business aspects of the issue, to forbid the use of non-utility credit experience is consistent with long-standing utility regulatory principles proscribing the denial of service for “collateral” matters.”

- 15.2 Please further explain his reference to “the long-standing utility regulatory principles proscribing the denial of service for collateral matters.”

- 15.2.1 Please specifically describe and provide examples of these “collateral matters” and describe the “long-standing utility regulatory principles” which prevent the denial of service for collateral matters.

On page 115 of his direct testimony, he states: “One alternative to cash security deposits is the solicitation of third-party sureties.”

- 15.3 Please provide examples of regulated utilities in other jurisdictions which accept third-party sureties as an alternative to cash security deposits.

- 15.3.1 For each of the regulated utilities identified in the above response, please generally explain how the system of accepting sureties is administered and the impacts (both positive and negative) that the acceptance of these sureties has had on both the utility and the ratepayers.

- 15.4 Please explain how BC Hydro would verify that the third party providing the surety has the ability to assume responsibility for a household’s bill in the event of non-payment.

On page 116 of Mr. Colton’s direct testimony, he states: “There is no reason why the qualifications of a surety for a utility bill should be any more stringent than the qualifications of a surety for any other type of consumer credit.”

- 15.5 Please provide examples of the “other types of consumer credit” referenced in the preamble above which accept sureties.

- 15.5.1 Please list and explain the qualifications that are required by other types of consumer credit when accepting a surety.

**16.0 Reference: Exhibit C2-12, Colton Evidence, Part 4 Terms and Conditions, pp. 117-121
Implement specific practices and procedures**

On pages 120 and 121 of Mr. Colton’s direct testimony, he recommends that BC Hydro “undertake a customer segmentation study that is specifically directed toward characterizing patterns of nonpayment; identifying the characteristics of nonpayers; identifying predictors of nonpayment; and identifying early indicators of nonpayment.”

- 16.1 Based on Mr. Colton’s experience with customer segmentation studies and taking into consideration his recommendations for BC Hydro described on pages 120 and 121 of his direct testimony, please provide a detailed discussion of the time and resources that would be

required for BC Hydro to undertake the recommended customer segmentation study. Please provide support for these estimates and explain all assumptions made.

- 16.2 Please provide examples of other Canadian utilities which have performed similar customer segmentation studies.

B. EXPERT EVIDENCE AND BCOAPO'S POSITION

- 17.0 Reference: Exhibit C2-12, Colton Evidence, Part 1, pp. 7, 13; Terasen Gas Inc. [now FortisBC Energy Inc. (FEI)], 2004 Market-based commodity rates Order G-64-04, Appendix A, p. 10
Essential services rate: Problem definition**

Mr. Colton, on behalf of BCOAPO, states on page 13 of Exhibit C2-12: “[The proposal for an Essential Services usage block] is a mechanism through which BC Hydro can simultaneously address affordability concerns, improve cost reflectivity in rates, and improve the efficiency of its operations and reduce overall operating costs” and on page 7: “The Company readily concedes that low usage is associated with greater non-responsiveness to price changes.”

The Commission states on page 10 of Appendix A to Order G-64-04: “Including a Bad Debt charge in the Gas Management Fee ... is therefore an effective risk management strategy.”

- 17.1 Please explain, for each item listed below, whether BCOAPO considers it to be a key driver of the essential services usage block proposal:

- to address the problem of affordability;
- to improve cost reflectivity in rates;
- to address ‘greater non-responsiveness of price changes for low use customers’. If yes, please explain why this is not already adequately addressed through the Residential Including Block (RIB) rate;
- to address greater non-responsiveness of ‘low-income high use’ customers compared to other high-use customers. If yes, please explain why the proposed rate appears to target all low-income users rather than just ‘low-income/high use’ customers; and
- to reduce BC Hydro bad debts by reducing the bills of a customer segment with above average bad debts. If yes, please explain whether this approach is an effective risk management strategy for a utility.

- 18.0 Reference: BC Gas Utility Ltd. (now FEI) 1993 Phase B rate design decision G-101-93, p. 24; Terasen Utilities (now FEI) final submission on the 2008 BC Hydro residential inclining block (RIB) proceeding, pp. 7, 8; BC Hydro 2008 RIB Decision G-124-08, pp. 32, 33
Essential services rate: Affordability – Commission jurisdiction**

The Commission stated on page 24 of the 1993 BC Gas Utility Ltd. Phase B Rate Design Decision (G-101-93): “Also, the Commission notes that the [Consumers’ Association of Canada (B.C. Branch) et al], representing some of the social groups most likely to benefit, did not advocate inverted rates as a means of subsidizing low consumption customers. The Commission is generally of the belief that decisions about income distribution are best left to elected representatives.”

