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British Columbia Hydro and Power Authority

Public Electric Vehicle Charging Service Rates

Decision and Order G-67-24

March 13, 2024

Before: A. K. Fung, KC, Panel Chair E. B. Lockhart, Commissioner

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Executive summary

On July 28, 2023, British Columbia Hydro and Power Authority (BC Hydro) applied to the British Columbia Utilities Commission (BCUC), pursuant to sections 58 to 61 and 90 of the *Utilities Commission Act,* seeking interim and permanent approval of the time-based and energy-based public electric vehicle (EV) charging rates and the terms and conditions under a new Rate Schedule (RS) 4100. BC Hydro also seeks BCUC approval to establish a separate class of service for its public EV charging service, and rescindment of the other EV charging rate schedules, namely, RS 1360, 1560, and 1561 (Application).

BC Hydro had previously applied to the BCUC for approval of time-based public EV fast charging rates on March 5, 2021. These rates were approved on an interim basis effective May 1, 2021 under RS 1360, 1560 and 1561. However, the BCUC ultimately denied approval of these time-based rates on a permanent basis in Order G-18-22 dated January 26, 2022 (2022 BC Hydro EV Decision), because they did not recover the full cost of providing service and contributed to an uneven playing field for other service providers. The BCUC directed BC Hydro to file a new application for a permanent EV fast charging rate.

In this Application, BC Hydro now requests BCUC approval of the following time-based and energy-based public EV charging rates, as set out in RS 4100, as amended:

Power Level	Time-Based Charge (cents / minute)	Energy-Based Charge (cents / kWh)
Level 2	3.03	28.28
Up to 25 kW Fast Charging	12.23	
Greater than 25 kW and less than or equal	21 /2	
to 50 kW Fast Charging	21.72	
Greater than 50 kW and less than or equal	27 53	31 31
to 100 kW Fast Charging	27.55	54.54
Greater than 100 kW and less than or	40.40	
equal to 200 kW Fast Charging	40.40	
Greater than 200 kW Fast Charging	50.50	
Extended Stay Charge	40 per	minute

After holding a Streamlined Review Process in December 2023, the BCUC approved certain time-based rates under RS 4100, effective January 1, 2024, on an interim and recoverable or refundable basis, pending the BCUC's final decision on the Application.

In this Decision, the Panel finds that BC Hydro's permanent energy-based rates proposed in the Application, as amended (Proposed Rates), are designed to fully recover the forecast costs of providing the public EV charging service on a 10-year levelized basis. Additionally, the Proposed Rates are set on a portfolio basis which supports ease of understanding and provides pricing consistency and flexibility. The Panel is persuaded that BC Hydro's rate design is appropriate and that the BCUC's directives in the 2022 BC Hydro EV Decision have been followed. Therefore, the Panel approves the Proposed Rates on a permanent basis, specifically the rates of 28.28 c/kWh

for Level 2 charging and 34.34 ¢/kWh for all fast charging stations, before any applicable Deferral Account Rate Rider (DARR) or Trade Income Rate Rider (TIRR) adjustments.

In the matter of transition from time-based to energy-based EV charging rates, the Panel acknowledges that BC Hydro received temporary dispensation from Measurement Canada on October 13, 2023 to enable energybased metering for all of its Level 2 and fast charging stations. The Panel accepts BC Hydro's proposal to transition from time-based rates to energy-based rates within 60 days of this Decision and directs BC Hydro to implement energy-based rates as approved by June 1, 2024. As a result, the time-based 2024 EV Interim Rates under RS 4100 will become obsolete by then.

The EV charging rates approved under RS 4100 have effectively replaced the rates previously established under other EV charging rate schedules. Accordingly, the Panel directs that RS 1360, 1560 and 1561 be rescinded. With respect to the manner of treatment of the variance between the interim time-based rates, and the permanent energy-based rates approved in this Decision, the Panel finds that the administrative burden imposed on BC Hydro to retroactively calculate three years of sales data would be disproportionate to the possible value of such an exercise. Therefore, BC Hydro is not required to make any retroactive adjustments.

With respect to other matters raised and approvals sought in this proceeding, subject to the adjustments as directed in this Decision, the Panel makes the following determinations:

- Marketing Budget and EV Charging Pilot Projects: BC Hydro's proposed marketing budget of \$6.5 million over 10 years is a reasonable expenditure and the Panel considers that it is desirable for BC Hydro to pursue opportunities for pricing flexibility. Accordingly, the Panel directs BC Hydro to file, by July 31, 2024, a proposal for an expedited review framework for BCUC approval of public EV charging pilot projects.
- Extended Stay Charge: The Panel approves an extended stay charge of 40 ¢ per minute for public EV fast charging stations, but denies the extended stay charge for Level 2 chargers. Level 2 charging takes much longer than fast charging to complete a full charge. It would be unfair and unrealistic to require Level 2 EV charging service customers to move their vehicles within a five-minute grace period to avoid incurring a charge of 40 ¢ per minute (or \$24 per hour).
- Monitoring and Evaluation: The Panel directs BC Hydro to file an evaluation report on its public EV charging service by August 31, 2025.
- Public EV Charging Class of Service: The Panel acknowledges that BC Hydro has complied with the BCUC's direction in the 2022 BC Hydro EV Decision regarding the establishment of a separate class of service for EV charging service. It is appropriate for BC Hydro to include in its new Public EV Charging Class of Service both fast charging and Level 2 charging, as these two types share common components.
- Rate Presentation related to DARR and TIRR: BC Hydro should be free to manage the form of its customer communications, including its Electric Tariff. However, BC Hydro is required to provide appropriate wording in its terms and conditions under the Electric Tariff and RS 4100 that reflects the rates approved in this Decision regardless of its choice of presentation of the approved rates (i.e. before or after any applicable DARR and TIRR adjustments).
- Terms and Conditions: The terms and conditions of service under RS 4100 are approved as adjusted.

1.0 Introduction

On July 28, 2023, British Columbia Hydro and Power Authority (BC Hydro) filed its Public Electric Vehicle (EV) Charging Service Rates Application with the British Columbia Utilities Commission (BCUC) seeking, among other requests, interim and permanent approval of Rate Schedule (RS) 4100 for time-based and energy-based public electric vehicle charging rates and the establishment of a separate class of service for the Public EV Charging Service (Application).

BC Hydro submitted the Application pursuant to the directives set out in BCUC Decision and Order G-18-22 dated January 26, 2022, relating to the BC Hydro Public EV Fast Charging Rate proceeding (2022 BC Hydro EV Decision). In that proceeding, the BCUC initially approved time-based rates for BC Hydro's public EV charging service on an interim basis but subsequently determined that the proposed rates were not just and reasonable under the *Utilities Commission Act* (UCA), partly because they do not recover the full cost of providing the service. Accordingly, the BCUC directed BC Hydro to file a new application for permanent rates by December 31, 2022, which filing date was extended at BC Hydro's request. BC Hydro submitted this Application on July 28, 2023, stating that the newly proposed rates are designed to fully recover the forecast costs of providing the public EV charging service on a 10-year levelized basis.

On December 18, 2023, the BCUC approved¹ certain time-based rates under RS 4100 proposed by BC Hydro, as amended in the proceeding, on an interim and recoverable or refundable basis pending the BCUC's final determination on the Application.

This Decision is the Panel's determination of the energy-based rates and related terms and conditions of service under RS 4100 on a permanent basis to take effect by June 1, 2024.

Section 1.4 sets out the structure of this Decision.

1.1 Application and Approvals Sought

BC Hydro states in the Application² (as amended³) that the proposed rates in RS 4100, which will replace the existing EV charging rates under RS 1360, 1560 and 1561, include time-based rates that are the same as the current rates for existing power level fast charging stations, i.e. 25 kilowatts (kW), 50 kW and 100 kW.⁴

BC Hydro further states that the proposed rates are designed on a portfolio basis, set by power level range and include all stations outlined in its Ten-Year Deployment Plan (Ten-Year Plan). The proposed rates include both time-based (i.e. per minute) rates, which vary by power levels of a charging port, energy-based (i.e. per kilowatt

¹ Order G-354-23.

² Exhibit B-1, BC Hydro Public Electric Vehicle Charging Service Rates Application (Application) dated July 28, 2023.

³ Exhibit B-1-2, Application Errata No. 1 dated November 20, 2023.

⁴ Exhibit B-1-2, p. 1-1.

hour (kWh)) rates,⁵ and an extended stay charge to help to reduce congestion at certain stations by discouraging extended stays after a charging session has ended.⁶

BC Hydro summarized the rates proposed under RS 4100 in Table 1-1 of the Application (as amended) which is reproduced below:⁷

Power Level	Time-Based Charge (¢ / min)	Energy-Based Charge (¢ / kWh)
Level 2	3.03	28.28
Up to 25 kW Fast Charging	12.23	34.34
Greater than 25 kW and less than or equal to 50 kW Fast Charging	21.42	34.34
Greater than 50 kW and less than or equal to 100 kW Fast Charging	27.53	34.34
Greater than 100 kW and less than or equal to 200 kW Fast Charging	40.40	34.34
Greater than 200 kW Fast Charging	50.50	34.34
Extended Stay Charge	40 ¢ / min	

Table 1-1 BC Hydro's Proposed Public Electric Vehicle Charging Rates

As already noted above, the proposed rates are designed to fully recover the forecast costs of providing the public EV charging service, including electricity costs comparable to the electricity costs paid by exempted public utility providers of EV charging service, on a 10-year levelized basis.⁸ This means that BC Hydro will under-recover costs in the earlier years and then over-recover costs in later years as EV adoption and station utilization are expected to increase.⁹

Regarding the planned transition from time-based to energy-based rates, BC Hydro received a temporary dispensation from Measurement Canada on October 13, 2023 facilitating energy-based metering and expected to complete its network platform technology upgrade to enable energy-based billing by December 2023.¹⁰

In this Application, BC Hydro seeks the following approvals:¹¹

(i) Approval of permanent energy-based rates (cents (¢) per kWh¹²) for its public EV charging service with an effective date of the first day of the second month following the date of the BCUC's final decision. The requested permanent energy-based rates are:

⁵ Exhibit B-1, Section 1.1, p. 1-1.

⁶ Exhibit B-1, Section 1.3, p. 1-9.

⁷ Exhibit B-1-2, p. 1-2.

⁸ Exhibit B-1, Section 1.1, p. 1-3.

⁹ Exhibit B-1, Section 1.1, p. 1-4.

¹⁰ Exhibit B-5, BCUC IRs 1.1.1 and 1.31.1.

¹¹ BC Hydro Final Argument, p. 7.

^{12 &}quot;kWh" stands for "kilowatt-hour".

- (a) 34.34 ¢/kWh for all fast charging power levels; and
- (b) 28.28 ¢/kWh for Level 2 charging.
- (ii) Approval of an extended stay charge with the same effective date as above. The requested extended charge is:
 - (a) 40 ¢ per minute.
- (iii) Approval to establish a separate class of service for public EV charging service, including both fast charging and Level 2 charging service.¹³

The Application, as originally filed, also included the following additional approvals sought (we outline below the BCUC's determinations to date in respect of those requests):¹⁴

	Original Approval Sought	Current Status
1	Approval of the proposed rates, as set out in Table 1-1 of the Application, on an interim, non-refundable and non- recoverable basis, effective September 1, 2023, until the permanent rates are established; and approving the terms and conditions as set out in RS 4100, provided as Appendix B to the Application, on an interim basis.	The BCUC denied this request. ¹⁵
2	Approval to have RS 1360, RS 1560 and RS 1561 rescinded, also effective September 1, 2023, when they will be replaced by RS 4100.	The BCUC approved certain interim time-based rates under RS 4100, effective January 1, 2024, but directed BC Hydro to maintain RS 1360, 1560 and 1561 until the BCUC renders its final decision on the Application. ¹⁶
3	Approval to not apply the general rate increase for fiscal 2024 to RS 4100, effective September 1, 2023, because of the BCUC's decision on the fiscal 2023 to fiscal 2025 Revenue Requirements Application (RRA) since the proposed rates have already taken into consideration the fiscal 2024 rate increase.	The interim rates pertaining to RS 4100, as noted above, took into consideration the fiscal 2024 rate increase.
4	Approval of the terms and conditions of service as set out in RS 4100.	See Panel determinations in Section 4.5 below.

1.2 Existing BC Hydro Public EV Charging Rates

BC Hydro currently charges public EV charging rates under four distinct rate schedules.

¹³ BC Hydro notes on p. 7 of its Final Argument, that it explained in its response to BCUC Information Request (IR) 1.30.1 why it is appropriate for Level 2 and fast charging to be included in the same class of service.

¹⁴ Exhibit B-1, pp. 1-11, 1-12.

¹⁵ Order G-219-23 with Reasons for Decision.

¹⁶ Order G-354-23.

The first three (RS 1360, 1560 and 1561) under BC Hydro's "General Service" class of service were approved by the BCUC on an interim, recoverable or refundable basis, effective May 1, 2021 (2021 EV Interim Rates).¹⁷ They were time-based (¢ per minute) rates as follows:¹⁸

- (a) RS 1360 Public EV Fast Charging Service (25 kW Fast charging stations) at 12.23 ¢ per minute;
- (b) RS 1560 Public EV Fast Charging Service (50 kW Fast charging stations) at 21.42 ¢ per minute; and
- (c) RS 1561 Public EV Fast Charging Service (100 kW Fast charging stations) at 27.53 ¢ per minute.

The above rates are before application of BC Hydro's Deferral Account Rate Rider (DARR) which is set out in RS 1901 and applies to all charges payable under the above rate schedules, before taxes and levies.

The fourth EV charging rate schedule, RS 4100 under BC Hydro's "Other" class of service, was approved by the BCUC on an interim basis, effective January 1, 2024 (2024 EV Interim Rates).¹⁹ It currently includes the following time-based rates for public EV charging service:²⁰

- 1. Level 2 Charging Port: 3.03 ¢ per minute;
- 2. Fast Charging Port of Power Level up to 25 kW: 12.23 ¢ per minute;
- 3. Fast Charging Port of Power Level greater than 25 kW and less than or equal to 50 kW: 21.42 ¢ per minute;
- 4. Fast Charging Port of Power Level greater than 50 kW and less than or equal to 100 kW: 27.53 ¢ per minute; and
- 5. Fast Charging Port of Power Level greater than 100 kW and less than or equal to 200 kW: 40.40 ¢ per minute.

The above rates are also before applying any DARR adjustments.

1.3 Review Process and Participants

The BCUC's review of the Application included, among other things, a round of information requests (IRs) to BC Hydro and a streamlined review process (SRP), followed by final and reply arguments.²¹

At the SRP conducted on December 11 to 12, 2023, BC Hydro updated its interim approval sought for timebased rates for Level 2 and certain fast charging power levels, effective January 1, 2024, and clarified that it was not seeking interim approval for rates pertaining to greater than 200 kW fast charging, energy-based rates, or its proposed extended stay charge. On December 18, 2023, the BCUC approved the proposed time-based rates in RS 4100 on an interim basis, effective January 1, 2024, with the manner of treatment of any variance(s) between

¹⁷ By Order G-89-21 dated March 23, 2021.

¹⁸ BC Hydro Tariff, pp. 2-19 to 2-22, 2-27 to 2-34, Revision 4, effective April 1, 2023.

¹⁹ Order G-354-23.

²⁰ BC Hydro Tariff, pp. 6-14 to 6-20, Original, effective January 1, 2024.

²¹ Orders G-219-23, G-259-23 and G-263-23 and letter dated December 12, 2023.

the approved interim and the permanent RS 4100 rates to be determined at the time that the BCUC renders its final decision on the Application.

Nine parties registered as interveners in this proceeding, of which the following five filed final arguments:

- Donald Flintoff (Flintoff);
- BC Sustainable Energy Association and Vancouver Electric Vehicle Association (BCSEA-VEVA);
- Residential Consumer Intervener Association (RCIA);
- British Columbia Old Age Pensioners' Organization et al. (BCOAPO); and
- Commercial Energy Consumers Association of BC (the CEC).

