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April 20, 2021
File No.: 301539.00034/14797

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By Electronic Filing

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Patrick Wruck, Commission Secretary

Dear Sirs/Mesdames:

**Re: British Columbia Hydro and Power Authority ("BC Hydro")
Fiscal 2022 Revenue Requirements Application**

We enclose for filing BC Hydro's Reply Submissions in the above-noted proceeding.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

[Original signed by]

Matthew Ghikas
Personal Law Corporation

MTG/vde

BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF

THE *UTILITIES COMMISSION ACT*, R.S.B.C. 1996, CHAPTER 473

AND

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

FISCAL 2022 REVENUE REQUIREMENTS APPLICATION

REPLY SUBMISSIONS OF

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

APRIL 20, 2021

FASKEN MARTINEAU DuMOULIN LLP

MATTHEW GHIKAS, CHRISTOPHER BYSTROM and TARIQ AHMED

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PART ONE: INTRODUCTION

1. The intervener submissions demonstrate substantial consensus on a number of components of BC Hydro's forecast revenue requirements for the fiscal 2022 test period ("Test Period"). Some interveners expressly support the proposed rate increase of 1.16 percent and other approvals sought,¹ while several indicate acceptance of, or do not oppose planned amounts in a variety of areas. BC Hydro's March 18, 2021 Final Submissions ("Final Submissions") anticipated and addressed most of the specific issues raised in intervener submissions. BC Hydro respectfully submits that, for the reasons set out in its Final Submissions and augmented here where necessary,² the requested rate increase and related orders³ are just and reasonable. They should be approved as sought.

¹ CEC Submissions, paras. 2, 10, 11; BCSEA Submissions, paras. 6-10; CM&E Submissions, p. 1. Zone II RPG (at para. 4) "does not oppose this rate increase although Zone II RPG continues to have concerns about electricity affordability."

² BC Hydro's silence on a particular matter should not be interpreted as agreement.

³ Exhibit B-2-7, Updated Draft Order Sought; amended by Exhibit B-9, Response to Undertaking No. 19. As discussed in Part Eight of these Reply Submissions, a recent amendment to Direction No. 8 to the BCUC means that BC Hydro no longer requires the regulatory account that it had sought in Exhibit B-5 (cover letter) to capture variances between the placeholder net income used in the determination of rates and what flows from BC Hydro's upcoming cost of capital proceeding.

PART TWO: APPLICATION CONTEXT

2. The following submissions address (1) intervenor commentary on BC Hydro's affordability mandate, and (2) AMPC's views on how the BCUC should approach rate setting during the COVID-19 pandemic.

A. BC HYDRO'S RATE AFFORDABILITY MANDATE AND HOW BC HYDRO ASSESSES IT

3. Several interveners, including BCOAPO, Zone II RPG, CEC, Mr. Bryenton and AMPC, reference affordability and concerns about the impacts of the COVID-19 pandemic.

(a) BC Hydro Is Advancing its Corporate Affordability Mandate

4. In terms of BC Hydro's corporate affordability mandate, Mr. O'Riley noted BC Hydro's requested rate increase of 1.16 percent is within inflation and rate increases have averaged 1.3 percent over the past three years. He also pointed to the long-term rate trajectory:⁴

I mean, we are very conscious, as I said, about the importance of keeping our rates affordable, and we really look at that over time. There is some times in a revenue requirements period, there is limited flexibility to manage a budget within a particular year, but over time we have more flexibility, and that's why the arc of costs and spending and investment are so important.

So we have coming out of the phase 1 government review, we made a strong commitment to try and keep rate increases below inflation. We've been quite successful at that, so far. I note that the Fiscal '20 and Fiscal '21 rate changes pretty much offset one another. So, if you look at a three-year of F20, '21, and '22, the current one, we are at about 1.3 percent over three years, which I think is a relatively modest rate increase. And we are looking through the 20s, through 2030, of rate increases below inflation. So, and that's an important benchmark for us, in addition to the benchmarks around, around staying in the first quartile for all three customer classes.

So, you know, we think -- we're conscious of the affordability affects here, we are also conscious of the investment needs, and we think the 1.16 strikes a balance there.

5. BC Hydro's efforts to advance its corporate affordability mandate in fiscal 2022 include its cost control efforts, effective investment in the stewardship of the system, broad and cost-

⁴ Tr. 1, p. 42, l. 23 – p. 43, l. 22 (O'Riley).

effective demand side management (“DSM”) initiatives intended to help customers reduce their energy consumption and bills, and implementing customer COVID-19 pandemic relief initiatives.

6. BC Hydro’s initiatives to help low income and Indigenous customers go beyond those referenced by BCOAPO and Zone II RPG. The DSM portfolio includes a variety of programs aimed at mitigating the particular challenges faced by low income customers and Indigenous communities.⁵ BC Hydro has welcomed input on these issues, and will continue to engage with customers.

7. The CEC “recommends that the Commission direct BC Hydro to examine options to assist medium and large general service customers and report back to the Commission with a plan for assistance forthwith.”⁶ A direction of the nature advocated by CEC would be inappropriate. BC Hydro’s has taken available steps within its existing tariffs to provide relief during the COVID-19 pandemic.⁷ Otherwise, the COVID-19 relief measures have required government policy determinations supported by legislative action.

8. BCOAPO, Zone II RPG and Mr. Bryenton address how BC Hydro should assess whether it is meeting its affordability mandate. BC Hydro recognizes that (as BCOAPO and Zone II RPG observe) the financial position of individual customers will differ and some customer expenses or income levels do not track inflation. However, inflation is a relevant data point for BC Hydro to consider when assessing its performance against its affordability mandate, given the statutory rate-setting context that requires the BCUC to set rates to recover reasonable and prudently incurred costs and precludes rate setting based on ability to pay. Many of BC Hydro’s costs are subject to uncontrollable inflationary pressures, and keeping rate increases below inflation may be⁸ one indication that BC Hydro has worked to offset cost pressures. As Mr. O’Riley noted, BC Hydro also considers affordability by benchmarking against other utilities. BC Hydro is open

⁵ Exhibit B-2-2, Appendix M, pp. 2-19.

⁶ CEC Submissions, paras. 220-224.

⁷ Exhibit B-5, CEC IR 1.15.1.

⁸ BC Hydro is not suggesting that inflation is a definitive measure of reasonable rates. At law, the reasonableness of rates is determined, not by how they compare with inflation, but by whether they recover reasonable and prudently incurred costs and provide an opportunity to earn a fair return. Just and reasonable rate increases can be more or less than inflation, depending on the facts.

to exploring additional potential indicators of affordability at the Low Income Advisory Council (“LIAC”) referenced by Zone II RPG and BCOAPO.⁹ The LIAC is also the appropriate forum to explore Zone II RPG’s proposal to retain a consultant.¹⁰

(b) Affordability Is Part of BC Hydro’s Corporate Mandate, Not a Rate Setting Principle

9. BC Hydro explained in Part Two of its Final Submissions that, although affordability is an important part of BC Hydro’s corporate mandate, the principle has only indirect relevance to the BCUC’s rate-setting mandate and this proceeding. As the BCUC noted in its decision (“Decision”) on BC Hydro’s Fiscal 2020-Fiscal 2021 Revenue Requirements Application (“Previous Application”):¹¹

Affordability is a reasonable objective for BC Hydro; ultimately its corporate existence depends on its customers being able to afford to buy its services. Affordability may also be a matter of public policy in which the government of BC may choose to take an interest and pass legislation or take other measures. However, the BCUC has no legislative mandate to make rates affordable, either for all customers or for specific groups of customers. The BCUC made this clear in its decision on BC Hydro’s 2015 Rate Design Application when it rejected a request for a low-income rate which was unsupported by an economic or cost of service justification. Rate setting principles are set out in the UCA, and subject to government regulations and directions, the BCUC must not approve [rates] which are “unjust, unreasonable, unduly discriminatory or unduly preferential.”

The BCUC went on to say: “For rates to be just and reasonable, we must be satisfied that the utility is able to recover only sufficient funds to enable it to continue to provide safe and reliable service, and to provide an appropriate return on the utility’s invested capital.”¹²

B. THE STATUTORY TEST FOR RATE APPROVAL REMAINS THE SAME DESPITE THE PANDEMIC AND “GAP YEAR” PROCESS

10. AMPC states: “Given the ‘streamlined’ lens of the F2022 RRA process, and the financial pressures on customers from COVID-19, any rate increases at all at this time should be subject to

⁹ BCOAPO Submissions, p. 8; Zone II RPG Submissions, para. 8.

¹⁰ Zone II RPG Submissions, para. 10.

¹¹ Decision, p. 194.

¹² Decision, p. 194.

a stringent review and meet a higher threshold of reasonableness and necessity.”¹³ While BC Hydro understands AMPC’s sentiment that the COVID-19 pandemic holds challenges for industrial customers, the statutory test for approving rates under the *Utilities Commission Act* (“UCA”) does not change depending on the format of a revenue requirements application (“RRA”) process or economic conditions. The statutory test is “just and reasonable”, and the meaning of that test is informed by a long line of court decisions. The BCUC should set fiscal 2022 rates based on reasonable forecast costs and prudently incurred capital costs, as the law requires.

11. As BC Hydro described in its Final Submissions, it continues to exercise fiscal discipline; however, doing the minimum to keep the lights on in the short-term is not enough, even in a pandemic. It is appropriate for BC Hydro to make the planned investments in the system, which will add resilience to BC Hydro’s system. The most significant expenditures planned for fiscal 2022 target areas specifically identified by the BCUC in the Decision as potentially requiring more investment.

¹³ AMPC Submissions, para. 8.

PART THREE: LOAD AND REVENUE FORECAST

12. Most interveners either support or do not oppose the use of COVID-19 Scenario A for the purposes of forecasting revenues for the Test Period.¹⁴

13. CEABC is focussed primarily on load forecasting over the longer term. It expresses concern about the persistence of the COVID-19 scenario reductions into fiscal 2024 and 2025,¹⁵ and the degree to which electrification loads to meet Government of B.C. 2030 greenhouse gas reduction targets are included in the March 2020 Load Forecast.¹⁶ The March 2020 Load Forecast presented in the Application included the impact for fiscal 2022 of a number of electrification measures, including loads associated with the Government of B.C.'s CleanBC programs.¹⁷

14. In 2020, BC Hydro completed a comprehensive load forecast update. This forecast, the December 2020 Load Forecast, will be provided in the next RRA and the 2021 Integrated Resource Plan.¹⁸ BC Hydro's electrification plan will also be included in the next RRA.¹⁹ BC Hydro's long-term load forecast, and its alignment with the long-term goals of the CleanBC plan, are best addressed as part of the review of BC Hydro's 2021 Integrated Resource Plan.²⁰

15. The BCUC should find that COVID-19 Scenario A is an appropriate basis for setting rates in fiscal 2022.

¹⁴ BCOAPO Submissions, pp. 16, 18 and 19; BCSEA Submissions, para. 20; CEC Submissions, para. 32; CM&E Submissions, p. 3; MoveUP Submissions, p. 2; RCIA Submissions, p. 6; Zone II RPG Submissions, para. 26.

¹⁵ CEABC Submissions, pp. 2, 3 and 20.

¹⁶ CEABC Submissions, pp. 3-5 and 20.

¹⁷ Exhibit B-4, BCUC IR 1.8.3.

¹⁸ Exhibit B-5, RCIA IR 1.2.3; Tr. 1, p. 186, ll. 5 – 11 (Rich).

¹⁹ Exhibit B-4, BCUC IR 1.8.1.

²⁰ Exhibit B-5, CEABC IR 1.1.1 and 1.1.7. See also, BC Hydro's response to Exhibit B-4, BCUC IR 1.8.3, which provides the estimated loads related to low carbon electrification activities and the Government of B.C.'s CleanBC Plan for fiscal 2022.

PART FOUR: COST OF ENERGY

16. Interveners either support²¹ or do not oppose the use of BC Hydro's planned Cost of Energy for the purpose of setting rates for the Test Period. RCIA and BCOAPO each propose that certain information be included in future proceedings, and BC Hydro responds below.

