

C9-17

## **British Columbia Hydro and Power Authority**

# **Application for Electricity Purchase Agreement Renewals for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro**

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## **Reasons for Decision**

November 8, 2019

Before:

D. M. Morton, Panel Chair  
B. A. Magnan, Commissioner  
R. I. Mason, Commissioner

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## **1.0 Background and Context**

### **1.1 Approvals sought**

On May 31, 2018, pursuant to section 71 of the *Utilities Commission Act* (UCA), the British Columbia Hydro and Power Authority (BC Hydro) filed with the British Columbia Utilities Commission (BCUC) the following Electricity Purchase Agreements (EPA) (collectively, the Application):

- An EPA effective March 1, 2018 between BC Hydro and MPT Hydro LP for the Sechelt Creek run-of-river hydroelectric project (Sechelt Creek EPA);
- An EPA effective April 1, 2018 between BC Hydro and Brown Miller Power Limited Partnership for the Brown Lake Storage hydroelectric project (Brown Lake EPA); and
- An EPA effective April 1, 2018 between BC Hydro and Cayoose Creek Power Limited Partnership for the Walden North run-of-river hydroelectric project (Walden North EPA);

BC Hydro also requests that the BCUC keep the unredacted version of the Application confidential as it contains information which is commercially sensitive to BC Hydro and the counterparties, and if publicly disclosed may compromise BC Hydro's negotiating position with respect to other EPAs.

### **1.2 Background and Relevant Previous Decisions**

The original EPAs with each Independent Power Producer (IPP) were signed under the 1989 Request for Proposals, with each contract term extending for at least 20 years. Each of the original EPAs also contained evergreen

- Kitsumkalum First Nation; and
- Metlakatla First Nation.

BC Hydro views that the Brown Lake EPA renewal does not trigger a duty to consult because:

- there are no new or incremental impacts to Aboriginal rights and title;
- there are no anticipated changes to the physical footprint of the IPP or energy output; or
- there are no environmental impacts that resulted from the original construction of the facility that have the potential to worsen with continued operation.

While network upgrades are expected to be undertaken by BC Hydro in relation to the EPA renewal, this will not change the operations or physical footprint of the BC Hydro transmission system.[22]

#### *Walden North IPP*

The Walden North IPP is within the consultative boundaries of the CCIB and the T'tit'q'et Administration (TA). The CCIB and TA are two of the eleven communities constituting the St'át'imc Nation.

BC Hydro is of the view that the Walden North EPA renewal will not result in any new or incremental impacts on the St'át'imc Nation's Aboriginal rights and title, and therefore it does not trigger the duty to consult because of the following:

- No changes to the physical footprint of the IPP are anticipated;
- The proposed plant refurbishment and culvert upgrade do not involve changes to existing water license or other Crown authorizations;
- There are no environmental impacts that resulted from the original construction of the Walden North facility that have the potential to worsen with its continued operation; and
- The Walden North facility will not be decommissioned or decommissioned earlier if the EPA is not renewed.

BC Hydro also states any past, present and future claims relating to potential impacts from the operation of the diversion tunnel have been included in settlement agreements signed with the St'át'imc Nation in 2011, as they relate to BC Hydro's Bridge River facilities and their continued maintenance and operations.[23]

#### *Panel Determination*

**The Panel finds that with respect to the EPA renewals with each of the Sechelt Creek, Brown Lake and Walden North IPPs, BC Hydro's duty to consult First Nations is not triggered by any of the EPA renewals because there are no anticipated adverse impacts on Aboriginal rights or title.**

### **3.2 Resource Planning and Need for Energy**

At the time of negotiating and executing the EPA renewals, BC Hydro anticipated it would need additional energy in fiscal 2022. With regard to the cost of the energy arising from the EPA renewals, BC Hydro submits that individual IPPs are not evaluated against each other to maximize cost-effectiveness of the renewable portfolio, nor do such evaluations consider targets or threshold amounts for energy and capacity. Instead, the approach to EPA renewals is informed by Recommended Action 4 from the 2013 Integrated Resource Plan (IRP).[24],[25],[26]

On February 14, 2019, the BC Government released its Comprehensive Review of BC Hydro Phase 1 Final Report (Phase I Report), of which one goal was to establish "a new five-year rates forecast that reflects cost and revenue strategies to keep rates affordable." [27] The Phase I Report also states the following:

- BC Hydro is currently forecast to be in energy surplus into the 2030s; [28]
- BC Hydro continues to forecast that it will have an energy surplus, even with changes in the future of energy procurement resulting from both phases of the BC Government's Comprehensive Review of BC

