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October 10, 2019

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**Attention: Patrick Wruck, Commission Secretary
and Manager, Regulatory Support**

Dear Sirs/Mesdames:

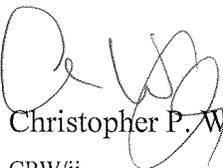
**Re: BC Hydro Electricity Purchase Agreement Renewals for Sechelt Creek Hydro,
Brown Lake Hydro and Walden North Hydro ~ Project No. 1598969**

We are counsel to the Commercial Energy Consumers Association of British Columbia (the "CEC"). As requested by the Commission, attached please find the CEC's REDACTED CONFIDENTIAL Final Submissions with respect to the above-noted matter.

All of which is respectfully submitted.

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer

CPW/jj

cc: CEC

cc: BC Hydro

cc: Registered Interveners

**COMMERCIAL ENERGY CONSUMERS
ASSOCIATION OF BRITISH COLUMBIA**

**CONFIDENTIAL
FINAL SUBMISSIONS**

**British Columbia Hydro and Power Authority Electricity Purchase Agreement
Renewals for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro
Project No. 1598969**

October 3, 2019

Commercial Energy Consumers Association of British Columbia

CONFIDENTIAL Final Submissions

**British Columbia Hydro and Power Authority Electricity Purchase Agreement Renewals
for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro
Project No. 1598969**

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**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA**

CONFIDENTIAL FINAL SUBMISSIONS

**British Columbia Hydro and Power Authority Electricity Purchase Agreement Renewals
for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro
Project No. 1598969**

The Commercial Energy Consumers Association of BC (“CEC”) represents the interests of those ratepayers consuming energy under commercial tariffs in applications before the BC Utilities Commission (“BCUC” or “Commission”).

BC Hydro has recently renewed Energy Purchase Agreements (“EPA’s) for three projects including:

- Sechelt Creek run-of-river hydroelectric project (“Sechelt Creek”);
- Brown Lake storage hydroelectric project (“Brown Lake”); and
- Walden North run-of-river hydroelectric project (“Walden North”).

The projects have effective dates of March 1, 2018, April 2, 2018 and April 1, 2018 respectively.¹

BC Hydro is filing the EPA renewals with the BCUC for acceptance in accordance with section 71 of the *Utilities Commission Act* (“UCA”).

The CEC has reviewed the evidence and provides the following **CONFIDENTIAL** comments and recommendations for the Commission’s review and consideration.

I. CONCLUSIONS AND RECOMMENDATIONS

1. The CEC recommends that the Commission find that in general the Independent Power Producer (“IPP”) renewals are not in the public interest at this time because they are being established for an extended period (forty years) and are based on evidence that has the potential to change significantly in the near future.
2. In particular, the CEC recommends that the Commission find that IPP renewals at prices that exceed the market sell price (i.e. would be sold for a loss) are not in the public interest until it can be demonstrated in the next Integrated Resource Plan (“IRP”) that the IPP energy is required and necessary beyond that which may be acquired from Demand Side Management (“DSM”).

¹ Exhibit B-1-1, page 1

3. The CEC therefore recommends that the Commission deny the IPP EPA renewals.
4. To the extent that the Commission determines that renewing any IPP project at this time could be in the public interest, the CEC recommends that the Commission:
 - Find that the Sechelt Creek is not cost-effective and deny the application for the period up until the next IRP.
 - Find that the Brown Lake EPA could be cost-effective depending on the value of the capacity credit, and has additional storage related benefits.
 - Find that the Walden North EPA could be marginally cost effective and has additional benefits.

II. INTRODUCTION

5. The EPA Renewals provide for the continued procurement of electricity generated from clean or renewable resources at existing, reliable hydroelectric facilities in British Columbia.²
6. The EPA Renewals are modeled after the more robust present-day form of EPA BC Hydro uses for purchasing electricity from hydroelectric IPP projects, which BC Hydro has updated to reflect current drafting standards and more robust contractual provisions. These more robust terms and conditions are favourable to BC Hydro and therefore benefit BC Hydro ratepayers as well.³
7. The CEC is generally of the view that the IPP purchases for extended periods are premature at this time as the IRP will soon be updated and may change several parameters which influence the value of the energy to BC Hydro.
8. The CEC submits that it would be preferable for BC Hydro to renew IPP purchases for a maximum of 5 years at this time.
9. Such a practice would 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.

Cost Effectiveness Analysis

10. In assessing its prospective EPA renewals, BC Hydro evaluates potential renewal prices against an estimate of the IPP's estimated cost of service (including a rate of return), the IPP's opportunity cost, the impact to BC Hydro's rates plans and system characteristics and BC Hydro's 'opportunity' cost.⁴

² BC Hydro Final Argument page 3

³ BC Hydro Final Argument page 3

⁴ Exhibit B-1-1 page 8

11. This methodology reflects a BCUC principle that an appropriate purchase price is somewhere between the value that the IPP could acquire from an alternative source, and the price that BC Hydro would pay from an alternative source.
12. The CEC is not opposed to the concept of an ‘appropriate price’ but submits that it is nonetheless 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.

BC Hydro Opportunity Cost

13. In its application, BC Hydro’s opportunity cost analysis values IPP energy at market prices during periods of surplus (BC Border Sell price), and at the Long Range Marginal Cost (“LRMC”) (Greenfield IPPs) during periods of deficit.⁵
14. BC Hydro utilized a value of \$89/MWh as the marginal cost estimate for 2022-2033 in calculating BC Hydro’s opportunity cost.⁶ [REDACTED]
15. BC Hydro’s opportunity is considered to be a ‘benchmark’ and is not used to determine IPA renewal price.⁸
16. In BCUC 1.8.1, BC Hydro made modifications to its opportunity cost to reflect various circumstances that it had failed to include, such as losses for Brown Lake and Walden North, certain volumes in the Sechelt Creek EPA, the impact of a Forbearance Agreement for Walden North and water rentals for Walden North.
17. BC Hydro recently adopted the use of market price as a conservative interim assumption for evaluating energy during surplus and deficit periods. This approach is consistent with BC Hydro’s plan to stay within the cost forecast that aligns with rates set out in the Government of BC’s Comprehensive Review, including expenditures for DSM and EPA renewals.⁹
18. During the proceeding, multiple scenarios were also developed regarding BC Hydro’s opportunity cost, reflecting a variety of circumstances including a preliminary assessment of BC Wind Energy in 2027 and beyond.¹⁰

⁵ Exhibit B-1, pages 8-9.

⁶ Exhibit B-5, BCUC 1.8.3

⁷ Exhibit B-1-1, pages 8-9

⁸ Exhibit B-5, BCUC 1.8.3

⁹ Exhibit B-5, BCUC 1.8.2.1

¹⁰ Exhibit B-14-1, BCOAPO 2.6.2

19. The impact of the scenarios was [REDACTED]
20. Overall, the CEC submits that the evidence is that the cost-effectiveness of the IPP energy is not nearly as robust as that presented in the original application, and at which the IPPs have been renewed.

