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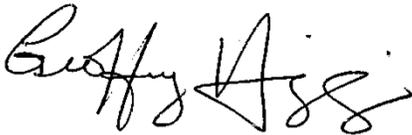
Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

**RE: Project No. 1598907
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Salmon River Diversion Ceasing of Operations Application
Reply Argument**

BC Hydro writes as required by Commission Order No. G-49-17 to provide its Reply Argument.

Yours sincerely,



(for) Fred James
Chief Regulatory Officer

st/ma

Enclosure

**Salmon River Diversion Ceasing of Operations
Application**

**Counsel's Reply Submission
on behalf of
British Columbia Hydro and Power Authority**

May 26, 2017

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1 Introduction

On May 12, 2017, BC Hydro submitted its Final Argument in respect of its March 7, 2017 Application (**Application**) to cease operation of the Salmon River Diversion (the **Project**).

On May 18, 2017 Mr. Landale filed his Final Argument. On May 19, 2017 the three remaining interveners Mr. Bishop; the Commercial Energy Consumers Association of British Columbia (**CEC**); and the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Council of Senior Citizen's Organizations of BC, Disability Alliance BC, Tenant Resource and Advisory Centre, and Together Against Poverty Society (known collectively in regulatory processes as **BCOAPO**), each filed submissions or Final Argument.

In this proceeding BC Hydro has requested an order to cease operation of the Salmon River Diversion and an order approving regulatory account treatment for Project costs. The Intervener Final Arguments support the Project and the order to cease operations, with the exception of Mr. Bishop's Final Argument which opposes the Project. The CEC and BCOAPO Final Arguments generally support regulatory account treatment of Project costs, while Mr. Landale's Final Argument opposes any regulatory account treatment.

BC Hydro has attempted to limit this Reply to address specific points raised in the Intervener Arguments, without repeating submissions made in its Final Argument. Though not normally appropriate for reply, BC Hydro makes an exception to include responses to some submissions which are more correctly queries for additional information rather than argument.

In its submissions, BC Hydro has indicated its intent to remove the Patterson Creek Flume and retain the diversion canal,¹ as noted by a number of Interveners.

¹ Exhibit B-1, page 26, and response to BCUC IRs 1.10.1 and 1.10.2.

BC Hydro also noted that as part of required permitting it has provided its preliminary design report to the Comptroller of Water Rights (**CWR**) with approval anticipated in the July 1, 2017 timeframe.² During review by the CWR and the Ministry of Forest Lands and Natural Resource Operations, questions regarding ongoing tenure requirements have been raised with respect to the canal.³ BC Hydro remains confident that its plan to leave the canal in place will be accepted.

This reply is structured to address each Intervener's Final Argument.

2 Reply to CEC's Final Argument

In its Final Argument, CEC recommends that the British Columbia Utilities Commission (**BCUC or Commission**) approve the Application for decommissioning as filed by BC Hydro.⁴ In support, the CEC submits that BC Hydro has provided reasonable evidence of significant deterioration of the Salmon River Diversion and has outlined a need to improve fish passage and fish screening.⁵ The CEC agrees with BC Hydro that an integrated rather than a piecemeal approach is preferable to addressing the needs at the Salmon River Diversion.⁶ The CEC recommends that the Commission consider the two alternatives provided by BC Hydro as being appropriate for review.⁷ In reaching its recommendation for approval of the Project, the CEC agrees with BC Hydro that given the marginal economic differences between alternatives, the Commission should give considerable weight to the non-economic factors.⁸ Acknowledging the support for the Application, BC Hydro takes the opportunity to reply to a few submissions made by the CEC.

² Exhibit B-3, response to BCUC IRs 1.20.1 and 1.20.2.

³ Exhibit B-3, response to BCUC IR 1.12.6.

⁴ CEC Final Argument, paragraph 104.

⁵ CEC Final Argument, paragraph 28.

⁶ CEC Final Argument, paragraphs 13 to 14.

⁷ CEC Final Argument, paragraph 44.

⁸ CEC Final Argument, paragraph 103.

