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August 30, 2017

Sent By E-mail

British Columbia Utilities Commission
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Attention: Patrick Wruck, Commission Secretary

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Your reference

Our reference
17-4034

Dear Sirs/Mesdames:

Association of Major Power Customers (AMPC) – Site C Inquiry Submission to the BC Utilities Commission (BCUC)

We are legal counsel to the AMPC in this matter. Please see enclosed AMPC's Submission to the BCUC for the Site C Inquiry.

Please contact the writer if you have any questions.

Yours very truly,

Matthew D. Keen

MDK/roe

Enclosure

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BRITISH COLUMBIA UTILITIES COMMISSION

INQUIRY RESPECTING SITE C

SUBMISSION OF THE ASSOCIATION OF MAJOR POWER CUSTOMERS OF BC

August 30, 2017

British Columbia Utilities Commission

Association of Major Power Customers of BC ("AMPC")

Submission regarding Inquiry Respecting Site C

I. INTRODUCTION

1. AMPC is a longstanding industry association that represents major industrial operators in BC, including the pulp and paper, forestry, mining, electrochemical and petrochemical industries, in matters of electricity regulation. AMPC's members provide many natural resources and industrial sector jobs throughout BC. Many of these operators are energy intensive and trade-exposed ("**EITE**") customers who are disproportionately affected by changes to industrial electricity rates. AMPC's mandate is to ensure that industrial customers' electricity rates in BC are competitive, fair, and efficient. Any industrial rate increases, including those attributable to Site C project costs, have a direct effect on AMPC's members. AMPC therefore takes a strong interest in the outcome of the Commission's inquiry respecting the Site C project.

2. On August 2, 2017, the Lieutenant Governor issued an Order in Council directing the BC Utilities Commission ("**Commission**") to review the Site C project ("**Inquiry**") based on the following Terms of Reference ("**TOR**"):

   a. What are the implications, including costs to ratepayers, of (i) completing the Site C project by 2024, (ii) suspending the Site C project while maintaining the option to resume construction until 2024, and (iii) terminating construction and remediating the site?

   b. Is the project on time and within the proposed $8.335 billion budget, excluding the $440 million project reserve established and held by the province?

   c. What are the mechanisms available to recover any costs associated with suspending or terminating the project?

   d. Given the objectives of the *Clean Energy Act*, could any other portfolio of generating projects and DSM initiatives provide similar benefits (including firming, shaping, storage, grid reliability and maintenance or reduction of GHG emissions) at similar or lower energy cost as the Site C project?

3. In response, on August 9, 2017, in Order G-120-17, the Commission established a procedural schedule for the Inquiry, providing an opportunity for members of the public and BC Hydro to (i) submit data and other relevant information by August 30, and (ii) submit comments on the Commission's Interim Report (due September 20) by October 11.

4. At this time, AMPC takes no position concerning whether or not the Site C project ought to proceed. Accordingly, this submission does not address issues a, b, or d listed above. Instead, this submission begins by identifying the dollar amounts associated with the Site C project, and focusses on issue c, providing the Commission with information relevant to its consideration of how to recover Site C costs from ratepayers, however the project proceeds, from the perspective of industrial customers.

5. In short, to minimize the harm to BC's competitive environment, the Commission should phase in all Site C costs to be recovered from ratepayers (whether attributable to project cancellation or placing the project in service) slowly and carefully. In particular, the Commission should continue the pace of the "10-Year Rate Plan" previously established by government and in place at the

moment, even though the 10-Year Rate Plan does not account for Site C costs.[1] As AMPC has argued in recent Commission proceedings, that means ensuring that BC Hydro's annual rate increases beyond fiscal 2019 are limited to no more than the 2.6% that industry is planning for.

6. Doing so will help keep BC electricity rates competitive relative to other jurisdictions, for both existing businesses and new industrial investment. In contrast, if electricity rates increase by more than 2.6%, that heightens the risk of destroying demand, i.e., existing industrial customers will scale or shut down operations, or even transfer production to other jurisdictions. In turn, these consequences would negatively affect jobs in BC, as well as all BC Hydro ratepayers, who would then have to bear a greater proportion of BC Hydro costs.