A. RCIA'S DESIRE FOR MORE INFORMATION ON WATER RENTALS IN FUTURE RRAS

17. RCIA recommends that in future applications, BC Hydro provide "a more comprehensive and quantified explanation of the relationship between increased water rental costs due to above average inflows and the corresponding energy cost offsets resulting from reduced market imports and/or increased market exports enabled by the increased inflows".²²

18. As RCIA notes in its submissions, total water rental fees are forecast to increase by \$52.2 million²³ in the fiscal 2022 Plan compared to the fiscal 2021 Plan.²⁴ This increase is mainly due to higher hydro generation volumes in calendar year 2020 (not fiscal 2020 as stated in RCIA's submissions) as a result of high inflows in the Peace and Columbia regions.²⁵

19. Due to the way water rentals are billed, costs do not occur in the same year as the generation. Water rental fees on the generation of energy are calculated as the actual energy output of the license holder from the prior calendar year multiplied by the current year water rental rates.²⁶ Accordingly, the generation in calendar 2020 determines costs in fiscal 2022.

20. For this reason, there is no direct link between the \$52.2 million increase in the Cost of Heritage Energy and the \$93.5 million decrease in the cost of Market Energy forecast for fiscal 2022 relative to fiscal 2021. The higher hydro generation in calendar year 2020 corresponds in part with a decrease in System Imports in fiscal 2021 relative to the forecast.²⁷

²¹ BCOAPO Submissions, pp. 21, 23 and 25; CEC Submissions, paras. 42, 61 and 65.

²² RCIA Submissions, p. 8.

²³ The figure that appears in RCIA's submissions is \$52.5 million. As set out in Exhibit B-2, Application, Table 4-2 and p. 4-7, the figure is \$52.2 million.

²⁴ RCIA Submissions, p. 8.

²⁵ Exhibit B-2, Application, p. 4-7.

²⁶ Exhibit B-2, Application, p. 4-7. (Water rental fees on operating capacity are calculated as the maximum sustained capacity observed for the current year times the current year rate.)

²⁷ Exhibit B-2, Application, p. 4-19.

21. When preparing its RRAs, BC Hydro considers feedback and submissions from interveners in previous proceedings to identify areas where more information, or an updated presentation of the information, may be helpful. As BC Hydro prepares the next RRA, it will consider RCIA's feedback and look for opportunities to provide a more detailed explanation.

B. BCOAPO'S DESIRE FOR ADDITIONAL INFORMATION ON MARKET ENERGY PURCHASES IN FUTURE RRAS

22. BCOAPO addresses the characterization of market energy purchases under the 2020 Transfer Pricing Agreement ("2020 TPA"), expressing concern about the ability, under the 2020 TPA, to identify the market purchases of electricity to meet domestic requirements.²⁸

23. As a result of the 2020 TPA, which came into effect on April 1, 2020, the method of allocating of imports and exports between BC Hydro and Powerex has changed.²⁹ In particular, hourly net imports and exports are no longer distinguished as between energy purchases and sales to meet domestic requirements, and energy purchases and sales for Powerex trade activity using the residual system capability (i.e., Trade Account transactions under the 2003 Transfer Pricing Agreement). Accordingly, in the fiscal 2021 Forecast and the fiscal 2022 Plan all purchases of market energy are classified as System Imports and reported on line 10 of Schedule 4.0, and all sales of energy are classified as System Exports and reported on line 11.³⁰

24. While the 2020 TPA does not conduct an hourly allocation, it does distinguish between flexible imports/exports and non-flexible imports/exports and sets out how BC Hydro's actual Annual Flexible Surplus/Deficit is determined. BC Hydro can identify the cost of market purchases of electricity to meet domestic requirements based on the 2020 TPA pricing methodology and provide this information based on the actual outcomes in subsequent RRAs.³¹

²⁸ BCOAPO Submissions, p. 24.

²⁹ Section 10 of Direction No. 8 to the British Columbia Utilities Commission, BC Reg. 24/2019 (as amended by BC Reg. 88/2021 (Order in Council No. 172), deposited March 22, 2021) directs the BCUC to not exercise its powers under section 71(1)(b) and (3) of the UCA in respect of the 2020 TPA.

³⁰ Exhibit B-4, BCUC IR 1.17.1.

³¹ Exhibit B-4, BCUC IR 1.17.1.

25. Neither of the items raised by RCIA and BCOAPO calls the fiscal 2022 planned Cost of Energy into question. BC Hydro submits that its planned Cost of Energy is reasonable and appropriate for the purpose of setting rates for the Test Period.

PART FIVE: OPERATING COSTS

A. INTRODUCTION

27. BC Hydro focusses below on the arguments of RCIA and AMPC, which are the only interveners who oppose approval of some of BC Hydro's planned operating costs. Otherwise, while some interveners were silent, several interveners expressed agreement with BC Hydro's planned operating cost increases.³²

B. BC HYDRO HAS PROVIDED AMPLE EVIDENCE TO JUSTIFY PLANNED OPERATING COSTS

28. RCIA states that it "takes issue with the apparent presumption in this Application that all base costs from the prior RRA are not subject to testing, and only those areas in which increases are proposed require defense in this proceeding."³³ There are two answers to RCIA's argument.

29. First, the scope of this proceeding included an assessment of BC Hydro's entire operating budget. The Application focussed on incremental changes from fiscal 2021 planned operating expenses because of the timing and structure of this proceeding as determined by the BCUC in the Decision contemplated that fiscal 2022 would be a "gap year",³⁴ recognizing that the desired regulatory cycle did not allow for a proceeding of the duration and breadth of a typical RRA. The BCUC noted that interveners had generally supported a "gap year" approach (BC Hydro recognizes that, at the time, RCIA had not yet been formed). The Decision contemplated an incremental approach, even suggesting the potential for using an inflationary adjustment or some other mechanism to escalate costs:³⁵

As for the scope and form of the fiscal 2022 RRA, the Panel finds that the comprehensive details in this Decision should be used to inform BC Hydro of the areas of particular concern to the BCUC.

³² CEC Submissions, paras. 69 and 105; BCSEA Submissions, paras. 24-33; Zone II Submissions, paras. 11, 12 and 14; MoveUP Submissions, p. 2.

³³ RCIA Submissions, p. 9.

³⁴ Decision, p. 187.

³⁵ Decision, p. 188.

Finally, it may be appropriate to apply an inflationary adjustment to some elements of BC Hydro's cost of service while other components may require a different indexing mechanism or consideration. We rely on BC Hydro to bring forward evidence to support its positions for any adjustments beyond inflation and further expects BC Hydro to equally identify and incorporate any anticipated cost decreases along with its costs increases for review in its fiscal 2022 RRA.

30. Using an inflation adjustment or other escalation mechanism would have presumably allowed less latitude for interveners to parse BC Hydro's planned operating costs than the process that actually unfolded.

31. Second, this proceeding is not occurring in a vacuum. There have been two significant RRA proceedings in the last few years, with the most recent Decision being issued only six months ago. In the Fiscal 2017–Fiscal 2019 RRA Decision, the BCUC indicated that it needed greater comfort regarding BC Hydro's starting point costs before inflation could be considered a potential tool for evaluating the reasonableness of forecast increases in a test period:³⁶

The Panel recognizes that in some cases, comparing forecast cost increases to the rate of inflation may be considered an appropriate measure for evaluating the reasonableness of forecast cost increases in the test period. This method is likely suitable in situations where a regulator has consistently been empowered to oversee all aspects of the utility's forecast and historical expenditures through proceedings in which the underlying base costs were initially established. However, given the Commission's limited involvement in the approval of BC Hydro's recent revenue requirements, the Panel does not have a high degree of comfort in BC Hydro's starting point, being the 2016 base operating cost.

32. BC Hydro's Fiscal 2020–Fiscal 2021 RRA thus included hundreds of pages of additional evidence specifically on BC Hydro's starting point (as opposed to solely incremental) operating costs. This additional evidence took the form of detailed sub-chapters within Chapter 5.³⁷ In the recent Decision, the BCUC made a number of favourable determinations regarding operating costs, including accepting BC Hydro's budgeting process:³⁸

³⁶ BCUC Decision and Order No. G-47-18, BC Hydro Fiscal 2017 to Fiscal 2019 Revenue Requirements Application (March 1, 2018), p. 33.

³⁷ For RCIA's reference, they were Chapters 5, 5A-5G of the Previous Application, with a chapter devoted to each Business Group.

³⁸ Decision, p. 58.

The Panel accepts BC Hydro's approach to leveraging a top down to bottom up budgeting to forecast its base operating costs for the Test Period, which provides insight into the cost pressures and savings opportunities for BC Hydro. The monitoring processes provide opportunities to adjust as necessary to ensure targets are achieved, as well as to gain insights to develop sound budgets for the future. In addition, the monitoring processes reveal trends that may otherwise go unnoticed.

33. The Decision also acknowledged BC Hydro's commitment to controlling costs and signalled areas where BC Hydro should consider increasing spending. The BCUC stated, for instance:³⁹

BC Hydro has been increasingly focused on its mandate to keep costs down and rates low. In fact, BC Hydro's executive compensation pay is linked to keeping rates low. This is a reasonable objective for any utility, and we applaud this attention to cost reduction. However, our mandate is to ensure not that rates are kept low or affordable, but that rates are just, reasonable and not unduly discriminatory or unduly preferential.

...

We are concerned that a singular focus on keeping rates low, while salutary, may encourage any utility to cut corners and focus on cutting costs in areas that may have detrimental effects. These effects could be in the Test Period but could also manifest in a future test period(s).

In this Decision, we express concerns about a number of areas where cost cutting may have been too aggressive or that needed increases have been put on hold:

1. Employee Training
2. Energy Studies
3. Vegetation management
4. Cybersecurity
5. Safety

Increased spending in these areas and others may be required in upcoming test periods. This will provide upward pressure on rates and there may not be any further cuts that can be made in other areas to mitigate these upward pressures.

³⁹ Decision, p. (v).

34. In assessing the reasonableness of BC Hydro's planned operating expenses for fiscal 2022, the BCUC is entitled to consider its prior determinations.⁴⁰

35. There is ample evidence for the BCUC to conclude that the overall planned operating expenses for fiscal 2022 – the starting operating expenses and incremental costs and savings – are reasonable. The evidence is summarized in the Final Submissions, but notably includes:

- (a) BC Hydro has determined planned operating expenses for fiscal 2022 using the same well-developed budgeting process used in prior years; and
- (b) BC Hydro has held operating budgets across all Key Business Units at current levels, with the exception of uncontrollable costs and the targeted investments in reliability and resilience that align with the BCUC's Decision. BC Hydro has largely offset other cost pressures with cost savings, despite there being fewer opportunities to do so after years of fiscal restraint.⁴¹ Doing more with the same budget requires ever more efficient operations.

36. BC Hydro's next RRA will reflect that the corresponding test period is not a "gap year".

C. BC HYDRO'S BUDGETING PROCESS INVOLVES PRIORITIZATION

37. AMPC advocates the following approach for planning operating expenses: "...a least cost approach should remain the starting point to BC Hydro's system investment and planning, with any expenditures above this amount first undergoing analysis that identifies the costs, benefits and risks associated with expenditures and potential alternatives."⁴² BC Hydro would take issue with AMPC's formulation to the extent that AMPC is suggesting a bias or presumption in favour of short-term cost reductions or doing nothing at all. The BCUC has cautioned against "a singular focus on keeping rates low".⁴³

⁴⁰ Considering or giving weight to its findings should be distinguished from the BCUC Panel considering itself bound by prior determinations. The latter is not permissible, per UCA, s. 75.

⁴¹ Tr. 1, p. 11, l. 24 – p. 14, l. 15 (O'Riley); Exhibit B-2, Application, p. 5-20.

⁴² AMPC Submissions, para. 17.

⁴³ Decision, p. (v).

38. AMPC states: “In other words, it is easy for BC Hydro and others to identify potential system risks, but harder to manage the pacing and prioritization of all of these risks. This is imperative to ensuring ratepayers are paying the fair cost of service in the year charged and not underwriting the cost for future service.”⁴⁴ In response:

- The evidence, discussed in BC Hydro’s Final Submissions, demonstrates how BC Hydro employs budgeting and planning processes – including for operating expenses and capital – that weigh competing priorities and incorporate top-down constraints to balance keeping rates low and BC Hydro’s longer-term stewardship role.⁴⁵
- Moreover, accounting rules and certain regulatory accounts promote inter-generational equity. Operating costs, which are typically recognized in rates in the year they are incurred, generally yield immediate benefits for ratepayers. Capital expenditures only affect rates once the assets go into service (i.e., when they become capital additions), and are amortized over the period that the assets are expected to serve customers. Certain regulatory accounts, such as the Demand-Side Management Regulatory Account, match cost recovery with the expected benefit horizon.