Hydro;[29] and

- A new IRP is expected to be submitted to the BCUC by February 2021;[30]

The Phase I Report is also set to inform Phase II of the Comprehensive Review, which will focus on transformational aspects to changing energy markets.[31]

#### *Position of the Parties*

BC Hydro states that, until recently, its approach to EPA renewals was informed by Recommended Action 4 from the 2013 IRP, which discusses the key principle of reducing near term costs while maintaining cost-effective options for long-term need.[32] BC Hydro expects that its EPA renewal approach will be revisited as part of the process for the 2021 IRP.[33]

BCOAPO states that “...the timing of the need for and the cost of these resources is uncertain.”[34] However, BCOAPO also notes that with BC Hydro’s load resource balance (LRB) being in surplus, objective 2(n) of BC’s energy objective “to be a net exporter of electricity from clean or renewable resources” is relevant as the renewals will lead to increased net exports by BC Hydro from clean and renewal resources in the short term.[35]

Overall, CEC submits that it is “important to avoid acquiring energy when it is not required at prices above that for which it may be sold in the market until such time as it may be used to serve domestic customers in BC.”[36] CEC also submits that the 2013 IRP is outdated and that it would be preferable for BC Hydro to avoid finalizing the acquisition of IPP energy at least until the LRB is updated and preferably until the IRP is completed.[37],[38] With respect to the term of the contracts, EPA submits that EPA contracts for maximum 5-year terms would better enhance flexibility and allow a period of time for the government to assess its key objectives with regard to IPP renewals and the BCUC to appropriately consider and assess a new IRP.[39]

#### *Panel Determination*

The Phase I Report forecasts that BC Hydro’s energy surplus will continue into the 2030s, at which time new resources would be required to meet a domestic energy shortfall. The Panel views that the information provided by Phase II of the Comprehensive Review and the 2021 IRP will be valuable, as will the IRP approval process planned to begin in 2021.

**In the absence of an updated IRP, the Panel finds insufficient evidence that BC Hydro has a need for the energy from these EPAs over the term of the contracts.** If the energy acquired from the EPA renewals are in excess to what BC Hydro requires to serve domestic load, it is expected that BC Hydro will sell the surplus energy on the open market as part of its energy management. Given the acquisition cost and current market prices and forecasts, there is a risk that this would result in harm to BC Hydro’s ratepayers. This is further addressed under Section 3.4 below.

### **3.3 Qualitative Benefits**

#### *Sechelt Creek EPA*

The equity ownership and profit-sharing arrangement signed with the Sechelt Creek IPP also provides the shíshálh Nation collaborative decision-making and governance. In a letter of comment, the shíshálh Nation view that the Sechelt Creek EPA renewal meets objective (l) in section 2 of the *Clean Energy Act* (CEA)[40] and encourages “ongoing reconciliation, co-management of resources in shíshálh swiya (water, fish, and renewable energy), shíshálh economic and commercial development (both direct and indirect), and meaningful self-government for shíshálh.”[41]

The Sechelt Creek project’s spawning channel provides additional environmental benefits through salmon repopulation, and the facility as a whole provides a boost to the local economy, through both eco-tourism and local employment (including employment to members of the shíshálh Nation),[42] as well as the re-opening of commercial fisheries in recent years.[43],[44]

#### *Brown Lake EPA*

The Brown Lake project is one of three resources that provides local reliability to the Prince Rupert area and

### 3.4 Cost Effectiveness

BC Hydro evaluates the cost effectiveness of the EPA renewals by comparing the EPA price against the market price during periods of surplus, and against the Long-Run Marginal Cost (LRMC) during periods of deficit,[60] as set out in Table 1 below.

BC Hydro states that the LRMC is used as a benchmark to determine the cost-effectiveness of different resources. For EPA renewals, BC Hydro expects to acquire additional resources needed from fiscal 2022 to fiscal 2033 at prices below the LRMC of \$89/MWh.[61]

**Table I – Marginal Resources and Related Costs**[62]

| Marginal Resources   | Period of Applicability    | LRMC (Fiscal 2017\$) |
|----------------------|----------------------------|----------------------|
| DSM and EPA Renewals | Fiscal 2022 to Fiscal 2033 | \$89/MWh             |
| Green Field IPPs     | Fiscal 2034 and beyond     | \$104/MWh            |

