BEFORE THE ADDITIONAL FACILITY OF THE

INTERNATIONAL CENTRE FOR SETTLEMENT OF INVESTMENT DISPUTE (ICSID)

BETWEEN:

MERCER INTERNATIONAL INC.,

Claimant / Investor

AND:

GOVERNMENT OF CANADA

Respondent / Party

ICSID CASE NO. ARB(AF)/12/(3)

REBUTTAL EXPERT REPORT OF MICHAEL ROSENZWEIG OF NERA ECONOMIC CONSULTING

March 31, 2015

TABLE OF CONTENTS

I. QUALIFICATIONS AND REPORT STRUCTURE 3

II. INTRODUCTION AND SUMMARY 4

A. Introduction 4
B. Summary 7
1. Comments on Dr. Fox-Penner 7
2. Comments on Mr. Switlishoff 10
3. Comments on Mr. Kaczmarek 12

III. CLAIMANT'S POSITION IN ITS REPLY 14

IV. CLAIMANT'S EXPERTS' ARGUMENTS ARE NOT RELIABLE 16

A. Dr. Peter Fox-Penner 19
1. Dr. Fox-Penner fails to understand that BC policy and BCH's objective is *not* "keeping BC rates as low as possible" 22
2. Dr. Fox-Penner fails when he attempts to frame the case as one about the allocation of arbitrage profits 25
3. Dr. Fox-Penner's academic theories of efficiency are inapt when applied to actual utility resource procurement and regulation in BC, and his stylized model is misleading and contains errors 27
i. Dr. Fox-Penner's academic conception of economic efficiency 27
ii. Dr. Fox-Penner's flawed stylized model 33
4. Dr. Fox-Penner fails to demonstrate inconsistent treatment of Celgar versus other BC mills and inconsistent treatment due to BCH's process 38
i. Alleged discrimination in treatment of other mills versus Celgar 39
ii. Alleged discrimination due to BCUC and BCH processes 43
5. Dr. Fox-Penner's alternatives for self-generation policy in BC are inapt and inefficient 46
B. Mr. Elroy Switlishoff 49
C. Mr. Brent Kaczmarek 53
1. Mr. Kaczmarek's competitive effects arguments are inapt 55
i. Mr. Kaczmarek's competitive analysis is flawed 55
ii. Mr. Kaczmarek dismisses beneficial treatment by Canada 62
2. The principles underlying Mr. Kaczmarek's damages arguments are fundamentally flawed 63
i. Fails to properly represent Celgar's FortisBC replacement rates 64
ii. Ignores that Celgar could not sell to a third party purchaser at a rate greater than its cost of replacement energy 67
iii. Incorrectly assumes that BCH would purchase Celgar's below-GBL electricity 74
iv. Inappropriately bases damages on the speculative renewal of Celgar's EPA 74

v. Fails to address the 1991 Ministers' Order 76
vi. Mr. Kaczmarek ignores logical flaws in Claimant's arguments related to differential treatment 76

V. DAMAGES 78

A. NERA's conclusions on damages 78
1. Damages due to G-48-09 81
2. Damages due to exclusivity agreement and Side Letter Agreement 82
3. Damages due to Celgar's GBL being set incorrectly 83

VI. APPENDICES 88

1. Documents Relied Upon
2. Technical Issues Related to the Errors in Mr. Kaczmarek's Damages Analysis
3. Correction of Mr. Kaczmarek's Damages Model

I. Qualifications and Report Structure

1. I am Michael Rosenzweig, a Special Consultant with NERA Economic Consulting. I submitted an expert report earlier in this proceeding,[1] and I have been asked by the Government of Canada ("Canada") to prepare this rejoinder report in response to the Reply Memorial and accompanying expert reply reports filed by Mercer International Inc. ("Mercer"), the Claimant in this NAFTA arbitration.[2]

2. My qualifications for submitting this report are unchanged since my initial report. The details of my experience are available at Appendix 1 of that report.

3. This report is organized as follows: Section II provides a summary of my analysis, Section III outlines Claimant's economic theory of this case, Section IV responds to the criticism of my first report by Claimant's counsel and its experts, including a new expert introduced in Claimant's second round filing, Dr. Peter Fox-Penner. Also in Section IV, I assess the responses by Claimant's other experts to the criticisms I made to the arguments and analyses in their first round filings. Finally, in Section V, I address the quantitative errors committed by Mr. Kaczmarek in his damages calculations, as well as the conceptual errors related to damages based on each of the "Measures" that Claimant alleges are objectionable. I also provide in that section, putting aside that the errors discussed in the previous sections demonstrate that Claimant has not been harmed, the results of Mr. Kaczmarek's damages calculations after they have been corrected for the errors that I have outlined.

---

[1] Expert Report of Dr. Michael B. Rosenzweig, dated August 22, 2014 ("NERA Expert Report").

[2] Mercer's Reply Memorial, dated December 16, 2014 ("Reply Memorial"); Second Expert Statement of Elroy Switlishoff, P. Eng., M. Eng., ("Mr. Switlishoff") dated December 10, 2014 ("Switlishoff Second Report"); Second Expert Report of Brian C. Kaczmarek, CFA ("Mr. Kaczmarek"), dated December 16, 2014 ("Kaczmarek Second Report"); Expert Report of Dr. Peter Fox-Penner, PhD ("Dr. Fox-Penner"), dated December 16, 2014 ("Fox-Penner Report").

II. Introduction and Summary

A. Introduction

4. Given the volume of materials presented to the Tribunal in this case, it is easy to lose track of the central and, in reality, relatively straight forward issue in this case. British Columbia ("BC") instituted an energy policy, the 2007 Energy Plan, that affected BC Hydro ("BCH") resource procurements: promote incremental increases in capacity that were environmentally friendly. BCH instituted a program of incentives to achieve those goals using the prospect of an Energy Purchase Agreement ("EPA") with an incentive purchase price for new or idle self-generation resources that use a bio-fuel.

5. Claimant in this case argues that it is being harmed since it is prevented by certain "Measures" from being able to sell its below-GBL (as set in its EPA with BCH) self-generation to third parties.[3] Notwithstanding Claimant's characterization and explicit denial of any right to a contract with BCH, it asks the Tribunal to award damages that are computed precisely as though Celgar would have had one of the incentive EPAs with BCH for this generation (in addition to the EPA Celgar has for its above-GBL generation).

6. Respondent and Claimant clearly have two disparate views of the issues. The fundamental question for the Tribunal is whether this case is about BCH's procurement process under BC's policies for incentivizing incremental, "green" power resources or if it is about Canadian policies that have allegedly prevented Celgar from selling the output of an existing generator installed in the 1990s (the "52 MW Generator") to third parties or to BCH at incentive prices.[4]

7. Claimant has made a number of arguments that purport to support its view in both its first filing and in its Reply. These arguments do not deal with the fundamental

[3] "GBL" is the acronym for Generator Baseline which is a measure defined by BCH to identify incremental resources in its procurement process. See ¶ 8 below.

[4] BCUC is an acronym for the British Columbia Utilities Commission.

inconsistency of Celgar's proffered generation not being incremental and yet Celgar seeking the incentive for incremental resources. Rather Claimant at first argues that it was discriminated against in the process for identifying incremental resources. Now Claimant raises additional arguments questioning anew the process as well as the motives of the BC government and the BC regulator, the BCUC. In this report, I demonstrate that these new arguments are again just camouflage to distract attention from the fundamental inconsistency.

8. BCH applied a metric to determine if resources proposed in its call for self-generated green power were in fact incremental to the BC power system. This measure was denominated the Generator Baseline ("GBL").

9. BCH analyzed Celgar's proposal for an EPA with the incentive pricing for output from its existing generator and determined that Celgar was offering electricity that was already being used to meet its own load and, so, was below its GBL. BCH rejected Claimant's proposal since the Celgar below-GBL generation was *not* incremental, would not contribute to meeting BCH's future resource requirements, would not comply with the 2007 Energy Plan, and therefore was not an appropriate recipient of an incentive EPA.

10. In its Reply, Claimant repeats its allegation of discrimination but with a different focus.[5] It also adds the allegation that the motive for the policies, the "Measures" that are the heart of its complaint, is actually to prevent Celgar from selling the output of its 1990s 52 MW Generator to third parties (but in actuality to BCH) on a long-term, firm basis. I also showed in the last round that Claimant's discrimination case was based on assessing the GBL process for a small subset of BC mills. However, I showed that the GBL process was consistent and consistently applied not just for those few mills Claimant assesses but also for the twelve mills I assessed (which are almost all of the mills in BC). Differences in GBL were the result of differences in the mills' individual circumstances.

[5] Mr. Switlishoff now criticizes the procedure for determining the historical year for setting the GBL. His concerns are addressed in Section IV.B below.

This was true not only across all the mills but also when Celgar was compared to each of the individual mills, including the two mills on which Mercer bases its claim.[6]

11. In the material that Claimant has submitted in response to Canada's Counter-Memorial, none of Claimant's experts or witnesses addresses the GBL-related results from my analysis of almost all mills in BC, with one exception.[7] Thus, my analyses remain unchallenged (at least by Claimant's expert or fact witnesses) and show a lack of any basis for a claim of inconsistent treatment in Claimant's case.

12. Claimant's filings in the first round and (as shown below) in this round are, to steal a phrase from its Reply Memorial, efforts that "kick[] up a lot of dust in an effort to distract".[8] In fashioning its response to provide this distraction, Claimant and its experts have crafted their arguments relying on abstruse and formalistic "academic" or "theoretical" constructs. However, the theoretical discussions are often out of touch with reality, which is where the BCUC must regulate and where BCH must operate a power system.

13. A few examples give a flavor of such approaches: Dr. Fox-Penner arguing that the absence of pure and perfect competition means that the BCUC cannot show that its orders enhance economic efficiency;[9] Mr. Switlishoff creating a "metric" that exists only in this case and neglects the actual differences among mills;[10] and Mr. Kaczmarek computing damages over an infinite period of time, relying on inputs which are inherently speculative.[11] These and other constructs are needed to avoid the reality that this dispute is about procurement of incremental resources under a nondiscriminatory

---

6 NERA Expert Report, Appendix 2.

7 Reply Memorial, ¶¶ 298-303. This is in contrast to counsel's deference to experts in responding to criticisms of the original damage calculations. Ibid, ¶ 586. See Section IV below for more detailed discussion.

8 Ibid, ¶ 12.

9 See Section IV.A.3 below for a detailed discussion. Dr. Fox-Penner, ignoring his own critique, finds that the BCUC policies are actually inefficient.

10 See Section IV.B below for a detailed discussion.

11 See Section IV.C.2.iv below for a detailed discussion.

process. The GBL methodology developed by BCH had to address the actual mill operating environments on a case-by-case basis, which explains and justifies the differences in GBLs.

14. Claimant focuses on what it characterizes as the "Measures" to argue that it has been harmed. But these "Measures" relate to BCH's resource procurement program under Provincial policies. Those policies set the following conditions: *additions* to BCH's generation resources would not be constructed by BCH but should be incentivized by BCH; the *additions* would be environmentally friendly; and the *additions* would be acquired cost-effectively. When the layers of Claimant's argument are peeled away, what is clear is that Celgar wants the incentive EPA price for its already existing resource. This cannot be cost-effective, *additional* generation.

B. Summary

15. Claimant's reliance on its experts is misplaced since they do not account for the realities of the GBL process, BCUC regulation, and BCH resource acquisition. I address these unrealities as they relate to each expert.

1. Comments on Dr. Fox-Penner

16. Claimant introduces a new expert, Dr. Peter Fox-Penner, whose intended role is to respond to a number of the economic/regulatory points raised in my first report. Claimant relies on Dr. Fox-Penner's academic credentials to distinguish his opinion from mine. And I agree that does distinguish our views. His views reflect an academic's approach which ignores the practicalities which constrain regulation and power procurement. Theory may be useful for trying to understand real-world relationships, but by necessity, it is a simplification of reality and is most often a frail reed on which to base predictions or predict actual motivations.[12] To be manageable,

[12] This is a common characteristic displayed by all of Claimant's experts as discussed in the sections responding to each.

theory must ignore practicalities which often can be only appreciated from hands-on experience.

17. For example, Dr. Fox-Penner agrees that economic efficiency is a fundamental aspect of regulation but asserts that the "regulatory policies and orders of the BCUC and BC Hydro[sic] were not directed primarily towards economic efficiency" in part because "[i]mperfect pricing makes it impossible to draw efficiency conclusions."[13] This is a fine academic debating point that is often raised by opponents of regulatory initiatives. In practice, subjecting initiatives to the standard of pure and perfect competition as his argument suggests would paralyze a regulatory agency. There are no actual economic systems that satisfy his "perfect pricing" requirement. It is also clear that BCH was increasing efficiency by acquiring resources cost-effectively. Regulatory agencies are obliged to affirmatively regulate and this is the environment in which the regulatory principle of economic efficiency must be assessed.[14]

18. In a similar vein, the "economics" that Dr. Fox-Penner uses to detect the true intention of the BCUC in issuing Orders G-38-01 and G-48-09 is premised on his view that the BCUC needed to investigate the entire BC economy (if not even the entire western North American economy) to verify that its orders were economically efficient.[15] Again, this is perhaps appropriate for a theoretical discussion but is unrelated to the practicalities of reasoned decision-making by regulatory agencies. Moreover, the "economic" analysis upon which Dr. Fox-Penner bases his criticism is his "stylized" modeling that purports to represent the third-party sales that Claimant argues it is prevented from transacting.[16] Even ignoring the unreality of such sales,[17] this single-

---

[13] Fox-Penner Report, ¶¶ 113-123 (where quoted text is from the headings to Sections IV and IV.B). Note that BCH does not make regulatory policy.

[14] See Section IV.A.3 below.

[15] See Section IV.A.3.i below.

[16] Fox-Penner Report, ¶¶ 29-44.

[17] See Witness Statement of Michael W. MacDougall, dated 21 March 2015, ("MacDougall Witness Statement"), Sections B.2 and C, Witness Statement of Dean Kraus, dated 31 March 2015 ("Krauss Witness Statement"), ¶

hour electricity market model is inapt in the context of this proceeding which deals with long-term resource acquisition. The model also has other significant miscalculations and serious defects as explained in the text below.[18]

19. Dr. Fox-Penner also is confused about other aspects of regulation. He determines that the BCUC's and BC's actual objective is "keeping BC rates as low as possible", which is, in his opinion, the rationale for incentivizing procurement of incremental resources.[19] This ignores the other obligations of the BCUC which include: ensuring reliable service (the real reason for its concerns about resource procurement) and providing an adequate return to utilities so they can fund investments to meet their service obligations (not mentioned by Dr. Fox-Penner). Taken literally, Dr. Fox-Penner's view would result (as it does in some places) in electricity being provided for free.

20. He goes on to characterize the "fundamental self-generator regulatory issue" as allocating the profits from arbitrage.[20] This conclusion results from his own theory of "status quo" preservation and relies on his defective model. The regulatory objectives of the BCUC were presented in my first report and Dr. Fox-Penner does not appear to disagree with them. Allocating profits between electricity sector participants is not one of them and not one that I ever encountered when I was at a regulatory agency. Perhaps Dr. Fox-Penner is confusing possible ancillary effects of commission actions with the reason for the actions.

21. Dr. Fox-Penner also evidences a basic misunderstanding of the context of this case: incentivized procurement of incremental "green" generation resources. Instead he asserts that "[e]ffectively, this policy rewards the less efficient generators relative to the

---

18 and Sections C.1 and C.2, and Witness Statement of Roger Garratt, dated 19 March 2015 ("Garratt Witness Statement"), Section C, which describe the unreality of Celgar's ability to make third-party sales.

[18] See Section IV.A.3.ii below.

[19] Fox-Penner Report, ¶ 11.

[20] Ibid, ¶ 32.

more efficient generator."[21] The objective of the policy is not, however, related in any way to giving prizes for mill efficiency.[22]

22. Dr. Fox-Penner is wrong on a number of other matters which I address below in Section IV.A. These include:

- Criticizing the whole of BCH's GBL setting methodology but analyzing the GBL determination of only two or three mills.[23]
- Determining that Celgar suffered discrimination but ignoring the consistently applied GBL methodology for all mills and the difference among mills that necessitate different GBLs.[24]
- Concluding that Celgar has suffered discrimination due to inadequate regulatory processes of the BCUC without considering the limits on BCUC regulatory authority and the actual practices of regulatory agencies.[25]
- Arguing that BC policies cannot be "shown" to be economically efficient and that they are in fact not the most efficient, fair or the best alternative; but at the same time ignoring how regulatory agencies actually function and relying on a flawed "stylized" model to support his claim.[26]

2. Comments on Mr. Switlishoff

23. In his first report, Mr. Switlishoff also delved into analyses not related to the real world. He created a metric, the below-load access percentage ("BLAP"), or "arbitrage percentage" that formed the basis for his supporting Claimant's allegations of discrimination.[27] I pointed out several deficiencies in his metric as he applied it.[28] In his

---

[21] Ibid, ¶ 29.

[22] Dr. Fox-Penner also provides his view of "a globally efficient solution" in ¶ 126 which is both incorrect and demonstrably impractical except perhaps in theory.

[23] See Section IV.A.4 below.

[24] See Section IV.A.4.i below.

[25] See Section IV.A.4.ii below which discusses, among other issues, that giving discretion to BCH to carry out its procurement activities is both a standard as well as rational regulatory agency approach to technical issues. See also the Expert Report of David Bursey, dated 28 March 2015, ("Bursey Report"), Section F.2 generally and ¶ 69 in particular.

[26] See Section IV.A.3.

[27] Switlishoff First Report, ¶ 96.

second report, Mr. Switlishoff responds to those criticisms by effectively disavowing BLAP, admitting that differences between BLAPs are not in themselves discriminatory.[29] Claimant thus tries to sidestep Mr. Switlishoff's backtrack by focusing its complaint on Celgar's alleged inability to make third-party sales. However, as shown by the statements of Powerex, NorthPoint and Puget Sound Energy staff, this is another empty exercise since such sales were not a realistic possibility.[30] Moreover, Celgar and BCH had a side letter agreement which permitted Celgar to sell to third parties if it reached agreement on replacement power from FortisBC.

24. Mr. Switlishoff also criticizes the way in which BCH applies what he denotes as the "current normal" criterion.[31] He bases his criticism on his review of the same limited set of mills as in his first report and the Tolko-Riverside mill which, unlike the others, is a sawmill and does not have a contract with BCH. In my first report, I presented my analyses of pulp and paper mills (including Celgar) and clearly delineated the differences in the actual situations of the mills that resulted in different outcomes for what constituted normal operations.[32] Mr. Switlishoff fails to respond to my explanations, and fails to analyze the breadth of mills that I analyzed.

25. Mr. Switlishoff also argues that Celgar's GBL has been set differently than that of another mill he looked at since it does not reflect Celgar's sales.[33] As explained below, his conclusion is misplaced since Celgar's sales were made from generation basically resulting from its pulp production while those for the other mill were not. Celgar's sales effectively were part of its management of the variability in its generation – purchasing

---

[28] NERA Expert Report, ¶ 59.

[29] Switlishoff Second Report, ¶ 11.

[30] MacDougall Witness Statement, Sections B.2 and C, Krauss Witness Statement, ¶ 18 and Section C, and Garratt Witness Statement, Section C.

[31] Switlishoff Second Report, Section III.

[32] NERA Expert Report, Sections III.B.2 and III.C.4 and Appendix 2.

[33] Switlishoff Second Report, ¶¶ 56-57.

from FortisBC to meet load when conditions preclude Celgar from self-supplying and selling when conditions temporarily produce a surplus.[34]

3. Comments on Mr. Kaczmarek

26. Mr. Kaczmarek presents in his second report a combination rebuttal and new arguments and admissions of error. His rebuttal fails to establish his case, and his new argument concerning competitive effects is analytically inadequate and presents no evidentiary support. These issues are discussed in detail in Section IV.C.

27. Mr. Kaczmarek criticizes my report for failing to address the issue of competitive effects of the "Measures", ignoring the fact that he did not address the issue either.[35] He appears to concede that Celgar's production has been unaffected and he provides no other indicators or evidence of economic harm.[36] His only "analysis" is to repeat the material presented by Mr. Merwin in his first statement that Celgar's position in the BC supply curve for pulp has been changed and to note that the additional revenue from below-GBL sales would reduce risks from price reductions in the pulp market. None of this goes to competitive harm.[37]

28. Mr. Kaczmarek offers a number of reasons why my criticisms of his using speculative data are not fair or correct. These are all unconvincing (see Section IV.C.2 for a detailed discussion). They include:

- Data for his *in perpetuity* calculation was not available due to the "Measures" themselves but could be quantified.[38] This is unresponsive to the issue that his assumptions extend to an infinite time horizon and are therefore inherently speculative. His only other response is to repeat his speculative estimation process.

---

[34] See Section IV.B. Also see Second Expert Report of Pöyry, dated 31 March 2015, ("Pöyry Second Report"), Section 4.4. See also ¶ 92 below.

[35] Kaczmarek Second Report, ¶ 30.

[36] Ibid, ¶ 31.

[37] Ibid, ¶¶ 33-40. Mr. Merwin's material is unreliable and incomplete as a competitive-effects analysis. (See Section IV.C.1 below).

[38] Ibid, ¶ 13. I discuss below in Section IV the defense to this criticism proffered by Claimant's counsel.

- Sales to third parties could not be identified since the "Measures" precluded them.[39] The speculative nature of this assumption is put to rest decisively in the witness statements of staff of Powerex, NorthPoint and Puget Sound Energy.[40]

- BCH would purchase from Celgar absent the "Measures" since BC would not want the power to go outside the Province, it is low-cost, and it would help meet BCH increases in load with green power.[41] However, sales outside of BC were not feasible, the sale price assumed was not low cost and Celgar was not an incremental source of power that could help meet new load.

- The rate he used for replacement power absent a FortisBC-Celgar agreement (including a rate) in his damages computations was reasonably approximated by the existing FortisBC rates or, alternatively, the [redacted][42] But his analysis goes out to infinity, so using existing rates for that period is clearly speculative. And the [redacted]

29. Mr. Kaczmarek admits to making some errors in his damage calculation, which he has incorporated into his current computations, and he agrees that his damages go to infinity. In his view, this approach is "in lieu of Respondent offering restitution for future losses."[43] These are shown to be inadequate responses in Section IV.C.2.iv below.

30. Mr. Kaczmarek has recomputed his damages estimate[44] but those computations still contain errors as discussed in Section V. Putting aside the errors which demonstrate there are no damages, I have computed damages using correct inputs to determine the effect of the errors on Mr. Kaczmarek's quantum. I have used the scenarios described by Claimant as the basis for the calculations using Mr. Kaczmarek's condensed model

---

39 Ibid, ¶¶ 33-40.

40 MacDougall Witness Statement, Sections B.2 and C, Krauss Witness Statement, ¶ 18 and Section C, and Garratt Witness Statement, Section C.

41 Op. Cit, ¶¶ 51-59.

42 Ibid, ¶¶ 84-89 and 93-94.

43 Ibid, ¶¶ 14 and 116-117.

44 Ibid, Section VI.A.

and correcting for the various mistakes committed by Mr. Kaczmarek. The results for these calculations are presented in Section V.A.3.

III. Claimant's Position in its Reply

31. Mercer argues in its Reply that the "Measures", the exclusivity provision and its GBL in its EPA with BCH and BCUC Order G-48-09, have harmed it by preventing it from making third-party sales from its generation below its current GBL.[45] This argument has several implicit assumptions: (1) Celgar had realistic opportunities for sales to third parties in the relevant time frame; (2) BCH discriminated against Celgar in setting the GBL in its EPA; and (3) that the exclusivity provision and BCUC Order G-48-09 actually prevented Celgar from making sales to third parties. These assumptions are incorrect. All of these points were addressed in Respondent's earlier filing but it may be useful to offer a short reprise before critiquing the new material that Claimant submits in its Reply.