At paragraphs 18, 29, 86, 94 and 102 the CEC recommends that the Commission give varying weights to different elements of the cost-effectiveness test that BC Hydro suggests ought to be applied to the Application. BC Hydro has taken a similar position in suggesting that non-economic factors should, in this instance, be given more weight than they otherwise would in light of the similar economics of the alternatives to the Project. However, BC Hydro does not think there is a great deal of value with the more granular approach advocated for by the CEC. Identifying and weighing discrete elements of the cost effectiveness test beyond the high-level economic/non-economic distinctions BC Hydro has drawn, risks giving those elements more significance than they can lawfully bear, particularly in the more usual project approval proceeding where economic considerations would properly dominate the cost-effectiveness assessment.

At paragraph 8 of the CEC Final Argument it is accepted that the Salmon River Diversion is not a “heritage asset” and thus is not subject to the section 14 *Clean Energy Act* prohibition against disposition. Nevertheless, at paragraph 10 the CEC seems to argue that the Commission should factor into its deliberations a purported legislative intent to maintain the Salmon River Diversion insofar as it contributes to the energy capability of the John Hart and Ladore generating stations. BC Hydro respectfully disagrees. If the fact that section 14 of the *Clean Energy Act* does not apply to the Project has any relevance to the Commission’s determinations then it should weigh in favour of approving the Application on the basis that the legislature chose not to invest the Salmon River Diversion with the protected status of a “heritage asset”. By comparison, BC Hydro submits that the section 41 application to cease operations of the Heber Diversion, also on the Campbell River System, proceeded on the basis that it was not a heritage asset and without suggestion of any intent to preserve generation by an association to heritage assets.

With respect to regulatory account treatment of Project costs, the CEC recommends applying such costs to the Dismantling Cost Regulatory Account (**DCRA**) should the

DCRA be approved under the current Fiscal 2017 - Fiscal 2019 Revenue Requirements Application proceeding, and in the event the DCRA is not approved, the CEC recommends applying the cost to the Non-Heritage Deferral Account, as the Salmon River Diversion is not itself a heritage asset. BC Hydro has no objection to this approach, as affirmed in its submissions.

3 Reply to BCOAPO Final Argument.

In its Final Argument, BCOAPO is generally supportive of the Application.⁹ The BCOAPO concurs with BC Hydro that action is required to address the condition of the Salmon River Diversion and to address commitments regarding fish passage.¹⁰ BCOAPO submits that BC Hydro's choice of alternatives for detailed review was reasonable.¹¹ BCOAPO agrees that where cost and rate impacts between alternatives are minor, environmental and social impacts should play a greater role.¹² The BCOAPO agrees that the Rehabilitation Alternative is likely marginal relative to the Decommissioning Alternative and that the latter alternative is clearly preferable from an environmental and social perspective.¹³ Again, acknowledging the support for the Application, BC Hydro replies to a few submissions made by the BCOAPO.

At page 8 of its submissions, the BCOAPO raises a concern that the relative economics of a future rebuild of the Salmon River Diversion may be understated when considering the Rehabilitation Alternative. BCOAPO acknowledges BC Hydro's submissions that rebuilding would entail a greater scope of work in the future than currently contemplated in the Application, resulting in a higher cost of energy. BCOAPO speculates that the economics of a future rebuild may be greater

⁹ BCOAPO Final Argument, page 1.

¹⁰ BCOAPO Final Argument, page 4.

¹¹ BCOAPO Final Argument, page 5.

¹² BCOAPO Final Argument, page 9.

¹³ BCOAPO Final Argument, page 9.

than “marginally economic” if the future reference price of energy is significantly higher than current reference price and today’s market prices.

