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ORDER NUMBER
G-104-20

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

British Columbia Hydro and Power Authority
Transmission Service Market Reference-Priced Rates Application

BEFORE:
T. A. Loski, Panel Chair
A. K. Fung, QC, Commissioner
E. B. Lockhart, Commissioner

on May 1, 2020

ORDER

WHEREAS:

A. On October 31, 2019, the British Columbia Hydro and Power Authority (BC Hydro) filed an application with the British Columbia Utilities Commission (BCUC) seeking approvals of an amended Freshet Rate, Rate Schedule 1892 (Freshet Rate) on a permanent basis and a new optional rate on a pilot basis, the Incremental Energy Rate, Rate Schedule 1893 (IER), pursuant to sections 58 to 60 of the *Utilities Commission Act* (UCA) (Application);

B. The Freshet Rate was approved by Order G-17-16, on a pilot basis, as part of the BC Hydro 2015 Rate Design Application. The Freshet Rate pilot provides participating customers market pricing for incremental consumption during the freshet period (May 1 to July 31 inclusive);

C. By Orders G-45-18, G-106-19 and G-224-19, the BCUC approved extensions to the Freshet Rate pilot and directed BC Hydro to file its application for a permanent Freshet Rate, together with the 2019 Freshet Rate pilot evaluation report, by no later than October 31, 2019;

D. In the Application, BC Hydro requests approval of an amended Freshet Rate to be made available on an ongoing basis, commencing April 1, 2020 with no fixed termination date. BC Hydro has indicated that it is proceeding to enroll customers for the 2020 freshet period on the premise that the BCUC will grant its approval prior to May 1, 2020;

E. As part of the Application, BC Hydro requests that the IER, be approved effective January 1, 2020 on an interim and non-refundable basis, which the BCUC approved via Order G-300-19. The IER is offered on a non-firm, interruptible basis for electricity usage above normal firm service (Rate Schedule 1823 or Rate Schedule 1828) baseline amounts, and is available as a pilot commencing January 1, 2020 until March 31, 2024;

F. By Order G-327-19 dated December 12, 2019, the BCUC established a regulatory timetable for the review of the Application, including a placeholder for a Streamlined Review Process (SRP) scheduled for Tuesday, March 17, 2020;

G. By Exhibit A-5 letter dated March 2, 2020, the BCUC established that the scope of the SRP will address the Freshet Rate component of the Application;

H. By Order G-49-20 dated March 12, 2020, the BCUC cancelled the SRP due to COVID-19 pandemic concerns and amended the regulatory timetable to review the Freshet Rate component of the Application through a written process. The amended regulatory timetable includes a second round of information requests, followed by written final arguments;

I. The balance of the Application pertaining to the IER component is pending further process; and

J. The BCUC has reviewed the evidence and arguments, and considers that the proposed rates contained in the Freshet Rate component of the Application should be approved.

NOW THEREFORE pursuant to sections 59 to 61 of the UCA, the BCUC orders as follows:

1. Rate Schedule 1892 is approved on a permanent basis.

2. BC Hydro is directed to file an evaluation report of Rate Schedule 1892, as set out in the Reasons for Decision attached as Appendix A to this order by December 31, 2024.

DATED at the City of Vancouver, in the Province of British Columbia, this 1st day of May 2020.

BY ORDER

Original signed by:

T. A. Loski
Commissioner

Attachment

British Columbia Hydro and Power Authority

Transmission Service Market Reference Priced Rates Application
Part 1 – Freshet Rate

Reasons for Decision

May 1, 2020

Before:
T. A. Loski, Panel Chair
A. K. Fung, QC, Commissioner
E. B. Lockhart, Commissioner

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Executive Summary

The British Columbia Utilities Commission (BCUC) Panel approves the Freshet Rate Schedule 1892, on a permanent basis and directs the British Columbia Hydro and Power Authority (BC Hydro) to file a full evaluation report of the Freshet Rate by December 31, 2024.

The Freshet Rate is an optional rate for non-firm, interruptible electricity service to transmission service customers during a freshet period commencing May 1 and ending July 31 of each year. The Freshet Rate was first introduced as a pilot, as part of BC Hydro's 2015 Rate Design Application. BC Hydro filed evaluation reports that show net positive gains over the four-year pilot.

In this Transmission Service Market Reference-Priced Rates Application (Application), BC Hydro requests approval of an amended Freshet Rate effective April 1, 2020 on an ongoing basis with no fixed termination date, for transmission service customers supplied with electricity under Rate Schedules 1823 and 1828. BC Hydro submits that the Freshet Rate is designed to make incremental energy available at an efficient price to transmission service rate customers during the freshet period when BC Hydro generally has a seasonally recurring energy surplus.

The Panel approves the Freshet Rate on a permanent basis pursuant to sections 59 to 61 of the *Utilities Commission Act* and directs BC Hydro to file a full evaluation report on the Freshet Rate by December 31, 2024.

The Panel is satisfied that the economic analysis provided by BC Hydro reasonably reflects the net benefits accruing to customers taking service under the Freshet Rate and all ratepayers over the four-year pilot.

Going forward, while BC Hydro forecasts it will be in an energy surplus position for at least the next ten years, the Panel is concerned there is the potential for events to unfold differently than currently anticipated. All these factors may make forecast supply and demand become less certain. The Panel considers it reasonable to evaluate possible mechanisms to mitigate against potential losses in future freshet periods. The Panel therefore directs BC Hydro to undertake an evaluation of the Freshet Rate by December 2024 rather than ten years, as suggested in the Application.

As part of the Application, BC Hydro also requests approval of an Incremental Energy Rate (IER) pilot. The IER, which the BCUC approved, on an interim and non-refundable basis, via Order G-300-19, is offered on a non-firm, interruptible and year-round basis for electricity usage above normal transmission firm service baseline amounts. The IER is available as a pilot commencing January 1, 2020 until March 31, 2024. The balance of this Application pertaining to the IER component is pending further process.

1.0 Introduction

On October 31, 2019, the British Columbia Hydro and Power Authority (BC Hydro) filed an Application to the British Columbia Utilities Commission (BCUC) seeking approval of the Freshet Rate, Rate Schedule 1892 (Freshet Rate) and Incremental Energy Rate Pilot, Rate Schedule 1893 (IER), pursuant to section 58 to 60 of the *Utilities Commission Act* (UCA) (Application). In these reasons for decision, the Panel will address the Freshet Rate component of the Application, pursuant to the BCUC's letter dated March 2, 2020 (Exhibit A-5) and Order G-49-20 dated March 12, 2020. The balance of this Application pertaining to the IER component is pending further process.

The Freshet Rate pilot is an optional rate for non-firm, interruptible electricity service to transmission service customers above normal Rate Schedule 1823 baseline amounts during the freshet period commencing May 1 and ending July 31.[1]

For reasons to follow, the Panel approves the Freshet Rate RS 1892 on a permanent basis. BC Hydro is directed to file a full evaluation report of the Freshet Rate by December 31, 2024.

1.1 Approvals Sought

BC Hydro requests approval of an amended Freshet Rate effective April 1, 2020 on an ongoing basis with no fixed termination date, as contained in Appendix B of the Application.[2] The amended Freshet Rate is for the provision of optional non-firm, interruptible electricity service to transmission service customers supplied with electricity under transmission Rate Schedules 1823 and 1828.[3]

BC Hydro has indicated that it is proceeding to enroll customers for the 2020 freshet period on the premise that the BCUC will grant its approval prior to May 1, 2020.[4]

1.2 Regulatory Process and Participants

The BCUC established a written hearing process for the review of the Application. After one round of information requests (IR), the BCUC scheduled a Streamlined Review Process (SRP) on March 17, 2020 and limited the scope of that hearing to the Freshet Rate component of the Application. However, due to the COVID-19 pandemic, the BCUC cancelled the SRP and amended the regulatory timetable to allow a second round of IRs, followed by final arguments, on the Freshet Rate.