Kelly Carmichael, Gary Guthrie, FortisBC Inc. and Suncor also registered as interveners but did not file final arguments.

The BCUC received 96 letters of comment from members of the public²² who mainly focused on the need for energy-based rates. The majority expressed opposition to the proposed rates, often citing the following perceptions and opinions:

- A public EV charging rate increase will hinder EV adoption, effectively working against the province's electrification and environmental goals.
- Higher EV charging rates will increase the gap between the cost of charging at home vs. public charging, to an extent that is not warranted.
- Time-based rates are not fair because different EV models and charging equipment at the stations charge at different speeds.
- The rates should be subsidized because EV adoption benefits all British Columbians.

In contrast, the letters supportive of the Application included the following views:

- The public EV charging rates shouldn't be subsidized by other classes of customers as EV use is a matter of an individual customer's choice.
- The proposed rate increase is justified and/or the rates are reasonable given the costs of the infrastructure and service.
- The proposal includes energy-based rates, therefore proponents endorse it.

Both groups who filed letters of comments expressed support for the introduction of an extended stay charge to discourage prolonged stays at a charging station.

1.4 Structure of Decision

The remainder of this Decision is structured as follows:

²² Exhibits D-1 to D-96.

- Section 2 provides the legislative and regulatory context for the review of this Application, specifically findings of the BCUC's Inquiry into the Regulation of EV Charging Service; overview of applicable sections of the *Clean Energy Act* (CEA) and Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR); and past BCUC decisions on public EV charging rates.
- Section 3 provides the Panel's determinations on BC Hydro's public EV charging rates and related considerations, including the transition from time-based to energy-based rates, rates and rate design of the energy-based rates proposal, extended stay charge, and monitoring and evaluation.
- Section 4 provides the Panel's determinations on other matters and approvals sought, including the establishment of a public EV charging class of service, treatment of interim and permanent rates, and other matters related to RS 4100 including the terms and conditions of service and applicable adjustments relating to the DARR and BC Hydro's Trade Income Rate Rider (TIRR).

2.0 Legislative and Regulatory Context

2.1 EV Inquiry

The BCUC conducted a two-phased "Inquiry into the Regulation of Electric Vehicle Charging Service" (EV Enquiry) in 2018 to 2019 to explore the EV charging services market characteristics and review its regulation in British Columbia (BC). In Phase 1, the BCUC focused on examining the EV charging services market in general and provided recommendations for the appropriate degree of regulation of entities that are not otherwise public utilities (exempted public utilities). The BCUC in its EV Inquiry Phase 1 Report dated November 26, 2018 (EV Inquiry Phase 1 Report) found that the public EV charging services market does not exhibit monopoly characteristics, and therefore there is no need to regulate price and terms of service for exempted public utility providers of EV charging service.²³

In Phase 2 of that EV Inquiry, the BCUC reviewed the role of the non-exempt public utilities' (i.e., BC Hydro and FortisBC Inc.) participation in the EV charging services market and how they should be regulated, if at all. In the Phase 2 Report dated June 24, 2019 (EV Inquiry Phase 2 Report), the BCUC found that while there are opportunities for the participation of non-exempt public utilities in the EV charging service market, regulatory oversight can help to mitigate ratepayer risk and potential impact on exempt public utilities.²⁴ Other findings in the EV Inquiry Phase 2 Report that are relevant for the review of this Application include:²⁵

- It is in the public interest to ensure that the playing field for EV charging service providers remain as level as possible. There is an opportunity for thoughtful regulation to ensure that non-exempt public utility investments don't have the end effect of crowding out exempt utility investment;
- There is no obligation of non-exempt public utilities to build any specific station or stations in any specific location. However, once a non-exempt public utility has built a station in a specific location, it must ensure that the station remain in good working condition unless the BCUC orders otherwise; and

²³ BCUC EV Charging Service Inquiry Phase 1 Report dated November 26, 2028, pp. 22 and 33.

²⁴ BCUC EV Charging Service Inquiry Phase 2 Report dated June 24, 2019, Section 8.0.

²⁵ BCUC EV Charging Service Inquiry Phase 2 Report dated June 24, 2019, Executive summary, p. 3.

 Non-exempt public utilities should develop a separate rate and tariff (or a separate class of service) for EV charging service.²⁶

2.2 Clean Energy Act and Greenhouse Gas Reduction (Clean Energy) Regulation

On June 22, 2020, the Government of BC amended the GGRR to include EV charging stations as prescribed undertakings. Section 5(2) of the GGRR sets out the criteria that qualify an EV charging station as a prescribed undertaking for the purposes of section 18 of the CEA and section 5(1) of the GGRR defines the terms used in section 5(2). Section 5 of the GGRR was amended on May 19, 2023, to include EV fast charging and Level 2 charging stations that are reasonably expected to come into operation by December 31, 2030.

Section 18(2) of the CEA requires the BCUC to set rates that allow public utilities to collect sufficient revenue to recover the costs incurred for implementing prescribed undertakings. Section 18(3) of the CEA prohibits the BCUC from exercising a power under the UCA in a way that would directly or indirectly prevent a public utility from carrying out a prescribed undertaking.

FortisBC Inc. (FBC) and BC Hydro are the only non-exempt (i.e. regulated) public utilities that have applied to date for BCUC approval of a rate design and rates to provide EV charging service in BC. We review those earlier decisions below.

2.3 BCUC Decisions regarding Public EV Fast Charging Service Rates

2021 FortisBC Inc. EV Direct Current Fast Charging Service Rate Decision

On December 22, 2017, FBC applied to the BCUC for approval of Rate Design and Rates for EV Direct Current Fast Charging (DCFC) Service and Tariff Rate Schedule 96 (RS 96). RS 96 was a new rate schedule for EV charging at FBC-owned DCFC stations, at a time-based rate of \$9.00 per half hour, or 30 ¢ per minute. The BCUC provided an interim approval of the time-based rate and then adjourned the proceeding to explore potential regulatory issues in the EV charging services market through the BCUC's EV Inquiry, as already noted (see Section 2.1 above).²⁷

In July 2020, FBC revised its approvals sought in RS 96 for service at FBC-owned EV charging stations of a \$0.27 per minute rate at 50 kW stations and a \$0.54 per minute rate at 100 kW stations.²⁸ After conducting a public review process, the BCUC approved the time-based rates on a permanent basis noting that the evidence indicates that the rates are sufficient to fully cover costs over a 10-year levelized period. Other relevant BCUC findings and determinations included:²⁹

• A time-based rate for EV fast charging service is currently the only option for FBC since there are currently no Measurement Canada approved meters for DCFCs. However, FBC is directed to apply for a dispensation from the *Electricity and Gas Inspection Act* to have the option to charge energy-based rates within 30 days of the issuance of Order G-341-21.

²⁶ BCUC EV Charging Service Inquiry Phase 2 Report Executive Summary dated June 2019, p. 4.

²⁷ Decision and Order G-341-21 dated November 24, 2021, Executive summary, p. i.

²⁸ Decision and Order G-341-21 dated November 24, 2021, p. 1.

²⁹ Decision and Order G-341-21 dated November 24, 2021, Executive summary, p. i.

- Applying certain Bonbright principles to EV fast charging rates may not be appropriate because FBC's
 regulated rates will be competing with other service providers which are exempt from BCUC rate
 regulation.
- The rates approved allow for recovery of FBC's costs to provide EV fast charging service on a forecast basis but with heavy reliance on current assumptions about demand elasticity and station utilization. The BCUC therefore directed FBC to file a detailed assessment of these rates by no later than December 31, 2022, or within six-months of Measurement Canada's approval of fast charging energy-based metering for FBC, whichever is earlier.

2022 BC Hydro EV Decision

On March 5, 2021, BC Hydro applied to the BCUC for approval of its Public EV Fast Charging Rates to introduce rates for the public EV charging service that it had been previously offering to the BC public free of charge.

On January 26, 2022, the BCUC rejected the rates proposed by BC Hydro, on the basis that they were not just and reasonable under the UCA partly because they were not recovering the full cost of providing the service. The BCUC found that the proposed rates were designed to only recover electricity costs and to ignore other incremental costs, including operating costs, maintenance costs, and capital costs. Accordingly, the resulting subsidized rates would directly contribute to an uneven playing field for exempted public utilities, which may detrimentally affect achievement of the objective of increasing EV adoption in BC, and therefore would be contrary to the public interest of all British Columbians.³⁰

As a result, in the 2022 BC Hydro EV Decision, the BCUC directed BC Hydro to file a new application for a permanent EV fast charging rate, subject to meeting several specific requirements. The BCUC made the following determinations:³¹

- The BCUC would consider approving an EV fast charging rate based on the levelized recovery of all costs. Such a rate would be just and reasonable if it reflects all of the costs required to provide the service, including associated capital, operating and maintenance costs, previous years' under-recoveries and electricity costs that are comparable to the electricity costs paid by exempt EV charging service providers.
- Congestion could be a problem at EV charging stations, and idling fees could be a deterrent to such congestion. The BCUC encouraged BC Hydro to monitor congestion and consider whether idling fees are warranted in the future.
- Time-based EV charging rates are discriminatory. While a time-based rate structure may be the standard practice for metering purposes for a regulated public utility at that time, the BCUC recognized that BC Hydro does have the option to seek a dispensation from Measurement Canada to enable energy-based billing and directed BC Hydro to do so.
- As part of the new application for permanent rates, BC Hydro was directed to include:

³⁰ 2022 BC Hydro EV Decision, pp. 36–37.

³¹ 2022 BC Hydro EV Decision, Executive Summary pp. i-iii.

- o Station utilization at different power level stations and factors that impact it;
- Financial models with actual and forecast revenue and costs to provide EV fast charging service and updated assumptions;
- An overview and comparison of the current EV fast charging service market and rates across Canada and United States; and
- A proposal for a depreciation rate for its EV DCFC charging stations and information to support its proposal.
- BC Hydro was also directed to establish a separate class of service for its EV fast charging service, in a permanent rate application to filed by December 31, 2022. A separate class of service will provide greater transparency and segregation of the revenues and costs for providing this service which outweigh any additional administrative costs.

3.0 BC Hydro's EV Public Charging Rates

3.1 Evolution of BC Hydro's Public EV Charging Service and Rates

BC Hydro has owned and operated public EV charging stations in B C since 2013.³² BC Hydro operates 141 public fast charging stations at 83 sites as of March 31, 2023.³³ While a majority of these stations are 50 kW stations³⁴, BC Hydro has confirmed that it will deploy new dual-port 180 kW stations starting in 2024.³⁵ Additionally, BC Hydro operates three public Level 2 charging stations as of March 31, 2023.³⁶ According to BC Hydro's Ten-Year Plan covering fiscal 2024 to fiscal 2033, it expects to deploy 2,050 fast charging ports and 1,255 Level 2 charging ports by the end of fiscal 2033.³⁷

As discussed in Section 1.2 above, BC Hydro's 2024 EV Interim Rates are time-based rates for public EV fast charging stations of power levels up to 200 kW and Level 2 stations. The BCUC first approved BC Hydro's interim time-based EV charging rates in 2021. In the 2022 BC Hydro EV Decision, however, the BCUC found that time-based rates are unduly discriminatory and directed BC Hydro to apply to Measurement Canada for a temporary dispensation to enable energy-based rates. Nonetheless, the BCUC allowed BC Hydro to maintain the approved time-based interim rates because BC Hydro would otherwise have to offer the service free of charge due to the lack of Measurement Canada temporary dispensation.³⁸

BC Hydro's current time-based rates are different depending on power level ranges. BC Hydro explains that this rate design reflects the speed at which energy is dispensed by the charging port into the EV battery. However, the proposed permanent energy-based rates for fast charging are the same for each power level range because the customer is charged for the actual energy dispensed. BC Hydro also explains that the proposed power level ranges allow for more flexibility (such as allowing for configuration of dual or multiple charging ports at each

³² Exhibit B-1, Section 4.1, p. 4-1.

³³ Exhibit B-1, Section 4.2.1, p. 4-2.

³⁴ Exhibit B-1, Section 3.2.1.1, Table 3-1, p. 3-3.

³⁵ Exhibit B-5, BCUC IR 1.1.

³⁶ Exhibit B-1, Section 3.2.1.1, Table 3-1, p. 3-3.

³⁷ Exhibit B-1, Section 4.2.1, pp. 4-2–4-3, p. 4-7, p. 4-8.

³⁸ 2022 BC Hydro EV Decision, p. 9.

station for different power levels) and are consistent with the ongoing development of charging station technologies.³⁹

With respect to BC Hydro's public Level 2 charging service, BC Hydro notes that the amendment to the GGRR in May 2023 to include Level 2 charging stations as prescribed undertakings guarantees cost recovery to BC Hydro for such stations under the CEA.⁴⁰

3.2 Transition from Time-Based Rates to Energy-Based Rates

On October 13, 2023, BC Hydro received temporary dispensation from Measurement Canada to enable energybased metering for all of BC Hydro's Level 2 and fast charging stations. BC Hydro confirmed at the SRP that it planned to complete its network platform technology upgrade to enable energy-based billing by December 2023.⁴¹

BC Hydro proposes to transition from time-based rates to energy-based rates within 60 days of receiving the BCUC's decision on permanent rates. BC Hydro explains that this would enable it to communicate changes in rates to its customers, although it can complete the actual transition to energy-based rates in one day through a remote batch process.⁴²

Positions of the Parties

BCSEA-VEVA supports BC Hydro in transitioning from time-based to energy-based rates.⁴³

RCIA notes that energy-based rates better reflect the services being supplied and their associated costs.⁴⁴

BCOAPO supports BC Hydro's request for a 60-day transition period and considers it to be a reasonable timeline.⁴⁵

Panel Determination

The Panel acknowledges that BC Hydro filed the Application in accordance with the directives in the 2022 BC Hydro EV Decision, which also directed BC Hydro to apply for new permanent EV fast charging rates and seek temporary dispensation from Measurement Canada to enable energy-based billing. As part of this Application, BC Hydro has done so. None of the interveners oppose BC Hydro's plan for transitioning from time-based rates to energy-based rates for public EV charging service.

We accept BC Hydro's proposal to transition to energy-based rates within 60 days of this Decision. The Panel recognizes that BC Hydro has had the Measurement Canada temporary dispensation in place since October 2023 and expects that the network platform technology upgrade to enable energy-based billing will have been completed by the time of this Decision. The Panel finds that 60 days are a reasonable period to allow BC Hydro

³⁹ Exhibit B-1, Section 5.2.2, pp. 5-7–5-8.

⁴⁰ Exhibit B-1, Section 5.2.2, pp. 5-9–5-10.

⁴¹ Exhibit B-5, BCUC IR 31.1.

⁴² Exhibit B-5, BCUC IR 36.2; SRP Transcript Volume 1, p. 45.

⁴³ BCSEA-VEVA Final Argument, p. 11.

⁴⁴ RCIA Final Argument, pp. 5–6, p. 11.

⁴⁵ BCOAPO Final Argument, pp. 60–62.

to undertake any remaining tasks, such as customer communications, to implement energy-based rates. Accordingly, the Panel directs BC Hydro to implement energy-based rates as approved by June 1, 2024.

We acknowledge that BC Hydro currently charges time-based public EV charging rates on an interim basis, as amended, effective January 1, 2024. The Panel directs BC Hydro to maintain the approved interim time-based rates until it completes the transition from time-based rates to energy-based rates. We do not find it necessary to approve time-based rates on a permanent basis since the time-based rates will become obsolete on or before June 1, 2024 following the transition to energy-based rates. The Panel addresses the treatment of any variances between interim and permanent rates in Section 4.3 below.

In the next section, the Panel will only focus on an assessment of BC Hydro's energy-based rates, namely, the proposed rates and the rate design.

