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June 24, 2021
File No.: 301539.00032/14797

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")
Review of the Performanced Based Regulation Report

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

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

[Original signed by]

Matthew Ghikas
Personal Law Corporation

MTG/lh
Enclosure

BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF

THE UTILITIES COMMISSION ACT

RSBC 1996, CHAPTER 473

AND

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

(BC HYDRO)

REVIEW OF THE PERFORMANCE BASED REGULATION REPORT

REPLY SUBMISSIONS OF BC HYDRO

JUNE 24, 2021

MATTHEW GHIKAS
Fasken Martineau DuMoulin LLP

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PART ONE: INTRODUCTION

1. There is a notable degree of consensus among the parties on the most significant aspects of this proceeding.

2. First, there is general acknowledgment among the parties that BC Hydro's current regulatory regime falls part-way along an incentive continuum, already incorporating various mechanisms that may be characterized as Performance Based Regulation ("PBR"). All interveners appear to accept, explicitly or implicitly, that the analytical exercise should be one of assessing whether the existing incentives for good performance can be strengthened in a way that the expected benefits outweigh the expected disadvantages.[1] The fact that discourse has moved away from the overly-simplistic "PBR versus Cost of Service regulation ("COSR")" dichotomy is, in and of itself, a significant accomplishment of this proceeding.

3. Second, most interveners express support for one or more of BC Hydro's three proposals – (i) to adopt a three-year test period, (ii) to develop regular statistical benchmarking, and (ii) to expand BC Hydro's use of performance metrics. BCOAPO and CEABC are the only two interveners to express reservations about increasing the length of the next test period to three years. RCIA has provided a list of desired metrics, while AMPC, BCOAPO, RCIA and CEABC comment on the potential role and limitations of benchmarking.[2] All of this feedback is constructive, and BC Hydro will be considering it in the course of preparing its upcoming Revenue Requirements Application ("RRA"). The BCUC has determined that the length of the upcoming test period is a matter that should be determined in the upcoming RRA proceeding, with the benefit of a complete evidentiary record. The BCUC should, for similar reasons, defer consideration of benchmarking design and the merits of specific performance metrics to the RRA proceeding.

4. Finally, there appears to be general recognition among the parties that BC Hydro is unique, particularly with regards to its mandate and governing legislation. A number of

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[1] BCOAPO Submissions, p. 9; BCSEA Submissions, para. 25; Gjoshe Submissions, p. 2; Zone II RPG Submissions, para. 2 and 4; RCIA Submissions, p. 6, CEC Submissions, para. 28; CEABC Submissions, p. 2; MoveUP Submissions, p. 1.

[2] AMPC Submissions, p. 2; BCOAPO Submissions, p. 23; RCIA Submissions, p. 12; CEABC Submissions, p. 6.

interveners[3] agree with BC Hydro that the potential benefits offered by other PBR options identified by Dr. Lowry are predicated on conditions that are absent in the case of BC Hydro. Interveners variously cited the absence of: (a) a mandate for BC Hydro to exceed its regulated return on equity ("allowed ROE"), (b) the unconstrained ability to reward management with bonuses for exceeding the allowed ROE, and (c) any inherent disincentive to pursue demand-side management and electrification. Accordingly, no intervener advocates for

- a test period longer than three years;
- the adoption of a PBR plan that encompasses the broad use of an index or formula, trackers, earnings sharing and other features of "textbook" PBR; or
- attaching financial incentives to specific metrics or initiatives, to which Dr. Lowry refers as Performance Incentive Mechanisms ("PIMs").

All interveners, apart from AMPC and RCIA, reject the use of some form of index or formula as a mechanistic determinant of rates; even AMPC and RCIA advocate only limited use.[4] CEABC is alone in favouring partial decoupling of electrification revenues.[5]

5. Given the extent of the agreement among the parties, these Reply Submissions are focussed.[6] The BCUC should move forward with BC Hydro's proposed measures, which

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[3] BCOAPO Submissions p. 15; BCSEA Submissions, paras. 36, 39-41, 69; CEABC Submissions, p. 2; CEC Submissions, para. 11; Zone II RPG Submissions, paras. 3 and 14; MoveUP Submissions, p. 2; RCIA Submissions focus on non-financial incentives.

[4] AMPC Submissions, pp. 1 and 2; RCIA Submissions, p. 8. The following interveners express opposition: BCOAPO Submissions p. 28; BCSEA Submissions, para. 96; CEC Submissions, para. 11 (general endorsement of BC Hydro's submission); Zone II RPG Submissions, paras. 15, 16; MoveUP Submissions, p. 4 (general endorsement of BC Hydro's submission); CEABC Submissions, p. 6. Ms. Gjoshe (Gjoshe Submissions, p. 12) appears to assume that the index or formula would only be used as a data point in assessing forecasts, rather than the sole determinant of the rate, which BC Hydro addresses below in these Reply Submissions.