IPP Opportunity Cost

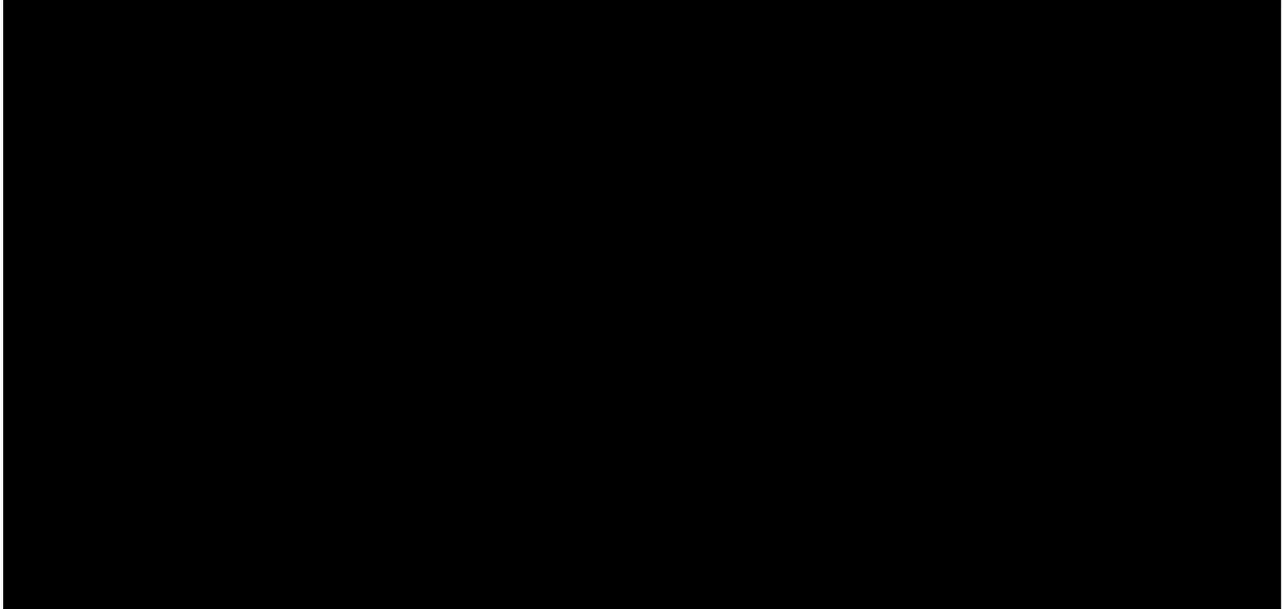
21. [REDACTED]
22. The CEC submits that the IPP's opportunity cost is of limited importance in that BC Hydro should be primarily considering its own opportunity cost, and should not necessarily acquire energy above that price because an IPP has a better opportunity elsewhere.
23. The CEC submits that the IPP's opportunity cost could provide a useful frame of reference in understanding any excess that BC Hydro would be paying to an IPP over and above that which they could achieve elsewhere.
24. Evidence was also provided in the proceeding which altered the expected IPP opportunity costs from those in the application.¹²

¹¹ Exhibit B-1-1 page 8

¹² Exhibit B-14-1, BCOAPO 2.11.1 and Exhibit B-7, CEC 1.8.3

Summary of Cost Evidence

25. The CEC provides the following summary of the cost evidence.



¹³ Exhibit B-14-1, BCOAPO 2.6.2

¹⁴ Exhibit B-14-1, BCOAPO 2.11.2 and CEC 1.8.1

¹⁵ Exhibit B-14-1, BCOAPO 2.6.2

¹⁶ Exhibit B-14-1, BCOAPO 2.6.2

¹⁷ Exhibit B-5-1, BCUC 1.8.1

¹⁸ Exhibit B-14-1, BCOAPO 2.6.2

¹⁹ Exhibit B-14-1, BCOAPO 2.6.2



²¹ Exhibit B-14-1, BCOAPO 2.6.2

²² BC Hydro opportunity cost is higher for Brown Lake than the renewal price when utilizing the upper end of the capacity credit

- [REDACTED]
29. In its Final Arguments BC Hydro acknowledges that its analyses as provided in the Filing and responses to IRs in the proceeding show that, over the 40-year terms of each of the EPA Renewals, the levelized price of the energy BC Hydro and its ratepayers will receive under the EPA will be lower than BC Hydro's opportunity cost under certain sets of assumptions and will be higher than BC Hydro's opportunity cost under other sets of assumptions, as considered in this proceeding.²³
30. However, they also state that 'the analyses show that the levelized price of each of the EPA Renewals is lower than or generally similar to BC Hydro's opportunity cost in the majority of the model run scenarios'.²⁴
31. The CEC is of the view that the Commission should adopt a very conservative approach to BC Hydro's 'opportunity cost' and, in particular, should reject the original LRMC approach utilized in the application as being inappropriate.
32. The CEC submits that the valuation of BC Hydro's opportunity cost as provided in the application incorrectly relies upon the premise that the need and timing for energy is known and correct, and that the costs for BC Hydro to acquire energy are known and will remain largely consistent with the current set of circumstances over the term of the agreement.
33. The CEC submits that the Interim Market Price assumption represents the appropriate value for BC Hydro's opportunity cost.
34. In its Supplemental Final Argument, BC Hydro provides the following rate impact ranges based on differing scenarios including the Interim Market Approach.

EPA Renewal	Rate Impact using BCUC Staff Model ⁴	Rate Impact using BC Hydro Model and Interim Market Approach ⁵
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%

²³ BC Hydro Final Argument page 5

²⁴ BC Hydro Final Argument page 5

35. As can be seen above, all the projects have the potential to cause a rate increase under the Interim Market Approach, with Sechelt Creek EPA being the most significant at 0.049%, Brown Lake slightly lower at 0.032%, and Walden North being the lowest at 0.022%.

CIRCUMSTANCES MAY CHANGE

36. The CEC's view is that substantial changes may arise in the circumstances over an extended term (i.e. 40 years) which could seriously impact the appropriateness of having made the IPP renewals.
37. For instance, it is possible, and indeed probable, that alternative, less expensive energy resources may be available in the future, or that BC Hydro will have a different mandate in terms of the need for IPP energy that is recommended to be included in its resource stack.
38. The CEC submits that changes in such circumstances could seriously affect the need and/or appropriate price to be paid for IPP energy.