BC Hydro’s evidence demonstrates that the Rehabilitation Alternative is marginally economic at the current reference price of energy and arguably uneconomic at prevailing market prices. Prolonged surplus conditions provide an appropriate sensitivity comparator. Projecting increased scope and costs 20 years into the future, coupled with potential energy savings based on a possible future energy cost, both discounted to present value, do not support a strong or confident basis to challenge the economic analysis provided in the Application. Further, the opportunity costs of forgone improvements to stakeholder and First Nations associated with perpetuating the Salmon River Diversion in the Campbell River System are real and will be felt in the near term.¹⁴

On page 7 of its submissions the BCOAPO argues that the Commission should direct BC Hydro with respect to the economic analyses that BC Hydro would employ in considering future Demand Side Management or generation resource investments where a project/initiative will not impact otherwise-planned acquisitions. With respect, such acquisitions are, in the context of this proceeding, hypothetical. BC Hydro submits that its future applications be judged on their own merits and in the circumstances applicable at the time, and that the Commission refrain from pre-judging such applications.

With respect to regulatory account treatment, the BCOAPO generally takes the same position as the CEC; that is dismantling costs incurred related to the Project would be eligible to be recorded in the DCRA, if the DCRA is approved as applied for in the Fiscal 2017 - Fiscal 2019 Revenue Requirements Application. In the event the DCRA is not approved, the appropriate regulatory account would be the Non-Heritage Deferral Account.

¹⁴ Exhibit B-3, response to BCUC IR 1.14.1.

BCOAPO differs in the financial treatment of costs in that at pages 9 to 11 of its submissions it advances a position that the planned costs for continuing operation and depreciation expenses should be offset against the dismantling costs to be recorded to the regulatory account. BCOAPO rationalizes that dismantling of the Salmon River Diversion is an unplanned activity under the Fiscal 2017 - Fiscal 2019 Revenue Requirements Application proceeding, hence all related costs, including the planned costs included in Fiscal 2017 - Fiscal 2019 Revenue Requirements Application, should be considered in the context of costs to be applied to a regulatory account. While BCOAPO acknowledges that the expected unplanned loss of approximately \$658,000¹⁵ upon retirement of the Salmon River Diversion will be to the account of the shareholder, BCOAPO considers that the estimated variance of approximately \$98,000¹⁶ relating to operating costs and depreciation expense should not be to the account of the shareholder but rather should be treated as an offset against the Project dismantling costs to be deferred to the regulatory account, if approved.

BC Hydro disagrees that, to the extent there is a variance in operating and depreciation expenses, it should be an offset to the actual costs of dismantling to be recorded to a regulatory account. Regulatory account treatment of dismantling costs to date under the Future Removal and Site Restoration Regulatory Account has not included variances related to expenses such as operating costs or depreciation, rather only actual dismantling costs incurred were charged to this regulatory account. The same in principal is envisioned for the proposed DCRA, except that this regulatory account will capture variances between plan and actual dismantling costs for a given fiscal year. Operating cost variances and variances related to depreciation on existing assets, whether higher or lower than plan, are not eligible for deferral to a regulatory account under existing orders and are to the account of

¹⁵ Exhibit B-3, response to BCUC IR 1.17.2.

¹⁶ Exhibit B-3, response to BCUC IR 1.17.2. (Also please note typographical error in BCOAPO submission referring to this amount as \$98 million.)

the shareholder. Similarly, the expected unplanned loss on retirement of the Salmon River Diversion assets is not eligible for deferral to a regulatory account, and will be to the account of the shareholder. Variances related to costs that are not eligible for deferral to a regulatory account (e.g., operating costs, depreciation on existing assets) are based on total actual expenditures for the fiscal year relative to the total planned expenditures for the fiscal year, and may arise due to a number of reasons in the normal course of business. In total, these variances may be higher or lower than plan in a given fiscal year, and are to the account of the shareholder. BC Hydro believes this approach is reasonable and consistent, in that both the loss on retirement as well as the net impact of the variance related to operating and depreciation expense is to the account of the shareholder.

4 Reply to Mr. Landale Final Argument

In his Final Argument, Mr. Landale supports the application to cease operations at the Salmon River Diversion.¹⁷ Mr. Landale does not support any deferral of Project costs to any account.¹⁸ BC Hydro replies to a few points raised by Mr. Landale's submission.