Terasen Utilities' (now FEI) Submission on the BC Hydro 2008 RIB Application stated on pages 7, 8:

As summarized in the headnote to Prince George Gas v. Inland Natural Gas, a 1956 decision of the British Columbia Court of Appeal (copy attached) to which BCOAPO did not refer:

A requirement that one group of consumers contribute to the overall costs of a public utility system serving them and others does not, per se, constitute a subsidy; that depends on the circumstances. In so far as those costs fairly constitute part of the cost of providing service to the consumers they may be a proper element in the rates those consumers are called upon to pay; the fact that such contribution to those costs may reduce the rates of other consumers does not make it a subsidy. However, in that case the benefit to the other consumers is not the specific purpose of the contribution, but the incidental result flowing from a proper rate based upon the cost of service. On the other hand, that contribution becomes a subsidy if its specific purpose is to benefit other consumers without regard to the extent those costs properly enter into the cost of serving the contributing customers. ...

... To be clear, the reason lifeline rates are impermissible in British Columbia is not because they are not cost-based, but rather because they have as their purpose creating a cross-subsidy within the residential class. The Commission observed in the December 11, 1987 Inland Gas decision that the Commission can consider "a variety of factors which the Commission considers relevant, not only cost of service:"

The Commission finds that, so long as departures from cost-based rates are based on evidence other than solely a desire to implement a policy of subsidizing one class of customers at the expense of another, it cannot be said that those rates are not just, reasonable and not unduly discriminatory. (pp. 17-18)

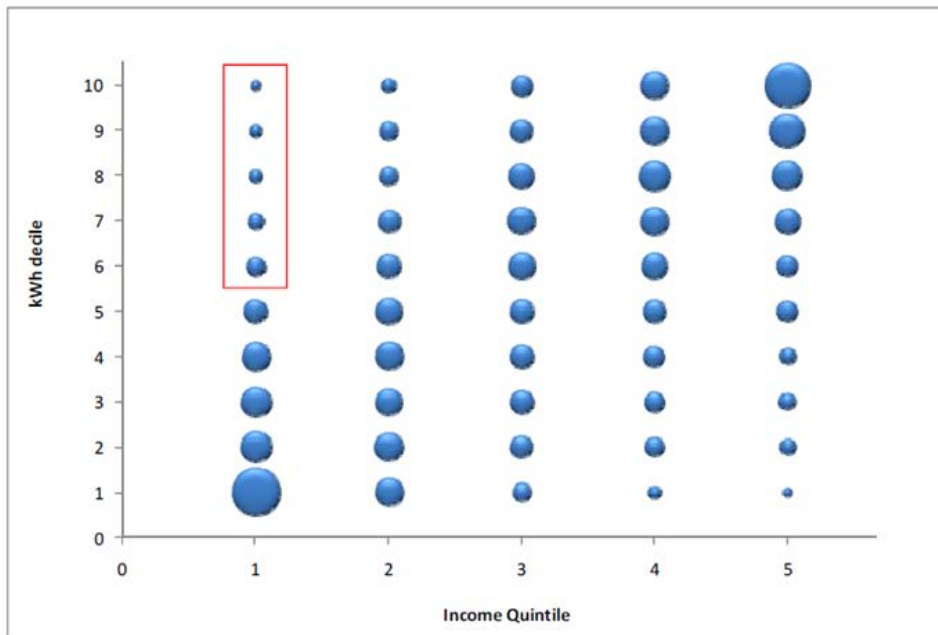
On pages 32 and 33 of the Commission Reasons for Decision to Order G-124-08 on the BC Hydro 2008 RIB Application, the Commission stated: "The Commission Panel has determined that it is unnecessary for it to decide the issue at this time because it has concluded that even if it had the jurisdiction to do so; it would not exercise that discretion as part of this Decision. For reasons that are set out in Section 4.2.4, the Commission Panel finds that the vast majority of BC Hydro's low-income customers will be better off under a simple two-step inclining block structure that is revenue neutral for the residential customer class than under the current flat rate structure."

