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June 3, 2021

Mr. Patrick Wruck  
Commission Secretary and Manager  
Regulatory Support  
British Columbia Utilities Commission  
Suite 410, 900 Howe Street  
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

**RE: Project No. 1599147**  
**British Columbia Utilities Commission (BCUC or Commission)**  
**British Columbia Hydro and Power Authority (BC Hydro)**  
**2020 Street Lighting Rate Application (the Application) – Reply Argument**

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BC Hydro writes to provide its Reply Argument and to provide an Errata No. 2 to the Application, as follows:

Arguments	Reply Argument
Exhibit B-1-2	Erratum No. 2 to the Application filed on November 12, 2020

For further information, please contact Anthea Jubb at 604-623-3545 or by email at [bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com).

Yours sincerely,



Chris Sandve  
Chief Regulatory Officer

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Enclosure

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## **BC Hydro 2020 Street Lighting Rate Application**

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### **British Columbia Hydro and Power Authority's Reply Submission**

**June 3, 2021**

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## 1 Introduction and Overview

1. This is British Columbia Hydro and Power Authority's (**BC Hydro**) Reply Argument for its 2020 Street Lighting Rate Application (**Application**) that was filed with the British Columbia Utilities Commission (**BCUC**) on November 12, 2020.
2. In the Application, BC Hydro has (i) requested changes to its Electric Tariff (**Electric Tariff**) to enable BC Hydro to undertake its Street Light Replacement Program (**Program**) as required by the Federal PCB Regulation<sup>1</sup> and to make improvements to the rates, terms and conditions applicable to its street lighting programs generally; (ii) requested changes to its Electric Tariff to address other related amendments with respect to unmetered services, mixed use services and other housekeeping amendments; and (iii) sought consent to rescind its Rate Schedule (**RS**) 1755 private lighting service, to waive Service Connection Charges for RS 1755 customers who require a new service connection to install their own lighting, and to allow certain eligible RS 1755 customers to migrate to private lighting service under RS 1701.<sup>2</sup>
3. The following interveners have filed arguments in this proceeding:
  - BC Old Age Pensioners' Organization et al. (**BCOAPO**);
  - BC Sustainable Energy Association (**BCSEA**);
  - Commercial Energy Consumers Association of British Columbia (**CEC**);
  - Zone II Ratepayers Group (**Zone II**);
  - City of Vernon (**Vernon**);

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<sup>1</sup> Canadian PCB Regulations (SOR/2008-278) issued pursuant to the *Canadian Environmental Protection Act*, a copy of which can be viewed at the following link: <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-273/index.html>.

<sup>2</sup> This assumes the Commission approves BC Hydro's proposed amendments to allow for private lighting service under RS 1701.

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- City of Kamloops (**Kamloops**); and
  - City of Surrey (**Surrey**).
4. In its Final Argument, BC Hydro submitted that the BCUC should approve the relief sought by BC Hydro in the Application as the relief sought satisfied the legal test of being “fair, just and not unduly discriminatory”.
  5. In general, BCSEA, CEC, BCOAPO and Zone II addressed all of the relief put forward by BC Hydro in the Application as follows:
    - (a) Supported BC Hydro’s conversion of its street lighting used to provide RS 1701 service to light emitting diode (**LED**) lighting and supported the changes to BC Hydro’s RS 1701 rates, subject to specific comments on components of the proposed rates which are addressed below;
    - (b) Either supported or did not oppose BC Hydro’s request for consent to rescind its RS 1755 service and to allow for transition of RS 1755 customers to RS 1701 where possible, and allowing for the consent to waive Service Connection Charges for other affected customers as requested;
    - (c) Supported or did not oppose BC Hydro’s changes to its back billing provision for unmetered loads with some comments offered on different time limitations for the under-billing and over-billing provisions; and
    - (d) Supported the other changes proposed by BC Hydro to its Electric Tariff to address mixed use loads and other housekeeping amendments.
  6. Vernon, Kamloops and Surrey also filed arguments which focused on aspects of BC Hydro’s Application as follows:
    - (a) Vernon supported BC Hydro’s proposed amendments to RS 1701 with the exception of the Supplemental Charge proposed to recover the

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undepreciated costs of the street lighting assets being removed  
(**Supplemental Charge**) which Vernon submitted should be denied;

- (b) Surrey did not expressly support or oppose BC Hydro's amendments to RS 1701 but offered areas where it believes amendments to the proposed rates were required and also supported the rescission of the RS 1755 service;
- (c) Kamloops did not expressly support or oppose any of the specific relief sought by BC Hydro but instead offered comments on various aspects of the Program.

- 7. BC Hydro has responded to each of the points raised in arguments in Part 2 of this Reply Argument below.
- 8. With respect to the specific questions posed by the BCUC, in its Final Argument BC Hydro confirmed its view that the costs of the Program and the Supplemental Charge should be recoverable from RS 1701 ratepayers despite the fact that street lighting may provide benefits to parties other than BC Hydro's RS 1701 ratepayers. With a couple of exceptions discussed below, interveners either agreed generally with BC Hydro's positions put forward in its Final Argument or did not offer detailed comments as discussed below.