3.3 Rates and Rate Design of BC Hydro's Energy-Based Rates Proposal

BC Hydro seeks approval of the following permanent energy-based rates (Proposed Rates) for its public EV charging service:

- 1) 34.34 ¢/kWh for all fast charging power levels; and
- 2) 28.28 ¢/kWh for Level 2 charging.⁴⁶

BC Hydro states that the Proposed Rates are cost-based and responsive to feedback from customers and interested parties. Consistent with the BCUC directives set out in the 2022 BC Hydro EV Decision, BC Hydro designed the Proposed Rates to fully recover all the forecast costs of providing public EV charging service, including all electricity costs comparable to the electricity costs paid by exempted public utilities, on a 10-year levelized portfolio basis. BC Hydro explains this rate design will protect other ratepayers and help provide a level playing field for exempt public utilities providing public EV charging service in BC.⁴⁷

The Proposed Rates are set on a portfolio basis to support customer acceptance and ease of understanding and to provide pricing consistency and flexibility. This means that all stations outlined in the Ten-Year Plan are considered together. On a station-by-station basis, some stations may collect more revenue than the cost of service, but overall, the total revenue from all stations is expected to recover the total costs for all stations. For example, under this approach, BC Hydro over-collects from urban stations with a relatively lower cost of service and higher utilization rate and under-recover from stations in remote locations with a higher cost of service and lower utilization rate. In BC Hydro's view, charging a higher rate in remote locations and sparsely populated highway corridors could create confusion among customers and also contribute to feelings of inequity between communities.⁴⁸ BC Hydro believes that maintaining a postage stamp principle for BC Hydro's public EV charging service is important for maintaining public confidence in BC Hydro as a Crown utility services provider.⁴⁹

Similarly, under the portfolio approach of the Proposed Rates, Level 2 charging ports have a lower revenue-to-cost (R/C) ratio (72 percent) than that of the fast charging ports (103 percent). The extra 3 percent recovered

⁴⁶ BC Hydro Final Argument, p. 7.

⁴⁷ Exhibit B-1, pp. 1-3–1-4.

⁴⁸ Exhibit B-1, pp. 5-4 and 5-6.

⁴⁹ BC Hydro Final Argument, p. 13.

from the fast charging stations allows BC Hydro to offer a rate for public Level 2 charging that is competitive with market prices and supports equity between those customers that have access to home charging and those that do not. BC Hydro clarified at the SRP that it derived the 28.28 ¢/kWh for Level 2 charging to align with the rate charged by most Level 2 service providers and to be about twice the Step 2 residential inclining block rate to discourage EV owners capable of charging at home from using public Level 2 charging.⁵⁰ BC Hydro then constrained the rate model to have a single energy-based rate across all other power levels, which resulted in a rate of 34.34 ¢/kWh for fast-charging to achieve an overall R/C ratio of 100 percent for all stations.⁵¹

BC Hydro also notes that the portfolio approach allows the Proposed Rates (single rate for fast charging and a lower rate for Level 2) to somewhat over-recover for some power level ranges and under-recover for other power level ranges, as shown in the following **Erreur ! Source du renvoi introuvable.**⁵²

Power Level	Energy-Based	Energy-Based	Total 10-Year	Total 10-Year Levelized
	Charge (¢/kwh)	(=C/D)	(C)	(D)
Level 2	28.28	55.84	23,003,595	41,193,075
Up to 25 kW Fast	34.34	37.34	868,174	2,324,818
Charging				
Greater than 25 kW and	34.34	33.83	11,939,176	35,292,618
less than or equal to 50				
kW Fast Charging				
Greater than 50 kW and	34.34	28.15	106,902,341	379,696,485
less than or equal to				
100 kW Fast Charging				
Greater than 100 kW	34.34	31.36	114,928,728	366,531,296
and less than or equal				
to 200 kW Fast				
Charging				
Greater than 200 kW	34.34	99.67	70,415,083	70,648,660
Fast Charging				

Table 1: BC Hydro's Cost of Service and Proposed Energy-Based Public EV Charging Rates⁵³

BC Hydro acknowledges that, in theory, having separate energy-based rates for each of the different charging power levels could better align cost recovery to cost causation, but at this time, it is proposing the same energy-based charge for all EV fast charging power levels for the following reasons:

- 1) With the exception of the greater than 200 kW power level range, the forecast cost of service for each power level generally aligns with the proposed energy-based charge for all fast charging power levels;
- 2) The higher forecast cost of service for the greater than 200 kW stations is based on insufficient data and may not be reliable;

⁵⁰ SRP Transcript Volume 1, p. 20.

⁵¹ SRP Transcript Volume 1, p. 75, line 8 to p. 76, line 5.

⁵² BC Hydro Final Argument, p. 12.

⁵³ Exhibit B-5, BCUC IR 1.33.1, Excerpt from Revised Table 5-1, p. 6.

- 3) The average charging speed of current EVs is limited and future EV technology advancements will enable EVs to take power faster at higher power level stations;
- 4) Customers will be billed for the amount of energy taken (per kWh) regardless of whether their EVs can receive fast charging at higher power levels or not; and
- 5) Charging the same energy-based rate for all fast charging power levels increases convenience and ease of understanding.⁵⁴

At the SRP, BC Hydro explained that due to a lack of data for fast charging stations of power levels above 100 kW, it consulted the P3 Charging Index report, which shows that current premium EVs can take power at 140 kW. Thus, BC Hydro assumed, in its financial model, that EVs take power at 140 kW regardless of how fast the charging station power levels are. This assumption resulted in the 100 to 200 kW stations having a similar average cost as do all the other power levels. However, for the greater-than-200 kW stations, this assumption results in a higher average per kWh cost. BC Hydro noted that if more EVs were able to charge at a level higher than 140 kW, which is the direction the EV market is going, the unit cost for the greater-than-200 kW power level range would be lower than 99.67 ¢/kWh.⁵⁵

BC Hydro submits the Proposed Rates are just and reasonable, which is demonstrated through scenarios (Low-End Sensitivity, Reference Case and High-End Sensitivity) that provide a forecast of the revenues, costs and resulting R/C ratio under various assumptions for different inputs, informed by actual results to date and future plans (see Table 2 below**Erreur ! Source du renvoi introuvable.**).⁵⁶ BC Hydro categorized the inputs to the rate model into four different groups as follows:⁵⁷

- Five assumption inputs that differ depending on the scenario. These assumptions are related to the: i) proportion of urban stations; ii) charging port first year and maximum utilization rate; iii) EV stock in BC in fiscal 2033; iv) number of charging ports in fiscal 2033; and v) availability of government funding.
- 2) Four dynamic cost inputs that vary according to the value taken by each of the five assumption inputs above: i) capital;⁵⁸ ii) finance; iii) operations and maintenance; and iv) electricity.⁵⁹
- 3) Three static cost inputs that do not vary according to the scenario: i) previous years' under-recoveries; ii) previous under-collection of the goods and services tax (GST); and iii) delayed application of fiscal 2023 general rate increase.
- 4) Three dynamic revenue inputs that vary according to the value taken by each of the five assumption inputs: i) EV charging revenue; ii) extended stay charge revenue; and iii) low-carbon fuel credit revenue.

⁵⁴ BC Hydro Final Argument, pp. 11–12.

⁵⁵ SRP Transcript Volume 1, p. 63, lines 19–26 to p. 64, lines 1–4; SRP Transcript Volume 2, p. 42, lines 11–16.

⁵⁶ Exhibit B-1, Section 1.1, p. 1-4.

⁵⁷ Exhibit B-1, Section 5.3, pp. 5-12–5-14.

⁵⁸ The Proposed Rates reflect a seven-year depreciation rate for the EV charging stations, which was first directed by BCUC Order G-18-22 and subsequently approved by BCUC Order G-91-23.

⁵⁹ Exhibit B-1, Section 1.2, p. 1-8.

Table 2: Scenarios' R/C Ratios⁶⁰

	Reference Case	Low-End Sensitivity	High-End Sensitivity
Updated R/C ratio (%)	99. <mark>5</mark> 2	57.79	118.44
		76.64 ¹⁵	

Footnote 15 in Table 2 denotes "urban stations only".

Table 2 above reflects the updated forecast R/C ratios, which account for the inclusion of the proposed marketing budget of \$6.5 million, amongst others.⁶¹ The Low-End Sensitivity and High-End Sensitivity reflect scenarios where all five assumption inputs either result in a lower-end or higher-end R/C ratio, respectively. The Reference Case reflects assumptions that represent a mid-point with the expected R/C ratio for the Proposed Rates.⁶² As shown, BC Hydro forecasts the R/C ratio to reach 99.52 percent under the Reference Case, 118.44 percent under the High-End Sensitivity scenario and 76.64 percent under the Low-End Sensitivity scenario, which increases to about 77 percent if only considering urban stations. Consistent with the concept of a 10-year rate levelization period, BC Hydro expects to under-recover costs in the first eight years (Reference Case) and over-recover costs in the remaining two years as EV adoption and station utilization increase.⁶³

BC Hydro explains that achieving a forecast R/C ratio of exactly 100 percent under the Reference Case would require slightly higher permanent energy-based rates of 34.64 ¢/kWh for all fast charging power levels and 28.58 ¢/kWh for Level 2. While BC Hydro is not opposed to setting rates at those slightly higher levels, it submits this is not necessary considering the various uncertainties and the proposed evaluation framework.⁶⁴ BC Hydro developed the Proposed Rates based on its best efforts to forecast costs and revenue using reasonable assumptions but recognizes that these forecasts and assumptions are uncertain. Thus, BC Hydro plans to monitor and evaluate the performance of the rates to determine if adjustments are required.

BC Hydro confirmed it does not anticipate the Proposed Rates to remain unchanged for 10 years, nor does it propose that all differences between forecast and actual, small or large, would lead to rate adjustments. In general, BC Hydro submits that the frequency of rate adjustments would need to balance the need to maintain rate stability with the need to be responsive to achieve cost recovery and adapt to market conditions and other factors.⁶⁵

As noted above, the Proposed Rates include a marketing budget. BC Hydro summarized the purpose of the marketing budget as follows:⁶⁶

The proposed marketing budget allowance [...] would allow BC Hydro to explore opportunities to incorporate more pricing flexibility than is provided by the proposed fixed energy-based rates. The intention is to explore pricing flexibility on a pilot basis – that is, to put alternative pricing in place for a limited time and limited scope, and monitor and evaluate the impacts. If

⁶⁰ BC Hydro Final Argument, p. 7.

⁶¹ BC Hydro Final Argument, p. 7.

⁶² Exhibit B-1, Section 5,3, p. 5-12.

⁶³ Exhibit B-1, Section 5.3.14, p. 5-38–5-39.

⁶⁴ BC Hydro Final Argument, p. 8.

⁶⁵ Exhibit B-5, BCUC IR 1.13.2.

⁶⁶ BC Hydro Final Argument, p. 14.

the evaluation of a pilot validates benefits such as increased utilization, improved customer experience or decreased congestion, the data could support a proposal to implement the alternative pricing approach on a permanent basis.

The marketing budget of \$6.5 million over 10 years is calculated as two percent of the forecast reference case revenue over the 10-year levelized period. Including this budget allowance in the rate model reduces the Reference Case R/C ratio from 100.8 percent to 99.6 percent, assuming the full amount is spent on temporary pilots without producing any benefits (i.e. a worst-case scenario).⁶⁷

BC Hydro provides examples of pricing concepts that could be tested in temporary pilots to see whether they improve utilization, customer experience and cost recovery:⁶⁸

- 1) Overnight or off-peak discounts to encourage more utilization during off-peak hours and create more capacity for other customers during peak hours, with the goal of increasing utilization rates overall.
- 2) Monthly subscription to regular users to lower the standard per kWh rates, with the goal of increasing utilization rates and revenues.
- 3) Location-based pricing pilot to optimize utilization by site/location, with the goal of sustaining utilization, smoothing utilization between sites or reducing congestion.
- 4) Incentives/charging account balance top-ups, such as a one-time bonus when registering as a BC Hydro EV network member or other retention-based incentives to increase awareness of the BC Hydro EV network for new users or those without home charging and increase utilization overall.

In terms of BCUC oversight of temporary pilots, BC Hydro states that it would submit a short application to the BCUC to request approval for any marketing activities it plans to implement with the expectation that such application be reviewed expeditiously.⁶⁹ This is because BC Hydro may need to react quickly to market conditions as they arise and would have limited evidence to provide to the BCUC before the introduction of the pilot, thereby limiting the level of scrutiny expected for approval of the pilot.⁷⁰ Afterwards, BC Hydro would apply to the BCUC if it plans to introduce any pricing changes on a permanent basis following any temporary offers.⁷¹ At the SRP, BC Hydro elaborated on what the entire process could look like. For a new pilot, BC Hydro would typically expect one month for the approval of the pilot, about six months to conduct the pilot, a couple of months to analyze the data and file an evaluation report, which could, depending on the pilot results, also include an application to the BCUC to introduce pricing changes, followed by another month or two (or more depending on the depth of evidence) to review the report results/application and issue a decision on a new permanent rate, if applicable.⁷²

With respect to its proposed rate design for public EV charging, BC Hydro refers to the BCUC's observation in the 2022 BC Hydro EV Decision that certain Bonbright principles, namely, those relating to price signals, rate stability and revenue stability, might not be relevant considerations when determining the rate for a competitive service

⁶⁷ Exhibit B-9, Attachment 1, p. 5.

⁶⁸ Exhibit B-9, Attachment 1, pp. 5-6.

⁶⁹ Exhibit B-9, Attachment 1, p. 5.

⁷⁰ SRP Transcript Volume 1, p. 82, line 20 to p. 83, line 21.

⁷¹ Exhibit B-9, Attachment 1, p. 5.

 $^{^{\}rm 72}$ SRP Transcript Volume 1, p. 84, line 10 to p. 85, line 19.

provided by a regulated public utility. Accordingly, BC Hydro provides its assessment of the proposed rate design against the remaining five Bonbright rate design criteria in

Table 3.

Bonbright Criteria	Reasoning
Fair apportionment of	The Proposed Rates are designed to recover the full cost of service from customers
costs among customers	who use the service, on a portfolio basis, over a levelized 10-year period.
(fairness)	
Avoid undue	The Proposed Rates are offered on a postage stamp basis. All customers will pay the
discrimination	same charges when they use BC Hydro's public EV charging service. The Proposed
(fairness)	Rates are set to include the electricity costs comparable to the electricity costs paid
	by exempt-utility providers who are BC Hydro's customers.
	It is just and reasonable to only apply the extended stay charge when it is needed
	and expected to achieve benefits (e.g., reduced congestion, improved station
	utilization, improved customer experience). Thus, it is not unduly discriminatory to
	not apply it when such benefits are not expected.
Customer	The Proposed Rates incorporate customer feedback, which prioritized the
understanding and	advancement of energy-based rates and an extended stay charge.
acceptance	
(practicality)	
Freedom from	BC Hydro plans to transition to energy-based rates which are fairer than time-based
controversy	rates and expects that the postage stamp approach will prevent feelings of inequity
(practicality)	between communities.
Recovery of revenue	The Proposed Rates are designed to fully recover all the forecast costs of providing
requirement (stability)	public EV charging service, including electricity costs comparable to the electricity
	costs paid by exempt-utility providers, on a 10-year levelized basis.

Positions of the Parties

BCSEA-VEVA

BCSEA-VEVA submits that the Proposed Rates are just and reasonable and should be approved, as they are designed to fully recover the forecast costs of providing the service on a levelized basis over 10 years and would not jeopardize the development of a robust public EV charging market in BC by "crowding out exempt utility investment". Also, the Proposed Rates perform favourably in relation to those Bonbright principles the BCUC has determined are relevant to a rate for a competitive service provided by a regulated public utility.⁷⁴

In BCSEA-VEVA's view, the modeling methodology and inputs are reasonable, including BC Hydro's move towards the Tesla North American Charging Standard (NACS) connector as the industry standard, and the Proposed Rates are supported by the updated R/C ratios for the three scenarios. BCSEA-VEVA supports the inclusion of the proposed marketing budget of \$6.5 million over 10 years and the review of proposed pilots on an expedited basis. BCSEA-VEVA agrees with BC Hydro that it is not necessary to set rates to achieve a forecast R/C ratio of exactly 100 percent, due to the uncertainties involved, but is not opposed to setting the rates at the slightly higher level to achieve a R/C ratio of exactly 100 percent. That said, it would "caution against giving the incorrect impression that the reference R/C ratio is more precisely accurate than a reasonable estimate within a reasonable range".⁷⁵

⁷³ Exhibit B-5, BCUC IRs 1.2.1 and 1.29.6.1.