II. SUBMISSIONS

A. Site C Project Costs and Potential Overruns are Significant

7. The magnitude of the costs at issue on the Site C project is well known – media and BC Hydro reports characterize Site C as the largest public infrastructure project in BC's history. Even if the project does not proceed, ratepayers will still bear significant costs. The Commission must therefore carefully scrutinize BC Hydro's costs and timing and consider them relative to the TOR.

8. According to a recent public BC Hydro fact sheet, the Site C project is estimated to cost $8.775 billion. This includes a capital cost estimate of $8.335 billion, and also $440 million held by the Treasury Board to account for uncontrollable costs and $795 million in a contingency fund for cost overruns.[2]

9. BC Hydro's fact sheet also states that as of May 31, 2017, BC Hydro has spent approximately $1.75 billion on the project, and has signed contracts valued at more than $4 billion.[3] BC Hydro has also entered into agreements with Indigenous groups, which may include cash or land payments, although the details of those contracts are confidential.[4]

10. On October 11, 2016, BC Hydro released a report prepared by Ernst & Young and BTY Consultancy Group Inc. ("**E&Y Report**") that concluded that "[g]iven Site C's early stage in its lifecycle, [E&Y and BTY's] review did not find any evidence to suggest that major project milestones and financial targets will not be met. Overall, the Site C project is both clearly defined and well-planned."[5] The E&Y Report also identified that "most of the major cost drivers for Site C have moved in favour of the project, with the exception of the exchange rate with the U.S. dollar."[6] The E&Y Report attributed the lower cost of materials, low interest rates, and an increase in skilled workers to the economic downturn.[7]

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[1] BC Hydro Fiscal 2017 to Fiscal 2019 Revenue Requirement Application, Ex. B-10, BC Hydro Responses to Intervener IR No. 1, pdf p. 12. Also see, *infra*, para. 16.

[2] "*Site C Clean Energy Project: Site C Fact Sheet*", BC Hydro (July 2017) online: <https://www.sitecproject.com/sites/default/files/site-c-fact-sheet-july-2017_0.pdf> ("**Fact Sheet**").

[3] Fact Sheet.

[4] Fact Sheet.

[5] Ernst & Young and BTY Consultancy Group Inc. "Site C Clean Energy Project – Infrastructure risk and cost management report." (13 September 2016), p. 1, online: <https://www.bchydro.com/news/press_centre/news_releases/2016/site-c-ey-bty-review.html> . Also see Dirk Meissner. "Site C dam on time and on budget, says Ernst and Young", The Canadian Press (11 October 2016) online: CBC <http://www.cbc.ca/news/canada/british-columbia/site-c-dam-on-time-and-on-budget-says-ernst-and-young-1.3801037>.

[6] E&Y Report, p. 26.

[7] E&Y Report, pp. 24-25.

11. However, documents filed by BC Hydro to the Commission on June 10, 2016 suggested that the project was over budget by $314 million as of that date.[8] Subsequently, BC Hydro filed its most recent public quarterly progress report, which states that as of March 31, 2017, the project is over budget by $482 million.[9]

12. Irrespective of whether Site C is cancelled, completed on budget, or completed with cost exceedances in the range of either (i) current figures, or (ii) critics' fears, unmanaged recovery of Site C costs will have a significant rate impact.

B. Mitigate Uncompetitive Rate Increases

(1) Overview

13. As discussed below, BC is losing ground in Canada when it comes to electricity pricing. Annual rate increases of greater than 2.6% will exacerbate this trend, and will have significant effects on industrial rate class customers like AMPC's members. On this basis, AMPC suggests the Commission adopt measures to limit annual rate increases to a maximum of 2.6%, phasing-in any rate increases slowly.

14. As noted in BC Hydro's recent Fiscal 2017 to Fiscal 2019 Revenue Requirements Application ("**RRA**"), industrial customers constitute a material component of BC Hydro's total load, approximately 27%.[10] AMPC members, in turn, make up approximately 80% of BC Hydro's Transmission Service Rate ("**TSR**") customers.