## **2 Reply to Interveners Final Arguments**

### **2.1 Reply to BCSEA Final Argument**

- 9. In its Final Argument, BCSEA supported the approval of the main requests in BC Hydro's Application. BCSEA also supported BC Hydro's views on the questions posed by the BCUC and agreed that the costs of the Program should be recovered from RS 1701 ratepayers and not all of BC Hydro's ratepayers or

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its shareholder and that the costs underlying the Supplemental Charge should be recovered from RS 1701 customers.<sup>3</sup>

### ***Budgeted vs. Actual Maintenance Costs***

10. While BCSEA did not take a position on the point, it noted that it did not have enough information to determine whether the RS 1701 rates should include budgeted or actual maintenance costs.<sup>4</sup>
11. Despite BCSEA not taking a position on the point, BC Hydro reiterates its evidence set out in Appendix G of the Application<sup>5</sup> that it is more appropriate to use budgeted maintenance costs as opposed to actual maintenance costs because historic actual maintenance spending has been higher than budget due to unplanned re-lamping costs. In BC Hydro's view, the actual maintenance spending will not be reflective of the maintenance costs following the completion of the Program because BC Hydro does not expect the LED lights to fail at the same rate as the high pressure sodium (**HPS**) and mercury vapour (**MV**) lights currently in place.

### ***Back-billing Provisions***

12. BCSEA suggested limitations on the proposed amendments to BC Hydro's back-billing provision when customers with unmetered loads do not advise BC Hydro of changes to the quantity of lights or electrical consumption in a timely way. Specifically, BCSEA suggested that BC Hydro should limit its ability to back-bill under-billed amounts that may be owing by customers of unmetered loads when they fail to identify changes to the quantity of lights or electrical consumption of their unmetered accounts to a period of one to three years.

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<sup>3</sup> Part 6 of BCSEA Final Argument

<sup>4</sup> Paragraph 37 of BCSEA's Final Argument.

<sup>5</sup> Exhibit B-1.

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BCSEA submits that an unlimited period for back-billing may be excessive in cases where the failure to notify BC Hydro was not deliberate.<sup>6</sup>

13. While a customer's failure to notify BC Hydro of changes to the quantity of lights or electrical consumption may not be deliberate in most cases, BC Hydro submits that it is a risk that can and should be managed by the customers receiving unmetered service and that these customers are in the best position to put processes in place to allow for the proper identification of lights and consumption being served under the rate. BC Hydro does not have sufficient information to know when changes to a customer's equipment or consumption have occurred. As a result, BC Hydro remains of the view that it requires the ability to back-bill customers retroactively for under-billing when the proper notifications are not made so as to provide incentive to customers to take action when necessary and to mitigate risk to ratepayers of under-billing arising as a result.<sup>7</sup>
14. BC Hydro makes no other submissions in respect of BCSEA's Final Argument.

## **2.2 Reply to BCOAPO Final Argument**

15. In its Final Argument, BCOAPO supported the approval of the relief set out in BC Hydro's Application, subject to certain comments and recommendations discussed below.<sup>8</sup> BCOAPO also generally agreed with BC Hydro's views on the questions posed by the BCUC and agreed that the costs of the Program should be recovered from RS 1701 ratepayers with the exception of certain costs attributable to the termination of the RS 1755 service.<sup>9</sup>
16. BCOAPO has made a number of comments in its Final Argument which BC Hydro addresses below.

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<sup>6</sup> Part 4 of BCSEA's Final Argument.

<sup>7</sup> Please refer to BC Hydro's response to BCUC IR 1.15.8.

<sup>8</sup> Pages 7-8 of BCOAPO's Final Argument.

<sup>9</sup> Pages 9, 17 and 18 of BCOAPO's Final Argument.



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***RS 1755 Termination Cost Recovery***

17. BCOAPO suggests that the costs associated with the termination of Group 1 and Group 3 RS 1755 customers, as well as those Group 2 RS 1755 customers who either choose not to migrate or cannot migrate to RS 1701 service, should not be included in the costs of the Program attributable to the RS 1701 rates as these costs are not associated with the RS 1701 service. BCOAPO also acknowledges that it would be unfair to allocate these costs solely to the RS 1755 customers whose service is being terminated. As a result, BCOAPO submits that these costs should be recovered from all ratepayers.<sup>10</sup>
18. BC Hydro confirms that the only costs arising from the termination of RS 1755 that have been included in the costs for completing the Program are those costs associated with the 370 Group 2 customers who may transition to RS 1701. Specifically, \$4,345 of the \$69,000 undepreciated cost of the RS 1755 assets has been included in the Supplemental Charge and \$411,435 of the total capital costs of \$5,655,542 associated with the termination of RS 1755 has been included in the capital costs for completing the Program. All other costs incurred by BC Hydro as a result of the termination of RS 1755 will be recovered from all ratepayers.<sup>11</sup> Since both amounts are minor and, even if entirely excluded, do not materially impact the RS 1701 rates proposed in the Application, BC Hydro does not propose that any further RS 1701 rate amendments are needed.