D. THE PLANNED MRS FUNDING INCREASE IS WARRANTED

39. CEC and BCSEA express support for increased funding for MRS,⁴⁶ while some other interveners take no position. Three matters raised by AMPC, RCIA and BCOAPO are addressed below.

(a) Certain MRS Information Is Confidential for Good Reason

40. Although AMPC and RCIA did not seek access to confidential MRS information in this proceeding, they now signal their desire in future applications to obtain access to confidential

⁴⁴ AMPC Submissions, para. 17.

⁴⁵ BC Hydro Final Submissions, paras. 13, 87-88, 92-93.

⁴⁶ CEC Submissions, para. 77-80; BCSEA Submissions, para. 25.

MRS-related information. AMPC asks the BCUC to pronounce on the matter in anticipation of future proceedings.⁴⁷ This approach is at odds with the process prescribed by the BCUC's Rules of Procedure, which contemplates interveners making objections at the time of filing. BC Hydro submits that it would be procedurally improper for the BCUC to make what would amount to a pre-emptive procedural order with the intent of fettering the discretion of the BCUC panel hearing the next RRA. This issue should properly be left for the future BCUC Panel to decide based on the facts at that time and in accordance with the process set out in the BCUC's Rules of Procedure.

41. BC Hydro nonetheless offers the following points in response.

42. First, there was evidence about MRS costs on the public record. The extent of the public record is evident, for instance, from the discussion in BC Hydro's Final Submissions.⁴⁸

43. Second, the majority of the planned MRS operating cost increase (\$21.3 million, i.e., all but \$0.4 million)⁴⁹ will fund activities that are necessary to deliver on mitigation plans developed in conjunction with the Western Electricity Coordinating Council ("WECC") which WECC has recommended for approval by the BCUC.⁵⁰ BC Hydro has no flexibility in terms of whether or not to implement steps in an approved mitigation plan, nor is there any discretion as to timing.⁵¹ Information sought by RCIA⁵² – such as, the circumstances that led to the mitigation plans, the merits of the mitigation plans, and the merits of the costs flowing from them – should not be re-

⁴⁷ AMPC Submissions, para. 12; RCIA Submissions, p. 11.

⁴⁸ CEC noted: "BC Hydro has provided a clear overview of the reasoning behind its request for nearly \$22 million in its Application and has responded to multiple information requests from the BCUC and interveners both on the public record and confidentially." CEC Submissions, para. 77.

⁴⁹ Exhibit B-2, Application, Chapter 5, section 5.5.3, p. 5-17 and section 5.6.3.

⁵⁰ Exhibit B-2, Application, Chapter 5, section 5.6.3.1; Exhibit B-4, BCUC IR 1.23.2; Exhibit B-2-4, Confidential Appendix Z, pp. 5-7; Exhibit B-6, BCUC (Confidential) IR 1.5.4 and 1.5.4.1; Exhibit B-4, BCUC IR 1.23.1.

⁵¹ Exhibit B-5, RCIA IR 1.8.4.

⁵² RCIA Submissions, p. 11. The RCIA wants access to, e.g., "what is causing BC Hydro to be non-compliant across a range of MRS standards, why the proposed operating (and capital) investments are needed, and why the selected mitigations proposed for implementation are the most cost-effective way to address the deficiencies."

litigated in the RRA. The BCUC already considers and determines such matters when it approves mitigation plans.⁵³

44. Third, CIP-related information is security sensitive, and the consequences of disclosure (inadvertent or otherwise) are potentially severe for BC Hydro, customers, British Columbians and neighbouring jurisdictions.⁵⁴ The most effective way to reduce that significant exposure is to limit access to information, and that is the typical approach used for CIP-related information in B.C. and elsewhere. Access is limited even within BC Hydro – only a handful of people at BC Hydro were privy to the contents of the materials filed in confidence with the BCUC in this proceeding, and those individuals were only granted access after completing BC Hydro’s internal training regarding how to handle CIP-sensitive information. In the U.S., there are blanket confidentiality requirements over CIP-related materials.⁵⁵

45. Fourth, some of the information filed confidentially in this proceeding, whether CIP-related or otherwise, is deemed to be confidential by the BCUC’s MRS Compliance Monitoring Program.⁵⁶ Section 6.2 of the Rules of Procedure provide that “[a]ll information submitted to the Commission for the purposes of a Hearing...will be held in confidence pursuant to the Commission’s Rules of Practice and Procedure...”. The requirements for confidentiality are repeated throughout the various compliance steps – e.g., Audits, Spot Checks, Compliance Investigation Reports, Complaints, and Notices of Alleged Violation.⁵⁷ For example:

4.3.1 A Notice of Alleged Violation will be treated as confidential unless and until the Commission confirms the Alleged Violation and the Commission considers that disclosure would not relate to a cyber-security incident or otherwise jeopardize the security of the bulk power system. [Emphasis added.]

⁵³ See Exhibit B-2, Application, p. 5-31 and 5-32 for a description of the BCUC’s process as it relates to mitigation plans.

⁵⁴ Exhibit B-2, Application, section 5.6.1.

⁵⁵ See, generally, North American Electric Reliability Corporation Compliance Monitoring and Enforcement Program, Appendix 4C to the Rules of Procedure, online at https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix_4C_CMEP_06082018.pdf.

⁵⁶ The MRS Rules of Procedure define “Confidential Information” to broadly encompass “(i) information produced for or created in the course of the registration process or any compliance monitoring process by an Entity, the Commission or the Administrator...”.

⁵⁷ See, for instance, sections 2.1.6.8, 2.3.3.8, 2.4.3.12, 2.8.5; 4.3.1.

46. There is a sound policy rationale underlying the BCUC's MRS Compliance Monitoring Program confidentiality requirements. Confidentiality in the compliance process is necessary in order to foster open dialogue between an entity and its regulator's enforcement arm. It encourages entities subject to MRS (there are a number of such entities in BC) to self-report and seek guidance on ways to mitigate risk and ensure the security and reliability of the system is maintained – which is the primary goal of the framework – without fear of reputational harm before due process has been observed through the BCUC's Compliance Monitoring Program. Under the BCUC's MRS compliance framework, if and when violations are confirmed, certain information may become public; however, that determination is made in the context of the compliance processes that the BCUC establishes.

47. The BCUC's approach regarding confidentiality follows the approach that is applied elsewhere in North America.⁵⁸

48. Moreover, exploring issues related to MRS compliance in an RRA would undermine the procedural safeguards that are built-in to the BCUC's Compliance Monitoring Program to ensure fairness. The inherent nature of compliance activities are such that significant attention must be given to due process. For example, under the BCUC's Compliance Monitoring Program, in the event of an Alleged Violation, there are obligations on WECC to provide disclosure to BC Hydro – an obligation that does not exist in the RRA context and reflects the unique character of compliance proceedings that can result in sanction.⁵⁹

(b) A Directive to Perform an MRS Efficiency Audit is Unwarranted

49. BCOAPO suggests that “the BCUC should direct BC Hydro to ensure that in the next internal audit of its MRS activities includes considerations of efficiency as well as compliance and

⁵⁸ See section 39.7(b)(4) of FERC's regulations and Order No. 672, 114 FERC at paras. 535 and 538. See also Second Joint Staff White Paper on Notices of Penalty Pertaining to Violations of Critical Infrastructure Protection Reliability Standards, Docket No. AD19-18-000, September 23, 2020 which provides that, “going forward, all CIP noncompliance filings and submittals by NERC will request that the entire filing or submittal be treated as CEII and Commission staff will designate such filings and submittals as CEII in their entirety. Additionally, because of the risk associated with the disclosure of CIP noncompliance information, NERC will no longer publicly post redacted versions of the CIP noncompliance filings and submittals.”

⁵⁹ Compliance Monitoring Program, section 6.1.

that the subsequent Report is written with a view to being able to provide a public version (redacted as necessary) that would address issues related to efficiency.”⁶⁰ The BCUC should decline BCOAPO’s invitation to make this directive.

50. As an initial point, Ms. Peck’s reference to the MRS program being inefficient was an acknowledgement that the processes could be improved to ensure that BC Hydro remains compliant with MRS, not that BC Hydro is spending wastefully. The example that Ms. Peck gave was automation: “So we are looking at technology to help provide some automation to some very manual processes, for example, to improve our efficiency.”⁶¹ MRS requirements are integrated in procedures within business areas, and the costs for these activities are embedded in the base operating budgets of various Key Business Units.⁶² The corporate budgeting process and accountability that exists throughout the organization instills fiscal discipline for MRS spending just as it does for other types of spending.

51. BC Hydro anticipates undertaking another internal audit of the MRS function. Ms. Peck explained that BC Hydro first needs to complete the work that is underway:⁶³

We have a requirement in our internal compliance program, which is our governance framework, for our MRS program to undertake an internal audit at least once every five years and I think it would be more likely sooner than that. So we do have to complete the work that we are doing right now, which I've loosely indicated is another couple years, and then we would look to having an audit after that point to make sure that we are effective and as efficient as is appropriate.

Although the audit will likely focus primarily on systems and governance, Mr. O’Riley observed that the efficacy of these processes and efficiency “go hand in hand”.⁶⁴

⁶⁰ BCOAPO Submissions, pp. 27-28.

⁶¹ Tr. 1, p. 194, l. 16 – p. 195, l. 1 (Peck). Other improvements that will reduce unplanned compliance work are discussed in the BCUC (Confidential) IR 1.2.3.

⁶² Exhibit B-5, BCOAPO IR 1.30.1.

⁶³ Tr. 1, p. 195, ll. 13–23 (Peck).

⁶⁴ Tr. 1, p. 197, ll. 22–24 (O’Riley).

52. In any event, a direction of the nature BCOAPO is contemplating would exceed the BCUC's jurisdiction, as it is aimed at directing how the Company is managed.⁶⁵

E. INCREASED VEGETATION MANAGEMENT SPENDING IS WARRANTED

53. A number of interveners, including CEC, BCOAPO, CM&E, BCSEA and MoveUP, support the requested funding for vegetation management.⁶⁶ AMPC and RCIA oppose the planned increase. BC Hydro responds to their arguments below.

(a) The Decision Did Not Limit Vegetation Management Increases to Inflation

54. AMPC advocates applying an inflationary adjustment to BC Hydro's forecast vegetation management costs for the transmission system, and "only approv[ing] distribution vegetation maintenance costs increases that reflect the Commission's concerns from the F2020-F2021 RRA."⁶⁷ AMPC's argument is based on a misinterpretation of the Decision.

55. AMPC suggests that transmission-related vegetation management expense increases above inflation are "inconsistent with the direction that the Commission provided to BC Hydro for this RRA, and unfair to customers as a result."⁶⁸ In making this argument, AMPC first cites the fact that the BCUC's Decision (in particular, the passage quoted in paragraph 29 above) "specifically identified that an 'inflationary adjustment' could be appropriate for certain BC Hydro expenditures". However, the BCUC did not purport to determine the allowed operating expenses for fiscal 2022 (a matter that was not before them in the Fiscal 2020-Fiscal 2021 RRA proceeding), nor could the BCUC Panel have lawfully fettered the discretion of a future BCUC Panel in any event. It is evident on the face of the Decision that the BCUC was identifying the potential to use a simplified approach to determining rates in the context of a "gap year". The BCUC was explicit that operating costs could exceed inflation if there was justification. There is ample evidence on

⁶⁵ See *British Columbia Hydro and Power Authority v. British Columbia (Utilities Commission)* (1996), 20 B.C.L.R. (3d) 106 at paras. 57-58 (available on CanLII) (C.A.), Tab 4 to Book of Authorities to BC Hydro Final Submissions (PDF pp. 267-268).

⁶⁶ CEC Submissions, para. 85; BCOAPO Submissions, p. 31; BCSEA Submissions, para. 26; CM&E Submissions, p. 5.

⁶⁷ AMPC Submissions, para. 20.

⁶⁸ AMPC Submissions, para. 20. See also paras. 21-23.

the record in this proceeding to support overall vegetation management cost increases above inflation for fiscal 2022.

