

21 January 2021

**VIA E-FILING**

Marija Tresoglavic  
Acting 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 Ms. Tresoglavic,

**Re: British Columbia Hydro and Power Authority (BC Hydro) 2020 Street Lighting Rate Application  
BCOAPO Information Request No. 1**

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. 1 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: **#1**  
TO: **BRITISH COLUMBIA HYDRO &  
POWER AUTHORITY**  
DATE: **JANUARY 21, 2021**  
PROJECT NO: **1599147**  
APPLICATION NAME: **2020 STREET LIGHTING RATE  
APPLICATION**

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**1.0 Reference: Exhibit B-1, page 2**

**Preamble:** The Application states: "Unlike RS 1701, the lights under RS 1755 are generally not affixed to a BC Hydro power distribution pole".

- 1.1 Are all of the lights under RS 1701 affixed to BC Hydro owned poles?
- 1.2 Is the "pole" space that is being used to affix lights under RS 1701 to a BC Hydro owned pole space that might otherwise be available for use by a third party (e.g., a telecom provider)?
  - 1.2.1 If yes, do the costs included in the determination of the RS 1701 rate include any costs associated with the use of the BC Hydro pole? If yes, what are these costs and how are they determined? If not, why not?
- 1.3 Are any of the lights under RS 1755 affixed to BC Hydro owned poles?
- 1.4 If yes, is the "pole" space that is being used to affix lights under RS 1705 to a BC Hydro owned pole space that might otherwise be available for use by a third party (e.g., a telecom provider)?
  - 1.4.1 If yes, do the costs included in the determination of the RS 1705 rate include any costs associated with the use of the BC Hydro pole? If yes, what are these costs and how are they determined? If not, why not?

**2.0 Reference: Exhibit B-1, page 5**

**Preamble:** The Application states: "For clarity, BC Hydro is not seeking approval of any capital expenditures or the Replacement Program implementation plan as part of the Application or separately".

- 2.1 Were any capital expenditures/capital additions related to the Replacement program included in BC Hydro's F2020-F2021 RRA?

2.1.1 If yes, what were the amounts for F2020 and F2021 and does BC Hydro consider these amounts to have been approved/accepted as reasonable as part of the BCUC's Decision and Order G-246-20?

2.2 Does BC Hydro's current F2022 RRA include any capital expenditures/capital additions related to the Replacement program?

2.2.1 If yes, what are the amounts and is BC Hydro requesting that the BCUC either approve or accept as reasonable these amounts as part of its future Decision?

**3.0 Reference: Exhibit B-1, page 12**

**Preamble:** The Application states: "BC Hydro leases these street lights to customers at an all-inclusive, unmetered monthly rate. The rate is applicable only in areas where there is suitable existing BC Hydro infrastructure."

3.1 Please explain what "suitable existing BC Hydro infrastructure" is required for the installation of lights under RS 1701.

3.2 Does BC Hydro actually have a formal lease agreement with the RS 1701 customers or is the provision of the service addressed entirely by the terms of BC Hydro's Electric Tariff?

**4.0 Reference: Exhibit B-1, pages 12 and 22**

**Preamble:** The Application states (page 12): "Street Lights are photocell controlled, turning on at dusk and off at dawn. Electricity consumption is not metered."

At page 22, the Application indicates that RS 1701 Street Light fixtures are widely distributed across the Province.

4.1 Please confirm that the monthly electricity use under RS 1701 is estimated based on the wattage of the individual fixtures and the hours involved between dusk and dawn.

4.1.1 If not confirmed, how is electricity used determined?

4.1.2 If yes, are the same "times" for dusk and dawn applied to all RS 1701 fixtures or does BC Hydro use different times for different parts of the Province? Also, how frequently does BC Hydro review and update the timings used?

**5.0 Reference: Exhibit B-1, page 13**

**Preamble:** The Application states:  
"In the 2015 RDA, BC Hydro also committed to review the monthly contact charge under RS 1703; Street Lighting Service under which the customer owns lights on BC Hydro owned poles. BC Hydro believes that the contact charge remains sufficient to recover its costs associated with

this service and no amendments are proposed to the contact charge under RS 1703 in the Application.”

- 5.1 Please provide the analysis supporting BC Hydro’s conclusion that the RS 1703 contact charge remains sufficient to recover its costs associated with this service.

**6.0 Reference: Exhibit B-1, pages 14 & 19-20 and Appendix G, page 8**

**Preamble:** The Application states (page 14):  
“As part of the Replacement Program four alternatives to meet the PCB Regulation were evaluated. The evaluation is summarized in section 4 below and identifies that proactive replacement of BC Hydro’s street lights with LED technology is the most cost-effective option to be compliant with the regulation and meet customer expectations.”