***Financing Costs for Amortized Capital Balances***

19. BCOAPO disagrees with the response provided by BC Hydro to BCOAPO's IR 2.29.1<sup>12</sup> explaining why BC Hydro has not included financing charges associated with its amortized capital costs incurred to complete the

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<sup>10</sup> Pages 7-8 and 17-18 of BCOAPO's Final Argument.

<sup>11</sup> Please refer to BC Hydro's response to BCOAPO IRs 2.24.1 and 2.24.2.

<sup>12</sup> Exhibit B-7.

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Program. BCOAPO believes the financing costs associated with these capital costs could be identified and included in the RS 1701 rates and that the financing charges associated with the undepreciated balances of the remaining HPS and MV lights being removed could be deducted from the RS 1701 rates.<sup>13</sup>

20. Existing finance charges associated with BC Hydro's service to RS 1701 customers are captured in the cost of service used to calculate the RS 1701 rates based on BC Hydro's Fully Allocated Cost of Service studies. For example, the column "Revenue without Replacement Program" of Table G-5 of the Application includes all BC Hydro finance charges that were assigned to RS 1701 customers based on fiscal 2021 RS 1701 rates. BC Hydro has not separately itemized finance charges specific to the Program for the purpose of calculating the proposed RS 1701 LED Rates.

### ***Non-Bulk Transmission and Distribution Capacity Savings***

21. BCOAPO submits that in determining its capacity savings as part of the RS 1701 rate, BC Hydro has overstated the value attributed to the non-Bulk Transmission and Distribution capacity savings in the early years. While BCOAPO continues to support the RS 1701 rates, it requested the BCUC to direct BC Hydro to reassess these savings using different assumptions as a compliance matter.<sup>14</sup>
22. In this application, BC Hydro has put forward rates designed to allocate to RS 1701 all of the costs and savings arising from the Program over a 20-year analysis period. In doing so, BC Hydro has made reasonable assumptions based on the best available information at that time.<sup>15</sup> BC Hydro acknowledges that changes in the assumptions used may cause the RS 1701 rate to increase

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<sup>13</sup> Pages 11-12 of BCOAPO's Final Argument.

<sup>14</sup> Pages 12-13 of BCOAPO's Final Argument.

<sup>15</sup> This view was supported by CEC in paragraph 55 of its Final Argument.

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or decrease; however, BCOAPO has conceded that it does not expect this information to change the cost benefit analysis such that RS 1701 rates should not be approved.<sup>16</sup> Accordingly, BC Hydro does not see benefit in undertaking the analysis requested by BCOAPO as a compliance matter because the sole purpose of the information being put forward in this application is in support of the inputs to the RS 1701 rates. BC Hydro respectfully submits that the BCUC should decline to require this analysis as a compliance matter.

### ***Average RS 1701 Rates***

23. In its Application, BC Hydro determined the average RS 1701 rate by considering two revenue streams – one considering the total RS 1701 revenues from the new LED rates over the 20-year period and the other considering the anticipated RS 1701 revenues from the existing rates less the total of the savings in each year over the same 20-year period. Both revenue streams were increased each year by the assumed RRA increases which are assumed to match inflation. These two revenue streams were then used to determine an average rate for RS 1701. BCOAPO suggests these revenue streams did not appropriately account for the time value of money in that they were not evaluated using a net present value analysis of the revenue streams.<sup>17</sup>
24. BC Hydro submits that its proposed revenue calculations are appropriate for the purpose of RS 1701 rate design, including increasing revenues based on rates that are increased by an amount equal to inflation. BC Hydro notes that the net present value approach requires discounting costs to the current period and is commonly used to assess an investment decision in the current period. This was not the intended purpose of the RS 1701 rate design calculations and pricing. To develop the RS 1701 pricing, BC Hydro must consider the ongoing cost of service and it would not be appropriate to discount all of the cost of

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<sup>16</sup> Page 13 of BCOAPO's Final Argument.

<sup>17</sup> Pages 14-15 of BCOAPO's Final Argument.

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service to the current period because the pricing is not entirely based on an investment decision in the current period. Rather, it must consider ongoing costs. For example, while the one-time Investment Replacement Program Cost (see page 12 of Appendix G of the Application)<sup>18</sup> are considered a current period investment, they account for only approximately 10 per per cent of the total costs of service. The majority of the cost of service is associated with the use of BC Hydro's infrastructure to provide electricity and these costs are not based on current year investments alone; rather they are the accumulation of prior investments and ongoing costs. BC Hydro further notes that for rate design purposes, net present value may sometimes be used to calculate ratepayer benefit cost ratios to help with the assessment of potential new rate designs. However, for the reasons above, it is not standard practice to use net present value as a direct input to pricing.

### ***Supplemental Charge***

25. BCOAPO supported BC Hydro's use and calculation of the Supplemental Charge. However, BCOAPO noted an inconsistency in the timing of when BC Hydro proposes to commence collecting the Supplemental Charge from RS 1701 customers as compared to the date for RS 1755 customers. RS 1701 customers commenced payment of the Supplemental Charge on May 1, 2021 while Group 2 RS 1755 customers will only pay the Supplemental Charge once they transition to RS 1701.<sup>19</sup>
26. BC Hydro confirms that Group 2 RS 1755 customers are not required to transition to RS 1701 service. As a result, BC Hydro submits that it is appropriate to commence charging these customers the Supplemental Charge only once they elected to transition, and have been transitioned, to RS 1701.