56. AMPC then suggests that the BCUC's Directive 22 (requiring BC Hydro "to address the adequacy of vegetation management funding"⁶⁹) was "specific to the distribution system". AMPC's characterization is not accurate. The Decision included multiple references to MRS standards (that only apply to the Bulk Electric System) and the "transmission system" (underlined for emphasis):

We agree with BC Hydro that vegetation management is an area of concern that requires evaluation. In particular, the BCUC recently directed an onsite investigation of BC Hydro regarding FAC-003 vegetation-related events. The purpose of MRS Standard FAC-003 is to maintain a reliable electric transmission system by using a defensive in-depth strategy to manage vegetation located on transmission rights of way and minimize encroachments from vegetation located adjacent to the right of way. Since vegetation growth is constant and always present, unmanaged vegetation poses an increased outage risk, especially when numerous transmission lines are operating at or near their rating. This can present a significant risk of consecutive line failures when lines are experiencing large sags.

In addition to possible vegetation management issues on BC Hydro's transmission system, we are also concerned with whether the appropriate practices are in place on its distribution system. Proper vegetation management is a key way to reduce storm restoration costs, to minimize outages for BC Hydro customers and to protect the integrity of the North American bulk electric system.

However, despite our concern, we are not approving more than what BC Hydro has requested in its budget for vegetation management in the Test Period. This is because BC Hydro would not be able to adequately spend the extra funds on vegetation management in the few months remaining in the Test Period. Further, it is management's responsibility to request the amount that it thinks it needs to carry out a proper vegetation management program.

The Panel supports BC Hydro's commitment to making vegetation management a key priority to be addressed as part of the next RRA and looks forward to receiving BC Hydro's future vegetation management plan that addresses the work required and the benefits to be achieved over the next test period. **However, given the Panel's concerns, we direct that BC Hydro ensure that it also address the**

⁶⁹ Decision, p. 73, Directive 22: "However, given the Panel's concerns, we direct that BC Hydro ensure that it also address the adequacy of its vegetation management funding in its next RRA."

adequacy of its vegetation management funding in its next RRA. [Bold in Decision; underlining added]

(b) Limiting Funding to the Fiscal 2021 Plan Would Be Harmful

57. RCIA “recommends that the vegetation management funding be limited to the F2021 forecast until after the revised vegetation management strategy has been finalized and approved by the Commission.”⁷⁰ The BCUC should not accept RCIA’s recommendation.

58. First, to the extent that RCIA’s reference to “F2021 forecast” means the planned spending for fiscal 2021 as set out in the Previous Application, that amount proved to be insufficient to accomplish the necessary work during the last test period. In fact, BC Hydro spent an additional \$3.6 million in fiscal 2020 on transmission vegetation management over and above what had been reflected in the Previous Application, and anticipated spending an additional \$8.8 million above plan in fiscal 2021; the additional \$12.4 million over the test period represented an additional 33 percent.⁷¹ It would be unreasonable to expect that BC Hydro’s requirements will decrease in fiscal 2022 when a significant vegetation accumulation remains.

59. Second, BC Hydro explained the harm that could come from not approving the incremental funding that BC Hydro is seeking:⁷²

If the incremental funding for fiscal 2022 is rejected, BC Hydro believes that there would be risk of grown-ins on the transmission system, in addition to incremental detrimental impacts to distribution reliability and public safety because of vegetation contact from falling trees. BC Hydro believes these risks must be proactively managed through an increase in vegetation management budget to ensure both public and employee safety and system reliability.

(c) The Fiscal 2022 Work Will Dovetail With the Pending Vegetation Management Strategy

60. The fact that work on the Vegetation Management Strategy is still underway is an unpersuasive rationale for RCIA’s position. The Vegetation Management Strategy will determine

⁷⁰ RCIA Submissions, p. 14.

⁷¹ BC Hydro Final Submissions, para. 46.

⁷² Exhibit B-4, BCUC IR 1.36.1.

an optimal mix between clearing and hotspotting going forward and longer-term budget levels. The work in fiscal 2022 is foundational and the benefits are realized regardless.⁷³

The incremental budget in fiscal 2022 will be used primarily to increase the total volume of work delivered. BC Hydro will also improve system imaging capability with LiDAR which is considered an industry best practice. Enhancements are also planned for the transmission vegetation Geographic Information System (GIS) data collection platform (VegNET) to add controls and streamline operational functionality. BC Hydro is also developing training modules to support consistent competencies for vegetation field staff and is implementing a new procurement strategy to improve cost forecasting and secure the long-term resources required for the distribution vegetation program.

61. BC Hydro's evidence, discussed in paragraphs 60 to 62 of its Final Submissions, was that the immediate priority of any strategy will be to address the accumulation of vegetation, which BC Hydro expects will take a few years. As Mr. Kumar put it, in order to reach equilibrium "we do need to address the backlog that currently exists before we can get to that point."⁷⁴ LiDAR, another significant component of the fiscal 2022 plan, will inform the Vegetation Management Strategy and future annual work plans and is key to developing new metrics that will help to identify issues before they arise.⁷⁵

(d) There is Ample Evidence to Support the Planned Vegetation Management Cost Increases

62. Both AMPC and RCIA question the sufficiency of evidence on the vegetation management expenditures. AMPC states that "An expedited regulatory process does not justify subjecting BC Hydro's new overall approach to vegetation management costs to a less rigorous level of scrutiny, especially when costs are forecast to increase to the extent proposed."⁷⁶ BC Hydro has provided ample evidence, summarized in the Final Submissions, to support its request for additional funding for fiscal 2022.⁷⁷ The evidence not only includes information as to why

⁷³ Exhibit B-4, BCUC IR 1.35.3. See also: Exhibit B-4, BCUC IR 1.35.1 and BCUC IR 1.40.10; Exhibit B-5, CEC IR 1.30.2.

⁷⁴ Tr. 2, p. 334, l. 6 – p. 335, l. 13 (Kumar).

⁷⁵ Exhibit B-2, Application, pp. 5-58, 5-61; Tr. 1, p. 13, ll. 8-12 (O'Riley); Ex. B-4, BCUC IR 1.35.4.1.

⁷⁶ AMPC Submissions, para. 28. See also: RCIA Submissions, p. 14.

⁷⁷ AMPC states at para. 19 that: "BC Hydro filed some of its vegetation management material confidentially, which AMPC could not review or test." The vegetation management information that was filed confidentially was, in fact, quite limited.

BC Hydro can no longer sustain the restraint exercised over the past decade, but also benchmarking evidence that shows spending below that of many utility peers.⁷⁸ BC Hydro identified steps that it takes to plan and deliver vegetation management work efficiently, including a competitive procurement process for contractors and augmenting contract management with local and specialized expertise.⁷⁹ BC Hydro used a competitive bidding process for LiDAR suppliers.⁸⁰ BC Hydro uses metrics to measure the effectiveness and progress of annual work plans for transmission and distribution vegetation management.⁸¹

63. In any event, it is difficult to see how it would be more “rigorous” to disregard the significant body of evidence supporting the planned increase and (a) mechanically apply AMPC’s proposed inflationary increase, or (b) arbitrarily hold costs to the fiscal 2021 forecast amount, as RCIA advocates.

(e) BC Hydro Has Maintained the Gains of Earlier Clearing for as Long as Possible

64. RCIA states: “The RCIA is concerned that the requirement for such a significant step increase in spending in F2022 may at least partly be driven by failure to maintain the gains that had been achieved under the accelerated vegetation management efforts undertaken from F2006 to F2009.”⁸² BC Hydro and its customers continued to benefit from the prior extensive clearing for over a decade.⁸³ RCIA’s argument gives insufficient consideration to the fact that once the overall canopy reaches a critical height, the only option is to clear the canopy again. BC Hydro presented ample evidence that we have reached that point. BC Hydro stated, for instance:⁸⁴

While targeted work can address emerging risks, trees continue to grow each year. Eventually, all remaining vegetation requires extensive maintenance to maintain safe clearances to energized equipment and support reliable system operations. The vegetation on the system has now reached a point where a vegetation

⁷⁸ Exhibit B-4, BCUC IR 1.32.11, 1.32.12.

⁷⁹ Exhibit B-4, BCUC IR 1.40.10.

⁸⁰ Exhibit B-2, Application, p. 5-63, 5-67, 5-77; Exhibit B-4, BCUC IR 1.39.3.

⁸¹ Exhibit B-4, BCUC IR 1.35.4.

⁸² RCIA Submissions, p. 13.

⁸³ Exhibit B-4, BCUC IR 1.33.1 and 1.33.1.2 provide a good description of the vegetation management cycle.

⁸⁴ Exhibit B-2, Application, p. 5-37. See also: Exhibit B-4, BCUC IR 1.33.1.1.

accumulation exists, and the benefits obtained by extensive clearing a decade ago have been fully realized. We need to address this accumulation to ensure future reliability and safety performance. BC Hydro believes that future system performance and safety will be negatively impacted if the *status quo* persists.

65. BC Hydro identified a number of initiatives that it has undertaken in recent years to find efficiencies, prioritize work and innovate to extend its ability to preserve system performance without additional resources. They included distribution automation, transmission system redundancy, vendor management plans, work delivery management, and a targeted method for visually identifying high risk vegetation through patrols.⁸⁵

(f) The Next RRA Will Address Future Vegetation Management Costs and Benchmarking

66. RCIA expresses concern about the level of vegetation management spending in future years.⁸⁶ This will be the subject of the next RRA.

67. AMPC recommends that in the next RRA, vegetation management expenditures in rates should be reviewed using a benchmarking approach.⁸⁷ BC Hydro indicated starting at paragraph 65 of the Final Submissions that it will be developing a suite of metrics and associated targets for the Vegetation Management Strategy to enhance accountability and operational decision making.

(g) Fiscal 2022 Work Can Be Completed Efficiently

68. AMPC and RCIA suggest that the size of the increase in fiscal 2022 may result in inefficiency.⁸⁸ The evidence indicates otherwise; the plan is scaled to the size that BC Hydro can achieve efficiently. For instance:

- BC Hydro's budget accounts for the number of qualified tree contractors in the market, as well as the need to complete environmental studies, archeology and heritage assessments and monitoring, and customer/landowner consultation.

⁸⁵ Exhibit B-2 Application, p. 5-46, 5-47; Exhibit B-4, BCUC IR 1.33.2.

⁸⁶ RCIA Submissions, p. 14.

⁸⁷ AMPC Submissions, para. 30.

⁸⁸ AMPC Submissions para. 27; RCIA Submissions, p. 14.

- BC Hydro uses integrated vegetation management, a standard industry best practice, to identify vegetation growth, establish work timing and action thresholds and deploy various control methods (e.g., brushing, mowing, pruning herbicide) and post-treatment evaluation.⁸⁹
- BC Hydro indicated that it is cognizant of the importance of avoiding an approach that artificially inflates prices.⁹⁰
- BC Hydro explained that cost-effectiveness will be achieved through the proper deployment of available and qualified resources, rather than the use of short-term contractors or “surge” resource acquisition.⁹¹
- BC Hydro is exploring how “the increase in the program size in fiscal 2022 provides opportunities to improve efficiency and contractor co-ordination.”⁹²

F. CYBERSECURITY FUNDING INCREASE: LARGER FOOTPRINT AND MORE THREATS

69. Among the interveners, only RCIA appears to oppose additional funding for cybersecurity. BC Hydro respectfully submits that the Company has made a strong case for its planned cybersecurity investment.

(a) BC Hydro Has Demonstrated the Need for Additional Cybersecurity Funding

70. BC Hydro’s Final Submissions discuss evidence demonstrating the specific need for additional funding in fiscal 2022 and that there is a framework in place to ensure efficient implementation and delivery. In particular, the evidence demonstrates:⁹³

- BC Hydro follows industry best practices;

⁸⁹ Exhibit B-4, BCUC IR 1.33.1.

⁹⁰ Exhibit B-4, BCUC IR 1.39.7: “BC Hydro also believes that it is prudent to provide notice for the contractors and the market that work volumes will be increasing to ensure adequate and cost-effective supply of services. If demand quickly outstrips supply, an increase in unit prices can be expected that will impact both base and incremental work.”

⁹¹ Exhibit B-4, BCUC IR 1.32.8.

⁹² Exhibit B-4, BCUC IR 1.39.12.

⁹³ BC Hydro Final Submissions, paras. 70-80.

- BC Hydro has a robust governance framework;
- BC Hydro has a strategy for optimizing the mix of insourced and outsourced work;
- BC Hydro's technology footprint is increasing in scope and complexity, i.e. "there's more to protect";
- Cyber threats are growing in volume and sophistication; and
- The additional funding will be used to address areas specifically identified through internal audit, self-assessments, an Office of the Auditor General audit of BC Hydro's Operating Technology environment, and an external assessment of BC Hydro's Industrial Control Systems.