At page 19 the Application states:  
“The proactive model of converting BC Hydro’s existing fleet of street lights was identified as the best alternative based upon regulatory compliance, financial, and reputational considerations.”

Appendix G, page 8 states:  
“The costs for the program as documented in the Implementation Phase business case includes the conversion of both RS 1701 and RS 1755 lights to LEDs. The total expected cost for the Program including contingency is \$73.4 million.”

- 6.1 Please provide the business case that supports the choice of the proactive replacement model as being the most cost effective.

**7.0 Reference: Exhibit B-1, page 24**

**Preamble:** The Application states: “The second Bonbright grouping is Fairness. Fairness, in the regulatory context, refers to how closely costs are recovered from those customers that cause the cost to arise.”

- 7.1 In BC Hydro’s view, what role does a Fully Allocated Cost of Service Study play in determining fairness – i.e., how closely costs are recovered from those customers that cause the costs?

**8.0 Reference: Exhibit B-1, page 27 and Appendix G, pages 4 & 6**

**Preamble:** The Application states (page 27):  
“BC Hydro estimates that the energy savings resulting from the Replacement Program will be approximately 28 GWh/year after it is fully implemented. These savings are valued at BC Hydro’s marginal cost of energy, which is approximated by the wholesale market price, at an average \$1.1 million per year.”

- 8.1 Please provide the analysis supporting the estimated energy savings of 28 GWh/year.

- 8.2 Please provide a copy of BC Hydro's June 2020 Market Price Forecast (Appendix G, page 4).
- 8.3 Please confirm that "market prices" were used to determine value of the energy savings for the entire 20-year period.
- 8.4 Are the Marginal Energy Cost values in Table G-3 in nominal or real dollars? If real dollars, what year are they based on?

**9.0 Reference: Exhibit B-1, page 27 and Appendix G, pages 5-6**

**Preamble:** The Application states (page 27):  
"BC Hydro estimates the capacity savings to be 6.7 MW once the program is fully implemented. These savings are valued at BC Hydro's long run marginal cost of generation capacity and bulk transmission, and our marginal costs for non-bulk transmission and for distribution, also totaling \$1.1 million per year."

- 9.1 Please provide a schedule that sets out the determination of the estimated 6.7 MW of capacity savings.
- 9.2 Please provide references as to where documentation can be found regarding the calculation of the long run marginal cost of generation capacity and bulk transmission and the marginal costs for non-bulk transmission and for distribution used in the analysis.
- 9.3 Please confirm that, in Table G-3, the values for Generation & Bulk Transmission Capacity Unit Costs only include bulk transmission for the years up to 2037. If not, please explain the significant increase in 2038.
- 9.4 What is the typical lead time in constructing bulk transmission facilities from the time of project approval to in-service?
  - 9.4.1 Based on this lead time, is it reasonable to assume that demand reductions in the early years (e.g., 2021 and 2022) will lead to savings in bulk transmission capacity cost in those years?
  - 9.4.2 Based on this lead time, what is a reasonable estimate as to future year one could practically expect to see first see bulk transmission capacity savings from the Replacement Program?
- 9.5 What is the typical lead time in constructing non-bulk transmission facilities and distribution facilities from the time of project approval to in-service?
  - 9.5.1 Based on these lead time, is it reasonable to assume that demand reductions in the early years (e.g., 2021 and 2022) will lead to savings in non-bulk transmission capacity costs and distribution capacity costs in those years?
  - 9.5.2 Based on these lead times, what is a reasonable estimate as to the future year one could practically expect to first see non-bulk transmission

capacity and distribution capacity savings from the Replacement Program?

9.6 Are the Marginal Unit Capacity Cost values in Table G-3 (Columns D, E and F) in nominal or real dollars? If real dollars, what year are they based on?

**10.0 Reference: Exhibit B-1, page 27 and Appendix G, pages 1-3, 12 & 15**

**Preamble:** In regard to the use of actual historical maintenance costs, the Application states (Appendix G, page 3):  
“The concern with this approach arises because historic actual spend has been higher than budget due to unplanned re-lamping costs. BC Hydro does not view this situation as being sustainable, or its cost outcomes as being or suitable for use as an input to the rate design.”

10.1 What is included in re-lamping costs and does this include replacement in the event of failures of existing fixtures?

10.2 Please provide more details as to: i) why actual re-lamping costs were higher than planned and ii) why the situation is not sustainable.

10.3 With respect to Appendix G, Table G-5, please explain how the Maintenance Savings reported for each year were determined based on the historical budget average of \$1.25 M?

10.3.1 In doing so, please confirm whether the Maintenance Savings shown are in nominal or real dollars and, if real dollar, what year they are based on.

10.4 Table G-6 indicates that the annual maintenance cost for the LED lighting is \$6.10/unit or \$554,185 in total per annum. Please explain if and how this cost was factored into the determination of Net Savings as set out in Table G-5.