[5] CEABC Submissions, p. 4. The following interveners express opposition: BCOAPO Submissions p. 29; BCSEA Submissions, para. 83; CEC Submissions, para. 11 (general endorsement of BC Hydro's submission); Zone II RPG Submissions, paras. 15, 16; MoveUP Submissions, p. 4 (general endorsement of BC Hydro's submission). The following interveners are silent: AMPC, Ms. Gjoshe.

[6] BC Hydro's silence should not be interpreted as agreement.

interveners broadly support. The BCUC should set aside other options identified by Dr. Lowry, including the variants on those options advocated by CEABC, AMPC and RCIA.

PART TWO: CONSIDERATIONS THAT SHOULD INFORM BCUC'S DETERMINATION

6. Several interveners have expressed agreement with BC Hydro's articulation (in Part Three of BC Hydro's Final Submissions) of considerations that should inform the evaluation of potential future modifications to BC Hydro's current regulatory regime. BC Hydro's submissions below focus on the relatively narrow submissions of Ms. Gjoshe and RCIA regarding these considerations.

A. BC HYDRO'S CURRENT REGULATORY FRAMEWORK PROVIDES INCENTIVES AND BC HYDRO HAS RESPONDED TO THEM

(a) Response to Ms. Gjoshe's Proposal to Use Write-Offs and Rate Deferrals

7. BC Hydro explained in Part Three of its Final Submissions why BC Hydro's existing framework provides strong incentives for BC Hydro to operate efficiently and provide safe and reliable service.[7]

8. Ms. Gjoshe, while expressing general agreement that the current framework provides strong incentives, argues that "it is also plausible that over shorter-term stretches, affordability objectives can be aided by other measures such as the writing-off of deferred costs; revenue decoupling (i.e. the deferral of costs deemed prudently-incurred for recovery in rates in future periods), etc."[8]

9. BC Hydro interprets Ms. Gjoshe's suggestions as (i) writing-off otherwise prudently incurred costs to keep rates low, and (ii) deferring costs to future periods to keep rates low today. Ms. Gjoshe's concepts, while couched in PBR language, are not incentive mechanisms. Rather, they are ways to engineer a particular rate outcome in the short-term. With respect to (i), the obligation on the BCUC when setting rates is the same regardless of the regulatory regime: rates must be just and reasonable. This legal requirement precludes the BCUC from directing write-

[7] Exhibit B-9, BCUC IR 1.3.2.

[8] Gjoshe Submissions, pp. 9, 10.

offs of prudently incurred costs.[9] As for (ii), this is an issue of rate design and should reflect the proper application of recognized rate design principles to BC Hydro's specific circumstances.

(b) Response to Ms. Gjoshe Regarding the Impetus for the PBR Report

10. Ms. Gjoshe takes issue with BC Hydro's observation that circumstances have changed since the BCUC originally ordered BC Hydro to prepare a PBR report.

11. Ms. Gjoshe states that "the Commission's goal of cost control…[remains] unadulterated by such changes in the Commission's emphasis as may happen from time to time."[10]

12. BC Hydro agrees that the BCUC should remain cognizant of the importance of efficient operations; BC Hydro is fully committed to maintaining that focus as well. BC Hydro's point was simply that the BCUC had requested the PBR Report (in the Fiscal 2017-Fiscal 2019 RRA decision) in the context of expressing concern about BC Hydro's level of commitment to controlling costs. The BCUC's concern has very evidently abated since then.

13. For example, in the Fiscal 2020-Fiscal 2021 RRA decision, the BCUC expressed a greater degree of comfort regarding BC Hydro's processes and efforts, and a concern that BC Hydro's affordability mandate has caused the company to place *too much* emphasis on cost control. BC Hydro's point was that, if there is concern that the existing framework is incenting cost cutting above other important priorities, it makes less sense to change to regulatory regime at this time to encourage further cost-cutting.

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[9] *ATCO Gas & Pipelines Ltd. v. Alberta (Utilities Commission),* 2015 SCC 45 at para. 7 per Rothstein J.: "Under a cost of service model, rates must allow the utility the opportunity to recover, over the long run, its operating and capital costs. Recovering these costs ensures that the utility can continue to operate and can earn its cost of capital in order to attract and retain investment in the utility: OEB [Ontario (Energy Board) v. Ontario Power Generation Inc., 2015 SCC 44], at para. 16. Consumers must pay what the Commission "expects it to cost to efficiently provide the services they receive" such that, "overall, they are paying no more than what is necessary for the service they receive": OEB [Ontario (Energy Board) v. Ontario Power Generation Inc., 2015 SCC 44], at para. 20." ATCO Gas and Pipelines Ltd. v. Alberta (Utilities Commission) - SCC Cases (lexum.com)

[10] Gjoshe Submissions, p. 8. By contrast, Zone II RPG "agrees with BC Hydro that there is now a 'legitimate question' about whether the original impetus for the PBR Report now exists." Zone II Submissions, para. 12.

