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October 7, 2019

Sent By E-mail

British Columbia Utilities Commission
Suite 410, 900 Howe St.
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Attention: Patrick Wruck, Commission Secretary

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Dear Mr. Wruck:

**BC Hydro and Power Authority Fleet Electrification Rate Application
Association of Major Power Customers of BC ("AMPC") – Information Requests No. 1**

We are legal counsel to AMPC in this matter and write to enclose AMPC's IR No. 1 to BC Hydro.

Please contact the writer if you have any questions.

Yours very truly,



Matthew D. Keen

MDK/roe

Enclosure

CAN_DMS: \129860930\1

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Association of Major Power Customers of British Columbia (AMPC)

British Columbia Hydro (BC Hydro)
BC Hydro and Power Authority Fleet Electrification Rate Application
Project No. 1599032

INFORMATION REQUEST (IR) NO. 1 TO BC HYDRO

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REQUESTOR NAME: **Association of Major Power Customers of BC (AMPC)**

INFORMATION REQUEST ROUND NO: **1**

TO: **BC Hydro**

DATE: **October 7, 2019**

PROJECT NO: **1599032**

APPLICATION NAME: **British Columbia Hydro and Power Authority – Fleet Electrification Rate Application**

1.0 Economic Justification

Reference: **Exhibit B-1, pp. 11, 36, and 45-47**

BC Hydro states in its Application:

- “The Demand Transition Rate, as proposed, is justified on an economic basis. Because the incremental revenues from this new type of load exceed BC Hydro’s marginal costs of service, it will provide benefits to ratepayers over time. The Demand Transition Rate does not recover its full embedded cost of service, and for this reason the Demand Transition Rate would transition to the LGS Rate over six years” (p. 11).
- “BC Hydro estimates that the incremental revenues received from new load served under the Overnight Rate will meet or exceed the marginal cost of serving new load. Therefore, ratepayers will not be harmed, and are expected to benefit from the new load, even if that new load is billed at a lower rate than existing load” (p. 36).
- “[e]ven during the period where BC Hydro does not fully recover its embedded cost of service, all rate payers are still better off if the incremental revenue from this proposed new Service exceeds BC Hydro marginal costs to serve the new load” (p. 45).
- “the incremental revenues received from new load served under the Demand Transition Rate will exceed the marginal cost of serving new load in the ten and fifteen year time periods. Therefore, ratepayers benefit from the new load in the medium and longer term” (p. 46).

In Table 7, BC Hydro provides the following table showing the Demand Transition Rate Ratepayer Impacts:

Table 7 Demand Transition Rate Ratepayer Impacts

Time Period for Load Factor	F2021 - F2025	F2026 - F2029	F2030 - F2034
Load Factor	15%	30%	52%
Time Period used for Ratepayer Benefit Cost Analysis	5 Years F2020-F2024	10 Years F2020-F2029	15 Years F2020-F2034
Ratepayer Benefit Cost Ratio	0.74	1.04	1.16

AMPC is seeking further clarification about the economic justification BC Hydro provides for the proposed Demand Transition Rate.

- 1.1 Are ratepayers are “better off” in the short-term period (i.e., from F2020-F2024) when BC Hydro does not fully recover its embedded cost of service? Please explain.

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- 1.2 Please confirm that the long-term benefits to all ratepayers over periods of ten years or longer outweigh the costs that are not recovered from Demand Transition Rate ratepayers in the short-term (i.e., from F2020-F2024), and form part of the “economic justification” for the Demand Transition Rate. If not confirmed, please fully explain your response.
- 1.3 For each of the rate structures proposed, please explain how BC Hydro quantified and balanced the impacts of its proposal in reducing barriers to fleet electrification against the impacts to existing ratepayers.
- 1.4 For the Demand Transition Rate proposal, which proposes no demand charge for six years followed by a demand charge that transitions to the LGS rate over the next six years, please explain how BC Hydro established this timeline for transition in relation to the overall economics of the proposed rate design and impacts on all ratepayers (both current and new customers under this proposed new rate).

2.0 Economic Justification

Reference: [**Exhibit B-1, p. 13**](#)

On p. 13, BC Hydro states:

In the case of rates that are intended to advance a public policy purpose, such as the reduction of GHGs, the Commission has determined that they must be able to stand independently on an economic or cost-of-service basis, regardless of the merits of the public policy purpose.

In footnote 6, BC Hydro states:

See, for example, section 7.1 of the Commission’s decision regarding BC Hydro’s 2015 Rate Design Application, where the Commission considered its jurisdiction to establish rates to advance the public policy purpose of mitigating poverty through preferential rates for low-income customers.

Reference: [**BC Hydro and Power Authority 2015 Rate Design Application, Decision and Order G-5-17, dated January 20, 2017**](#)

On p. iv, the Commission Panel states:

In summary, the Panel finds that low income rates unsupported by an economic or cost of service justification are unjust, unreasonable and unduly discriminatory and are therefore not in accordance with section 59 of the *UCA*. The Panel finds no evidence of legislative intent to provide the Commission with jurisdiction to set low income rates and there is no evidence the legislature intended the *UCA* to provide jurisdiction for low-income rates in the absence of an economic or cost of service justification.

On p. 53, the Commission Panel states:

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The Panel is not persuaded that sections 23 and 38 of the *UCA* explicitly grant the Commission jurisdiction to set a low-income rate, in the absence of an economic or cost of service justification.

AMPC is seeking to better understand the basis for BC Hydro's assertion that a cost-of-service or economic basis is justification for any proposed rates intended to advance a public policy purpose.