⁷⁴ BCSEA-VEVA Final Argument, paragraphs 7–8, 13 and 15.

⁷⁵ BCSEA-VEVA Final Argument, paragraphs 9–10, 14, 38 and 40–41.

BCSEA-VEVA endorses having the same energy-based rate for all fast charging power level ranges for simplicity and ease of communication to potential customers even though this may lead to congestion at the higher power level stations by not motivating drivers of EVs that cannot charge at the higher maximum power level to leave the higher-powered stations for EVs that can use the higher power delivery. However, on balance, BCSEA-VEVA considers that the common rate approach is preferable at this time. It also supports having the same energybased rate for all Level 2 charging service at a level lower than the rate for fast charging service due to competitiveness considerations and equity between customers that have access to home charging versus those that do not. BCSEA-VEVA notes that public Level 2 charging service is new for BC Hydro; thus, the relationship between the two rates should be examined in the post-implementation evaluation report. Also, it endorses having the same rates in all locations throughout BC at this time (i.e. postage stamp rates) and is satisfied with BC Hydro's commitment to consider whether different rates for different locations are warranted in the future.⁷⁶

BCOAPO

BCOAPO submits that full cost recovery and not undermining the competitive market are the primary considerations to design rates for public EV charging service. BCOAPO also submits that the Bonbright principles which are not related to price signals, rate and revenue stability, are applicable.⁷⁷

BCOAPO notes BC Hydro's sensitivity analysis shows that, while the Proposed Rates may be expected to result in a R/C ratio close to 100 percent, there are greater risks associated with the rates under-performing as opposed to over performing. While BCOAPO supports a 10-year levelization period, it is also concerned that under-recoveries are expected to last eight years out of 10, representing a significant risk to BC Hydro's ratepayers given the level of uncertainty related to the EV load in that period. While this does not warrant a denial of the Proposed Rates, BCOAPO submits that it does point to the need for ongoing monitoring and evaluation of the performance of the Proposed Rates. It also supports BC Hydro's use of conservative assumptions in some of the inputs used and supports the implementation and approval of rates that fully recover costs based on such inputs.⁷⁸

BCOAPO supports BC Hydro's proposed use of postage stamp rates across BC and submits that BC Hydro's proposal to charge the same rate across all fast charging stations is reasonable, at least in the short term, but notes the risk of congestion at higher power levels stations as EV charging capabilities increase. BCOAPO expects that BC Hydro's evaluation report will rely on actual data to inform whether the practice of common rate across all power level ranges will continue to be appropriate once the greater-than-200 kW power level stations are online.⁷⁹ BCOAPO is not opposed to the proposed rate of 28.28 ¢/kWh for Level 2 charging as it strikes a reasonable balance between cost concerns and the goal of supporting customers without access to home charging. With regards to the fast charging rate, BCOAPO notes that initially, BC Hydro calculated that a rate of 34.34 ¢/kWh would yield a R/C ratio of just over 100 percent. However, after updating certain model inputs, the R/C ratio decreased to 99.52 percent. Based on BCOAPO's concerns about the risks of under- versus over-

⁷⁶ BCSEA-VEVA Final Argument, paragraphs 20–21, 23–28.

⁷⁷ BCOAPO Final Argument, pp. 21–22.

⁷⁸ BCOAPO Final Argument, pp. 23 and 43.

⁷⁹ BCOAPO Final Argument, pp. 48 and 56.

recovery, BCOAPO submits that the Panel should direct BC Hydro to adjust its proposed energy-based rates to achieve a R/C ratio of exactly 100 percent.⁸⁰

BCOAPO is not opposed to the inclusion of a marketing budget but recommends the BCUC would need to be assured that the temporary pricing option has merit (relative to other options).⁸¹

<u>Flintoff</u>

Flintoff agrees with BC Hydro that a rate based on a levelized recovery of all costs would be just and reasonable if it recovers all the costs required to provide the service, including capital and operations and maintenance costs, previous year's under-recoveries and electricity costs that are comparable to the costs paid by exempt EV charging service providers. Flintoff submits he is not opposed to the proposed R/C ratios, having the same energy-based rate for all of BC Hydro's Level 2 charging service, or having the same rate for BC Hydro's public EV charging service within BC. In particular, Flintoff supports the Proposed Rates of: (i) 34.34 ¢/kWh for all fast charging stations; and (ii) 28.28 ¢/kWh for Level 2 charging.⁸²

<u>RCIA</u>

RCIA favours rates based on the quantity of energy sold rather than time spent charging because they better reflect the services being supplied and their associated costs. In its view, energy-based rates provide clearer price signals to consumers, which should contribute to customer understanding.⁸³ RCIA supports cost-based recovery as a central consideration in the setting of fair and equitable rates. While RCIA agrees generally with BC Hydro's Proposed Rates, it would set the rates at the slightly higher levels to achieve a R/C ratio as close to 100 percent as possible.⁸⁴ Furthermore, RCIA supports BC Hydro's proposal to experiment with pricing pilots but notes that rates based on pricing flexibility should be monitored through more frequent reporting and potential adjustments to avoid cross-subsidization between customers and utility services.⁸⁵

RCIA notes that due to the transitional nature of the market, including the uncertainty related to the five assumption inputs, there is a risk the Proposed Rates may not recover costs as forecast. For this reason, RCIA agrees with BC Hydro's proposed reporting, including reviewing potential adjustments to the rates to ensure they are consistent with full cost recovery.⁸⁶

<u>The CEC</u>

The CEC recommends that the Proposed Rates be implemented; however, it also recommends that alternatives be found for the proposed levelized costing mechanism in favour of a simpler mechanism of a rate rider to deliver recoveries or rebates to the EV charging customers earlier. The CEC is concerned that the model

⁸⁰ BCOAPO Final Argument, p. 57.

⁸¹ BCOAPO Final Argument, p. 39.

⁸² Flintoff Final Argument, p. 2.

⁸³ RCIA Final Argument, pp. 5–7.

⁸⁴ RCIA Final Argument, pp. 5–6.

⁸⁵ RCIA Final Argument, pp. 5 and 8.

⁸⁶ RCIA Final Argument, pp. 7–8.

forecasts eight years of under recovery with a potential uptick in the final two years and submits the BCUC should direct BC Hydro to provide alternative profitable plans in its next rate application, following its 12-month report and no later than two years from the BCUC decision on this proceeding.⁸⁷

The CEC recommends that the BCUC ask BC Hydro to explore and propose, in its next rate application: i) potential convenience premium rates, e.g. for non-urban fast charging; and ii) potential higher power premium rates, as the evidence demonstrates that the cost of service for power levels in the 180 kW to 200 kW plus range is expected to be significantly higher on a \$/kWh basis.⁸⁸

The CEC submits that temporary pilots could have a problem of not being 'real' to the EV customers and, as proposed, could easily just be avoided as unnecessary. Thus, the CEC is opposed to BC Hydro spending its \$6.5 million budget for marketing and potential discounts. The CEC would like to see BC Hydro applying premiums rather than discounts and recommends that the BCUC find that pricing discounts versus premiums for some of the charging services may not be the optimal operational method. Thus, it recommends that the BCUC ask BC Hydro to explore and propose potential premium rates in its next rate application.⁸⁹

BC Hydro Reply

BC Hydro notes BCOAPO and the CEC's concerns about potential risks to ratepayers because the Proposed Rates under-recover during the initial eight years of the 10-year rate modelling period. However, BC Hydro points out that under-recovery of current costs in the early years and over-recovery in the final years are intended features of the levelized rate structure. Further, BC Hydro submits that the CEC provided no evidence to support its rate rider proposal in lieu of the 10-year levelized approach, which BC Hydro adopted to be consistent with the parameters set out by the BCUC in the 2022 BC Hydro EV Decision.⁹⁰ While the levelization period could be shortened or lengthened, BC Hydro reiterates that:

[T]he 10-year levelized period is appropriate because it balances the need to achieve full cost recovery and the need to maintain competitive rates. It is consistent with the period approved by BCUC Order No. G-341-21 for FortisBC Inc. and represents a level playing field because it is forecast to achieve full cost recovery.⁹¹

BC Hydro submits that it is reasonable for a new service offered in a competitive market, such as the public EV charging service, to take a few years to achieve full cost recovery. BC Hydro points out that the forecast R/C ratio for the Proposed Rates under the Reference Case scenario is 92 percent in year five (fiscal 2028), which is within 10 percent of full cost recovery.⁹²

With regards to the marketing budget, BC Hydro agrees with BCOAPO that having more information and data for evaluation purposes has benefits but stresses the intent of this budget is to test pricing concepts on a temporary and limited basis. BC Hydro submits it will consider appropriate baseline data from the current rates when

⁸⁷ CEC Final Argument, paragraphs 1 and 11.

⁸⁸ CEC Final Argument, paragraphs 37, 44, 46–47 and 49.

⁸⁹ CEC Final Argument, paragraphs 5–9, 55 and 102.

⁹⁰ BC Hydro Reply Argument, p. 3.

⁹¹ BC Hydro Reply Argument, p. 4.

⁹² BC Hydro Reply Argument, p. 4.

implementing and evaluating the effectiveness of any temporary pricing alternatives enabled by the marketing budget.⁹³

In respect of RCIA's submission, BC Hydro submits that more frequent reporting is not necessary because, as it stated at the SRP, "the marketing budget would provide a cushion that perhaps could provide some comfort to the [BCUC] to approve something on a temporary basis, ... and know that... in the event that BC Hydro's assumptions are off-base... at least that revenue loss has been accounted for."⁹⁴

In response to the CEC, BC Hydro points out that, at the SRP, it agreed that price differentiation, both incentives and premiums, could be explored over time as the market matures. BC Hydro also notes that the marketing budget does not preclude the premium pricing approach but emphasizes that, all else equal, premium pricing alone would result in an over-recovery of the revenue requirement for the public EV charging service. As an example, BC Hydro expects that time-based pricing proposals would include consideration of both discounted charges during off-peak periods as well as premium charges during on-peak periods.⁹⁵

Panel Determination

The Panel finds that BC Hydro has adopted an appropriate rate design and that the Proposed Rates reflect the BCUC's requirements set out in the 2022 BC Hydro EV Decision. The Panel further finds that BC Hydro has developed rates that are cost-based and designed to fully recover, on a 10-year levelized basis, the forecast cost of service, including electricity costs comparable to the costs paid in a competitive EV charging services market. The Panel also agrees with BC Hydro's assessment of its rate design against the applicable Bonbright rate design criteria. Therefore, **the Panel approves the Proposed Rates on a permanent basis, specifically the proposed rates of 28.28 c/kWh for Level 2 charging and 34.34 c/kWh for all fast charging stations, before any applicable DARR or TIRR adjustments.**

We recognize that rate design is not a precise exercise and that it is based on assumptions that are subject to uncertainty. That is why it is important to consider the methodology underlying the rate design – if the methodology is flawed then so too will the resulting rate. Likewise, weak assumptions may lead to under or over cost recovery. In this case, however, we are persuaded that BC Hydro's methodology is reasonable and that its assumptions regarding the proportion of urban versus non-urban stations, utilization rates and the EV stock in BC are reasonable. We accept that certain assumptions have a greater impact on the outcome than others – as BCOAPO points out, errors in some assumptions such as government funding will have a negligible impact on the outcome.

Because rate design is imprecise, there is no need to insist that the Proposed Rates achieve a forecast R/C ratio of exactly 100 percent. We accept that uncertainty regarding the underlying assumptions is inevitable, and that the evaluation framework, as well as the levelized rate design, provides room for subsequent adjustment of the Proposed Rates and an appropriate assurance of cost recovery.

Although BCOAPO and the CEC are concerned that the proposed levelized rate structure creates potential risks for ratepayers because the Proposed Rates under-recover during the first eight years of the 10-year rate

⁹³ BC Hydro Reply Argument, p. 4.

⁹⁴ BC Hydro Reply Argument, p. 6.

⁹⁵ BC Hydro Reply Argument, pp. 5–6.

modeling period, we accept BC Hydro's observation that under-recovery of current costs in the early years and over recovery in the final years is an intended outcome of the levelized rate structure. We agree with BC Hydro's submission that it is reasonable for a new service offered in a competitive market, such as the public EV charging service, to take a few years to achieve full cost recovery. As BC Hydro correctly points out, the forecast R/C ratio for the Proposed Rates under the Reference Case scenario is 92 percent in year five (fiscal 2028), which is within 10 percent of full cost recovery, and which we consider to be a reasonable range based on the levelized rate design.⁹⁶ Moreover, in proposing a levelized rate, BC Hydro is adhering to the BCUC guidance in the 2022 BC Hydro EV Decision, in which the BCUC stated it would consider approving a public EV charging rate based on the levelized recovery of all costs.

Further, although the CEC suggests we should ask BC Hydro to develop a simpler method of cost recovery, such as a rate rider instead of a levelized rate, this suggestion lacks sufficient detail and we are not persuaded that this would in fact be simpler, easier to understand or achieve a more effective cost recovery.

In addition, the Panel finds that it is appropriate for BC Hydro to set rates on a portfolio basis to support customer acceptance and ease of understanding and to provide pricing consistency and flexibility. We acknowledge that BC Hydro might in the future prioritize alignment between cost recovery and cost causation, about which we offer no opinion. However, at this early stage of EV adoption, we are satisfied that a portfolio basis for establishing public EV charging rates is reasonable.

The Panel accepts BC Hydro's proposed marketing budget as a reasonable expenditure. The evidence demonstrates that this budget will have a minimal impact on the R/C ratio. We consider it desirable to enable BC Hydro to pursue opportunities for pricing flexibility as the market develops rather than data-gathering to make more informed decisions, as BCOAPO suggests. The marketing budget is intended to enable BC Hydro to explore and test pricing alternatives in a timely manner in response to changes in market conditions, which is why it is important to give BC Hydro the latitude to do so instead of waiting until it has gathered sufficient information.

We also recognize the importance of timely BCUC review for the effective launch of a pilot project – if the approval process is too long, the opportunity may disappear altogether. We believe that BC Hydro can contribute to a more efficient review process by proposing a framework for an expedited review process for approval of such pilots. Therefore, **the Panel directs BC Hydro to file, by July 31, 2024, a proposal for an expedited review framework for BCUC approval of public EV charging pilot projects that would facilitate their future reviews.**

3.4 Extended Stay Charge

BC Hydro explains that an extended stay charge "is intended to encourage EV charging service customers to move on promptly when their charge is complete to reduce congestion and wait time for other customers wanting to charge their vehicle."⁹⁷ Thus, an extended stay charge would apply to a customer whose vehicle is fully charged but remains connected to the charge port for some time, potentially preventing another customer from using the charger.⁹⁸ Recognizing that congestion could be a problem at EV charging stations, the BCUC

⁹⁶ BC Hydro Reply Argument, pp. 5–6.

⁹⁷ BC Hydro Final Argument, p. 21.