32. Claimant's case for having been harmed is deficient on several grounds. First, there was no financially viable market for Celgar to make third-party sales.[46] The witness statements of Brian MacDougall (Powerex), Dean Krauss (NorthPoint), and Roger Garratt (Puget Sound) make clear that there were neither green energy markets nor sufficiently high Mid-C prices. For this reason, the exclusivity restriction about which Celgar complains is of no practical effect. This provision cannot in any event support a discrimination or unfair treatment complaint since every BCH EPA contained such a restriction.[47] In fact, there is only one situation that I am aware of in which a mill had the possibility of obtaining a relaxation of this limitation and that is Celgar's obtaining the Side Letter Agreement that accompanied the Celgar-BCH EPA.[48] With the Side

[45] Reply Memorial, ¶¶ 32-36.

[46] See MacDougall Witness Statement, Sections B.2 and C, Krauss Witness Statement, ¶ 18 and Section C, and Garratt Witness Statement, Section C and Respondent's Counter-Memorial.

[47] Second Witness Statement of Jim Scouras, dated March 30, 2015 ("Scouras Second Witness Statement"), ¶ 8.

[48] Ibid, ¶ 33.

Letter Agreement, Celgar was not precluded, as it alleges, by BCH from selling below-GBL generation.

33. Second, BCH did not use a different GBL methodology to set a GBL for Claimant. As I showed in my earlier report, Claimant's argument in this regard is demonstrably false,[49] and as I discuss below, my analysis has not been credibly rebutted in Claimant's Reply.

34. Third, Claimant argues that Order G-48-09 prevents FortisBC from supplying it power at particular prices: embedded cost rates.[50] This, in turn, frustrates Claimant's ability to sell its below-load generation since it cannot obtain replacement power cheaply enough in order to make sales economically. Claimant's characterization of the Order is, however, incorrect. Order G-48-09, as described in my earlier report, does not prevent FortisBC from supplying Celgar as much embedded cost power as Celgar desires. Celgar could have chosen (and still could) utility supply instead of self-generation.[51] The only effect of Order G-48-09 is to prevent inefficient arbitrage by precluding supply to Celgar at rates that include BCH PPA electricity while Celgar is selling below-load power.[52] This limitation in Order G-48-09 is consistent with the cost-causality regulatory principle.[53] Further, the BCUC did permit FortisBC to supply Celgar when it was selling below its load (and even below its 40 MW GBL[54] with BCH), subject to agreement on a supply contract.[55] Additionally, the BCUC directed FortisBC to develop

---

[49] NERA Expert Report, Section III.B.2 and Appendix 2.

[50] Reply Memorial, ¶¶ 33 and 35.

[51] NERA Expert Report, ¶ 79.

[52] Ibid, ¶¶ 62-63 and 82.

[53] BCUC Order G-48-09, pg. 21.

[54] 40 MW is Celgar's GBL of 349 GWh expressed on an hourly basis.

[55] As the BCUC noted in the decision accompanying Order G-156-10, "The parties [FortisBC and Celgar] are at liberty to establish their own GBL and, should they desire, to incorporate it into a general service agreement and submit it to the Commission for approval." (BCUC, Order Number G-156-10, "In the Matter of FortisBC Inc. 2009 Rate Design and Cost of Service Analysis, Decision", 19 October 2010, **NERA-3**, page 115) The parties have so far failed to reach such an agreement, as I pointed out in my first report. (NERA Expert Report, ¶ 82) Additionally, in in Order G-188-11, the BCUC stated that "Celgar is free to sell all or a portion of its generation below the BC Hydro GBL into the market and supply its mill from FortisBC resources, not including BC Hydro PPA Power." BCUC, Order G-188-11 and Decision, Zellstoff Celgar Limited Partnership Complaint Regarding

an appropriate rate that Celgar could elect for below-load supply even while selling to third parties.[56] FortisBC proposed a cost-recovery rate, but Celgar has objected to such a rate.[57] Claimant's counter-argument is that the Order subjected Celgar to a net-of-load standard in terms of access to embedded cost power.[58] This, as shown previously, is false. [redacted].[59] Moreover, as Mr. Swanson of FortisBC testifies, the BCUC has directed that Claimant is entitled to non-PPA embedded cost power to replace its sales below its GBL.[60]

35. Claimant has presented an additional expert and additional arguments to support its positions but these new presentations do not remedy the defects in Claimant's case just described. Moreover, as shown below these arguments are themselves flawed.

IV. Claimant's Experts' Arguments are Not Reliable

36. Reading Claimant's Reply Memorial and expert reports is like entering a hall of funhouse mirrors. This filing presents arguments that distort reality: infeasible power transactions; formalistic academic arguments; stylized models unrelated to the facts of this case; metrics of discrimination that its creator now disavows; reliance on incomplete analyses; and speculations about the future. Each of these will be addressed in the sections below.

---

the Failure of FortisBC Inc. and Celgar to Complete a General Service Agreement and FortisBC's Application of Rate Schedule 31 Demand Charges, November 14, 2011 p.49, **NERA-4**.

56 See **NERA-4**.

57 See Second Witness Statement of Dennis Swanson, dated 27 March 2015, ("Swanson Second Witness Statement"), ¶¶ 26-38.

58 Reply Memorial, ¶¶ 33 and 35.

59 NERA Expert Report, ¶ 83. Claimant's expert, Mr. Kaczmarek, effectively admits this in his report (Kaczmarek Second Report, ¶ 92, which links [redacted], which is an embedded cost rate). Further, Claimant admits elsewhere in its Reply Memorial that the [redacted] (Reply Memorial, ¶ 204). In practice, Celgar is not held to a net-of-load standard.

60 Swanson Second Witness Statement, ¶¶ 26-38.

37. Before analyzing the arguments of Claimant's experts, I would first like to address an argument made by Claimant's counsel, which is not supported by any of its experts; that constitutes Claimant's "rebuttal" of my analysis of BCH's GBL methodology.[61] My analysis concluded that BCH consistently employed a set of principles in determining its position in the GBL element of EPA negotiations. Claimant's critique dismissed my analysis for not meeting counsel's (perhaps personal) standards.

38. The specifics of counsel's remarks are, however, misplaced. Counsel incorrectly argues that:

a) I did not employ an independent analysis, which ignores the part of my report which provided the details of my methodology;[62]

b) I did not perform an independent assessment of data or utilize a transparent process, which again ignores the part of my report which provided the details of my analysis and the information that I used;[63]

c) I did not do independent fact gathering,[64] which ignores that many of the "facts" were the elements of private and confidential business negotiations and only available from the parties.[65] It also ignores that I did review approximately 1,000 documents, which also were made available to Claimant, and neither Claimant nor its experts have challenged the basic facts in those documents, nor have Claimant's experts challenged my analytical results; and

d) I did not "recalculate" the GBLs, which ignores that the accuracy of GBLs is unrelated to the issues relevant to the allegation of discrimination—consistency of approach and application of a methodology—and ignores

---

[61] Reply Memorial, ¶¶ 298-303.

[62] NERA Expert Report, Section III.B.2.

[63] Ibid. It also ignores the approximately 1,000 documents that I reviewed and that were made available to Claimant through Canada's production of documents.

[64] Reply Memorial, ¶ 301.

[65] Mr. Kaczmarek in his first report at ¶ 52 recognized the confidential nature of the EPA negotiations which included the issue of agreeing to a GBL.

the fact that GBLs are not "calculated" using a formula, a fact which Claimant has acknowledged.[66]

39. However, since my approach to analyzing GBLs was not clear to Claimant, I present here a brief summary. For each of the twelve mills I analyzed, I received and reviewed a large volume of documents.[67] I understand that Claimant was provided with the same documents. My evaluation of the GBL process for the mills was as follows:

- I reviewed historical data for each mill, including historical generation, load, purchases, and sales.[68]
- I reviewed each mill's EPA or Load Displacement Agreement ("LDA") with BCH (each of the 12 mills I reviewed signed such an agreement during the 2009 to 2011 period). I reviewed GBL, firm sales, or load displacement levels, including shaping (by season, month, or hour) as well as whether these levels were adjusted based on outages. I reviewed price terms and penalty terms as well as non-price terms such as what triggered the beginning of firm energy sales under an EPA (often this was tied to a new or refurbished generation resource coming on-line).[69]
- I reviewed electricity-generation related contracts that the various mills had entered into before their EPAs and LDAs referenced in the previous bullet point. I assessed the effect of these contracts on the mills generation and on their GBL determination, considering the potentially different effects of whether or not the agreement was canceled before the effective date of the new EPA/LDA. If a

---

66 Claimant's counsel also has "rebuttal testimony" on two specific elements of my GBL memos in ¶¶ 302-303 of its Reply Memorial, but with regard to the first, I already addressed (in Appendix 2 of my first report) the relevant substantive differences between the mills, and with regard to the second, I only note that Appendix 2 to my first report already contains the information I relied upon for the analysis in that Appendix.

67 For example, for each of the four mills for which I presented my detailed analysis in my first report I reviewed between about 60 and 210 documents. Ultimately, I relied upon 28 documents in my assessment of these four mills (see Appendix 2 of NERA Expert Report). These documents are **NERA-34** to **NERA-60** and the website http://www.canfor.com/our-company/our-rich-history. This is in addition to the various witness statements I relied upon.

68 The data were contained in contemporaneous data tables produced by BCH or the mills, documents related to setting the mills CBLs (Customer Baseline Load, which is part of BCH's two-tiered tariffs, where for some BCH mills, their CBL was associated at least indirectly with their GBL determination. See NERA Expert Report, point 3 following ¶ 52), as well as data contained in analyses, memos, letters, and emails produced by the mills and BCH.

69 Certain mills entered into subsequent EPAs after the initial EPA they signed during this 2009 to 2011 period, replacing their initial EPAs. I reviewed these subsequent EPAs as well. I also considered modifications made to the initial terms of the EPAs that were made under the contract-updating terms of those agreements (for example, changing the firm sales amount).

contract was canceled, I assessed the terms of the cancelation from an economic-regulatory perspective.

- I reviewed contemporaneous analyses, arguments, or descriptions of mill operation/history produced by BCH or the mills leading up to the determination of the GBLs. This included documents from the "back and forth" between the mills and BCH about their potential GBL.

- I talked to BCH staff for clarification of facts concerning the mills and of BCH reasoning with respect to setting a GBL.

- I reviewed witness statements filed with Canada's Counter-Memorial as well as the witness statements of Mr. Merwin and Mr. Gandossi.

- I processed all this information, and formed my assessment of the GBL process for each mill. I compared the process for each individual mill with BCH's overall methodology.

- My assessment included a critical assessment of the GBL process for the various mills with respect to BCH's overarching goals. I also assessed specific aspects of setting individual GBLs from an economic perspective, considering the economics of incentives and utility resource acquisition.[70]

40. As I concluded in my first report, my comprehensive assessment revealed that all mills experienced the same GBL setting process, including Claimant. Despite having received the over 1,000 documents that I reviewed to reach this conclusion, Claimant did not undertake its own independent analysis. Claimant's attacks on my independence have no bearing on my results.

41. I will now turn to my review of the expert reports submitted by Claimant.

A. Dr. Peter Fox-Penner

42. As I noted in my first report, the principles of economic regulation of electric utilities include: protecting customers, allowing utilities to recover costs and a reasonable return, ensuring that costs are borne by those who cause them, and producing as economically efficient outcomes as feasible. I also discussed the principles of utility resource

[70] Such specific assessments included, for example, how a prior contract was treated and how specific efficiency or mill improvement programs were treated. These assessments included consideration of the incentives (if any) provided by BCH related to these agreements or programs.

acquisition, which basically are to acquire sufficient resources to meet supply obligations and to do so cost-effectively, conforming to the constraints and policies of the utility's regulator.[71] I specifically discussed how the below-GBL arbitrage that Celgar seeks was economically inefficient and inconsistent with BCUC self-generator policy and BCH's procurement policy for acquiring generation resources. I found that both the BCUC's policies and BCH's procurement program only granted incentives to new or incremental generation (including long-term idle generation). I also analyzed all self-generating mills with EPA or LDA contracts with BCH, and found that BCH had applied a consistent GBL methodology to each of the mills including Celgar.[72]

43. Dr. Peter Fox-Penner responds to several of these points. I note that Claimant submits Dr. Fox-Penner's expert opinion to provide what it characterizes as a more academically credentialed economic view.[73] As I noted above, I agree that Dr. Fox-Penner's view is distinguishable from mine by being more theoretical and, consequently, less applicable (or even realistic) than mine.

44. According to Dr. Fox-Penner, he was requested by counsel to address the following issues:[74]

- Whether the policy rationales offered by the Government of BC towards self-generation are consistent with the related regulatory actions taken by the Commission, BC Hydro, and the Ministry of Energy and Mines ("MEM");
- Whether the regulatory processes followed by the BCUC and BC Hydro were appropriate;
- Whether economic efficiency was a primary objective of these policies and regulatory orders, and whether the policies and orders were designed to achieve economic efficiency; and

[71] NERA Expert Report, ¶ 35 and Section III.A.2.

[72] Ibid, Section III.B.2 and Appendix 2.

[73] Reply Memorial, ¶¶ 164-165.

[74] Fox-Penner Report, ¶ 7.

- Whether the policy objectives of the BCUC and BC Hydro could have been achieved in a more transparent and non-discriminatory manner.

45. As I show below, Dr. Fox-Penner's responses rely on irrelevant and incorrect hypotheticals that are divorced from the actual issues of this case. Dr. Fox-Penner:

- Characterizes the objective of the BCUC as "keeping BC rates as low as possible".[75] This ignores the multiplicity of regulatory goals and taken literally would result in free electricity. From this inapt viewpoint, he dismisses without examination the rationales for the BC and BCUC policies related to sales of self-generated electricity. (See Section 1 below.)

- Characterizes the "fundamental self-generator regulatory issue" as allocating the profits from arbitrage.[76] This mischaracterizes and misunderstands regulatory process, authority and objectives, and relies on an esoteric and irrelevant dissertation on "status quos". (See Section 2 below.)

- Criticizes BCH and the BCUC for not truly pursuing economic efficiency due to using an embedded cost basis for tariffs, as "imperfect pricing makes it impossible to draw efficiency conclusions."[77] This ignores the practical aspects of regulation. He also posits other flawed theoretical efficiency arguments.[78] (See Section 3.i below.)

- Criticizes the BC and BCUC policies related to sales of self-generated power as not economically efficient and allowing discretionary allocation of self-generator benefits,[79] but he relies on a fundamentally defective model. (See Section 3.ii below.)

- Alleges that BCH treated Celgar less favorably than other mills,[80] but he ignores my analysis in my first report that shows that BCH treated all mills, including Celgar, consistently in setting their GBLs and demonstrates that Celgar was not treated differently with respect to issues of load displacement. He also criticizes

---

[75] Ibid, ¶ 11.

[76] Ibid, ¶ 32.

[77] Ibid, Section IV.B and ¶ 120.

[78] Ibid, Section IV.A, IV.C, IV.D, and IV.E.

[79] Ibid, Section II.B and ¶ 39.

[80] Ibid, Sections II.C and II.D.

BCH and BCUC processes as a source of discrimination.[81] This is an academic view that demonstrates his lack of regulatory experience. (See Section 4 below.)

- Presents several alternative self-generator policies that he claims would remove alleged discrimination,[82] but these are each inefficient and/or impractical. (See Section 5 below.)

46. Dr. Fox-Penner's report appears to be an attempt to distract from what I presented in my first report as the key issue in this case from an economic perspective, i.e., the efficient procurement of incremental generation resources by BCH. Dr. Fox-Penner appears to engage in academic formalities that only distract from the key issue.

1. Dr. Fox-Penner fails to understand that BC policy and BCH's objective is *not* "keeping BC rates as low as possible"[83]

47. As discussed above, Claimant and its experts dispute BCH's process of setting GBLs in its EPAs with BC mills. The underlying concept in this process is efficient resource procurement. When the case is viewed through this lens, BCH's contracting with Celgar and the other mills is seen to be consistent and reasonable.[84] Dr. Fox-Penner ignores this and instead divines the hidden agenda of this policy: that preventing arbitrage in BC is actually only an effort to keep rates as low as possible. Not only is this a distraction, but also Dr. Fox-Penner is incorrect that this is the objective in BC.

48. Dr. Fox-Penner relies on this conclusion in an attempt to substantiate his assertion that the BCUC has denied Celgar access to embedded cost power below its GBL for the purpose of selling it at higher prices in an effort to keep rates as low as possible for other rate payers. However, this confuses the conditions for obtaining incentive prices in BCH's procurement process (that a resource be new or incremental, as well as less expensive than any other BCH alternatives) with the (misunderstood by him) desirable regulatory result: keeping future rates as low as *reasonable*. Dr. Fox-Penner fails to

---

81 Ibid, Section III.

82 Ibid, Section V.

83 Ibid, ¶ 11.

84 I also showed this explicitly in my analysis of the various mills in my first report, see NERA Expert Report, Section III.B.2 and Appendix 2.

grasp the basic economics involved: the price terms under which BCH has contracted for biomass power are an incentive used by BCH to meet is power acquisition objectives.

49. Celgar was not denied access to additional power because BCH wanted to keep rates low; it was not denied access to any power. The only restriction was on FortisBC, which was denied access to BCH PPA power if Celgar was selling below-load power while purchasing replacement power.[85] Celgar was denied an EPA with incentive prices for that power because providing Celgar with this incentive would not result in any additional capacity or generation for BCH. Dr. Fox-Penner even goes on to say that overall efficiency would increase as a result of Celgar being given access to *additional* embedded cost power for the purpose of selling it at higher prices.[86] However, as I show below in Section IV.A.3, this is in fact economically incorrect since it would result in an inefficient wealth transfer and Dr. Fox-Penner's conclusion is a result of a flawed analysis.

50. In making his argument, Dr. Fox-Penner does recognize that energy policy in BC is directed at preventing harmful arbitrage.[87] I do not disagree with that observation. However, Dr. Fox-Penner's argument fails when he constructs an identity between preventing "harmful arbitrage" and "keeping BC rates as low as possible".[88] Using this inapt link, Dr. Fox-Penner attempts to discredit arbitrage-prevention as a regulatory goal by insinuating that it is merely a policy by BCH to preserve its profits and or minimize

---

[85] Even this restriction, I understand, is only temporary until FortisBC and Celgar agree to a supply agreement that the BCUC approves. Alternatively, this would also be removed if the BCUC approves a rate schedule for FortisBC to supply self-generators that are selling below their load (and Celgar takes power under this rate). FortisBC submitted to the BCUC for approval such a rate schedule in 2013, though this proceeding is suspended while other related BC self-generator issues are resolved (Second Swanson Witness Statement ¶¶ 35-38).

[86] This is a surprising assertion since as Dr. Fox-Penner points out embedded cost rates are a primary cause of inefficiency in the power sector.

[87] Fox-Penner Report, ¶ 9. The BCUC has defined harmful arbitrage for regulatory purposes as arbitrage between embedded cost rates and market prices to the detriment of other ratepayers. BCUC Order G-60-14, Application for approval of rates between BC Hydro and FortisBC Inc. with regards to Rate Schedule 3808, Tariff Supplement No. 3 – Power Purchase and Associated agreements, and Tariff Supplement No. 2 to Rate Schedule 3817, and Accompanying Decision, May 6, 2014, **NERA-75**, footnote 13.

[88] Ibid, ¶ 11.

its customers rates at the expense of purportedly more economically efficient and equitable policies.[89] This critique of BC's arbitrage-related policies fails for several reasons. In the present section, I first address the flaws in his basic approach.[90]

51. First, equating these two concepts ignores and thereby dismisses, without any rationale, the other harmful effects of the arbitrage (i.e., an inefficient distribution of resources[91]) that BC policy prevents. Harmful arbitrage is also not the other side of the coin from lowest (or even proper) rates. Many factors affect the rates charged by a utility—a customer engaging in harmful arbitrage would be just one.

52. Second, Dr. Fox-Penner displays a fundamental misunderstanding of the purpose of energy regulatory policy in BC (and in many other jurisdictions). Regulatory policy does not dictate that rates should be kept as low as possible (otherwise rates would be zero). Rather, rates should be as low as *reasonable*, consistent with a reasonable rate of return to the utility while ensuring safe and reliable service. For example, BC Hydro (and other utilities) has rates high enough to pay for reserve capacity which enables it to keep the lights on even if power plants were unexpectedly to go offline.[92] Also, if rates are kept too low, then the utility may be unable to earn a sufficient return to attract the new capital required to make needed improvements and expansions of the power system.

---

[89] Ibid, ¶¶ 31-32 and 38-40. While Dr. Fox-Penner is correct that a utility's customer rates are linked to its profits, he ignores that many factors affect a utility's profits and that maintaining reasonable profits at a utility is a prerequisite to attracting sufficient capital to maintain service reliability.

[90] I discuss Dr. Fox-Penner's flawed presentation of economic efficiency and equitable treatment below in Section IV.A.3 and IV.A.4.

[91] For example, a wealth transfer from BC ratepayers to Celgar with no benefit in return.

[92] BC Hydro, like many utilities in Canada and the United States, acquires energy resources to meet a planning goal of one-day-in-ten-years of loss-of-load probability. This standard reflects the high importance of reliable service to customers. To meet this requirement, utilities require significant reserve capacity above the peak load of their power system to counteract the possibility of unplanned power plant unavailability and various constraints in the power system. BC Hydro estimates this reserve capacity at 14%. (See BC Hydro Provincial Integrated Electricity Planning Committee Meeting 2, Information Sheet #3, Planning Criteria, February 22-23, 2005, **NERA-76**, page 2). Even though rates could be lower without this reserve, customers are willing to pay more for reliability since outage costs are significantly greater than the carrying costs of reserve, i.e., it is economically efficient.

53. Additionally, Dr. Fox-Penner misunderstands the regulatory issues related to this case when he equates the efficient incentivization of new capacity with the goal of keeping rates low.[93] Generally, I agree with Dr. Fox-Penner's description of the BC electricity policy goal of "'incentivizing' greater production of self-generated biomass power."[94] Yet, when equating this policy goal with keeping rates low, Dr. Fox-Penner again misconstrues the point of BC policy and BCH's actions, confusing commission and utility actions with a desirable, ancillary effect. Also, BC energy policy encourages environmentally benign resources, which likely means that rates will be higher than if more conventional sources were allowed. Using Dr. Fox-Penner's logic, one would conclude that the policy goal was to increase rates; clearly an ancillary effect not the goal.

54. In summary, Dr. Fox-Penner's discussion of lowest-possible rates is flawed, demonstrates a lack of understanding of regulation and distracts from the core context for this case: the consistency of BCH's determination of GBLs for Celgar and the other mills in the context of resource procurement.

2. Dr. Fox-Penner fails when he attempts to frame the case as one about the allocation of arbitrage profits

55. While I characterize the principal regulatory issues faced by BC and the BCUC as economic efficiency, adequate return on investment, and ratepayer protection, Dr. Fox-Penner characterizes the "fundamental self-generator regulatory issue" as how arbitrage profits are allocated amongst the mills in BC.[95] As mentioned above, this is incorrect as well as a distraction. From this cropped view of regulatory objectives (allocating arbitrage profits), Dr. Fox-Penner asserts that the actions (or omissions) of the BCUC

---

[93] Fox-Penner Report, ¶¶ 12 and 133.

[94] Ibid, ¶ 12. I would clarify that BC's higher-level policy objective is to promote clean and biomass energy generally (from self-generators or other facilities). See British Columbia Ministry of Energy, Mines and Petroleum Resources, Energy For Our Future: A Plan for BC, 2002, **NERA-77**, action item 20 (page 39) and 2007 plan, The BC Energy Plan: A Vision for Clean Energy Leadership, bates 048500-048542, **NERA-10**, action items 29-31 (page 39). But I agree that energy from BC pulp and paper (and saw) mills with self-generation has been an important part of realizing this policy objective.