B. UNIQUE CIRCUMSTANCE #1: BC HYDRO'S MANDATE AS A CROWN CORPORATION

14. No intervener expresses disagreement with BC Hydro's description of its mandate as a Crown corporation - in particular, its affordability mandate and the absence of a mandate to exceed its allowed ROE (i.e., maximize profits). Most interveners noted this characteristic in expressing opposition to options identified by Dr. Lowry.[11]

15. However, RCIA states that it "…strongly disagrees that PBR incentive mechanisms function only or primarily based upon the utility's motivation to exceed allowed ROE."[12] For clarity, BC Hydro has not taken the position that all PBR incentive mechanisms function only based upon the utility's motivation to exceed allowed ROE. BC Hydro agrees that there are PBR mechanisms that can work to strengthen incentives without relying on the potential to exceed allowed ROE. The three PBR mechanisms that BC Hydro has proposed fall into that category.

16. However, the evidence of all three experts is clear that some PBR options are premised on the effectiveness of "carrot" incentives, and that those mechanisms will not deliver the promised benefits in the case of BC Hydro. BC Hydro's affordability mandate means that BC Hydro is already motivated to minimize costs. It will not find additional motivation in being able to exceed the allowed ROE.[13] These observations are consistent with Dr. Lowry's evidence that shows little or no performance gains from PBR when applied to publicly owned utilities.[14]

17. BC Hydro's unique mandate also means that RCIA is overstating the degree of tension between the interests of customers and the utility.[15] The absence of a profit-maximizing objective and the presence of a rate-affordability objective in the case of BC Hydro aligns its interests with those of customers. While disagreements may exist over priorities (e.g., the correct balance between cutting costs in the short-term and safe and reliable service), BC Hydro's

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[11] BCSEA Submissions, e.g., paras. 36, 37, 83, 95, 97.

[12] RCIA Submissions, p. 6.

[13] See BC Hydro Final Submissions, para. 38, note 27. Hence, in the case of BC Hydro, low rates are a direct product rather than a byproduct of the company's efforts at minimizing costs.

[14] Exhibit A2-5, Lowry Report, pp. 67-68. See also BC Hydro Final Submissions, paras. 94-95.

[15] RCIA Submissions, p. 7.

mandate requires attention to ratepayer interests in ways that are largely absent for an investor-owned utility.

C. UNIQUE CIRCUMSTANCE #2: CONSTRAINTS ON MANAGEMENT COMPENSATION STRUCTURE PRECLUDE REPLICATING A PROFIT MAXIMIZING MOTIVE

18. Ms. Gjoshe "support[s] the Commission's use of productivity improvement measures as part of its future review of BC Hydro's RRAs, through the use of a combination of positive and negative performance incentives directly tied to performance evaluation for BC Hydro's management."[16]

19. BC Hydro explained in its Final Submissions that Public Service Employer Council requirements constrain BC Hydro's management compensation structure.

20. Moreover, contrary to what Ms. Gjoshe appears to assume, the BCUC's rate setting jurisdiction does not extend to determining operational matters like the compensation framework. As our Court of Appeal has held:

> 56 It is only under s.112 of the *Utilities Act* that the Commission is authorized to assume the management of a public utility. Otherwise the management of a public utility remains the responsibility of those who by statute or the incorporating instruments are charged with that responsibility.
>
> …
>
> 58 Taken as a whole the *Utilities Act*, viewed in the purposive sense required, does not reflect any intention on the part of the legislature to confer upon the Commission a jurisdiction so to determine, punishable on default by sanctions, the manner in which the directors of a public utility manage its affairs.[17]

21. BC Hydro's compensation plan aligns with the Service Plan, which in turn aligns with BC Hydro's mandate letter from the Government of B.C. It accords with the requirements of the Public Sector Employers Council.

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[16] Gjoshe Submissions, p. 11.

[17] *British Columbia Hydro and Power Authority v. British Columbia (Utilities Commission)*, 20 BCLR (3d) 106. https://www.bccourts.ca/jdb-txt/ca/96/00/c96-0090.txt

PART THREE: BC HYDRO'S PENDING IMPROVEMENTS TO THE FRAMEWORK

A. INTRODUCTION

22. A number of interveners express support for one or more of BC Hydro's proposals to be considered in the upcoming RRA proceeding (i.e., a three-year test period, regularly scheduled statistical benchmarking and information-only performance metrics). In this section, BC Hydro responds to submissions of BCOAPO, RCIA, AMPC and CEABC on particular elements.

