

11 March 2021

VIA E-FILING

Patrick Wruck
Commission Secretary
BC Utilities Commission
6th Floor 900 Howe Street
Vancouver, BC V6Z 2N3



Reply to: Leigha Worth
ED@bcpiac.org
Ph: 604-687-3034
Our File: 7500.623

Dear Mr. Wruck,

**Re: British Columbia Hydro and Power Authority (BC Hydro) 2020 Street Lighting Rate Application
BCOAPO Information Request No. 2**

We represent the BC Old Age Pensioners' Organization, Active Support Against Poverty, Council of Senior Citizens' Organizations of BC, Disability Alliance BC, Together Against Poverty Society and the Tenant Resource and Advisory Centre, known collectively in this process as "BCOAPO et al."

Enclosed please find the BCOAPO's Information Request No. 2 with respect to the above-noted matter.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,
BC PUBLIC INTEREST ADVOCACY CENTRE

Original on file signed by:

Leigha Worth
Executive Director | General Counsel

Encl.

REQUESTOR NAME: **BCOAPO**
 INFORMATION REQUEST ROUND NO: **#2**
 TO: **BRITISH COLUMBIA HYDRO & POWER AUTHORITY**
 DATE: **MARCH 11, 2021**
 PROJECT NO: **1599147**
 APPLICATION NAME: **2020 STREET LIGHTING RATE APPLICATION**

22.0 Reference: Exhibit B-4, BCUC 1.2.1

Preamble: The Response states: "On the assumption that the pole space required by each light continues to be available for use, BC Hydro determined that its operating costs associated with RS 1703 lights were approximately recovered by the contact charge as currently approved. Such costs are limited to removing the street light or transferring the street light from the old pole to the new one in the event of pole replacement."

22.1 Please confirm that BC Hydro's review of the contact charge under RS 1703 is based on a "marginal cost" approach (i.e., what additional costs does BC Hydro incur in allowing the streetlight owner to attach its fixture to BC Hydro's pole) as opposed to fully allocated cost approach as is used for most other classes of ratepayers.

22.1.1 If confirmed, please explain why such an approach is appropriate.

22.1.2 If not confirmed, please explain why.

22.2 Why is it reasonable to assume that the pole space required by each light continues to be available for use?

23.0 Reference: Exhibit B-5, BCOAPO 1.1.2 and BCOAPO 1.1.2.1

Preamble: The response to BCOAPO 1.1.2 states: "the street light is not attached within the telecom space or space that could be used for a third party".

The response to BCOAPO 1.1.2.1 states: "In addition, as RS 1701 street lights are installed on BC Hydro poles that are part of BC Hydro's distribution system and not installed for the purpose of providing street lighting, BC Hydro doesn't incur any incremental costs related to use of the pole."

23.1 Please explain more fully why (per BCOAPO 1.1.2) the street lights under RS 1701 are not attached within space that could be used by a third party.