There are six registered interveners in this proceeding:

- Movement of United Professionals (MoveUP);
- BC Sustainable Energy Association (BCSEA);
- Association of Major Power Customers of BC (AMPC);
- British Columbia Old Age Pensioners' Organization et al. (BCOAPO);
- Commercial Energy Consumers Association of British Columbia (the CEC); and

[1] Exhibit B-1, p. 4. The Freshet Rate pilot was approved by Orders G-17-16, G-45-18, and G-106-19.
[2] Ibid., pp. 1, 4.
[3] RS 1823 is BC Hydro's default rate for firm electricity service supplied to transmission customers. RS 1828 is BC Hydro's rate for firm electricity supplied to transmission customers with self-generation who have entered into a contract with BC Hydro under its Biomass Energy Program.
[4] Exhibit B-4, BC Hydro response to BCUC IR 1.5.1.

- Clean Energy Association of B.C. (CEABC).

The BCUC also received two interested party requests in this proceeding.

As part of the Application, BC Hydro requested that the IER be approved effective January 1, 2020 on an interim and non-refundable basis, which the BCUC approved via Order G-300-19. The IER is offered on a non-firm, interruptible and year-round basis for electricity usage above normal firm transmission service baseline amounts and is available as a pilot commencing January 1, 2020 until March 31, 2024.[5] BC Hydro proposes to file an evaluation report on the IER by December 13, 2023.[6]

1.3 Decision Framework

As stated above, these reasons for decision only address the Freshet Rate component of the Application. The balance of this Application pertaining to the IER component is pending further process.

Section 2.0 of these reasons for decision discusses the need for and describes the proposed Freshet Rate. Section 3.0 addresses the issues arising regarding BC Hydro's Freshet Rate. Section 4.0 sets out the Panel's determinations on the Freshet Rate.

2.0 Description of and Need for Freshet Rate

2.1 Background

The Freshet Rate was first introduced as part of BC Hydro's 2015 Rate Design Application (RDA). It was a new optional rate to provide transmission customers with market-referenced pricing for electricity consumption above historical Rate Schedule 1823 levels, on a non-firm interruptible basis during the freshet period of May through July only.[7]

BC Hydro states that "[t]he Freshet Rate was also responsive to the 2013 Industrial Electricity Policy Review (IEPR) task force recommendations to develop innovative rate options for industrial customers and to recover what BC Hydro would otherwise obtain on the export market, but with potential economic benefits to BC."[8] Further, BC Hydro submits that the Freshet Rate is designed to make incremental energy available at an efficient price to Rate Schedules 1823 and 1828 customers during the freshet period when BC Hydro generally has a seasonally recurring energy surplus.[9]

The BCUC approved the Freshet Rate as a two-year pilot ending in December 31, 2017 and directed BC Hydro to file three evaluation reports.[10] BC Hydro was also directed to consult with stakeholders on further process as to whether the Freshet Rate should be made permanent.[11] The Freshet Rate pilot was subsequently extended to a third and fourth year, as requested by BC Hydro.[12]

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[5] Exhibit B-1, p. 6.
[6] Exhibit B-4, BC Hydro response to BCUC 1.28.3.2.
[7] Exhibit B-1, p. 15.
[8] Ibid., Appendix D, p. 9 of 296.
[9] Ibid., p. 44.
[10] By Order G-17-16.
[11] Exhibit B-1, p. 15.
[12] Ibid., pp. 15-16. Approved by Orders G-45-18 and G-106-19.

By the time BC Hydro filed its responses to BCUC questions on March 25, 2020, it had received notice from 24 participant sites to enrol for the 2020 freshet period. BC Hydro provides the following breakdown for each of the four years of the Freshet Rate Pilot as follows:[13]

Table 1: Freshet Rate Participant Customer Sites

Industry	Year 1	Year 2	Year 3	Year 4	Year 5
Pulp and Paper	9	9	8	8	1
Solid wood	12	12	12	11	11
Oil and Gas	6	6	6	4	4
Chemicals	3	4	4	3	2
Mining	6	10	13	9	3
Cement	1	1	1	1	1
Other	2	2	1	1	2
Total	39	44	45	37	24

2.2 Consultation and Letters of Support

Prior to filing the Application on October 31, 2019, BC Hydro consulted with its existing transmission service customers, AMPC and the Ministry of Energy, Mines and Petroleum Resources (MEMPR) and conducted workshops in October 2018, November 2018 and September 2019.[14] BC Hydro included letters of support in the Application from these parties for the Freshet Rate being offered on a permanent basis.[15]

2.3 Description of the Freshet Rate

Rate Design

As noted above, the Freshet Rate is designed to make incremental energy available at an efficient price when BC Hydro generally has an energy surplus. Energy oversupply arises from significant inflows due to snowmelt and rain. This results in high generation from BC Hydro non-flexible resources and an increase in must-take[16] generation from independent power producers (IPPs). When generation exceeds load and storage capability, must-take generation cannot be stored in system storage for later use and be forced to spill.[17]

BC Hydro states that the Freshet Rate is designed to:[18]

(a) Provide opportunities for transmission service customers to operate their idle and/or flexible production capacity that in the absence of these rates would be underutilized;

[13] Exhibit B-6, BC Hydro response to BCUC Pre-filed Questions for SRP 1.0.
[14] Exhibit B-1, pp. 5, 12.
[15] Ibid., p. 12; Appendix F.
[16] Ibid., Appendix D, p. 245 of 296. Must-take energy is energy that cannot be stored at the generating facility for later use (e.g., at facilities with little or no storage). System minimum generation is if the system is operating exclusively on must-take energy.
[17] Ibid., Appendix D, pp. 29-31 of 296.
[18] Ibid., pp. 2-3.

(b) Provide benefits to all ratepayers by setting pricing that is generally sufficient to cover, on an expected basis, BC Hydro's marginal cost of energy and make some contribution to fixed costs;

(c) Minimize risk to all ratepayers by not requiring BC Hydro to undertake system reinforcements and not requiring BC Hydro to provide service if the electrical system is constrained for technical reasons such as forced or planned outages of its transmission or generation system. For greater certainty, BC Hydro does not propose to interrupt these non-firm services for economic reasons[19]; and

(d) Minimize risk to participating customers by making these rates optional and continuing to provide participating customers with firm service at stable pricing under Rate Schedule 1823 or 1828, as applicable.