During the proceeding, BC Hydro stated that LRMC values, as used in the Application, were estimated in 2015 and are now considered out of date. Instead, a market price is used as a conservative interim assumption for evaluating energy during surplus and deficit periods in consideration of potential policy changes that may affect BC Hydro arising from ongoing government review and other energy related policies.[63] This interim market price approach will continue to be used until the next IRP, when BC Hydro plans to update its LRMCs.[64]

The potential rate impact of each EPA renewal, using BC Hydro’s model and the interim market approach, and compared against the BCUC Staff Model[65], is also provided below:

**Table 2 – Rate Impact**[66]

| EPA Renewal       | Rate Impact using BCUC Staff Model <sup>4</sup> | Rate Impact using BC Hydro Model and Interim Market Approach <sup>5</sup> |
|-------------------|---|---|
| Sechelt Creek EPA | -0.020% to 0.045%                               | -0.001% to 0.049%   |
| Brown Lake EPA    | -0.010% to 0.029%                               | 0.000% to 0.032%  |
| Walden North EPA  | 0.001% to 0.038%                                | -0.015% to 0.022%   |

#### *Position of the Parties*

BC Hydro states that “any one distinct set of assumptions should not be relied upon when making public interest determinations; rather the entirety of evidence and criteria set forth in section 71(2.21) of the UCA should be considered.”[67]

Overall, BCOAPO notes a lack of clarity on the cost-effectiveness of the EPAs due to “...the uncertainty regarding BC Hydro’s LRB, future market prices and, in particular, the appropriate LRMC value for the cost of new greenfield (wind-based) IPPs.”[68] BCOAPO acknowledges that while the detailed results are confidential,[69] BCOAPO considers the assessment of the cost-effectiveness of EPA renewals to be an important consideration for the BCUC in making its determinations.[70]

C submits that the interim market price assumption represents the appropriate value for BC Hydro’s opportunity cost, and that “all the projects have the potential to cause a rate increase under the Interim Market Approach.” CE also views that “substantial changes may arise in the circumstances over an extended term (i.e. 40 years)...and tha

less expensive energy resources may be available in the future.”[71]

### *Panel Determination*

**The Panel finds insufficient evidence that any of the three EPAs are cost-effective over the 40 year contract period.**

**The Panel finds that the interim market approach is the more appropriate method to value the EPA renewals than BC Hydro’s opportunity cost.** The interim market cost approach provides a more recent comparison of opportunity costs relative to the LRMC, which was estimated in 2015 and which BC Hydro considers “out of date.” The Panel also notes that the interim market approach better aligns with the most recent Phase I Government Review of BC Hydro, and that BC Hydro will continue to use the interim market approach until LRMCs are updated in the next IRP.

Evaluating cost-effectiveness starts by using a set of assumptions to calculate a base value. As the interim market approach has been determined as the appropriate method to value each EPA renewal, to state that the EPA renewals are cost-effective would contradict and be inconsistent with this finding.

Further, the Panel views that ratepayers are exposed to price and market risks over the terms of these contracts. This risk is reflected in the range of rate impacts calculated using each of the BCUC Staff Model and the BC Hydro interim market approach.

In the Panel’s view, the range of possible ratepayer impacts calculated for each EPA renewal exposes ratepayers to a significant level of risk due to uncertainty in market prices and changes in the energy industry in general, over the 40-year time horizon. However, if the EPA renewals were restructured to have shorter terms, as suggested by CEC, the level of market and price risks would be reduced, and the other benefits provided by each project would outweigh the lack of cost-effectiveness of each EPA renewal. Further, shorter terms would provide some flexibility in reacting to market changes and better align with the upcoming 2021 IRP.

## 3 Panel Determination

The Panel has considered the cost-effectiveness of the EPA renewals, as well as the benefits that each of the EPA renewals provides to their respective local and Indigenous communities, including potential impacts on local employment, environmental impacts and salmon migration.

The Panel acknowledges the benefits these projects provide to their local and Indigenous communities and these benefits are consistent with energy objectives (k) and (l). However, the Panel has also considered energy objective (n) which requires the protection of the interests of persons who receive or may receive service in British Columbia. At the present time, the energy acquired would be surplus to BC Hydro’s needs and the contract price of all three EPA renewals exceeds the cost that BC Hydro would be able to sell the energy for on the open market. As a result, this could leave BC Hydro’s ratepayers economically harmed over the 40-year term of the EPA renewals.

The Panel views the 40-year term of each EPA renewal to be problematic considering the level of market and price risk exposures placed on ratepayers. In the absence of an updated and approved IRP, we are unable to determine that these contracts are in the public interest over the 40-year term. These EPA renewals would be best adjudicated within the context of an updated IRP.