- 23.2 Please explain why in the case of RS 1703 the rate is based on the assumption that the pole space required by each light continues to be available for use (per BCUC 1.2.1) while in the case of RS 1701 the rate is based on the assumption that the space used could not be used by a third party?
- 23.3 What costs (i.e., the types of costs), if any, associated with the use of the pole space are included in the RS 1701 rate?
- 23.4 Are third parties seeking to attach/contact their equipment/property to BC Hydro's distribution poles charged for the right to do so?
- 23.4.1 If yes, are the charges for use of the pole determined on the same basis as the used of poles charge included in the RS 1701 rate?
- 23.4.2 If not, why not?
- 24.0 Reference: Exhibit B-5, CEC 1.8.1; BCOAPO 1.11.3 & BCOAPO 1.14.2**
- 24.1 Is the expected cost to convert RS 1701 and RS 1755 Group 2 lights to LEDs of \$63.5 M (as noted in BCOAPO 1.11.3) meant to represent the Total Installed Cost of \$63 M noted in BCOAPO 1.14.2 (\$63 M = \$693.50 x 90,850)?
- 24.1.1 If not, please explain the difference between the two values in terms of what costs are included in each.
- 24.2 What is the authorized cost of converting RS 1701 and RS 1755 Group 2 lights to LEDs after reserve is added?
- 24.3 For purpose of the pricing model, please explain why it is appropriate to use the expected cost as opposed to the authorized cost.
- 25.0 Reference: Exhibit B-5, BCOAPO 1.12.1
Exhibit B-4, BCUC, 1.9.2, Pricing Model**
- Preamble:** The Response to BCOAPO 1.12.1 states: "The total investment-related costs in Table G-6 are calculated in order to determine the amount of annual depreciation to be included in the rate calculation. This includes the \$693.51 per unit total installed cost under the Replacement program as identified above, but also the \$158.55 Net Book Value of the existing street light arms that are not installed as part of the Replacement Program but continue to depreciate."
- 25.1.1 Please explain why it is necessary to include the undepreciated value of the existing street light arms Table G-6. Hasn't this cost already been included in the existing RS 1701 rate?
- 25.1.2 If the cost of the existing street light arms was excluded from Table G-6 would it: i) change the average LED rate in Table G-6 (and if so how) or ii) simply change the current value (96.9%) of the "% of Calc. Additional

Cost Contribution” in the Pricing Model so as to yield the same average LED rate. Please fully explain the basis for the response.

26.0 Reference: **Exhibit B-4, BCUC 1.8.11**
Exhibit B-5, BCOAPO 1.9.2
Exhibit B-1, Appendix G, Table G-3

Preamble: The response to BCUC 1.8.11 states:
“The marginal resource changed from Revelstoke Unit 6 in 2037 to Simple Cycle Gas Turbine (SCGT) in 2038, based on the updated capacity LRBs as presented in Table D-2 and Table D-4 in the October 3, 2019 filing 20-Year Load Forecast, as part of BC Hydro Fiscal 2020 to Fiscal 2021 Revenue Requirements Application (F2020-F2021 RRA).”

The response to BCOAPO 1.9.2 refers to BC Hydro’s response to AMPC IR 1.5.8, included in Exhibit B-6 to the Fiscal 2020 to Fiscal 2021 Revenue Requirements Application, which states:

“From fiscal 2023 to fiscal 2031, BC Hydro expects to be in a deficit position for generation capacity with only existing and committed resources. During this period the capacity avoided cost is based on the next most cost-effective generation capacity resource on a unit capacity cost basis which is Revelstoke Unit 6. The Previous Application outlined the cost of Revelstoke Unit 6 at approximately \$60 per kW-year (fiscal 2018\$). This value is based on the unit capacity cost of Revelstoke Unit 6 (\$51/kW-year F2016\$ at point of interconnection) adjusted with delivery to the Lower Mainland and for energy benefits.

From fiscal 2032 onwards, load is forecast to exceed the capability of planned generation resources including Revelstoke Unit 6. The capacity avoided cost from this point onwards is based on Simple Cycle Gas Turbine (SCGT). Its cost is estimated at \$123 per kW-year (fiscal 2018\$), based on the unit capacity cost of SCGT in Kelly Lake/Nicola area derived from engagement with industry experts in 2014-2015. The \$123 per kW-year figure is composed of \$80/kW-year F2016\$ at point of interconnection and adjusted with delivery to the Lower Mainland, GHG costs, and adjusted for energy impacts.”

26.1 The period over which Revelstoke is deemed to be the marginal resource differs as between the response to BCUC 1.8.11 and the response to BCOAPO 1.9.2 (i.e., AMPC 1.5.8 from the F2020/F2021 RRA). Please reconcile.

26.2 Please clarify whether the Generation & Bulk Transmission Capacity Marginal Unit Cost in Table G-3 actually includes any costs specifically for Bulk Transmission other than losses.

