May 31, 2019

VIA E-FILING

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

BCPIAC
Public Interest Advocacy Centre

Reply to: Leigha Worth
lworth@bcpiac.com
Ph: 604-687-3034
Our File: 7500.430

Dear Mr. Wruck,

Re: British Columbia Hydro and Power Authority Electricity Purchase Agreement Renewals for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro ~ Project No. 1598969
BCOAPO Information Requests No. 2

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

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

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

Sincerely,
BC PUBLIC INTEREST ADVOCACY CENTRE

Original on file signed by:

Leigha Worth
Executive Director | General Counsel

Encl.

REQUESTOR NAME:	**BCOAPO**
INFORMATION REQUEST ROUND NO:	**#2**
TO:	**BRITISH COLUMBIA HYDRO & POWER AUTHORITY**
DATE:	**MAY 31, 2019**
PROJECT NO:	**1598969**
APPLICATION NAME:	**APPLICATION FOR ELECTRICITY PURCHASE AGREEMENT RENEWALS FOR SECHELT CREEK HYDRO, BROWN LAKE HYDRO AND WALDEN NORTH HYDRO**

1.0 Reference: Exhibit B-7, CEC 1.2.1
Exhibit B-1, page 2, lines 13-14

1.1 Are the "more robust terms and conditions" referred to on page 2 the "more favourable terms" discussed in the response to CEC 1.2.1 and documented in Appendix F?

1.2 If not, please outline what the new terms and conditions are that are considered to be "more robust".

2.0 Reference: Exhibit B-5, BCUC 1.8.1; BCUC 1.21.1 and BCUC 1.29.1
Exhibit B-7, CEC 1.4.3

2.1 Figure 1 in CEC 1.4.3 provides the forecast Mid-C Price based on ABB's 2017 Fall Reference Forecast. Please provide a revised version of Figure 1 that also includes ABB's Spring 2016 Mid-C Price forecast as used in the Application.

2.2 Are the levelized energy prices for each of the Renewed EPA's (per Tables 3, 5 and 7) greater or less than the "Market Price" for the EPA's as set out in Table 1 of BCUC 1.8.1?

2.3 Are the levelized energy prices for each of the Renewed EPA's (per Tables 3, 5, and 7) greater or less than the revised BC Hydro Opportunity Cost set out in Table 1 of BCUC 1.8.1?

2.4 With respect to the response to BCUC 1.8.1, please provide a revised version of Table 1 where: i) the "Market Values" and ii) the "Revised BC Hydro Opportunity Costs" (for the surplus period) are based on ABB's 2017 Fall Reference Forecast.

2.5 Are the levelized energy prices for each of the Renewed EPA's (per Tables 3, 5 and 7) greater or less than the "Market Price" for the EPA's as set out in the revised version of Table 1 per part (4) above?

2.6 Are the levelized energy prices for each of the Renewed EPA's (per Tables 3, 5 and 7) greater or less than the "BC Hydro Opportunity Cost"

for the EPA's as set out in the revised version of Table 1 per part (4) above?

3.0 Reference: Exhibit B-5, BCUC 1.8.1, 1.8.2.1 and 1.8.4
Exhibit B-1, page 8 (Table 1)

Preamble: The response to BCUC 1.8.4 states: "BC Hydro recently adopted the use of market price as a conservative interim assumption for evaluating energy during surplus and deficit periods". (emphasis added)

3.1 Precisely when did BC Hydro adopt the use of market price as a conservative interim assumption for evaluating energy during surplus and deficit periods?

3.2 What is meant by "interim assumption"?

3.3 Based on this approach, would the market price be used to evaluate any future EPA renewals for the entire term of the renewal? If not, please provide a revised version of Table 1 (Exhibit B-1) that indicates when "market prices" would be used and what other values would also be used.

4.0 Reference: Exhibit B-5, BCUC 1.8.3.2, 1.8.4 and 1.11.2.2.1
Exhibit B-1, Appendix B, Tables 3-6 and 3-8
Exhibit B-1, pages 8 (Table 1)

Preamble: The response to BCUC 1.8.3.2 states: "BC Hydro's current DSM Plan does not acquire all DSM up to $89/MWh".

4.1 Please confirm that the reference to "BC Hydro's current DSM Plan" is referring to the DSM Plan is set out in the F20-F21 RRA Application.

4.2 What DSM Plan was the basis for the DSM savings included in Tables 3-6 and 3-8 of Appendix B?

4.3 With respect to Table 3-8, what is the average levelized Total Resource cost (TRC) and Utility Cost for DSM measures forecast to be implemented over the F2022 to F2033 period?

4.4 With respect to Table 3-8, what is the DSM initiative forecast to be implemented over the F2022-F2033 period that has the highest levelized TRC and what is the associated levelized value (in 2017$)?

4.5 With respect to Table 3-8, which DSM initiative forecast to be implemented over the F2022-F2033 period that has the highest levelized Utility Cost and what is its associated levelized value (in 2017$)?