Renewal Portfolio Based on 2013 IRP

39. BC Hydro's plan to acquire energy through EPA renewals with IPPs is based on and consistent with BC Hydro's 2013 IRP. It is guided by the assumptions in the IRP.²⁶
40. The 2013 IRP is established upon certain constraints which 'create' a need for IPP energy and diminishes the availability of other options.
41. But for the IRP and other policy requirements, BC Hydro's resource options could include energy from the market, increased load reduction activities DSM, new technologies etc.
42. Recognizing that BC Hydro does not have a newer IRP at this time, the CEC nonetheless submits that the 2013 IRP is outdated at this time and relies upon information that is not necessarily still appropriate to form the basis for future spending.
43. BC Hydro expects that its EPA renewal approach will be revisited as part of the process for the 2021 IRP.²⁷
44. The next IRP will inform future plans for the level of DSM expenditures and volume of EPA renewals.²⁸

²⁵ BC Hydro Supplemental Final Argument page 4

²⁶ Exhibit B-1-1, page 4

²⁷ Exhibit B-12, BCUC 2.15.1

²⁸ Exhibit B-5, BCUC 1.8.2.1

45. The CEC submits that simple changes in the IRP in approximately 2 years and/or adjustments to provincial policy at some point, potentially in the very near future, could result in significant changes to the requirements and appropriateness of acquiring IPP energy.
46. The CEC is of the view that pursuing IPP purchases for extended terms at this time without recognizing the potential for shifting circumstances is not appropriate.
47. The CEC submits that it would be preferable for BC Hydro to pursue IPP energy only to the extent it is absolutely necessary to fulfill BC Hydro's resource gaps for the next five years, and avoid terms in excess of this amount.
48. The CEC recognizes that the IPP levelized costs are typically predicated on higher short-term rates with lower longer term rates, but submits that these could be renegotiated.
49. The CEC recommends that the Commission deny the IPP renewals on the basis of the 40 year terms that are excessive given the potential changes in circumstances and signal an opportunity to consider renewals for a 5-year period.

SELF SUFFICIENCY REQUIREMENT COULD CHANGE

50. The recent 'Zapped' Report prepared for the Provincial Government points out the impact of the Self Sufficiency requirement and recommends reversal of this requirement.²⁹
51. To the extent that the Self-Sufficiency requirement was either removed or modified (e.g. Reducing the % of energy to be self-supplied; allowing market supply for temporary load resource balance gaps; acquisition of new resources to be self-supplied 'on average' etc.) BC Hydro could potentially acquire a significant portion of its energy at market rates.
52. The CEC submits that it would be prudent for BC Hydro to consider the potential for such changes in the future and avoid long-term commitments to IPP energy at this time.
53. The CEC submits that a 5-year term maximum should be considered for renewals at this time.

DSM OPTIONS COULD BE INCREASED

54. BC Hydro acknowledges that acceptance of the EPAs in this application may, but will not necessarily, result in reduced DSM expenditures and reduced future EPA renewals over the fiscal 2022-2033 period.³⁰
55. BC Hydro's current DSM plan does not acquire all DSM up to \$89/MWh and is set out in the F2020-F2021 RRA Application.³¹

²⁹ BC Government 'Zapped A Review of BC Hydro's Purchase of Power from Independent Power Producers conducted for the Minister of Energy, Mines and Petroleum Resources' page 2

³⁰ Exhibit B-5, BCUC 1.8.2.1

56. At page 10-5 of the RRA, BC Hydro characterizes its DSM plan as continuing the ‘moderation approach’.
57. The CEC submits that it would be reasonable to expect this could change in the next IRP and DSM options could potentially be increased due to their cost-effectiveness and environmental benefits.
58. The average portfolio utility cost of the DSM plan is less than the market price of export electricity. Tables 10-5 and 10-13 of the RRA provide a Net-Levelized Cost (Utility Cost and Total Resource Cost) for both the integrated system programs and the non-integrated areas.

Table 10-5 Cost Effectiveness Comparison of Non-Integrated Areas and Integrated System Programs

	Net Levelized Cost (non-integrated areas) (\$/MWh)	Benefit-Cost Ratio (non-integrated areas)	Net Levelized Cost (integrated system programs (\$/MWh)	Benefit-Cost Ratio (integrated system programs)
Utility Cost	175	1.8	11	1.7
Total Resource Cost	117	2.2	-11	3.6

Table 10-13 Benefit-Cost Ratios and Net Levelized Costs (\$/MWh)

	Benefit-Cost Ratios		Net Levelized Costs (\$/MWh)	
	Utility Cost Test (Market Price at \$30 per MWh)	Modified Total Resource Cost Test (LRMC at \$105 per MWh)	Utility Cost (\$)	Total Resource Cost (\$)
Codes and Standards	n/a	n/a	n/a	n/a
Rate Structures	11.1	1.4	(4)	73
Programs (including TMP)	1.7	3.6	12	(11)
Total Portfolio (including TMP, excluding Codes and Standards savings ³⁶⁶)	1.1	2.5	27	14

59. In the RRA, BC Hydro states that the total DSM portfolio excluding codes and standards for the Utility Cost test is \$27/MWh, which is lower than the market price of \$30/MWh.³²

³¹ Exhibit B-5, BCUC 1.8.3.2.

³² BC Hydro RRA page 10-31

- 60. The CEC submits that it would be appropriate for BC Hydro to meet some of its resource gaps with DSM to the extent possible in the Integrated Areas instead of with IPP energy, as it appears this could be a significantly more cost-effective option than the IPP renewals being proposed.
- 61. The CEC submits that this potential speaks to the benefit of limiting the term lengths of IPP renewals.

LOAD RESOURCE BALANCE

- 62. The need for new resources, including EPA renewals, is identified in BC Hydro’s Load Resource Balance (“**LRB**”).³³
- 63. This LRB is provided in Appendix B of the Application.
- 64. The mid-level load forecast in the F2017-F2019 RRA identifies a need for new resources in fiscal 2022.
- 65. At the time of negotiating and executing the EPA renewals, BC Hydro had assumed it would have an energy shortfall (prior to future planned resources) beginning in fiscal 2022 based on the planning view of the LRB.³⁴