At paragraph 3.1.4, Mr. Landale encourages the Commission to note that small projects do not receive adequate long term ongoing maintenance, good repair or upgrading. The evidence in this proceeding indicates that the 60 year old Salmon River Diversion has been regularly and periodically maintained and the subject of significant reviews for identifying necessary repairs and upgrade.¹⁹ The reality of aging structures is that at some point in time major rehabilitation or replacement becomes necessary, as does consideration of continuing operation in light of such efforts; that time has come for the Salmon River Diversion.

¹⁷ Landale Final Argument, paragraph 6.3.

¹⁸ Landale Final Argument, paragraph 6.4.

¹⁹ Refer for example, to Exhibit B-3, response to BCUC IR 1.2.2, Exhibit B-4, response to CEC IR 1.15.3.3, and Exhibit B-1, Appendix E, page 14 of 312 (listed background reports).

In reference to Mr. Landale's comment at paragraph 4.1.3 regarding BC Hydro's response to Landale IR 1.2.2., BC Hydro offers the following information. The estimated forecast interest costs to the end of the Fiscal 2017 – Fiscal 2019 Revenue Requirements Application test period (end of fiscal 2019) related to the Salmon River Diversion dismantling costs, assuming \$15.0 million of dismantling costs are deferred to the DCRA in fiscal 2018, would be approximately \$0.9 million. This assumes that costs will be transferred to the DCRA in the middle of the fiscal year. The total estimated costs of approximately \$15.9 million (\$15.0 million dismantling costs plus approximately \$0.9 million of interest costs) would be recovered over the following test period. The duration of the following test period is not yet known.²⁰

5 Reply to Mr. Bishop Final Argument

In his Final Argument Mr. Bishop is the lone voice opposing approval of the Application.²¹

BC Hydro makes an over-arching submission in regard to the entirety of Mr. Bishop's final argument: Mr. Bishop's submissions fail to grapple with the central thrust of BC Hydro's argument, namely that where the economics of the reasonable alternatives are close, that non-economic factors can and should justify the Project. Instead, and by way of example, Mr. Bishop sets up straw-man arguments not made by BC Hydro and not advanced in support of the Project (#1, comparing the incremental revenue associated with the Salmon River Diversion to the recreational sport-fishing benefits); argues irrelevant issues not supported by the evidence (#2 an alleged failure to maintain the asset); and argues that the Commission's process was insufficient to get the necessary information (#3). With respect, the entirety of Mr. Bishop's final argument is a red-herring. Mr. Bishop advocates for a status quo alternative of minimal piecemeal maintenance which BC Hydro dismissed as not

²⁰ Exhibit B-4, response to Landale IR 1.2.1.

²¹ Bishop Final Argument, page 3.

meeting the needs at the Salmon River Diversion.²² BC Hydro replies to Mr. Bishop's enumerated points as follows:

1. As Mr. Bishop signals in his submission, the comparison of energy value to an economic appraisal of angling does not reflect a fulsome economic evaluation of alternatives as provided by BC Hydro in the proceeding.
2. Mr. Bishop's assertion that the Salmon River Diversion has been allowed to deteriorate belies the age of the 60-year old facilities and the efforts BC Hydro has made to maintain the facilities as noted earlier in this submission.

In response to Mr. Bishop's query regarding whether the Diversion was included in BC Hydro's rate base for a period when BC Hydro was assessing conditions and needs, BC Hydro affirms that it was. This is consistent with its normal business practices, where BC Hydro does not remove assets from its rate base where there has not been a final determination on removing or not using the assets. An exception may arise where assets are significantly impaired or need full replacement to be made useful.

3. No submission and hence no reply required.
4. Mr. Bishop acknowledges BC Hydro's confirmation regarding no acquisition of energy to replace the energy lost from the Salmon River Diversion and encourages the Commission to seek further assurances. BC Hydro considers its response to Information Requests²³ and submission in its Final Argument as sufficient, and notes in further reply that energy supply contracts are subject to Commission approval pursuant to the *Utilities Commission Act*, section 71.
5. Mr. Bishop puts forward an alternative to maintain the Salmon River Diversion and references his view on the cost of energy as well as project cost based on the AE Report. BC Hydro maintains that its identification of alternatives and economic evaluations are sound and complete. BC Hydro has clearly identified

²² Exhibit B-1, page 24.