- 18.1 Does BCOAPO consider that the specific purpose of the Essential Service usage block is to provide a subsidy to low income customers? If no, please explain. If yes, please explain whether the 1956 decision of the BC Court of Appeal and the December 11, 1987 Inland Gas Decision referred to by Terasen Utilities in the 2008 BC Hydro RIB proceeding are relevant considerations.
- 18.2 Does BCOAPO disagree with the Commission's determination in Decision G-101-93 that "decisions about income distribution are best left to elected representatives"? Please explain why/why not.
- 18.3 Does BCOAPO disagree with the Commission's determination on page 32 of the Reasons for Decision to Order G-124-08 that, even if the Commission has justification to approve differentiated or reduced rates for low-income residential customers, it should not do so as the RIB rate benefits the vast majority of BC Hydro's low-income customers? Please explain why/why not.

**19.0 Reference: Centre of Sustainable Energy, Understanding ‘High Use Low Income’ Energy Consumers, 2010, pp. 9, 13;¹ Exhibit C2-12, Part 3, p. 48
Essential services rate: Affordability – high use/low income customers**

A 2010 UK report by the Centre of Sustainable Energy titled ‘Understanding ‘High Use Low Income’ Energy Consumers’ (2010 UK Report) includes the following chart (Figure 6) on page 9:

Figure 6. Distribution of households by income quintile and energy consumption decile (width of bubbles represents (weighted) number of households)



Mr. Colton, on behalf of BCOAPO, submits on page 48 of Exhibit C2-12: “My experience has allowed me to identify at least the following “market barriers” that disproportionately impede the installation of energy efficiency measures by low-income households: ... ”.

19.1 Does BCOAPO consider that a distribution of households by income and energy consumption in BC would be expected to be directionally consistent with the results shown in Figure 6 of the 2010 UK report? Please explain.

19.1.1 Does BCOAPO consider that, from an affordability perspective, the key focus when reviewing the effect of the RIB rate on low-income customers should be on those low-income customers outlined in red on Figure 6 of the 2010 UK report (i.e., high use low-income)? If no, please explain why not.

19.2 Does BCOAPO consider that low-income/high use customers are less likely to respond to the RIB rate and Demand Side Management (DSM) programs (relative to other high use residential customers) by making efficient investment decisions? Please explain.

¹ https://www.cse.org.uk/downloads/reports-and-publications/policy/energy-justice/understanding_high_use_low_income_energy_consumers.pdf

- 19.2.1 Does BCOAPO consider that the RIB rate structure has a greater risk in that low-income/high use customers may behave inefficiently due to the tendency to under-heat homes relative to other high use customers? Please explain.
- 19.2.2 Does BCOAPO consider that the essential services usage block proposal effectively targets any potential RIB efficiency concerns identified above for the low-income/high use customer segment? Please explain.

20.0 Reference: Exhibit C2-12, Colton Evidence, p. 61; Hydro Amendment to RS 1289 2014 Decision, G-104-14, p. 14; BC Hydro RIB rate report proceeding, 2016, Exhibit A-9, pp. 3-5, Exhibit A-10, p.1; FBC DSM Decision G-186-14, p. 16
Essential services rate: Affordability – DSM

The Commission stated on page 14 of the BC Hydro 2014 Decision on the Amendment to RS 1289 Net Metering Service: "... the Panel considers the Commission would be in a better position to make a determination of the benefit of [RS 1289 rate design changes] after the evaluation of the impact of the micro-SOP and its integration with the SOP and RS 1289 DG programmes."

In Exhibit A-9, pages 3 to 5 of the BCUC RIB rate report proceeding, the Commission described the Minister's questions the report will address, including: "What evidence is available about factors that lead to high energy use and, therefore, bill impacts for customers without access to natural gas, including low income customers" and "What is the potential for existing Demand Side Management programs to mitigate these impacts?" Exhibit A-10 set the report deadline as August 5, 2016.

In the 2015-2016 FortisBC Inc. (FBC) DSM Decision on pages, the Commission stated on page 16: "...the Commission Panel agrees with the DSM focus on effectiveness and balance ...:

- effectiveness - consideration of [utility cost test (UCT)] results, addressing 'lost opportunities' (e.g., new construction) and maintaining a level of customer and trades engagement; and
- balance - providing broad opportunities for customers to participate, in particular for 'hard to reach' customers such as low-income groups and renters."

Mr. Colton states on page 61 of Exhibit C2-12: "I recommend that in this proceeding, the Commission direct BC Hydro to make certain minimum DSM service level guarantees for low-income customers."