Table 3-6 Energy Load Resource Balance with Existing and Committed Resources⁴⁵

(GWh)	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036	
Existing and Committed Hydro Resources																					
1 Hydro Resources (Including Site C)	(a)	48,445	46,895	46,014	46,491	46,491	46,491	46,867	52,303	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777
2 Existing and Committed FP Resources	(b)	13,198	14,502	14,337	14,364	14,007	13,702	13,547	13,210	12,814	12,414	12,307	11,983	11,467	10,720	10,269	10,203	10,163	10,015	9,478	8,110
3 Total Supply (Operational View) ^{***}	(c) = a + b	61,643	61,407	60,351	60,856	60,500	60,274	60,338	65,087	66,591	66,084	65,761	65,244	64,407	64,037	63,981	63,641	63,722	63,253	61,887	
Demand - Integrated System Total Gross Requirements																					
4 2016 Mid Load Forecast Before DSM		-56,334	-55,013	-55,413	-51,371	-52,300	-53,676	-54,836	-55,008	-57,100	-58,310	-59,267	-70,296	-71,222	-72,206	-73,374	-74,526	-75,462	-76,383	-77,215	-78,008
5 Expected LNG Load		-61	-148	-148	-252	-1,268	-2,209	-2,721	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848
6 Sub-total (d)		-56,395	-55,162	-55,561	-51,624	-53,574	-55,874	-57,557	-58,856	-60,907	-71,158	-72,115	-73,104	-74,070	-75,144	-76,222	-77,383	-78,310	-79,241	-80,053	-80,856
Existing and Committed Demand Side Management & Other Measures																					
7 DSM Fuel Reduction		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
8 Voltage and VAR Optimization		67	152	171	188	219	240	254	260	263	268	268	268	268	300	306	310	315	320	325	331
9 2016 DSM Plan F25 savings		282	270	230	240	206	190	172	177	186	183	186	186	184	184	187	173	161	150	138	126
10 Sub-total (e)		1,131	1,204	1,193	1,211	1,227	1,249	1,260	1,269	1,269	1,236	1,231	1,228	1,228	1,227	1,195	1,163	1,157	1,161	1,155	1,150
11 Surplus/Deficit (Operational View) ^{**}	(f) = c + d + e	4,279	3,529	563	2,443	281	(2,491)	(6,220)	(5,673)	(5,502)	(5,732)	(4,895)	(5,115)	(7,009)	(8,425)	(10,896)	(12,239)	(13,212)	(14,288)	(15,444)	(17,000)
12 Surplus/Deficit as % of Net Load (Planning View) ^{**}		112%	117%	110%	108%	104%	99%	94%	92%	92%	94%	93%	91%	89%	87%	85%	84%	83%	81%	80%	79%
13 Low Load Forecast Surplus/Deficit (Operational View) ^{**}		5,700	5,289	3,995	5,033	4,118	1,238	538	(462)	(1,830)	(3,004)	(2,448)	(224)	(1,248)	(2,820)	(4,148)	(5,267)	(6,172)	(6,873)	(7,373)	(10,038)
14 High Load Forecast Surplus/Deficit (Operational View) ^{**}		1,852	838	(2,812)	(1,362)	(4,781)	(8,202)	(10,888)	(12,534)	(13,978)	(11,498)	(12,728)	(14,368)	(16,238)	(18,554)	(20,367)	(21,811)	(23,193)	(24,508)	(26,262)	(28,007)
* 2016 Integrated System Load Forecast with losses																					
** See section 3.4.2 for description of Operational versus Planning View																					

- 66. The CEC notes that BC Hydro’s LRB with Existing and Committed Resources Low Load Forecast (operational view) anticipates a very minor deficit in F2024, and no significant deficit until F2029.
- 67. The LRB After-Planned Resources anticipates an energy shortfall at 2034.

³³ Exhibit B-1-1, page 3
³⁴ Exhibit B-5, BCUC 1.8.2

Table 3-8 Energy Load Resource Balance after Planned Resources⁴⁶

(GWh)	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036	
Supply and Committed Resource Reserves																					
1	Herbaceous Resources (Including Site C)	(a)	46,445	46,595	46,014	46,491	46,491	46,491	46,857	52,303	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	53,777	
2	Supply and Committed RRB Reserves	(b)	13,190	14,542	14,337	14,394	14,207	13,752	13,547	13,210	12,814	12,414	12,307	11,963	11,467	10,720	10,259	10,203	10,163	10,015	9,476
Future Supply Side Reserves																					
3	IPP Renewals		106	290	571	647	779	936	1,114	1,349	1,620	1,951	2,032	2,223	2,617	3,320	3,708	3,826	3,863	4,011	4,546
4	Standby Offer Program		71	130	291	419	546	674	801	929	1,096	1,194	1,311	1,436	1,596	1,894	1,821	1,940	2,076	2,204	2,330
5	Renewable R																				
6	Subtotal	(c)	177	410	862	1,066	1,325	1,606	1,915	2,270	2,694	3,136	3,370	3,600	4,206	5,040	5,629	5,803	5,966	6,241	6,876
7	Total Supply (Operational View) **	(d = a + b + c)	61,620	61,827	61,213	63,622	63,213	63,663	63,654	64,345	67,691	69,327	69,494	69,449	69,463	69,546	69,672	69,763	69,806	70,030	70,149
Demand - Integrated System Total Gross Requirements																					
8	2016 May Mid Load Forecast Before DSM		-68,334	-69,013	-69,413	-69,371	-69,309	-69,675	-69,936	-69,008	-67,109	-66,310	-66,267	-70,256	-71,222	-72,396	-73,374	-74,526	-75,462	-76,383	-77,215
9	Expected LNG Load		-61	-148	-148	-282	-1,285	-2,399	-2,721	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848	-2,848
10	Subtotal	(e)	-68,395	-69,161	-69,561	-69,653	-70,974	-72,397	-72,757	-71,856	-69,957	-71,156	-72,115	-73,104	-74,074	-75,144	-76,222	-77,303	-78,310	-79,240	-80,063
Supply and Committed Demand Side Management & Other Measures																					
11	DSM Theft Reduction		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
12	Voltage and VAR Optimization		67	182	171	188	219	240	254	269	285	298	286	286	286	300	306	310	315	320	326
13	2016 DSM Plan F16 savings		902	970	939	940	926	926	923	917	912	895	863	855	844	844	807	770	780	758	757
Planned Demand Side Management Measures																					
14	2016 DSM Plan F17 to F19 savings		389	905	1,679	1,806	1,931	1,959	1,936	1,930	1,917	1,908	1,896	1,863	1,787	1,694	1,613	1,547	1,462	1,300	1,224
15	2016 DSM Plan F20+ savings		0	0	0	292	604	1,454	1,887	2,310	2,637	2,848	3,229	3,500	3,758	4,006	4,248	4,473	4,650	4,908	5,116
16	Subtotal	(f)	1,521	2,162	2,673	3,326	4,072	4,672	5,112	5,502	5,811	6,069	6,386	6,581	6,770	6,927	7,085	7,183	7,310	7,388	7,502
17	Surplus / (Deficit) (Operational View) **	(g = d - e + f)	2,225	2,666	3,152	3,969	4,616	5,257	5,918	6,489	7,734	8,271	8,337	8,537	8,740	8,907	9,069	9,220	9,317	9,440	9,745
18	Surplus / Deficit as % of Net Load (Planning View) **		113%	116%	118%	114%	111%	100%	100%	105%	109%	109%	107%	106%	107%	107%	107%	107%	107%	107%	107%
19	Small Gap Surplus (Deficit) (Operational View) **		7,295	7,457	6,536	6,007	6,279	6,967	6,275	6,030	6,076	6,063	6,540	6,017	6,506	7,046	7,393	6,766	6,346	6,779	6,262
20	Large Gap Surplus (Deficit) (Operational View) **		2,659	2,028	701	1,392	-601	-1,971	-18,100	-6,031	-13,643	-19,946	-16,233	-18,308	-16,463	-17,736	-18,673	-19,169	-19,030	-19,267	-19,473
* 2016 Integrated System Load Forecast with losses																					
** See section 3.4.2 for description of Operational versus Planning view																					

- 68. The Low Load forecast (operational view) does not anticipate an energy shortfall out past 2036, but instead suggests an ongoing surplus continuing into the future.
- 69. A significant surplus of 9,893 GWh is forecast for F2026, and remains at over 4,000 GWh.³⁵
- 70. The CEC submits that there is a significant risk that BC Hydro could be acquiring very expensive energy which it will be obliged to sell at a loss if it acquires all the IPP energy as proposed in this application.