26.2.1 If not, why not?

26.2.2 If yes, with respect to Table G-3, please provide a breakdown of Generation vs. Bulk Transmission capacity costs and explain the basis for the Bulk Transmission capacity cost values used.

27.0 Reference: **Exhibit B-4, BCUC 1.12.4**
Exhibit B-5, BCAC 1.5.1

27.1 Please explain why it is appropriate to apply the Supplemental Charge to RS 1755-Group 2 customers as none of the existing street light assets/costs that are being retired early as a result of the Replacement Program were originally incurred on their behalf.

28.0 Reference: **Exhibit B-5, BCOAPO 1.10.1, 1.10.2 and 1.10.3**
Exhibit B-5, SURREY, 1.4.2

Preamble: The Response to BCOAPO 1.10.1 states:
“Re-lamping activities most commonly include replacement of failed lamps but also include luminaire cleaning and, if required, replacement of a failed luminaire, photocell, bracket and/or wiring run back to the BC Hydro secondary distribution system.”

The Response to BCOAP 1.10.2 states:
“The actual street light maintenance costs were higher because the number of spot repairs experienced were higher than what BC Hydro had planned for. BC Hydro saw an increasing number of spot repairs over the past five years because we discontinued the practice of group re-lamping of street lights in fiscal 2014 in anticipation of a conversion to LED street lights in the near future.”

The response to BCOAPO 1.10.3 states:
“The Maintenance Savings reported for each year in Table G-5 were determined by comparing the High Pressure Sodium (HPS) street light historical maintenance budget average with the LED street lights ongoing costs. The LED street light ongoing costs include amortization of LED failure replacement, dismantling cost of failed LED street lights and allowance to clean all LED street lights after 10 years of ownership.”

The response to SURREY 1.4.2 states: “The budgeted amount reported in Table G-1 represents the anticipated cost to address RS 1701 street light failures experienced during each fiscal year. Planned maintenance (proactive group re-lamping) was cancelled in fiscal 2014 in anticipation of a conversion to LED street lights in the near future.”

28.1 Given that BC Hydro discontinued the practice of group re-lamping in F2014, were the budget values for F2016-F2020 based entirely on estimates as to the number of spot repairs that would be required in the absence of any pro-active re-lamping?

28.1.1 If not, what was the basis for the F2016-F2020 maintenance budgets?

28.2 How were the costs for equipment replacement as a result of re-lamping activities (per BCOAPO 1.10.1) accounted for in the F2016-F2020 budgets? For example, i) Was the total capital cost of the new equipment included in the maintenance budget and assumed to be expensed in the that year, ii) Was an allowance for amortization of this equipment included in the maintenance budget for the year (similar to the way equipment replacement costs are included in the LED street lights ongoing costs) or iii) were such costs excluded from the historical maintenance budget (per Table G-1) and treated as a capital addition in each year's overall budget?

28.2.1 Based on the response, please comment on whether the cost comparison referred to in BCOAPO 1.10.3 appropriately reflects the "savings" in equipment replacement costs over the 20 year period (i.e., do the historic budget costs for maintenance include the costs for equipment replacement in similar manner to the way they have been included in the maintenance cost for LED street lights?).

29.0 Reference: Exhibit B-5, BCOAPO 1.11.3, 1.11.4, and 1.11.4.3

Preamble: The Response to BCOAPO 1.11.4 states: "The \$3 million per year is based on the total Program's one-time investment costs without an allowance for financing costs associated with the unamortized balance of the Program's investment costs."

The response to BCOAPO 1.11.4.3 states: "Table G-5 of the Application already includes finance charge carrying costs based on the historic level of these charges recovered from RS 1701 customers. In particular, the column labelled Revenue without Replacement Program (\$ million) in Table G-5 is the total RS 1701 revenue in fiscal 2021 inclusive of finance charges and these amounts are carried through all 20 years of the model."