- 20.1 Does BCOAPO consider that options to address low-income affordability concerns arising from the RIB rate include (i) rate design changes and (ii) DSM? Please explain.
- 20.2 Does BCOAPO consider that the Commission would be in a better position to make a determination on the benefit of a rate change to address low-income affordability concerns arising from the RIB rate after the evaluation of (i) the utility reports filed in the BCUC RIB rate report proceeding and/or (ii) BC Hydro's next section 44.2 DSM Expenditure Schedule filing? If no, please explain.
- 20.3 Please explain how a request to make certain minimum DSM service level guarantees for low-income customers is within scope of a rate design application. Specifically, does BCOAPO consider that this request is more appropriately addressed in BC Hydro's long-term resource plan and/or a section 44.2 DSM Expenditure Schedule filing?

**21.0 Reference: Exhibit C2-12, Colton Evidence, Part 1, pp. 8, 13;
BC Hydro RS 3808 proceeding, BCOAPO Final Submission, p. 10;
BC Hydro RIB rate report proceeding, 2016, Exhibit A-9, p. 3
Essential services rate: Cost causation justification**

Mr. Colton states on page 8 of Exhibit C2-13: “Low-use customers ... make a lower contribution to the Company’s peak demand ... ” and on page 13 “[The proposal] is a mechanism through which BC Hydro can ... improve cost reflectivity in rates ...”.

BCOAPO stated on page 10 of its Final Submission on BC Hydro RS 3808: “As BC Hydro has pointed out, it is not unusual (and indeed expected) that some customers within a given customer class will have revenue to cost ratios in excess of the class average and some will have ratios that are below. This is simply the result customers having different load characteristics and can only be avoided if a unique rate is set for each customer. However, this is administratively infeasible. Therefore some variation in revenue to cost ratios for individual customers is acceptable.”

In Exhibit A-9, page 3 of the BCUC RIB rate report proceeding, the Commission described the Minister’s questions the report would address, including: “Do the residential inclining block rates cause a cross-subsidy between customers with and without access to natural gas service?” and stated that “The utilities shall then use both (i) a FACOS approach and (ii) a comparison of average rates to long-run incremental costs approach, to analyze whether the RIB rates cause a cross-subsidy ... ”

- 21.1 Does BCOAPO consider that, while low-use customers may make a lower contribution to the Company’s peak demand, they also pay lower average unit costs for their electricity compared to high-use customers under the RIB rate? Please explain.
- 21.2 Please explain whether it is BCOAPO’s position that the essential services usage block will improve cost reflectivity in rates for low-use customers. If yes, please explain whether the costs referred to are embedded costs and/or long-run marginal costs.
 - 21.2.1 If BCOAPO is referring to embedded costs, does BCOAPO consider that some variation in revenue-to-cost ratios for individual customers within a customer group is acceptable? Please explain.
 - 21.2.2 Does BCOAPO consider that the Commission would be in a better position to make a determination on whether cost reflectiveness within the residential rate group should focus on embedded costs or long-run marginal costs after the evaluation of the utility reports filed in the BCUC RIB rate report proceeding? If no, please explain.
- 21.3 Is it BCOAPO’s position that the (i) revenue: embedded cost ratio and/or (ii) revenue: long-run marginal cost ratio for BC Hydro’s low-use customers are higher than the residential class average? Please explain.
 - 21.3.1 If yes, why is BCOAPO not proposing that the essential services usage block be offered to all low use customers to improve cost reflectiveness in rates?

22.0 Reference: Exhibit C2-12, Colton’s Evidence, Part 1, pp. 26, 27; Exhibit B-1, Section 5.2, p. 5-26; Exhibit B-23, BCUC 2.179.1
Essential services rate: Alternative options

BC Hydro states in BCUC 2.179.1 that a RIB rate design with a T1/T2 differential of 60% (Step 1 rate of 7.83¢/kWh and Step 2 rate of 13.07¢/kWh compared to the status quo option of 8.29¢/kWh and 12.43 ¢/kWh respectively) would result in 93% of low-income customers being better off. On page 5-26 of the Application, BC Hydro described three ‘three step rate’ options, two of which were modelled at the request of BCOAPO.

22.1 Please discuss the benefits/disbenefits of BCOAPO’s Essential Services rate proposal compared to (i) the option of a ‘T1/T2 differential of 60%’ discussed in BCUC 2.179.1 and (ii) the three step rate options (A, B and C) described on page 5-26 of the Application.

22.2 Please update the tables on pages 26 and 27 of Exhibit C2-12 assuming a 100% low-income participation rate.

C. DIRECT TESTIMONY OF SETH KLEIN

23.0 Reference: Exhibit C2-12, Klein Evidence, p. 5
Purpose of Klein’s direct testimony

Mr. Klein states that the purpose of his testimony is to demonstrate the extent and profile of poverty in BC and why many low-income British Columbians experience energy poverty. Also, Mr. Klein states that his testimony seeks to answer the question as to whether rising BC Hydro rates represent a hardship for low-income British Columbians.