⁹⁸ BC Hydro Final Argument, p. 21.

encouraged BC Hydro to monitor congestion and consider whether idling fees were warranted to deter such congestion.⁹⁹ An extended stay charge is also known as an idle fee.¹⁰⁰

BC Hydro consulted with its customers on the introduction of such charge and learned that the "use of extended stay charges to encourage turnover at charging stations" was the second most important priority for participants (73-percent support level), closely following "energy-based pricing" as the top priority (75-percent support level).¹⁰¹ BC Hydro qualified this support level as "high" and noted that the survey question did not specify whether the extended stay charge would apply only to select stations or to all stations.¹⁰²

Considering the BCUC's encouragement and customer feedback in relation to idle fees, BC Hydro is requesting approval of an extended stay charge of 40 cents per minute, plus applicable GST, for charging ports of all power levels. General rate increases, DARR or TIRR will not apply to the extended stay charge because, in BC Hydro's view, the price signal needs to be simple, and preferably consistent, to achieve better customer understanding.¹⁰³ BC Hydro proposes to provide customers with a five-minute grace period after the end of a charging session, during which the extended stay charge will not apply, and states that customers will be provided with proactive text and/or email messaging to notify them of their session coming to an end and when the extended stay charge will apply.¹⁰⁴ BC Hydro forecasts \$4 million in revenue (Reference Case) based on 5 percent of customers being billed for an extended stay for a period of five minutes, within a range of \$1 million to \$7 million.¹⁰⁵

Furthermore, BC Hydro proposes to apply the extended stay charge only at times and at charging stations where it observes congestion.¹⁰⁶ BC Hydro explains how it will observe congestion: based on the utilization data it collects, BC Hydro can monitor the time between when a vehicle disconnects, and another connects at a charging station. If the time is often short during certain times of day, the implication is that customers must wait to charge their vehicles at the station at those times.¹⁰⁷ BC Hydro does not propose to apply the extended stay charge between 11 p.m. and 7 a.m. at Level 2 charging stations, so that customers using these stations for overnight charging do not need to move their vehicles during the night.¹⁰⁸

In BC Hydro's view, there is a trade-off between inconveniencing customers when there are no customers waiting to charge their vehicle and achieving benefits in terms of reduced congestion.¹⁰⁹ However, based on survey results noting that people find it inconvenient to wait for charging, BC Hydro considers that customers would be more inconvenienced if they arrived at a charging station occupied by a car that has stopped charging

⁹⁹ 2022 BC Hydro EV Decision, p. 47.

¹⁰⁰ Exhibit B-5, BCUC IR 1.29.1.

¹⁰¹ Exhibit B-1, p. 3-11.

¹⁰² SRP Transcript Volume 1, p. 124, lines 19–23 and p. 125, lines 9–10.

¹⁰³ Exhibit B-1, pp. 5-10–5-11, Exhibit B-5, BCUC IR 1.1.1, p. 5 and BCUC IR 1.29.2.

¹⁰⁴ Exhibit B-1, p. 5-11.

¹⁰⁵ Exhibit B-1, Table 5-3, p. 5-14.

¹⁰⁶ Exhibit B-1, p. 5-11; BC Hydro Final Argument, p. 21.

¹⁰⁷ BC Hydro Final Argument, pp. 21–22.

¹⁰⁸ BC Hydro Final Argument, p. 22.

¹⁰⁹ Exhibit B-5, BCUC IR 29.3, p. 3; BC Hydro Final Argument, p. 21.

but is not subject to idle fees than if they arrived at an unoccupied charging station, knowing an idle fee would apply starting five minutes after the end of the charging session, even if there is no one else waiting.¹¹⁰

BC Hydro confirms that its fast charging sites are susceptible to becoming fully used as, prior to September 2023, all of BC Hydro charging sites only had one or two single-port fast charging stations. Specifically, of BC Hydro's 83 sites, 30 percent (25) had one single-port station and the remaining 70 percent (58) had two single-port stations. BC Hydro stated that it opened the first site that can charge four EV simultaneously in Cloverdale, BC. in September 2023 and that it intends to select locations that support expanding the number of ports per site so that by fiscal 2033 there will be an average of seven to eight fast charging ports per site for urban areas and three for non-urban areas.¹¹¹

Based on market research on idle fee grace periods and pricing by other fast charging service providers, BC Hydro states that its proposal is aligned with current market pricing.¹¹² However, at the SRP, BC Hydro stated it was unaware that other service providers charged idle fees for Level 2 charging stations as the market research was focused on fast charging stations.¹¹³

Positions of the Parties

BCSEA-VEVA supports the proposed extended stay charge of 40 cents per minute and notes that the design elements of the proposed extended stay fee are reasonable and appropriately based on consideration of other idling fee approaches applied in the market. It agrees that BC Hydro should have discretion regarding when and where to apply it.¹¹⁴

BCOAPO submits the Panel should direct BC Hydro to develop and communicate clear messaging regarding how it intends to monitor congestion and determine when extended stay charges are applied and discontinued.¹¹⁵

Flintoff supports the rate that BC Hydro proposes for an extended stay charge. However, he is opposed to BC Hydro's proposal to only apply the charge at charging stations where utilization data indicates the station might experience congestion as well as its proposal to not apply the extended stay charge to Level 2 charging stations between 11 p.m. and 7 a.m. He submits that "[C]hargers must always be available for the next customer regardless of the time of day or location."¹¹⁶

In response to Flintoff, BC Hydro submits that "for an extended stay charge to be just and reasonable, it should be applied in instances where it is needed and expected to achieve benefits such as reduced congestion, improved station utilization, and improved customer experience." BC Hydro states that further data on customer charging behaviour will help inform how the extended stay charge is performing and if there is a need to adjust the charge.¹¹⁷

 $^{^{\}rm 110}$ SRP Transcript Volume 1, p. 126, lines 10–26 and p. 127, lines 1–6.

 $^{^{111}}$ Exhibit B-5, BCUC IR 1.29.5 and Exhibit B-1, Appendix C, $\,$ p. 1.

¹¹² Exhibit B-1, p. 5–10; Exhibit B-5, BCUC IR 29.3.

¹¹³ SRP Transcript Volume 1, p. 128, lines 10–15.

¹¹⁴ BCSEA-VEVA Final Argument, p. 7.

¹¹⁵ BCOAPO Final Argument, p. 60.

¹¹⁶ Flintoff Final Argument p. 3.

¹¹⁷ BC Hydro Reply Argument, p. 8.

The CEC submits that the extended stay charge should be a percentage of any applicable charges as opposed to a fixed fee for time per minute, for example five percent, which would generate a more cost-effective revenue stream and charging availability profile. The CEC recommends that the BCUC find that premiums for extended stay time may be a useful process for BC Hydro's charging services.¹¹⁸

In response to the CEC, BC Hydro submits there is no evidence to support the CEC's claim that a percentagebased charge would be more effective, and points out that the CEC's proposed pricing structure is different from the current common practice in the market, i.e. a fixed per-minute charge after a grace period. BC Hydro submits it will continue to monitor customer behaviour and consider whether alternative approaches are necessary.¹¹⁹

Panel Determination

The Panel approves an extended stay charge of 40 ¢ per minute for public EV fast charging stations, to take effect at the same time as the implementation of the approved energy-based rates by BC Hydro. We are persuaded by BC Hydro, as well as interveners, that an extended stay charge for public EV fast charging stations will help with congestion by encouraging drivers to make the charger available for the next customer and send an appropriate message to EV users that the charging station is not a parking spot. We consider that it would be efficient in terms of transition and communication to implement the extended stay charge and energy-based rates at the same time.

BC Hydro has not persuaded us, however, that it needs to monitor congestion to determine when and where to apply this charge. We accept that there is a trade-off between inconveniencing customers when there are no customers waiting to charge their vehicles and achieving benefits in terms of reduced congestion, and in our view that trade-off is achieved by permitting the five-minute grace period. Because EV adoption is in its early stages, we consider this to be the appropriate time to proactively educate drivers of the necessity of moving on once their vehicles have charged.

We do not approve an extended stay charge for Level 2 chargers, however; as BC Hydro's own evidence shows, this does not reflect current practice among other providers of public Level 2 charging stations. Level 2 charging takes much longer (typically several hours as opposed to minutes) to complete a full charge, and we accept that EV owners often combine their Level 2 charging sessions with longer duration activities, such as work, watching a movie or shopping. In these circumstances, it would simply be unfair and unrealistic to require customers who use Level 2 public chargers to move their vehicles within the five-minute grace period to avoid incurring a charge of 40 ¢ per minute.

The Panel considers, however, that the features of the extended stay charge will benefit from review as part of BC Hydro's EV evaluation report, both in regard to the revenues expected, as well as whether the proposed charge should extend to Level 2 chargers down the road to alleviate congestion, as discussed below.

¹¹⁸ CEC Final Argument, p. 14.

¹¹⁹ BC Hydro Final Argument, p. 7.

3.5 Monitoring and Evaluation

BC Hydro proposes to submit an evaluation report to the BCUC on its public EV charging service within 12 months of the adoption of a permanent rate (Evaluation Report). BC Hydro explains that the Evaluation Report would provide an update on:

- The performance of the rates for public EV charging service, including the extent of cost recovery, charging session revenue, and extended stay charge revenue;
- Public EV charging service statistics, such as station utilization rates, estimated low carbon fuel credit revenue, and customer satisfaction metrics; and
- Progress and updates on BC Hydro's deployment plan and on converting time-based rates to energybased rates.¹²⁰

BC Hydro confirms that the Evaluation Report could include a request to the BCUC for approval of adjustment(s) to the public EV charging rates depending on how cost recovery is tracking relative to the assumptions in the Application.¹²¹ BC Hydro also explains that it will include a recommendation as to when the next evaluation report should be filed and requests that the BCUC not specify in its final order a date for filing the second and subsequent evaluation reports.¹²²

Positions of the Parties

BCSEA-VEVA does not oppose BC Hydro's proposed scope for the Evaluation Report although it submits that the Evaluation Report should be based on a full year of actual experience with the rates, and that a reporting period longer than 12 months may be necessary if BC Hydro proposes changes requiring BCUC approval to allow for adequate time for public consultation.¹²³

BCOAPO expects that BC Hydro will address several additional matters in its Evaluation Report, such as:

- details for cost of NACS cables/connectors that BC Hydro is planning to adopt on new equipment orders as well as for retro-fitting existing charging stations;
- network platform upgrade costs;
- details for energy dispensation rates which are currently based on modelled results as opposed to actual results for higher power levels;
- update regarding efficiency of BC Hydro's EV charging sites;
- update regarding the value of low carbon fuel credits;
- updates on cost of greater-than-200 kW stations and information on congestion experienced at higher power level stations;
- reporting on the actual service life of EV charging stations; and

¹²⁰ Exhibit B-1, Section 6.5, p. 6-9.

¹²¹ SRP Transcript Volume 2, p. 27.

¹²² SRP Transcript Volume 1, p. 133.

¹²³ BCSEA-VEVA Final Argument, p. 8.

 an updated survey of Level 2 and fast charging rates offered by other EV service providers in BC Hydro's service area.¹²⁴

BCOAPO also disagrees with BC Hydro¹²⁵ that the main purpose of the Evaluation Report should be to assess the cost recovery of BC Hydro's rates.¹²⁶ BCOAPO submits that owing to the uncertainty and scope of BC Hydro's RRAs, regular if not annual reporting is required.¹²⁷ BCOAPO requests that the BCUC specify the regulatory cycle for review of BC Hydro's future evaluation reports in its final order with respect to permanent rates.¹²⁸BCOAPO argues that in some cases, one year would be a sufficient time to provide meaningful data in the Evaluation Report (such as in case of network platform upgrade costs, costs associated with adopting the NACS connectors/cables, and costs of charging stations with higher power levels). However, in other cases, a longer period will likely be required to gather meaningful data (such as rates for stations with higher power levels).¹²⁹

Flintoff submits that, as the EV industry is still evolving, there is a risk of stranded assets in case the EV charging connectors change in the future. Flintoff recommends that the BCUC direct BC Hydro to track changes in North American EV chargers and file an annual report on the automobile industry's efforts to standardize Tesla's NACS EV charging connectors for all EVs in the United States that may impact Canadian standards.¹³⁰

RCIA supports BC Hydro's proposed reporting¹³¹, but submits that one of the issues that should be reviewed in the Evaluation Report is the use of an extended asset life for BC Hydro's EV charging stations.¹³²

The CEC agrees with BC Hydro's proposed scope for the Evaluation Report but recommends that the BCUC ask BC Hydro to explore certain additional objectives in the Evaluation Report, such as:

- performance of the public EV charging service costs and cost-effectiveness metrics, with cost recovery showing the R/C ratios and any impacts on other ratepayer groups;
- status of potential convenience premium rates;
- status of innovations to integrate BC Hydro's EV charging with market-based charging services; and
- identification of demand-side management opportunities for the EV charging customer base to enhance their opportunities and benefits from adoption of EVs.¹³³

- ¹³⁰ Flintoff Final Argument, p. 3.
- ¹³¹ RCIA Final Argument, p. 8.
- ¹³² RCIA Final Argument, p. 10.

¹²⁴ BCOAPO Final Argument, pp. 69–70.

¹²⁵ SRP Transcript Volume 2, p. 26.

¹²⁶ BCOAPO Final Argument, p. 65.

¹²⁷ BCOAPO Final Argument, p. 67.

¹²⁸ BCOAPO Final Argument, p. 69.

¹²⁹ BCOAPO Final Argument, p. 65.

¹³³ CEC Final Argument, p. 16.

In reply to BCSEA-VEVA, BC Hydro states that it would not be opposed to a longer period between the implementation of the permanent rates and the filing of the Evaluation Report if the BCUC considers such a longer period to be appropriate.¹³⁴

In reply to BCOAPO, BC Hydro submits that it generally agrees with BCOAPO's recommendations for the scope of the Evaluation Report, except for the recommendation to include a review of service life of EV charging stations and an updated survey of Level 2 and fast charging rates offered by other EV service providers in BC Hydro's service area. BC Hydro reiterates that the main purpose of the Evaluation Report is to track BC Hydro's own cost recoveries for the EV charging service, which is an issue that is independent of the rates being charged by other EV service providers. Further, with respect to BCOAPO's suggestion on subsequent reporting, BC Hydro reiterates that it would be more appropriate for BC Hydro to propose in each evaluation report as to when the next evaluation should occur, adding that it is challenging to set an accurate reporting cadence for a 10-year period at the outset.¹³⁵

In reply to Flintoff, BC Hydro submits that a directive to file an annual report with respect to new EV charging connectors is not required because such changes would be reflected in BC Hydro's updated forecast capital costs and captured in the Evaluation Report. In addition, BC Hydro believes that the risk of stranded assets is low because it expects a mixed charging environment with legacy connectors for non-Tesla EVs, and that most new EVs will have the Tesla NACS connector starting in 2025. It plans to match charging connector types with the current and forecast EV stock in BC to optimize its public charging service.¹³⁶

In reply to RCIA, BC Hydro submits that it is opposed to RCIA's suggested scope for the Evaluation Report with respect to a review of the service life of charging stations. BC Hydro argues that depreciation rates for its assets, including for EV charging stations, are set in revenue requirements proceedings and that its seven-year depreciation rate is consistent with the rate recommended by its consultant, Concentric.¹³⁷

In reply to the CEC, BC Hydro submits that it generally agrees with the additional objectives that the CEC proposes should be added in the Evaluation Report, except for the addition of "identification of demand side management opportunities for the EV charging customer base to enhance their opportunities and benefits from adoption of EVs". BC Hydro argues that this is outside the scope of this Application and would be addressed more appropriately through proceedings to review long-term resource plans and demand-side management expenditure schedule requests.¹³⁸

Panel Determination

The Panel finds that an evaluation by BC Hydro of its public EV charging service will be useful. First, the evaluation should track BC Hydro's cost recovery progress for providing its public EV charging service. Second, the evaluation should address whether the Proposed Rates are competitive and maintain a level playing field for exempted public utilities providing public EV charging services in BC. We also recognize that the reporting items for the Evaluation Report should not impose an undue burden on BC Hydro.

¹³⁴ BC Hydro Reply Argument, pp 8–9.

¹³⁵ BC Hydro Reply Argument, pp. 9–10.

¹³⁶ BC Hydro Reply Argument, pp. 10–11; Exhibit B-6, BCSEA-VEVA IR 11.1.