29.1 Please confirm that, in principle, the financing costs included in the currently recovered from RS 1701 customers are intended to recover the costs of "financing" the assets currently used by RS 1701 customers.

29.1.1 If not confirmed, please explain why.

29.2 Please confirm that the \$63.5 M in costs for the replacement program (per BCOAPO 1.11.3) are incremental costs over and above those reflected in the revenue requirements used to determine the current RS 1701 rate.

29.2.1 If not confirmed, please explain why and also explain why the amortization is included as an increment cost in Table G-5.

29.3 Please confirm that the \$63.5 M will be spent over a period up to F2024 but for purposes of including the costs in the proposed RS 1701 rate the costs have been amortized over a period of 20 years or 40 years depending on the asset.

29.4 Since RS 1701 includes a share of the financing cost for the assets included in BC Hydro's revenue requirement as used for rate setting purposes, please

explain more fully why, if the costs of the Replacement Program are amortized for purposes of including the incremental cost of the Program in the rate calculation, the rate calculation shouldn't also include, in each year, the financing costs associated with the unamortized balance of the Replacement Programs costs.

**30.0 Reference: Exhibit B-1, Appendix G, Tables G-5 & G-6
Exhibit B-4, BCUC 1.9.2, Pricing Model**

30.1 Please explain why the calculation of the proposed LED rates is based on equating: i) the total revenues from the new LED rates over the 20 year period with ii) the anticipated total revenues from the existing rates less the total of the savings in each year over the same 20 year period, as opposed to equating the net present value of the two different streams using BC Hydro's average cost of capital (or an alternative discount rate which BC Hydro considers more appropriate).

**31.0 Reference: Exhibit B-1, Appendix G, Tables G-5 & G-6
Exhibit B-4, BCUC 1.9.2, Pricing Model**

31.1 Please provide an alternative pricing/LED rate derivation model where: i) costs and savings are in the model in the year they are incurred (e.g. the Replacement Program costs are not amortized but included in the year the dollars are spent) and ii) the LED rates are derived so as to equate the net present value of the revenues from the LED rates with the net present value of the total revenues from the existing rates less the total of the savings in each year over the 20 year period analysis period using BC Hydro current average cost of capital (or an alternative discount rate which BC Hydro considers more appropriate).

32.0 Reference: Exhibit B-5, BCSEA 1.1.8 and 1.1.10

Preamble: The Response to BCSEA states: "While changing the rate design within a rate class may result in a change to revenue to cost ratio for that rate class, it does not constitute rate rebalancing unless BC Hydro was seeking to shift costs between rate classes to get closer to unity in the revenue to cost ratio."

The UCA states:

"58(1) In this section, "revenue-cost ratio" means the amount determined by dividing a public utility's revenues from a class of customers during a period of time by the public utility's costs to serve that class of customers during the same period of time.

58(7) The commission may not set rates for a public utility for the purpose of changing the revenue-cost ratio for a class of customers except on application by the public utility."

32.1 Does rate rebalancing result from: i) shifting the allocation of costs between rate classes (as suggested by the response to BCSEA 1.1.8) or ii) shifting (through the setting of rates) the revenue requirement recovery between rate classes?

- 32.2 Please explain how changing rate design within a rate class may result in a change to the revenue cost ratio for that rate class.
- 32.3 Please confirm that if the change in rates for the RS 1701 class matches the change in BC Hydro's revenue requirement as a result of the Replacement Program then, in principle, the rates for BC Hydro's other customer class will be unaffected.
- 32.3.1 If not confirmed please explain why.

33.0 Reference: Exhibit B-5, CEC 1.5.2

Preamble: The question asked "From which party or parties was the difference between the Budget and the Actual (Maintenance) costs recovered". The response states: "BC Hydro's Street Lighting maintenance costs were recovered through BC Hydro's revenue requirements applications in accordance with the allocation of costs across BC Hydro rate classes."