B. THREE-YEAR TEST PERIOD STRENGTHENS INCENTIVES, INCREASES REGULATORY EFFICIENCY AND RETAINS VALUED TRANSPARENCY

23. AMPC, Ms. Gjoshe, CEC, Zone II RPG and BCSEA see value in returning to a three-year test period.[18] RCIA does not object.[19] BCOAPO and CEABC favour a two-year test period, at least for the next test period;[20] however, neither of these interveners has identified a reason to question the three main benefits of a three-year test period discussed in BC Hydro's Final Submissions:

- the unanimous view of the experts that a three-year test period will, other things being equal, increase the incentives to control costs relative to a two-year test period[21];
- the potential regulatory efficiency benefits[22]; and
- the fact that ratepayers benefit from rate predictability, i.e., are protected from further rate increases for an additional year.[23]

24. Rather, BCOAPO and CEABC focus on whether it will be possible for BC Hydro to prepare reasonable forecasts extending out three-years. BC Hydro understands that the BCUC must have

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[18] AMPC Submissions, p. 3; Gjoshe Submissions, pp. 5, 8; CEC Submissions, para. 3; Zone II RPG Submissions, para. 4; BCSEA Submissions, para. 87.

[19] RCIA Submissions, p. 12. Although RCIA does not object to initially using a three-year test period for future RRAs, it does advocate the use of a formula. BC Hydro addresses those arguments below.

[20] BCOAPO Submissions, p. 21; CEABC Submissions, p. 4.

[21] See BC Hydro Final Submissions, paras. 125-129.

[22] See BC Hydro Final Submissions, para. 131.

[23] See BC Hydro Final Submissions, para. 130.

confidence in the reasonableness of forecasts any time it approves rates, regardless of the length of the test period. As the BCUC has recognized, these questions are best addressed in the upcoming RRA proceeding with the benefit of evidence as to the basis of BC Hydro's forecasts. For the purposes of this proceeding, it is sufficient for the BCUC to find based on the expert evidence that, in principle and other things being equal, adding another year to the test period will provide stronger incentives.

25. BCOAPO suggests, in the alternative, having a review half-way through a three-year test period.[24] BCOAPO's approach would add regulatory process and uncertainty. It would also potentially reduce the efficiency incentives relative to a two-year test period, other things being equal since it would introduce the potential for rebasing (at least for the costs subject to mid-term review at that time) after only 1.5 years. Given that the BCUC has referred the issue of the length of test period to the RRA proceeding, it should similarly avoid commenting on BCOAPO's alternative proposal now.

C. REGULARLY-SCHEDULED STATISTICAL BENCHMARKING WILL BE VALUABLE

26. There appears to be general support for benchmarking, at least in principle.

27. Some interveners have correctly noted that benchmarking is costly, and the value of benchmarking depends on its design.[25] BC Hydro is cognizant of both the potential benefits and the limitations of benchmarking. It will be important to focus on the cost drivers best suited to benchmarking, and to be cognizant of whether adding design complexity (e.g., the straw-dog options that Dr. Lowry suggests) brings benefits sufficient to outweigh the added cost and "black box" opacity.

28. The concerns that these interveners have raised are addressed in the approach that BC Hydro is taking to the development of benchmarking. Specifically, BC Hydro is developing terms of reference to guide the objective, scope, and frequency of future benchmarking studies. It will present a proposal in the upcoming RRA, with supporting justification. The BCUC and

[24] BCOAPO Submissions, p. 21.

[25] AMPC Submissions, p. 3; CEABC Submissions, p. 6; BCOAPO Submissions, p. 23.

interveners will then have an opportunity to provide input on those terms of reference in canvassing the various issues throughout the course of the proceeding. The outcome of that process will be terms of reference that BC Hydro can use when commissioning a benchmarking study.

D. EXPANDED INFORMATION-ONLY PERFORMANCE METRICS ARE BENEFICIAL

29. Interveners generally support BC Hydro's proposal to introduce expanded information-only performance metrics. No intervener advocates for attaching earnings-based financial incentives to performance metrics, at least at this time.[26]

30. RCIA has identified a number of specific cost metrics for consideration. BC Hydro will certainly consider this feedback for its upcoming RRA, and the proceeding will provide a forum to evaluate the merits of the measures with the benefit of evidence. At this juncture, BC Hydro reserves comment except to identify three important considerations regarding RCIA's proposal.