¹³⁷ BC Hydro Reply Argument, p. 9.

¹³⁸ BC Hydro Reply Argument, p. 11.

We agree with BCSEA-VEVA that the Evaluation Report should be based on a full year of experience with the Proposed Rates. This will enable BC Hydro to provide more meaningful reporting in which any seasonal fluctuations are captured, which could affect the rates for public EV charging service. We also recognize that this will be the first year of the Proposed Rates and that BC Hydro may include rate amendments in its Evaluation Report depending on how cost recovery is tracking relative to the assumptions in the Application. Additionally, rate amendments may also be warranted depending on the capital costs from retrofitting EV charging stations with NACS connectors in the future as well as fluctuations in utilization rates. We find that it would be more appropriate for BC Hydro to propose in the Evaluation Report the timing for the next evaluation report rather than setting a reporting cadence in this Decision.

To address whether the Proposed Rates are competitive, a comparison of BC Hydro fast charging service rates with other operators will assist the BCUC in evaluating and understanding the potential impact on exempted public utility providers in the EV charging service market.

We are of the view that certain items in addition to the scope proposed by BC Hydro for the Evaluation Report will be informative. **BC Hydro is directed to file its Evaluation Report with the BCUC by August 31, 2025.** That Evaluation Report must include the following items in addition to the scope proposed by BC Hydro:

- details for cost of NACS connectors that BC Hydro is planning to adopt on new equipment orders as well as for retro-fitting existing charging stations;
- network platform upgrade costs;
- update regarding the value of low carbon fuel credits;
- update on energy-based cost (in ¢/kWh) of the greater-than-200 kW stations and information on congestion experienced at higher power level stations;
- information on whether the extended stay charge should apply to public Level 2 chargers to alleviate congestion;
- an updated survey of Level 2 and fast charging rates offered by other EV service providers in BC Hydro's service area; and
- update on cost recovery showing the R/C ratios and any impacts on other ratepayer groups.

Interveners recommend additional reporting on the service life of charging stations, demand-side management opportunities for EV charging customers, and the status of premium rates. We agree with BC Hydro that the service life of charging stations and demand-side management opportunities are issues that would be better addressed in other proceedings, such as revenue requirement and demand-side management proceedings. For instance, we note that the BCUC in its BC Hydro Fiscal 2023 to Fiscal 2025 RRA Decision determined the service life of BC Hydro's EV charging stations assets.¹³⁹ With regard to the status of premium rates, the Panel has already directed BC Hydro to propose an expedited review framework for pilot projects in Section 3.3 above. As such, we find that requiring BC Hydro to include in its Evaluation Report the status of alternative rate design for EV charging service is not warranted.

¹³⁹ BC Hydro Fiscal 2023 to Fiscal 2025 RRA Decision and Order G-91-23, pp. 141–142.

4.0 Other Matters

4.1 Public EV Charging Class of Service

The BCUC's EV Inquiry's Phase 2 Report stated that non-exempt public utilities should be required to develop a separate rate and tariff (or a separate class of service) for any operators using any level of charging other than Level 1 or 2; including if the operator is the non-exempt public utility itself.¹⁴⁰ BC Hydro stated in its 2021 EV rates application, however, that it considered EV fast charging service to be part of its General Service and had therefore developed its time-based EV fast charging rates to reflect its General Service pricing.¹⁴¹ In its 2022 BC Hydro EV Decision, the BCUC directed BC Hydro to establish a separate class of service for its EV fast charging service, and to include this in its application for permanent rates.¹⁴² Accordingly, BC Hydro addresses this requirement in the Application and states that it will establish a new rate class for public EV charging service and will include the new rate class in its Fiscal 2023 Fully Allocated Cost of Service Study.¹⁴³

Since BC Hydro's public EV charging service now includes Level 2 charging stations, BC Hydro proposes that the separate class of service for public EV charging services be broadened to include both fast charging and Level 2 charging.¹⁴⁴ BC Hydro submits that fast charging and Level 2 should be in the same class of service because many components are shared across all power levels, including technology, operations, and customer service. Further subdividing the class could lead to swings in cost recovery and potential rate volatility.¹⁴⁵

Positions of the Parties

BCSEA-VEVA and Flintoff support approval of a separate class of service for customers of BC Hydro's public EV charging service.¹⁴⁶ Further, BCSEA-VEVA agrees with BC Hydro that it is appropriate for Level 2 and fast charging to be included in the same class of service.¹⁴⁷

Panel Determination

The Panel acknowledges that BC Hydro has complied with the BCUC's direction in the 2022 BC Hydro EV Decision.

The Panel finds that it is appropriate for BC Hydro's separate class of service for public EV charging to include both fast charging and Level 2 charging. We accept that the two types of charging share common components, and that subdividing this class would not beneficial. Further, we acknowledge that this new class of service will be reflected in and reviewed as part of BC Hydro's forthcoming Fully Allocated Cost of Service Study.

¹⁴⁰ BCUC EV Charging Service Inquiry Phase 2 Report, p. 41.

¹⁴¹ 2022 BC Hydro EV Decision, pp. 51–52.

¹⁴² 2022 BC Hydro EV Decision, p. 55.

¹⁴³ Exhibit B-1, p. 6-10.

¹⁴⁴ Exhibit B-1, p. 6-10; BC Hydro Final Argument, p. 7.

¹⁴⁵ Exhibit B-5, BCUC IRs 1.30.1 and 1.30.2.

¹⁴⁶ Flintoff Final Argument, p. 2; BCSEA-VEVA Final Argument, p. 8.

¹⁴⁷ BCSEA-VEVA Final Argument, p. 8.

4.2 EV Fast Charging Regulatory Account

BC Hydro defers costs and revenues related to public EV charging service to the EV Fast Charging Regulatory Account.¹⁴⁸ In the BC Hydro Fiscal 2023 to Fiscal 2025 RRA Decision dated April 21, 2023, the BCUC stated:¹⁴⁹

[...] revenues related to EV fast charging should be included in the regulatory account to allow for the full consideration of revenues and costs as part of the permanent EV rates application that is to be filed later this year. The regulatory account should be continued until at least the approval of permanent EV fast charging rates for BC Hydro. The Panel expects that, at that time, there would be additional information for the BCUC to determine whether and how this regulatory account should be continued, and any related recovery mechanism.

[...]

The recovery of any interest charges, along with the recovery of any other balances, from this regulatory account should be considered at the same time as or after BCUC approval of the permanent EV fast charging rates.

In the Application, BC Hydro submits that the actual ending balance in the EV Fast Charging Regulatory Account was approximately \$5 million including interest at the end of fiscal 2023.¹⁵⁰ The balance includes:¹⁵¹

- Actual operating and maintenance, depreciation, and energy costs from fiscal 2020 to fiscal 2023;
- Financing costs for fiscal 2023;
- Actual revenue from Public Electric Vehicle Charging Service for fiscal 2022 and fiscal 2023; and
- Revenue from Low Carbon Fuel Credits received in fiscal 2023 for Public Electric Vehicle Charging Service. The credits received in fiscal 2023 were based on energy consumption from calendar year 2018 to calendar year 2021.

BC Hydro included the \$5 million balance in the EV Fast Charging Regulatory Account as a cost in the rate model to calculate the Proposed Rates. The \$5 million balance would be recovered from all BC Hydro EV charging customers over the 10-year modelling period.¹⁵²

BC Hydro notes that only energy-related costs are tracked in the EV Fast Charging Regulatory Account. It states that this is inconsistent with the basis of the Proposed Rates, which apply electricity costs comparable to the electricity costs paid by exempted public utilities that provide EV charging service (i.e. General Service rates, which include demand-related costs as well as energy-related costs).¹⁵³

¹⁴⁸ Exhibit B-1, p. 6-11 and in accordance with Orders G-246-20, G-187-21, and G-91-23.

¹⁴⁹ BC Hydro Fiscal 2023 to Fiscal 2025 RRA Decision and Order G-91-23, p. 232.

¹⁵⁰ Exhibit B-1, p. 6-11.

¹⁵¹ Exhibit B-1, p. 5-33.

¹⁵² Exhibit B-5, BCUC IR 1.14.1.

¹⁵³ Exhibit B-1, p. 6-12.

BC Hydro submits that once the BCUC approves a permanent rate as part of this proceeding, BC Hydro can make submissions on matters relating to the scope and recovery of the balance in the EV Fast Charging Regulatory Account as part of a future revenue requirement application.¹⁵⁴

BC Hydro explains that it defers costs associated with Level 2 public charging stations to the EV Fast Charging Regulatory Account.¹⁵⁵ BC Hydro is amenable to renaming the EV Fast Charging Regulatory Account to "EV Public Charging Regulatory Account" to reflect its Level 2 proposals.¹⁵⁶

BC Hydro submits that the disposition of the EV Fast Charging Regulatory Account balance should be dealt with in an RRA proceeding, in part because BC Hydro's rates have been set through fiscal 2025 and the rates assume the account balance is not being incorporated into BC Hydro's revenue requirement.¹⁵⁷

Positions of the Parties

Interveners did not make submissions on the BC Hydro EV Fast Charging Regulatory Account.

Panel Determination

The Panel approves changing the name of the EV Fast Charging Regulatory Account to "EV Public Charging Regulatory Account" to reflect the inclusion of BC Hydro's Level 2 charging service. In addition, we acknowledge that BC Hydro has factored the outstanding balance of \$5 million into the Proposed Rates. However, we are not satisfied that the disposition and treatment of the EV Fast Charging Regulatory Account have been fully explored during this proceeding. Accordingly, we find that matters relating to the scope and recovery of the balance in the EV Fast Charging Regulatory Account are better addressed as part of BC Hydro's future RRA.

4.3 Treatment of Interim versus Permanent Rates

In the 2022 BC Hydro EV Decision, the BCUC directed that the 2021 EV Interim Rates remain in place until permanent rates are set by the BCUC.¹⁵⁸ The 2021 EV Interim Rates are shown below.

Power Level	Rate Schedule	Time-Based Charge (¢ per minute)
25 kW	1360	12.23
50 kW	1560	21.42
100 kW	1561	27.53

Table 4: 2021 EV Interim Rates at Fiscal 2024

In December 2023, the BCUC established the 2024 EV Interim Rates which are also time-based rates but for different power levels.¹⁵⁹ BC Hydro did not seek interim approval for energy-based rates.¹⁶⁰ The BCUC directed

¹⁵⁸ 2022 BC Hydro EV Decision, p. 37.

¹⁵⁴ Exhibit B-1, p. 6-12.

¹⁵⁵ Exhibit B-6, BCOAPO IR 1.9.3.

¹⁵⁶ SRP Transcript Volume 1, p. 43.

¹⁵⁷ BC Hydro Final Argument, p. 27.

¹⁵⁹ Order G-354-23.

¹⁶⁰ SRP Transcript Volume 1, p. 23.

BC Hydro to maintain RS 1360, 1560, and 1561 until the BCUC renders its final decision on the Application. The 2024 EV Interim Rates are shown below.

Power Level	Rate Schedule	Time-Based Charge (¢ per minute)
Level 2		3.03
Up to 25 kW Fast Charging		12.23
Greater than 25 kW and less than or equal to 50	4100	21 / 2
kW Fast Charging		21.42
Greater than 50 kW and less than or equal to		27 53
100 kW Fast Charging		27.55
Greater than 100 kW and less than or equal to		40.40
200 kW Fast Charging		-010

Table 5: 2024 EV Interim Rates

The interim time-based rates shown above exclude the DARR adjustment. In both of its interim rate approvals related to BC Hydro's public EV charging service, the BCUC directed that the manner of treatment of any variance(s) between the approved interim and the permanent rates would be determined at the time the BCUC renders its final decision on the Application.¹⁶¹

In this Decision, the Panel has approved the Proposed Rates on a permanent basis for BC Hydro's public EV charging service, which will be implemented by June 1, 2024.

BC Hydro submits that if the BCUC orders different permanent rates than the Proposed Rates, BC Hydro proposes that the variance between the interim rates and the permanent rates be addressed prospectively within the EV charging service rate class through the levelized rate design.¹⁶²

BC Hydro explains that its use of the terms "non-refundable" and "non-recoverable" in its requested rate approvals was to indicate that the way it proposes to treat any variance between interim and permanent rates is to account for it within the class as a whole, rather than recovering the variance from or refunding it to individual EV charging service customers.¹⁶³

BC Hydro submits that the Proposed Rates are designed to collect approximately the same amount of revenue as the interim time-based rates. If the BCUC approves the applied-for permanent rates, there would be no variance, in terms of revenue, collected between the interim and permanent rates.¹⁶⁴

¹⁶¹ BC Hydro Final Argument, p. 63.

¹⁶² BC Hydro Final Argument, p. 26.

¹⁶³ SRP Transcript Vol. 1, p. 37.

¹⁶⁴ BC Hydro Final Argument, p. 26.

Positions of the Parties

If the BCUC orders different permanent rates, BCOAPO and the CEC agree with BC Hydro's proposed method to treat any variance between interim and permanent rates prospectively.¹⁶⁵ The CEC further submits that retroactive recovery or refunds to specific customers would be an administrative burden.¹⁶⁶ No intervener opposed BC Hydro's position on this matter.

Panel Determination

Having approved permanent energy-based rates, we must now address the treatment of any variance between interim and permanent rates. There are two possible variances. The first relates to the variance between the two sets of interim rates: the 2021 EV Interim Rates associated with RS 1360, 1560, and 1561 and the 2024 EV Interim Rates associated with RS 4100.

The Panel notes that the time-based rates of 12.23, 21.42, and 27.53 ¢ per minute are the same for fast charging up to 100 kW between the 2021 and 2024 EV Interim Rates, even though they differ in terms of specific power levels versus power level ranges. Rates for Level 2 charging and fast charging greater than 100 kW were newly introduced as part of the approved 2024 EV Interim Rates. It is possible that the 2021 EV Interim Rates may yield a difference when compared to the 2024 EV Interim Rates. However, the Panel has limited information to assess whether there is a difference, nor do we have any way to verify the accuracy of such calculations. Nonetheless, we find that the administrative burden to retroactively calculate almost three years of sales data is disproportionate to the possible value of such exercise, considering that the two sets of time-based rates are almost the same such that any variance is expected to be immaterial.

The second variance relates to the difference between the time-based 2024 EV Interim Rates and the Proposed Rates that we have approved on a permanent basis in Section 3.3 above. For similar reasons as those outlined above, we find that retroactively calculating past charging sessions based on energy delivered is not practical and will impose an undue administrative burden on BC Hydro. Further, we accept BC Hydro's submission that there would be no variance in terms of revenue collected between the time-based 2024 EV Interim Rates and energy-based permanent rates, as BC Hydro modelled both cases for full cost recovery on a levelized and portfolio basis. Furthermore, no interveners suggested that the BCUC direct a refund or collection of any such variance.

The Panel notes that the 2021 EV Interim Rates under RS 1360, 1560, and 1561 are no longer in use as of January 1, 2024 and that the time-based 2024 Interim Rates under RS 4100 will become obsolete by June 1, 2024 following the transition to energy-based rates. Accordingly, the Panel directs that RS 1360, 1560, and 1561 be rescinded. BC Hydro is not required to make any retroactive adjustments between the interim time-based rates and the permanent energy-based rates as approved in this Decision.

4.4 General Rate Changes and Adjustments with DARR/TIRR

BC Hydro's public EV fast charging rates under RS 1360, 1560, and 1561 are subject to general rate changes and the DARR.¹⁶⁷ While BC Hydro proposes that its public EV charging rates under RS 4100 will be subject to general

¹⁶⁵ BCOAPO Final Argument, p. 63; CEC Final Argument, p. 18.

¹⁶⁶ CEC Final Argument, p. 18.