In light of the above findings, the Panel declines to make any determination with regards to whether EPA renewals with the Sechelt Creek IPP, Brown Lake IPP and Walden North IPP are in the public interest and accepted for filing under section 71, at this time. However, the Panel is prepared to consider accepting the subject EPA renewals for periods shorter than 40 years to allow for the conclusion of BC Hydro’s next IRP proceeding, at which time there may be further clarity on BC Hydro’s long term energy needs and supply alternatives to meet demand.

While accepting these EPA renewals as being in the public interest for even a shorter period than 40 years will likely result in some economic harm to ratepayers, the Panel considers this economic harm to be minimal. Further as noted above, a renewal is consistent with energy objectives (k) and (l). Therefore, the Panel considers it reasonable

to accept these EPA renewals until the conclusion of the IRP proceeding as they could potentially provide BC Hydro with options for long term sources of energy should BC Hydro be able to demonstrate the need within the upcoming IRP.

**Accordingly, the Panel adjourns this proceeding for 60 days to allow BC Hydro and the counterparties, should they so choose, to restructure and resubmit the EPA renewals with a term not to exceed three years from the date of this order.**

[1] Exhibit B-1, pp. 9–10, 17, 25–26.

[2] Exhibit B-1, pp. 10, 17, 27.

[3] Clean Energy Act, SBC 2010, Chapter 22, section 2, retrieved from [http://www.bclaws.ca/civix/document/id/complete/statreg/10022\\_01#section2](http://www.bclaws.ca/civix/document/id/complete/statreg/10022_01#section2)

[4] Exhibit B-1, p. 9.

[5] Exhibit B-5, BCUC IR 1.1.1

[6] Exhibit B-5, BCUC IR 1.1.2.2

[7] Exhibit B-12, BCUC IR 2.1.2

[8] Exhibit B-5, BCUC IR 1.3.3.1

[9] Exhibit B-5, BCUC IR 1.35.1

[10] Exhibit B-1, pp. 15–16.

[11] Exhibit B-1, pp. 16–17.

[12] Exhibit B-5, BCUC IR 1.32.1

[13] Exhibit B-5, BCUC IR 1.37.1

[14] Exhibit B-5, BCUC IR 1.4.1

[15] Exhibit B-5, BCUC IR 1.38.3

[16] Exhibit B-1, p. 23.

[17] Exhibit B-5, BCUC IR 1.2.1

[18] Exhibit B-1, pp. 23–24.

[19] Exhibit B-1, pp. 23–26.

[20] Exhibit B-17, BCUC IR 3.2.5

[21] Exhibit B-1, pp. 15–16.

[22] Exhibit B-1, pp. 21–22.

[23] Exhibit B-1, pp. 34–35.

[24] Exhibit B-5, BCUC IR 1.11.1

[25] Exhibit B-5, BCUC IR 1.42.1.1

[26] Exhibit B-14, CEC IR 2.30.2

[27] Phase I Report, p. 1, retrieved from [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/electricity/bc-hydro-review/final\\_report\\_desktop\\_bc\\_hydro\\_review\\_v04\\_feb12\\_237pm-r2.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/electricity/bc-hydro-review/final_report_desktop_bc_hydro_review_v04_feb12_237pm-r2.pdf)

[28] Phase I Report, p. 3.

[29] Phase I Report, p. 33.

[30] Phase I Report, p. 2.

[31] Phase I Report, p. 35.

[32] Exhibit B-5, BCUC IR 1.42.1.1

[33] Exhibit B-12, BCUC IR 2.15.1

[34] BCOAPO Final Argument, p. 20.

[35] BCOAPO Final Argument, p. 7.

[36] CEC Redacted Final Argument, p. 3.

[37] CEC Redacted Final Argument, p. 7.

[38] CEC Redacted Final Argument, p. 11.

[39] CEC Redacted Final Argument, p. 2.

[40] Objective (l) in section 2 of the CEA – BC's energy objectives states "to foster the development of first nation and rural communities through the use and development of clean or renewable resources."

[41] Exhibit E-1, p. 4.

[42] Exhibit B-5, BCUC IR 1.2.2.2

[43] Exhibit B-12, BCUC IR 2.1.2

[44] Exhibit E-1, pp. 2–3.

[45] Exhibit B-5, BCUC IR 1.32.1

[46] BC Hydro Final Argument, p. 4.

[47] Exhibit B-5, BCUC IR 1.37.1

[48] BC Hydro Final Argument, p. 13.

[49] Exhibit B-5, BCUC IR 1.2.1.2

[50] Exhibit B-5, BCUC 1.2.1