²³ Exhibit B-4, response to CEC IR 1.1.1.2.

the cost of energy used in its economic analysis and has provided detailed cost estimates.²⁴ The limitations of cost estimates as provided in the AE Report have been addressed in responses to Information Requests²⁵ and discussed in BC Hydro's Final Argument.

6. Mr. Bishop suggests that fish passage improvements could be achieved through trap and release programs, and improvements to fish screen performance can be achieved through contracting out cleaning and operation. Mr. Bishop offers no evidentiary support for his proposals. BC Hydro notes in its Application that fulsome discussions of fish passage and fish screen improvements have occurred over a numbers of years and included government agencies, community stakeholders and First Nations.²⁶ The culmination of ideas reviewed and considered is appropriately reflected in the scope and evaluation of the Rehabilitation Alternative. With respect to contracting out some services to maintain the fish screen, BC Hydro already engages third party contractors to maintain the fish screen as needed.
7. Mr. Bishop suggests BC Hydro consider partnerships with third parties to transfer ownership or operations of the Salmon River Diversion to achieve cost savings. In BC Hydro's view there is no support for a proposition that addressing the underlying needs at the Salmon River Diversion and the fundamental economics of refurbishing or replacing it would differ for other parties. The scale of an operation, the required scope of works and the potential benefits are marginal investments as demonstrated by the evidence in the proceeding.
8. Mr. Bishop appears to suggest that BC Hydro did not provide evidence to support the environmental impacts of the Salmon River Diversion. BC Hydro notes that the Application and a number of responses to Information Requests

²⁴ Exhibit B-1, pages 31 to 34 and Exhibit B-3-2.

²⁵ Exhibit B-3, response to BCUC IRs 1.7.1 and 1.7.1.1.

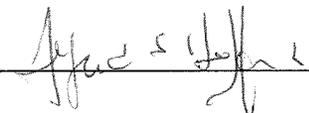
²⁶ Exhibit B-1, pages 18 to 21. Refer also to Exhibit B-3, response to BCUC IRs 1.4.4, 1.4.5 and 1.4.5.2.

identify environmental considerations and impacts.²⁷ In support, BC Hydro also provided a report entitled *Salmon River Upstream Fish Passage, Step 3 - Environmental Feasibility Assessment* as Attachment 1 to its response to BCUC IR 1.15.1.

Mr. Bishop also notes that BC Hydro does not discuss fish enhancement at other habitats such as the White River basin, which is many kilometers downstream of the Salmon River Diversion. BC Hydro's efforts to enhance fish and wildlife at a number of locations in the Province under its Fish and Wildlife Compensation Program, or other programs and projects, are not within scope of the proceeding and do not impact consideration of the Application.

9. Mr. Bishop suggests that the loss of energy from the Salmon River Diversion would marginally impact the replacement of undersea cable supplying Vancouver Island, which may be reaching end-of-life. While the issue is not in evidence in this proceeding, BC Hydro notes there are currently no major undersea cable reinforcements identified in BC Hydro's 10 year capital plan. Further, as BC Hydro states in its Application, the Salmon River Diversion provides energy but no capacity,²⁸ hence it has no impact to the timing of future system reinforcement because transmission reinforcement is based on dependable capacity, not energy.

ALL OF WHICH IS RESPECTFULLY SUBMITTED MAY 26, 2017

Per:  _____

Alfred Hefford, Solicitor & Counsel, British Columbia Hydro and Power Authority

²⁷ Refer for example to Exhibit B-1, pages 16 to 20 and 34 to 35, and Exhibit B-3, response to BCUC IRs 1.10.7, 1.13.1, 1.15.1, 1.15.2 and 1.15.3.

²⁸ Exhibit B-1, page 22.