71. BC Hydro agrees with CEC's sentiment that: "Defending against such threats is of paramount importance given the extensive and critical nature of BC Hydro's role in serving the population and economy of BC."⁹⁴ BC Hydro respectfully submits that, in light of the evidence, ratepayers would be ill-served by the BCUC denying additional funding for cybersecurity measures on the basis articulated by RCIA.

72. It appears that RCIA's opposition may be rooted, in part, by the fact that BC Hydro made the most sensitive cybersecurity information available to the BCUC only.⁹⁵ BC Hydro filed a significant amount of supporting evidence on the public record. The public information included a description of its approach to cybersecurity, the nature of the reviews that have been undertaken, the adoption of best practices, and its approach to insourcing versus outsourcing. BC Hydro provided the additional details confidentially to the BCUC only because the risk of inadvertent disclosure is real (it has occurred in prior BCUC proceedings) and the potential harm to BC Hydro and ratepayers from disclosure could be very significant. BC Hydro feels strongly that, in this context, the risk and implications outweighed the public benefit in additional circulation to interveners.

⁹⁴ CEC Submissions, para. 98.

⁹⁵ RCIA Submissions, p. 15.

(b) BC Hydro Is Reporting to the BCUC on the Powertech Incident

73. MoveUP recommends “that the Commission ask BC Hydro to provide a detailed confidential report on this attack, how it arose, how it was detected and responded to, how future attacks can be avoided, and the lessons to be learned from it.”⁹⁶ BC Hydro is already reporting to the BCUC confidentially on this incident, and an upcoming report will address lessons learned.

G. THE REMAINING INCREASE IS ALMOST ALL DUE TO UNCONTROLLABLE FACTORS

74. Interveners, including BCOAPO, Zone II RPG, CEC and BCSEA appear to accept the uncontrollable cost increases;⁹⁷ some other interveners are silent. However, RCIA and AMPC make submissions on pension costs, to which BC Hydro responds below.

(a) BC Hydro Has Used the Approved Methodology for Forecasting Current Services Pension Costs

75. AMPC and RCIA advocate for determining forecast pension services costs based on a five-year average of discount rates.⁹⁸ The BCUC has considered, and rejected, that approach in each of the last two RRA proceedings.⁹⁹ It is appropriate to set rates for fiscal 2022 based on the BCUC-approved methodology, as BC Hydro has done. The timing of the updated discount rate analysis is consistent with past RRAs.¹⁰⁰

⁹⁶ MoveUP Submissions, p. 3.

⁹⁷ BCOAPO Submissions, p. 33; BCSEA Submissions, para. 33; CEC Submissions, para. 105; Zone II RPG Submissions, para. 14.

⁹⁸ AMPC Submissions, para. 13; RCIA Submissions, pp. 16-17.

⁹⁹ Decision, p. 167: “The Panel is not persuaded by AMPC’s argument that, due to the minimal impact it has on cash, the discount rate used for rate setting purposes should remain the same or that pension costs should be calculated in a way that smooths ratepayer funding of the expense. In the Panel’s view, there are many items in the revenue requirement that are non-cash items, for example depreciation of capital assets, but are adjusted with more recent information. Calculating pension costs based on a more recent discount rate results in better matching of costs and benefits, compared to using an older discount rate. Therefore, the Panel declines to direct BC Hydro to depart from its current approach, which adheres to a previous BCUC directive.” See also: BCUC Decision and Order No. G-47-18, BC Hydro Fiscal 2017 to Fiscal 2019 Revenue Requirements Application (March 1, 2018), p. 71.

¹⁰⁰ Tr. 1, p. 83, l. 24 – p. 84, l. 10 (Layton).

(b) BC Hydro Is Not Recording Interest on the Non-Current Pension Costs Regulatory Account

76. AMPC is mistaken in its belief that “ratepayers are being charged interest on the Non-Current Pension Costs Regulatory Account (labelled ‘Recovery – Finance Charges’ in BC Hydro’s financial statements)...”.¹⁰¹ As Mr. Layton testified,¹⁰² and BC Hydro re-confirmed in item 1 of Exhibit B-2-7, interest is not charged on the pension regulatory accounts.

77. The entry “Recovery – Finance Charges”, to which AMPC refers, is not showing interest on the account balance as AMPC has inferred. As noted in Exhibit B-2-7,¹⁰³ non-current service costs are comprised of plan income on pension plan assets and interest expense on post-employment benefit liabilities. Non-Current Pension Costs are included in finance charges as shown in Appendix A, Schedule 8.0, line 17 and any variances between forecast and actual amounts are deferred to the Non-Current Pension Costs Regulatory Account in accordance with BCUC Order No. G-48-14. These variances are shown on Appendix A, Schedule 2.2, line 81 which is labeled “Recovery – Finance Charges”.

¹⁰¹ AMPC Submissions, para. 51.

¹⁰² Tr. 1, p. 86, ll. 14–18 (Layton).

¹⁰³ The exhibit references section 5G.9.2 of the Previous Application where this is explained further.

PART SIX: CAPITAL EXPENDITURES AND ADDITIONS

A. INTRODUCTION

78. This Part addresses the submissions of Mr. Bryenton, CEC and RCIA on BC Hydro's capital expenditures and additions. Other interveners are either silent on BC Hydro's capital expenditures and additions, or took no issue with or expressed support for BC Hydro's forecast.¹⁰⁴

B. BC HYDRO'S CAPITAL INVESTMENTS CONTINUE TO BALANCE AFFORDABILITY WITH SYSTEM PERFORMANCE AND RISK

79. Mr. Bryenton states that the desired outcome of BC Hydro's capital expenditures and additions should be "to eliminate or minimize any rate increase, and possibly reduce rates temporarily particularly during the Covid pandemic".¹⁰⁵ BC Hydro is sensitive to affordability, but must balance this with system performance and the need to safely manage its assets.¹⁰⁶ BC Hydro has an obligation to provide safe and reliable service to its customers and prudently manage its assets, which requires ongoing capital expenditures and additions. BC Hydro's budgeting approach provides a robust framework for balancing these objectives.¹⁰⁷ As part of this balancing process, BC Hydro has already made reductions to its capital plan.¹⁰⁸ BC Hydro's revenue requirement reflects careful cost management and prioritization¹⁰⁹ and reflects BC Hydro's reasonable costs to provide service.¹¹⁰ An arbitrary reduction to planned capital budgets to eliminate a rate increase could compromise BC Hydro's ability to manage risks to its system and maintain asset health and system performance,¹¹¹ which would be imprudent.

80. Mr. Bryenton's suggestion to reduce capital is that BC Hydro could "waive" depreciation expense.¹¹² This is not a reasonable option, as "waiving" this expense would violate accounting

¹⁰⁴ BCOAPO Submissions, pp. 36-41; BCSEA Submissions, paras. 34-39.

¹⁰⁵ Bryenton Submissions, p. 4.

¹⁰⁶ Exhibit B-2, p. 6-15; Exhibit B-2-2, Appendix S, p. 4 of 92; Exhibit B-5, Bryenton IR 1.5.2.

¹⁰⁷ Exhibit B-2-2, Appendix S, pp. 2 to 16 of 92.

¹⁰⁸ Exhibit B-5, Bryenton IR 1.5.3.

¹⁰⁹ Exhibit B-5, Bryenton IR 1.6.1.

¹¹⁰ Exhibit B-5, Bryenton IR 1.6.3.

¹¹¹ Exhibit B-5, Bryenton IR 1.5.1.

¹¹² Bryenton Submissions, p. 4.

rules,¹¹³ increase financing costs, and arbitrarily defer present expenses to future years. BC Hydro's depreciation expense is reasonable and should be recovered in rates as per the law and BC Hydro's and the BCUC's usual practice.

C. BC HYDRO CAPITAL PLANNING AND DELIVERY PROCESSES REMAIN REASONABLE

81. RCIA cites schedule delays and costs increases on the Site C project to support its assertion that "BC Hydro's project management and cost control performance on recently completed and ongoing capital projects undermines credibility of its claim that its capital delivery processes are robust".¹¹⁴ RCIA's assertion is not supported by the evidence.

82. The Site C project is a unique project in BC Hydro's portfolio, in terms of scale, scope and complexity. Site C has also not been the focus of this proceeding and there is no evidence that schedule delays or cost increases on Site C are due to any failure of BC Hydro's capital delivery processes.

83. BC Hydro's capital planning and delivery processes, including its capacity to deliver large projects, was a focus of the last RRA proceeding. For example, BC Hydro's final argument in the last proceeding devoted over 12 pages to describing the evidence related to its capital delivery processes.¹¹⁵ The BCUC analyzed BC Hydro's evidence and reached the conclusions cited in BC Hydro's Final Submissions, determining that BC Hydro's capital planning and delivery processes were reasonable.¹¹⁶ BC Hydro's capital planning and delivery process remain the same.¹¹⁷

84. While all the evidence from the last proceeding has not been repeated, the evidence in this proceeding shows that BC Hydro's processes continue to be reasonable. BC Hydro's capital program metric shows that, of the 377 projects included in the fiscal 2016 to fiscal 2020 five-year period, 70.0 per cent had an Actual Cost less than the Original Approved Expected Cost, and the

¹¹³ Exhibit B-5, Bryenton IR 1.3.1.

¹¹⁴ RCIA Submissions, p. 19.

¹¹⁵ BC Hydro Final Submission in its Fiscal 2020 and Fiscal 2021 RRA, pp. 122-134.

¹¹⁶ Decision, pp. 78-79, 86 and 96.

¹¹⁷ Exhibit B-2, Application, Section 6.2; Exhibit B-2-2, Appendix S.

median project was 7.4 per cent below the Original Approved Expected Cost.¹¹⁸ Further, in fiscal 2020, BC Hydro completed a total of 40 projects with aggregate Original Approved Expected Costs of \$364.3 million and aggregate Actual Costs of \$340.9 million, which was a variance of - \$23.4 million (-6.4 per cent).¹¹⁹

D. IT IS NOT COST EFFECTIVE TO PROCEED WITH THE ASSET PLANNING TOOL AT THIS TIME

85. CEC submits that BC Hydro's deferral of the Asset Investment Planning ("AIP") Tool is not appropriate and requests that the BCUC direct "BC Hydro, within one year, revise the business case for the Asset Planning Investment Tool and present a firm timeline for its implementation."¹²⁰ BC Hydro's response is three-fold.

86. First, regardless of the merits of the AIP Tool, it would not be cost effective for BC Hydro to proceed with the project at this time. The primary reason for this is that BC Hydro needs to implement other enterprise software changes before it can effectively implement the AIP Tool. BC Hydro is advancing an Enterprise Asset Management (EAM) IT platform, which will consolidate and provide access to key asset data repositories. If the AIP Tool is implemented prior to the EAM platform, then it will be a standalone tool reliant on periodic manual data migration from existing IT systems. However, if the AIP Tool is implemented after the EAM platform, then it will be able to directly access and incorporate up-to-date asset health and criticality data into the time-based evaluation of investments, resulting in a more efficient process.¹²¹

87. BC Hydro also has ongoing constraints with the subject matter experts to support the project given other corporate priorities.¹²² At the same time, pricing for the vendor services and licensing component of the project suggests that the total project cost would be beyond the upper bound of the Definition phase business case cost estimate.¹²³ All this meant that it was not cost effective to proceed with the project at this time.

¹¹⁸ Exhibit B-2, Application, p. 6-18.

¹¹⁹ Exhibit B-2, Application, p. 6-18.

¹²⁰ CEC Submissions, paras. 143-144.

¹²¹ Exhibit B-5, CEC IR 1.35.3.1.

¹²² Exhibit B-5, CEC IR 1.35.3.

¹²³ Exhibit B-5, CEC IR 1.35.3.

88. Ms. Daschuk explained at the Review Session:

We still have a plan to pursue the asset portfolio tool, we are just not doing it right now. So, a couple of things happened. One is the cost of the tool, or the cost of this approach was becoming increasingly high. And then we also worked with the technology roadmap and we learned that by talking to other utilities and to suppliers that we would make a better decision to make other investments in the technology first, and then come back to this one, and this would sort of be a layer on onto an existing enterprise asset management platform. So, over the longer term I say we would still be committed to the concept, but we've just decided not to do it right now.¹²⁴

...