BC Hydro explains that it uses "system marginal value" as its marginal cost of energy for incremental sales. BC Hydro states:

> The system marginal value represents the estimated marginal value of energy in the system, which is typically the expected value of generation from one of BC Hydro's large storage reservoirs. BC Hydro's analysis takes into account uncertainties in various inputs such as forecasted inflows, electricity and gas prices, loads and operational constraints. The rates have been designed to cover the marginal cost of energy and provide a contribution to fixed costs on an expected value basis (determined by positive expected net revenue in the analysis), which is determined by the probability weighted average of all values.[20]

Further, BC Hydro explains that fixed costs are those that do not vary according to changes in electricity usage and production within a period of time, for example, the cost of delivery infrastructure.[21]

Freshet Rate Energy Charge

The Freshet Rate energy charge is based on the Mid-C market price, which BC Hydro expects to be generally reflective of its marginal cost of energy. BC Hydro structured the Freshet Rate such that it also includes a price floor of $0/MWh and an adder of $3/MWh. BC Hydro explains that the floor and adder are to help ensure that customers make some contribution to BC Hydro's fixed costs even in periods of very low or negative market pricing.[22]

In the proposed tariff for Rate Schedule 1892 in Appendix B of the Application, BC Hydro states the following for the energy charge:[23]

> The charge applied to energy supplied under this Rate Schedule 1892 during each HLH [High Load Hours] and LLH [Low Load Hours] of the current Freshet Period is equal to:
>
> 1. The greater of
>
> (a) The Intercontinental Exchange (**ICE**) Mid-Columbia (**Mid-C**) Peak or Mid-C Off-Peak weighted average index price, as published by the ICE in the ICE Day Ahead Power Price

[19] Interrupting service for economic reasons refers to curtailment of service under conditions where energy and capacity is available but providing service may result in an economic loss to ratepayers. (Exhibit B-4, BCUC IR 1.9.4)
[20] Exhibit B-1, p. 2, footnote 2.
[21] Ibid., footnote 3.
[22] Ibid., pp. 45-46.
[23] Ibid., Appendix B, p. 1 of 18.

Report, applicable to the hour;[24] and

(b) $0/kWh; plus

2. An $3.00/MWh adder.

Since the Freshet Rate is optional, if Mid-C energy prices increase such that it is uneconomic for the customer to take service under the Freshet Rate, the customer would still have firm service available under its own rate schedule.[25]

2.4 BC Hydro's Justification for the Freshet Rate

In its evaluation reports, BC Hydro submits that the Freshet Rate produced benefits for participants and non-participants, and these benefits are expected to continue. Through Years 1 to 3, BC Hydro reports revenue gains of $2.3 million in 2016, $2.2 million in 2017 and $1.9 million in 2018. BC Hydro identified that Year 4 represented a substantial change in conditions compared to the previous years, as low reservoir inflows and the Enbridge gas pipeline rupture in October 2018 resulted in a revenue loss of $0.5 million for 2019. The net revenue over the four-year pilot is a net positive gain of $5.8 million, as shown in Table 2 below.[26]

Table 2: Freshet Rate Monthly Ratepayer Impact by Marginal Resource for Years 1-4

Year 1 (2016)	Forced Export	Market Import	System Basin	Revenue gain (loss)
May	$ 61	$ (6)	$ 481	$ 536
June	$ -	$ -	$ 806	$ 806
July	$ -	$ -	$ 917	$ 917
	$ 61	**$ (6)**	**$ 2,204**	**$ 2,259**
Year 2 (2017)	**Forced Export**	**Market Import**	**System Basin**	**Revenue gain (loss)**
May	$ 56	$ (93)	$ 424	$ 387
June	$ 117	$ (55)	$ 402	$ 464
July	$ 38	$ -	$ 1,305	$ 1,343
	$ 211	**$ (148)**	**$ 2,131**	**$ 2,194**
Year 3 (2018)	**Forced Export**	**Market Import**	**System Basin**	**Revenue gain (loss)**
May	$ 205	$ (78)	$ -	$ 127
June	$ 170	$ (77)	$ 50	$ 143
July	$ 65	$ (4)	$ 1,541	$ 1,602
	$ 440	**$ (159)**	**$ 1,591**	**$ 1,872**
Year 4 (2019)	**Forced Export**	**Market Import**	**System Basin**	**Revenue gain (loss)**
May	$ 45	$ (107)	$ (275)	$ (337)
June	$ 65	$ (91)	$ (55)	$ (81)
July	$ -	$ (94)	$ (31)	$ (125)
	$ 110	**$ (292)**	**$ (361)**	**$ (543)**
Totals	**$ 822**	**$ (605)**	**$ 5,565**	**$ 5,782**

[24] Daily Mid-C energy prices are converted from US$ to C$ using the daily Bank of Canada exchange rate; Exhibit B-1, p. 54.
[25] Exhibit B-1, p. 46.
[26] Ibid., Appendix E, p. 18 of 21.

The table above refers to three system conditions that may result in net revenue gains or losses. The section below provides further details about forced export (Condition 1), market import (Condition 2), and system basin generation (Condition 3).

Conditions to Calculate Economic Impacts

The Freshet Rate ratepayer impact that estimated a net revenue gain of $5.8 million is based on BC Hydro's economic analysis. BC Hydro examines its daily power supply operations to determine the marginal resource used to service incremental Freshet Rate energy volumes each day. The marginal resource used to service the Freshet Rate energy on any given day reflects one of three system conditions. BC Hydro explains that ratepayers are typically better off under Conditions 1 and 3, and worse off under Condition 2.[27] BC Hydro's explanations for the three system conditions are as follows:[28]

- **Condition 1: Minimum Generation with forced export** – During periods when BC Hydro experiences a minimum generation constraint and net exports were forced to avoid spill, energy supplied under Freshet Rate is deemed to reduce forced exports. When Condition 1 is in effect, energy supplied under Freshet Rate is deemed to provide an economic benefit to all ratepayers of approximately $10/MWh.

  Under Condition 1, there is always expected to be a net benefit to the ratepayer.

- **Condition 2: Minimum generation with economic import** – During periods when BC Hydro experiences a minimum generation constraint while importing on an economic basis, energy supplied under the Freshet Rate is deemed to be served from market imports (Mid-C). When Condition 2 is in effect, energy supplied under Freshet Rate is deemed to result in economic loss to all ratepayers of approximately $4/MWh, if the market price is positive.[29] On any day when the market price is negative, the deemed revenue loss is reduced by the difference between the actual market price and the $0/MWh floor price of the Freshet Rate. For example, if the market price was -$5/MWh during Condition 2, energy supplied under the Freshet Rate is deemed to provide a benefit to all ratepayers of approximately $1/MWh.

  Under Condition 2, there is a ratepayer loss, unless the Mid-C price is sufficiently negative.

- **Condition 3: Basin generation (system)** – During periods when BC Hydro is not on a minimum generation constraint, energy supplied under the Freshet Rate is deemed to be served from BC Hydro's generation system resources. When Condition 3 is in effect, the difference between the value of actual Freshet Rate energy sales and BC Hydro's system marginal value is used to determine the deemed revenue gain or loss on that day.

  Under Condition 3, where system storage is the marginal resource, 'Revenue gain (loss)' is a notional term as it is based on the difference between the Freshet Rate and the system marginal value at the time of the incremental load.

[27] Exhibit B-1, Appendix D, pp. 22-23 of 296.
[28] Ibid., Appendix E, pp. 15-16 of 21; Exhibit B-4, BC Hydro response to BCUC IR 1.8.5; BC Hydro Final Arguments, pp. 6-7.
[29] The $4/MWh represents the difference between the $3/MWh energy charge adder collected, plus deferral account rate rider as applicable, and BC Hydro's cost of wheeling and 1.9 percent transmission losses for delivery of market energy to the BC border of approximately $7/MWh. (Exhibit B-6, BC Hydro response to BCUC Pre-filed Question 4.0 for SRP).