- 72. The CEC notes that the BC Hydro anticipates filing a 20-year LRB in its F2020-F2021 RRA which will be reviewed at that time. The LRB is expected to be filed in November of this year.
- 73. The CEC submits 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.

BC Hydro Should Prioritize Selection of IPP Renewals



- 75. BC Hydro has been renewing individual EPAs where it has been cost effective to do so and has been guided by the 2013 IRP EPA renewal assumptions.³⁷

³⁵ Exhibit B-1, Appendix B Load Resource Balance

³⁶ Exhibit B-7-1 CEC 1.3.2

76. BC Hydro states that it has been deferring renewal of EPAs for smaller hydroelectric projects and focusing negotiation of EPA renewal with larger hydroelectric projects which have already been accepted by the Commission.³⁸
77. The renewal assumptions have been estimates of what BC Hydro assumed at that time would be available for renewal at cost effective prices. [REDACTED]
78. The CEC submits that the assumptions upon which the renewal price guidelines were established may not be appropriate at this time for the reasons noted above in Cost Effectiveness Analysis.
79. BC Hydro states that it is guided by Recommended Action 4 which indicates that BC Hydro is to optimize its portfolio according to the key principle of reducing near-term costs while maintaining cost-effective options for long-term need.⁴⁰

- [REDACTED]
81. The BCUC requested that BC Hydro provide a list of EPAs that BC Hydro could terminate, their most recent annual energy volumes and the most recent annual energy cost.⁴²

³⁷ Exhibit B-14, CEC 2.30.2

³⁸ Exhibit B-5, BCUC 1.42.1.1

³⁹ Exhibit B-5-1, BCUC 1.42.1

⁴⁰ Exhibit B-5-1, BCUC 1.42.1.1

⁴¹ Exhibit B-7-1 CEC 1.3.2

⁴² CONFIDENTIAL Exhibit B-12-1, BCUC 2.20.1

- [REDACTED]
85. The CEC submits [REDACTED]
86. The CEC is of the view that [REDACTED]
87. BC Hydro states that it makes an assessment on whether the IPP's forecasted capital and O&M fall within acceptable industry practice, but is not able to provide a range of industry practice.
88. BC Hydro has not evaluated individual IPPs in the renewable portfolio in order to maximize cost effectiveness⁴⁵, nor has it developed a process to identify the lowest-cost contracts within the EPA renewal portfolio prior to entering into negotiations with specific IPP projects.⁴⁶
89. BC Hydro states that the EPAs within the renewal portfolio did not expire/terminate at the same time and it was not possible to identify, prior to each of the negotiations being completed, which EPAs would have the lower costs. An existing EPA contract price was not expected to factor into an IPP's cost of service going forward.⁴⁷
90. The CEC is of the view that it is inappropriately risky to simply acquire all energy available under a certain cost threshold, unless it is clear that the acquisition would have a marginal cost lower than the marginal sale price. That is, if the energy can be sold at a profit if not required by BC Hydro in serving its ratepayers. Otherwise, ratepayers bear the risk of acquiring energy and disposing of it at a loss.
91. The CEC submits that it would be preferable for BC Hydro to identify the most cost-effective options and acquire energy accordingly, with the most cost-effective options being acquired for the longest periods and the less cost-effective options being acquired sparingly if at all.
92. Where BC Hydro identifies opportunities where it can 'profitably' acquire energy (i.e. sell at a greater price than acquired) then it may be appropriate to do so.

⁴³ Exhibit B-12, BCUC 2.15.1

⁴⁴ CONFIDENTIAL Exhibit B-12-1 BCUC 2.20.1

⁴⁵ Exhibit B-14, CEC 2.30.2

⁴⁶ Exhibit B7, CEC 1.10.3

⁴⁷ Exhibit B7, CEC 1.10.3

There is Limited Risk to BC Hydro in Deferring IPP Renewals

93. At various times BC Hydro has expressed concern that without long-term IPP renewals at this time there is a risk of IPPs being unable or unwilling to sell to BC Hydro at some point in the future when required, either because they are selling to other alternatives and/or unable to profitably sustain their activities in the absence of BC Hydro purchases.
94. The CEC points out that BC Hydro [REDACTED]
95. The CEC submits BC Hydro could still offer high prices to an IPP at a later date and would create the same incentive for the IPP whether it is offered now or at some point in the future.

IPPs can sell into market and return to BC Hydro at a later date

96. The CEC submits [REDACTED]
97. Some of the benefits that IPPs receive as a result of selling to BC Hydro instead of the market include:
- No need for the IPP to schedule and pay for transmission wheeling on the BC Hydro system or other transmission systems;
 - Reduced risk of delivery of energy to the point of delivery because no additional transmission wheeling rights need to be obtained on other party's transmission systems;
 - Certainty of energy sales under a long-term contract; and
 - Low counter-party risk.⁴⁸
98. BC Hydro is not aware of an alternative that would allow the IPPs to receive \$85/MWh. The application does not suggest that there is such an alternative.⁴⁹
99. BC Hydro is not able to provide an analysis of risks that an IPP may experience selling to BC Hydro, but identifies a lack of flexibility to sell to other third parties and respond to high market prices, if available.⁵⁰

⁴⁸ Exhibit B-14, CEC 2.28.3

⁴⁹ Exhibit B-7, CEC 1.3.1

⁵⁰ Exhibit B-14, CEC 2.28.4

Uneconomic IPPs should not be supported by BC Hydro

100. The CEC is also of the view that the risk to IPP existence should not factor significantly into the Commission's decision-making with regard to IPP renewal.
101. In the CEC's opinion if the IPP is uneconomic and unable to be profitable selling into the market, then it should not be up to ratepayers to make the project profitable when other alternatives may be available.
102. The CEC submits that the Commission should apply limited weight to the value of IPP continuity in determining whether or not to renew the three IPP projects and under any circumstances in doing so should have an analysis of the risks of acquiring energy at a loss in advance of need.
103. Overall the CEC is of the view that the individual EPA renewals should be sufficiently well justified as to stand on their own merits, when compared against each other and when considered against the market.