There were costs -- it was costing more than our original forecast was. We were also looking at the benefits we could expect to achieve from that investment and we didn't see the benefits justifying the costs at this time.¹²⁵

...

What we did do is talk to other utilities that have deployed similar types of tools, and what kind of benefits they achieved from the deployment of those tools. We also talked to them about the technology roadmap that they used and what kinds of technology projects they did first, and second, and third. And it was based on that -- those discussions as well with pure utilities that we felt that we were not going to achieve the benefits that we would have otherwise have expected if we did the things in the order in which we had originally concentrated.¹²⁶

89. Second, the decision to proceed with the AIP Tool is a BC Hydro management decision, and should not be the subject of a directive. This issue was canvassed in the last proceeding, and the BCUC concluded as follows: "The Panel agrees with BC Hydro that the decision whether to proceed with the Planning Tool Project is a matter for management over which the BCUC has no jurisdiction."¹²⁷

¹²⁴ Tr. 1, p. 150, ll. 6–19 (Daschuk).

¹²⁵ Tr. 1, p. 151, ll. 22–25 (Daschuk).

¹²⁶ Tr. 1, p. 152, ll. 9–21 (Daschuk).

¹²⁷ Decision, p. 80.

90. Third, the BCUC can take comfort in BC Hydro's track record. BC Hydro has demonstrated that it is continually seeking improvements to its capital planning and delivery processes, including by making recent incremental improvements.¹²⁸ BC Hydro will revisit the project through its future business planning and Technology capital planning processes.¹²⁹ BC Hydro will advance the AIP Tool when it is cost effective to do so.

91. RCIA argues that BC Hydro's cancellation of the AIP Tool means that "BC Hydro's claims that its existing capital planning and delivery processes are robust, well-established and effective has not been substantiated in this proceeding."¹³⁰ RCIA's argument is without merit. Delaying investment in the AIP Tool until it is cost effective to do so does not impair BC Hydro's existing processes. As stated by Ms. Daschuk:¹³¹

I would say that we feel we have a very robust capital planning process, and the asset portfolio optimization tool was going to make us even better. And we still believe that we have a robust approach, which is albeit a risk-based approach. We are going to look at those opportunities to do that in the future. I still feel very confident that we have a good capital program, good capital plan, we're making good decisions on what types of projects to advance.

BC Hydro's capital planning and delivery processes are the same robust, well-established and effective processes that the BCUC reviewed in the last proceeding and concluded were reasonable.¹³²

¹²⁸ Exhibit B-5, CEC IR 1.36.2.

¹²⁹ Exhibit B-5, RCIA IR 1.30.2.

¹³⁰ RCIA Submissions, p. 18.

¹³¹ Tr. 1, p. 151, ll. 8–17 (Daschuk).

¹³² Exhibit B-2, Application, pp. 6-10 to 6-11; Exhibit B-5, CEC IR 1.36.2.

PART SEVEN: REGULATORY ACCOUNTS

A. INTRODUCTION

92. CEC and BCSEA express support for BC Hydro's regulatory account proposals,¹³³ while others are silent. BC Hydro addresses below specific submissions made by RCIA, AMPC and BCOAPO. BC Hydro submits that for the reasons articulated in its Final Submissions and below, the regulatory account approvals sought are just and reasonable.

B. REGULATORY ACCOUNTS SERVE SEVERAL PURPOSES

93. RCIA signals its intent to explore BC Hydro's regulatory accounts in future RRAs, stating that "it is not obvious that the existing regulatory accounts only capture exogenous risks. Rather, the regulatory accounts may enable indirect (or unaccountable) risk management measures to be taken by BC Hydro."¹³⁴ BC Hydro's regulatory accounts were reviewed in depth in the last two RRA proceedings, and the BCUC has approved them. BC Hydro's regulatory accounts all align with the categories identified in the BCUC's Guidelines for regulatory accounts, which recognize a role for regulatory accounts in circumstances where costs are not uncontrollable. BC Hydro exercises discipline over controllable costs regardless of whether those costs are deferred.

C. AMORTIZATION OF CAPITAL ADDITIONS REGULATORY ACCOUNT IS REASONABLE

94. BCOAPO indicates that, although it has no concern with BC Hydro's proposal to defer variances arising as a result of any changes determined in the depreciation study to the Amortization of Capital Additions Regulatory Account, it takes issue with BC Hydro's proposal to amortize the variance over the next test period. BCOAPO states that, given the uncertainty of the length of the test period, the recovery period should be deferred until the next application.¹³⁵ BC Hydro's proposal is consistent with the recovery mechanism approved by Order No. G-47-18 for the Amortization of Capital Additions Regulatory Account. The approach ensures that the balance is continually cleared with minimal intergenerational inequity. Approving BC Hydro's requested treatment now is consistent with past orders and would not preclude the BCUC from

¹³³ CEC Submissions, paras. 161, 162; BCSEA Submissions, paras. 42, 46-48.

¹³⁴ RCIA Submissions, p. 20.

¹³⁵ BCOAPO Submissions, p. 44.

directing a different recovery period in the future if the circumstances warrant. Therefore, BCOAPO's concern is best addressed in the next proceeding.

D. THE DARR TABLE MECHANISM IS JUST AND REASONABLE

95. BCOAPO submits that the BCUC's approval of the DARR should not preclude consideration of other approaches in the future if circumstances warrant.¹³⁶ Section 75 of the UCA already makes clear that the BCUC is not bound by its previous decisions; it need not be stated in every order. BC Hydro's approval sought, as worded in the draft order in Exhibit B-2-7, will create no misunderstanding in this regard.

96. AMPC requests that the BCUC defer ruling on the continued use of the DARR and its current implementation methodology until the next RRA.¹³⁷ BC Hydro submits that the BCUC should approve the use of the DARR now. For the reasons set out in BC Hydro's Final Argument,¹³⁸ the DARR table mechanism previously approved by the BCUC¹³⁹ remains a reasonable mechanism for clearing the net balances in the Cost of Energy Variance Accounts. AMPC's concern is addressed by the fact that, if the BCUC approves the proposed DARR table mechanism, the BCUC retains discretion to alter BC Hydro's DARR proposal and/or the DARR mechanism in future applications if circumstances warrant.¹⁴⁰ Therefore, AMPC is not precluded from raising alternative approaches in the future.

¹³⁶ BCOAPO Submissions, p. 43.

¹³⁷ AMPC Submissions, para. 73.

¹³⁸ BC Hydro Final Submissions, paras. 109-114.

¹³⁹ BCUC Decision and Order No. G-16-09, BC Hydro Fiscal 2009 to Fiscal 2010 Revenue Requirements Application Decision, March 13, 2009, page 172. One clarification is that BC Hydro proposes to determine the level of the DARR based on the forecast net balance of the Cost of Energy Variance Accounts at the end of the preceding fiscal year. (Exhibit B-2, Application, p. 7-3.)

¹⁴⁰ Exhibit B-4, BCUC IR 1.55.4.

PART EIGHT: OTHER REVENUE REQUIREMENTS

A. INTRODUCTION

97. There were very few relevant issues identified in relation to BC Hydro's other revenue requirements.¹⁴¹

B. THE RECENT AMENDMENT TO DIRECTION NO. 8 HAS DETERMINED NET INCOME FOR FISCAL 2022

98. An amendment to *Direction No. 8 to the British Columbia Utilities Commission*,¹⁴² which became law after BC Hydro filed its Final Submissions, has set BC Hydro's net income for fiscal 2022 at \$712 million. As this amount is the same as the placeholder used in the Application, BC Hydro no longer requires the regulatory account that it had sought in Exhibit B-5 to capture variances from the placeholder.

99. BCOAPO's submissions that the scope of the previously-requested regulatory account should be expanded are now moot. The same is true for its submissions regarding return on equity ("ROE").¹⁴³

100. With respect to Mr. McCandless' submissions on the amendment,¹⁴⁴ the merits of government legislation or government's intention in promulgating it, are not matters for debate in this proceeding.

C. AMPC'S SUBMISSIONS ON ROE ARE BEST ADDRESSED IN AN ROE PROCEEDING

101. BC Hydro will address AMPC's arguments regarding ROE and risk¹⁴⁵ in the proper forum. They have no bearing on this proceeding, particularly in light of the recent amendment to Direction No. 8.

¹⁴¹ CEC indicated urged acceptance: CEC Submissions, paras. 165-166. Some interveners are silent.

¹⁴² B.C. Reg 88/2021 (Order in Council No. 172), deposited March 22, 2021, amends Direction No. 8 to the BCUC.

See Exhibit B-11 for discussion.

¹⁴³ BCOAPO Submissions, pp. 46-47, 49.

¹⁴⁴ McCandless Submissions, p. 2.

¹⁴⁵ AMPC Submissions, paras. 78, 65.

D. BC HYDRO IS PURSUING AN APPROPRIATE HEDGING STRATEGY

102. AMPC has repackaged its arguments on hedging from the previous RRA proceeding.¹⁴⁶ BC Hydro submits that those arguments are still without merit.

103. BC Hydro's hedging strategy is intended to mitigate exposure to interest rate volatility, and it is achieving its intended purpose. The hedging program is a risk mitigation strategy, the purpose of which is to provide increased cost certainty and protection to ratepayers from interest rate volatility by locking in interest rates related to BC Hydro's forecast future borrowing requirements. Over the life of hedged bond issuances, the gains or losses on hedging and the related higher or lower interest rates on the associated debt issuances largely offset, providing increased cost certainty and protection to ratepayers from volatile interest rates in the future. This has been an important strategy to mitigate financial risk for significant capital investments for the benefit of ratepayers.¹⁴⁷

104. AMPC seeks to characterize BC Hydro's objective as "prioritiz[ing] cost certainty for its own internal purposes" as distinct from the interests of ratepayers. This is a false dichotomy. Customers benefit from reducing significant exposure to financing risk, as the financing costs are recovered in rates. Mr. Wong drew the analogy of a fixed-rate mortgage versus floating rate mortgages; under a fixed rate mortgage the party who has to pay the interest costs is benefiting from the certainty regardless of what ultimately happens with interest rates.¹⁴⁸ At present, the benefit of the greater certainty provided by hedging is particularly high. BC Hydro (ultimately, BC Hydro customers) face significant exposure to interest rate risk, particularly due to the magnitude of ongoing capital investments including the Site C project.¹⁴⁹

105. Utilities make many investments to mitigate risk for the company and customers. Resiliency investments, for example, are rooted in risk mitigation. Customers may not see an immediate pay-off in terms of cost savings, higher reliability or new revenues from investments

¹⁴⁶ AMPC Submissions, paras. 52-66.

¹⁴⁷ Exhibit B-5, McCandless 1.3.12.

¹⁴⁸ Tr. 1, p. 77, ll. 2-25 (Wong).

¹⁴⁹ Exhibit B-2-2, Appendix E.

in (e.g.) cybersecurity, but they are still benefitting from the reduced risk of experiencing significant future harm. Insurance is another example; BC Hydro pays insurance premiums to mitigate risk of losses.

106. Even if one were to accept the premise that BC Hydro should be hedging to reduce financing costs rather than mitigate risk, AMPC is arguing with the benefit of hindsight. AMPC's argument that BC Hydro has been locking in at high interest rates is based on a relatively short time horizon – the figure in its submissions dates back only 24 months, a time when long Canada yields were already well below 2.5 percent. It is stating the obvious that extending the figure to encompass prior years would show that the interest rates AMPC is characterizing as high interest rates were *historic low interest rates* at the time the hedges were entered.

107. Similarly, AMPC's idea that BC Hydro could have "timed its borrowings with drops in the market"¹⁵⁰ is unrealistic and appears to be based on hindsight. For good reason, BC Hydro's approach is not premised on betting on short-term market fluctuations.¹⁵¹ The values of BC Hydro's outstanding future debt hedges are driven by market forward interest rates, which are market-driven and outside of BC Hydro's control. Therefore, BC Hydro's goal is to lock in interest rates related to long-term borrowings and provide cost certainty over the long-term.¹⁵²

108. Finally, BC Hydro submits that AMPC's comment that BC Hydro's borrowing itself could have driven up prices¹⁵³ is pure speculation and not supported by any evidence in this proceeding.

¹⁵⁰ AMPC Submissions, para. 62.

¹⁵¹ Exhibit B-5, McCandless IR 1.3.13.

¹⁵² Exhibit B-5, McCandless IR 1.3.13.