23.1 Given the extent of poverty in BC as demonstrated and profiled by Mr. Klein, would it not be a more direct solution to address poverty directly at source through better social services and higher income assistance at the governmental level than through *ad hoc* solutions such as the low-income electricity program as advocated by BCOAPO?

24.0 Reference: Exhibit C2-12, Klein Evidence, pp. 9-12, 37-38
Measuring poverty

Mr. Klein discusses the merits of various measures of poverty: Low-Income-Cut-Off (LICO), Low Income Measure (LIM), and Market Basket Measure (MBM). Mr. Klein indicates that MBM is the best measure of poverty. He also identifies other proxy measures of the BC Government, e.g., MSP premium assistance, Rental Assistance Program, and the low-income carbon action tax credit.

24.1 Given the pros and cons among the LICO, LIM and MBM measures of poverty, does Mr. Klein have a strong preference among them for the purposes of establishing a low income threshold for a discounted block of electricity? Please provide reasons in your response.

24.2 Please discuss the merits of using the other proxy measures of the BC Government programs to be used in preference to the MBM or the other measures of poverty.

**25.0 Reference: Exhibit C2-12, Klein Evidence, pp. 28-20
Measuring poverty**

Mr. Klein discusses poverty and its correlation with age categories and family type.

25.1 Please describe how these data would inform the Commission in considering the proposals of BCOAPO.

**26.0 Reference: Exhibit C2-12, Klein Evidence, pp. 31- 34
Measuring poverty**

Mr. Klein states “A report for the Ministry of Energy, Mines and Resources estimated that around 292,000 BC households (18% of total households) were living in energy poverty in 2005 (meaning, a household that spent 10% or more of its after tax income on home energy).”

26.1 Please identify whether (and how) the Ministry has endorsed the report findings in the preamble that 18% of total households live in energy poverty and that 10% of after tax income spent on home energy is the test for energy poverty.

26.1.1 How does this reconcile with the statement on page 34 that the Minister responsible for BC Hydro has rejected the proposition that BC Hydro rates pose an energy poverty challenge?

26.2 On page 32, Mr. Klein asserts that the distribution of energy costs is highly regressive – meaning rising BC Hydro bills do not impact everyone equally. Isn't it true that all basic necessities, for example food, are highly regressive?

26.2.1 Please describe how this information would help the Commission in considering the proposals of BCOAPO?

**27.0 Reference: Exhibit C2-12, Klein Evidence, p. 35, footnote 40
Living Wage declining in 2016**

Mr. Klein notes that:

Interestingly, in 2016, for the first time since developing the methodology for calculating the *Living Wage for Families*, the living wage in Metro Vancouver and other cities will be going down. That is because of the introduction of the new Canada Child Benefit by the federal Trudeau government; the living wage calculation incorporates the impact of various taxes and tax credits, and because the new CCB will substantially boost the incomes of low and middle-income families with children, the living wage drops in 2016. The new federal government's boost to the Guaranteed Income Supplement for low-income single seniors will also result in a notable drop in the seniors' poverty rate. These positive new federal measures are not a reason for complacency. But they do drive home the value of good policy, showing that well-designed and targeted policies can make a real difference in the lives and affordability of low-income households.

27.1 Would it not be more appropriate to tackle low income issues through government policies and programs rather than low income electricity utility rates? Please discuss.

**28.0 Reference: Exhibit C2-12, Klein Evidence, p. 39
Proposed BCUC action**

In his conclusion, Mr. Klein endorses Lee *et al.*'s recommendation that:

The BC Utilities Commission should actively consider distributional impacts as part of its rate approval decisions. While we find that BC Hydro's RIB rate has a limited but progressive distributional impact, the ongoing increase in electricity prices, as currently proposed, will adversely impact low-income households.

- 28.1 As an alternative to targeting low income programs, would it be desirable to keep BC Hydro residential Tier 1 rates low and increase the Tier 2 rates? Please discuss the merits of an even steeper inclining block rate structure versus targeting low income rates.
- 28.2 In Mr. Klein's opinion, does his endorsement of Lee *et al.*'s recommendation imply that the mandate of the BCUC should be expanded to protect low-income customers and implement social policy goals? Please address the jurisdiction of the BCUC in your response.