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<sup>18</sup> Exhibit B-1.

<sup>19</sup> Page 17 of BCOAPO's Final Argument.

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***RS 1701 Availability Provision***

27. BCOAPO submits that the availability provision of RS 1701 should allow for lighting from BC Hydro distribution facilities on non-public property for all RS 1701 customers and not just those RS 1755 customers transitioning to RS 1701.<sup>20</sup>
28. BC Hydro does not agree with this proposed amendment. BC Hydro proposes to provide RS 1701 service from distribution poles that are on public property. BC Hydro made a narrow exception to allow service of RS 1755 customers that transition to RS 1701 from a pole that is not on public property as part of its efforts to accommodate RS 1755 customers impacted by the termination of this rate. BC Hydro does not otherwise intend to serve RS 1701 customers from distribution poles on non-public property. Further, BC Hydro suggests it may introduce inconsistency and fairness issues as BC Hydro already serves private properties under its other existing rate schedules (e.g., its residential rate schedules as part of the metered service). As a result, BC Hydro does not purport to use RS 1701 to serve private property from distribution poles that are not located on public property other than in the narrow circumstance noted.

***Fixture Changes During the Street Lighting Replacement Program***

29. In responding to Mr. Kelsey's letter of comment, BCOAPO specified its view that lighting design should remain with municipalities; however, BCOAPO suggested that when relocations or adjustments are required after installation of a new LED light as a result of a customer complaint, these costs should not be charged to the municipality as per Special Condition 5 of RS 1701.<sup>21</sup>
30. As noted in BC Hydro's response to BCUC IR 2.20.5, "...If an issue with the installed LED street light is identified by the Customer, BC Hydro will endeavor

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<sup>20</sup> Pages 19-20 of BCOAPO's Final Argument.

<sup>21</sup> Pages 23-24 of BCOAPO's Final Argument.

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to work with the customer to remedy the situation. During the Replacement Program deployment, if it is determined that a newly installed LED street light requires re-work (e.g., replacing the street light with a different wattage or colour temperature), Customers will not be charged the undepreciated value of the street light. Customers will be charged if the re work results in costs that go beyond those reasonably anticipated as part of the Replacement Program deployment.”<sup>22</sup> As a result, BC Hydro submits it will be able to sufficiently accommodate RS 1701 customer requests during deployment arising as a result of the lighting change.

***Special Condition 4 of RS 1755***

31. BCOAPO noted an inconsistency between the availability provision of RS 1701 and Special Condition 4 of RS 1755. Specifically, Special Condition 4 of RS 1755 only allows for migration to RS 1701 when the light is mounted on a BC Hydro distribution system pole that is on public property; whereas RS 1701 contemplates that migration of an RS 1755 customer to RS 1701 could occur to a pole on non-public property if acceptable to BC Hydro.<sup>23</sup>
32. BC Hydro agrees with the discrepancy identified by BCOAPO and proposes to change Special Condition 4 of RS 1755 as follows:

“Where a light served under this Rate Schedule 1755 is mounted on a BC Hydro distribution system pole, prior to September 30, 2022 the Customer may request to migrate Service from Rate Schedule 1755 to Rate Schedule 1701 which migration will be subject to the terms of Rate Schedule 1701 and specifically Special Condition 9 of Rate Schedule 1701”.

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<sup>22</sup> BC Hydro's response to BCUC IR 2.20.5 (Exhibit B-6).

<sup>23</sup> Pages 30-31 of BCOAPO's Final Argument.

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BC Hydro has attached a revised version of RS 1755 showing this amended Special Condition 4 to this Reply Argument.

### **2.3 Reply to CEC Final Argument**

33. In its Final Argument, CEC generally supported the relief proposed by BC Hydro and the positions taken by BC Hydro on the questions posed by the BCUC with two exceptions: first, regarding the timing for collection of the Supplemental Charge; and second, regarding the limitations on the back-billing provisions proposed by BC Hydro.

#### ***Supplemental Charge as a DSM “Proxy”***

34. CEC suggested that BC Hydro could have considered the Supplemental Charge as being a proxy to a demand-side measure (**DSM**) such that it could be recovered over a longer time period thereby reducing the rate impact to RS 1701 customers.<sup>24</sup>
35. As noted in BC Hydro's response to CEC IR 2.14.4, BC Hydro has not put forward any of the proposed expenditures for approval as DSM expenditures.<sup>25</sup> CEC seems to accept this as their argument focuses on the consideration of the Supplemental Charge as a “proxy” to DSM and not as an actual DSM expenditure. BC Hydro understood that this distinction is being made for the purpose of justifying the recovery of the Supplemental Charge over a longer time period, akin to a traditional DSM expenditure which gets recovered over a 20-year period, as opposed to having the costs recovered during the deployment period of the Program as proposed by BC Hydro.
36. In order to enable recovery of the Supplemental Charge over a period longer than what has been proposed by BC Hydro as suggested by CEC, a regulatory account would be required. BC Hydro has not sought approval of a regulatory

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<sup>24</sup> Pages 7-8 of CEC's Final Argument.