- 2.1 Please confirm that the Panel identified a requirement for BC Hydro to provide an economic or cost-of-service justification in relation to BC Hydro's proposal for a low income rate, and not for any proposed rates intended to advance a public policy purpose. If not confirmed, please fully explain your response and provide references to all relevant Commission decisions in support of your response.

3.0 Economic Justification

Reference: **Exhibit B-1, p. 36**

On p. 36, BC Hydro states:

The Overnight Rate design is justified on an economic basis. BC Hydro estimates that the incremental revenues received from new load served under the Overnight 9 Rate will meet or exceed the marginal cost of serving new load. Therefore, ratepayers will not be harmed, and are expected to benefit from the new load, even if that new load is billed at a lower rate than existing load.

- 3.1 Please confirm that BC Hydro's conclusion cited above ("that the incremental revenues ... will meet or exceed the marginal cost of serving new load" and "ratepayers will not be harmed, and are expected to benefit") still holds true once BC Hydro is out of its energy surplus. If not confirmed, please fully explain your response.
- 3.2 Are any cross-subsidies between rate classes built into the Overnight Rate? Please explain.

4.0 Uncertainty under Demand Transition Rate

Reference: **Exhibit B-1, p. 45**

On p. 45, BC Hydro states "there is considerable uncertainty about the actual timing and load factor of load served under the Demand Transition Rate".

- 4.1 What are the minimum conditions concerning the timing and load factor of load served under the Demand Transition Rate such that ratepayers are held harmless?
- 4.2 Please discuss the risk of BC Hydro not encountering the minimum timing and load factor conditions identified in the response to 4.1 above.

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5.0 Generation Capacity Marginal Cost

Reference: Exhibit B-1, Appendix E, pp. 2-4

On p. 4, BC Hydro provides the following table that summarizes BC Hydro's Marginal Costs, including Generation Capacity for F20-F34:

Table 2 Summary of BC Hydro's Marginal Costs

Marginal Costs	Value	Source	Analysis Marginal Cost Assumption Used
Non-Bulk Transmission Capacity	\$50/kW-year (\$2019) (Area substations cost which includes switching substation and distribution substation costs) assumes \$35/kW-year for distribution substation	BC Hydro current transmission capital plan and load forecast, inflated by CPI	<ul style="list-style-type: none">Demand Transition Rate Base Case and Scenario 1 used \$50 /kW yearOvernight Rate Scenario 1 assumed 30% share of \$35 /kW year distribution substation cost
Distribution Capacity	<ul style="list-style-type: none">System Wide Average: \$25/kW-year (\$2019) (includes distribution wire system cost) OrBC Hydro's Maximum Distribution Extension Contribution: \$15/kW-yr (\$2019)	BC Hydro current distribution capital plan and load forecast, Inflated by CPI. Or <ul style="list-style-type: none">Electric Tariff Section 8	<ul style="list-style-type: none">\$25 /kW-year was used in:<ul style="list-style-type: none">Overnight Rate Scenario 1 (+ \$10 /kW-yr for the distribution substation cost above-\$25+\$10=) \$35/kW-yr)Overnight Rate Scenario 2Demand Transition Rate Scenario 1BC Hydro's estimated Maximum Contribution of \$15 /kW-year was used in Overnight Rate and Demand Transition Rate Base Cases
Energy	Ranges from \$23/MWh in F20 to \$23-34/MWh in F2034	Mid-C Market	<ul style="list-style-type: none">Used in all Base Cases and Scenarios
Generation Capacity	F20-F22: \$38 /kW-year F23-F31 \$60 /kW-year F32-F34 \$123 /kW-year	As cited in BC Hydro F20-F21 Revenue Requirements. Inflated by CPI.	<ul style="list-style-type: none">Demand Transition Rate Base Case and Scenario 1

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On p. 2, BC Hydro provides the following explanation of how BC Hydro sets its Generation Capacity Marginal Costs:

When the system is in a state of capacity surplus (capacity supply is greater than peak demand), BC Hydro continues to set generation capacity marginal costs based on market values, whereas when the system is in a state of capacity deficit, the generation capacity marginal cost is set based upon the next lowest cost new generation in B.C. The marginal (lowest cost new generation) resources are assumed to be Revelstoke Unit 6, followed by a Simple Cycle Gas Turbine (SCGT). The generation capacity marginal cost also includes the marginal cost of bulk transmission, if a need of bulk transmission is necessary.

AMPC is seeking confirmation of the figures and underlying assumptions from Table 2.

- 5.1 Please confirm that the Generation Capacity Marginal Cost figures provided for F20-F22 (\$38 / kW-year), F23-F31 (\$60 / kW-year), and F32-34 (\$123 / kW-year) are all based on generation from Revelstoke Unit 6, followed by a Simple Cycle Gas Turbine. If not confirmed, please fully explain your response.

6.0 Customer Load Forecasts

Reference: Exhibit B-1, pp. 8-9

BC Hydro states in its Application:

The proposed Overnight Rate would be available to BC Hydro customers that are businesses, government agencies or other organizations that own, or lease, and operate electric fleet vehicles or vessels, for separately metered charging with maximum demand equal to or greater than 150 kW.

The proposed Demand Transition Rate would be available to BC Hydro customers that are businesses, government agencies or other organizations that own, or lease, and operate electric fleet vehicles or vessels, for separately metered charging with maximum demand equal to or greater than 150 kW.

- 6.1 For each rate structure, please provide the customer load breakdown by type of customer forecast (i.e., business, government agency, other organization). Please comment on existing electric fleet vehicle customer load and how BC Hydro has forecast growth in its economic and cost-of-service assessments, including timing of growth and customer segment.