31. First, RCIA expects that BC Hydro will be able to easily compile its proposed metrics.[27] While the availability of the data is one important consideration, it is no less important that metrics be meaningful and aligned with business objectives. Compiling more information for the sake of having more information is inefficient and undesirable for ratepayers and BC Hydro alike. It has the potential to obfuscate, rather than clarify, the critical issues under examination. Metrics can also be misleading or create perverse incentives. BC Hydro will be in a position to comment on the availability of data, and other considerations, in the upcoming RRA proceeding.

32. Second, RCIA envisions its metrics as "reducing and simplifying regulatory reporting by making reporting more quantitative, and less labour intensive (i.e., enable the avoidance of long descriptive sections of prose). Preparing tables and graphs (of information that is already being collected) is fundamentally easier and less time-consuming than providing written descriptions of the same information – a picture is worth a thousand words."[28]. BC Hydro submits:

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[26] Interveners that are explicit in this regard: BCOAPO Submissions, p. 25; CEABC Submissions, p. 6.

[27] RCIA Submissions, p. 8.

[28] RCIA Submissions, p. 12.

- It is unrealistic to expect that raw data can be useful in the absence of a rubric for interpreting it, and BC Hydro would be remiss if it provided that data without explaining its meaning, significance or limitations.

- With respect to regulatory burden, BC Hydro submits that the more likely outcome is that metrics will either open new areas for debate or will just change the nature of the evidence and debate. Metrics should not be expected to reduce regulatory burden. BC Hydro anticipates there would be disagreement about the import and choice of particular metrics, as well debate over the significance to ascribe to reported results. The value of any new metrics adopted in the upcoming RRA will be in their ability to build understanding and confidence in the forecasts, rather than to reduce process.

- Quantitative results do not eliminate subjectivity; the BCUC will still need to apply its judgement when interpreting results. A good illustration of this point is RCIA's expressed concern that BC Hydro's regulatory accounts "may temporarily sequester costs and consequently alter the reported metrics for a time period". Regulatory accounts are only one of many factors that can affect reported results for the metrics that RCIA has proposed. RCIA's solution to the potential influence of regulatory accounts on results is to implement "a mechanism … to monitor BC Hydro's use of regulatory accounts, to ensure that their use does not directly or indirectly negatively impact the information quality utilized by the PBR mechanisms."[29] Developing "mechanisms" to account for the impacts of factors that could potentially skew results would add complexity and the "mechanisms" could foster debates in their own right.

33. Third, and related to the second point, reliance on historical data as a mechanistic means of setting rates going forward would require the company or the industry to be in a steady-state equilibrium in which the future is a virtual mirror image of the past. That is not the case with

[29] RCIA Submissions, p. 13.

BC Hydro. There has been and continues to be changes in BC Hydro's operations and in the industry and the economy.

34. In short, metrics can potentially represent a useful tool and looks forward to evaluating their potential and probative value in the course of the upcoming RRA; however, metrics are not the "silver bullet" that RCIA seems to envision. The BCUC will need to be cognizant of both the potential benefits and the inherent limitations of performance metrics.

PART FOUR: ADDITIONAL MECHANISMS DO NOT MEET THE COST / BENEFIT TEST

A. INTRODUCTION

35. There is only limited support among interveners for the additional PBR options identified by Dr. Lowry. Specifically:

- No intervener has advocated for a test period longer than three years, and their submissions often align with the evidence of BC Hydro, Dr. Weisman and Mr. Kolesar.[30]
- No intervener advocates for attaching financial incentives to specific metrics or initiatives, at least at the present time.[31]
- All interveners, apart from AMPC and RCIA, reject the use of some form of an index or formula in place of forecasts. Even AMPC and RCIA advocate only limited use.[32]
- CEABC is alone in favouring partial decoupling of electrification revenues.[33]

36. BC Hydro addresses below the arguments of AMPC, RCIA and CEABC on the latter two issues. Their arguments have critical shortcomings.

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[30] AMPC Submissions, p. 3; BCOAPO Submissions, p. 27; CEABC Submissions, p. 6; BCSEA Submissions, paras. 93-94.

[31] The following interveners address this topic explicitly: BCOAPO Submissions, p. 26; CEABC Submissions, p. 7; RCIA Submissions, p. 10; BCSEA Submissions, para. 100; CEC Submissions, paras. 11, 75, 79.

[32] AMPC Submissions, pp. 1 and 2; RCIA Submissions, p. 8. The following interveners express opposition: BCOAPO Submissions p. 28; BCSEA Submissions, para. 96; CEC Submissions, para. 11 (general endorsement of BC Hydro's submission); Zone II RPG Submissions, paras. 15, 16; MoveUP Submissions, p. 4 (general endorsement of BC Hydro's submission); CEABC Submissions, p. 6. Ms. Gjoshe (Gjoshe Submissions, p. 12) appears to assume that the index or formula would only be used as a data point in assessing forecasts, rather than the sole determinant of the rate, which BC Hydro addresses below in these Reply Submissions.