¹⁵³ AMPC Submissions, para. 62.

PART NINE: TRANSMISSION REVENUE REQUIREMENT

109. No intervener opposed approval of BC Hydro's transmission revenue requirement ("TRR") and open access transmission tariff ("OATT") rates. However, BCOAPO requests that the BCUC direct BC Hydro to report back on the pros and cons of using a regulatory account to capture variances in interconnection revenue.¹⁵⁴ BC Hydro notes that it also incurs additional costs, which are also non-deferable, in order to generate the revenues in question. However, BC Hydro can report back to the BCUC in the next RRA if the BCUC would consider it helpful.

¹⁵⁴ BCOAPO Submissions, p. 57.

PART TEN: DEMAND SIDE MANAGEMENT

A. INTRODUCTION

110. This Part addresses the submissions of Mr. Bryenton, CEABC, CEC, RCIA and Zone II RPG on BC Hydro's proposed fiscal 2022 traditional DSM expenditures.

B. MODERATION STRATEGY CONTINUES TO BE REASONABLE PENDING 2021 IRP EXAMINATION OF FUTURE DSM LEVELS

111. While interveners such as BCSEA,¹⁵⁵ Zone II RPG,¹⁵⁶ BCOAPO,¹⁵⁷ and CEABC¹⁵⁸ support or take no issue with BC Hydro's level of DSM expenditures, others suggest it is either too high or too low. Mr. Bryenton argues that it is "obvious" that BC Hydro should increase DSM expenditures,¹⁵⁹ while RCIA submits that even BC Hydro's existing level of DSM is not justified given the energy surplus.¹⁶⁰ While Mr. Bryenton focusses only on the potential reduction to the revenue requirement, RCIA focuses only on BC Hydro's energy surplus. Neither provides a convincing rationale for their position that addresses the various competing factors related to the level of traditional DSM. BC Hydro submits that its moderation approach continues to strike a reasonable balance of the various factors at play, including savings for individual customers, rate impacts, and BC Hydro's energy surplus position. BC Hydro has reduced DSM spending in light of its surplus position and considering the potential for rate impacts. However, BC Hydro continues to offer a broad range of program opportunities for customers to reduce their bills. BC Hydro has also maintained a level of DSM that preserves its ability to ramp up DSM in the future, while not increasing revenue requirements.¹⁶¹ The moderation strategy remains the appropriate approach until the 2021 IRP, where BC Hydro will examine future levels of DSM.¹⁶²

¹⁵⁵ BCSEA Submissions, para. 8.

¹⁵⁶ Zone II RPG Submissions, para. 15.

¹⁵⁷ BCOAPO Submissions, p. 62.

¹⁵⁸ CEABC Submissions, p. 9.

¹⁵⁹ Bryenton Submissions, p. 4.

¹⁶⁰ RCIA Submissions, pp. 23-24.

¹⁶¹ Exhibit B-4, BCUC IR 1.69.1; Tr. 2, p. 283, l. 17 – p. 284, l. 12 (Hobson).

¹⁶² Exhibit B-4, BCUC IR 1.69.1 and 1.69.2; Tr. 1, p. 165, l. 26 – p. 166, l. 23 (Hobson).

112. CM&E notes some of the factors in play with respect to DSM spending, and states that spending money on DSM does not make “business sense” for BC Hydro.¹⁶³ CM&E’s point is unclear. As part of its moderation strategy, BC Hydro uses the market price of \$33/MWh to compare to the net levelized utility cost. This approach ensures that even surplus energy resulting from DSM would have a positive impact on BC Hydro’s revenue requirements.¹⁶⁴ Therefore, while DSM spending may still result in upward pressure on rates, BC Hydro’s moderation approach ensures that the level of traditional DSM makes “business sense”.¹⁶⁵

113. CEABC supports BC Hydro’s moderation approach,¹⁶⁶ but discusses the potential rate impacts of DSM spending and the ratepayer impact measure (“RIM”) test.¹⁶⁷ In reply, section 4(6) of the *Demand-side Measures Regulation* does not allow the BCUC to use the RIM test to find that DSM expenditures are not cost-effective. Further, CEABC’s analysis of the ratepayer impact of DSM and estimated \$550 million present value cost¹⁶⁸ is new evidence, not argument. The table that CEABC reproduces on page 8 of its submissions has been adjusted by CEABC to include their estimation of total benefits and total costs, which are not part of the table provided by BC Hydro in Exhibit B-5, CEABC IR 1.9.2 Attachment 1. Further, CEABC’s analysis is misleading because it incorrectly includes reduced revenue as a cost in its analysis. As BC Hydro has shown through the Utilities Cost Test results, its traditional DSM results in a reduction to BC Hydro’s revenue requirement.¹⁶⁹ Because BC Hydro has lower costs, BC Hydro needs to collect less revenue in rates. This may lead to an increase in rates – not because BC Hydro has incurred more costs – but because BC Hydro is recovering lower costs over fewer unit sales.

114. BC Hydro urges caution with respect to any interpretation of the RIM. As stated by Mr. Hobson:¹⁷⁰

¹⁶³ CM&E Submissions, p. 5.

¹⁶⁴ Exhibit B-5, Bryenton IR 1.10.1.

¹⁶⁵ Tr. 1, p. 165, l. 26 – p. 166, l. 23 (Hobson).

¹⁶⁶ CEABC Submissions, p. 9.

¹⁶⁷ CEABC Submissions, pp. 5-9.

¹⁶⁸ CEABC Submissions, p. 8.

¹⁶⁹ Exhibit B-2, Application, pp. 10-19 and 10-20.

¹⁷⁰ Tr. 2, p. 296, ll. 2–15 (Hobson).

But my view would be there is limited value in it, and I think part of that comes from when you take a look at the ratepayer impact measure as an economic test, you can provide some pretty misleading information in terms of things like magnitude. And you can make some decisions to not move forward with things that while they have a poor result on a RIM test, they actually have very little rate impact and a lot of benefit in other areas in terms of cost reduction. So, I think there is caution if you're going to be looking at a measure like that, and given the regulation, I think there is limited value in us providing it within the annual report.

115. Therefore, BC Hydro submits that the BCUC cannot consider the RIM test as a measure of cost effectiveness, and should not otherwise consider the RIM, or CEABC's interpretation of it, as it is potentially misleading.

C. HISTORICAL REDUCTIONS IN COMMERCIAL SECTOR HAVE RESULTED IN MORE EQUITABLE DISTRIBUTION

116. CEC "submits that the Commission should deny BC Hydro's DSM spending plan and identify that it would accept a DSM spending plan that provided more balanced spending for commercial rate classes."¹⁷¹ CEC's request should be rejected. As has been discussed in previous proceedings, BC Hydro acknowledges that traditional DSM expenditures in the commercial sector have been decreasing. This decline has occurred over multiple test periods, each of which has been the subject of a DSM expenditure schedule that has been scrutinized and accepted by the BCUC as being in the public interest. The BCUC has also provided direction regarding the distribution of BC Hydro's DSM spending, to which BC Hydro has responded.¹⁷² As the BCUC concluded in its Decision, the decline in commercial spending has resulted in a more equitable distribution of spending amongst the residential, commercial and industrial sectors.¹⁷³

¹⁷¹ CEC Submissions, para. 193.

¹⁷² E.g., Directive 21 of the BCUC's Decision on BC Hydro's F2017 to F2019 RRA recommended that BC Hydro consider more targeted DSM programs directed at residential customers, which arose from a concern over "the relatively low level of DSM spending for residential customers (including low-income customers)". BCUC Decision and Order No. G-47-18, BC Hydro Fiscal 2017 to Fiscal 2019 Revenue Requirements Application (March 1, 2018), p. 81.

¹⁷³ Decision, p. 146.

117. CEC made substantially the same argument in the last RRA proceeding, which the BCUC rejected. The BCUC's Decision summarizes the argument and evidence as follows:¹⁷⁴

The CEC asserts that in light of the substantial discrimination being experienced by the commercial sector since fiscal 2014 due in part to the ongoing reductions in DSM expenditures, the CEC recommends that the BCUC deny the proposed DSM Plan and recommend that BC Hydro reallocate its spending to provide increased opportunities for cost-effective advancement of conservation and efficiency for BC Hydro's customers, including but not limited to the commercial rate classes.

The CEC submits that DSM spending could be increased overall, and in particular should be increased for the commercial sector. Commercial spending is planned to be 143 percent lower in fiscal 2021 than it was in fiscal 2014, and is planned to decline further by an additional 4 percent in fiscal 2022.

In response to the CEC, BC Hydro acknowledges the decline in commercial DSM expenditure, but notes the change since 2014 where expenditure on commercial DSM was roughly double that of residential. The current reallocation of funding has resulted in a more equitable distribution of spending amongst the residential, commercial and industrial sectors, and is closer to the allocation of DSM costs for cost recovery purposes referenced in Table 4-25 above, and in the BCUC's Decision on the 2017-2019 RRA. BC Hydro submits that the CEC has not established substantial discrimination, and that BC Hydro has brought the allocation of DSM spending amongst sectors into better alignment while adhering to the DSM moderation approach.

118. The Panel's determination on this issue was as follows:¹⁷⁵

While we acknowledge the CEC's submission on the decline in commercial DSM expenditure, this decline occurs in the context of a fairly stable overall DSM budget, and reallocation of expenditure from commercial and industrial customers to residential customers. To put the decline in commercial expenditure since 2014 in context, at that time expenditure on commercial DSM was roughly double that for residential DSM, which did not match the allocation of DSM costs between the two sectors.

...In recognition of the inevitable trade-offs that have to be made while reallocating funds between sectors in the absence of an increase in overall DSM funding, we find the allocation of DSM expenditures between the customer

¹⁷⁴ Decision, p. 145.

¹⁷⁵ Decision, p. 146.

classes, as reflected in the proposed DSM expenditure schedule, to be reasonable for the Test Period.

119. BC Hydro's planned expenditures in the commercial sector of \$16.6 million are not materially different than the \$17.5 million planned for fiscal 2021,¹⁷⁶ with \$0.50 million of the difference due to the impact of the COVID-19 pandemic.¹⁷⁷ Further, the breakdown of BC Hydro's DSM costs across customer classes is similar to that presented in the Previous Application, which the BCUC determined to be reasonable.¹⁷⁸ Therefore, BC Hydro submits that the BCUC should reject the CEC's recommendation, as it did in its Decision.

120. BC Hydro acknowledges that there are opportunities for cost effective DSM in the commercial sector. BC Hydro will be considering future levels of DSM spending in the 2021 IRP.

D. BC HYDRO CONTINUES TO RAMP UP DSM IN THE NON-INTEGRATED AREAS

121. Zone II RPG encourages BC Hydro to more fully develop the approach to measuring the cost-effectiveness of traditional DSM in the Non-Integrated Areas ("NIA").¹⁷⁹ As noted by Mr. Hobson, BC Hydro has included the 40 percent adder under the *Demand-Side Measures Regulation* into the cost effectiveness analysis for the NIA and will be looking to add other benefits depending on the information it can obtain.¹⁸⁰ However, DSM programs in the NIA are already cost effective.¹⁸¹

122. Zone II RPG indicates that it is concerned with continuing delays in implementing DSM in the NIA.¹⁸² BC Hydro has taken steps to increase participation in the NIA, including by hiring a Relationship Manager in June 2019¹⁸³ and creating a dedicated program for NIA communities.¹⁸⁴

¹⁷⁶ Exhibit B-2, Application, p. 10-9, Table 10-4.

¹⁷⁷ Exhibit B-5, CEC IR 1.62.1.

¹⁷⁸ Exhibit B-2, Application, pp. 10-10 and 10-11.

¹⁷⁹ Zone II RPG Submissions, para. 17.

¹⁸⁰ Tr. 1, p. 248, ll. 15-23 and p. 249, ll. 4-20 (Hobson).

¹⁸¹ Exhibit B-2-2, Appendix M, p. 13; Exhibit B-5, Zone II RPG IR 1.21.5.

¹⁸² Zone II RPG Submissions, para. 18.

¹⁸³ Exhibit B-2-2, Appendix W, p. 8.

¹⁸⁴ Exhibit B-2-2, Appendix W, p. 11.