<sup>25</sup> BC Hydro's response to CEC IR 2.14.4 (Exhibit B-7).

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account in the Application and BC Hydro submits that its proposal to collect the costs over the deployment period of the Program as proposed is appropriate. While CEC cites potential intergenerational inequity as a reason to spread the cost recovery over additional years, as noted by CEC BC Hydro does not expect the customers being served over RS 1701 to change substantially over the next 20-year period.<sup>26</sup> Therefore, recovery of the costs over the period proposed by BC Hydro does not result in a utility ratepayer intergenerational equity issue to be considered in respect of BC Hydro's RS 1701 rates.

37. Finally, BC Hydro notes that it has already commenced collecting the costs of the Program from ratepayers in fiscal 2021 under final (non-refundable) rates and has proposed recovery of additional costs in fiscal 2022. In light of these circumstances, it is unclear how the proposal could be implemented.

### ***Back-Billing Limitations***

38. Similar to BCSEA, CEC also suggested that the period for which BC Hydro is able to back-bill its unmetered customers for under-billed amounts for failing to notify BC Hydro in the event that the number of lights or consumption changes should be limited to five years, with application of interest after six months. Further, CEC also submitted that since customers will presumably be incented to notify BC Hydro of over-billing scenarios in order to recover their over-payments, a strict limit is not appropriate and therefore should remain unlimited or, alternatively, should be limited to a longer period such as 20 years. CEC did not object to BC Hydro's amendment to provide that interest would not accrue on over-billed amounts. CEC did not oppose BC Hydro's other proposed changes to the back-billing provision (Section 5.7 of it's the Electric Tariff).<sup>27</sup>
39. BC Hydro provided its rationale for having an unlimited ability to back-bill an under-billed customer in response to BCSEA's submission in paragraph 13 of

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<sup>26</sup> Paragraph 112 of CEC's Final Argument in reference to BC Hydro's response to CEC IR 1.2.3.

<sup>27</sup> Pages 22-25 of CEC's Final Argument.



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this Reply Argument. With respect to the comment made by CEC regarding the six month limitation proposed by BC Hydro for refunding any amounts over-billed as a result of a customer failing to make the appropriate notifications on a timely basis, BC Hydro does not believe it is reasonable to expose non-participating ratepayers to significant payments arising as a result of a customer failing to take an action that is entirely within its control and not within the control of BC Hydro.<sup>28</sup> As noted above, customers are able to put processes in place to ensure that they make the notifications that are required by BC Hydro. BC Hydro submits that its proposal provides the appropriate incentive to customers to comply with this requirement. However, if the time limitation was removed or a longer time limitation ordered by the Commission, BC Hydro submits that such amounts should not bear interest because to allow interest to accrue provides a benefit to customers for failing to adhere to the Electric Tariff terms as required.

40. CEC also submitted that there is value in similar treatment between the time limitations applicable to over-billed and under-billed amounts. BC Hydro submits that similar treatment is not necessarily warranted as the risks and impacts of under-billing and over-billing are not equal and further notes that the existing back-billing provisions do not provide similar treatment between over-billing and under-billing.<sup>29</sup>
41. BC Hydro has no other submissions in response to the CEC Final Argument.

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<sup>28</sup> To the extent that BC Hydro is unable to back-bill for under-billed amounts, ratepayers generally will have to contribute to the revenues.

<sup>29</sup> Please refer to BC Hydro's response to BCUC IR 1.15.8 (Exhibit B-4).

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## 2.4 Reply to Zone II Final Argument

42. Zone II generally supported or took no position on BC Hydro's requested relief in this application and supported BC Hydro's positions put forward on the questions raised by the Commission.<sup>30</sup>
43. Zone II suggested that BC Hydro should include the marginal cost of energy in the NIA regions in the rate because BC Hydro has undervalued the marginal cost of energy by relying only on the marginal cost of energy for the integrated region. Since all 14 communities rely on diesel for reliability, Zone II submits that the marginal fuel is diesel and therefore the marginal energy cost should be based on the avoided cost of diesel which is \$300 per MWh \$2021. This would result in a savings to RS 1701 customers overall.<sup>31</sup>
44. As noted by Zone II, BC Hydro has confirmed it cannot use the marginal cost of energy for the NIA regions in designing this rate because it does not have location specific marginal energy and demand cost estimates.<sup>32</sup> In designing the RS 1701 rates, BC Hydro has used reasonable assumptions to determine the costs and savings that would arise as a result of the Program based on the best available information at that time. While changing the assumptions may make the RS 1701 rates increase or decrease (as in fact would be the case with the various adjustments suggested by interveners in their arguments), BC Hydro continues to submit that its assumptions are reasonable and appropriate for determining the RS 1701 rates.