Contribution to Province Is a Red Herring

104. BC Hydro includes an analysis of the economic benefits to the province in terms of GDP, tax revenues, water rentals, and staff (FTEs) for each of the IPPs.
105. The CEC is of the view that these economic benefits will remain if the IPP is able to successfully sell their energy to alternative buyers.
106. The CEC submits that to the extent the risk is that the IPP will fail in the absence of BC Hydro purchases, then it should not be up to ratepayers to subsidize an entity that is not economically viable.
107. The CEC recommends that the Commission provide limited weight to the proposed economic benefits associated with the individual IPPs because there are offsetting economic benefits when uneconomic supply is removed from the system. Similarly, if the IPP finds alternative purchasers, the economic benefits would persist.
108. The CEC submits that where the IPP projects may be fairly similar in terms of the cost-effectiveness assessment it could be useful to provide additional consideration to the economic benefits.

Environmental Attributes Are Not Marketable

109. There is no market for the environmental attributes associated with run-of-river facilities, although wind are considered to be eligible. BC Hydro's run-of-river hydroelectric facilities do not currently qualify for California's Renewable Portfolio Standards. California is the largest RPS jurisdiction both in size and value.⁵¹

⁵¹ Exhibit B-15, CEC 2.4.2

110. The CEC recommends that the Commission take note of this situation in its assessment of the EPA proposed renewals.

III. EVALUATION OF INDIVIDUAL ENERGY PURCHASE AGREEMENTS

Sechelt Creek EPA Renewal

111. The Sechelt Creek hydroelectric project is located northeast of Sechelt, B.C., on Salmon Inlet. The project has an installed capacity of 16.7 MW with average annual generation of 85 GWh.⁵²
112. BC Hydro terminated the original Sechelt Creek EPA effective March 1, 2018, immediately prior to the effective date of the Sechelt Creek EPA renewal.⁵³
113. The Sechelt Creek project is located close to BC Hydro's load centre in the Lower Mainland (reducing losses on the system), delivers a relatively high proportion of its annual energy during BC Hydro's peak load months, and is partly owned by the First Nation whose traditional territory the facility is located within.⁵⁴

COST EFFECTIVENESS

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

118. Additionally, there is a project-specific characteristic that reduces the value by another \$1/MWh.

⁵² BC Hydro Final Argument page 7

⁵³ BC Hydro Final Argument page 7

⁵⁴ BC Hydro Final Argument page 3

⁵⁵ Exhibit B-1-1, page 5

⁵⁶ Exhibit B-7-1, CEC 2.2

⁵⁷ Exhibit B-14-1, BCOAPO 2.6.2

⁵⁸ Exhibit B-6, BCUC 1.2.3

119. The following is the relevant section of the evidence provided above.



EPA Renewal	Rate Impact using BCUC Staff Model ⁴	Rate Impact using BC Hydro Model and Interim Market Approach ⁵
Sechelt Creek EPA	-0.020% to 0.045%	-0.001% to 0.049%

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122. The CEC has reviewed the evidence related to the cost-effectiveness of the EPA.

⁵⁹ Exhibit B-14-1, BCOAPO 2.6.2

⁶⁰ Exhibit B-14-1, BCOAPO 2.6.2

⁶¹ Exhibit B-14-1, BCOAPO 2.6.2

⁶² Exhibit B-14-1, BCOAPO 2.6.2

⁶³ Exhibit B-5-1, BCUC 1.8.1

⁶⁴ Exhibit B-14-1, BCOAPO 2.6.2

⁶⁵ Exhibit B-14-1, BCOAPO 2.6.2



⁶⁷ BC Hydro Supplemental Final Argument page 4

⁶⁸ Exhibit B-7-1 CEC 1.10.2 and B-15, CEC 2.2.1.1

123. The CEC notes that the Rate Impact using BC Hydro model and the Interim Market Approach suggests a very limited potential benefit and the largest potential cost impact to ratepayers of the 3 EPAs.
124. The CEC is of the view that the Sechelt Creek IPP project is not a cost-effective purchase by quite a significant margin when considering the Interim Market Approach. Additionally, BC Hydro's Revised and Updated opportunity cost range also extends lower than the purchase price.
125. The CEC submits that a purchase price of [REDACTED] could be more defensible.

ENERGY DELIVERY

126. The CEC has reviewed the % of firm energy available from Sechelt Creek as outlined in CONFIDENTIAL B-5-1, BCUC 1.30.2.1 and is satisfied with the appropriateness of the information and evidence.

ENVIRONMENTAL CONSIDERATIONS

127. The Sechelt Creek project is an environmentally sustainable project: it has been recognized for its environmental stewardship, including efforts to enhance the salmon run in Sechelt Creek and has received a UNESCO prize for excellence in sustainable hydropower development. The Sechelt Creek IPP provided information in relation to salmon migration enhancement and associated environmental and financial benefits attributable to the project as outlined in BC Hydro's Final Arguments at pages 9-10.⁶⁹
128. The CEC is of the view that the environmental benefits are important but not significantly definitive in the proceeding.

RISK ASSESSMENT

129. BC Hydro outlines a risk assessment for Sechelt Creek in the application, which includes attrition, financial, permitting/environmental, technical and network upgrade costs.⁷⁰
130. The CEC has reviewed the evidence related to the risks associated with the IPP and finds there to be a low risk.

RELIABILITY

131. The CEC has reviewed the Engineering Report [REDACTED] and provided in CONFIDENTIAL B-5-1, BCUC 1.34.1.
132. The CEC is satisfied with the condition of the hydroelectric facility and its expected longevity given normal maintenance and prudent management.

⁶⁹ BC Hydro Final Argument pages 9-10

⁷⁰ Exhibit B-1-1-2 pages 12-14

CONTRIBUTION TO THE PROVINCE

- [REDACTED]
134. As noted above, the CEC recommends that the Commission provide little weight to the contribution to the Province because of offsetting contributions in the alternative.

FUTURE OF SECHELT CREEK IF NOT RENEWED

135. BC Hydro states [REDACTED]
136. The CEC submits that it is reasonable to consider that BC Hydro is not necessarily needed by the IPP to remain solvent.

CONCLUSION ON SECHELT CREEK

137. The CEC finds that although the Sechelt Creek EPA renewal is beneficial in delivering a high proportion of its annual energy during BC Hydro's peak load months, and has a high annual capacity factor, it does not provide significant benefits in the absence of load requirements, and is otherwise not or only marginally cost effective.
138. The CEC submits that the benefits of the Sechelt Creek project including the impact on salmon run are important and it could be appropriate for BC Hydro to consider renegotiating the term and/or the price for EPA renewal.
139. To the extent that the IPP can achieve better prices from alternative purchasers they should do so.
140. The CEC recommends that the Commission deny the IPP renewal as it is undertaken at this point.

Brown Lake EPA Renewal

- [REDACTED]
142. It also provides storage benefits to BC Hydro and an estimated 6 MW of dependable capacity.⁷⁴

⁷¹ Exhibit B-5-1, BCUC 1.6.1

⁷² Exhibit B-1-1-2, page 16

⁷³ Exhibit B-1-1-2, page 16

⁷⁴ BC Hydro Final Argument pages 11-12

143. The Brown Lake EPA delivers a high proportion of its annual energy during BC Hydro's peak load months and a low proportion of its annual energy during the freshet season.