Adjusted ratepayer impact

In the IR process, BC Hydro was asked to update its estimate of the ratepayer benefits, which it adjusted for implementation cost for each year, load shifting assessment for Years 1 and 2 and a revised forecast of load shifting impacts for Year 3. BC Hydro did not forecast or assess Year 4 load shifting impacts because it had insufficient data and information at the time when it filed IR No. 2 responses. BC Hydro estimates that the adjusted ratepayer benefit for the Freshet Rate pilot is $3.166 million as shown below.[30]

Table 3: Adjusted Ratepayer Benefit by Year

Ratepayer Benefit - Adjustment Description	Year 1 ($,000)	Year 2 ($,000)	Year 3 ($,000)	Year 4 ($,000)	Total ($,000)
Preliminary ratepayer benefit	$ 2,259	$ 2,194	$ 1,872	$ (543)	**$ 5,782**
Less implementation costs	$ (115)	$ (30)	$ (60)	$ (91)	**$ (296)**
Less customer-reported load shift impact	$ (32)	$ -	$ -	$ -	**$ (32)**
Less unexplained load variance impact	$ -	$ -	$ -	$ -	**$ -**
Less natural load growth impact	$ (470)	$ (340)	$ (205)	$ -	**$ (1,015)**
Less RS 1880 replacement service impact	$ (233)	$ (820)	$ (220)	$ -	**$ (1,273)**
Adjusted Ratepayer Benefit*	**$ 1,409**	**$ 1,004**	**$ 1,387**	**$ (634)**	**$ 3,166**
**actuals for Year 1 and Year 2; REVISED forecast for Year 3 load shifting; insufficient information available for Year 4*					

In its final arguments, BC Hydro states that "… the design elements and special conditions of RS 1892 as applied-for are sufficient for the freshet energy service to provide benefits to ratepayers… BC Hydro has clearly demonstrated that RS 1892 has provided ratepayer benefits over the Pilot period."[31]

3.0 Issues Arising

The Panel identified a number of issues during the review of the Application. These issues are:

- Assessing the ratepayer impact and potential economic losses. In Year 4 of the Freshet Rate pilot, BC Hydro reported a net revenue loss of $543,000. How likely is this going to reoccur? What is the appropriate time interval to assess ratepayer impact?
- Is load shifting a concern for the approval of the Freshet Rate on a permanent basis?
- What are the mechanisms to manage the risk of future losses in the Freshet Rate?
- How should BC Hydro adjust for potential surplus energy as a result of recent economic conditions?
- Should a similar rate be offered to other rate classes beyond transmission service rate customers?

Overall, interveners, except for BCOAPO, are supportive of the BCUC approving the Freshet Rate on a permanent basis.[32] Interveners which are in favour of the Freshet Rate view that the offering will encourage incremental load without BC Hydro incurring additional infrastructure costs and potentially provide benefits to

[30] Exhibit B-6, BC Hydro response to BCUC Pre-filed Question 6.0.
[31] BC Hydro Final Arguments, pp. 10-11.
[32] MoveUP Final Arguments, p. 5; CEC Final Arguments, p. 5; AMPC Final Arguments, pp. 1-2; BCSEA Final Arguments, p. 3; CEABC Final Arguments, p. 1.

both participating and non-participating ratepayers.[33] BCOAPO submits that the BCUC should suspend the Freshet Rate after the 2020 freshet period because of the lack of protection (i.e. risk of net losses) for non-participating customers.[34]

3.1 Ratepayer Impact and Potential for Economic Losses

As shown in Table 2, BC Hydro reports a preliminary ratepayer benefit equal to a loss of $543,000 in Year 4 of the Freshet Rate pilot. Excluding the potential impact of load shifting, the adjusted ratepayer benefit is a loss of $634,000.

In February 2019, BC Hydro assessed that there would be an economic loss to ratepayers during the 2019 freshet period.[35] BC Hydro explained that conditions were different than previous years because the May-July 2019 freshet period had low reservoir levels, reduced thermal generation due to the Enbridge pipeline explosion and below average inflows. This reduced freshet energy surplus and contributed to higher system marginal prices and higher market energy imports.[36] This experience has raised questions about the economic rationale for the Freshet Rate and its impact on ratepayers.

When asked whether BC Hydro could reduce market energy imports if Condition 2 occurs and is likely to lead to ratepayer losses, BC Hydro states:[37]

> In operations, service of RS 1892 load is not distinguished from service of all other customer load. BC Hydro does not attribute imports, exports or use of its generation resources to serve any particular load... Reducing energy imports or using BC Hydro generation resources differently to serve load are not options to manage the potential for economic losses.

Regardless of the resource condition, BC Hydro calculates the deemed economic gains or losses as an after-the-fact rate impact evaluation.[38]

As the evidence in Year 4 shows, the Freshet Rate has the potential for economic harm to non-participating customers. Accordingly, the Panel must address the following questions:

- Is there adequate understanding as to what circumstances will lead to an economic loss in a given year? Are the 2019 Year 4 economic losses likely to recur?
- What is the appropriate evaluation interval when considering the expected financial impact of the Freshet Rate? Should the consideration be overall net positive benefit over a period of time, or no economic losses at all in any given timeframe?

Position of Parties

BC Hydro considers that the pilot results "demonstrate that the Freshet Rate design is robust and, when assessed over multiple years, able to prudently and efficiently drive incremental energy sales from participant

[33] CEC Final Arguments, p. 5; CEABC Final Arguments, p. 1.
[34] BCOAPO Final Arguments, pp. 12-13.
[35] Exhibit B-7, BC Hydro response to BCUC Staff IR 2.F.
[36] Exhibit B-1, Appendix E, p. 20 of 21.
[37] Exhibit B-6, BC Hydro response to Pre-filed Question 4.0 for SRP.
[38] Exhibit B-7, BC Hydro responses to BCUC Staff Question 2.C.

customers while protecting the interests of non-participant ratepayers."[39] BC Hydro views that the Freshet Rate should not be changed solely because of a deemed economic loss for a specific hour or day.
BCOAPO submits that BC Hydro's evaluation of ratepayer benefits of $5.8 million is "significantly overstated". After adjusting for implementation costs and load shifting, it calculates the net revenue would reduce to $3.166 million. Any load shifting that occurs in Year 4 would reduce the net revenue even further.[40]

With respect to the probability of economic gains or losses under the three conditions, BCOAPO submits that there is no guarantee that BC Hydro's proposed pricing for the Freshet Rate based on Mid-C prices and a $3/MWh adder will produce positive net revenues in any given year. Whether or not there will be positive net revenue depends on future system conditions and export market prices. It may not be the case that future system conditions and prices will be similar to BC Hydro's experience in the four-year pilot.[41]

On the other hand, CEABC argues that the true benefit derived by ratepayers over the 3-year period is over $6 million. CEABC states, "[t]hat $6 million is the benefit relative to the actual prior revenue status, rather than to some hypothetical status that never existed."[42] CEABC submits that the Year 4 loss was due to very special circumstances which are unlikely to be repeated and this should not be considered a serious risk or an obstacle to continuing the Freshet Rate on a permanent basis.[43]

BCSEA submits that it is "satisfied with the methodology used for the analysis of the financial benefits to all ratepayers of the Freshet Rate Pilot."[44] BCSEA views that the evaluation of the Freshet Rate should be whether it is likely to produce positive financial ratepayer benefits on average in future years[45], and that the evidence supports the conclusion that the Freshet Rate is likely to produce positive financial ratepayer benefits on average in future years.[46]

In its reply, BC Hydro submits that BCOAPO misunderstood the actual benefits that the Freshet Rate brings to transmission service customers in the form of incremental production and sales.[47] While BC Hydro agrees with BCOAPO that there is no guarantee the Freshet Rate will produce positive net revenues everyday or every freshet period, ratepayer benefits will be realized in most individual freshet periods over multiple years. BC Hydro submits that its experience under the Freshet Rate pilot demonstrates that it is able to appropriately manage the ratepayer impacts in response to the three system conditions.[48]

Panel Discussion

The Panel is satisfied that the economic analysis provided by BC Hydro reasonably reflects the net benefits accruing to customers taking service under the Freshet Rate and all ratepayers over the four-year pilot period. Additionally, the Panel is satisfied that the economic analysis is sufficient to allow parties to understand the circumstances in any given freshet period that will lead to economic gains or losses.