However, while BC Hydro took steps to mitigate the impact of COVID-19,¹⁸⁵ fiscal 2021 participation has been delayed by the pandemic, as the timing of activities has shifted in response to provincial health orders and local health protocols.¹⁸⁶ The result is that many Indigenous communities have experienced delays in their home energy upgrade projects.¹⁸⁷ As noted by Zone II RPG in its submissions,¹⁸⁸ in fiscal 2022, BC Hydro has plans for a number of activities that will assist in the continued ramp up in the NIA and Indigenous communities, and help mitigate the impacts of the COVID-19 pandemic.¹⁸⁹

123. In reply to Zone II RPG's encouragement to advance diesel reduction,¹⁹⁰ BC Hydro is working with communities in the NIAs on a range of initiatives to support community diesel reduction, including:¹⁹¹

- DSM initiatives in remote communities which support reduced community diesel use by providing upgrades to homes and buildings;
- Community projects, such as the upgrades to LED streetlights, which reduce diesel use; and
- Supporting communities and developers on renewable energy projects that could significantly reduce diesel use in the future.

124. As noted by Ms. Daschuk,¹⁹² BC Hydro recognizes that there is more work ahead to support community diesel reduction and is committed to continuing to work with communities to advance these, and other, initiatives.¹⁹³

¹⁸⁵ Exhibit B-5, Zone II RPG IR 1.18.

¹⁸⁶ Exhibit B-5, Zone II RPG IR 1.24.1.1.1

¹⁸⁷ Exhibit B-5, Zone II RPG IR 1.24.1 and 1.24.1.1.

¹⁸⁸ Zone II RPG Submissions, para. 20.

¹⁸⁹ Exhibit B-5, Zone II RPG IR 1.18.1 and 1.21.4.

¹⁹⁰ Zone II RPG Submissions, para. 24.

¹⁹¹ Exhibit B-5, Zone II RPG IR 1.21.1.

¹⁹² Tr. 1, p. 256, l. 16 – p. 257, l. 4 (Daschuk).

¹⁹³ Exhibit B-5, Zone II RPG IR 1.21.1.

PART ELEVEN: ELECTRIFICATION

A. INTRODUCTION

125. This Part addresses the submissions of CEC, CEABC, BCOAPO and Mr. Bryenton related to electrification, including BC Hydro's development of an electrification plan, cost recovery for its EV charging stations, and revenue from low carbon fuel credits.

126. BC Hydro notes that paragraph 188 of its Final Submissions incorrectly stated that "Approximately 35 per cent of the net book value is associated with other distribution equipment (e.g., transformers, cables, ductbanks) that are amortized using existing asset classes and have varying amortization rates." In fact, as indicated in the referenced response to Undertaking No. 19, 14 percent (\$0.7 million of the total \$5.0 million) is associated with other distribution equipment.¹⁹⁴

B. WORK CONTINUES AS ELECTRIFICATION PLAN DEVELOPMENT IS UNDERWAY

127. Interveners such as CM&E¹⁹⁵ and CEABC¹⁹⁶ encourage BC Hydro to make additional investments in electrification. BC Hydro is already undertaking numerous initiatives, including in relation to the electrification of the North Montney Region.¹⁹⁷ BC Hydro is also consulting stakeholders on an electrification plan which will be filed in the next RRA.¹⁹⁸

128. CEC submits that the BCUC should "have BC Hydro identify the requirement for the electrification plan and metrics to be included in the next RRA or otherwise provide an explanation as to why it has not scoped the requirements for the plan."¹⁹⁹ CEC's request is unclear and unnecessary. BC Hydro has already stated that it will be consulting stakeholders on the electrification plan in 2021,²⁰⁰ and will be filing the plan and associated performance metrics in its next RRA.²⁰¹

¹⁹⁴ Exhibit B-9, Undertaking No. 19.

¹⁹⁵ CM&E Submissions, pp. 3-4.

¹⁹⁶ CEABC Submissions, pp. 14-19

¹⁹⁷ BC Hydro Final Submissions, para. 142.

¹⁹⁸ Exhibit B-2, Application, p. 10-2; Exhibit B-5, BCSEA IR 1.12.5 and CEC IR 1.61.1.

¹⁹⁹ CEC Submissions, para. 201.

²⁰⁰ Exhibit B-2, Application, p. 10-2.

²⁰¹ Exhibit B-5, BCSEA IR 1.12.5 and CEC IR 1.61.1.

129. CEC also suggests a separate review of the electrification plan.²⁰² The electrification plan, *per se*, is not subject to BCUC approval – e.g., it is not a rate, capital project, resource plan, or energy supply project under the UCA. As such, having a separate review for the plan is unnecessary, and the purpose of such a review is unclear. It makes sense to review the electrification plan in the context of an RRA, which includes the capital projects and LCE expenditures that are included in the plan.²⁰³ This is similar to BC Hydro’s other strategies, plans and studies,²⁰⁴ which are helpful background to capital projects and programs, but are not subject to their own separate review.

130. CEABC states that the electrification plan should be incorporated into the 2021 IRP.²⁰⁵ As explained by Mr. O’Riley, the IRP will be looking at different scenarios of electrification and how BC Hydro may meet customer load requirements under those scenarios, whereas the electrification plan is a five-year plan that is linked to financial commitments, so it properly belongs in the RRA.²⁰⁶

C. BCUC MUST SET RATES TO RECOVER BC HYDRO’S FISCAL 2020 AND FISCAL 2021 COSTS ON ITS ELIGIBLE CHARGING STATIONS

131. BCOAPO agrees that BC Hydro’s stations that came into operation prior to June 22, 2020 are prescribed undertakings, but “submits that the F2020 costs and costs for the first quarter of F2021 should not be allowed into the Proposed Regulatory account.”²⁰⁷ BCOAPO offers no evidence or rationale for its position, which is incorrect in law and must be rejected.

132. As BC Hydro explained in detail in its Final Submissions, section 18 of the *Clean Energy Act* requires rates to be set that allow public utilities to recover their costs incurred on their prescribed undertaking. This includes BC Hydro’s costs that were incurred in fiscal 2020 and fiscal 2021. The purpose of the *Clean Energy Act* and section 5 of the Greenhouse Gas Reduction (Clean

²⁰² CEC Submissions, para. 202.

²⁰³ Tr. 1, p. 208, l. 22 – p. 210, l. 1 (O’Riley).

²⁰⁴ Exhibit B-2-2, Appendix K.

²⁰⁵ CEABC Submissions, p. 16.

²⁰⁶ Tr. 1, p. 208, l. 22 – p. 210, l. 1 (O’Riley).

²⁰⁷ BCOAPO Submissions, p. 13.

Energy) Regulation (“GGRR”) is to allow public utilities to recover their costs incurred on EV charging stations. There is no basis in the words or context of the *Clean Energy Act* or GGRR on which BC Hydro’s fiscal 2020 and fiscal 2021 costs could be excluded from recovery in rates.

133. BC Hydro also notes that when the BCUC directed BC Hydro to remove its EV costs from rate base, the BCUC encouraged BC Hydro to apply to recover any of its prior expenditures. The BCUC stated: “The Panel encourages BC Hydro to apply to the BCUC if it wishes to have any of its prior, current or future EV capital expenditures considered as possible prescribed undertakings under the GGRR.”²⁰⁸ Therefore, it has always been contemplated that BC Hydro could seek to recover its past costs.

134. BCOAPO submits that, since BC Hydro did not remove finance costs attributable to EV charging stations from the fiscal 2020 or fiscal 2021 requirements, the balance in the Electric Vehicle Costs Regulatory Account should not attract interest, apparently to avoid double-counting of costs, as finance costs were included in rates in those years.²⁰⁹ However, the \$4.8 million²¹⁰ included in the Electric Vehicle Costs Regulatory Account for fiscal 2020 and fiscal 2021 should collect interest as BC Hydro proposed²¹¹ because these are costs that BC Hydro incurred, but has not been able to collect from ratepayers. The delay between when the expenditures are made and the collection of revenue gives rise to the need for interest charges. This is distinct from any finance costs incurred in fiscal 2020 and fiscal 2021 in relation to the EV charging station assets. Moreover, there is no risk of double-counting of finance costs, as interest applied to regulatory accounts reduces the amount of interest recovered through finance charges.²¹²

²⁰⁸ Decision, p. 94.

²⁰⁹ BCOAPO Submissions, p. 13.

²¹⁰ Exhibit B-4, BCUC IR 1.1.1.

²¹¹ Exhibit B-2, p. 7-12.

²¹² Exhibit B-2-2, Appendix A, Schedule 8.0.

135. BC Hydro notes that its forecast costs of \$4.8 million over fiscal 2020 to fiscal 2021 for EV charging stations that are prescribed undertakings are not entirely capital costs,²¹³ as was incorrectly indicated by CEABC.²¹⁴

D. EV RATE DESIGN IS OUT OF SCOPE

136. Mr. Bryenton comments on BC Hydro's proposed EV rate design.²¹⁵ BC Hydro's EV charging station rate design is the topic of a separate proceeding before the BCUC and is out of scope.

E. BC HYDRO WILL CONTINUE TO FORECAST EV COSTS IN RRAS

137. CEABC suggests that the "EV Station Program should be operated as a transparent profit-making entity."²¹⁶ BC Hydro's response is three-fold:

- (a) The BCUC does not have jurisdiction to direct BC Hydro to set up a separate entity and operate its EV station program as a "profit making entity" as proposed by the CEABC. This is a management function within the purview of BC Hydro.
- (b) As demonstrated in this proceeding, BC Hydro can track its costs and revenues from its EV stations without setting up a separate profit-making entity.
- (c) EV station customers are BC Hydro electricity customers. They should not be treated as a separate "profit making" business for the benefit of all other customers, any more than any other group of BC Hydro customers should be.

138. BC Hydro will be treating its EV station costs and revenue like all other costs and revenue and forecasting them its future RRAs.²¹⁷ This approach is consistent with BC Hydro's other costs and revenues, and allows costs and revenues to be tracked appropriately.

²¹³ Exhibit B-2, Application, p. 7-13; Exhibit B-4, BCUC IR 1.1.1.

²¹⁴ CEABC Submissions, p. 10.

²¹⁵ Bryenton Submissions, pp. 4-5.

²¹⁶ CEABC Submissions, p. 11.

²¹⁷ Exhibit B-4, BCUC IR 1.7.3.

F. BC HYDRO ACQUIRES AND TRANSFERS LOW CARBON FUEL CREDITS IN ACCORDANCE WITH LEGISLATION AND RATEPAYERS BENEFIT

139. CEABC recommends that the 2020 TPA be amended to track the value of the sale of credits, RECs or similar products.²¹⁸ Direction No. 8 has been amended to direct the BCUC not to exercise its powers under section 71(1)(b) and (3) of the UCA in respect of the 2020 TPA. However, BC Hydro currently transfers its low carbon fuel credits to Powerex under a separate agreement.²¹⁹ As BC Hydro has noted, the Ministry is currently considering changes to the low carbon fuel standard.²²⁰ As the low carbon fuel standard and market evolves, BC Hydro and Powerex will determine what appropriate changes should be made to the transfer credits to Powerex and will consider CEABC's recommendations at that time.

²¹⁸ CEABC Submissions, p. 14.

²¹⁹ Exhibit B-9, Undertaking No. 24.

²²⁰ Exhibit B-9, Undertaking No. 24.

PART TWELVE: CONCLUSION AND ORDER SOUGHT

140. The evidence in this proceeding, discussed in the Final Submissions and augmented here, makes a compelling case for BCUC approval of the proposed rate increase and other requested orders.²²¹

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated:	<u>April 20, 2021</u>	<u><i>[original signed by Matthew Ghikas]</i></u> Matthew Ghikas, Counsel for BC Hydro
Dated:	<u>April 20, 2021</u>	<u><i>[original signed by Christopher Bystrom]</i></u> Christopher Bystrom, Counsel for BC Hydro
Dated:	<u>April 20, 2021</u>	<u><i>[original signed by Tariq Ahmed]</i></u> Tariq Ahmed, Counsel for BC Hydro

²²¹ Exhibit B-2-7, Updated Draft Order Sought. The initial orders sought are summarized in Section 1.4 of the Application. As discussed in Part Seven of these Final Submissions, BC Hydro amended its request in Exhibit B-5 (cover letter) to also seek a regulatory account to capture variances between the placeholder net income used in the determination of rates and what flows from BC Hydro's upcoming cost of capital proceeding. As discussed in Part Eleven of these Final Submissions, BC Hydro also amended its requests in Exhibit B-9, BC Hydro's Response to Undertaking No. 19 to include depreciation rates for its EV charging stations.