15. AMPC participated as an intervener in the RRA and filed Information Requests, Evidence, and Final Argument that focused on concerns relating to increases in BC Hydro's industrial rates. The same concerns are relevant here, including that:

    a. *BC Hydro's industrial rates have rapidly increased since F2011 and are becoming increasingly uncompetitive compared to other provinces in Canada.*

    b. *Increasingly uncompetitive electricity rates heighten the risk of existing customers scaling or shutting down their operations, or transferring production to other jurisdictions, which slows new industrial investment in BC. Any such "demand destruction" will negatively affect all BC Hydro ratepayers, who will have to bear a greater proportion of costs.*

    c. *The Commission and BC Hydro must understand the risk that BC Hydro's rate increases pose to the industrial load forecast when approving the rate-smoothing deferral account now….*[11]

[8] BC Hydro. "Site C Clean Energy Project – Quarterly Progress Report No. 3. F2016 Fourth Quarter – January 2016 to March 2016." (10 June 2016), Table 16, p. 25, online: <https://www.sitecproject.com/document-library/quarterly-progress-reports-to-the-bcuc>.
[9] BC Hydro. "Site C Clean Energy Project – Quarterly Progress Report No. 7. F2017 Fourth Quarter – January 2017 to March 2017." (16 June 2017), Table 14, p. 32, online: <https://www.sitecproject.com/document-library/quarterly-progress-reports-to-the-bcuc>. Also see, *infra*, para. 18.
[10] Ex. C-9-7, AMPC Evidence, Q/A 2, p. 3. Also, Ex. B-1-1, BC Hydro F2017-F2019 Revenue Requirement Application ("**BC Hydro Application**"), p. 3-9.
[11] AMPC Final Argument, para. 2.

(2) Site C Cost Effects

16. BC Hydro confirmed in its response to AMPC Information Request No. 1.1.5 in the RRA that Site C costs are outside the 10-Year Rate Plan:

> *The 2013 10 Year Rates Plan did not include the Site C Clean Energy Project as the Project was not yet approved when the Plan was announced. In other words, the 2013 10 Year Rates Plan target annual rate increase of 2.6 per cent per year from fiscal 2020 to fiscal 2024 did not include the impacts of the generating asset capital additions related to the Site C Clean Energy Project.*[12] [emphasis added]

17. BC Hydro maintains a regulatory account for the Site C project. After the provincial government's Final Investment Decision on the project, BC Hydro began to capitalize Site C work, applicable to some of the amounts already entered into the account.[13] In the RRA, BC Hydro noted that it was "not requesting approval of a recovery mechanism for the [Site C] regulatory account with this application. BC Hydro will request a recovery mechanism for the regulatory account in a future application."[14] The amounts in the Site C regulatory account are as follows:[15]

BC Hydro
F17-F19 RRA

Other Regulatory Accounts
($ million)

Line		Reference	F2015 RRA	F2015 Actual	F2015 Diff	F2016 RRA	F2016 Actual	F2016 Diff	F2017 Plan	F2018 Plan	F2019 Plan
	Column		1	2	3 = 2 - 1	4	5	6 = 5 - 4	7	8	9
	Site C Clean Energy Project										
24	Beginning of Year		361.6	338.0	(23.7)	376.9	418.7	41.8	435.6	453.2	471.6
25	Additions	5.0 L53	0.0	65.4	65.4	0.0	0.0	0.0	0.0	0.0	0.0
26	Interest		15.2	15.3	0.1	16.8	16.9	0.1	17.6	18.4	19.5
27	Recovery	5.0 L30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	End of Year		376.9	418.7	41.8	393.7	435.6	41.9	453.2	471.6	491.1

18. According to BC Hydro's most recently filed quarterly progress report, the total project expenditures to March 31, 2017 are as follows:[16]

Table 14 Total Project Expenditure Summary ($ million Nominal) Compared to Final Investment Decision

Description	Final Investment Decision	Forecast	Final Investment Decision Plan to Date	Actuals to March 31, 2017	Variance
Total Project Costs	8,335	8,335	1,149	1,631	(482)
Treasury Board Reserve	440	440	0	0	0
Authorized Project Cost	8,775	8,775	1,149	1,631	(482)

[12] Ex. B-10, BC Hydro Responses to Intervener IR No. 1, pdf p. 12.
[13] Ex. B-1-1, BC Hydro Application, pdf pp. 529-530.
[14] Ex. B-1-1, BC Hydro Application, pdf p. 530.
[15] Ex. B-1-1, BC Hydro Application, pdf p. 663. A high-quality version of this table is reproduced in Appendix A to this Submission.
[16] BC Hydro. "Site C Clean Energy Project – Quarterly Progress Report No. 7. F2017 Fourth Quarter – January 2017 to March 2017." (16 June 2017), Table 14, p. 32, online: <https://www.sitecproject.com/document-library/quarterly-progress-reports-to-the-bcuc>.