[39] Exhibit B-1, Appendix E, p. 21 of 21; Exhibit B-6, BC Hydro response to Pre-filed Question 2.0 for SRP; BC Hydro Final Argument, p. 11.
[40] BCOAPO Final Argument, pp. 5-6.
[41] Ibid., p. 8.
[42] CEABC Final Argument, p. 7.
[43] Ibid., p. 7.
[44] BCSEA Final Argument, p. 5.
[45] Ibid., p. 5.
[46] Ibid., p. 6.
[47] BC Hydro Reply Argument, p. 8.
[48] Ibid., pp. 8-9.

The Panel is concerned with the net loss incurred in Year 4 and more importantly, the prospect of losses in future years. The Panel is persuaded that Year 4r of the Pilot was an extraordinary period. It was a dry year coupled with the Enbridge pipeline rupture incident, leading to results which reasonably can be considered as anomalous. Accordingly, the Panel considers that the negative result that occurred in Year 4 does not necessarily foreshadow losses in future periods.
The Panel accepts that there is no guarantee that the Freshet Rate will provide positive net revenues on any given day, or any given freshet period. The Panel accepts that, like with any forecast, there can be no guarantee that actual events will be consistent with forecasts, as there is a degree of crystal ball gazing involved. The Panel considers that variances (positive and negative) between forecast and actual have the potential to be greater the further out the time period to which the forecast pertains. The Panel accepts that BC Hydro's forecasts will be in an energy surplus position for at least the next ten years; however, the Panel is concerned that this forecast may not prove to be accurate over that period.

Given this degree of forecast uncertainty, the Panel considers that evaluating economic results in aggregate over a period of several years is a more reasonable and appropriate mechanism for the evaluation of the Freshet Rate, as compared to simply considering results in a single given period. However, the Panel is also concerned there is the potential for events to unfold differently than currently anticipated, which could result in more frequent periods of net losses. Consequently, the Panel considers it reasonable to evaluate possible mechanisms to mitigate against potential losses in future freshet periods. These mechanisms are discussed in section 3.3. Before discussing the possible mitigation mechanisms, though, the Panel must address the issue of load shifting.

3.2 Load Shifting

The Freshet Rate is designed to encourage incremental energy use during the freshet period. BC Hydro states that "[t]he Freshet Rate was effective in providing customers with a transparent market-referenced pricing option for incremental energy use that provided financial benefits to both participants and non-participants."[49] BC Hydro considers that the design minimizes load shifting.[50]

Load shifting was a concern raised by interveners and BCUC staff during the 2015 RDA. Load shifting occurs when a customer changes the timing of electricity consumption to buy more during freshet months and less in non-freshet months for no net change in total annual energy consumption. BC Hydro considers that load shifting should also include energy that the customer would have purchased anyway.[51]

BC Hydro provided load shifting assessments using a detailed six-step analysis methodology for Years 1 and 2 of the pilot, which offset about $1.9 million[52] of the $4.5 million ratepayer benefits over the two-year period. BC Hydro revised its forecast of load shifting for Year 3 by applying professional judgement on readily available information, which offset about $0.4 million of the $1.9 million in ratepayer benefits in Year 3. BC Hydro did not forecast or assess Year 4 load shifting impacts because it had insufficient data and information at the time when it filed IR No. 2 responses.

In this section, the Panel addresses whether load shifting is a concern for approving the Freshet Rate on a permanent basis, and if so, whether BC Hydro has sufficiently addressed this concern.

[49] Exhibit B-1, p. 17.
[50] Ibid.
[51] Ibid., Appendix D, p. 36 of 296.
[52] Year 1 ($,000): $32 + $470 + 233 + Year 2 ($,000): $340 + $820 = $1,895,000.

Position of Parties

Interveners view that BC Hydro has mitigated the risks related to load shifting.[53] BCSEA is satisfied with BC Hydro's explanations of how load shifting can be minimized in the Freshet Rate[54] and how the Energy Customer Baseline reset mechanism under the default Transmission Service Rate mitigates the prospective risk of load shifting between months.[55] CEC submits that Special Condition 2 of Rate Schedule 1892 mitigates load shifting risk by allowing BC Hydro to deny service if the customer is not able to describe the operational and/or production changes that will result in incremental energy consumption.[56]

BCOAPO submits that any load shifting or natural load growth that occurred in Year 4 would reduce the net revenue even further. BCOAPO also views that the estimated increase in domestic energy sales of 569 GWh is overstated. BCOAPO states that "BC Hydro has provided no estimates as to the expected revenue impact of load shifting and natural load growth over the next three years."[57]

In its Reply, BC Hydro submits that the 569 GWh represents an increase in actual billed Rate Schedule 1892 energy sales over the four-year Freshet pilot. The uncertainty stems from whether some of that increase might have occurred and been billed under other rate schedules if the Freshet Rate had not been offered. Through the Freshet Rate pilot, BC Hydro has gained experience to appropriately manage load shifting risks.[58]

Panel Discussion

The Panel accepts that there is uncertainty in accurately estimating the amount of load shifting that would have occurred. The Panel is persuaded that BC Hydro has mitigated the risks related to load shifting by having deterrence measures in the tariff. The Panel accepts that the Energy Customer Baseline reset mechanism serves to mitigate risk of load shifting. Additionally, the Panel considers that Special Condition 2 of Rate Schedule 1892 provides BC Hydro with a strong mechanism to deny service to a customer whose proposed production and/or operational changes will not result in incremental load.

The Panel notes that although there is uncertainty in determining the precise amount of load shifting, it accepts that BC Hydro has gained experience through the pilot period allowing it to be able to manage load shifting in the future. The Panel further notes the estimation must be completed on the basis of hindsight, which may somewhat reduce the value of the information; however, the Panel views that it is necessary for BC Hydro to continue to estimate annually the impacts of load shifting and include these amounts in its evaluation report (see section 3.3.4 for a discussion of the evaluation report).

3.3 Managing the Risk of Future Losses

In the sections above, the Panel discussed the risks to all other ratepayers by way of potential economic losses associated with making the Freshet Rate available on an ongoing basis. To manage these risks, BC Hydro was asked about various mechanisms to protect ratepayers from economic losses, such as considering adding a curtailment criteria for economic reasons, increasing the energy adder to cover costs, filing a plan in advance of the freshet period, and evaluating the Freshet Rate sooner than BC Hydro proposed a ten-year timeframe.

[53] CEC Final Argument, p. 11; BCSEA Final Argument, p. 4.
[54] Exhibit B-5, BC Hydro response to BCOAPO 1.20.1.
[55] Exhibit B-5, BC Hydro response to BCOAPO 1.39.2.
[56] CEC Final Argument, p. 13.
[57] BCOAPO Final Argument, pp. 5-6, 10.
[58] BC Hydro Reply, p. 7.

In this section, the Panel will address these risk mitigation mechanisms.