[95] Fox-Penner Report, ¶ 32.

and BCH in this regard were inefficient, unfair, and discriminatory.[96] In this section, I discuss Dr. Fox-Penner's misunderstanding of the actual regulatory issues related to the arbitrage policies in BC. I address the specifics of Dr. Fox-Penner's arguments on these issues in Sections 3 to 5 below.

56. At the highest level, Dr. Fox-Penner's arguments about arbitrage allocation are only a distraction from the true regulatory issue: the efficient procurement of incremental generation resources that does not result in harmful arbitrage.

57. The allocation of arbitrage profits was not even an issue (directly or indirectly) before the BCUC, for the BC Government, or for BCH – this entire concept was devised by Dr. Fox-Penner.[97] I am not aware of any BCUC proceeding (or BCH or BC document) that considers arbitrage from this perspective. As discussed, the objective and economics of BCH's process were to increase generation capacity cost effectively (at a cost less than BCH's other procurement options),[98] in order to provide safe, reliable, and "clean" power. The purchase of generation from an existing and active (i.e., not idle) asset (Celgar's existing self-supply generation) does not conform to this goal, and so, not-surprisingly, BCH rejected Celgar's proposals to sell this power to BCH under its Bioenergy Call.

58. Similarly, Dr. Fox-Penner frequently asserts that costs, electricity rates, and the "harm" of arbitrage can only be judged from the viewpoint of a particular *status quo*.[99] For example, he argues that the cost-causality principle depends upon the "status quo" against which cost incurrence is measured.[100] My analysis was not based on a theoretical "definition of the status quo"[101] but rather on the realities of this case,

---

96 For example, see Ibid, Sections II.B, II.C, III.C, and V.A.

97 The issue before the BCUC has not been the allocation of benefits for self-generation, but rather how to deal with the potential arbitrage of embedded cost power.

98 For example, contracting for new construction.

99 Fox-Penner Report, ¶¶ 10, 39-40, 42, 48, 109, and 151.

100 Ibid, ¶ 42.

101 Ibid.

specifically the actual status quo of Celgar and the other mills. In setting GBLs, BCH did not preserve some level of status quo profits for each mill. Rather, it was appropriate for BCH to preserve the level of self-supply that each generator provided absent incentives from the EPAs, as this was the level that was economically efficient given each mill's unique circumstances. Celgar, for its own financial considerations, chose to self-generate 100% of its load. That is its status quo ex-ante. Again, Dr. Fox-Penner's argument dissolves when viewed through the proper lens of BCH's resource procurement process, which, in accord with efficient acquisition, only considered new or incremental generation resources.

59. Still, even under Dr. Fox-Penner's terms, I understand that as this is a NAFTA case, the key question would be whether the "status quo" was determined differently for US companies or unfairly with respect to Celgar. But as I showed in my first report, all twelve BC mills I examined including Celgar (whether American, Canadian, or otherwise) were treated the same by BCH. In fact, Dr. Fox-Penner never addresses my analyses of the GBL process or the fact that they demonstrate that Celgar was not discriminated against or treated unfairly in terms of its GBL or access to embedded-cost power.

60. In summary, Dr. Fox-Penner's focus on allocation of arbitrage as the main issue for the BCUC is both incorrect as a matter of fact and of regulatory practice and simply a distraction.

3. Dr. Fox-Penner's academic theories of efficiency are inapt when applied to actual utility resource procurement and regulation in BC, and his stylized model is misleading and contains errors

i. Dr. Fox-Penner's academic conception of economic efficiency

61. In my first report I discussed the basic principles of economic efficiency with regard to utility regulation (specifically relating this discussion to BC) and the economically inefficient nature, from a resource acquisition perspective, of the retroactive subsidy that

Celgar now seeks.[102] Dr. Fox-Penner spends much of his report attempting to rebut my arguments by discussing the economic efficiency (or alleged lack thereof) of BC energy policies, BCUC's regulation, and BCH's rates and power acquisition policies.[103] At best, Dr. Fox-Penner's efficiency arguments are a distraction since, even ignoring their flaws, they do not show that Celgar has been treated differently than any other BC mill.[104] Still, for completeness, I address here the defects in Dr. Fox-Penner's efficiency arguments.

62. Basically, Dr. Fox-Penner's efficiency arguments are divorced from the actual nature of regulation, electricity rates, and power acquisition. I do note that he does not dispute that economic efficiency is a basic principle of regulation.

63. Dr. Fox-Penner attempts (and fails) to rebut the demonstration in my first report that economic efficiency is an objective of energy policy in BC.[105] Dr. Fox-Penner notes that he did not see "much discussion" of economic efficiency in the policy documents he reviewed.[106] But, even if the Province did not identify its policies as economic efficiency-promoting, an economic reading of the policies[107] would demonstrate the efficiency principles underlying BC policies and utility regulation as I have noted in my first report.[108]

---

[102] NERA Expert Report, Sections III.A, III.B.1, and III.C.10.

[103] Fox-Penner Report, Sections II.B and IV, V.

[104] And as I demonstrated in my first report, in fact BCH set Celgar's GBL consistent with how it set the GBLs of each of the other BC mills. NERA Expert Report, Section III.B.2 and Appendix 2.

[105] NERA Expert Report, Sections III.A, III.B, and III.C.2.

[106] Fox-Penner Report, ¶ 14.

[107] For example, BC's 2007 Energy Plan, **NERA-10**.

[108] I also presented in my first report how the foundational principles of utility regulation are designed to "produc[e] economically efficient outcomes in the absence of a market" (NERA Expert Report, ¶ 35), and then I went own to show how BC "policies and resulting resource acquisition processes conformed to [these general] regulatory principles …" (Ibid, ¶ 42).

64. In addition, Dr. Fox-Penner presents embedded-cost rates in BC as a policy inconsistent with economic efficiency.[109] Dr. Fox-Penner does not actually object to these embedded cost rates – in fact the thrust of his report (and the clear objective of Claimant) is that Celgar should be supplied electricity at such rates in order to engage in arbitrage. Rather, Dr. Fox-Penner implies that because BC has embedded cost rates, and because of other market failures, "it [is] impossible to reach conclusions regarding the level of economic efficiency achieved [by BC electricity policies]."[110] However, this argument is based on the academic "theory of the second best".[111] This theory is not useful in any practical sense since it is an argument for not going forward with one economically efficient policy if any other aspect of the economic system is not perfectly economically efficient. Of course, every economy or regulated environment has some aspects that diverge from economic perfection.

65. Dr. Fox-Penner appears unaware that regulatory commissions are obligated to affirmatively regulate and are limited to act within their authority. Dr. Fox-Penner revealingly states that "[i]n theory, at least, it may be better to let two market imperfections cancel each other out rather than making an effort to fix either one".[112] This prescription demonstrates a lack of understanding of regulation and regulatory responsibilities.[113] Therefore, the second best argument becomes useless when these institutions face issues that require resolution. In practice, these institutions need to act, and their actions are based on and evaluated by the best, practicable assessment of the effect on economic efficiency, even if the theoretical need for economic perfection is not achieved. My analysis of efficiency in BC reflects this reality.

---

[109] Fox-Penner report, ¶¶ 14 and 120.

[110] Ibid, ¶¶ 119-123. According to Dr. Fox-Penner such "failures" include, beyond embedded cost rates, the fact that electricity rates in BC incorporated neither the positive effects that electricity supply has on job creation nor the negative potential effects on global climate change of power plant emissions (Ibid, ¶ 121).

[111] Ibid, ¶ 123.

[112] Ibid.

[113] See Utilities Commission Act, R.S.B.C. 1996, c. 473 ("Utilities Commission Act" or "UCA"), **NERA-30**, Section 24.

66. Further, Dr. Fox-Penner argues that the BCUC's policies towards self-generators were not economically efficient.[114] But this conclusion is based in part on his expanding the relevant economic system beyond British Columbia. While Dr. Fox-Penner neglects to state definitively the economic system against which he is measuring the efficiency of BCUC's policies, his arguments suggest that he is considering the combined economy of BC and California or perhaps BC and the entire western United States and Canada plus Baja California in Mexico.[115] This broad market, however, does not fall within the purview of BC or the BCUC and so is not a relevant concern of either.

67. Similarly, Dr. Fox-Penner suggests that to maximize economic efficiency, BC policies related to self-generators would need to consider "not just the BC electric power system" but the "total cost of providing electric power, pulp and paper products, jobs and economic development, and all of the other outcomes [the BC government] wishes to provide."[116] Dr. Fox-Penner also asserts that "To achieve the larger objective of economic efficiency the geographic and sectorial boundaries over which efficiency is measured must include the entire BC or Canadian economy, not just the electric sector."[117] Besides ignoring real-world limitations, Dr. Fox-Penner misses the point that in this arbitration the concern is a specific electricity-sector policy subject to BCUC jurisdiction. It is a distraction to speak about economic efficiency in general terms rather than relative to what BC and BCUC can affect. BC and BCUC focused on the

---

[114] Fox-Penner Report, ¶¶ 33, 37, and 39. Also, it is interesting that Dr. Fox-Penner is flexible in his demand for academic purity. In one part of his report, he concludes that a BCUC policy is not efficient, where in another part of his report (Ibid, ¶ 119) he rebuts himself concluding that because of certain imperfect economic prerequisites in BC "it [is] impossible to reach conclusions regarding the level of economic efficiency achieved" of a BC policy. Specifically, Dr. Fox-Penner discusses the policies that follow from Order G-38-01.

[115] Dr. Fox-Penner focuses on the possible connection of BC and California (Ibid, ¶¶ 21, 25, and 142), but he also states this is just an example of an external market for BC mills to sell power (Ibid, ¶¶ 21 and 142). As California and BC are part of a larger power system that extends from New Mexico, USA and Baja California, Mexico to Alberta and B.C. (see Map of US and Canadian Power Systems, http://www nerc.com/AboutNERC/keyplayers/Documents/NERC_Regions_Color.jpg, accessed on March 26, 2015, **NERA-78**), it may be that Dr. Fox-Penner believes that this is the relevant region in which to evaluate the economic efficiency of BCUC policies.

[116] Ibid, ¶ 124.

[117] Ibid, ¶ 118.ii.

efficiency of the BC self-generator policy. If every policy had to be efficient in Dr. Fox-Penner's sense, of course nothing could ever be done.[118]

68. Dr. Fox-Penner also argues that treating sunk costs discriminatorily will discourage future investment. He offers only theory to support his view, nothing relevant or specific to BC or BCH.[119] Further, his arguments ignore the regulatory-decision horizon in practice, which is typically significantly less than the 20 to 50 year time frame, which Dr. Fox-Penner's theory considers. These arguments ring hollow in the face of continued investment in BC and give undue importance to Celgar since no other mill has claimed discriminatory treatment.

69. Also, Dr. Fox-Penner asserts that it would be more efficient for the low-cost mills in BCH's service territory to be expanded and the high-cost mills be closed.[120] First, I would be surprised if a government in a western economy would force certain businesses to close or expand their production facilities. Certainly, his prescription is beyond the authority of the BCUC.[121] Second, Dr. Fox-Penner's conclusions are based on a non sequitur. He ignores the obvious efficiency gains from adding new facilities at a mill with older, less efficient assets, implicitly assuming that the observed lower efficiency is somehow inherent in those mills.

70. Further, Dr. Fox-Penner claims that preventing arbitrage is not consistent with efficiency.[122] This is only true when the arbitrage is between efficient markets and not the regulated (embedded cost) market in which Celgar wants to transact. Specifically,

---

[118] Notably, Dr. Fox-Penner does not discuss the global, Provincial or policy efficiency of Celgar's objective to sell below its GBL. Nor does he present this mode of far-reaching analysis when he concludes that certain proposals he makes are economically efficient.

[119] For example, Dr. Fox-Penner's discusses inflation shocks, central-bank monetary policy, and the effects of default on government debt (Fox-Penner Report, ¶ 138). Effectively he is equating poor monetary and budgetary policy decisions with the fact that Celgar is prevented from engaging in arbitrage below its GBL. At best this is extraneous if not diversionary.

[120] Ibid, ¶ 126.

[121] Bursey Report, Section E.

[122] Fox-Penner Report, Section IV.E.

Dr. Fox-Penner claims that "BC's policies clearly prevented generators like Celgar from selling their self-generated power into markets such as California's, where prices were frequently higher."[123] Putting aside the unreality of such sales,[124] since Celgar would be generating the same amount of electricity regardless of whether it is selling its below-GBL generation, this example is not actually about putting resources to their best use since the flows on the BCH system are identical. The difference in flows is only in cash from BC ratepayers to Celgar.[125]

71. Dr. Fox-Penner also suggests that BC self-generator policy is economically inefficient as it rewards inefficient mills by granting them opportunities to sell below their load, and that a more efficient policy would reward the most efficient mills with so-called "arbitrage profits".[126] This ignores that the policy is not to give prizes based on mill efficiency but to incentivize procurement of incremental bioenergy resources. In reality, self-generators can sell below their load only when the sales are from new or incremental (including idle) generation. More fundamentally, Dr. Fox-Penner fails to take into account that market economics already rewards greater mill efficiency via increased profits.[127]

72. In summary, Dr. Fox-Penner's arguments that Provincial policies related to self-generation cannot be shown to be economically efficient in his academic sense are irrelevant. Although Dr. Fox-Penner apparently agrees with the regulatory principle of

---

[123] Ibid, ¶ 142.

[124] See MacDougall Witness Statement, Sections B.2 and C.

[125] Moreover, Dr. Fox-Penner's assertion is irrelevant considering Claimant's actual complaint concerns purportedly discriminatory or unfair treatment related to the setting of GBLs in BCH's contracts.

[126] Fox-Penner Report, ¶ 38.

[127] Also, Dr. Fox-Penner appears to take a given that a mill's efficiency determines the portion of its load that it will self-supply without incentives from BCH. This appears to be why, under his logic, purportedly less efficient mills can be (and are) granted more opportunity to sell below their load. But this ignores the many reasons why a mill may or may not be able to self-supply its load that have nothing to do with its efficiency. See my discussion of Howe Sound's ability to supply its load in ¶ 112 below.

economic efficiency I outlined in my first report,[128] he ignores that no utility regulatory agency would or could feasibly carry out the type of theoretical exercise he suggests for every (or even most) of its policies. Additionally, Dr. Fox-Penner fails to provide such an analysis to show that BC self-generator policies are not efficient.

ii. Dr. Fox-Penner's flawed stylized model

73. As discussed in Section IV.A.3.i, even a valid showing of the economic inefficiency of BC policies would fail, by itself, to demonstrate that Celgar was discriminated against or treated unfairly. Still, for completeness, I will address in this section the flaws in Dr. Fox-Penner's stylized model, which he claims demonstrates the inefficiency of BC's self-generator policy.

74. Dr. Fox-Penner bases his conclusion about the inefficiency of this policy on an example of a single, stylized hourly market. Specifically, Dr. Fox-Penner claims his model shows that equal apportionment of arbitrage opportunities increases overall economic efficiency.[129] This specific claim appears intended to leave the impression that granting Celgar more arbitrage opportunities (and more access to embedded cost power) would improve overall economic wellbeing. But this is incorrect for all of the following reasons.

75. Dr. Fox-Penner claims his model shows the "true effects" of BCUC Order G-38-01,[130] relying on a quote from one of the "whereas" clauses: to "assist[] British Columbia industries with idle self-generation capability to capitalize on current market opportunities, and help[] to mitigate the potential energy shortages in the Pacific Northwest and California."[131] Dr. Fox-Penner's focus on G-38-01 and external market

---

[128] For example, economic efficiency is one of his reasons for implying that allocation of arbitrage opportunities to self-supplying entities (such as Celgar) is a better policy towards self-generators. (Fox-Penner Report, ¶¶ 39-40).

[129] Ibid.

[130] Ibid, ¶ 19.

[131] Ibid, ¶ 18. The Order also highlights how this must be done so that customers do not consume increased embedded cost power.

sales, however, ignores that the BC 2007 Energy Plan is about the procurement of incremental generation by BCH. It is this internal BCH resource procurement program that is the focus of the case, not abstract theoretical sales outside the province. This is confirmed by Mr. Kaczmarek who calculates damages assuming Celgar simply has a larger volume in its contract with BCH.

76. On this basis alone, Dr. Fox-Penner's model should have no relevance. It is, however, also flawed in its conceptual design and implementation.

77. First, Dr. Fox-Penner does not explain the equivalence between a one-hour example and the present case where Celgar claims harm from 2009 to perpetuity. Also, as any other utility, BCH plans (and acquires resources) over multi-year horizons. The real context for this case is the acquisition of long-term resources exemplified by the 10-20 year term of BCH's EPAs. The motivation for Mercer's claim is the refusal of BCH to award Celgar a long-term contract for its existing generation.[132] Dr. Fox-Penner's one-hour, spot-market analysis is irrelevant to analyzing this issue. In addition, his example ignores the Order G-38-01 language that refers to a customer baseline based on **historical** generation or consumption.[133] A one hour model is insufficient for assessing a historical baseline and inapt to explain the process behind determining a generator's historical level of self-supply.

78. Second, the external sales opportunities that Dr. Fox-Penner includes in his example are dependent on variable and volatile power market prices. A $90/MWh opportunity might be available in one hour, but it might not be the next. So at best, Dr. Fox-Penner's

---

[132] Mercer now argues that its issue is broader, namely third-party sales generally. As discussed above, in Section V below, and in MacDougall Witness Statement, Sections B.2 and C, Krauss Witness Statement, ¶ 18 and Section C, and Garratt Witness Statement, Section C, such sales are not achievable practically.

[133] Dr. Fox-Penner's quote from the Order in his footnote 12 does not include the part of the Order that makes clear BCUC's expectation that "B.C. Hydro … make every effort to agree on a customer baseline, based either on the **historical** energy consumption of the customer or the **historical** output of the generator" (Emphasis added. BCUC, Order Number G-38-01, "British Columbia Hydro and Power Authority Obligation to Serve Rate Schedule 1821 Customers with Self-Generation Capability", 5 April 2001, **NERA-12**, page 2). Clearly Dr. Fox-Penner is aware of this requirement, as he presents part of this quote in his ¶ 51, but his stylized model design ignores this.

model presents a temporary snapshot of what might happen in power markets, which is not helpful in a multi-year damages case. Moreover, it seems clear that Dr. Fox-Penner's model is a stylized version of the California energy crisis, but this basically had ended by the end of 2001, so is not relevant for Celgar's efforts to sell below its GBL, which began years later.[134]

79. Third, Dr. Fox-Penner's example ignores the costs and constraints on exporting power outside of BC. To make the sales in Dr. Fox-Penner's model, transmission must be available, which is not necessarily the case.[135] Reserving the transmission capability has a cost, and power is lost along the way from BC to, for example, California. Dr. Fox-Penner's model does not include these costs and effects, which would make exporting electricity less attractive than the model assumes.

80. Fourth, Dr. Fox-Penner's model compares two scenarios he devised which both feature two generators; one that is currently self-supplying and one that is idle unless it is allowed to arbitrage embedded cost rates against market prices. His scenarios are: a) only the otherwise idle self-generator can export under Order G-38-01 (Dr. Fox-Penner's Table 1, which I refer to as "Scenario A") and b) the ability to export below-load generation is apportioned equally to the two self-generators (Dr. Fox-Penner's Table 2, which I refer to as "Scenario B").[136]

81. He asserts that Scenario B is more efficient by claiming that more electric load is supplied and at a lower overall cost in that scenario.[137] In the extreme, this could leave a misleading impression that the overall economy is improved if Celgar is allowed to receive embedded cost power while selling its below-GBL self-generation at high prices. However, Dr. Fox-Penner is only able to reach his economic efficiency conclusion

---

[134] Swanson Second Witness Statement, ¶ 4.

[135] Especially to make firm long-term sales. See MacDougall Witness Statement, Sections B.2 and C.

[136] Dr. Fox-Penner apparently misses the irony of an administratively (i.e., non-market) determined sharing arrangement.

[137] Fox-Penner Report, ¶ 38. He also states his conclusion by claiming (equivalently) that more power is produced and at a lower cost (Ibid, ¶¶ 38 and 39).

(ignoring the absence of the detailed analysis he demands of the BCUC) due to two fundamental errors in his analysis:

- Dr. Fox-Penner's math is wrong. He double counts 50 MW of load served in Scenario B. **In fact the same load level is served in each of the two scenarios**.[138]

- Dr. Fox-Penner's assumptions are critical to his results but are arbitrary. His claim that load can be served more cheaply in Scenario B is the result of his unsubstantiated assumptions. Dr. Fox-Penner's example assumes that the marginal generation cost for BCH is $60/MWh and for the idle self-generator (entity "B") it is $70/MWh.[139] But Dr. Fox-Penner chooses these numbers as a matter of convenience without any basis. One just as well could assume the reverse: that BCH's marginal cost was $70/MWh and "B"'s was $60/MWh, and under these assumptions Scenario A would be cheaper.[140] Moreover, the very issue of export opportunities is dependent on prices outside of BC being higher than BC self-generators' generation and transmission costs. In reality export prices are and have been low.[141] At an export price in line with recent history, neither of his example self-generators would export, rendering his entire model irrelevant.

82. Fifth, Dr. Fox-Penner's model actually highlights a basic problem with Celgar's claim. He assumes BCH requires $10 in profit for each MW it sells.[142] So, for the 1,050 MW he assumes BCH would sell in his Scenario B (his Table 2), that would be $10,500. But

---

138 In Dr. Fox-Penner's Scenario A (his Table 1), 1,200 MW of load are served: 100 MW of load at entity "A", 100 MW of load at entity "B", 900 MW of other load served by BCH, and 100 MW are exported by "B". In Dr. Fox-Penner's Scenario B (his Table 2), 1,200 MW of load are also served: still 100 MW of load at entity "A", still 100 MW of load at entity "B", still 900 MW of other load served by BCH, and still 100 MW are exported, half by "A" and half by "B".

Equivalently, the same generation occurs in both scenarios. In his Scenario A, 1,200 MW: 100 MW at "A", 100 MW at "B", and 1,000 MW by BCH. In his Scenario B, 1,200 MW: 100 MW at "A", 50 MW at "B", and 1,050 MW by BCH.

Dr. Fox-Penner double counts 50 MW of load (or equivalently 50 MW of generation) in his Scenario B.

139 Fox-Penner Report, Table 2.

140 Also, his "basis" for BCH's marginal generation cost is a linear cost curve (which is also his arbitrary assumption), see Figure 2 of Fox-Penner Report. But cost curves are typically exponential, so even in his own modeling construct, it appears the BCH cost should be higher.

141 Figure 3 and Figure 4 below and MacDougall Witness Statement, Sections C.1.b and C.1.d.

142 Fox-Penner Report, ¶ 26. Adequate profits allow a utility to pay its required return on capital, where a certain minimum return is needed to attract sufficient capital for the utility to perform its duties. For simplicity, I discuss this example in terms of MW of power. In Fox-Penner's one hour model, one MW of power is equivalent to one MWh of production.

under Dr. Fox-Penner's assumptions, BCH would receive only $9,500 in this scenario. Because, as I have shown above, the amount of generation is the same in each scenario, this lower profit would represent a wealth transfer, which must be absorbed by BCH or ratepayers. This is not efficient and is contrary to regulatory principles.[143]

83. Finally, Dr. Fox-Penner claims his stylized model illustrates four "facets" of the present arbitration.[144] Each of his conclusions fails.

- "Facet A" claims the granting of opportunities to sell below-load in BC is arbitrary and not based on economic efficiency. This conclusion fails due to conceptual errors in his flawed modeling assessment. Moreover Dr. Fox-Penner's construct of allocating arbitrage ignores that BCH was engaged in long-term resource acquisition.