¹⁶⁷ Exhibit B-1, pp. 1-10 and 5-34.

rate changes as well as DARR and TIRR adjustments,¹⁶⁸ it is not seeking to apply these adjustments to the extended stay charge to keep the price signal simple and easy for customers to understand.¹⁶⁹

By way of comparison between BC Hydro and FBC on how the utilities treat anticipated rate increases over the modelled period, BC Hydro explains that FBC embedded escalation factors in its financial model for its rate calculation and does not adjust rates to reflect any general rate changes.¹⁷⁰ In contrast, BC Hydro has not embedded escalation factors in its model to calculate the Proposed Rates and submits that it is therefore appropriate, in BC Hydro's case, to apply general rate changes,¹⁷¹ which would include DARR and TIRR.

BC Hydro explains that it plans to present the BCUC-approved public EV charging rates in RS 4100 as inclusive of the DARR and TIRR, and to specify as such. BC Hydro considers that this presentation will be easier for customers to verify that the charge they are paying at a BC Hydro public EV charging station matches the rate displayed in RS 4100. Alternatively, BC Hydro can show the rates, before any applicable DARR and TIRR adjustments, in RS 4100 and in a separate section of the rate schedule indicate that the applicable DARR and TIRR apply to the public EV charging service rates. In either case, BC Hydro confirms that there is no difference in what BC Hydro would actually bill customers.¹⁷²

Positions of the Parties

With respect to applying the general rate change to RS 4100, BCSEA-VEVA agrees with BC Hydro's proposal that general rate increases would apply to the rates for public EV charging service.¹⁷³

Interveners do not object to BC Hydro applying the DARR or TIRR to RS 4100, but rather provide submissions on how the rate riders should be presented in the tariff. BCSEA-VEVA supports BC Hydro's proposal to present the BCUC-approved public EV charging rates in RS 4100 to be inclusive of the DARR and TIRR. Under this approach, the posted rate at the charging stations will correspond to the rate presented in RS 4100.¹⁷⁴ BCOAPO is indifferent as between the two approaches of whether to include DARR and TIRR in the presentation of the Proposed Rates in RS 4100 or separately by noting that these rate riders apply.¹⁷⁵

Panel Determination

The Panel approves the application of BC Hydro's general rate changes to its Level 2 and fast charging rates. We accept that BC Hydro's rate calculation is different than FBC's methodology, in that BC Hydro has not embedded escalation factors in its model to calculate the Proposed Rates. Thus, we are satisfied that it is appropriate to apply general rate increases to BC Hydro's rates for public EV charging service. We are persuaded that general rate increases should not apply to the extended stay charge so that the price signal remains clear to customers.

¹⁶⁸ Exhibit B-5, BCUC IR 1.1.1, Attachment 3 - Proposed Rate Schedule 4100, p. 6-22.

¹⁶⁹ Exhibit B-5, BCUC IR 1.1.1; Exhibit B-1-2, p. 5-11; Exhibit B-6, BCSEA-VEVA IR 1.23.1.

¹⁷⁰ Exhibit B-6, CEC IR 1.19.3; FBC Application for Approval of Rate Design and Rates for Electric Vehicle Direct Current Fast Charging Service, Decision and Order G-341-22, p. 19.

¹⁷¹ Exhibit B-6, CEC IR 1.19.3.

¹⁷² BC Hydro Final Argument, pp. 8–9.

¹⁷³ BCSEA-VEVA Final Argument, p. 4.

¹⁷⁴ BCSEA-VEVA Final Argument, p. 4.

¹⁷⁵ BCOAPO Final Argument, p. 62.

The Panel accepts that BC Hydro plans to present the BCUC-approved EV charging rates in RS 4100 to be inclusive of DARR and TIRR. We agree with BC Hydro that whether it chooses to present rates this way, or to show the rates exclusive of DARR/TIRR and refer to DARR/TIRR in a separate section of RS 4100, makes no difference to what BC Hydro would bill customers. This is simply a presentation issue in how BC Hydro wishes to organize its Electric Tariff, including applicable rate rider adjustments. BC Hydro should be free to manage the form of its customer communications, unless the BCUC directs otherwise.

Given that DARR and TIRR change from time to time and that the rates approved by Order G-354-23 specified no DARR adjustment, throughout this Decision we have referred to public EV charging service rates without any adjustment and will continue to do so. However, **BC Hydro is required to provide appropriate wording in its terms and conditions under the Electric Tariff and RS 4100 that reflects the rates approved in this Decision regardless of its choice of presentation of the approved rates (i.e. before or after any applicable DARR and TIRR adjustments)**.

4.5 Terms and Conditions

BC Hydro requests BCUC approval of the terms and conditions for its public EV charging service as set out in RS 4100. The EV charging rates, extended stay charge, and applicable rate riders as discussed earlier in this Decision form part of RS 4100. BC Hydro in Section 5.5 of the Application outlines differences between RS 4100 and the previous RS 1360, 1560, and 1561, as summarized below:¹⁷⁶

- Availability RS 4100 is available in all rate zones and areas outside Rate Zone I, Rate Zone IB, and Rate Zone II where a BC Hydro charging station is located to reflect BC Hydro's increased geographic coverage of charging stations. In contrast, the previous rate schedules indicated that EV charging would be available in Rate Zone I only.
- 2. Definitions amend or introduce the definitions of charging port, charging sessions, charging site, charging station, customer, EV charging billing agreement, EV charging service, extended stay, fast charging port, Level 2 charging port, and power level.
- Special Conditions 12 special conditions related to billing, discrepancies, notification of service interruption, liability, third-party fees,¹⁷⁷ and limitation of other electricity services outside BC Hydro's current rate zones.

With respect to third-party fees including parking and roaming fees, BC Hydro has not yet completed the procurement process for the new network technology platform as of September 2023. However, in cases where BC Hydro needs to collect third-party fees that are not paid by customers directly, those fees will be flowed through to the customer.¹⁷⁸ BC Hydro submits that the public charging network technology platform updates are required to charge the third-party fees in Special Conditions 6, 7, 10, and 11. BC Hydro expects to implement these fees at all stations, over time, as enabled by public charging network technology platform updates.¹⁷⁹

Positions of the Parties

Interveners did not raise any issues related to BC Hydro's terms and conditions in RS 4100 in the proceeding.

¹⁷⁶ Exhibit B-1, pp. 5-44 to 5-54.

¹⁷⁷ For example, roaming fees, credit card transaction fees, and parking fees.

¹⁷⁸ Exhibit B-5, BCUC IR 1.28.1.

¹⁷⁹ Exhibit B-1, p. 6-3.

Panel Determination

The Panel approves the BC Hydro terms and conditions of service under RS 4100 as adjusted in accordance with this Decision. BC Hydro is directed to file tariff pages for endorsement at least 30 days in advance of permanent energy-based rates coming into effect, which shall, in any event be on or before June 1, 2024.

We are generally satisfied with BC Hydro's proposed terms and conditions for RS 41000 which align with its current public EV charging service. These include expanding service areas to reflect BC Hydro's public EV charging service coverage, describing how charging stations are configured, and updating special conditions for various situations. As for the collection of third-party fees where applicable, we note that enabling the network technology platform is required to implement four of the 12 special conditions and it is unclear whether BC Hydro has executed such network technology platform upgrade to date. Accordingly, as part of the tariff page filing, the Panel directs BC Hydro to address the appropriateness of including the special conditions related to BC Hydro's collection of third-party fees from customers.

4.6 Confidentiality

BC Hydro submits that Appendix C to the Application includes station-by-station utilization information that is commercially sensitive and requests that the confidential information provided in Appendix C remain confidential for five years. Further, BC Hydro requests that the Excel model provided in confidential Exhibit B-1-1-2 pertaining to the rate design of its public EV charging service remain confidential for ten years because it includes ten-year cost forecasts that are commercially sensitive.¹⁸⁰

Interveners did not comment on these requests in their submissions.

Panel Determination

The Panel agrees that both Appendix C and the Excel model pertaining to the rate design of BC Hydro's public EV charging service contain information that is commercially sensitive because there are other service providers competing in the EV charging market that could benefit from having access to this information. Therefore, **unless otherwise ordered by the BCUC, the Panel approves BC Hydro's request to keep confidential Appendix C for five years and the EV rate design Excel model for ten years, respectively.**

¹⁸⁰ Exhibit B-1, p. 2.

 13^{th}

Original signed by:

A. K. Fung, QC Panel Chair / Commissioner

Original signed by:

E.B. Lockhart Commissioner



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ORDER NUMBER G-67-24

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

and

British Columbia Hydro and Power Authority Public Electric Vehicle Charging Service Rates

BEFORE:

A. K. Fung, KC, Panel Chair E. B. Lockhart, Commissioner

on March 13, 2024

ORDER

WHEREAS:

- A. On July 28, 2023, British Columbia Hydro and Power Authority (BC Hydro) applied to the British Columbia Utilities Commission (BCUC) for approval of the BC Hydro Public Electric Vehicle (EV) Charging Service Rates Application (Application) pursuant to sections 58 to 61 and 90 of the *Utilities Commission Act* (UCA) including the following:
 - i. the rates and terms and conditions as set out in Rate Schedule (RS) 4100 for Public Electric Vehicle Charging Service, on an interim and permanent basis;
 - ii. the rescindment of RS 1360, 1560, and 1561, on a permanent basis; and
 - iii. the establishment of a separate class of service for Public EV Charging Service.
- B. By Order G-89-21 dated March 23, 2021, the BCUC approved time-based rates for BC Hydro's EV fast charging on an interim, refundable and recoverable basis, effective May 1, 2021, as set out in RS 1360, 1560 and 1561 (2021 EV Interim Rates) in relation to BC Hydro's Public EV Fast Charging Service Rates Application dated March 5, 2021 (2021 Application);
- C. By Order G-18-22 dated January 26, 2022, the BCUC denied BC Hydro's 2021 Application on a permanent basis, and ordered that the 2021 EV Interim Rates were to remain in place until permanent rates are set by the BCUC;
- D. In the Application, as amended, BC Hydro requests BCUC approval of the following time-based and energybased EV charging rates, as set out in its new RS 4100:

Power Level	Time-Based Charge (cents / minute)	Energy-Based Charge (cents / kWh)
Level 2	3.03	28.28
Up to 25 kW Fast Charging	12.23	
Greater than 25 kW and less than or equal to 50 kW Fast Charging	21.42	
Greater than 50 kW and less than or equal to 100 kW Fast Charging	27.53	34.34
Greater than 100 kW and less than or equal to 200 kW Fast Charging	40.40	
Greater than 200 kW Fast Charging	50.50	
Extended Stay Charge	40 per	minute

- E. By Orders G-219-23, G-259-23 and G-263-23 and letter dated December 12, 2023, the BCUC established a regulatory timetable for the review of the Application, which included public notice, letters of comment, intervener registration, one round of information requests to BC Hydro, a streamlined review process (SRP), and written final arguments;
- F. By Order G-354-23 dated December 18, 2023, the BCUC approved certain time-based rates under RS 4100 on an interim basis, effective January 1, 2024 (2024 EV Interim Rates), and directed BC Hydro to maintain RS 1360, 1560 and 1561 until the BCUC renders its final decision on the Application;
- G. At the SRP, BC Hydro clarified that it continues to seek approval of the energy-based rates under RS 4100 on a permanent basis upon the BCUC's final decision on the Application; and
- H. The BCUC has reviewed the Application, evidence and arguments filed in the proceeding and determines that approval of permanent energy-based rates is warranted.

NOW THEREFORE, pursuant to sections 58 to 61 of the UCA, for the reasons stated in the decision issued concurrently with this order, the BCUC orders as follows:

- 1. The energy-based rates for BC Hydro's public EV charging service are approved on a permanent basis, specifically the proposed rates of 28.28 ¢/kWh for Level 2 charging and 34.34 ¢/kWh for all fast charging stations, before any applicable Deferral Account Rate Rider or Trade Income Rate Rider adjustments.
- 2. BC Hydro is directed to implement the approved energy-based rates by June 1, 2024, and maintain the 2024 EV Interim Rates until it completes the transition from time-based rates to energy-based rates.
- 3. The extended stay charge of 40 ¢ per minute is approved for BC Hydro public EV fast charging stations, to take effect at the same time as the implementation of the approved energy-based rates.
- 4. RS 1360, 1560 and 1561 are rescinded. BC Hydro is not required to make any retroactive adjustments between the interim time-based rates and the permanent energy-based rates as approved by this order.

- 5. The terms and conditions of service under RS 4100 are approved subject to adjustments set out in the decision. BC Hydro is directed to file revised tariff pages with the BCUC for endorsement at least 30 days in advance of permanent energy-based rates coming into effect.
- 6. BC Hydro is directed to comply with all other directives set out in the decision issued concurrently with this order.

DATED at the City of Vancouver, in the Province of British Columbia, this 13th day of March, 2024.

BY ORDER

Original signed by:

A. K. Fung, KC Commissioner

List of Acronyms

Acronym	Description
2021 EV Interim Rates	Interim time-based rates approved by Order G-89-21 under RS 1360, 1560 and 1561
2022 BC Hydro EV Decision	Decision and Order G-18-22 dated January 26, 2022
2024 EV Interim Rates	Interim time-based rates approved by Order G-354-23 under RS 4100
BC	British Columbia
BC Hydro	British Columbia Hydro and Power Authority
ВСОАРО	British Columbia Old Age Pensioners' Organization et al.
BCSEA-VEVA	BC Sustainable Energy Association and Vancouver Electric Vehicle Association
BCUC	British Columbia Utilities Commission
CEA	Clean Energy Act
CEC	Commercial Energy Consumers Association of BC
DARR	Deferral Account Rate Rider
DCFC	Direct current fast charging
EV	Electric vehicle
EV Enquiry	BCUC's Inquiry into the Regulation of Electric Vehicle Charging Service
FBC	FortisBC Inc.
Flintoff	Donald Flintoff
GGRR	Greenhouse Gas Reduction (Clean Energy) Regulation
GST	Goods and Services Tax
IR	Information request
kW	Kilowatt
kWh	Kilowatt hour
NACS	North American Charging Standard
R/C ratio	Revenue-to-cost ratio
RCIA	Residential Consumer Intervener Association
RRA	Revenue requirements application
RS	Rate schedule
SRP	Streamlined review process

Ten-Year Plan	Ten-Year Deployment Plan
TIRR	Trade Income Rate Rider
UCA	Utilities Commission Act

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

and

British Columbia Hydro and Power Authority Public Electric Vehicle Charging Service Rates

EXHIBIT LIST

Exhibit No.