3.3.1 Curtailment Criteria for Economic Reasons

The Freshet Rate is a non-firm and interruptible service. BC Hydro will provide energy and capacity under Rate Schedule 1892 only to the extent it is available.[59] However, BC Hydro does not propose to interrupt Rate Schedule 1892 for economic reasons. Under Special Condition 2 of Rate Schedule 1892, BC Hydro has the right to withdraw service if there was a lack of available energy or capacity.[60] BC Hydro did not curtail Rate Schedule 1892 service to any customer during the four-year pilot.[61]

In this section, the Panel will address whether BC Hydro should curtail customers for economic reasons to manage the risk of economic losses to ratepayers.

As discussed in the previous section, BC Hydro experienced a net loss in Year 4. When questioned about whether losses could be avoided by curtailing customers for economic reasons, BC Hydro states "… none of its nine existing, non-firm service Rate Schedules in its Electric Tariff (excluding RS 1892 and RS 1893) require BC Hydro to interrupt the service for economic reasons… BC Hydro acknowledges that if these non-firm services are not interrupted for economic reasons, then there is a risk of revenue loss that is borne by all ratepayers."[62]

BC Hydro submits that "while the ability to interrupt service for economic reasons may reduce the risk of economic loss to ratepayers there are barriers to developing reliable and transparent indicators during time periods when service may result in economic loss to ratepayers".[63] BC Hydro further submits that "providing public information indicative of the system marginal value of BC Hydro resources could compromise BC Hydro's ability to benefit from energy trade. BC Hydro consider the system marginal value information to be confidential."[64]

BC Hydro submits that there would be additional costs to develop, communicate and implement an economic interruption provision. BC Hydro's view is that pricing for the Freshet Rate, particularly the energy charge adder, "reasonably mitigates the risk of providing non-firm service when it might be uneconomic to all ratepayers under certain conditions."[65] BC Hydro submits that as compared to implementing reliable, transparent criteria for economic interruption, the proposed energy charge adder can achieve outcomes for all ratepayers at a lower overall administrative cost, and with less complexity and controversy. [66]

BC Hydro submits that under the Freshet Rate, it retains the right to interrupt service due to lack of sufficient capacity and energy. Additionally, BC Hydro will not undertake any system reinforcements that may be required to serve the non-firm load under the Freshet Rate.

BC Hydro considers that the proposed Freshet Rate design and pricing reflect a balanced approach to risk as between ratepayers and participant customers. BC Hydro states that "[t]he transfer of additional risk to

[59] Exhibit B-1, p. 45.
[60] Exhibit B-4, BC Hydro response to BCUC IR 1.9.5.
[61] Exhibit B-1, Appendix D, p. 60 of 296; Appendix E, p. 14 of 21.
[62] Exhibit B-4, BC Hydro response to BCUC IR 1.9.
[63] Ibid., BC Hydro response to BCUC IR 1.9.4.
[64] Ibid., BC Hydro response to BCUC 1.9.4.
[65] Ibid., BC Hydro response to BCUC IR 1.9.4.
[66] Ibid., BC Hydro response to BCUC IR 1.9.4.

participant customers, such as through the inclusion of economic interruption criteria, will reduce the attractiveness of RS 1892 which, in turn, may lead to reduced participation. This, in turn, would diminish the proven effectiveness of RS 1892 to help BC Hydro mitigate freshet period over-supply and provide ratepayer benefits."[67]

Position of Parties

Several interveners are in support of BC Hydro's proposal to not interrupt the Freshet Rate for economic reasons.[68] APMC submits that economic curtailment is not possible and not justified. Even if it is possible, AMPC states that "[c]ustomers are less likely to invest time and resources into participating in a complex rate if there is the specter that the rate will be suspended."[69]

While the CEC agrees with BC Hydro that it would be inappropriate to curtail under changing economic conditions, the CEC does not accept BC Hydro's argument that the transfer of risk to participants will reduce participation. The CEC submits that BC Hydro can manage customers' expectations and understanding appropriately of when such curtailment might occur. It may be beneficial for BC Hydro to establish certain parameters to curtail for economic reasons for BCUC approval.[70] Further, MoveUP is concerned that non-participants will be harmed financially if BC Hydro does not reserve a right to curtail customers for economic reasons.[71]

In reply BC Hydro states that the CEC has not offered any evidence in support of its claim that customer expectations and understanding of such an economic curtailment can be managed appropriately, nor does it address the concerns BC Hydro raised in its evidence.[72]

Panel Discussion

The Panel notes that for the four-year pilot period, there were no interruptions of service due to energy or capacity constraints. Based on the experience observed during the pilot period, the Freshet Rate appears to be similar in quality to firm service. As BC Hydro anticipates that there will be surplus energy for at least the next ten years, with the absence of an economic curtailment mechanism, it appears that the prospect of curtailment of the Freshet Rate service for the next ten-year period is likely to be low. However, the Panel is satisfied that BC Hydro will curtail service if there are energy or capacity constraints and will not provide service under this rate schedule if it requires system reinforcements in order to provide such service.

Although the Panel considers that economic curtailment is possible, it does not consider it to be justified for the Freshet Rate at this time. The Panel considers it likely that the imposition of economic curtailment may lead to a reduction of participation in the Freshet Rate. This in turn, may result in a reduction of the revenues and benefits accruing to all ratepayers. The Panel agrees that the energy charge adder is a mechanism that reasonably mitigates the risk of providing non-firm service when it might be uneconomic to all ratepayers under certain conditions. Finally, the Panel considers that a transparent economic curtailment provision would likely require making the system marginal value public, which may compromise the ability of BC Hydro's subsidiary, Powerex, to benefit from energy trade. Accordingly, the Panel does not see the merit or the need for an

[67] Exhibit B-6, BC Hydro response to BCUC Pre-filed Question 2.0 for SRP.
[68] CEC Final Argument, p. 12; BCSEA Final Arguments, p. 6; AMPC Final Arguments, p. 4.
[69] AMPC Final Arguments, p. 4.
[70] CEC Final Arguments, p. 12.
[71] MoveUP Final Arguments, pp. 4-5.
[72] BC Hydro Reply Argument, paragraph 25, p.11.

economic curtailment provision for the Freshet Rate at this time given BC Hydro's current forecast of surplus energy for the next ten years.

3.3.2 Increasing the Energy Adder to Cover Costs

Under the Freshet Rate, BC Hydro manages the risk of economic losses from market imports through the $3/MWh energy charge adder and the $0/MWh energy price floor. BC Hydro considers that "the $3 per MWh adder provides a sufficient margin to cover any residual revenue shortfalls that may arise for energy imports over the entire freshet period and across multiple freshet periods."[73] The scenarios under which ratepayers will experience an economic loss under Condition 2 have been discussed in section 2.4 above.