## 2.5 Reply to Vernon Final Argument

45. In its Final Argument, Vernon did not oppose the RS 1701 rates but did submit that the Supplemental Charge should be denied on the basis that it is not fair or just because the recovery of the undepreciated cost of the lighting assets being

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<sup>30</sup> Pages 10-11 of Zone II's Final Argument.

<sup>31</sup> Pages 5-7 of Zone II's Final Argument.

<sup>32</sup> Pages 6-7 of Zone II's Final Argument.

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removed is a cost that the RS 1701 ratepayers had less control over than BC Hydro.<sup>33</sup>

46. In support of its position regarding the denial of the Supplemental Charge, Vernon has submitted that BC Hydro inappropriately continued to install HPS and MV lighting after the Federal PCB Regulation was passed.<sup>34</sup>
47. BC Hydro submits that its decision making in this regard was prudent. As set out in BC Hydro's response to Vernon IR 2.7.2, BC Hydro took a reasonable approach in evaluating the evolving technology as well as the pricing, unit reliability and future maintenance of LED street lights.<sup>35</sup> Further, BC Hydro had an obligation to provide service while it was undertaking this evaluation, including replacing lights that had failed. While commencing the replacement of the lights sooner may have resulted in fewer HPS/MV lights being installed, costs for the LED technology may have been higher. As a result, BC Hydro submits that it is not appropriate to apply a hindsight view to BC Hydro's decision as to when to proceed with the Program or to assert that BC Hydro's costs for completing the Program would have been lower if it had commenced sooner.
48. Further, Vernon's view is that BC Hydro had more control over the need to replace street lighting in order to meet its legal requirements than RS 1701 customers do and therefore the costs should not be applied to ratepayers. In support of this position Vernon cited a decision in Alberta.<sup>36</sup> In the *FortisAlberta v. Alberta (Utilities Commission)*<sup>37</sup> decision (**FortisAlberta**), the Alberta Court of Appeal upheld a decision of the Alberta Utilities Commission's (**AUC**) where the

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<sup>33</sup> Page 2 of Vernon's Final Argument.

<sup>34</sup> Page 11 of Vernon's Final Argument.

<sup>35</sup> BC Hydro's response to Vernon IR 2.7.2.

<sup>36</sup> Pages 11-13 of Vernon's Final Argument.

<sup>37</sup> 2015 ABCA 295.

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AUC determined that “any gains or losses on utility assets are for the account of the utility and its shareholders, not customers”<sup>38</sup>.

49. While the FortisAlberta case may reflect the law in Alberta, BC Hydro submits that it does not reflect the law in British Columbia. In British Columbia, the law continues to be that a utility should be allowed to recover its prudently incurred costs for stranded assets from ratepayers as opposed to taking the approach established in the FortisAlberta case that requires a utility to recover its costs for stranded assets that are no longer used and useful from the shareholder as opposed to ratepayer.<sup>39</sup> Specifically, in an article in the Alberta Law Review written by Lou Cusano, the author notes: “the [AUC] is the only utility regulator to have interpreted *Stores Block* as requiring the utilities to bear the financial risk of stranded assets.”<sup>40</sup> As a result, BC Hydro submits that the FortisAlberta case should not be used as a basis to deny the Supplemental Charge.
50. With respect to the questions posed by the Commission, Vernon provided its view that both ratepayers and the wider general public obtain benefits from street lighting and on that basis, it may be appropriate for them to share the costs of street lighting. However, for the purposes of the Application, Vernon

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<sup>38</sup> Utility Asset Disposition (**UAD**) decision (AUC Disposition 2013-417) page 330

<sup>39</sup> This has been recently demonstrated by the BCUC's stated approach to dealing with stranded assets in the BCUC Indigenous Utility Inquiry undertaken subsequent to the FortisAlberta decision. Specifically, in that proceeding the BCUC stated in respect of the recovery of costs for stranded assets that “the incumbent public utility should be compensated for its losses” and went on to suggest that “Reasonable compensation for the stranded assets could be the book value, which represents the portion of the costs that are unrecovered, or the market value.”

<sup>40</sup> Lou Cusano, David Wood, Evan Dickinson and Gino Bruni, “Prudence, Stranded Assets and the Regulation of Utilities: A Review of the Alberta Utility Regulatory Principles in a Post-Stores Block Era”, (2018) 56:2 Alta L Review 403 at 431. The article also quotes evidence provided by James M Coyne, a cost of capital expert, in a Generic Cost of Capital proceeding in front of the AUC as follows: “I know of no other regulatory body in Canada or the United States that has taken a similar approach to that taken by the [AUC] with respect to the Stores Block Decision, and in particular the extent to which the [AUC] has disallowed cost recovery for assets that have been deemed by the regulator as prudent and useful for utility service, were placed into service, but were later stranded before the end of their useful life.” (page 431). Full testimony found at 2018 Generic Cost of Capital Proceeding (2 August 2018), 22570-D01-2018 (Evidence, Rebuttal testimony of James M Coyne, Exhibit 22570-X775), at 55, online: AUC [https://www.auc.ab.ca/regulatory\\_documents/ProceedingDocuments/2018/22570-D01-2018.pdf](https://www.auc.ab.ca/regulatory_documents/ProceedingDocuments/2018/22570-D01-2018.pdf)).