[33] CEABC Submissions, p. 4. The following interveners express opposition: BCOAPO Submissions p. 29; BCSEA Submissions, para. 83; CEC Submissions, para. 11 (general endorsement of BC Hydro's submission); Zone II RPG Submissions, paras. 15, 16; MoveUP Submissions, p. 4 (general endorsement of BC Hydro's submission). The following interveners are silent: AMPC, Ms. Gjoshe.

B. FORMULA OR INDEX-BASED RATE MAKING SHOULD NOT BE PURSUED

37. The use of a formula or index to set rates is not a necessary characteristic of a PBR regime.[34] In its Final Submissions, BC Hydro has identified several reasons why a formula or indexed based approach to setting rates should not be pursued.

(a) Response to AMPC's "Simple Formula"

38. AMPC "supports the use of indexing and/or a simple formula approach for rate setting specifically related to Operating and Maintenance expense and capital replacements/renewals", while retaining the current approach to determining other costs. AMPC gives the example of using inflation to escalate these costs, arguing that it would "streamline regulation, introduce stronger cost containment incentives, and allow for operating flexibility and efficient operations for BC Hydro."[35] BC Hydro submits that AMPC is over-selling the potential benefits of this approach.

39. First, Dr. Weisman has confirmed that a formula or index is not inherently superior to using a forecast in terms of incentives for cost containment, and Dr. Lowry indicated that a forecast can provide "strong" incentives. In both cases, the revenue trajectory is determined in advance, requiring the utility to operate within a defined envelope to achieve its allowed ROE. AMPC's assumption thus appears to be that setting the trajectory for operating expenses and replacement capital equivalent to inflation is guaranteed to produce a *lower* trajectory than what a cost forecast would produce.

40. This premise is problematic from the perspective of accepted rate making principles. The use of a formula does not relieve the BCUC of its obligation to set rates that are just and reasonable. The formula must produce a rate trajectory that provides the utility with a reasonable opportunity to cover its prudently incurred costs and earn a fair rate of return.

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[34] Exhibit B-8, Weisman Supplementary Report, para. 26. Dr. Lowry identifies a "stair-step ARM" (forecasting) as a mechanism for use in a PBR MRP.

[35] AMPC Submissions, p. 2.

41. BC Hydro has held much of its operating cost budget *below* inflation in recent years. The increases in BC Hydro's base operating costs have been driven by the need to reinvest in areas like Mandatory Reliability Standards, cybersecurity, and vegetation management – all areas identified by the BCUC as requiring additional investment. It is unrealistic to expect that these important initiatives could be achieved within an inflationary increase.

42. Second, AMPC's assumption that its "simple formula" would result in a marked decrease in regulatory process also appears to discount the inevitable protracted debate about what costs should, and should not, be included under the formula. Determining an appropriate formula, however simple, will be controversial. We could also expect future debates about strategic cost deferrals and capital and operating cost substitution. On the latter point, Mr. Kolesar noted that the approach contemplated by AMPC can give rise to perverse incentives: "Secondly, applying an I-X to O&M alone may be detrimental in that it may provide an incentive to shift costs from O&M to capital and vice versa, potentially negatively influencing the achievement of dynamic efficiencies in the firm and increasing costs in the long run."[36]

(b) Response to RCIA on Using a Formula Based on Historical Costs

43. Similar problems exist with RCIA's approach of "Utiliz[ing] formulas to determine budgetary envelopes for non-volatile utility expenditures, based on historical trends with appropriate adjustments for escalation and productivity improvements…".[37] RCIA, like AMPC, identifies the target costs as being operating costs and "routine and non-volatile" capital.[38]

44. RCIA considers BC Hydro's proposed forecast-based approach to be uncompelling as a PBR mechanism because BC Hydro is developing "bottom-up" budgets, rather than having to live within formula-driven three-year budgets derived from historic expenditure trends.[39] Leaving aside (for the sake of argument) the fact that BC Hydro's budgeting process (which the BCUC just

[36] Exhibit B-9, BCUC IR. 1.18.4 (Kolesar).

[37] RCIA Submissions, p. 8.

[38] RCIA Submissions, p. 10.

[39] RCIA Submissions, p. 10.

endorsed[40]) incorporates "top-down" constraints imposed by management, RCIA's argument is conceptually flawed:

- The expert evidence is that the incentive for cost-minimization is the same whether the performance benchmark (e.g., rate cap) is based on external formulae, such as input inflation, or a cost forecast at the outset of the regulatory regime (what Dr. Lowry calls a "stair-step ARM"). The strength of the incentives derives from the fact that the performance benchmark is independent of the utility's actual performance.