Although increasing the $3/MWh adder will mitigate losses to ratepayers in Year 4[74], BC Hydro, through customer consultations, observed strong opposition to the energy adder being priced higher than $3/MWh.[75] BC Hydro submits that increasing the energy charge adder will reduce the attractiveness of the Freshet Rate, which may result in reduced customer participation. This may lead to diminishing the overall effectiveness of the Freshet Rate.[76]

AMPC submits that there is no rational basis to increase the energy charge adder because "there is no evidence that there is a likely risk of material program under-collection at the present level." [emphasis in original][77] AMPC states that "BC Hydro's financial modelling shows the adder is more than adequate to mitigate the risk of additional costs to other rate classes, full stop".[78] AMPC concurs with BC Hydro's argument that "[i]ncreasing the energy charge adder would reduce the attractiveness of the Freshet Rate by eroding the price signal to customers to participate."[79] That would defeat the purpose of the rate to benefit BC Hydro's own domestic customers and BC Hydro's surplus power will be sold on the Mid-C market.[80]

BCOAPO, after making its own estimates, submits that the directional view provided by BC Hydro's analysis of the F2020- F2022 period indicates that the proposed energy charge adder of $3/MWh and energy price floor of $0/MWh is insufficient to cover the expected cost of the marginal resource.[81] BCOAPO outlines options to redesign the Freshet Rate to ensure non-participating customers are held harmless, including: (i) increasing the energy adder and (ii) suspending the Freshet Rate when BC Hydro predicts that there is a high probability of economic losses.[82]

Panel Discussion

The Panel considers that the energy charge adder is an effective mechanism to manage the risk of economic losses from market imports. However, the Panel agrees that increasing the energy charge adder may reduce the attractiveness of the Freshet Rate, thereby reducing the anticipated benefits to participating customers and to all ratepayers. The Panel notes there was considerable customer support for the energy charge adder set at $3/MWh, and significant resistance to increase the charge. The Panel is persuaded that the proposed energy

[73] Exhibit B-1, p. 47.
[74] Exhibit B-4, BC Hydro response to BCUC IR 1.9.2.
[75] Exhibit B-5, BC Hydro response to BCOAPO 1.31.4.
[76] BC Hydro Final Argument, Paragraph 40, p. 13.
[77] AMPC Final Argument, pp. 2-3.
[78] Ibid., Paragraph 14, p. 3.
[79] Ibid., p. 3.
[80] Ibid., p. 3.
[81] Ibid., p. 10.
[82] Ibid., p. 12.

charge adder set at $3/MWh, with an energy price floor of $0/MWh, strikes an appropriate balance of ensuring additional benefit is generated from the Freshet Rate, while sending a reasonable price signal to Freshet Rate customers.

3.3.3 Advance Planning for the Freshet Period

BC Hydro was asked whether the Freshet Rate should be suspended if it predicts that there is a high probability of economic losses due to unfavourable conditions, in atypical years. In addition, BC Hydro was asked about its position if it was required to submit an annual plan prior to each Freshet Rate period for BCUC review and/or approval. BC Hydro does not support a requirement that the Freshet Rate be suspended if BC Hydro predicts there is a high probability of economic losses. Regulatory process would be required to determine the criteria and process for the suspension of service. Undergoing BCUC proceedings each year lacks regulatory efficiency and result in additional legal and regulatory costs that would have to be recovered from BC Hydro ratepayers.[83]

BC Hydro does not support adding a requirement to suspend service for an entire freshet period for economic reasons. BC Hydro submits that it has not undertaken the necessary modeling, analysis and consultation regarding the potential benefits, costs and risk of such requirements. Furthermore, BC Hydro submits that there is no evidence demonstrating that such requirements would provide a net benefit overall.[84] BC Hydro states that reviewing the Freshet Rate at a fixed future date would be more efficient and a less costly process, as compared to a suspension of service.[85]

BCOAPO submits that while there may be regulatory costs to reviewing BC Hydro's predictions for the Freshet Rate, that is simply one of the considerations that would need to be taken into account in determining whether a "suspension option" was the best approach to ensure that non-participating customers are held harmless and that costs are justifiable. BCOAPO states that "[t]he desire to keep regulatory costs low must always be balanced with the benefit that regulatory process confers to not only the ratepayers, but the utility itself."[86]

AMPC does not support a suspension of the Freshet Rate as a potential mechanism to reduce the risk of (deemed) under-recovery of costs in any particular year.[87] AMPC submits that it strongly disagrees with such a mechanism because it would make the rate less attractive to program participants[88], and would likely reduce industry's use of the rate.[89] AMPC further submits that the "risk of deemed revenue losses in atypical years is robustly compensated for by the energy adder."[90]

Panel Discussion

The Panel agrees that a suspension mechanism to be used in atypical years would result in increased regulatory and related costs, which would need to be recovered from ratepayers. The Panel recognizes that increased regulatory-related costs must be balanced with the benefit that may be derived from such an exercise. The Panel is persuaded that a suspension mechanism would likely make the Freshet Rate less attractive to participants, thereby reducing the potential benefit of the rate accruing to all ratepayers. The Panel considers, as stated in section 3.3.2 of these reasons, that the proposed energy charge adder is an effective mechanism to

[83] Exhibit B-6, BC Hydro response to BCUC Pre-filed Question 5.0.
[84] BC Hydro Final Argument, paragraph 32, p. 11.
[85] Exhibit B-6, BC Hydro response to BCUC Pre-filed Question 5.0.
[86] BCOAPO Final Argument, pp. 12-13.
[87] AMPC Final Argument, paragraph 8, p. 2.
[88] Ibid., paragraph 9, p. 2.
[89] Ibid., paragraph 10, p. 2.
[90] Ibid., paragraph 21, p. 4.

manage the risk of economic losses from market imports. Accordingly, the Panel considers that a suspension mechanism is not necessary at this time.

3.3.4 Freshet Rate Monitoring and Evaluation

BC Hydro proposes to review the Freshet Rate after ten years, not any earlier.[91] BC Hydro believes that a review in ten years time is a reasonable approach considering regulatory efficiency, ratepayer risk and customer experience.[92] The costs associated with more frequent reviews will have to be recovered from all ratepayers.[93] BC Hydro estimates $100,000 or more to prepare an evaluation report on ratepayer economics and answering IRs on it from three to five interveners.[94] BC Hydro states that its planned energy surplus "is expected to last at least ten years, and that conditions experienced over the last four years are likely to be within the range of conditions observed in the near and medium term."[95] BC Hydro does not expect that ongoing analysis of the economic impacts will result in meaningful additional information about the Freshet Rate.[96]

In this section, the Panel addresses what is the appropriate timeline for BC Hydro to evaluate and report on the Freshet Rate.

Position of Parties

While most interveners are supportive of the Freshet Rate, they propose that BC Hydro should report on the performance of the Freshet Rate sooner than BC Hydro's proposed ten years. AMPC is the only intervener that agrees with BC Hydro for a 10-year review period.[97]

Interveners recommend that BC Hydro should submit an evaluation of the Freshet Rate as soon as three years,[98] with most of them suggesting five years.[99] These interveners are concerned that changing energy policies could alter BC Hydro's long-term energy surplus forecast.[100]

BCOAPO suggests that if the BCUC approves the Freshet Rate, the evaluation report for the IER that is expected in the fall of 2023 should include the performance of the Freshet Rate.

In its reply, BC Hydro submits that if the BCUC considers that BC Hydro should be required to re-evaluate and report on the Freshet Rate sooner than ten years, BC Hydro suggests that a reasonable alternative would be to re-evaluate the Freshet Rate and report on the on-going appropriateness of the rate following BC Hydro's second integrated resource plan (IRP).[101]

Panel Discussion/Determination

The Panel understands that a major consideration in BC Hydro's proposed ten-year reporting period is its expectation that BC Hydro will be in a position of energy surplus for at least ten years. The Panel notes that

[91] Exhibit B-5, BC Hydro response to MoveUP IR 1.3.1
[92] Exhibit B-6 BC Hydro response to BCUC Pre-filed Question 8.0 for SRP
[93] Ibid., BC Hydro response to Pre-filed Question 8.0 for SRP
[94] Exhibit B-7, BC Hydro response to BCUC Staff Question 2.O
[95] Exhibit B-6, BC Hydro response to Pre-filed Question 8.0 for SRP
[96] Exhibit B-7, BC Hydro response to BCUC Staff Question 2.N
[97] AMPC Final Argument, pp. 3-4
[98] MoveUP Final Argument, pp. 4-5
[99] BCSEA Final Argument, pp. 6-7; CEC Final Argument, pp. 1, 15; CEABC Final Argument, p. 12
[100] Ibid., pp. 6-7; CEC Final Argument, pp. 1, 15; CEABC Final Argument, p. 12
[101] BC Hydro Reply Argument, p. 13

although BC Hydro asserts that its "energy surplus in a planning view is expected to last at least ten years",[102] there is limited evidence on the record in this proceeding to support that assertion. The Panel considers it is possible that customer needs and preferences may change, energy policies may change, or climate change may affect reservoir inflows. All these factors may make forecast supply and demand become less certain. In light of this uncertainty, the Panel considers that an evaluation of the effectiveness of the rate before ten years is reasonable and prudent.