(3) AMPC Rate Concerns

19. Given the significant capital expenditures associated with the Site C project, the amounts already in the Site C regulatory account, and the fact that the 10-Year Rates Plan does not account for Site C costs, AMPC is obviously concerned that associated rate increases will significantly exceed the currently planned 2.6% annual rate increases under the 10-Year Rates Plan.

20. The concerns that AMPC raised in the RRA relating to rapid increases in BC Hydro's industrial rates, the growing uncompetitiveness of electricity rates in BC, the consequences for existing industrial customers and new investments, and load forecast accuracy are directly relevant to this Inquiry. Recovering Site C costs in a way that accelerates rate increases will make electricity rates increasingly uncompetitive. To the extent rate increases lead to industrial demand destruction, it is to the detriment of all ratepayers in BC.

21. In its evidence in the RRA, AMPC prepared the following table based on Hydro Quebec survey results showing the relative ranking of overall electricity rates for industrial customers across Canadian jurisdictions:[17]

		Price, $.01/kWh							Relative Ranking						
Industrial - 1823 Tier 1		F2011	F2012	F2013	F2014	F2015	F2016	F2017	F2011	F2012	F2013	F2014	F2015	F2016	F2017
Montréal.	QC	4.55	4.53	4.51	4.62	4.78	4.90	4.90	4	4	4	4	3	5	5
Calgary,	AB	5.03	6.80	8.28	14.02	7.40	4.74	4.80	5	6	8	12	7	3	4
Charlottetown,	PEI	9.58	8.36	8.36	8.53	8.71	8.90	9.12	12	9	9	8	9	11	11
Edmonton,	AB	6.98	8.49	6.97	13.13	7.51	4.22	4.02	8	10	7	11	8	2	1
Halifax,	NS	7.61	8.07	9.00	9.33	9.86	10.02	10.02	9	8	10	9	10	12	12
Moncton,	NB	6.66	6.86	6.86	6.86	7.00	7.14	7.25	7	7	6	7	6	10	10
Ottawa,	ON	8.64	9.51	10.58	6.20	10.87	6.13	4.52	10	11	12	6	11	8	3
Regina,	SK	6.09	6.24	5.67	5.95	6.32	6.55	6.71	6	5	5	5	5	9	9
St. John's	NL	3.98	3.98	3.98	3.98	4.77	4.77	4.90	3	2	2	2	2	4	5
Toronto,	ON	9.40	9.64	10.46	10.81	11.03	5.55	4.99	11	12	11	10	12	7	7
Vancouver,	BC	**3.88**	**4.19**	**4.50**	**4.58**	**4.99**	**5.29**	**5.49**	**2**	**3**	**3**	**3**	**4**	**6**	**8**
Winnipeg,	MB	3.55	3.62	3.69	3.78	3.91	4.02	4.18	1	1	1	1	1	1	2

22. AMPC's Final Argument in the RRA summarized its evidence regarding rate increases and competitiveness:

> *8. While BC Hydro rates have historically been competitive for industrial users, AMPC's filed Evidence in the RRA proceeding shows that BC Hydro's rates for industrial customers connected at transmission voltage under Rate Schedule 1823 are becoming uncompetitive, irrespective of whether realistic (Tier 1 weighted) or conservative (non-trivial Tier 2 purchases) assumptions are made.*
>
> *9. There have been alarming rate increases for the TSR class in BC since F2011:*
>
> - *Tier 1 pricing has increased by 42%, an increase of 51% when the cumulative impact of PST is included (recognizing that PST is poised to change).*[18]
> - *AMPC prepared both conservative and realistic analyses of the Hydro Quebec study [that was cited in AMPC's Evidence and contained a study of electricity rates across Canadian jurisdictions], and both confirm the rapid escalation of BC's industrial rates relative to other regions in Canada.*

[17] AMPC Final Argument, para. 9, citing Ex. C-9-7, AMPC Evidence, Appendix A. A high-quality version of this table is reproduced in Appendix A to this Submission.
[18] Ex. C-9-7, AMPC Evidence, Q/A 3, p. 4.