- Mechanistically relying upon BC Hydro's own past cost trends to set future rate caps or forecasts implicitly assumes a steady-state environment that does not exist. Historical information must be considered in context of the current state, or it will fail to produce "just and reasonable" rates going forward.

45. Moreover, RCIA, like AMPC, is contemplating a "frugal" formula.[41] BC Hydro submits that the legal test for rate-setting requires an assessment of what is reasonable and prudent, not what is "frugal". The BCUC, in its recent Fiscal 2022 RRA Decision, rejected a similar argument from AMPC that BC Hydro should be applying a "least cost approach".[42]

46. It is easy to see how the use of a historical rolling average as the starting point for a formula can produce budgets that are inadequate to meet the needs of BC Hydro's customers, let alone satisfying the legal standard. First, as noted above, many operating costs bear little relation to inflation, and depend more on increasing demands on the company (e.g., greater

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[40] Fiscal 2022 RRA Decision, p. 27: "The Panel considers BC Hydro's budgeting process involving top-down and bottom-up elements goes beyond the examination of incremental changes from the prior year and continues to be reasonable for forecasting operating costs. Therefore, for these reasons, the Panel finds the F2022 operating costs requested for recovery to be reasonable."

[41] E.g., "Being forced to manage costs within a pre-approved budget is difficult if the pre-approved budget is frugal, which is more likely to be achieved using a formula-driven approach rather than relying upon the applicant's traditional budget development processes."

[42] Fiscal 2022 RRA Decision, p. 27: "The Panel is reluctant to accept AMPC's proposal that the "least cost approach" should be the starting point for all of BC Hydro's system investment and planning, as this approach is not always practical for the provision of safe and reliable service."

scope and complexity of MRS, increased frequency and sophistication of cyber threats, vegetation growth cycle). Second, even for costs that are influenced by inflation, RCIA's approach introduces a "ratcheting" effect – operating efficiently today means the rolling three-year average will be ratcheted downwards in later years, which quickly becomes punitive for the utility unless offset by progressively larger upward adjustments. This is, if anything, a *disincentive* to reduce costs today, since the utility knows that it will be harmed in the long-term.[43]

47. The objectivity that RCIA is seeking to achieve by using a formula is illusory. The development of adjustment factors involves considerable judgment. As with AMPC's approach, RCIA's proposal promises extensive debates about adjustment factors, cost substitution, deferral of work and other matters that have contributed to the increase in regulatory process in Alberta under PBR.

(c) Response to Ms. Gjoshe on Benchmarking versus Formula / Index-Based Rates

48. Ms. Gjoshe suggests there is an inconsistency between BC Hydro's willingness to consider benchmarking and its opposition to formula or index-based rates.[44] BC Hydro's position is internally consistent. Ms. Gjoshe is assuming that "both indexing and benchmarking are instruments for assessing the reasonableness of BC Hydro's forecasts, and with due process would be able to assist the BCUC and interveners in this regard." However, BC Hydro understands Dr. Lowry's option as contemplating the use of indexes or formula *to determine the rate,* rather than to inform or verify a forecast (i.e., no forecast is presented for costs included in the formula). BC Hydro favours presenting a forecast, and then using appropriate benchmarking as an aid in informing the reasonableness of the forecast. The specific design of that benchmarking analysis will be addressed in the upcoming RRA.

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[43] RCIA is contemplating creating a situation not unlike the "ratchet effect"/"moving the goal posts" about which Dr. Weisman cautioned, where utilities would be deterred from seeking out additional savings if they perceive a risk that any savings achieved during multi-year rate plan will be rebased prior to the end of the term. Exhibit A2-1, First Weisman Report, p. 48.

[44] Gjoshe Submissions, p. 12.

C. PARTIAL DECOUPLING WOULD HARM RATEPAYERS

49. CEABC is alone in favouring partial decoupling of electrification revenues.[45] Its position is based on flawed reasoning.

50. First, BC Hydro's initiatives are only one component of an overall plan that the Government of B.C. has to achieve its GHG reduction objectives. The responsibility to meet the Government of B.C. GHG reduction objectives is not BC Hydro's alone, as CEABC seems to suggest.

51. Second, partial decoupling would divert benefits away from customers to provide BC Hydro with an incentive to pursue electrification when BC Hydro is (a) already mandated to pursue electrification, and (b) is not motivated by the type of financial incentive being contemplated. This is a poor value proposition for customers.