5.0 Reference: Exhibit B-5, BCUC 1.8.3.2, 1.8.4 and 1.11.2.2.1
Exhibit B-1, Appendix B, Tables 3-6 and 3-8
Exhibit B-1, pages 8 (Table 1)

5.1 Based on the utility's information found in BCUC 1.11.2.2.1's Tables 1 and 3, has the period during which DSM and EPA Renewals are the marginal resource now changed to F2027 to F2031?

5.1.1 If not, based on BCUC 1.11.2.2.1 what is the period for which DSM and EPA Renewals are the marginal resource and how was it determined?

5.2 Please provide an updated version of Table 1 (Exhibit B-1) based on the LRB presented in BCUC 1.11.2.2.1.

5.3 With respect to Table 3 in BCUC 1.11.2.2.1, what is the average levelized Total Resource Cost (TRC) and Utility Cost for DSM measures forecast to be implemented over the F2027 to F2031 period (or, if different, the period identified in the previous response)?

5.4 With respect to Table 3 in BCUC 1.11.2.2.1, what is the DSM initiative forecast to be implemented over the F2027-F2031 period (or, if different, the period identified in the previous response) with the highest levelized TRC and what is the associated levelized value (in 2017$)?

5.5 With respect to Table 3, in BCUC 1.11.2.2.1, what is the DSM initiative forecast to be implemented over the F2027-F2031 period (or, if different, the period identified in the previous response) with the highest levelized Utility Cost and what is the associated levelized value (in 2017$)?

6.0 Reference: Exhibit B-5, BCUC 1.8.1, 1.11.2.2.1 and 1.21.1
Exhibit B-7, CEC 1.4.3
Exhibit B-1, pages 9 (Table 1) 12 (Table 3). 19 (Table 5) and 31 (Table 7)

Preamble: In response to the first round of interrogatories, BC Hydro has provided a more recent Market Price Forecast (BCUC 1.21.1 and CEC 1.4.3) and a new Load/Resource Balance (BCUC 1.11.2.2.1). Also, BC Hydro has revised its opportunity cost calculations with respect to specific EPAs and indicated that the value for Brown Lake did not include any value for the dependable capacity provided (BCUC 1.8.1)

6.1 Based on these updates, please provide a revised version of Table 1.

6.2 Based on these updates please provide revised versions of Tables 3, 5 and 9 using the approach in the Application (per pages 8-9) for evaluating energy but using the updated values for Market Prices (during surplus periods), the revised dates for the applicability of DSM & EPAs versus Greenfield IPPs as the basis for LRMC (per BCUC 1.11.2.2.1) plus the revisions noted in BCUC 1.8.1.

6.2.1 Similar to the text provided in Exhibit B-1 at pages 12 (lines 6-8), 19 (lines 12-14) and 31 (lines 3-5), please comment as to whether the levelized energy price for each EPA is above or below BC Hydro Opportunity Cost values set out in response to part (2) above.

6.3 What are the levelized prices for each of the three EPA renewals for the period up to (and including) 2026?

6.3.1 In each case, please comment on how this value compares (i.e., is it higher or lower than) with BC Hydro's levelized cost for Market Purchases (based on the updated Market Price forecast) for the period up to (and including) 2026?

7.0 Reference: Exhibit B-5, BCUC 1.8.4
Exhibit B-1, page 9 (Table 1) and Appendix B

Preamble: The response to BCUC 1.8.4 states: "The $89/MWh estimate was a price signal to set the upper limit on DSM and EPA renewal acquisitions". It also states: "These LRMCs are now considered out of date."

7.1 Please confirm that the $89/MWh estimate for EPA renewals was developed at the time of the F2017-F2019 Revenue Requirements Application. If not, when was it developed?

7.2 Based on its experience to date in renegotiating EPA renewals, does BC Hydro consider is $89 / MWh (2017$) to still be an appropriate cost effectiveness benchmark for EPA renewals?

7.2.1 If yes, why?

7.2.2 If not, what would be a more appropriate benchmark?

7.3 For purposes of this Application, is $89/MWh still the best "price signal to set an upper limit on DSM and EPA renewal acquisitions" (per BCUC 1.8.4)?

7.3.1 If yes, why?

7.3.2 If no, what is the best value and please provide a revised version of Table 1 (Exhibit B-1).

7.3.3 If no, please provide revised responses to BCOAPO 6.2 and 6.2.1 (above) using this revised value for the LRMC related to DSM and EPA Renewals.

8.0 Reference: Exhibit B-5, BCUC 1.13, 1.14, 1.15 and 1.16
BCUC 1.8.1, 1.11.2.2.1 and 1.21.1
Exhibit B-7, CEC 1.4.3
Exhibit B-1, pages 9 (Table 1), 12 (Table 3), 19 (Table 5) and 31 (Table 7)

Preamble: The response to BCUC 1.14.1 (footnote #4) indicates that the LRMC value of $104/MWh based on the cost of new wind resources is "now outdated"**.**

8.1 Taking into account the information in the references provided for BCUC 1.13 through BCUC 1.16 as well as the BC Hydro's responses, what is BC Hydro's current view as to the cost of wind energy ($ 2017) at the point of interconnection and the resulting LRMC value ($ 2017)?