- "Facet B" alleges that the harmful arbitrage that is prevented by BC self-generator policies is merely a reflection of a status quo that is assumed. But Facet B is wrong for the same reasons that Facet A is wrong—both ignore the realities of resource acquisition.[145]

- "Facet C" attempts to cast self-generator policy in BC as a way of allocating costs and benefits to the self-generators and BCH and its ratepayers. In this "Facet" Dr. Fox-Penner also asserts that the policy of limiting incentives to idle self-generators (his Table 1) is less economically efficient and less equitable than his equal-apportionment scenario (his Table 2). This is basically the status quo argument from Facet B and the inefficiency argument from Facet A, both of which I just showed are invalid. Further, his less-equitable argument fails. In that argument, Dr. Fox-Penner argues that the entity that self-supplies in his example (effectively, this is Celgar) is *required* to do so. This is wrong since it is based on a misstatement of what Order G-38-01 "requires". Nothing requires a self-generator to self-supply rather than take utility supply. That is a choice of the self-generator, as I explained in my earlier report. What cannot happen is that the self-generator stops self-supplying (where it is economically viable for it to continue to do so) and takes embedded cost power in order to *arbitrage*.

---

143 The revenues above their operating costs that utilities receive go to cover their overhead and, importantly, the repayment of debt and equity holders. If utilities do not receive a reasonable profit, they may not be able to attract the capital needed to meet their requirement to provide reliable power supply. Dr. Fox-Penner even suggests (Fox-Penner Report, ¶ 37) that the solution to any shortfall could be remedied by a rate increase or reduced profits for BCH.

144 Fox-Penner Report, ¶ 39.

145 See Section IV.A.2 above for more detail.

- "Facet D" alleges that the true motivation behind preventing self-supplying entities from arbitraging is to protect BCH's profits. But I addressed the inaptness of this argument above in ¶ 50. It is also interesting to note that Dr. Fox-Penner's alternative solution to what he sees as the real motivation for not giving Claimant what it seeks is that BC Hydro must raise its rates slightly for everyone. This supports the wealth transfer argument that I have been making. Either BCH or ratepayers must absorb the cost of Celgar's arbitrage yet receive no tangible benefits. Dr. Fox-Penner also mischaracterizes how rates are set, since BCH cannot simply raise rates unilaterally.

84. In summary, Dr. Fox-Penner's academic efficiency arguments in general, but also in particular based on his model, are inapt for critiquing the adequacy, consistency, and or fairness of BC's self-generation policies. At best, they distract from the relevant question in this matter: whether Celgar was treated differently than the other mills in BCH's procurement process (which it was not).

4. Dr. Fox-Penner fails to demonstrate inconsistent treatment of Celgar versus other BC mills and inconsistent treatment due to BCH's process

85. As I showed in my first report, all twelve BC mills I examined, including Celgar, were treated the same by BCH in setting their GBLs.[146] I also showed the flaws in Claimant's argument that Celgar was treated differently with respect to Claimant's net-of-load arguments, the LDAs received by Howe Sound and Canfor, and the exclusivity provision in Celgar's EPA.[147] In fact, Dr. Fox-Penner never addresses these issues raised in my first report – in particular, he does not address the GBL memos I attached to my first report in Appendix 2. Instead, Dr. Fox-Penner presents new arguments about discrimination that also are inapt and rehashes old arguments made by Mr. Switlishoff in his first report.

86. Dr. Fox-Penner's arguments related to alleged discriminatory treatment of Celgar fail, in general, because they ignore: a) that the EPAs provided to the various mills were

[146] NERA Expert Report, Section III.B.2 and Table 1.

[147] Ibid, respectively: Section III.C.6; Section III.C.5 plus Appendix 2, GBL memos for Howe Sound and Canfor; and Section III.C.7.

incentives as part of BCH's resource procurement program; b) key facts, such as granting Celgar incentives to sell below its GBL would not produce any incremental capacity or energy, and that Celgar receiving the incentive it seeks would be efficiency reducing; and c) my GBL analysis that showed that BCH's process was consistent and consistently applied.[148]

87. I respond to these claims made by Dr. Fox-Penner below.

i. Alleged discrimination in treatment of other mills versus Celgar

88. Dr. Fox-Penner allegedly finds that the "revealed rationales" of BC and BCH's policies toward self-generators were not consistent with Order G-38-01 and that the "implementation [of that order] was *ad hoc*, ... and was discriminatory toward Celgar".[149] Dr. Fox-Penner, however, only examines a select few of the mills with contracts with BCH.[150] This is an incomplete and inadequate basis for concluding that the process is deficient.

89. In contrast, in my first report, I examined twelve pulp mills, each of which has a contract with BCH.[151] As my analysis demonstrated, the revealed policy of BCH in setting GBLs in contracts with BC pulp mills is consistent throughout the set of mills analyzed. Specifically, I found that BCH treated Celgar the same as each of the other mills. As mentioned above, it is surprising that Dr. Fox-Penner does not mention, much less rebut, my analysis.[152]

---

[148] He also ignores my analysis of the various mills' GBLs and BCH's GBL process presented in NERA Expert Report, Section III.B.2 and Appendix 2.

[149] Fox-Penner Report, Section II.C.

[150] Dr. Fox-Penner examines four mills, one of which (Tolko/Riverside, a sawmill) does not have (nor has it ever had) a contract with BCH.

[151] As I mentioned above, for the various mills, I analyzed about one thousand documents to assess the treatment the mills were afforded.

[152] Dr. Fox-Penner neither mentions nor rebuts Tables 1 and 2 from my first report, which summarize my analysis of 12 BC mills with self-generation. He also does not rebut my detailed analysis in Section III.B.2 and Appendix 2 of my first report.

90. Based on four mills (and only three with contracts with BCH), Dr. Fox-Penner reaches three conclusions about the BC self-generator policy as implemented:[153] i) Celgar was not allowed to increase its access to embedded cost electricity, but other mills were;[154] ii) BCH had too much discretion in setting GBLs (including in choosing the historical period); and iii) BCH's treatment of Celgar was inconsistent with, and less favorable than, its treatment of other mills. These conclusions are incorrect:

- BCH's GBL policy was to not allow an increase in consumption of embedded cost power (except in the case of load growth) and consistently applied this policy to all mills including Celgar (contrary to Dr. Fox-Penner's conclusion i.).[155]
- BCH applied a consistent process (contrary to Dr. Fox-Penner's conclusion ii.).[156]
- Apparent differences in the details of setting GBLs in fact were consistent with BCH's methodology and any differences in below-load access-percentages do not represent inconsistent treatment. Rather differences in BLAPs result from (1) the requirement not to provide incentives to active generators and (2) reflecting, on a case-by-case basis, site-specific differences among the mills (contrary to Dr. Fox-Penner's conclusion iii.).[157]

91. In support of his conclusions, Dr. Fox-Penner appears to rely on his allegation that Celgar's purchases from FortisBC in 2007 were not subtracted from its load in determining its GBL, but similar purchases were subtracted for Howe Sound and Tembec.[158] But framing the issue in this way obscures the basic principles behind the GBLs in BCH EPAs. Fundamentally, the GBLs represent the amount of self-supply

---

153 Fox-Penner Report, ¶ 74.

154 In doing this, he insinuates unfairness and a lack of economic efficiency consideration. Also, Dr. Fox-Penner presents this conclusion in contrast to his representation that the BCUC and or BCH "officially declar[ed] that 'harmful arbitrage' was prohibited so as to keep non-self-generator electricity rates low" (Fox-Penner Report, ¶ 74.i). However, Dr. Fox-Penner does not cite to a BCH or BCUC document that makes such a declaration, and I am not aware of any such declaration having been made. Dr. Fox-Penner may have confused his linkage between preventing arbitrage and keeping rates as low as possible with ancillary effects of the actual BCUC and BCH self-generator policy of protecting customers and efficient resource acquisition.

155 NERA Expert Report, ¶¶ 53-55 and Appendix 2.

156 Ibid, Section III.B.2 and Appendix 2.

157 Ibid, Sections III.C.4 and III.C.7.

158 Fox-Penner Report, ¶ 71.

generation that BCH can count on from mills absent an EPA.[159] Celgar's GBL of 349 GWh is based on its historical generation,[160] which is consistent with utility planning principles.[161] Moreover, Celgar's GBL was set consistently with those of the other mills with EPAs, including Howe Sound and Tembec. Each mills' GBL reflects the increase above self-supply generation that BCH can count on to add to its resource mix based on their historical generation.[162]

92. Further, Dr. Fox-Penner's insinuation that Celgar's historical purchases should have been subtracted from its load ignores the unique situation where Celgar, unlike the other mills, was basically electrically self-sufficient in the year used to set its GBL, and purchased primarily during generator upset conditions.[163] Even under its EPA with BCH, Celgar continues to purchase electricity at low embedded cost rates during upset condition.[164] So, if Celgar's purchases had been subtracted from its GBL, then Celgar would gain increased access to low embedded cost power, contrary to self-generator policy in BC.[165] Further, a lower GBL would require BCH to incentivize generation Celgar was already producing, which would be better treatment than other mills

---

159 Then, incremental generation is purchased on top of the GBL, under the EPA. See Second Witness Statement of Lester Dyck, dated 27 March 2015, ("Dyck Second Witness Statement"), ¶¶ 3-5.

160 Celgar's annual generation in 2007 was 350 GWh, to be precise. However, since its load in that year was 349 GWh, in line with the requirement that GBLs are the baseline of self-supply, 349 GWh was used as the GBL.

161 From a utility planning preservative, the concern is with this annual generation amount for self-supply, as this is the generation baseline above which a utility (BCH in this case) can procure firm, incremental generation.

162 See NERA Expert Report, Section III.B.2 and Appendix 2. While Tembec's GBL was instead, I understand, calculated [redacted], this was due to the unique contract circumstances at that mill (it already had a BCH EPA, but BCH GBL methodology determined generation in the absence of a contract); see Tembec GBL Memo in NERA Expert Report, Appendix 2, which showed that nonetheless Tembec's GBL is consistent with Celgar's and those of the other mills I analyzed.

163 At least this is what Celgar represented to Lester Dyck during its GBL negotiations with BCH (Dyck Second Witness Statement, ¶¶ 19 and 25).

164 See for example Kaczmarek Second Report, Supporting Valuation Model Spreadsheet (**NERA-79**), Row 73 of tab '3.A_Model_Actual.'

165 Celgar would continue to receive the low embedded cost energy from FortisBC that it has always received from FortisBC during upset conditions plus it would have access to additional embedded cost power if its GBL were set lower than its current level to reflect precisely these types of purchases.

received. I further discuss the treatment of generation, load, purchases, and sales in setting GBLs below.[166]

93. Further, Dr. Fox-Penner detects discriminatory and unfair treatment of Celgar in the way BC and BCUC dealt with subsidies for Howe Sound and Canfor in setting GBLs. However, based on my review of twelve mills, I found a consistent process in determining GBLs with respect to the incentives provided by BCH and my analysis remains unrebutted.[167] For completeness, I will respond briefly to Dr. Fox-Penner's flawed analysis:

- As I pointed out in my first report, Celgar does not have (and as far as I am aware has never had) a Load Displacement Agreement, so (aside from any requirements of the Ministers' Order) Celgar was not required to self-supply its load under such an agreement.[168] Celgar freely chose to enter into an EPA with BCH, but even under that agreement Celgar is still not required to self-supply, in light of its Side Letter Agreement with BCH which allows it to sell below GBL electricity, if it reaches a supply agreement with FortisBC that the BCUC approves.[169]

- In contrast, Howe Sound and Canfor entered into explicit LDAs with BCH which provided incentive payments to expand their generation capabilities and displace load that would have otherwise been served by BCH.[170] Dr. Fox-Penner's argument is that BCH provided the payments to these mills to require self-supply but then let them off the hook by allowing Howe Sound and Canfor to arbitrage some of the power that should have been self-supplied under their subsequent

---

166 See ¶ 119, below.

167 NERA Expert Report, Section III.B.2 and Appendix 2. The specific incentive that the mills had, which are the focus of Dr. Fox-Penner's comments, are LDA arrangements the mills had prior to their EPAs. Note that four of the mills that Dr. Fox-Penner ignores (but I reviewed) also have LDAs with BCH (or did have one prior to entering into an EPA with BCH). These mills are Domtar/Kamloops, Canfor/Northwood, Nechako/Vanderhoof, and Conifex/Mackenzie. BC Hydro approached each LDA in the same manner when setting GBLs for these mills' EPAs.

168 I understand the Ministers' Order could constrain Celgar to use its turbine to self-supply its load (See Witness Statement of John O'Riordan, dated 25 March 2015 ("O'Riordan Witness Statement")). However, as I explained in my first report, since Celgar does not have an LDA arrangement, it "is free to purchase whatever amount of regulated-cost or, if under a supply contract, contract electricity that it deems to be economic." (NERA Expert Report, ¶ 79)

169 See Side Letter Agreement between BCH and Zellstoff Celgar Limited Partnership, "Re: Electricity Purchase Agreement, with Effective Date of January 27, 2009 ("EPA")", **NERA-80**.

170 To be precise, Howe Sound's agreement was called a Generation Agreement, but as it required load displacement, I refer to it as an LDA.

EPAs.[171] However, Dr. Fox-Penner ignores that Howe Sound [redacted]. Similarly, he ignores that Canfor [redacted].

- Also, Dr. Fox-Penner insinuates that Celgar was discriminated against because it was prevented from receiving embedded-cost power to replace below-load generation.[174] [redacted] So, the EPAs for these mills incentivized generation above their historical levels, which otherwise would not have occurred. The facts show that none of the mills received embedded-cost power to replace existing below-load generation to make sales to BCH as Celgar is demanding for itself.[176]

94. In summary, when considering the relevant facts, the subsidy and GBL related treatment of these three mills was consistent.

ii. Alleged discrimination due to BCUC and BCH processes

95. In Section III.A, Dr. Fox-Penner criticizes the BCUC for not having the proper process for Province-wide implementation of its policies. But this is not linked to any discrimination against US companies, so it is not clear to me how Dr. Fox-Penner's claim is linked to the present NAFTA case. In any case, Dr. Fox-Penner fails to show

---

171 For Howe Sound, Dr. Fox-Penner also mentions its sales to Powerex.

172 Also, when Howe Sound made sales to Powerex when its LDA was in force, [redacted] Witness Statement of Fred Fominoff, dated 19 August 2014 ("Fominoff Witness Statement"), ¶ 29; Letter from BC Hydro Power Authority to Fred Fominoff, 9 November 2009, at 4, **NERA-81**.

173 While Dr. Fox-Penner notes the [redacted] in a footnote (Fox-Penner Report, footnote 78), he ignores its effect on his arguments.

174 Ibid, ¶¶ 79 and 82.

175 [redacted]

176 See NERA Expert Report, Appendix 2, for details. See also footnote 253 below for a discussion of this issue with respect to Tembec's GBL.

that the policies and procedures he criticizes were not consistently applied to all mills and therefore his criticisms are irrelevant in the context of this case.

96. Specifically, Dr. Fox-Penner asserts that the BCUC gave BCH too much freedom in the GBL implementation process and this resulted in discrimination.[177] However, this ignores the fact that this is how most regulatory agencies have to operate since they usually do not have the expertise to decide detailed technical matters. Also Dr. Fox-Penner does not recognize the necessary consideration of the unique circumstances of each mill when GBLs are set.

97. In addition, in his Section III.C, Dr. Fox-Penner criticizes the BCUC for not having a Province-wide GBL policy citing Order G-48-09 as an example of different treatment between BCH and FortisBC territories. Order G-48-09 does not, however, deal with "GBL policies", but prevents FortisBC from purchasing low-cost power from BCH (under their PPA) while FortisBC supplies Celgar as Celgar simultaneously arbitrages its below-load generation.[178] In any event, as Claimant acknowledges, Order G-48-09 does not lead to different treatment of Celgar relative to other mills in these situations.[179] Moreover, it is my understanding that a Province-wide GBL policy was proposed by the Province in the G-202-12 proceedings and that Claimant resisted this proposal. Dr. Fox-Penner cannot therefore rely on a supposed lack of a Province-wide GBL policy to criticize the BCUC. Finally, the fact that different local electricity utilities provide service in different ways to account for their own circumstances is not uncommon.[180]

98. Further, Dr. Fox-Penner argues that Celgar has been the victim of discrimination and that the different treatment afforded to it is inconsistent with BC's stated energy policy goals. First, he argues that to prevent harmful arbitrage, Celgar's GBL should have been

---

[177] Fox-Penner Report, ¶ 93.

[178] See also Bursey Report, Section F.2.(c).

[179] Reply Memorial, ¶¶ 202-203 and 205. That is, each mill with a GBL with BCH has access to embedded cost rates for selling self-generation below their load and above their GBL.

[180] For example, across Canada, the United States, and the world, it is common for even neighboring utilities to have different rates. This lacuna may be the result of Dr. Fox-Penner's lack of actual regulatory experience.

set based on its load minus its purchases from FortisBC.[181] I already addressed why this argument is wrong above where I stated that Celgar's historical purchases were typically during under-generation conditions.[182] Moreover FortisBC continues to supply Celgar with embedded cost power during Celgar's generator outages.

99. Dr. Fox-Penner also argues that BC's policy of incentivizing only new and incremental generation should not have limited Celgar's ability to sell its below-GBL generation.[183] This ignores that Celgar, *absent incentives*, built its older 52 MW and upgraded it in order to self-supply. To give Celgar a retroactive incentive now would be an inefficient wealth transfer.[184]

100. Dr. Fox-Penner also criticizes the BCUC for not requiring BCH to develop and publish GBL guidelines in a timely manner.[185] However, Dr. Fox-Penner fails to link his complaint to different or unfair treatment of Celgar. He also ignores the principles that were made public as part of the Order G-38-01 proceeding and that the GBL methodology that was implemented was explained to all proponents in the Bioenergy Call - Phase 1 and subsequent calls.[186]

101. On a related point, Dr. Fox-Penner argues that because BC's policies towards self-generators were inconsistent, BC's energy security objectives were also "necessarily inconsistent".[187] Dr. Fox-Penner links BC's acquisition of biomass power with energy security to make his claim. But as he notes, the policy goal was to *increase* biomass

---

181 Fox-Penner Report, ¶ 110.

182 See ¶ 92, above.

183 Fox-Penner Report, ¶ 111. While Dr. Fox-Penner does not explicitly mention a below-GBL restriction, as Celgar is already selling its above GBL generation, the only restriction left to complain about is below GBL.

184 Also, Mercer's damages claim (quantified by Mr. Kaczmarek) makes clear that actually it wants a BCH incentive for its below-GBL generation which is inconsistent with the purposes of BCH's procurement objectives.

185 Fox-Penner Report, Section III.B.

186 See the 6 principles outlined on p. 2 of Reply Comment of BC Hydro, Commission Order G-27-01, April 2, 2001, **NERA-82**.

187 Fox-Penner Report, 17.

capacity. Clearly Celgar was not going to add to that capacity. So his conclusion is necessarily inapt as it applies to Celgar.

102. Finally, Dr. Fox-Penner argues that limits on Celgar selling below its GBL were not related to energy security concerns otherwise Celgar would instead have received a below-GBL EPA or LDA to keep its below-GBL power in the Province.[188] This is a non-sequitur: BC's energy security goal is met by keeping Celgar's energy in the Province independently of the way it is kept. Third-party sales were, in any event, at odds with market realities. I note that Celgar's damages calculation revealingly assumes that it sells its below-GBL generation to BCH, not to buyers outside of the Province.[189]

103. In summary, Dr. Fox-Penner's discrimination arguments are without merit.

5. Dr. Fox-Penner's alternatives for self-generation policy in BC are inapt and inefficient

104. Dr. Fox-Penner presents various regulatory policies and procurement options related to self-generation in BC that he asserts would not be discriminatory and still comply with BC's energy policy goals. At best these hypotheticals are a distraction, as they do not address the key issue of whether Celgar actually was treated differently than other BC mills. In practice, each suggestion by Dr. Fox-Penner is inapt.

105. First, he suggests that the BCUC could have established province-wide guidelines for acquiring power for self-generating entities.[190] However, this ignores that the BCUC had to consider differences in the situations facing the two utilities that could require different policies. The primary example is the supplier-customer relationship between BCH and FortisBC.[191] Second, he states that the BCUC should have been transparent

---

188 Ibid, ¶112.

189 Kaczmarek First Report, ¶ 199.

190 Fox-Penner Report, ¶145

191 See NERA Expert Report, ¶ 95 and footnote 90 (in the latter I reference the hybrid relationship between FortisBC and BCH).

with its "goals, strategies, and activities".[192] The BCUC policies took into account the results of public processes such as the Ministry of Energy's 2007 Energy Plan and the BC Pulp and Paper Task Force ("Task Force"),[193] in which Celgar participated, and policies were announced in publicized Commission Orders. All of this demonstrates transparency.

106. Third, Dr. Fox-Penner argues that it would be a "more efficient approach" to grant lower GBLs to self-generation mills who built their generation without subsidies, and higher GBLs to self-generators who received subsidies.[194] He does not, however, provide support for his claim that this would be more "efficient".[195] All the mills with EPAs also already receive incentives (i.e., high green-power rates for electricity they sell above their GBLs). It therefore does not make sense to say that certain mills (e.g., Celgar) should also have lower GBLs. Specifically with reference to Howe Sound, Dr. Fox-Penner ignores that the [redacted] His suggestion also conflicts with the purpose of GBLs, which is to ensure that only new or idle generation is acquired. Dr. Fox-Penner's suggestion would actually reduce efficiency by breaking the link between GBLs and the demarcation of new/incremental generation.

107. Fourth, Dr. Fox-Penner suggests that FortisBC's tariffs should be designed to allow Celgar the same access as BCH customers to power purchased under the 1993 FortisBC-BCH PPA. It appears Dr. Fox-Penner's intent is to suggest that Celgar should have additional access to below-load embedded-cost power while allowing more below-load sales, with Celgar's access being "the same" (by some unspecified standard) as what BCH customers receive. This is reminiscent of Mr. Switlishoff's BLAP, which now

---

192 Fox-Penner Report, ¶¶ 146-147

193 Second Witness Statement of Les MacLaren, dated 24 March 2015 ("MacLaren Second Witness Statement"), Sections A.1 and A.2.

194 Fox-Penner Report, ¶ 148.

195 Assuming he means economically efficient, I note that Dr. Fox-Penner does not provide the expansive analysis to support his assertion that he demands of the BCUC.

even Mr. Switlishoff has disavowed as the basis of discrimination. It also ignores that Celgar is not a BCH customer and regulators do not harmonize tariffs across different utilities.

108. Fifth, Dr. Fox-Penner also claims that the BCUC could have used fairer and more equitable ways to allocate embedded-cost power and arbitrage opportunities to self-generators.[196] The premise of his suggestions, however, assumes that the issue before the BCUC is the allocation of arbitrage benefits, which as I showed above is not the case.[197] Moreover, his four specific proposed alternatives to allocating arbitrage opportunities are each inefficient and/or ineffective:[198]

i. suggests a pro-rata allocation of arbitrage opportunities, but this is inefficient in the context of resource acquisition (and also, like BLAP, ignores differences among the mills);[199]

ii. suggests self-generators can sell all their generation at market rates with a BC tax on the proceeds, but he fails to realize that this exceeds BCUC's authority (and again would lead to inefficient resource acquisition);[200]

iii. suggests all self-generation mills be precluded from arbitrage, and BCH would pay these mills a portion of the profits from export sales BCH makes. However, this would not lead to efficient resource acquisition as it would limit or eliminate BCH's ability to provide specific incentives to acquire idle or new generation from mills. Also, there would be difficult questions in order to identify which resources are contributing to this surplus.

---

[196] Fox-Penner Report, ¶151. In effect, Dr. Fox-Penner's suggestion is only about arbitrage opportunities. The "allocation" of embedded-cost power is only a concern to Claimant as it relates to arbitrage possibilities.

[197] See above Section IV.A.2.

[198] Fox-Penner Report, ¶151.

[199] MacLaren Second Witness Statement, ¶¶ 10-11.

[200] Bursey Report, Section E.

iv. suggests that "public interest principles" be established for the allocation of arbitrage and each self-generator then can make its case for its allocation. But this is what was already done in Order G-38-01, without the additional BCUC actions Dr. Fox-Penner suggests.