Description

COMMISSION DOCUMENTS

A-1	Letter dated August 8, 2023 – Appointing the Panel for the review of BC Hydro Public Electric Vehicle Charging Service Rates Application
A-2	Letter dated August 17, 2023 – BCUC Order G-219-23 establishing a regulatory timetable and Public Notice with Reasons for Decision
A-3	Letter dated September 14, 2023 – BCUC Information Request No. 1 to BC Hydro
A-4	Letter dated September 20, 2023 – BCUC amending the Panel for the review of the application
A-5	Letter dated September 29, 2023 – BCUC submitting Streamlined Review Process information
A-6	Letter dated September 29, 2023 – BCUC Order G-259-23 amending the regulatory timetable
A-7	Letter dated October 6, 2023 – BCUC Order G-263-23 amending the regulatory timetable
A-8	Letter dated November 17, 2023 – BCUC providing Streamlined Review Process Information
A-9	Letter dated November 17, 2023 – BCUC Panel Information Request No. 1 to BC Hydro
A-10	Letter dated November 24, 2023 – BCUC establishing the Streamlined Review Process Scope

A-11	Letter dated December 6, 2023 – BCUC providing further Streamlined Review Process Information
A-12	Letter dated December 12, 2023 – BCUC adjusting the regulatory timetable
A-13	Letter dated December 14, 2023 – BCUC notifying parties of corrections to transcript
A-14	Letter dated December 18, 2023 – BCUC Order G-354-23 approving interim rates

COMMISSION STAFF DOCUMENTS

A2-1	Letter dated September 14, 2023 – BCUC staff submitting Tesla's article titled Opening the North American Charging Standard, dated November 11, 2022
A2-2	Letter dated September 14, 2023 – BCUC staff submitting CleanTechnica.ca article titled What You Need to Know About Fast Charging EVs Now & Over the Next Few Years in USA, dated August 14, 2023
A2-3	Letter dated September 14, 2023 – BCUC staff submitting Electrek.co article titled Everything You Need to Know about the North American Charging Standard (NACS), dated June 19, 2023
A2-4	Letter dated September 14, 2023 – BCUC staff submitting ElectricAutonomy.ca article titled Tesla Supercharger Network Now Billing Based on kWh in Canada, dated August 4, 2023
A2-5	Letter dated December 8, 2023 – BCUC staff submitting Witness Aid for the Streamlined Review Process dated December 11–12, 2023

APPLICANT DOCUMENTS

- B-1 BRITISH COLUMBIA HYDRO AND POWER AUTHORITY (BC HYDRO) Public Electric Vehicle Charging Service Rates Application dated July 28, 2023
- B-1-1 **CONFIDENTIAL** Letter dated July 28, 2023 BC Hydro submitting Public Electric Vehicle Charging Service Rates Application
- B-1-2 **PUBLIC –** Letter dated November 17, 2023 BC Hydro submitting Application Errata No. 1
- B-1-1-1 Letter dated July 28, 2023 BC Hydro submitting public Excel Model supporting the Application
- B-1-1-2 **CONFIDENTIAL –** Letter dated July 28, 2023 BC Hydro submitting confidential Excel Model supporting the Application
- B-1-1-3 **CONFIDENTIAL** Letter dated November 17, 2023 BC Hydro submitting confidential Application Errata No. 1
- B-2 Letter dated August 25, 2023 BC Hydro submitting confirmation of public notice in compliance with G-219-23
- B-3 Letter dated September 8, 2023 BC Hydro submitting confirmation of public notice in compliance with G-219-23
- B-4 Letter dated October 5, 2023 BC Hydro submitting extension request for filing response to Information Request No. 1
- B-5 PUBLIC Letter dated November 9, 2023 BC Hydro submitting response to BCUC Information Request No. 1
- B-5-1 CONFIDENTIAL Letter dated November 9, 2023 BC Hydro submitting confidential response to BCUC Information Request No. 1
- B-5-2 PUBLIC Letter dated December 15, 2023 BC Hydro submitting revised public responses to BCUC Information Request No. 1

B-6	PUBLIC - Letter dated November 9, 2023 – BC Hydro submitting responses to Interveners Information Requests No. 1
B-6-1	CONFIDENTIAL - Letter dated November 9, 2023 – BC Hydro submitting confidential responses to Interveners Information Requests No. 1
B-7	Letter dated November 15, 2023 – BC Hydro submission on SRP Scope
B-8	Letter dated November 21, 2023 – BC Hydro submitting responses to BCUC Panel Information Request No. 1
B-9	PUBLIC - Letter dated December 7, 2023 – BC Hydro submitting public SRP Presentation and Sensitivity Analysis
B-9-1	CONFIDENTIAL - Letter dated December 7, 2023 – BC Hydro submitting confidential SRP Presentation and Sensitivity Analysis
B-10	Letter dated December 15, 2023 – BC Hydro submitting errata to SRP Transcripts Volumes 1 and 2
B-11	PUBLIC - Letter dated December 15, 2023 – BC Hydro submitting public responses to SRP Undertakings
B-11-1	CONFIDENTIAL - Letter dated December 15, 2023 – BC Hydro submitting confidential responses to SRP Undertakings

INTERVENER DOCUMENTS

C1-1	FLINTOFF, DONALD (FLINTOFF) - Letter dated August 17, 2023 submitting request to intervene
C1-2	Letter dated September 21, 2023 – Flintoff submitting Information Request No. 1 to BC Hydro
C1-3	Letter dated November 1, 2023 – Flintoff submitting no intervener evidence
C2-1	GUTHRIE, GARY (GUTHRIE) - Letter dated August 17, 2023 submitting request to intervene
C2-2	Letter dated September 21, 2023 – Guthrie submitting Information Request No. 1 to BC Hydro

C3-1	BC SUSTAINABLE ENERGY ASSOCIATION AND VANCOUVER ELECTRIC VEHICLE ASSOCIATION (BCSEA-VEVA) - Letter dated August 19, 2023 submitting request to intervene by T. Hackney
C3-2	Letter dated September 21, 2023 – BCSEA-VEVA submitting Information Request No. 1 to BC Hydro
C3-3	Letter dated October 5, 2023 – BCSEA-VEVA submission on further process
C3-4	Letter dated November 1, 2023 – BCSEA-VEVA submitting no intervener evidence
C3-5	Letter dated November 15, 2023 – BCSEA-VEVA submission on SRP Scope
C4-1	FORTISBC INC. (FBC) - Letter dated August 21, 2023 submitting request to intervene by S. Walsh
C5-1	RESIDENTIAL CONSUMER INTERVENER ASSOCIATION (RCIA) - Letter dated September 6, 2023 submitting request to intervene by A. Abomazid
C5-2	Letter dated September 12, 2023 – RCIA submitting Confidentiality Declaration and Undertaking Forms
C5-3	Letter dated September 21, 2023 – RCIA submitting Information Request No. 1 to BC Hydro
C5-4	Letter dated November 15, 2023 – RCIA submission on SRP Scope
C5-5	Letter dated November 15, 2023 – RCIA confirming no submission on Information Request No. 1
C5-6	Letter dated December 10, 2023 – RCIA submitting Witness Aid for the Streamlined Review Process
C6-1	BC OLD AGE PENSIONERS' ORGANIZATION, COUNCIL OF SENIOR CITIZENS' ORGANIZATIONS OF BC, ACTIVE SUPPORT AGAINST POVERTY, DISABILITY ALLIANCE BC, TENANTS RESOURCE AND ADVISORY CENTRE, AND TOGETHER AGAINST POVERTY SOCIETY (BCOAPO) - Letter dated September 7, 2023 submitting request to intervene by I. Mis
C6-2	Letter dated September 18, 2023 – BCOAPO submitting Confidentiality Declaration and Undertaking Forms
C6-3	Letter dated September 21, 2023 – BCOAPO submitting Information Request No. 1 to BC Hydro
C6-4	Letter dated November 15, 2023 – BCOAPO submission on SRP Scope

C7-1	COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BC (CEC) - Letter dated September 7, 2023 submitting request to intervene by D. Craig
C7-2	Letter dated September 21, 2023 – CEC submitting Information Request No. 1 to BC Hydro
C7-3	Letter dated November 15, 2023 – CEC submission on SRP Scope
C7-4	Letter dated December 10, 2023 – CEC submitting Witness Aid for the Streamlined Review Process
C8-1	SUNCOR - Letter dated September 7, 2023 submitting request to intervene by A. Henry
C9-1	CARMICHAEL, KELLY (CARMICHAEL) - Letter dated August 30, 2023 submitting request to intervene
C9-2	Letter dated September 21, 2023 – Carmichael submitting Information Request No. 1 to BC Hydro

LETTERS OF COMMENT

D-1	BUTZELAAR, R. (BUTZELAAR) – Letter of Comment dated August 10, 2023
D-2	CAMPOS, K. (CAMPOS) – Letter of Comment dated August 9, 2023
D-3	BRUDY, S. (BRUDY) – Letter of Comment dated August 10, 2023
D-4	LACTIN, J. (LACTIN) – Letter of Comment dated August 10, 2023
D-5	LEMCKE, W. (LEMCKE) – Letter of Comment dated August 10, 2023
D-6	NORIE, S. (NORIE) – Letter of Comment dated August 11, 2023
D-7	YOUNG, S. (YOUNG) – Letter of Comment dated August 12, 2023
D-8	WENDLAND, L. (WENDLAND) – Letter of Comment dated August 12, 2023
D-9	HYNES, C. (HYNES) – Letter of Comment dated August 12, 2023
D-10	COLLIER, M. (COLLIER) – Letter of Comment dated August 12, 2023
D-11	THIR, S. (THIR) – Letter of Comment dated August 12, 2023
D-12	INSELBERG, A. (INSELBERG) – Letter of Comment dated August 12, 2023
D-13	ЈОНNSON, C. (ЈОНNSON) – Letter of Comment dated August 12, 2023

D-14	LANDROCK, K. (LANDROCK) – Letter of Comment dated August 12, 2023
D-15	BOLDING, C. (BOLDING) – Letter of Comment dated August 12, 2023
D-16	McGIFFIN, T. (McGIFFIN) – Letter of Comment dated August 12, 2023
D-17	SIRULNIKOFF, A. (SIRULNIKOFF) – Letter of Comment dated August 12, 2023
D-17-1	SIRULNIKOFF – Additional Letter of Comment dated August 12, 2023
D-18	JORDAN, J. (JORDAN) – Letter of Comment dated August 12, 2023
D-19	VALENTINE, N. (VALENTINE) – Letter of Comment dated August 12, 2023
D-20	ALEXANDER, M. (ALEXANDER) – Letter of Comment dated August 12, 2023
D-21	SAVISKOFF, P. (SAVISKOFF) – Letter of Comment dated August 12, 2023
D-22	VENNARD, N. (VENNARD) – Letter of Comment dated August 12, 2023
D-23	NASH, L. (NASH) – Letter of Comment dated August 13, 2023
D-24	COLEMAN, B. (COLEMAN) – Letter of Comment dated August 13, 2023
D-25	WALBERG, R. (WALBERG) – Letter of Comment dated August 13, 2023
D-26	CHATTON, R. (CHATTON) – Letter of Comment dated August 13, 2023
D-27	MCKAY, C. (MCKAY) – Letter of Comment dated August 13, 2023
D-28	TWEEDY, T. (TWEEDY) – Letter of Comment dated August 13, 2023
D-29	Pow, A. (Pow) – Letter of Comment dated August 13, 2023
D-30	ЈОНNSON, M. (ЈОНNSON) – Letter of Comment dated August 13, 2023
D-31	CAREY, M. (CAREY) – Letter of Comment dated August 13, 2023
D-32	RADKE, T. (RADKE) – Letter of Comment dated August 13, 2023
D-33	HOLMAN, B. (HOLMAN) – Letter of Comment dated August 13, 2023
D-34	MOEN, V. (MOEN) – Letter of Comment dated August 13, 2023
D-35	CAMPBELL, C. (CAMPBELL) – Letter of Comment dated August 13, 2023
D-36	Luкovicн, D. (Luкovicн) – Letter of Comment dated August 13, 2023

- D-37 THIESSEN, F. (THIESSEN) Letter of Comment dated August 13, 2023
- D-38 GREWAL, A. (GREWAL) Letter of Comment dated August 13, 2023
- D-39 JONES, R. (JONES) Letter of Comment dated August 13, 2023
- D-40 CHUI, V. (CHUI) Letter of Comment dated August 13, 2023
- D-41 MUNRO, D. (MUNRO) Letter of Comment dated August 13, 2023
- D-42 EVERETT, N. (EVERETT) Letter of Comment dated August 13, 2023
- D-43 FAIRBANK, T. (FAIRBANK) Letter of Comment dated August 13, 2023
- D-44 LANTAIGNE, D. (LANTAIGNE) Letter of Comment dated August 14, 2023
- D-45 PECK, B. (PECK) Letter of Comment dated August 14, 2023
- D-46 CUNNINGHAM, M. (CUNNINGHAM) Letter of Comment dated August 14, 2023
- D-47 MOONEY, F. (MOONEY) Letter of Comment dated August 14, 2023
- D-48 Go, B. (Go) Letter of Comment dated August 14, 2023
- D-49 SMITH, C. (SMITH) Letter of Comment dated August 14, 2023
- D-50 AGAR, D. (AGAR) Letter of Comment dated August 14, 2023
- D-51 BROWN, W. (BROWN) Letter of Comment dated August 15, 2023
- D-52 Lo, K. (Lo) Letter of Comment dated August 15, 2023
- D-53 REEKIE, M. (REEKIE) Letter of Comment dated August 14, 2023
- D-54 VANPEENAN, P. (VANPEENEN) Letter of Comment dated August 15, 2023
- D-55 WONG, S. (WONG) Letter of Comment dated August 14, 2023
- D-56 BAXTER, M. (BAXTER) Letter of Comment dated August 15, 2023
- D-57 BROOKS, T. (BROOKS) Letter of Comment dated August 15, 2023
- D-58 BROWNRIDGE, J. (BROWNRIDGE) Letter of Comment dated August 16, 2023
- D-59 VARTY, D. (VARTY) Letter of Comment dated August 16, 2023
- D-60 WILLIAMS, G. (WILLIAMS) Letter of Comment dated August 16, 2023

D-61	HACKETT, H. AND E. (HACKETT) – Letter of Comment dated August 16, 2023
D-62	JAFFAR, A. (JAFFAR) – Letter of Comment dated August 16, 2023
D-63	RICE, S. (RICE) – Letter of Comment dated August 17, 2023
D-64	Evans, P. (Evans) – Letter of Comment dated August 16, 2023
D-65	LITTLE, D. (LITTLE) – Letter of Comment dated August 17, 2023
D-66	HEALEY, M. (HEALEY) – Letter of Comment dated August 17, 2023
D-67	NELSON, L. (NELSON) – Letter of Comment dated August 17, 2023
D-68	ETHIER, J. (ETHIER) – Letter of Comment dated August 17, 2023
D-69	Sмітн, K. (Sмітн) – Letter of Comment dated August 17, 2023
D-70	SILVA, T. (SILVA) – Letter of Comment dated August 17, 2023
D-71	TAYLOR, P. (TAYLOR) – Letter of Comment dated August 17, 2023
D-72	SHARMAN, R. (SHARMAN) – Letter of Comment dated August 17, 2023
D-73	SAWADA-TSE, H. (SAWADA-TSE) – Letter of Comment dated August 17, 2023
D-74	Рніррѕ, D. (Рніррѕ) – Letter of Comment dated August 17, 2023
D-75	PAGE, R. (PAGE) – Letter of Comment dated August 17, 2023
D-76	BAUER, B. (BAUER) – Letter of Comment dated August 18, 2023
D-77	BROWN, I. (BROWN) – Letter of Comment dated August 18, 2023
D-78	PALMER, F. (PALMER) – Letter of Comment dated August 18, 2023
D-79	Dairoвi, P. (Dairoвi) – Letter of Comment dated August 18, 2023
D-80	LUTZ, B. (LUTZ) – Letter of Comment dated August 18, 2023
D-81	VILLALTA, O (VILLALTA) – Letter of Comment dated August 19, 2023
D-82	MEUTER, H. (MEUTER) – Letter of Comment dated August 19, 2023
D-83	SHUNTER, M. (SHUNTER) – Letter of Comment dated August 19, 2023
D-84	COLLIN, K. (COLLIN) – Letter of Comment dated August 20, 2023

- D-85 THOMPSON, I. (THOMPSON) Letter of Comment dated August 21, 2023
- D-86 THOMAS, G. (THOMAS) Letter of Comment dated August 21, 2023
- D-87 LUCKING, T. (LUCKING) Letter of Comment dated August 22, 2023
- D-88 JOHANNESSEN, D. (JOHANNESSEN) Letter of Comment dated August 23, 2023
- D-89 DEMERSE, T. (DEMERSE) Letter of Comment dated August 23, 2023
- D-90 EWART, D. (EWART) Letter of Comment dated August 25, 2023
- D-91 MODO CO-OPERATIVE (MODO) Letter of Comment dated August 29, 2023
- D-92 BECKETT, D. (BECKETT) Letter of Comment dated September 6, 2023
- D-93 WILSON, T. (WILSON) Letter of Comment dated September 20, 2023
- D-94 DOWNIE, D. (DOWNIE) Letter of Comment dated September 22, 2023
- D-95 ALLEN, D. (ALLEN) Letter of Comment dated December 13, 2023
- D-96 STEVENTON, D. (STEVENTON) Letter of Comment dated December 15, 2023