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acknowledged that "... it would be appropriate to permit the new RS 1701 LED rates as proposed by BC Hydro".<sup>41</sup>

51. Although not relevant to the Application, Vernon suggested that the BCUC should hold an inquiry under the UCA to determine whether the cost of street lighting should be entirely borne by RS 1701 ratepayers in light of the broader social benefits. BC Hydro is not supportive of such an inquiry. The question of who should pay for street lighting is broader than the street lighting service provided by BC Hydro under RS 1701. Municipalities also provide their own street lighting, outside of the jurisdiction of the Commission, which provides the same societal benefits as RS 1701 street lighting. These societal benefits are broader than BC Hydro's ratepayer groups or municipal taxpayers and regulation of these costs is certainly broader than the question of utility regulation under the UCA. As a result, BC Hydro submits that the evidence submitted in this proceeding is sufficient to determine the question of cost allocation of the RS 1701 street lighting costs.

## **2.6 Reply to Surrey Final Argument**

52. In its Final Argument, Surrey supports BC Hydro's proposed amendments to the RS 1701 rates but has provided a number of comments for consideration. Surrey confirms that in its view it is appropriate for the Supplemental Charge and the cost of completing the Program to be recovered from RS 1701 ratepayers.<sup>42</sup>

### ***Light Repair***

53. Surrey has submitted that BC Hydro should consider options for repairing an LED light that fails after the warranty period as opposed to replacing it in its

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<sup>41</sup> Page 6 of Vernon's Final Argument.

<sup>42</sup> Page 9 of Surrey's Final Argument.

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entirety as Surrey submits this will result in increased cost savings.<sup>43</sup> As noted by BC Hydro in its response to BCUC IR 1.3.6, BC Hydro intends to rely on its 10-year warranty period initially to allow a failed LED to be replaced with a new LED. BC Hydro explained that it does not propose to repair failed LED street lights during this period due to the Provincial nature of BC Hydro's RS 1701 program (which is different in scale than a municipal program) which makes the stocking of the components necessary to repair the lights and training of crews to do that work not effective when compared against a replacement warranty. However, BC Hydro may consider repair options after its warranty period if it determines that these options are appropriate.<sup>44</sup>

### ***Budgeted vs. Actual Maintenance Savings***

54. Surrey also submits that BC Hydro should determine its maintenance savings using its actual vs. budgeted maintenance costs. BC Hydro has responded to this above in paragraph 11 of this Reply Argument.

### ***Light Reuse***

55. Surrey submits that BC Hydro should reuse any LED lights that have been removed.<sup>45</sup> In its response to BCUC IR 1.11.2, BC Hydro explained that there are logistical and potential reliability issues that may arise if LED lights are reused which is why BC Hydro is not proposing to reuse them.<sup>46</sup> As BC Hydro does not believe this impacts the rates being proposed in the Application but instead represents an operational decision, BC Hydro does not provide further submissions on this point.

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<sup>43</sup> Page 4 of Surrey's Final Argument.

<sup>44</sup> Please refer to BC Hydro's response to BCUC IR 1.3.6 (Exhibit B-4).

<sup>45</sup> Page 5 of Surrey's Final Argument.

<sup>46</sup> Please refer to BC Hydro's response to BCUC IR 1.11.2 (Exhibit B-4).

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***Allocation of Program Savings***

56. Surrey has submitted that BC Hydro has not appropriately shared the expected savings arising from the Program with RS 1701 customers.<sup>47</sup> BC Hydro has not sought to retain the benefit of any reasonably assumed savings. Rather, BC Hydro has sought to include as many reasonably assumed savings as possible in the design of RS 1701. These savings are offset by the capital costs of completing the Program. As a result, RS 1701 rates are not reduced as greatly as customers may have anticipated.

***Back-Billing Provision***

57. Surrey submits that the terms and conditions applied to both over-billing and under-billing should be the same.<sup>48</sup> BC Hydro has addressed comments on the proposed time limitations for back-billing made by other interveners in paragraphs 13, 39 and 40 of this Reply Argument.

***Special Condition 7 - Breakage***

58. Surrey had provided detailed comments regarding the allocation of risk arising when an RS 1701 street light is broken or damaged.<sup>49</sup> Surrey submits that BC Hydro should bear the cost of repair when a street light is damaged for reasons beyond the control of the RS 1701 customer. Further, Surrey suggests that BC Hydro ought to amend Special Condition 7 in RS 1701 to reflect the detailed information regarding how this Special Condition would be applied as provided in BC Hydro's responses to Surrey IRs 2.2.3 and 2.2.4 series.<sup>50</sup>

59. BC Hydro is not requesting any substantive changes to Special Condition 7 of RS 1701 in the Application. BC Hydro's policy around cost allocation for broken

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<sup>47</sup> Page 5 of Surrey's Final Argument.

<sup>48</sup> Page 6 of Surrey's Final Argument.

<sup>49</sup> Pages 6-8 of Surrey's Final Argument.