B. Mr. Elroy Switlishoff

109. In his first report, Mr. Switlishoff argued that a different BLAP for Celgar compared to other mills was the basis of discrimination.[201] I pointed out a number of problems with the measure as a device for demonstrating discrimination: (1) the metric is non-standard, (2) does not consider the effects of mill-specific characteristics, (3) ignores regulatory principles and (4) ignores policy objectives.[202]

110. In response to these criticisms Mr. Switlishoff now claims that "differences in the Below-Load Access Percentage amongst self-generators do not by themselves establish that they result from discriminatory treatment."[203] Instead he argues that the BLAP "is a useful measure of the *effect* of discriminatory treatment only after discriminatory treatment has been found to have occurred."[204] (emphasis added) Thus, he argues, BLAP is a measure of the effect of some kind of discriminatory treatment.

111. Mr. Switlishoff does not, however, respond to the deficiencies of the metric. But using BLAP to *measure* discriminatory effects is equally flawed as using BLAP to *detect* discrimination. All the flaws in BLAP discussed above and in my first report make it an inapt metric even under the hypothetical that discrimination has occurred (or under the hypothetical of any other objectionable treatment due to Celgar's GBL).

---

[201] Expert Report of Elroy Switlishoff, dated 27 March 2014 ("Switlishoff First Report"), ¶ 96. ("[I]n analyzing the Province's Treatment of either Howe Sound or Tembec, the proper focus is on the percentage of the pulp mills electric load that could be met by self-generation that the pulp mill is permitted to meet with embedded cost utility electricity while it is selling self-generated electricity. I will refer to this variable as the "Below-Load Access Percentage.")

[202] NERA Expert Report, ¶¶ 60-61.

[203] Switlishoff Second Report, ¶11.

[204] Ibid.

112. For example, Mr. Switlishoff calculates a [redacted] BLAP for Howe Sound and a 0% BLAP for Celgar.[205] One straight forward but important difference between these mills that BLAP ignores is that Howe Sound has a thermo-mechanical pulp mill ("TMP mill") and a NBSK mill, and Celgar only has a NBSK mill. Claimant addresses this issue, arguing that BCH calculated GBLs under the same methodology whether or not mills had a TMP mill and so concludes that this fact about Howe Sound is irrelevant.[206] This distracts from the point of why BLAP does not indicate differential treatment or even the alleged effects of such treatment. The point is that TMP mills have a significant load but do not produce black liquor that can used as fuel for generation to offset that load. So historically Howe Sound consumed utility-provided power to meet a large portion of its TMP load, unlike Celgar which has not. But BLAP simplistically compares total load and/or generation data to GBL completely oblivious to this crucial difference between Howe Sound and Celgar. This is the key reason why Howe Sound's BLAP differs from Celgar's and this reason has nothing to do with discrimination or the effects of discrimination.

113. Similarly, BLAP is not a measure of any potential objectionable effects due to the other measures: the exclusivity provision in Celgar's EPA or Order G-48-09. Further, Mr. Switlishoff has not linked the BLAP metric to allegedly discriminatory or other objectionable effects of the three "Measures" about which Claimant complains. Without this link, BLAP also fails as a relevant metric for the effects of these measures.[207]

114. Instead of BLAP, Mr. Switlishoff now bases his support for the inconsistent and unfair treatment claims on flaws he detects in what he denotes the "current normal" criterion

---

[205] Switlishoff First Report. ¶ 194.

[206] Reply Memorial, footnote 222. While Claimant is specifically rebutting a statement in Respondent's Counter-Memorial, I point out that I addressed the issue of Howe Sound and Celgar having different mill operations in my first report (NERA Expert Report, Section III.C.4).

[207] I also note that Dr. Fox-Penner alleges that BC self-generator policy rewards inefficient mills (Fox-Penner Report, ¶ 38), but BLAP remains the only metric used by Claimant to calculate damages. Yet BLAP also is inapt as a measure of the level to which inefficiency allegedly was rewarded.

and the treatment of sales in the determination of Celgar's GBL.[208] As I discuss later in this section, there are deficiencies in these arguments as well.

115. Mr. Switlishoff begins his report by suggesting that Canada's counsel has a naïve understanding of the physical versus the financial nature of power transactions.[209] He observes that physically the "status quo" for mills with EPAs that purchase electricity to replace below-load generation is "no net flow of electricity", with respect to its below-load sales.[210] What he fails to mention is that this observation is true after an EPA has become effective. It is not correct when comparing the net flow of electricity before and after that point. This highlights a key fact in the context of BCH procuring incremental generation resources. To meet BCH's needs, resources must produce a "positive" flow to the BCH system relative to the *status quo ante*, i.e., reduce BCH's load. So only resources that produce an increment to BCH's system capability (by reducing net system load) are eligible for incentives under BCH's procurement process, e.g., the Bioenergy Call. Celgar proposed both an incremental resource, the generator that reached commercial operation in 2010, and its already existing generator which was built in the 1990s (and its generation capabilities were upgraded in 2005-06 by Celgar). The second resource that Celgar offered does not meet the criterion of being incremental in a biocall for power that was issued in 2008.

116. This failure to satisfy the criterion also resolves Mr. Switlishoff's concern that: "Celgar's desired sales of below-load self-generated electricity[] do not require BC Hydro to pay 'something for nothing'" since it would be a typical "contractual, notional power flow".[211] The payment at issue is the above-market incentive price in the EPA which was for *incremental* resources. Since Celgar was not providing incremental power, what it

---

[208] Switlishoff Second Report, Section E.

[209] Ibid, ¶¶ 5-6.

[210] Ibid. Apparently, Mr. Switlishoff is adopting one of Dr. Fox-Penner's theoretical cogitations: choosing his *status quo*.

[211] Ibid, ¶¶ 9-10.

wants is precisely for BCH to *pay* the incentive but get *nothing* in terms of incremental power.

117. Mr. Switlishoff also criticizes BCH's GBL process for setting "normal" conditions at one point in time.[212] In general, the parties to the EPAs reviewed historical generation data, in order to find a one-year period of recent "normal operations." For several mills in BCH territory, their pre-existing non-contracted GBL (which itself was based on a historical year, typically 2005) became their GBL in their EPA.[213] If no single historical year represented normality, the parties agreed to an alternative measure, such as a [redacted] that better represented 365 days of normal operation.[214] In Celgar's case, using a long-term historical average would not be representative of normal operations because of the recent enhancements to the mill's generation capabilities at the time of its EPA negotiations.[215]

118. Mr. Switlishoff alleges that there was a lack of consistency in applying BCH's "Current Normal" year criteria across Tembec, HSPP, Celgar, and Tolko-Riverside. But Mr. Switlishoff does not explain where my memos, which show the opposite conclusion, for Celgar as compared with the Tembec 2009 and House Sound 2010 EPAs, are in error. It is not clear that Mr. Switlishoff's reliance on Tembec's 1997 EPA and Howe Sound's 2001 enabling agreement are relevant to a possible unequal treatment argument. Also, it is far from clear what is the relevance of a sawmill, i.e., Tolko-Riverside, which has a different business model and operating characteristics than Celgar and has no contract with BCH.

---

212 Ibid, ¶¶ 30-32.

213 NERA Expert Report, ¶ 52, number 3).

214 See NERA Expert Report, Appendix 2, Howe Sound GBL Memo and Dyck Second Witness Statement, ¶ 49.

215 See NERA Expert Report, Appendix 2, Celgar GBL Memo and Dyck Second Witness Statement, ¶ 17. Using 2007 as normal may have been a conservative choice for normal operations for Celgar, as Mr. Merwin raised the possibility of more generation growth. (Dyck Second Witness Statement, ¶ 29) Mr. Switlishoff's interpretation of BCUC's intentions in Order G-38-01 with respect to "historical" generation assessments suggests that BCH's approach was inconsistent with the Order. Switlishoff Second Report, ¶¶ 20-23. However, a commission would rarely try to specify a "one-size-fits-all" approach to a clearly idiosyncratic measure variants of which have been a challenge to develop in many jurisdictions.

119. Mr. Switlishoff argues that Celgar's GBL should be based on generation minus sales (or equivalently, load minus purchases).[216] With respect to generation minus sales, Mr. Switlishoff specifically identifies Howe Sound as being treated differently than Celgar, but this is a repeat of his argument in his first report, which I demonstrated was erroneous in my first report.[217] As I have demonstrated, Howe Sound's sales were a result of its contractual arrangement with BCH and Powerex that [redacted].[218] In contrast, Celgar's sales were basically the by-product of its pulping operations, and therefore a basically a result of normal mill operations.[219] Due to this difference, to arrive at a GBL that reflects self-generation in the absence of a contract, [redacted].

C. Mr. Brent Kaczmarek

120. Mr. Kaczmarek submitted a second report which attempts to do several things: rebut several criticisms that I raised with respect to his first report, introduce a new argument related to competitive effects of the "Measures," and recalculate damages correcting for mistakes that I identified in my report that he agrees were mistakes. His rebuttal fails to

---

[216] Switlishoff Second Report, ¶¶ 56-59.

[217] Ibid, ¶ 56 and NERA Expert Report, ¶ 76 (the third solid bullet point that begins "Treatment of pre-EPA sales"). In resurrecting these points, Mr. Switlishoff ignores once again the fact that Celgar's load is its generation except for the transient generation surpluses and shortages to load normally experienced by a mill, financial optimization of time-of-use rates and the existence of the [redacted]. Also see Dyck Second Witness Statement, ¶¶ 19 and 25 and Pöyry Second Report, Section 4.3 and 4.4.

[218] I understand that Howe Sound [redacted] See NERA Expert Report, Appendix 2, Howe Sound GBL memo. See Second Witness Statement of Pierre Lamarche, dated 23 March 2015 ("Lamarche Second Witness Statement").

[219] Pöyry Second Report, Section 4.4. I note that Claimant's witness Mr. Merwin focuses on steam balance when addressing this issue (Second Witness Statement of Brian Merwin, dated 15 December 2014, ("Merwin Second Witness Statement"), ¶ 29), but this ignores the *black liquor* by-product of Celgar's operation which allowed Celgar to be basically energy self-sufficient (NERA Expert Report, footnote 106). Also, Mr. Merwin asserts that Celgar intentionally incurred incremental hog fuel, power boiler, and natural gas costs in order to make discretionary sales (Merwin Second Witness Statement, ¶ 28). However, this appears to contradict his early testimony, at least with respect to natural gas, where he previously stated: "**Since 2003, the Mill's natural gas consumption has been limited to … provisional usage.**" (emphasis added, Merwin Second Witness Statement ¶ 27; in that same paragraph Mr. Merwin defines what he means by provisional usage, which, as one would expect, does not include discretionary sales).

establish his case and his new argument concerning competitive effects is both analytically inadequate and lacks any evidentiary support. I address the topic of computing damages below in Section V.

121. Among the shortcomings of Mr. Kaczmarek's arguments not related directly to the mechanics of computing damages are the following:

- He argues that Celgar suffered negative competitive effects from the "Measures" but provides no analysis or evidence to support his claim.[220] (See Section 1, below.)
- He claims to have determined that the "Measures" imposed a net-of-load standard on Celgar but ignores the [redacted] (Addressed in ¶ 172 below.)
- He fails to understand and properly represent the purpose of tariffs and what Celgar's cost-of-service would be in the But-For Scenario. (See Section 2.i, below.)
- He fails to demonstrate that Celgar would have been able to sell its below-load electricity to third parties at rates that would have been profitable.[222] (See Section 2.ii, below.)
- He incorrectly assumes that BCH would have purchased Celgar's below-GBL electricity, even in the face of evidence indicating that was unlikely.[223] (See Section 2.iii, below.)
- He computes damages *in perpetuity*[224] which ignores that the EPAs have a limited term, Celgar's turbine has a limited life, and requires reliance on speculative inputs such as the renewal of Celgar's EPA. (See Section 2.iv, below.)
- He fails to address the practical implications of the 1991 Ministers' Order. (See Section 2.v, below.)

---

220 Kaczmarek Second Report, Section III.B.i.

221 Ibid, ¶ 23. While in that paragraph Mr. Kaczmarek qualifies that Celgar's "net-of-load" standard is tied to its 2007 load, this shows that Mr. Kaczmarek's characterization is misleading, as I discuss later in my report.

222 See MacDougall Witness Statement, Sections B.2 and C for the demonstration that such sales were simply unrealistic.

223 Kaczmarek Second Report, ¶ 55.

224 Ibid, ¶ 95.

- He ignores fatal flaws in Claimants damages arguments related to the zero GBL and BLAP-based GBL damages quanta he calculates. (See Section 2.vi, below.)

1. Mr. Kaczmarek's competitive effects arguments are inapt

i. Mr. Kaczmarek's competitive analysis is flawed

122. With respect to alleged competitiveness effects, in my first report I noted that "Claimant has not demonstrated how the GBL in its EPA has prevented Claimant from engaging in any economic activity that it would have engaged in with a GBL purportedly in line with the treatment of other mills."[225] Mr. Kaczmarek's response is that I ignored his first report where he "explained that Celgar has been more exposed to fluctuations in pulp prices than it would have been absent the Measures."[226]

123. Mr. Kaczmarek's argument is really just an unsupported theory about the increased level of risk that Celgar could face when the other BC mills are able to sell electricity below their load. But simply stating a theory does not demonstrate harm. As obvious as this might sound, the onus is on Claimant to show it has been harmed. Yet neither Mr. Kaczmarek nor Claimant presents any evidence (or even claims) that Celgar suffered any actual negative effect related to pulp mill competition.[227] I would expect a competitive harm argument to be accompanied by demonstration of foreclosed business opportunities, reduced sales, underbidding by competitors, etc., but none of this is presented by Mr. Kaczmarek or Claimant. Mr. Kaczmarek is silent regarding this criticism of his competition theory. Indeed, Kaczmarek continues to assume that Celgar's pulp and electricity production is identical with or without the "Measures", which is tantamount to conceding there have been no harmful competitive effects.[228]

---

[225] NERA Expert Report, ¶ 112.

[226] Kaczmarek Second Report, ¶ 30.

[227] Additionally, Mr. Kaczmarek still does not quantify (nor does Claimant request) any damages due to these alleged competitive affects. This fact alone may give one pause about the seriousness of Claimant's allegation of competitive harm.

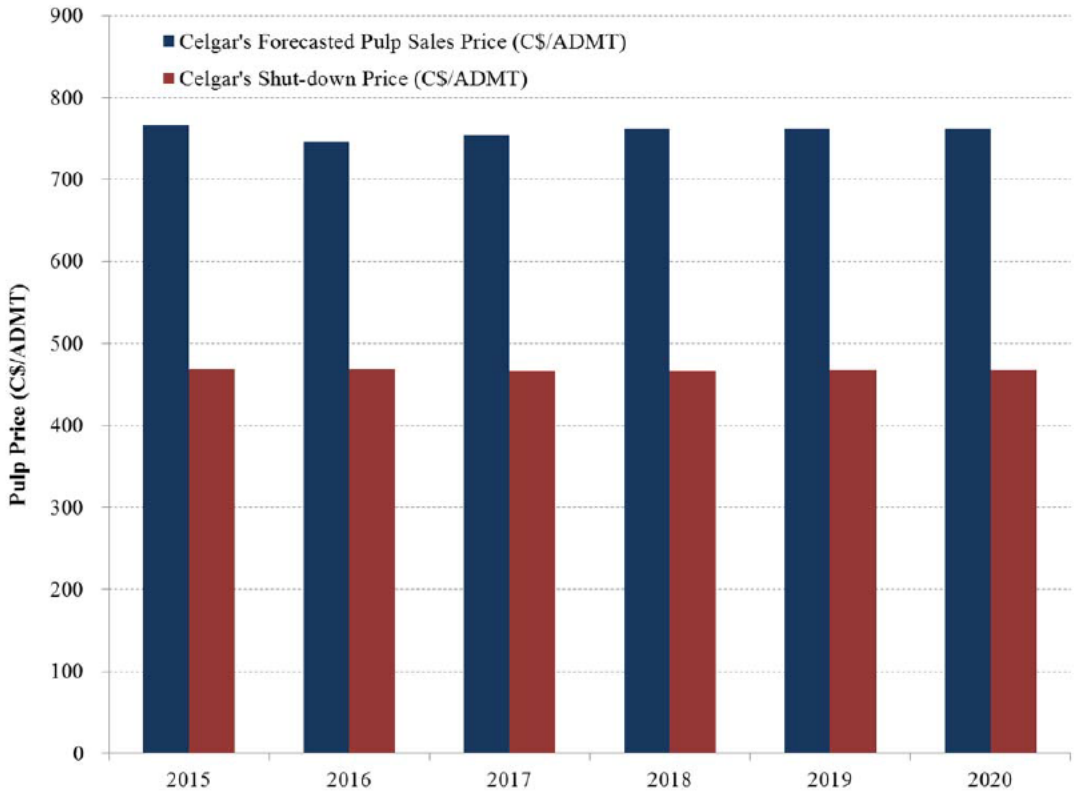
[228] Kaczmarek Second Report, ¶ 31. Perhaps to address this issue, Mr. Kaczmarek introduces a new aspect to his competition argument, suggesting that the fact that other mills have EPAs with below-load sales could have led to lower pulp prices and higher raw material cost (Kaczmarek Second Report, ¶ 32). However, Mr. Kaczmarek

124. One of Mr. Kaczmarek's competition arguments is that Celgar faces greater exposure to pulp price movement (leading to a higher risk of shutdown during pulp downturns) due to its lack of below-load sales.[229] But the facts of this case do not support such a risk as a significant practical concern. As I pointed out in my first report, Celgar did not shutdown during the global economic downturn of 2008-2009 due to pulp price effects, and this was before it began realizing the revenue from its electricity sales under its EPA (nor has it shut down since). In fact, Mr. Kaczmarek's forecast of Celgar's financials shows it could tolerate significant drops in pulp prices before it might shut down, even without the below-GBL sales it seeks, rendering this particular argument moot.

does not even claim that these potential price and cost effects actually have happened, much less present any data or analysis on this point.

[229] Ibid, ¶ 30.

Figure 1: Mr. Kaczmarek's Forecasted Pulp Sales Price and Shut-down Price Point, 2015 through 2020



125. Figure 1 shows Celgar's shutdown point prices based on its forecasted variable costs.[230] This follows from Mr. Merwin's statement that "As a rule of thumb, a pulp mill will refrain from shutting down as long as it covers its variable costs."[231] I also included Mr. Kaczmarek's forecast of Celgar's electricity sales (*without* the additional sales it now seeks) as an offset to its variable costs.[232] Pulp prices would need to fall substantially

[230] Specifically, I calculated Celgar's per-unit variable costs as its variable production cost plus shipping costs divided by its pulp production volume (using Mr. Kaczmarek's forecast of each of these terms, see **NERA-79**, worksheet "3.A_Model_Actual". While he lists Celgar's shipping costs separately from its variable costs, I assume, conservatively, the former is also variable). In reality, a mill might not shut down if these costs were higher than its sales price by a modest amount or this situation were expected to persist only for a short period of time. The pulp prices in this figure also come from Mr. Kaczmarek's model.

[231] Witness Statement of Brian Merwin, dated 24 March 2014 ("Merwin First Witness Statement"), ¶ 99. This appears to be Celgar's strategy as well, as Mr. Merwin stated that [redacted] Merwin First Witness Statement, ¶ 97.

[232] If Celgar were to shutdown, it would not earn any revenues under its EPA, so it would need to consider these lost revenues in its shutdown decision. Similarly, if Celgar were to shutdown, it potentially would be liable for

below current forecasts for Celgar to shutdown, according to Mr. Kaczmarek's own forecasts.

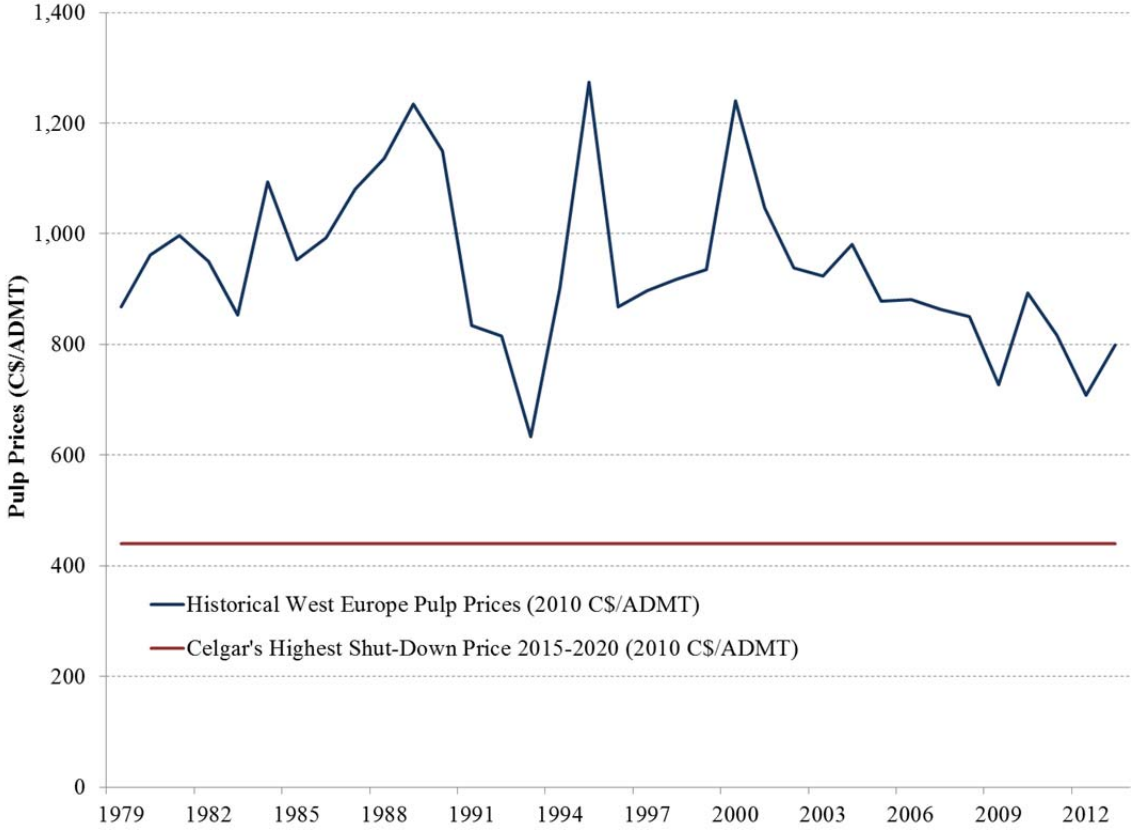
126. To gain a sense of the possibility that pulp prices would drop to such low levels, I reviewed historical pulp prices from 1979 to 2013[233] (adjusting for inflation). This analysis revealed that historical prices were always above even the highest forecasted Celgar shutdown point and generally were significantly above that point. So, it would appear unlikely that even a significant pulp price downturn would cause Celgar to shut down, at least through the term of its EPA.

---

paying penalties under its EPA for non-delivery, so avoiding these penalties would be an incentive to stay open. However, for simplicity, and to be conservative, I do not consider the effects of potential avoided penalties in my competitive analysis.

[233] This is the period for which my data source had prices when I downloaded them (March 25, 2015) (http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=global-economic-monitor-(gem)-commodities#). I have provided an excel spreadsheet with the raw downloaded data as **NERA-83**.

Figure 2: Western Europe World Pulp Prices and Celgar's Highest Forecasted Shut-down Price[234]
1979 through 2013 (Shown in 2010 C$)



127. In addition, in order to bolster his claims about the effect on Celgar's competitive position due to the so-called "Measures", Mr. Kaczmarek presents two figures from Mr. Merwin's first witness statement.[235] Yet these figures, which I also addressed in my first

[234] I used data from Western Europe, as similar historical data for US or China was not available to me. The highest shut-down price is the 2015 value from Figure 1 expressed in 2010 C$. While at least in recent years Celgar has sold at slightly lower prices than these Western Europe prices, this does not change my conclusions about the lack of effect of the "Measures" on Celgar's competitiveness (based on the relationship between China and Western Europe pulp prices—at least those prices presented in Mr. Kaczmarek's Second Model—it appears unlikely that the price Celgar actually sells at would go below its shut-down point).