- 33.1 Please confirm that it was the Budget costs that would have been included in BC Hydro's revenue requirements application.
- 33.2 Please also confirm that to extent Actual Maintenance costs exceeded the Budget and were not recovered through rates, the difference would be reflected in BC Hydro's actual net income and would not be subject to future recovery from customers.
- 33.2.1 If not confirmed, please explain why.

34.0 Reference: Exhibit B-5, SURREY 1.3.1.1.3

Preamble: The Response states:
"Per Special Condition No. 7 of RS 1701, BC Hydro will, without charge, replace lamps street lights or components that fail to operate, unless breakage is the reason for such failure in which case the Customer will be charged the cost of the material required to make the fixture operate. Vandalism would be considered to be "breakage", but malfunction would not."

- 34.1 Please clarify whether, in the case of breakage, the customer is just responsible for the cost of the materials required to make the fixture operate or whether the customer is also responsible for the labour costs associated with making the fixture operate.
- 34.2 Please explain the rationale for BC Hydro's approach to cost recovery in the event street lights or components fail due to breakage.

- 35.0 Reference:** **Exhibit B-4, BCUC 1.13.5**
- Preamble:** The response states: “at their discretion, Group 1 customers can reuse these poles for the installation of privately-owned lighting provided that the poles are in suitable condition for continued use.”
- 35.1 Whose role is it to determine if “the poles are in suitable condition for continued use”?
- 36.0 Reference:** **Exhibit B-4, BCUC 1.13.6**
Exhibit B-5, BCOAPO 1.15.2.2
- Preamble:** The Response to BCOAPO 1.15.2.2 states:
“BC Hydro’s view is that examining amendments to the Electric Tariff to allow Residential Customers the option to take Small General Service for part of their electric use would be complex and require consideration of matters beyond the scope of this Application. Such an examination would encompass a number of different Tariff provisions and may also have implications to BC Hydro’s revenues and therefore for all ratepayers, as the Residential and Small General Service Rate Schedules differ in meaningful ways, including charges and availability.”
- 36.1 Is there any practical reason (other than the current wording of tariff) why it is appropriate for Small General Service customers to have access to lighting service through an unmetered connection but not Residential customers?
- 36.2 Please explain more fully: i) why amendments to the Electric Tariff to allow Residential Customers the option to take Small General Service for part of their electric use would be complex and ii) how material the implications for BC Hydro’s revenues would be.
- 37.0 Reference:** **Exhibit B-5, BCAC 1.2.2**
- Preamble:** The Response notes that the amended availability for RS 1701 is as follows:
“For lighting of private property where BC Hydro owns, installs and maintains the luminaires, controls, conductors, brackets, and poles where the light is mounted on a BC Hydro distribution system pole that is on public property.
In the case of lighting of private property previously served by BC Hydro pursuant to Rate Schedule 1755, BC Hydro may in its sole discretion authorize service to be provided from a light that is mounted on a BC Hydro distribution system pole that is on non-public property.”
- 37.1 Would a new customer/connection to BC Hydro’s system be able to obtain lighting for private property where BC Hydro owns, installs and maintains the luminaires, controls, conductors, brackets, and poles and the light is to be mounted on a BC Hydro distribution system pole that is on public property?

37.1.1 Is such eligibility solely at BC Hydro discretion (similar to the treatment of former RS 1755 customers seeking RS1701 service using a BC Hydro distribution pole located on private property)? If not, why not?

37.2 It appears from the second sentence in the preamble that only lighting of private property previously served by BC Hydro pursuant to Rate Schedule 1755, is eligible to be provided from a light that is mounted on a BC Hydro distribution system pole that is on non-public property. Please confirm whether this is the case or whether a new customer/connection would be eligible to receive service under RS 1701 for the lighting of private property from a light that is mounted on a BC Hydro distribution system pole that is on non-public property.

37.2.1 If new customers/connections are not eligible, please explain why and what is the basis for a different treatment of BC Hydro-owned distribution poles depending on whether they are on public or private property.

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