<sup>50</sup> Please refer to BC Hydro's response to Surrey IRs 2.2.3, 2.2.3.1, 2.2.3.2, 2.2.3.3, 2.2.3.3.1, 2.2.3.4, 2.2.3.5, 2.2.3.6, 2.2.3.6.1, 2.2.4.

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street lights remains as it has been prior to the Application. BC Hydro has provided responses on the record as to how it applies this provision in practice. BC Hydro's business practices support its application of the Electric Tariff provisions and are needed because it is not practical for the Electric Tariff to include sufficient detail to address all circumstances that may arise under each provision. As a result, BC Hydro submits that addressing the granular detail of how it would apply Special Condition 7 of RS 1701 through a business practice, and not in the wording of the Electric Tariff, remains appropriate.

60. Further, as noted in BC Hydro's response to Surrey IR 2.2.4, BC Hydro provides lighting service in locations identified by the RS 1701 customer. Each customer is most suited to determine where best to locate lights so as to ensure their safe operation.<sup>51</sup> Therefore, BC Hydro submits that its existing business practice for requiring customers to pay for the cost of repairing broken lights continues to be appropriate.

### ***Lighting Changes***

61. Surrey submits that BC Hydro should allow a grace period for customers to make changes to their lighting selection if appropriate.<sup>52</sup> BC Hydro has addressed a similar comment above in paragraph 30 of this Reply Argument. Surrey also submits that BC Hydro should provide light shields to prevent light trespass on to private property at no cost.<sup>53</sup> BC Hydro has submitted that it does not believe light shields will be required due to the design of the LED lights and BC Hydro has committed to work with customers to align the lights to avoid light trespass on to private property.<sup>54</sup> This is a Program implementation point and does not relate to the relief sought hereunder. However, BC Hydro

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<sup>51</sup> Please refer to BC Hydro's response to Surrey IR 2.2.4 (Exhibit B-7).

<sup>52</sup> Page 8 of Surrey's Final Argument.

<sup>53</sup> Page 8 of Surrey's Final Argument.

<sup>54</sup> Please refer to BC Hydro's responses to BCUC IRs 1.4.6 and 1.4.6.1 (Exhibit B-4), and BCUC IR 2.20.4 (Exhibit B-6).



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notes that it does not support amending the Program to include light shields on the new lights as a policy and notes that such a Program change would increase the costs of the Program.

## **2.7 Reply to Kamloops Final Argument**

62. In its Final Argument, Kamloops provided a number of comments for consideration by the BCUC regarding its views on what the savings from the Program should be, the need for additional lighting locations and the need for BC Hydro to participate in the consultation associated with these changes, a concern that BC Hydro has not adequately addressed the need for light shields, the desire for BC Hydro to use actual maintenance costs vs budgeted maintenance costs in its RS 1701 rate calculations and a question of why the rate reductions for the conversion to LED light under RS 1702 are greater than the rate reductions seen under RS 1701.
63. Some of these comments have already been addressed by BC Hydro above. Specifically, in paragraph 61 of this Reply Argument, BC Hydro has discussed why it does not believe light shields will be required. In paragraph 11 of this Reply Argument, BC Hydro has provided its rationale for using budgeted maintenance costs in RS 1701 rates.
64. With respect to the role of BC Hydro in any consultation that may be required as a result of new lights being requested by an RS 1701 customer, BC Hydro provides lighting to RS 1701 customers at the locations identified by those customers. Lighting design is the responsibility of RS 1701 customers, as would be the case for lighting provided by customers under RS 1702. As a result, any consultation required prior to the request being made to install a new street light location is rightly the responsibility of the customer. It is not reasonable to expect that BC Hydro would undertake, at the expense of ratepayers,

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consultation in each municipality across the Province that takes RS 1701 service.

65. In response to the question of why the rate reductions under RS 1701 are not the same as seen under RS 1702 when a municipality converts its lights to LED, BC Hydro confirms that this is because RS 1702 is an energy only rate. BC Hydro confirms that similar energy savings are seen under RS 1701; however, the RS 1701 rate includes other costs and savings beyond the energy cost which is why the rate reductions are not equivalent.

### **3 Conclusion**

66. As noted above, interveners generally supported the need for the Program and the proposed relief sought by BC Hydro in the Application and that the relief sought is fair, just and not unduly discriminatory.
67. In response to the BCUC's questions, with the exception of Vernon and BCOAPO on a narrow point, interveners who responded generally agreed with BC Hydro that the costs of the Program and the Supplemental Charge, if approved, should be recovered from RS 1701 ratepayers despite the fact that street lighting may have broader societal benefits.
68. BC Hydro has addressed each of the submissions made by interveners above and, with the exception of the amendment to Special Condition 4 of RS 1755 proposed by BCOAPO which BC Hydro submits is appropriate, BC Hydro respectfully submits that its relief sought in the Application should be approved as requested.

**ALL OF WHICH IS RESPECTFULLY SUBMITTED JUNE 3, 2021**

Per: *A. Ward*

Amanda Ward, Senior Regulatory and Compliance Counsel  
British Columbia Hydro and Power Authority