[235] Kaczmarek Second Report, Figures 2 and 3, which themselves come from Figures 6 and 7 of the Merwin First Witness Statement.

report, continue to fail to demonstrate any harm to Celgar.[236] More importantly, these graphs are not reliable evidence as I show below.

128. First, I note that after it filed its Reply Memorial, Claimant decided to provide several spreadsheets related to the graphs presented in Mr. Merwin's first statement and resubmitted by Mr. Kaczmarek in his reply.[237] This submission may be in response to my earlier criticism that "[Mr. Merwin] has not provided his model nor his assumptions that went into his modeling."[238] However, what has been provided is insufficient for me to analyze these figures in depth. There is no explanatory information or underlying equations for the entries that are hard-entered in the spreadsheets which are the basis for the graphs.[239]

129. Moreover, the spreadsheets raise serious questions about the reliability of the associated competitive arguments. As I argued in my first report, these graphs do not constitute a competitive analysis.[240] Mr. Kaczmarek and Mr. Merwin are simply comparing cost curves and do not address any of the indicia of competition listed above. In addition, those cost curves themselves are suspect. The difference between the two graphs appears to be simply the reduction in the assumed energy costs by a factor labeled "Savings

---

236 NERA Expert Report, footnote 163. Mr. Kaczmarek confuses an asserted position on a theoretical cost curve cost with actual, demonstrable harm.

237 Document Production of 20 Feb 2015 from Mercer to Canada, **NERA-84**.

238 NERA Expert Report, footnote 163.

239 The limited data that is provided is hard-entered into a spreadsheet and is wholly unsupported. Specifically, no analysis or support is provided for the crucial assumptions that Mr. Merwin makes about the magnitude of the benefit he claims other mills realize due to their EPAs with BCH. But even this limited data provided raises new questions. The new data reveals that fixed costs are included in his cost curves, yet Mr. Merwin in his first witness statement discussed how only variable costs are typically considered in shutdown decisions (Merwin First Witness Statement, ¶¶ 97, 99 and 153).

240 NERA Expert Report, ¶¶ 112-116. As I stated there, Claimant has not demonstrated that the alleged "Measures" have had any effect on its competitive position. For example, Mr. Kaczmarek has modeled the same level of pulp production in both his Actual and But-for Scenarios and has not shown any loss of market share or cancelled investments.

Potential".[241] There is no basis or discussion provided for this factor which is mysteriously identical for 7 of the 10 mills that are compared to Celgar.

130. In addition, Mr. Merwin's analysis is limited to BC mills, but according to Mr. Merwin the pulp market is global.[242] Therefore, presumably a robust competitive analysis would include consideration of the non-BC mills that compete with Celgar – Mr. Merwin's and, necessarily, Mr. Kaczmarek's derivative analyses fail in this regard.

131. Last, it appears that Mr. Merwin's analysis may suffer from a fundamental analytical flaw. Mr. Merwin states that his first figure addressing competitive effects does not consider below-load sales and treats above load sales as revenue.[243] It is not clear from this statement what Mr. Merwin has done with respect to Celgar's revenues under its EPA with BCH, where most of those sales are above its load. One interpretation is that his treatment of above load sales as revenue means that he effectively ignores this *revenue* in his calculations because he is doing a *cost* assessment. Considering the magnitude of Celgar's energy costs Mr. Merwin includes in his calculations, it appears this is the correct interpretation. This means that Celgar's revenues from its actual EPA sales to BCH are *not* included as offsets to its costs *in either figure*.[244] Mr. Merwin and Mr. Kaczmarek appear to be ignoring a major incentive for Celgar to stay open during pulp downturns: Celgar can only receive its EPA revenues if it stays open since its primary fuel is the black liquor produced by its mill operation.[245] So these figures are

---

[241] Column L in the spreadsheet entitled "2011_12_09_No Power Sales_Status Quo_Adjsuted wood.xlsx." provided to me as part of **NERA-84.**

[242] Merwin First Witness Statement, ¶ 7.

[243] Ibid, ¶ 151 and footnote 66.

[244] This must affect both figures as Celgar's costs are the same in both of Mr. Merwin's figures. Celgar's energy costs as presented in cell K29 of the Excel file "2011_12_09_No Power Sales_Status Quo_Adjusted wood.xlsx" provided in **NERA-84** are high enough that I would be surprised if Mr. Merwin arrived at this figure by including Celgar's EPA revenues as an offset to costs. However, I also consider the alternative that Mr. Merwin did include those EPA revenues as cost offsets (see footnote 246 below).

[245] Pöyry Second Report, Section 4.3

invalid as a tool to show Celgar's competitiveness in its real market environment.[246] Moreover if the effect of its EPA were added to Mr. Merwin's analysis, Celgar would likely remain the least-cost mill in BC in both of his comparative figures, rendering Claimant's competition complaint moot even using its own chosen analysis methodology.

ii. Mr. Kaczmarek dismisses beneficial treatment by Canada

132. Responding to my first report, Mr. Kaczmarek argues that the subsidies that Celgar received from the federal Pulp and Paper Green Transformation Program ("PPGTP") program to construct its new turbine are "not relevant to Mercer's damages resulting from the measures."[247] However, Mr. Kaczmarek's criticism is misguided. I made the comment he references in the context of his arguments related to Celgar's competitive position. In fact, Mr. Kaczmarek even provides a quotation from my first report that ends: "… 'Mr. Kaczmarek has not considered how Canada and BCH have helped Celgar's competitive position.'"[248] Both Mr. Kaczmarek and Mr. Merwin have made substantial arguments related to the competitive effects of the Measures, focusing on the diminution of Celgar's financial ability to absorb market disturbances since it does not receive the additional funds from the sale to BCH of its below-GBL generation. But they have not considered whether and to what extent the substantial funds that Canada and BCH have provided Celgar (that, under their views of competitive effect, may have helped its competitive position) have offset the purported effects of the foregone EPA-priced sales. The BCH EPA provides Celgar with firm energy sales revenues of about C$ 25 million/year (which will increase with inflation), which provides a significant incentive for Celgar to stay open.[249] Canada provided a subsidy of C$ 57.7 million for

[246] Alternatively, even if Mr. Merwin did consider Celgar's EPA sales, his analysis would fail to be meaningful. This is because he would have considered Celgar's EPA revenues in both his figures (Figures 6 and 7, or Kaczmarek Second Report, Figures 2 and 3), but considered the EPA revenues of the other mills only in his second figure (Figure 7, or Kaczmarek Second Report, Figure 2).

[247] Kaczmarek Second Report, ¶ 148.

[248] Ibid, ¶ 147.

[249] C$ 25 million is calculated as C$ 107/MWh times 238 GWh of sales (divided by 1,000 to convert to C$ millions) (see Appendix 3, Clause 3.1 and Appendix 2, Part I of BC Hydro and Zellstoff Celgar Limited Partnership Electricity Purchase Agreement, January 27, 2009, **NERA-34**, for these amounts, and Appendix 3,

Celgar to build the new turbine. This subsidy indirectly has provided an incentive for Celgar to stay open during downturns, because without this subsidy Celgar (according to Mr. Merwin) may not have finished its new turbine,[250] which would have precluded its financially very rewarding EPA with BCH.

2. The principles underlying Mr. Kaczmarek's damages arguments are fundamentally flawed

133. Mr. Kaczmarek has two fundamental types of errors in his analysis. One set is technical and quantitative in nature, and renders his damages calculations erroneous. I discuss these errors in Appendix 2. The other set is analytical. These errors, which are at the very foundation of Mr. Kaczmarek's analysis, render his entire quantum calculation unsustainable. These errors relate to Mr. Kaczmarek's assumption that Celgar would have been able to profit from additional electricity sales but for the "Measures" and to other fundamental flaws in establishing damages:

- He fails to understand the realities of the rates that FortisBC would charge Celgar to replace its self-generation.
- He ignores that Celgar would not have been able to contract for third-party sales at a rate that was greater than its cost of replacement energy.
- He incorrectly assumes that BCH would have purchased below-GBL electricity.
- He inappropriately computes damages *in perpetuity*, ignoring the finite lives of the EPA and Celgar's turbine, and using speculative assumptions such as the renewal of Celgar's EPA with BCH.
- He ignores the practical implications of the 1991 Ministers' Order on Celgar's ability to make below-load sales.
- He ignores logical flaws in Claimant's damages arguments related to alleged differential treatment.

Clause 3.2 for the inflation adjustment). In practice, Celgar has sold less that its firm sales amount, but it still receives significant revenues from BCH which provide an incentive to stay open.

[250] See NERA Expert Report, ¶ 115 and Merwin First Witness Statement, ¶¶ 109 to 112.

134. The implication of correcting (the first five of) these fundamental errors is that Celgar's below-GBL sales in Mr. Kaczmarek's But-For Scenario would not be profitable. Therefore, there can be no related damages. The sixth error in this list addresses fatal flaws in establishing damages which Mr. Kaczmarek ignores.

i. Fails to properly represent Celgar's FortisBC replacement rates

135. The rate at which FortisBC would supply Celgar to replace its below-load sales is critically important under the hypothetical that the alleged "Measures" are objectionable. A demonstration that this replacement rate is above Celgar's realistic net revenues from third-party sales would be fatal to Mr. Kaczmarek's damages quantification.[251] In his But-For Scenarios, Mr. Kaczmarek assumes that Celgar purchases from FortisBC at low embedded cost rates. Even if one were to accept his assumption, it likely would be uneconomic for Celgar to sell below its load. Using rates that may better reflect economic principles of utility regulation shows even more clearly the fallacy of assuming Celgar would have an incentive to sell its below-GBL output. Therefore, there are no associated damages.

136. As stated in my first report,[252] according to standard regulatory principles, regulated rates for electricity service should be set to protect ratepayers against unreasonable rates while providing utilities the opportunity to earn an adequate return on investments. Rates should also reflect the principle of cost-causality which requires that, to the degree feasible, costs should be assigned to the entity which causes their incurrence. An example of cost causality in the context of this case is any additional cost that Celgar

[251] While Mr. Kaczmarek models that this electricity is sold to BCH (under EPA firm energy prices), he is clear that this is an assumption used to quantify (alleged) harm (Expert Report of Brent Kaczmarek, dated 31 March 2014, ("Kaczmarek First Report"), ¶ 199). And as shown in my first report and again in this report, below-GBL sales to BCH are not a realistic option (see NERA Expert Report, ¶ 120 and Section IV.C.2.ii, below). While Claimant also argues that BCH likely would purchase below-load electricity from Celgar, it acknowledges that it "makes no claim that BC Hydro was required to purchase Celgar's below-load electricity" (Reply Memorial, ¶ 36).

[252] NERA Expert Report, ¶ 34.

might impose on FortisBC if Celgar were to sell its below-GBL electricity that it currently consumes.[253]

137. Under the cost-causality principle, FortisBC would charge Celgar a rate that reflected the additional cost to its system for acquiring the additional electricity to supply Celgar's new demand.

138. In addition, Mr. Kaczmarek's arguments about (and damages calculations related to) tariffs are also speculative. Mr. Kaczmarek claims to rebut my criticism that absent a FortisBC-Celgar agreement (including a rate), damages, which are highly sensitive to Celgar's cost of supplying its load, are speculative.[254] He states that my comment about there being no agreement is inconsistent with the hypothetical that Order G-48-09 is objectionable. However, my criticism was that damages are speculative due to a lack of a supply agreement between Celgar and FortisBC. This remains true even assuming Order G-48-09 is objectionable. The terms of what a Celgar-FortisBC agreement would have been but for Order G-48-09 has a critical effect on any quantum determination. But those terms are not known. While the parties had negotiated a supply agreement, it had not yet been approved by the BCUC.

139. Further, Mr. Kaczmarek claims to rebut my criticism regarding the speculation present in his hypothetical that only Celgar's GBL is objectionable.[255] Mr. Kaczmarek assumes that even though Celgar could not purchase electricity from FortisBC at an embedded cost rate in this hypothetical, BCH would extend the [redacted]. This is speculative.

---

[253] This is in contrast to every other mill that has an EPA with BCH. These mills still supply the same amount of self-generation as they would absent their EPAs and are therefore imposing *no additional cost* of supplying their load. While I understand for Tembec, there were periods under its previous EPA (its 1997 EPA) where it supplied more of its load than it is required to supply under its current EPA, this is related to fact that Tembec's current generator was incentivized by its previous EPA, a situation which does not apply to Celgar but which appropriately affected the determination of Tembec's GBL as addressed in Appendix 2 of my first report. See also footnote 162 above and Dyck Second Witness Statement, ¶¶ 35 and 40-42.

[254] Kaczmarek Second Report, ¶¶ 84-89.

[255] Ibid, ¶¶ 91-94.

The fact that BCH allowed Celgar to have a limited quantity of [redacted].[256]

140. Also, Mr. Kaczmarek states that he increased the tariffs at FortisBC and BCH in his damages calculation to match FortisBC's and BCH's requested rate increases. However, these are "requested" and not yet approved tariffs, and even the requests do not cover his full period of analysis.[257] Also, as his analysis continues *ad infinitum*, he effectively assumes that BCH and FortisBC rates will continue indefinitely, which is speculative.

141. Additionally, since electricity systems change over time, electricity rates cannot be static and, from an economic and a regulatory point of view should reflect the cost of providing service. Since different utilities have different underlying costs, it is typical to have different tariff structures and tariff levels among utilities. So, as I stated in my first report, the fact that Celgar may have a rate charged by FortisBC different from the rates paid by mills in BCH's service territory is not unusual.[258] The same would apply naturally to the rates of increase in tariffs.

142. Finally, in his updated analysis, Mr. Kaczmarek fails to mention the likely upcoming introduction of a new stand-by rate (RS-37) in the FortisBC service area, which will apply to Celgar retroactively and going forward (assuming Celgar elects to take power under this rate). It is possible that Celgar's total costs could be lower under the proposed stand-by rate than its current rates, therefore affecting the damages. Mr. Kaczmarek does not raise this issue.

---

256 Scouras Second Witness Statement, ¶ 50. Under the Seller Consumed Energy system, [redacted]

257 Mr. Kaczmarek extends the requests, which are to be effective through 2018, through to 2020. Kaczmarek Second Report, Appendix 3.D, excel worksheet "3.D_FBC & BCH Prices" Also, he assumes that FortisBC will be able to pass through, dollar for dollar, BCH's tariff increases to its customers, which as far as I am aware is not known at this point (Kaczmarek Second Report, ¶ 163).

258 NERA Expert Report, ¶ 95.

143. In conclusion, Mr. Kaczmarek's failure to effectively rebut the significant number of criticisms that I have made regarding the rates that he assumes would apply to Celgar in his But-For Scenario render his analysis less reliable. In any event, even if one were to adopt Mr. Kaczmarek's low embedded cost rate assumption, the rate would still be higher than what Celgar could sell economically in the market, which will be made clear in the next section.

ii. Ignores that Celgar could not sell to a third party purchaser at a rate greater than its cost of replacement energy

144. Mr. Kaczmarek claims to rebut my criticism that sales to third parties are speculative.[259] First, he argues that the "Measures" prevented making such sales so it is unfair to criticize the failure to identify potential customers. He uses NorthPoint as alleged proof of that claim. However, the witness statement provided by Mr. Krauss of NorthPoint appears to contradict Mr. Kaczmarek's position on this matter.[260] Also, internal Mercer documents indicate the difficulty of third-party sales (in BC or outside):

> "As to whether a market exists, BC is unique in that BC Hydro is a crown corporation that controls all of the electricity sales in the province through having a monopoly on sales and through its virtual control of transmission capabilities. Consequently, <u>it is the Company's view that a market mechanism does not exist in BC for producers to sell their power into. Further, trying to sell significant volumes of power outside the province has substantial challenges because of the lack of transmission space</u>." (Emphasis Added). [261]

145. In addition, my reading of the Witness Statement submitted by Mr. Garratt of Puget Sound Energy reinforces the notion that Celgar did not have, and could not have identified, a viable external market in which to profitably market its power.[262] Further, as has been attested to by Mr. MacDougall of Powerex, both the unavailability of firm

---

[259] Kaczmarek Second Report, ¶¶ 68-78.

[260] Krauss Witness Statement, Section C, especially ¶ 24, in contrast to Kaczmarek Second Report, ¶ 66.

[261] Letter from Richard Short to David Ure Re: Electricity sale contract accounting, Match 2, 2009, **NERA-85**, MER00192102_CONFIDENTIAL at MER00192105.

[262] Garratt Witness Statement, Section C.

transmission access and green market possibilities make it highly unlikely that Celgar could have consummated long-term, third-party, green-power transactions.[263]

146. Without a realistic possibility of green power sales, Celgar would be left only with the possibility of selling at traditional wholesale power markets, and I understand that Mid-C would be its most realistic external market.[264] However, even these sales would be infeasible and or uneconomic for Celgar. Mr. Kaczmarek's model assumes that Celgar would *actually* sell all below-load self-generation it *is allowed* to sell. Basically, he assumes that Celgar makes consistent sales of all its energy in *every hour* from 2009 and thereafter *in perpetuity*.[265] Making such sales at Mid-C would require long-term firm transmission access to that market. But as Mr. MacDougall of Powerex has demonstrated, long-term firm transmission access would not have been, and is not, available to Celgar.[266]

147. Without such access, Celgar would be limited to shorter-term sales based on what transmission it could secure. Mr. Kaczmarek's model does not account for this possibility; therefore it cannot be used as a basis for assessing damages under this hypothetical.

148. Even if the 2008 proposed PSA between Celgar and FortisBC ("2008 PPA" or "PSA") had been approved by the BCUC (which was assumed by Mr. Kaczmarek but as discussed in Section IV.C.2.i is unlikely), Celgar would have had very few opportunities

---

263 MacDougall Witness Statement, Sections B.2 and C (especially Section C.2).

264 Based on my conversations with Powerex (also see MacDougall Witness Statement, ¶¶ 23 and 63). Third-party sales to other markets would also be infeasible and or uneconomic, though. Alberta is a neighboring market to BC, but as with Mid-C, long-term firm sales to Alberta were highly unlikely, due to the unavailability of long term firm transmission access (MacDougall Witness Statement, ¶ 37 and 71). Further, spot sales opportunities would likely also be limited due to both price variability and transmission access limitations. (Ibid, Section C.1.d) Even when a high hourly price in Alberta made a spot sale potentially attractive, it would be unlikely that Celgar could capture the benefit of those high prices for itself, due to transmission limitations and due to competition Celgar would face from Mid-C. Even when sales to Alberta could be made, it is likely that most of the benefit of high prices would go to the transmission holder rather than Celgar. (Ibid, ¶¶ 48 and 69-71)

265 At least every hour except when Celgar's generator is down for maintenance or other emergency conditions.

266 Celgar could attempt to contract with parties that do have such long-term firm access, but this would likely be prohibitively expensive. See MacDougall Witness Statement, ¶ 48.

to engage in profitable arbitrage by selling its below-GBL generation at Mid-C rates, and the potential profits from the few sales it may have been able to make would have been far lower than what Mr. Kaczmarek computes. Figure 3 below shows both the highest reported daily transaction price for on-peak Mid-C delivery[267] and the costs that would be incurred by Celgar as a result of selling in the Mid-C market. I have calculated these costs as the energy charge under R.S. 31 (from the PSA) *plus* the transaction costs associated with selling to the Mid-C market.[268]

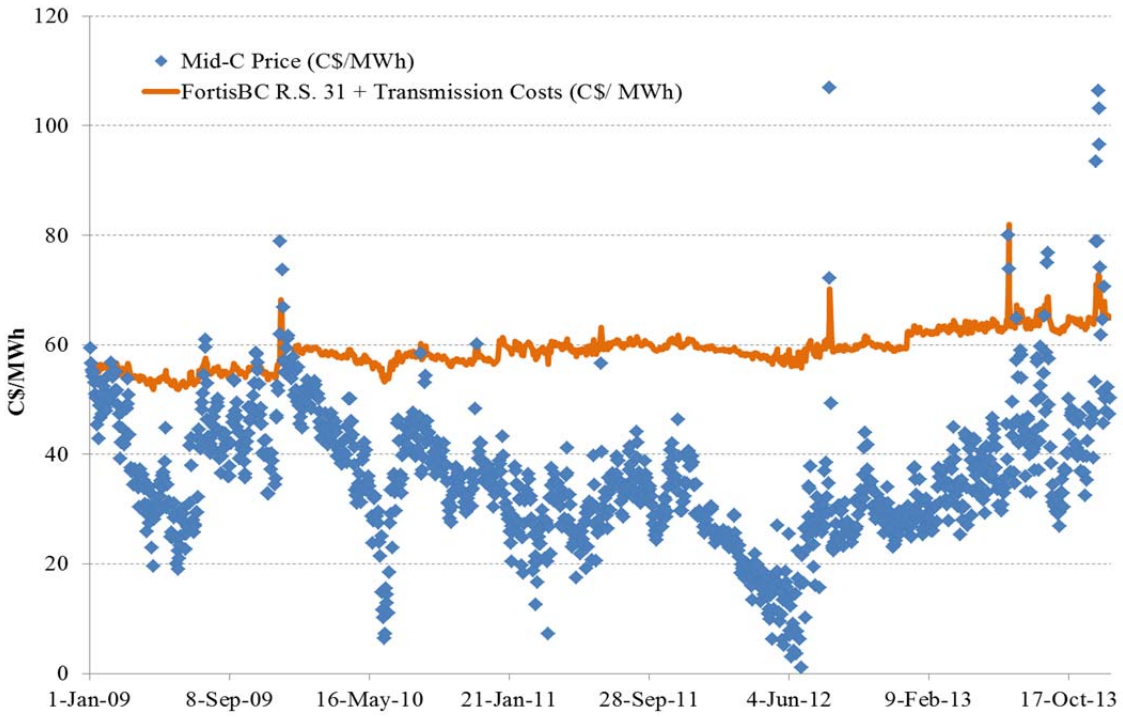
---

[267] See Mid-C Prices downloaded from the US Energy Information Agency, **NERA-86**. This is conservative, as there is no guarantee that Celgar could have contracted at the highest trading prices.

[268] To be conservative, I use RS-31 energy rates (lower than the RS-33 rates also in the 2008 PSA). The transaction costs that would apply would be: FortisBC rate schedules 103, 104, and 109, BCH's transmission losses and costs (a per MWh charge), and Bonneville Power Authority ("BPA") transmission losses and costs (per MWh charges). I use rates associated with short-term sales. See MacDougall Witness Statement ¶ 53 and Historical FortisBC Tariffs provided by FortisBC, **NERA-87**.

For BCH and BPA, I use current transmission rates throughout my analysis (these were the rates provided to me at the time I performed my analysis; while subsequently historical rates were provided, those rates are similar to current rates and using them would have no effect on my conclusions).

Figure 3: Average Mid-C Prices and Celgar's Supply plus Transmission Costs 2009 through 2013



Note: There were 3 days in this 4-year period with peak prices above C$120/MWh (prices of C$139, C$121, and C$173). I have not shown these simply for viewing purposes.

149. As can be seen, between 2009 and 2013, peak Mid-C prices were quite consistently below Celgar's cost of replacing its generation to meet load plus transmission costs, even if it were allowed to take power under FortisBC's embedded cost Rate Schedule 31 (lower on about 98% of days).[269] However, this chart does not take into account the fact that transmission access would likely be more expensive in hours when the Mid-C price is higher (or even unavailable as holders of capacity keep it to capture the increased profits).[270] Therefore, it is likely that even if occasional high prices made it theoretically

[269] While this chart shows prices for peak-hour contracts only, off-peak hour prices are much lower, which further highlights the challenge Celgar would have to even attempt to sell its power around-the-clock, as Mr. Kaczmarek's damages modeling assumes it can.