**11.0 Reference: Exhibit B-1, page 27 and Appendix G, pages 8-10 & 12**

**Preamble:** The Application states (page 27):  
“The total one-time investment costs of the Replacement Program are expected to be \$3 million per year after the Replacement Program is fully implemented, including capital cost amortization (installation labour, assets and costs to facilitate the roll-out) over 20 years and dismantling.”

Appendix G states (page 10):  
“For the 20-year analysis period used in the rate design, the average annualized value of amortization of one-time Replacement Program capital and non-capital costs is \$3 million per year after installation completes.”

11.1 What is included in the one-time Replacement Program capital and non-capital costs used to determine the \$3 M per year?

- 11.2 Please confirm whether are the \$3 M per year is in nominal or real dollars and, if real dollars, what year it is based on.
- 11.3 Please provide the derivation of the \$3 M/year. In doing so, please reconcile the \$3 M per year with the fact that a simple straight-line amortization of the \$83.28 M Program Cost (per Table G-4) over 20 years yields an annual amortization of \$4.16 M (i.e., \$83.28/20).
- 11.4 Does the \$3 M per year include any allowance for the financing costs associated with the unamortized balance of the Program's investment costs?
  - 11.4.1 If yes, please indicate how as part of the response to the preceding question and indicate what average cost of capital value was used.
  - 11.4.2 If not, why not?
  - 11.4.3 If not, please provide a calculation of the annual carrying costs for each of the years 2021-2040 associated with the undepreciated investment costs for the Program using BC Hydro's weighted average cost of capital and revise Table G-5 so as to include these incremental costs.

**12.0 Reference: Exhibit B-1, pages 28-29 and Appendix G, pages 10-12 & 17**

**Preamble:** The Application states:  
 "The early retirement of existing street lights results in unrecovered depreciation for those assets that are removed before the end of their service life; specifically, the light fixtures. As these street lights are replaced by LEDs, the remaining Net Book Value of the replaced street light needs to be written off. In order to contain this write-off within RS 1701 (i.e., and not paid for by other ratepayers), BC Hydro is proposing that a temporary supplemental charge be included in the rate schedule."

Appendix G states (pages 10-11):  
 "This results in \$6.55 million of net book value that needs to be recovered before the lights are removed from service. Assuming lights are removed from service over fiscal 2021, fiscal 2022 and fiscal 2023, the annual value that needs to be recovered is \$2.18 million per year, although the actual value to be recovered in each year will depend on when the supplemental charge becomes effective."

- 12.1 Please confirm that the \$2.18 M per year is derived by dividing the balance to be recovered (\$6.55 M) by 3. If not confirmed, please explain how it was calculated.
- 12.2 Please confirm whether (in Table G-5) the \$2.2 M is expressed in nominal or real dollar and, if real dollars, what year it is based on.
- 12.3 Does the calculation of the supplemental charge include any allowance for the annual carrying costs of the undepreciated balance over the three-year period?
  - 12.3.1 If yes, please explain how.

12.3.2 If not, why not?

12.3.3 If not, please provide a revised estimate of the annual cost associated with the early retirement of the existing street lights that includes an allowance for carrying cost based on BC Hydro's weighted average cost of capital and revise Tables G-5 and G-7 accordingly.

**13.0 Reference: Exhibit B-1, Appendix G, page 12 (Table G-5)**

13.1 Please provide the derivation of the annual values for "Revenue without Replacement Program", clearly documenting the assumptions regarding the number of fixtures and the annual applicable rate increases/resulting rates.

13.2 Are all of the values in Table G-5 expressed on the same basis (e.g., are they all nominal values)?

13.3 When does BC Hydro expect to file its next Rate Design Application (inclusive of a Fully Allocated Cost of Service Study)?

13.4 Why was an assessment period of 20 years used as opposed to one that addressed the appropriateness of the RS 1701 rate up to time of BC Hydro's next Rate Design Application?

**14.0 Reference: Exhibit B-1, pages 29-31 and Appendix G, pages 13-17**

14.1 Please provide a schedule that sets out the annual revenue stream for RS 1701 based on the number of units and F2021 rates per Table G-6 and the assumed annual rate increases through to 2040.

14.1.1 Please demonstrate that this revenue stream is equivalent to that set out in the last column of Table G-5.

14.1.2 If the two revenue streams do not match for each year, please demonstrate whether the revenue streams match after accounting for the time value of money based on BC Hydro's weighted average cost of capital?

14.2 Based on Table G-6, the total installed costs are \$63 M (i.e., 90,850 units x \$693.51 per unit) and the total investment-related costs are \$77.4 M (i.e. 90,850 units x \$852.06 per unit). Please reconcile these values with the Total Replacement Programs costs of \$83.28 M (per Table G-4).