52. CEABC appears to argue that electrification is more suited to partial decoupling because it is mandated, when the opposite is true - the mandate undermines the rationale for partial decoupling.[46] Dr. Lowry proposes partial decoupling as an option because he assumes that BC Hydro will be less incented to pursue electrification when ratepayers receive the entire benefit of electrification sales.[47] In other words, he assumes that without the "carrot" of increased earnings BC Hydro lacks motivation to pursue electrification with sufficient vigour. The fact that BC Hydro is subject to a government mandate with respect to electrification eliminates the need for financial incentives. CEABC's proposal would, in short, violate one of Dr. Lowry's principles of incentive design: "don't pay out any more money than you need to get the elicited

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[45] CEABC Submissions, p. 4. The following interveners express opposition: BCOAPO Submissions p. 29; BCSEA Submissions, para. 83; CEC Submissions, para. 11 (general endorsement of BC Hydro's submission); Zone II RPG Submissions, paras. 15, 16; MoveUP Submissions, p. 4 (general endorsement of BC Hydro's submission). The following interveners are silent: AMPC, Ms. Gjoshe.

[46] CEABC Submissions, p. 9: "Achieving the Government's GHG-reduction electrification objectives is not a forecast of the same type that BC Hydro is used to dealing with. It does not represent a "what if" scenario that BC Hydro can be indifferent to. Rather, it is a goal that must be reached. Indeed, it is a legislated goal, enshrined in the BC Climate Accountability Act."

[47] Tr 2, p. 152, ll. 2-13 (Lowry). E.g. "Well, the margin that might be gleaned from it's passed back to the customer. That's the concern."

behaviour, desired behaviour."[48] It would have the perverse result of undermining BC Hydro's affordability mandate.

53. CEABC's analogy to DSM only proves BC Hydro's point that partial decoupling is unnecessary. In the following passage, CEABC indicates that it wants BC Hydro to apply the same rigour to electrification as it does to DSM. It bears noting that BC Hydro is pursuing DSM without the "carrot" of additional earnings or financial "stick" incentives:

> The situation with regard to achieving electrification is very analogous to the situation with regard to how BC Hydro handles its conventional Demand Side Management (DSM) initiatives. The difference being that conventional DSM is aimed at reducing demand, while electrification is aimed at increasing demand. In the case of conventional DSM, BC Hydro has been given certain objectives to achieve; it looks at the obstacles to achieving those objectives and it maps out a strategy for overcoming those obstacles. BC Hydro should adopt the same approach in the case of increasing electrification, as a means to reducing GHG emissions.[49]

54. Third, CEABC's support for partial decoupling for electrification is premised on imposing asymmetrical risk on BC Hydro. CEABC says, for example: "Provided that the objectives are set at a very ambitious level (as CEABC believes the Government's electrification objectives to be), then the probability of exceeding those objectives will be very much less than the probability of falling short."[50] CEABC's expectation runs counter to the requirement of just and reasonable rates, which by definition are neither too high, nor too low. CEABC is, in essence, arguing for a mechanism that would unduly hamper the utility's ability to earn its allowed ROE, even in circumstances where BC Hydro has taken reasonable steps to pursue electrification opportunities.

55. Even if one assumes (for the sake of argument) that an asymmetrical partial decoupling mechanism would satisfy the legal standard, imposing asymmetrical risk on BC Hydro would still come at a cost to ratepayers in the form of a higher cost of capital. Dr. Weisman stated:

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[48] Tr. 2, p. 222, ll. 9-17 (Lowry).

[49] CEABC Submissions, p. 10.

[50] CEABC Submissions, p. 8.

> Third, whereas a fundamental property of PBR is that the regulated firm bears greater risk in exchange for the prospect of greater reward, this does not imply that the regulated firm should bear all of the risk under PBR. Reflexively eliminating or reducing variance accounts and recovery mechanisms may cause the regulated firm to bear excessive risk. As the Economics Nobel Laureate Milton Friedman famously quipped, "there is no such thing as a free lunch." It follows that this increased risk-bearing for the regulated firm would ultimately be reflected in an increased cost of capital and therefore higher rates for consumers, holding all other factors constant.[51]

56. Fourth, CEABC seems to equate partial decoupling with punishment. The experts are clear that partial decoupling, like other PBR options, is intended to strengthen both "carrot" and "stick" incentives, not to serve as tool for punishing the utility for failing to achieve legislated requirements.

[51] Exhibit A2-2, F20-F21 RRA IR BCUC IR 1.191.3.

PART FIVE: CONCLUSION

57. The measures that BC Hydro is advancing in the upcoming RRA are not only endorsed by all three experts, but also enjoy considerable intervener support. The measures can, in principle, be expected to deliver benefits in the unique circumstances of BC Hydro, and the upcoming RRA provides an appropriate forum for exploring the design of the measures. Although RCIA and AMPC support the limited use of formulas and indexing, and CEABC advocates partial decoupling of electrification revenues, the evidence demonstrates that these mechanisms are ill-suited to the current circumstances of BC Hydro.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated: June 24, 2021

Matthew Ghikas

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