The Panel accepts that the preparation of an evaluation report prior to ten years will result in additional costs, which will need to be recovered from ratepayers. In this instance, the Panel considers that the potential benefits to be derived from an earlier evaluation report will outweigh the costs of doing so, thereby safeguarding all ratepayers.

For these reasons**, the Panel directs BC Hydro to file a full evaluation report of the Freshet Rate by December 31, 2024. The format and contents of the evaluation report should be consistent with the evaluation reports prepared for the pilot period, coupled with a full assessment of implementation costs, load shifting, and the breakdown of the three system conditions by each year.**

The Panel also notes that section 58 (1) of the UCA provides parties the ability to make complaints about a rate to the BCUC and also provides for the BCUC, at any time on its own motion, to commence a review of rates charged by a utility.

3.4 Other Issues

Two additional issues were raised by interveners during the proceeding: the first being the potential for surplus energy as a result of recent economic conditions resulting from the COVID-19 pandemic; and the second being a proposal to extend the Freshet Rate beyond transmission service rate customers.

This section will discuss these two issues.

3.4.1 Potential Surplus Energy as a Result of Recent Economic Conditions

In light of the COVID-19 pandemic, MoveUP raised the issue of the decreased overall load due to the economic downturn. MoveUP submits that BC Hydro is receiving a surge of freshet electricity under take-or-pay contracts with IPPs.[103] MoveUP proposes that the BCUC "direct BC Hydro to review and report on the extent of its recourse under the *force majeur* provisions of its energy supply agreements in view of the COVID-19 pandemic, the emergency declaration, and the attendant economic crisis."[104]

In reply, BC Hydro states that "MoveUP's proposal is clearly well outside the scope of this proceeding."[105]

Regarding the COVID-19 pandemic, BC Hydro acknowledges that customer needs and preferences are changing and the future might be more uncertain now. However, BC Hydro submits that there is no reason to expect material change to the foundational assumptions of the Freshet Rate in the freshet period, being recurring energy surplus, low Mid-C market prices, and transmission service rate customers having the flexibility to

[102] BC Hydro Final Argument, paragraph 36, p. 12
[103] MoveUP Final Argument, p. 2
[104] Ibid., p. 6
[105] BC Hydro Reply, p. 5

increase production.[106] BC Hydro's pending IRP will assess the freshet period energy surplus as well as forecasts of load and market prices.[107]

Panel Discussion

The Panel agrees that MoveUP's proposal is outside of the scope of this proceeding. The COVID-19 pandemic is unprecedented and British Columbians are being impacted at many different levels. The Panel considers that impacts of the COVID-19 pandemic on forecasts of load, resources and market prices, including the freshet period energy surplus, can most appropriately be reviewed as part of the next BC Hydro integrated resource plan.

3.4.2 Extending Freshet Rate Beyond Transmission Service Rate Customers

In the 2015 BC Hydro RDA that established the Freshet Rate pilot, the BCUC explored whether the Freshet Rate could be applied to general service customers. The CEC advocated for an expansion of the freshet rate program to include medium general service (MGS) and large general service (LGS) rate groups and requested the BCUC to confirm that discussions are to occur in the near term.

In that decision, the BCUC was supportive of these discussions being initiated as requested by the CEC. However, that Panel stated:[108]

> … the Panel understands that it is unlikely a freshet rate solution will be achieved in the short term as desired by CEC. We accept that it is not simply a matter of applying the same rate to commercial customers as will be applied in the industrial customer pilot due the differences in rate schedules. In addition, the fact that medium and large general service customer rates are currently under review adds additional challenges in determining a freshet rate for this customer class.

The same issue has been raised by some interveners in this proceeding.

According to the Freshet Rate Pilot Final Evaluation Report dated December 2018, BC Hydro has not engaged commercial and other ratepayer groups on extending the Freshet Rate to general service customers as discussed in Order G-17-16. BC Hydro anticipates that a significant engagement process is required, as was required with the Transmission Service Freshet Rate. In the December 2018 Report, BC Hydro indicated that it is considering advancing further consultation with commercial customers on this topic.[109]

Position of Parties

The CEC argues that the Freshet Rate is "somewhat discriminatory in that it is not offered to other ratepayers such as commercial customers who might benefit significantly."[110] MoveUP states that "[w]hile BC Hydro has not taken any steps to extend a freshet rate of some sort to general service customers, the next while may be a good time to pursue that strategy more proactively."[111]

[106] Ibid., pp. 2-4
[107] Ibid., p. 5
[108] Order G-17-16, p. 12
[109] Exhibit B-1, Appendix D, p. 29 of 296
[110] CEC Final Argument, p. 7
[111] Exhibit B-5, BC Hydro response to CEC IR 1.1.1.1 and 1.1.1.2; MoveUP Final Argument, p. 2

The CEC recommends that the BCUC encourage BC Hydro to develop a four-year pilot for a freshet rate for Commercial customers within the next two years. Such pilot could potentially be reviewed at the same time as the industrial Freshet.[112]

In its reply, BC Hydro submits that it is not unduly discriminatory under the UCA "if the Freshet Rate is offered only to customers taking service under RS 1823 or RS 1828, and not other classes of customers." Citing section 59 of the UCA, BC Hydro states that "[d]iscrimination in rates is typically identified if a rate or service extended to a person is not also extended to other persons under substantially similar circumstances and conditions for the same description."[113]

Panel Discussion/Determination

The Panel accepts that further work and consultation must be undertaken by BC Hydro before making a decision on whether to apply for a freshet pilot or tariff for Commercial customers. The Panel acknowledges that BC Hydro submits "to date there has been limited interest in such a rate from commercial customers."[114] For greater clarity, the Freshet Rate is only available to Transmission Service rate customers, which do not include Commercial customers who are taking Distribution Service.

The Panel notes that BC Hydro states it is "open to exploring similar pilots or tariffs for commercial customers."[115] The Panel encourages BC Hydro to consult with Commercial customers or any parties representing Commercial customers as part of its consultation activities in preparation for its next rate design application.

The Panel finds that the proposed Freshet Rate is not unduly discriminatory or unduly preferential within the meaning of section 59 of the UCA. Section 59 (4) (c) sets out that it is a matter of fact that the BCUC is the sole judge as to whether a service is offered or provided under substantially similar circumstances and conditions. The Panel considers that service provided to Transmission customers and service provided to Distribution customers are not under substantially similar circumstances and conditions.

4.0 Determinations on Approvals Sought

For the reasons discussed above, **pursuant to sections 59 to 61 of the UCA, the Panel approves the Freshet Rate on a permanent basis. BC Hydro is directed to file a full evaluation report of the Freshet Rate by December 31, 2024.**

[112] CEC Final Argument, p. 2
[113] BC Hydro Reply, p. 12
[114] Exhibit B-5, BC hydro responses to CEC IR 1.1.1.1
[115] Ibid., BC hydro responses to CEC IR 1.1.1