COST EFFECTIVENESS

[REDACTED]

⁷⁵ Exhibit B-14-1, CEC 2.2.2

⁷⁶ Exhibit B-7-1, CEC 1.2.2

⁷⁷ Exhibit B-14-1, BCOAPO 2.2.2

⁷⁸ Exhibit B-14-1, BCOAPO 2.11.1 and CEC 1.8.3

⁷⁹ Exhibit B-6, BCUC 1.2.3

⁸⁰ Exhibit B-14-1, BCOAPO 2.6.2

⁸¹ Exhibit B-14-1, BCOAPO 2.11.1 and CEC 1.8.3

⁸² Exhibit B-14-1, BCOAPO 2.6.2

⁸³ Exhibit B-14-1, BCOAPO 2.6.2

⁸⁴ Exhibit B-5-1, BCUC 1.8.1

⁸⁵ Exhibit B-14-1, BCOAPO 2.6.2

⁸⁶ Exhibit B-14-1, BCOAPO 2.6.2

[REDACTED]

EPA Renewal	Rate Impact using BCUC Staff Model ⁴	Rate Impact using BC Hydro Model and Interim Market Approach ⁵
Brown Lake EPA	-0.010% to 0.029%	0.000% to 0.032%

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- 149. The CEC notes that the Rate Impact using BC Hydro model and the Interim Market Approach suggests a very limited potential benefit and the largest potential cost impact to ratepayers of the 3 EPAs.
- 150. The CEC notes that using the BC Hydro Model and Interim Market Approach, the Brown Lake EPA suggests no beneficial rate impacts, and some potential cost impacts.
- 151. However, there is a potential for the costs to be mitigated through the capacity credit available in this EPA.

Capacity Credit

[REDACTED]

- 153. The normalized Monthly profile percentage is provided in CEC Confidential IR 1.13.2.

[REDACTED]

[REDACTED]

[REDACTED]

- 157. The CEC is of the view that it is appropriate to consider the capacity credit when evaluating the opportunity cost of the Brown Lake IPP.

⁸⁸ BC Hydro Supplemental Final Argument page 4

⁸⁹ Exhibit B-7-1, CEC 1.13.2

⁹⁰ Exhibit B-1-1 page 16

⁹¹ Exhibit B-12-1 BCUC 2.10.3.2

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

161. Overall the CEC submits that the rate impacts when considering capacity credits could potentially be beneficial depending on the level of capacity credit used.

ENERGY DELIVERY

162. The CEC has reviewed the % of firm energy available from Brown Lake as outlined in CONFIDENTIAL B-5-1, BCUC 1.30.2.1.

163. The CEC is satisfied with the BC Hydro evidence relating to available energy from the Brown Lake EPA.

SUPPORT FOR PRINCE RUPERT

164. Storage capability at the Brown Lake facility allows BC Hydro to support local reliability in the Prince Rupert area acting as a standby resource in case of a forced or planned outage for BC Hydro’s transmission line.⁹⁴

[REDACTED]

[REDACTED]

167. The CEC submits that this is a significant benefit from the Brown Lake EPA and should be provided with moderate weight in the Commission’s deliberations.

⁹³ Exhibit B-14-1, BCOAPO.2.6.2
⁹⁴ BC Hydro Final Argument page 12
⁹⁵ CONFIDENTIAL Exhibit B-15, CEC 1.2.3.1

RISK ASSESSMENT

[REDACTED]

[REDACTED]

170. The CEC has reviewed the evidence related to the risks associated with the IPP and finds there to be a low risk.

RELIABILITY

[REDACTED]

172. The CEC has reviewed the evidence related to reliability and is satisfied with the reliability of the project.

FUTURE OF BROWN LAKE IF NOT RENEWED

[REDACTED]

174. The CEC submits that this is a positive situation.

175. The EPA potentially speaks to the ability for BC Hydro to renegotiate a shorter term with the IPP.

CONTRIBUTION TO THE PROVINCE

[REDACTED]

177. As noted above, the CEC recommends that the Commission provide little weight to the contribution to the Province because of the offsetting benefits in the alternative.

⁹⁶ Exhibit B-1-1 pages 20-22

⁹⁷ Exhibit B-1-1 page 22

⁹⁸ Exhibit B-1-1 page 22

⁹⁹ Exhibit B-1-1 page 23

¹⁰⁰ Exhibit B-5-1 BCUC 1.6.2

CONCLUSION BROWN LAKE

- 178. The CEC finds that the Brown Lake EPA offers one of the more cost effective of the IPP resources being evaluated, but only when considering the additional capacity values.
- 179. The CEC notes that it is also a relatively small IPP project compared to Sechelt Creek.
- 180. The CEC recommends that, to the extent the Commission supports BC Hydro entering into longer term EPA renewals, then the Brown Lake renewal could be potentially approved.

Walden North EPA Renewal

- 181. The Walden North EPA is a run-of-river hydroelectric facility located on Cayoosh Creek near the confluence of Cayoosh Creek and the Seton River, near Lillooet, BC. It is just downstream of BC Hydro's Seton Dam.¹⁰¹
- [REDACTED]

- 183. The IPP provides water diversion benefits to BC Hydro by enabling the continued diversion of water from Cayoosh Creek into Seton Lake, and the project is partly owned by the First Nation whose traditional territory the facility is located within.
- [REDACTED]
- [REDACTED]

COST EFFECTIVENESS

- 186. BC Hydro provides the levelized price over the term of the EPA renewal in CONFIDENTIAL Exhibit B-1-1, page 5.
- [REDACTED]
- [REDACTED]

¹⁰¹ Exhibit B-1-1 page 24

¹⁰² Exhibit B-1-1 page 24

¹⁰³ Exhibit B-1-1 page 25

¹⁰⁴ Exhibit B-1-1 page 25

¹⁰⁵ Exhibit B-14-1, BCOAPO 2.2.3

¹⁰⁶ Exhibit B-15, CEC 2.5.2

[REDACTED]

Forbearance Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰⁷ Exhibit B-7-1, CEC 1.2.2

¹⁰⁸ Exhibit B-6, BCUC 1.4.2

¹⁰⁹ Exhibit B-6, BCUC 1.3.1

¹¹⁰ Exhibit B-6, BCUC 1.3.1

¹¹¹ Exhibit B-6, BCUC 1.3.3

¹¹² Exhibit B-7-1, CEC 1.22.1

¹¹³ Exhibit B-6, BCUC 1.3.1

¹¹⁴ Exhibit B-1-1 page 27

¹¹⁵ Exhibit B-6, BCUC 1.3.2

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

201. The CEC submits that the appropriate assessment of the cost-effectiveness of the renewal should consider the costs of renewing versus the costs of continuing with the existing EPA.