8.2 If BC Hydro has an updated value for the cost of wind energy (per BCOAPO 8.1 that differs from that used in the Application), then based on the responses to BCOAPO 7.3 through 7.3.2 and BCOAPO 8.1; the new Load/Resource Balance (BCUC 1.11.2.2.1) and the response to part (1), please provide an updated version of Table 1 from Exhibit B-1.

8.3 If BC Hydro has an updated value for the cost of wind energy (per BCOAPO 8.1), then based the responses to BCOAPO 8.2, the more recent Market Price Forecast (BCUC 1.21.1 and CEC 1.4.3) and the revised assumptions in BCUC 1.8.1, please provide revised versions of Tables 3, 5 and 9 from Exhibit B-1.

8.3.1 Similar to the text provided in Exhibit B-1 at pages 12 (lines 6-8); 19 (lines 12-14) and 31 (lines 3-5), please comment as to whether the levelized energy price for each EPA is above or below the BC Hydro Opportunity Cost values set out in response to BCOAPO 8.3.

8.4 If BC Hydro does not have an updated view as to the cost of wind energy (per BCOAPO 8.1), then please provide the LRMC value ($ 2017) consistent with a wind energy cost of $60/MWh per the BCUC Waneta Decision (page 46).

8.5 If BC Hydro does not have an updated view as to the cost of wind energy (per BCOAPO 8.1), then please provide revised versions of Tables 1, 3, 5 and 9 from Exhibit B-1 based on the more recent Market Price Forecast (BCUC 1.21.1 and CEC 1.4.3); the new Load/Resource Balance (BCUC 1.11.2.2.1), the revised assumptions in BCUC 1.8.1, the response to BCOAPO 7.3 and a wind energy cost of $60/MWh (per the Waneta Decision).

8.5.1 Similar to the text provided in Exhibit B-1 at pages 12 (lines 6-8); 19 (lines 12-14) and 31 (lines 3-5), please comment as to whether the levelized energy price for each EPA is above or below BC Hydro Opportunity Cost values set out in response to BCOAPO 8.5.

9.0 Reference: Exhibit B-5, BCUC 1.20.1

9.1 Please explain more fully the basis on which wind energy is viewed as providing capacity benefits when considered on a portfolio basis but not when considered on its own.

10.0 Reference: Exhibit B-7, CEC 1.8.2 and 1.8.4

10.1 Is the levelized EPA price for the Sechelt Creek EPA for period up to F2033 greater or less than BC Hydro's DSM cost?

10.2 Similarly, for each of the Brown Lake and Walden North EPAs, is the levelized EPA price for the period up to F2033 greater or less than BC Hydro's DSM cost?

10.3 For each of the three EPAs, is the levelized EPA price for the period up to F2031 greater or less than BC Hydro's DSM cost? (Note: This question

assumes that the new load resource balance provided in BCUC 1.11.2.2.1 indicates that DSM and EPA renewals are the marginal resource up to 2031 per BCOAPO 5.1. If a different date is appropriate please substitute)

11.0 Reference: Exhibit B-7, CEC 1.8.3
Exhibit B-1, pages 12 (Table 3), 19 (Table 5) and 31 (Table 7)

11.1 Based on the response to CEC 1.8.3, do the IPP Opportunity Cost values in Tables 3, 5 and 7 need to be updated?

11.1.1 If yes, please provide revised tables.

12.0 Reference: Exhibit B-5, BCUC 1.5.1 and 1.8.1

12.1 Please confirm that BC Hydro's Opportunity Cost with respect to Walden North does not include any allowance for the cost of an alternative diversion structure.

13.0 Reference: Exhibit B-5, BCUC 1.21.1 and 1.21.2

13.1 For purposes of determining BC Hydro's Opportunity Costs for each EPA, please clarify whether firm and non-firm energy were valued differently during: i) the period of surplus when Market Prices applied; ii) during the period when the LRMC is based on DSM and EPA renewals and iii) during the period when the LRMC is based on Greenfield IPPs.

13.1.1 If yes, please explain the differences.

14.0 Reference: Exhibit B-7, CEC 1.12.1

14.1 In the response reference is made to an "adjusted energy price". The same terminology is used in Footnotes 14, 20 and 29 of Exhibit B-1. Furthermore, footnote 29 makes reference to footnote 27 which is linked to BC Hydro's Opportunity Cost. In these footnotes, is the "adjusted energy price" referring to the BC Hydro Opportunity Cost as set out in Tables 3, 5 and 7 respectively?

14.1.1 If not, how and where are the cost of the network upgrades reflected in Tables 3, 5 and 7?

14.1.2 If Tables 3, 5 and 7 do not capture the cost of network upgrades, please indicate what the impact would be.