[270] See MacDougall Witness Statement, ¶¶ 48 and 64. Also, Celgar discussed this phenomenon in an internal document referring to a different market to which it has sought to sell (Alberta): "Maintaining transmission line access, when Alberta prices are most lucrative, continues to be a problem." See Energy Coordinator's July, 2007 Report to Al Hitzroth, **NERA-88**, MER00091267_CONFIDENTIAL at MER00091268. The difficulty of

economic for Celgar to sell into the Mid-C market in a given hour or day, in practice it would not be economic or even possible to make those sales, as securing transmission access in high-price periods from those who have transmission access could be far more expensive than the regulated transmission tariffs if holders of access are even willing to release that capacity.

150. Further, as I show below in Figure 4, current forward rates for the Mid-C market[271] are well below the costs that Celgar would incur to sell in that market.[272] While forwards markets are not always a perfect representation of future spot prices, they are generally the best available data. Absent a tectonic shift in the Mid-C market or in FortisBC embedded cost rates, this relationship seems unlikely to invert.

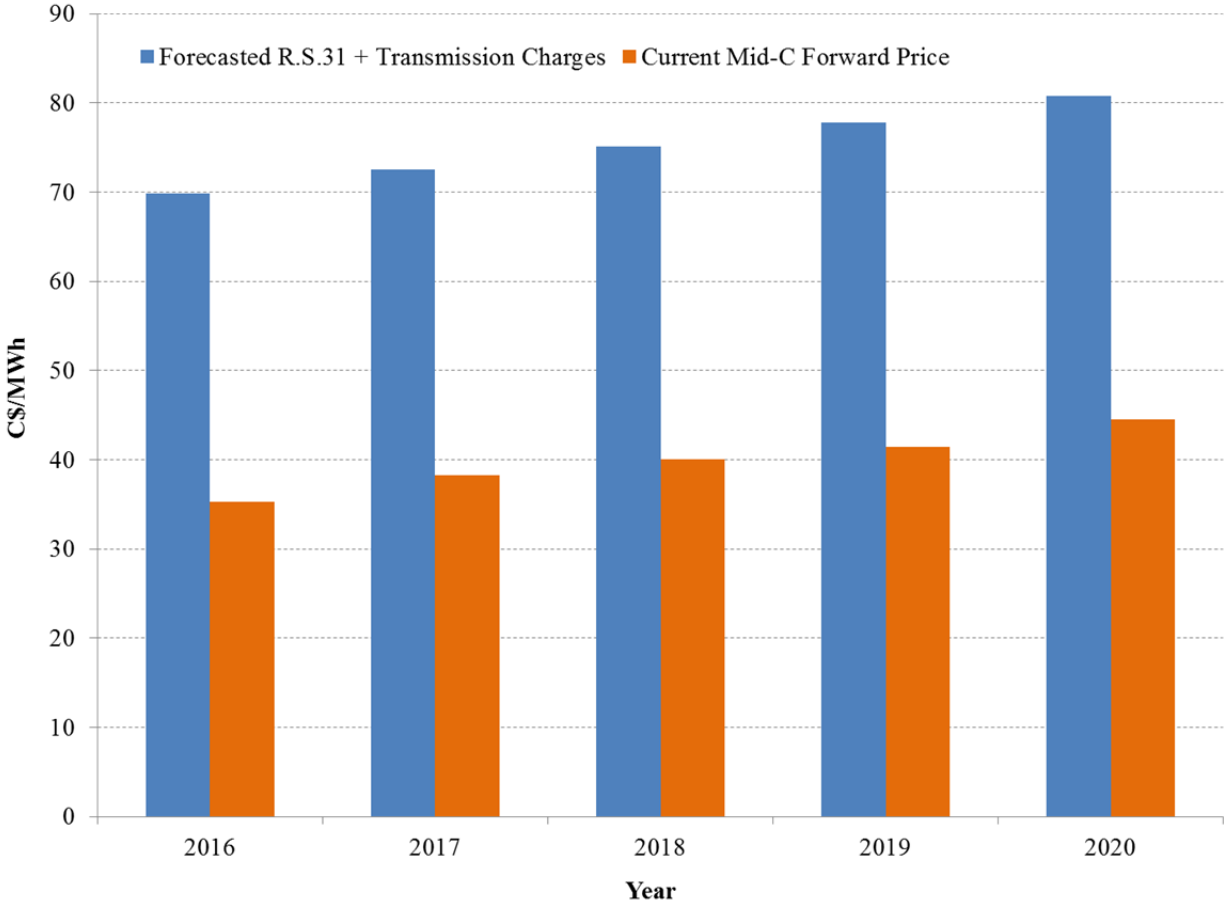
---

securing transmission into a neighboring high-priced market is not unique to Alberta (this is common phenomenon and one based on the economics of supply and demand).

[271] Current Mid-C forward rates obtained from Bloomberg, L.P on March 30, 2015, **NERA-89**.

[272] As above, the costs associated with selling to the Mid-C market are the cost of energy under R.S. 31 plus the transaction costs related to these sales. I use Mr. Kaczmarek's forecast of RS 31 rates (Kaczmarek Second Model). I assume FortisBC RS 103 and 104 increase in line with the increases he assumes for RS 31. I have assumed current transmission rates in the BCH and Bonneville regions as I have not been provided proposed future transmission rates for these utilities.

Figure 4: Yearly Mid-C Forward Prices and Forecasted Celgar Supply plus Transmission Costs, 2016 through 2020



151. As Claimant's entire argument that BCH would purchase its below-load power rests on the notion that BCH would rather purchase the power than let it leave the province, a lack of viable third party options is devastating, and appears to defeat Claimant's damages claims. So, as I pointed out in my first report, Mr. Kaczmarek's quantification of damages remains speculative due to his assumption of high sales (the EPA) prices for Celgar's below-GBL generation.[273]

152. Mr. Kaczmarek also alleges that if Celgar's ability to arbitrage below its load is speculative, then Order G-48-09 and setting Celgar's GBL to its 2007 load "[make] no

[273] NERA Expert Report, ¶ 120.

commercial or economic sense."[274] On a related point, he says that my asserting that his damages are speculative contradicts my conclusion that the "Measures" prevent harm to ratepayers.[275] But this ignores that Mr. Kaczmarek damages are calculated based on his speculating that Celgar could overcome the transactional hurdles but for the "Measures". Accepting that speculation, as Mr. Kaczmarek clearly does, his damages would represent a transfer payment from ratepayers to Celgar with no benefit for ratepayers and that would harm ratepayers.[276]

153. Moreover, Mr. Kaczmarek's statements ignore the arguments from my first report and the discussion above that it would be speculative (even unrealistic) to assume that Celgar could arrange for long-term sales to third parties at a firm price that was higher than an appropriate replacement rate for its load, which is one that reflects the costs Celgar causes.[277] The BCUC's actions (and BCH's resource procurement policy including the requirement of a self-generation baseline) reflected the importance of protecting ratepayers by preventing harmful arbitrage. Even given the speculative nature of the sales that Celgar desired to make, nonetheless it is appropriate for regulators and utilities to prevent the possibility of actions by a customer that would impose costs they cause on other ratepayers.

154. Finally, the existence of the Side Letter Agreement with BCH renders many of Mr. Kaczmarek's arguments nullities. He has attributed its inability to make third-party sales below its GBL to the actions of Canada but the Side Letter Agreement rebuts that claim. In reality the only reason that Celgar has been unable to make such sales (ignoring the bad economics and physical constraints) is that it has been unable to reach an agreement with FortisBC to supply its below-load power, a transaction between private parties. In fact, to my knowledge Celgar was the only mill that was given such an agreement, and

---

[274] Kaczmarek Second Report, ¶ 13.

[275] Ibid.

[276] NERA Expert Report, ¶ 97 and Figure 2.

[277] Ibid, ¶ 120-124 and 129-131.

was thus the only self-generator that was given even the opportunity to make sales below its GBL.

iii. Incorrectly assumes that BCH would purchase Celgar's below-GBL electricity

155. In addition, Mr. Kaczmarek claims to rebut my criticism that the assumption that Celgar could have sold its below GBL output to BCH was speculative, and he gives three reasons: (1) BCH would have purchased the energy rather than have it leave BC; (2) Celgar's low production costs made it an attractive option and (3) Celgar would be an attractive source to help meet increased load with green energy.[278] Each explanation fails for the following reasons:

- (1) fails as it is not probable that Celgar could find such a purchaser or get the transmission capacity to make the sale.[279]
- (2) is wrong because all of the other bidders into the BCH procurement processes were providing incremental energy for which BCH would not have to incur any additional supply costs as it would for Celgar (directly or via Fortis).[280]
- (3) is wrong because Celgar is not adding any incremental resource to meet increases in system load.

iv. Inappropriately bases damages on the speculative renewal of Celgar's EPA

156. In my first report, I criticized Mr. Kaczmarek for calculating damages *in perpetuity*, as this necessarily relies on countless unfounded assumptions, not to mention the unreality of Celgar operating for an infinite number of years (and Canada similarly being required to pay damages for that same infinite period).[281] In his second report, Mr. Kaczmarek continues to compute damages *in perpetuity*. However, he claims that because Claimant will continue to be harmed indefinitely, the calculation is justified absent the removal of

[278] Kaczmarek Second Report, ¶¶ 51-59.

[279] MacDougall Witness Statement, Sections B.2 and C.

[280] Specifically I understand this is true for the BCH's Biocall for Power – Phase I, and more generally I understand this to be true for BCH's other recent procurement processes.

[281] NERA Expert Report, ¶ 132.

the "harmful measures."[282] This assertion does not specify how the harm to Claimant would persist for all time given the limited life of the mill's assets and the likelihood that the "Measures" will change (e.g. the EPA will terminate in 2020) during the same horizon that Mr. Kaczmarek assumes in his damages calculation, i.e., before the end of time. The assertion also fails to respond to the speculative data and computational issues I raised related to Mr. Kaczmarek's *in perpetuity* analysis.

157. First, I criticized Mr. Kaczmarek for his speculative assumption that BCH would renew its EPA with Celgar after it expires in 2020.[283] Mr. Kaczmarek responds by indicating that even if the EPA were not renewed, Celgar could contract to sell its output at similar "green" energy prices to third parties, and that his assumption is merely that someone (BCH or a third party) would keep buying Celgar's power at EPA prices.[284] As I have shown in Section IV.C.2.ii of this report, it is unlikely that Celgar would be able to sell to third parties at a price that was economically attractive.[285] So, renewing with BCH is the only realistic option, and this remains a speculative assumption.

158. Second, Mr. Kaczmarek's *in perpetuity* calculation is highly sensitive to the discount rate used,[286] which, as I show in Appendix 2, is flawed and unreliable.

159. Further, even if, counterfactually, Celgar could find a buyer for its below-GBL energy post-2020 in Mr. Kaczmarek's But-For Scenario and that buyer would pay "green" energy prices, Mr. Kaczmarek does not substantiate his assumption that "green" energy prices would remain at their current levels during the post-2020 period.

---

[282] Kaczmarek Second Report, ¶ 14.

[283] NERA Expert Report, ¶ 132.

[284] Kaczmarek Second Report, ¶ 99.

[285] See also MacDougall Witness Statement, Sections B.2 and C, Krauss Witness Statement, ¶ 18 and Section C (especially Section C.3), and Garratt Witness Statement, Section C (especially ¶ 18).

[286] I pointed this out in my first report (NERA Expert Report, ¶ 138), that Mr. Kaczmarek's discount rate assumption is particularly important as about one-third of his quantum results from his *in perpetuity* calculation and more generally, two-thirds of his quantum come from the future cash flows both of which depend crucially on his discount rate. He did not respond to this criticism. His *in perpetuity* calculation is particularly sensitive to the discount rate due to the compounding nature of discounting.

160. In summary, even if Celgar has been damaged (and it has not), it remains highly speculative to continue those damages after the expiration of Celgar's EPA.

161. On a related point, Mr. Kaczmarek rejects my criticism that damages cannot go beyond the end date of the EPA in the scenario where the setting of Celgar's GBL is determined to cause harm, but Order G-48-09 is not objectionable.[287] But Mr. Kaczmarek never actually addresses, much less refutes, the substance of my claim. Celgar's GBL does not exist in isolation; it is defined only within the context of Celgar's EPA with BC Hydro.[288] Therefore, if the GBL level is the only harm that Celgar has suffered it is only logical that damages cannot be calculated beyond the end of the EPA.

v. Fails to address the 1991 Ministers' Order

162. As I stated in my first report, any damages that are based on the sale of electricity generated at Celgar's previously existing 52 MW turbine must inherently ignore the 1991 Ministers' Order. As I read that order, in return for certain exemptions from the Utilities Commission Act, Mercer committed the mill to use the output from its 52 MW turbine for self-supply.[289] Mercer was aware of this provision when it purchased the mill.[290] Mr. Kaczmarek did not respond to this point in his second report. If this Order binds Celgar to use that generation to supply its load rather than selling it, then damages must be zero, even if G-48-09, or Celgar's GBL, or both, were objectionable.

vi. Mr. Kaczmarek ignores logical flaws in Claimant's arguments related to differential treatment

163. Claimant argues that it should not have a GBL because of the alleged discriminatory treatment of Celgar in terms of compensation for load displacement when compared with

---

[287] Kaczmarek Second Report, ¶¶ 135-136. I note that Mr. Kaczmarek effectively assumes that the EPA is renewed on precisely the same terms as Celgar's current EPA. (Kaczmarek Second Report, ¶¶ 105-108) Even if the EPA were renewed, it is additionally speculative to assume that the terms would be identical.

[288] Witness Statement of Lester Dyck, dated 21 August 2014 ("Dyck First Witness Statement"), ¶¶ 65-66.

[289] Also, see NERA Expert Report, ¶ 12 and Bursey Report, Section H.

[290] "General Assignment Agreement between KPMG and 0706906 B.C. LTD." dated 14 February 2005, **NERA-90**, Schedule B, Part B, number 10.

the Howe Sound and Canfor mills.[291] However, there are a number of flaws in Claimant's rationale justifying the alleged discriminatory treatment. As Mr. Kaczmarek ignores these issues, his damages assessment assuming a zero GBL is also flawed.

164. First, it is unclear to me how this scenario asking for treatment identically to Howe Sound and Canfor is linked to any of Claimant's alleged "Measures." There is no link to the setting of Celgar's GBL, as neither Howe Sound nor Canfor has a zero GBL. Additionally, both Howe Sound and Canfor have the same exclusivity provision in their EPAs, so there is no link to that measure. Last, due to Celgar's access to [redacted] and FortisBC embedded low-cost power when its generation is less than its load there is no link to Celgar's complaint related to Order G-48-09. Consequently, identically to Celgar, Howe Sound and Canfor have maintained their historical access to embedded cost energy under their EPA.

165. Second, Celgar was never forced to displace its load, as I discussed in detail in my first report.[292]

166. Third, as explained in my first report, LDAs and EPAs were two different types of incentive program used by BCH to incentivize generation at new or idled facilities.[293] Therefore, Celgar's self-generation was not eligible to receive an incentive via a Load Displacement Agreement as it was already generating and was already being used to displace Celgar's mill load. It was the economics of Celgar's own business operations that led it to build its 52 MW turbine, a fact that was not true for the mills that received LDAs from BCH.[294]

167. Claimant also argues that it should, alternatively, have a GBL based on the below load percentage of other mills. Several of Mr. Kaczmarek damages scenarios are based on

---

[291] Reply Memorial, ¶ 530.

[292] NERA Expert Report, ¶ 79. None of Claimant's experts offered any rebuttal to this point.

[293] Section III.B.2.a.

[294] I also address LDA issues above in ¶ 93.

these percentages as determined by Mr. Switlishoff. Using these percentages is an inapt basis on which to calculate damages as Mr. Switlishoff never responded to the criticisms that I raised about the BLAP as a meaningful measure.[295] Specifically, the BLAP does not consider the differences in mills in terms of operating environments, lines of business, supply or sales contracts, or share of own load self-supplied. These factors are crucial to determining a given mill's GBL, and BLAP ignores all of them. BLAP also does not reflect relative mill efficiencies since it does not consider any input/output measures. BLAP does not consider anything beyond the comparison of load or generation to GBL which has no relevance to mill efficiency. Claimant has not rebutted any of these defects. With these defects, BLAP cannot provide any reliable measure of the extent of any harm that Celgar may have suffered. So there is no link between the BLAP-related GBLs relied upon by Mr. Kaczmarek and any mechanism of harm related to Mercer's claim.[296]

V. Damages

A. NERA's conclusions on damages

168. Mr. Kaczmarek presents his updated damages quantifications in his second report.[297] Based on errors in his analysis which I pointed out in my first report, Mr. Kaczmarek has made three corrections to his quantum: eliminating the double counting of purchases of electricity, starting damages in line with the timing of Celgar's EPA (previously his damages began prior to the EPA),[298] and correcting a math error in his discount rate analysis. The total effect is to reduce his damages quantum by about C$ 10 million (considering his zero GBL scenario). For details of these corrections see Section A of Appendix 2.

[295] See NERA Expert Report, ¶ 61.

[296] The other aspect to Mercer's claim is related to third-party sales. Clearly BLAP has nothing to with such sales and moreover, those sales have been shown to be not possible.

[297] Kaczmarek Second Report, Table 15.

[298] As I explain in Appendix 2, Mr. Kaczmarek has only partially corrected the error I identified in my first report related to the start date of damages, but even his partial correction reduces damages. See also ¶ 187 below.

169. Mr. Kaczmarek responds to additional errors of his analysis that I pointed out in my first report, including using an inapt discount rate methodology, ignoring under-generation penalties in his But-For Scenario, and continuing to calculate damages *in perpetuity* (all of which overstate damages). Mr. Kaczmarek rejects my criticisms of these errors, but his rebuttal is flawed, and these errors remain. See Section B of Appendix 2 for details.[299] Mr. Kaczmarek's damages quantification contains two further errors which I have identified in my analysis of his second report: he does not include FortisBC transmission charges that apply to Celgar's sales and his formulas for calculating interest on historical damages contain errors. These errors also overstate damages – see Section B.5 of Appendix 2. The technical errors that remain in Mr. Kaczmarek's modeling cause Mr. Kaczmarek to overstate damages by about C$ 100 million (again considering his zero GBL scenario).[300]

170. In addition to these technical errors, Mr. Kaczmarek's damages quantification is also deficient due to several overarching errors and faulty arguments, addressed now.

171. Mr. Kaczmarek admits that he did not do any independent economic analysis related to the actions of the BCUC or BCH or to the process under which BCH evaluated proposed GBLs by mills with self-generation.[301] Therefore, he cannot (and did not) respond to my GBL memos or other analysis I provided related to the overarching economic issues in this case.

172. While Mr. Kaczmarek does not have any legal, economic or regulatory opinion of the measures, he nonetheless asserts that his "examination of the Measures revealed that Celgar is indeed subject to a 'net-of-load' standard".[302] This ignores the fact that

---

[299] I also address in that appendix Mr. Kaczmarek's response to my critique that he overdesigned his model.

[300] See Table 1, below, zero GBL scenario.

[301] Kaczmarek Second Report, ¶ 23. Further, in Kaczmarek First Report, ¶ 197, Mr. Kaczmarek indicates that the key input to his model, the amount of additional sales in his But-For Scenarios, was provided to him by counsel. I discussed this issue in NERA Expert Report, ¶ 108.

[302] Ibid. While Mr. Kaczmarek qualifies that Celgar's "net-of-load" standard is tied to its 2007 load, this characterization is misleading. Net-of-load is a technical term that refers to the amount of generation above an

Celgar's load grew, yet its GBL did not grow correspondingly, as it would under a net-of-load standard. Moreover, this ignores the "Seller Consumed Energy" arrangement that Mr. Kaczmarek acknowledges elsewhere in his report; he even concedes (and then apparently ignores) that the [redacted].[303]

173. Mr. Kaczmarek admits that he does not know whether the "Measures" violate NAFTA but he insists that their effects are known. For example:[304]

- He claims that Celgar's EPA prevents sales to any party except BCH. However, this is a standard condition in all BCH EPAs which is consistent with the rationale for the incentive nature of the contracts, i.e., incremental (and hence committed) capacity.[305] Also, Celgar is the only EPA holder with a Side Letter Agreement that would allow it to sell to other parties below its GBL if it reaches (and the BCUC approves) an agreement with its utility, FortisBC, for supply while self-generating.[306]

- He claims that G-48-09 prevents FortisBC from supplying Celgar if Celgar is selling its self-generated electricity. But this was only a temporary limitation until Celgar and FortisBC reached a supply agreement, and until FortisBC instituted a rate reflecting a matching methodology preventing supply to Celgar of PPA purchases from BCH under rate schedule 3808 (the rate in the PPA, which includes low embedded cost power).

- He claims that the Seller Consumed Energy arrangement [redacted] But it is economically correct for Seller Consumed Energy [redacted]

---

entity's current load. A net-of-load standard cannot be tied to an historical load level, as in Mr. Kaczmarek's characterization.

303 Kaczmarek Second Report, ¶ 92.

304 Ibid, ¶ 26.

305 See Scouras Second Witness Statement ¶¶ 8-10 for a discussion on the rationale for the standard exclusivity clause in BCH's EPAs.

306 Ibid, ¶ 33.

174. Based on my analysis of Claimant's response to my first report, I once again conclude that there is no basis for the allegation that there have been any damages related to the "Measures" as defined by Claimant in this matter because:

- The Seller Consumed Energy arrangement between Celgar and BCH [redacted]
- The Side Letter Agreement between Celgar and BCH only required Celgar to come to an agreement with FortisBC in order to sell below-GBL electricity under its EPA, therefore there are no damages associated with BCH's exclusivity provision.[308]
- The methodology applied by BCH in assigning GBLs was consistent and consistently applied to each of the mills with GBLs including Celgar, therefore there are no damages associated with Celgar's GBL.[309]

175. Below I address in detail damages related to each measure. When addressing Mr. Kaczmarek's damages calculations related to Celgar's GBL (Section V.A.3 below), despite the fundamental flaws in Claimant's arguments with respect to GBLs, to assess the effects of Mr. Kaczmarek's errors on damages I present corrected versions of his damages quanta based on his different GBL scenarios.

1. Damages due to G-48-09

176. Claimant has conceded that due to the Seller Consumed Energy arrangement between BCH and Celgar, Celgar [redacted].[310]

177. While Claimant agrees that Order G-48-09 does not cause a separate harm from its alleged GBL-related harm, Claimant does assert that Order G-48-09 harms it by

---

[307] NERA Expert Report, ¶ 83.

[308] Ibid, ¶¶ 11, 82, and footnote 118.

[309] Ibid, Section III.B.2.

[310] Reply Memorial, ¶ 202-203 and 205.

indirectly preventing it from selling below its load to third parties, alleging that the Order effectively prevents it from receiving embedded cost replacement power. However, this is incorrect for four reasons:

- First, Celgar's inability to reach a supply agreement with FortisBC is the only factor that has prevented it from making third-party sales, as I discussed above.[311]
- Second, even if Celgar had access to the embedded cost power it desires, making below-GBL sales to BCH or third parties is a chimera.[312]
- Third, even if Order G-48-09 were objectionable, Celgar likely would still not have access to low embedded cost power for the purpose of arbitrage in a way that would result in harm to ratepayers.
- Fourth, any claim of damages associated with Order G-48-09 would need to account for any Celgar self-supply commitment under the 1991 Ministers' Order.

178. Therefore, there are no damages due to Order G-48-09.

2. Damages due to exclusivity agreement and Side Letter Agreement

179. Claimant argues that the "exclusivity" provision in its EPA with BCH prevents it from making below-GBL sales. But this is incorrect: as I noted above in ¶ 154, Celgar was the only mill to receive a Side Letter Agreement in connection with an EPA with BCH. This agreement allows Celgar to sell below-GBL generation if it is able to negotiate a supply agreement with FortisBC that is acceptable to the BCUC. Celgar's inability to reach such an agreement, not the standard exclusivity provision in all EPAs with BCH, is the true constraint on Celgar's ability to sell third parties below-GBL power.