[REDACTED]

Summary of Walden North Cost Effectiveness Assessment

[REDACTED]

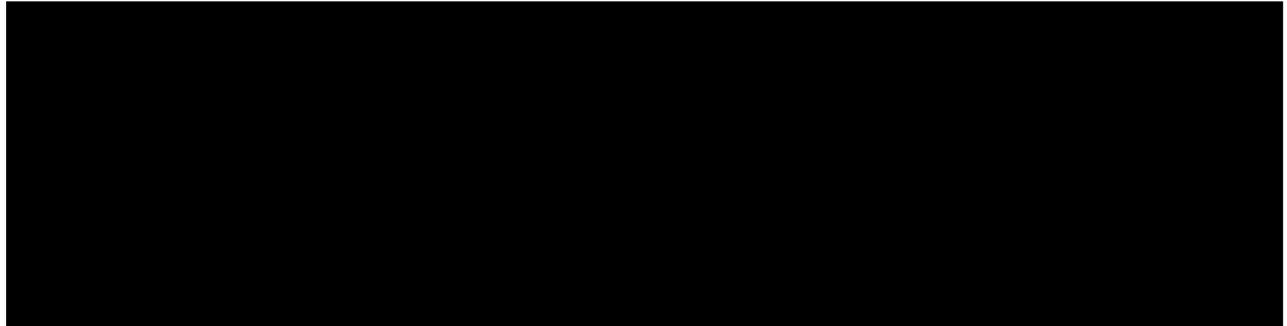
¹¹⁶ Exhibit B-6, BCUC 1.3.2

¹¹⁷ Exhibit B-6, BCUC 1.3.2 and 1.3.5

¹¹⁸ Exhibit B-15, CEC 2.5.1

¹¹⁹ Exhibit B-14-1, BCOAPO 2.11.1

204. The following provides the relevant portions of the cost evidence for Walden North noted above.



EPA Renewal	Rate Impact using BCUC Staff Model ⁴	Rate Impact using BC Hydro Model and Interim Market Approach ⁵
Walden North EPA	0.001% to 0.038%	-0.015% to 0.022%



207. The Walden North EPA has the highest potential benefits to ratepayers (-0.015%) on a rate impact basis and the lowest potential cost impact (+0.022%) of the three EPAs under the BC Hydro and Interim Market Approach assessments.

208. The CEC submits that the Walden North IPP renewal appears to be reasonably cost effective based on these criteria.

¹²⁰ Exhibit B-14-1, BCOAPO 2.6.2

¹²¹ Exhibit B-14-1, BCOAPO 2.11.1 and CEC 1.8.3

¹²² Exhibit B-14-1, BCOAPO 2.6.2

¹²³ Exhibit B-14-1, BCOAPO 2.6.2

¹²⁴ Exhibit B-5-1, BCUC 1.8.1

¹²⁵ Exhibit B-14-1, BCOAPO 2.6.2

¹²⁶ Exhibit B-14-1, BCOAPO 2.6.2



ENVIRONMENTAL AND FIRST NATIONS BENEFITS

- 209. The Walden North IPP provides a lengthy statement with regard to environmental and other benefits which are outlined in BC Hydro's Final Argument at pages 19-21.
- 210. The CEC finds these benefits to be important and recommends that the Commission assign moderate weight to these considerations during their deliberations.

REFURBISHMENT

- 211. If the Walden North EPA renewal is accepted, the Walden North IPP is planning to undertake certain refurbishments to restore the facility to its original condition. There are no plans to increase generating capacity.¹²⁸

[REDACTED]

[REDACTED]

- 214. The CEC submits that this is a positive attribute of the project.

CAYOOSH DIVERSION TUNNEL AND DIVERSION AMENDMENT AGREEMENT

- 215. The Cayoosh Tunnel diversion diverts up to 1400cfs of water from Cayoosh Creek to Seton Lake, providing about 24.4 GW/y of incremental heritage generation at the Seton Generating Station.¹³¹
- 216. Diverting Cayoosh Creek flows is also critical for salmon migration.

[REDACTED]

Diversion Amendment Agreement

[REDACTED]

¹²⁸ BC Hydro Final Argument page 28
¹²⁹ Exhibit B-7-1, CEC 1.22.1
¹³⁰ Exhibit B-7-1, CEC 1.22.1
¹³¹ BC Hydro Final Argument page 21
¹³² Exhibit B-1-1 page 30
¹³³ Exhibit B-1-1, page 25

- [REDACTED]
220. If the Walden North EPA renewal is accepted, the Diversion Agreement will continue pursuant to the Walden North Amendment Agreement.¹³⁵
221. The continuation of the Diversion Agreement enables BC Hydro to avoid the potential cost of an alternative diversion structure or other contractual arrangement with the IPP for the length of the EPA renewal.¹³⁶
222. The CEC submits that the updated Diversion Amendment Agreement is a valuable benefit of the EPA and should be weighted moderately in the Commission's assessment of the EPA.

RISK ASSESSMENT

[REDACTED]

[REDACTED]

225. The CEC has reviewed the evidence related to the risks associated with the IPP and finds there to be a low risk.

RELIABILITY

226. The CEC has reviewed the evidence related to reliability and is satisfied with the reliability of the project.

FUTURE OF WALDEN NORTH IF NOT RENEWED

227. BC Hydro states that if the EPA renewal does not proceed, the original EPA has not been terminated and will continue in accordance with its terms and the Forbearance Agreement. The original EPA can be terminated as early as [REDACTED] or can continue for longer with the term of the original EPA and the Forbearance Agreement. If the original EPA terminates there are uncertainties with respect to what it and the Diversion Agreement would be replaced with in the future.¹³⁹

¹³⁴ Exhibit B-1-1, page 32

¹³⁵ Exhibit B-6, BCUC 1.4.2

¹³⁶ Exhibit B-6, BCUC 1.4.1

¹³⁷ Exhibit B-1-1 pages 32-36

¹³⁸ Exhibit B-1-1 page 34

¹³⁹ Exhibit B-6 BCUC 1.3.2

- [REDACTED]
229. The CEC submits that this is a positive situation and the EPA and potentially speaks to the ability for BC Hydro to renegotiate a shorter term with the IPP.

CONTRIBUTION TO THE PROVINCE

- [REDACTED]
231. As noted above, the CEC recommends that the Commission provide little weight to the contribution to the Province.

CONCLUSION WALDEN NORTH

232. The CEC finds that the Walden North EPA is the most cost-effective of the EPAs with the renewal price being approximately the same as the interim market valuation.
233. The CEC notes that it is also has additional environmental and technical benefits to BC Hydro.
234. The CEC recommends that, to the extent the Commission supports BC Hydro entering into longer term EPA renewals, then the Walden North renewal could be reasonably approved.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

David Craig

David Craig, Consultant for the Commercial Energy Consumers Association of British Columbia



Christopher P. Weafer, Counsel for the Commercial Energy Consumers Association of British Columbia

¹⁴⁰ Exhibit B-6 BCUC 1.3.2

¹⁴¹ Exhibit B-5-1 BCUC 1.6.2