14.3 With respect to Table G-6, please provide the derivation of the Depreciation of Investment Related Costs (line 7) based on the Investment Related Costs set out in line 6. As part of the response, please explain why the values in line 7 appear to use a depreciation life of greater than 20 years.

14.4 With respect to line 11 of Table G-6, please explain how the Electricity Rate of \$0.0398/W/Month was derived from the F2019 FACOS.

14.5 Please explain (and provide the supporting work sheets) as to how the values in line 14 of Table G-6 were derived. In doing so, please explain why/how they were calculated so as “To Match R/C” and what R/C this is in reference to.

**15.0 Reference: Exhibit B-1, pages 43 and 50**

**Preamble:** The Application states: “The rate schedule (RS 1755) is closed and the service is no longer offered. For all new private outdoor lighting installations, customers must install their own lighting and wire their lighting load through their service meter.”

15.1 Is it the case that for all new private outdoor lighting installations, customers must install their own lighting and wire their lighting load through their service meter or, as indicated on page 50, can separate service be established as unmetered SGS accounts if the customer is billed under General Service rates?

15.2 In those instances where a standalone RS 1755 account is held by a Residential customer and new lights cannot be practically metered due to their location, can the Residential customer have such installations treated as an unmetered SGS account?

15.2.1 If not, why not?

15.2.2 If not, and the reason is simply due to the current wording of BC Hydro’s Electric Tariff, what amendments would be required to allow such circumstances?

15.2.3 If not, what other alternatives are available for customer who seeks to continue to have the service?

15.3 Has BC Hydro considered providing funding to residential customers for whom it is financially challenging to install their own new lights, for example through one of the Demand Side Management Programs, specifically Low-Income DSM Program?

15.3.1 If yes, please provide details.

15.3.2 If not, why not?

**16.0 Reference: Exhibit B-1, pages 41-42; 48-49, 52-53**

16.1 Please confirm that it is BC Hydro’s plan to remove all of the BC Hydro poles associated with the Group 3 customers.

16.2 Why isn’t BC Hydro proposing to offer to transfer ownership of the poles (after removal of the light) to customers if requested and agreed to by the customer and to do so at no cost? Would this be more cost-effective for BC Hydro than removing and disposing of the pole?

**17.0 Reference: Exhibit B-1, pages 53-63**

**Preamble:** At page 56 the Application states: “BC Hydro has limited ability to audit unmetered services in ways that conclusively identify under or over-billing.”

17.1 Does BC Hydro undertake any audits/inspections (either on a full or random sample basis) of its unmetered connections to determine if the actual equipment connected matches its billing records?

17.1.1 If yes, please describe the nature of its audit process and how often it is performed.

17.1.2 If yes, is the cost of the audit process attributed to the unmetered customer classes for purposes of BC Hydro’s FACOS Study?

**18.0 Reference: Exhibit B-1, page 58**

**Preamble:** The Application states:

“First, BC Hydro proposes to remove the six- or 12-month time limitation for back-billing for self-reported unmetered accounts so that under-billed accounts can be adjusted for actual consumption to the date of the addition or alteration of the customer’s assets that resulted in a change in electricity usage by an unmetered electrical load. This will enable full recovery of BC Hydro’s costs to the time that the additional consumption began.”

18.1 The referenced quote refers just to removing the limitation for back-billing so under-billed accounts can be adjusted for actual consumption. However, later on the same page (lines 27-28) reference is made to the change applying to both under-billed and over-billed unmetered accounts. Please clarify.

18.2 If the account is not metered and the change was made by the customer, how will BC Hydro determine the date of the addition or alteration of the customer’s assets?

18.2.1 If there is a dispute with customer as to the appropriate date, how will it be resolved?

**19.0 Reference: Exhibit B-1, page 59**

**Preamble:** The Application states: “In addition, applying interest adds to BC Hydro’s administrative effort.”

19.1 What is the typical administrative cost of adding interest to an account’s bill?

**20.0 Reference: Exhibit B-1, pages 64-65**

**Preamble:** The Application states (page 64):

“Some street light and traffic signal customers started to opt for metered services for their new or existing RS 1702 and RS 1704 connections to minimize administrative efforts.”

The Application also states (page 65):

“The exclusion of street light service from the definition of General Service was made through BC Hydro’s 2015 Rate Design Application, approved through BCUC Order No. G-5-17.”

- 20.1 How can some street light and traffic signal customers be opting for metered services for their new or existing RS 1702 and RS 1704 connections when (per page 65) street light service is excluded from the definition of General Service?

**21.0 Reference: Exhibit B-1, page 67**

- 21.1 Please confirm that, based on the proposed changes, a customer will be able to receive service solely for Street Lighting under the General Service Tariff.

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