- *As these increases surpass those of any other Canadian jurisdiction, they risk adverse effects to existing and future industrial customers and the competitiveness of the BC economy.*

- *Specifically, BC Hydro's industrial rates are the fourth most expensive out of the 12 Canadian locations surveyed, up from the second lowest-cost jurisdiction in less than five years. In other words, most of the locations now offer cheaper industrial rates than BC does.*[19]

23. AMPC's conclusions in the RRA regarding the effects of rate increases on EITE customers specifically and industrial demand are equally applicable to this proceeding:

> *[Industrial loads] that are energy intensive and trade exposed are, by definition, especially vulnerable to the effect of rate increases that continue to exceed the pace of inflation, particularly compared to other rate classes. Energy comprises a significant proportion of their costs, and their revenues are driven by external market prices, meaning energy costs directly affect profitability. All customers are harmed if industrial load is lost and BC Hydro's costs are spread over the remaining customer base. It is the combination of those two factors that make EITE customers unique and in need of careful consideration in the context of BC Hydro's load forecast.*[20]

III. Conclusion

24. In conclusion, AMPC recommends that the Commission adopt rate increase deferral measures that mitigate the potentially profound impact that Site C costs will have over both the short term and long term. To protect industrial competitiveness within BC and associated jobs, AMPC recommends that any future BC Hydro rate increases, including costs arising from Site C, continue to target the 10-Year Plan's F2020-2024 level of 2.6% per year.

All of which is respectfully submitted this 30th day of August, 2017.

Norton Rose Fulbright Canada LLP

Matthew D. Keen

Emily Chan

Counsel to the Association of Major Power Customers of British Columbia

[19] AMPC Final Argument, paras. 8-9, citing Ex. C-9-7, AMPC Evidence and Ex. B-1-1 BC Hydro Application. Footnotes from original omitted.

[20] AMPC Final Argument, para. 24, citing Ex. C-9-8, AMPC response to BCUC IR 2.1.1, p. 3. While AMPC raised other relevant concerns in the RRA regarding load forecasting and demand elasticity (Final Argument, paras. 16-35 and 42-52), it does not address these points here given the Commission hearing panel's "key findings" issued August 25, 2017. They include an acknowledgement of AMPC's concerns regarding price elasticity and recognition of industrial load forecast risk (pp. 6 and 12, respectively).

APPENDIX A

Reproduction of table at paragraph 17:

BC Hydro
F17-F19 RRA

Other Regulatory Accounts
($ million)

Line	Column	Reference	F2015 RRA	F2015 Actual	F2015 Diff	F2016 RRA	F2016 Actual	F2016 Diff	F2017 Plan	F2018 Plan	F2019 Plan
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26	Interest		15.2	15.3	0.1	16.8	16.9	0.1	17.6	18.4	19.5
27	Recovery	5.0 L30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	End of Year		376.9	418.7	41.8	393.7	435.6	41.9	453.2	471.6	491.1

Reproduction of table at paragraph 21:

Industrial - 1823 Tier 1		**Price, $.01/kWh** F2011	F2012	F2013	F2014	F2015	F2016	F2017	**Relative Ranking** F2011	F2012	F2013	F2014	F2015	F2016	F2017
Montréal.	QC	4.55	4.53	4.51	4.62	4.78	4.90	4.90	4	4	4	4	3	5	5
Calgary,	AB	5.03	6.80	8.28	14.02	7.40	4.74	4.80	5	6	8	12	7	3	4
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Vancouver,	BC	**3.88**	**4.19**	**4.50**	**4.58**	**4.99**	**5.29**	**5.49**	**2**	**3**	**3**	**3**	**4**	**6**	**8**
Winnipeg,	MB	3.55	3.62	3.69	3.78	3.91	4.02	4.18	1	1	1	1	1	1	2