180. Additionally, as I demonstrated above in Section IV.C.2.ii, Celgar would not have been able to sell its below-GBL generation at a price above the cost that it would incur to supply its load. Celgar demonstrably had no options to sell its power at firm green

[311] Swanson Second Witness Statement, Section D.

[312] See Sections IV.C.2.ii and IV.C.2.iii above.

energy rates to third parties[313] and because BCH would be unwilling to purchase below-GBL power, Celgar's most realistic remaining option would be to sell this energy in the Mid-C market. However, as Figure 3 and Figure 4 demonstrate, selling at Mid-C rates would at almost all times have resulted in a financial loss for Celgar.[314]

181. Finally, as with damages associated with Order G-48-09, any claim of damages associated with the exclusivity provision would need to ignore the 1991 Ministers' Order, since the third-party sales Mercer desires to make would be from generation that I understand may be committed to self-supply under that Order.

3. Damages due to Celgar's GBL being set incorrectly

182. Mr. Kaczmarek's damages quantifications are calculated assuming that Celgar should have received a different GBL. Further, the damages scenarios presented by Claimant in its Reply Memorial are also based on different GBL assumptions.[315]

183. Although, as discussed above, I disagree that Celgar's GBL was set in a less favorable way then for other mills.[316] Nonetheless, it is useful to appreciate the effects of the errors in his damages quantifications on his quantum; I present these effects below.

184. A crucial question in quantifying damages assuming a lower GBL is whether Celgar would be able to sell all its above GBL electricity at prices identical to the firm energy prices in its EPA with BCH (which Mr. Kaczmarek assumes). However, if it is not appropriate to determine damages based on BCH firm energy prices, then there are no damages due to the lack of availability of realistic third-party sales, much less sales at the

---

313 MacDougall Witness Statement, Section C (especially Section C.2), Krauss Witness Statement, ¶ 18 and Section C, and Garratt Witness Statement, Section C.

314 And these figures assume that Celgar would be able to secure transmission access at regulated transmission tariff rates, which would be especially unlikely in the few higher price periods where it might appear at first that Celgar could make a sale to Mid-C.

315 Reply Memorial, ¶¶ 529-536.

316 See ¶ 42 above and NERA Expert Report, Section III.B.2 and Appendix 2. Further, Claimant would have to overcome possible restrictions on its ability to sell its below-load self-generation due to the Ministers' Order (see ¶ 162 above).

firm energy EPA prices that Mr. Kaczmarek assumes.[317] For this reason I assume *arguendo* for the purpose of quantification that the above-GBL electricity would be procured at the incentive price in BCH EPAs.

185. I provide my corrections to Mr. Kaczmarek's damages under the hypothetical that Celgar would be able to purchase replacement cost power at low embedded cost rates. In this alternative, I do not correct Mr. Kaczmarek's assumption that the 2008 PSA would be Celgar's replacement rate.[318]

186. Assuming Celgar's damages are calculated based on BCH firm energy EPA prices (and assuming that Celgar is supplied under the 2008 PSA), I have corrected Mr. Kaczmarek's damages calculations for the following errors:[319]

- Speculatively extending damages beyond the end of the term of Celgar's EPA (2020). I explained the rationale for this correction in Section IV.C.2.iv.
- Using an inapt discount rate.[320] See Appendix 2, Sections B.2 and B.3.
- Understating under-delivery penalties in the But-For Scenario. See Appendix 2, Section B.4.
- Ignoring Transmission tariffs that Celgar would have to pay. See Appendix 2, Section B.5.i.
- Calculating interest with erroneous formulas. See Appendix 2, Section B.5.ii for details.

187. Also, as I note in Appendix 2, Section A, Mr. Kaczmarek only partially accepted my criticism of when damages for Celgar would begin (assuming hypothetically there are damages). I do not make a further correction at this time, as there is some ambiguity surrounding this issue due to the uncertainty around the terms of Celgar's potential sales

---

317 See discussion above in Sections IV.C.2.ii and IV.C.2.iii.

318 Kaczmarek Second Report, ¶ 188. The 2008 PSA reflects the low embedded cost rates Celgar desires.

319 Appendix 3.A presents details of how each correction was implemented in my modeling, and Appendix 3.B is Mr. Kaczmarek's model with the corrections implemented.

320 Mr. Kaczmarek considers an inapt capital structure and uses an indirect and imprecise method to calculate the cost of capital of a hypothetical third party purchaser.

arrangements "But For" the Measures. However, I have been informed by Respondent's counsel that there may be NAFTA-related reasons why Claimant's damages calculations cannot begin before September 27, 2010.[321] In this situation, Mr. Kaczmarek's damages quanta would need to be recalculated assuming damages no earlier than that date.[322] In addition, in my first report and this report I present contractual arguments for basing damages on this date.[323]

188. In order to minimize the risk of disagreement between the parties regarding these calculations, I have calculated damages using Mr. Kaczmarek's damages model. Table 1 below presents my correction of Mr. Kaczmarek's damages.

---

[321] See Reply Memorial, ¶ 615.

[322] Under a September 27, 2010 start date, the corrected quanta in Table 1 would be reduced further, where the level of reduction depends on the scenario. For example, with this additional correction, preliminarily I estimate that damages would be reduced by an additional C$ 26 million in Mr. Kaczmarek's zero GBL scenario. If September 27, 2010 is the correct starting date for damages, I can update all of my corrections to Mr. Kaczmarek's quanta.

[323] See NERA Expert Report, ¶ 140, first bullet point and Appendix 2, ¶¶ 4-5 to this present report.

Table 1: Correction of Mr. Kaczmarek's Damages Calculations[324]

Mr. Kaczmarek's Damages Scenario	GBL (MWh)	Mr. Kaczmarek's Uncorrected Damages (C$ '000s)	Mr. Kaczmarek's Corrected Damages (C$ '000s)	Overstatement in Damages (C$ '000s)	Percentage Overstatement (%)
No Load Displacement Obligation and/or Comparable to Skookumchuck Mill's 1997 EPA	[redacted]	[redacted]	[redacted]	[redacted]	70%
Comparable to Tolko Industries Ltd.'s GBL	148,674	147,019	83,427	63,592	76%
Comparable to Howe Sound's 2010 EPA	[redacted]	[redacted]	[redacted]	[redacted]	77%
Celgar's 2001 generation-to-load (Order G-38-01)	186,123	119,783	67,091	52,692	79%
Levels comparable to Skookumchuck Mill's 2009 EPA	[redacted]	[redacted]	[redacted]	[redacted]	79%
Celgar's 2002 generation-to-load (2003 Heritage Contract)	220,022	95,062	52,303	42,758	82%
Celgar's avg. 1994-2006 generation-to-load (Ministers' Order)	249,700	73,213	39,357	33,856	86%
Celgar's 2006 generation-to-load (BC Hydro EPA)	268,200	59,519	31,287	28,232	90%
Celgar's avg. 2005 & 2006 generation-to-load (Before Project Blue Goose)	271,095	57,359	30,024	27,335	91%
Celgar's 2007 generation-to-load (BC Hydro EPA)	326,715	15,074	5,751	9,323	162%

189. I note that Mr. Kaczmarek's zero GBL scenario, "No load displacement obligation and/or comparable to Skookumchuck Mill's 1997 EPA," is based on two different theories. One is that Celgar should have the right to sell all of its generation based on its allegedly different treatment compared to Howe Sound and Canfor with respect to load displacement services.[325] I have already replied to the load-displacement assertion above.[326] The second argument that attempts to justify a zero GBL is the treatment Tembec was accorded in its 1997 EPA. Even if *arguendo* Claimant should have received

[324] Appendix 3.B, worksheet "Appendix 3.B.2 - Summary". Worksheet "Appendix 3.B - Cover Sheet" of that same spreadsheet describes how to run the corrections in Appendix 3.B. These figures do not reflect a later start date for calculating damages as discussed above.

[325] See Reply Memorial, ¶ 530.

[326] I addressed flaws in Claimant's arguments specific to this damages theory above in Section IV.C.2.vi.

the same treatment as Tembec did in its 1997 EPA, a zero GBL does *not* represent that treatment. While Tembec's 1997 EPA [redacted] as I addressed in Appendix 2 to my first report. This invalidates a zero GBL scenario based on that EPA.

190. I also note that Mr. Kaczmarek's presents two damages quanta for each of his scenarios, one assumes a 20-year bond rate for pre-award interest and the other assumes a prime rate + 2%. For simplicity, Table 1 only corrects Mr. Kaczmarek's prime rate + 2% damages quanta. The magnitudes of my corrections are virtually identical under his 20-year bond rate damages quanta.[327]

191. Finally, I note that several of Mr. Kaczmarek's damages calculations assume that Celgar's GBL was incorrect for two reasons: 1) it was based on Celgar's operation in the wrong historical period and 2) it was incorrect not to reduce Celgar's GBL by its historical sales. If the historical period used for setting Celgar's GBL was incorrect but BCH was correct *not* to subtract Celgar's historical sales, alternative GBL amounts would need to be considered for determining the quantum of damages. To avoid inundating the reader with damages scenarios, I have not calculated damages for these cases.

Respectfully submitted,

Michael B. Rosenzweig

[327] An alternative table showing the correction of damages under Mr. Kaczmarek's 20-year Canadian bond rate scenario can be found in Appendix 2, Section C.

VI. Appendices

1. **Documents Relied Upon**

2. **Technical Issues Related to the Errors in Mr. Kaczmarek's Damages Analysis**

3. **Correction of Mr. Kaczmarek's Damages Model**

    a. Details of Corrections to Mr. Kaczmarek's Model

    b. Corrected Version of Mr. Kaczmarek's Damages Model

Appendix 2

Technical Issues Related to the Errors in Mr. Kaczmarek's Damages Analysis

1. In response to my first report, Mr. Kaczmarek admits that he made a number of errors in the damages calculation presented in his first report. Additionally, he rejects a number of other errors that I pointed out in my first report. However, the bases on which he rejects my criticisms are flawed. In this appendix I will first briefly discuss the nature of each of the errors that Mr. Kaczmarek acknowledges in his second report, and then discuss each of the additional errors that still persist in his updated analysis, including two new errors that I identified since the filing of my previous report.

A. Mr. Kaczmarek's quantum corrections

2. In his second report Mr. Kaczmarek confirms three mistakes in his quantitative analysis, which I pointed out in my first report. Mr. Kaczmarek agrees that each mistake he made led him to overstate damages.

3. First, I noted that "Mr. Kaczmarek has failed to account for all of the electricity produced at the Celgar mill in his Actual Scenario. The amount he fails to account for is equal to the amount that he assumes Celgar purchases from FortisBC in his Actual Scenario."[1] Mr. Kaczmarek responded by saying that my "comments are not entirely clear to [him]."[2] Nonetheless, immediately following that statement, Mr. Kaczmarek admits to an error that he "double-count[ed] purchases of electricity"[3]. This is precisely the error to which I was referring. Mr. Kaczmarek has adjusted his modeling, conceding that this error meant that he overstated his damages by about C$ 6 million.[4]

4. Second, I criticized Mr. Kaczmarek for incorrectly starting his damages calculation on the date of BCUC Order G-48-09, 6 May 2009, rather than using September 2010, when

---

[1] NERA Expert Report, ¶ 141.

[2] Kaczmarek Second Report, ¶ 138.

[3] Ibid.

[4] Ibid.

contractually Celgar began selling energy to BCH at EPA prices.[5] Mr. Kaczmarek partially admits to this error.[6] He has recalculated his damages based on a start date of 31 July 2009, the day the EPA came into effect, lowering damages. However, Mr. Kaczmarek disagrees that damages should start in September 2010, which is when Celgar's new turbine achieved commercial operation (the Celgar-BCH EPA identified firm sales would begin on the new turbine's COD[7]).

5. Mr. Kaczmarek argues that because Mercer seeks damages related to the generation of its existing turbine, the COD of the new turbine is not relevant. Basically, Mr. Kaczmarek's assumption is that if Celgar's GBL were lower, effectively allowing below-load sales from its existing turbine, then it would begin selling power at the EPA rates for firm energy sales before the COD of Celgar's new turbine. However, the mills which received below-historical-load GBLs to incentivize idle generation—the very same mills whose treatment Celgar desires—themselves often have EPAs with sales beginning after the COD of new or refurbished generation assets. So, at the least there is ambiguity in when Celgar would have begun selling at EPA prices in the But-For Scenario. Given this, having the same start date for EPA sales in Mr. Kaczmarek's Actual and But-For Scenarios would be the conservative choice. However, he chooses the less conservative date which yields a higher quantum.[8] While in light of this ambiguity I do not further correct Mr. Kaczmarek's calculations, in the hypothetical that there are damages, if damages were to start on the same date Celgar began to make firm energy EPA sales, then the quantum should be lowered accordingly. There also may be NAFTA-related

---

5 NERA Expert Report, ¶ 140, first bullet point.

6 Kaczmarek Second Report, ¶¶ 133-134.

7 Ibid, ¶ 133. COD is commercial operation date. See BC Hydro and Zellstoff Celgar Limited Partnership Electricity Purchase Agreement, January 27, 2009, MER00012857, **NERA-34**, Appendix 3, Clause 3.

8 Also, even without a lower GBL, Celgar could have made above GBL firm-energy sales to BCH before the new turbine came online, as it generated more than its GBL from that older turbine alone. Presumably the parties expected this when the EPA was signed (the older turbine's output exceeded Celgar's GBL by 25 GWh in 2008, the year prior to the signing of the EPA), but still the parties agreed to wait until the new turbine's COD before any firm-energy sales could begin.

reasons that limit the start for damages to September 2010.[9] If this is the case, then I reserve the right to update my correction of Mr. Kaczmarek's damages quanta and a preliminary estimate is changes on the order of C$ 26 million in the zero GBL scenario.

6. Third, as I noted in my first report, Mr. Kaczmarek committed a math error in the calculation of average debt to equity ratio of the comparable companies that he chose.[10] Mr. Kaczmarek has updated his analysis to include the corrected debt-to-equity ratio, lowering damages.[11]

7. Correcting for these damages, Mr. Kaczmarek reduces his quantum by about $C 10 million (for his zero GBL scenario). This amount can be inferred from Mr. Kaczmarek's corrected version of the model attached to his first report.[12]

B. Technical errors in Mr. Kaczmarek's updated analysis

1. Mr. Kaczmarek overdesigns his model

8. In his second report, Mr. Kaczmarek agrees that, as I indicated in my first report, a simpler model could also have produced the same damages quantum that was produced by his extensive model of Celgar's entire mill operation. His stated justification for creating a more complex model is to be able to show the diminution of value of Celgar in percentage terms.[13] This seems suspect since this has nothing to do with actual damages. The more complex model appears to be simply a matter of optics.

---

[9] See Section V.A.3 of the main text of my report.

[10] NERA Expert Report, footnote 194.

[11] Kaczmarek Second Report, ¶ 118.

[12] "RESTRICTED_Appendix 5-6_Kaczmarek Second Report_Celgar Mill Valuation Model_Corrected First Report Model.xlsx" "Corrected Kaczmarek Frist Model", **NERA-91**. This model, however, only corrects two of the errors to which Mr. Kaczmarek admits. It does not correct for his admission that damages should start as of the end of July 31, 2009 (Kaczmarek Second Report, ¶ 134). Cells E62 and E107 of worksheet "5.B_Model_But-For" in Corrected Kaczmarek Frist Model should have been corrected to reflect the five months of damages Mr. Kaczmarek assumes for 2009. Once these cells are corrected, it can be seen that the total effect is about C$ 10 million for his zero GBL scenario (worksheet "5.B Summary" shows his previous and corrected damages quanta).

[13] Kaczmarek Second Report, ¶¶ 142-145.

2. Mr. Kaczmarek incorrectly uses a weighted average cost of capital for his discount rate

9. Mr. Kaczmarek claims that my criticism that a potential third party purchase of Celgar would be likely equity financed is inapt.[14] But Mr. Kaczmarek confuses how firms raise funds for capital needs, versus how funds are actually invested in new assets. He is correct that firms including pulp and paper firms typically *raise capital* through debt and equity. But this is irrelevant for Mr. Kaczmarek's damages calculation, as Mr. Kaczmarek is modelling how a third-party might actually *acquire* Celgar. When firms raise debt, it generally is corporate debt, which is paid back from the results of total firm operations. This, for example, is different from project financing. Due to the risks of any single project, project financing is generally much more expensive and sometimes can be difficult to obtain.

10. Therefore, a firm might *raise capital* for a purchase through both (lower-cost corporate) debt and equity, but will actually *pay for* that purchase with cash (or cash equivalents). But this cash purchase is effectively *equity*. If the project fails, *all the money* the firm invested in that project could be lost. Nonetheless, the firm still has to pay back the debt that it raised, as that debt was corporate and not tied to the project. This is the typical financing situation that Mr. Kaczmarek ignores. In any case, the facts of this case support my argument. When Mercer purchased Celgar in 2005, it *raised* both debt and equity funds *at the corporate level*, but it actually paid for Celgar with cash and cash equivalents.[15] So it is Mercer's shareholders that are at risk with the Celgar acquisition.

---

[14] Ibid, ¶¶ 112 to 115.

[15] Specifically, Mercer paid cash plus Mercer shares plus an amount for Celgar's working capital that it would assume. The mill was acquired using proceeds from capital Mercer raised *at the corporate level* of about US $378 million. Mercer used this money not just for buying Celgar, but also for repaying debt at its Rosenthal mill and for corporate working capital. See "Mercer International Inc. announces completion of the acquisition of the Celgar NBSN pulp mill and note and share offerings", Mercer Press Release, "Mercer International Inc. Announces Completion of the Acquisition of the Celgar NBSK Pulp Mill and Note and Share Offerings," dated 14 February 2005, **NERA-92**.

Mercer would need to receive an equity return for its investment to properly compensate its shareholders – presumably a third-party investor would do the same.[16]

3. Mr. Kaczmarek's calculation of the cost of equity for a potential purchaser of Celgar is flawed

11. In my first report, in addition to noting the inappropriateness of Mr. Kaczmarek's use of a WACC as the discount rate for his analysis, I also criticized his calculation of the cost of equity that a hypothetical buyer of the Celgar mill would use. Mr. Kaczmarek also responds to this criticism in his second report.[17]

12. I criticized Mr. Kaczmarek for estimating a company-wide cost of equity rather than the return on equity for investing in a project such as Celgar.[18] Mr. Kaczmarek responds that he assumed that the investor already is diversified through the assets and companies in which it has ownership stakes, citing Prof. Aswath Damodaran. However, this diversification argument applies to investing in a trading context for securities not to the purchase of a long term asset.

13. Similarly, I criticized Mr. Kaczmarek for not addressing risks that might apply to Celgar specifically. I noted that Mercer's internal documents appear to show that Celgar's EBITDA volatility was higher than the volatility of Mercer's other mills.[19] Mr. Kaczmarek responds by pointing out that Celgar's EBIDTA volatility is largely driven by fiber costs.[20] This may or not be correct, but this does not respond to the point that Celgar may be *more* volatile than other mills (at least compared to other Mercer mills) and that this volatility would influence the return demanded by a purchaser.

---

[16] Because Mercer's Weighted Average Cost of Capital ("WACC") is far less than its required return on equity, this error overstates damages.

[17] NERA Expert Report, ¶¶ 136-138 and Kaczmarek Second Report, ¶¶ 119-130.

[18] NERA Expert Report, ¶¶ 136-137.

[19] Ibid, ¶138.

[20] Kaczmarek Second Report, ¶ 130.

14. I also mentioned the 63 risks identified in internal Mercer documents.[21] Mr. Kaczmarek points out that (by his count) 53 of the Mercer risks are not Celgar-specific (and some of those are specific to Mercer's German mills) and 10 risks are Celgar-specific (though he claims eight of those Mercer has mitigated).[22] This does not refute the point that Celgar faces many risks (even if not all are Celgar-specific), and that a purchaser of Celgar would likely consider these risks. Mr. Kaczmarek fails to account for these risks in his calculations.

15. More generally, I also highlighted the fact that the mills addressed in the present proceeding involve numerous bankruptcies, ownership changes, and temporary shutdowns – all of which point to risks that a potential buyer of Celgar would consider.[23] Mr. Kaczmarek does not respond to this criticism.

16. In justifying his calculation of the cost of equity calculation in his second report, Mr. Kaczmarek pointed out that his calculations were based on the "standard" method of the Capital Asset Pricing Method ("CAPM").[24] However, what he fails to acknowledge is that while CAPM is a *popular* methodology for estimating the cost of equity for highly liquid stocks of publically traded companies, it is both an indirect and inapt method for estimating the return that an investor would require on its equity investment in a risky, single asset such as Celgar.

17. Further, there are a number of underlying flaws with the CAPM method: (i) CAPM is an indirect approach that relies on market assumptions and information not specific to the company, (ii) CAPM may not capture the idiosyncrasies of the market where the company under analysis is located, (iii) CAPM is not a forward-looking methodology, (iv) CAPM's input data may require the use of proxies and rely on statistical analysis that has several shortfalls, and (v) CAPM is volatile and it changes as the market changes.

---

[21] NERA Expert Report, ¶138.

[22] Kaczmarek Second Report, ¶¶ 123-127.

[23] NERA Expert Report, ¶138.

[24] Kaczmarek Second Report, ¶ 124.

18. By ignoring the idiosyncratic risks of Celgar and by using an inappropriate methodology, Mr. Kaczmarek's underestimates the cost of equity to be 9.07%. [25] However, this estimate is [redacted]][26] Often, a company will clearly state (at least in its internal documents) what return expectations it is relying on to justify its investment. When this is available, this is the best measure of cost of equity for an investment.

19. Related to Mercer's investment in Celgar, I identified two presentations prepared for Mercer's Board that calculated forecasted profits from the project.[27] I have inferred the expected equity return from these presentations. One estimate was performed by the consulting/engineering firm [redacted] and the second by the investment bank [redacted] The EBITDA expectations presented in the [redacted] due diligence report imply an equity IRR of 12.4% to 13.4% (on the assumption that Celgar would go forward with the Blue Goose project). In its presentation to the board, [redacted] presents expected EBITDA under two scenarios that reflect Mercer going forward with project Blue Goose, and these imply equity IRRs of 11.9% to 13.9%.[28] Each of these scenarios prepared for Mercer implies a [redacted] than Mr. Kaczmarek's calculation, highlighting the inaptness of his approach.

---

[25] Ibid, ¶ 169

[26] While Mr. Kaczmarek's theory is that a third-party investor would buy Celgar, the actual, historical demanded return on equity from an actual investment in Celgar (in this case, by Mercer) is far more apt than Mr. Kaczmarek's statistical approximations of (purportedly) comparable firms' company-wide costs of equity.

[27] Jaakko Poyry NLK Inc., 18 November 2004, "Project Next Step – Technical Due Diligence for Mercer International Inc, -- Draft.", **NERA-93**, and CIBC World Markets, November 19, 2004, "Presentation to the Board of Trustees of Mercer International Inc.", **NERA-94**.

[28] See Appendix 3.B, worksheet "Appendix 3.B.6 -Acquisition IRR" for my calculation of these IRRs. I note that I have made several conservative assumptions in calculating these IRR figures (see that worksheet and Appendix 3.A, Section B).

4. Mr. Kaczmarek's calculation of under generation penalties in the but-for world is flawed

20. Mr. Kaczmarek rejects my criticism that he improperly ignores penalties in the But-For Scenario for not delivering the required EPA energy amounts.[29] However, his rejection is based on a fundamental misunderstanding of how contracts for firm energy purchase work. Namely, the purpose of the penalties associated with under-generation is to incentivize the seller meeting its delivery obligations. These penalties are an essential component of the EPA contracts. Self-generators receive the benefit of selling a defined amount of energy on a firm (i.e., uninterrupted) basis only if they accept the risk of having to pay under-generation penalties if they fail to meet that firm supply commitment. Therefore, the amount of firm energy that a generator can sell to BCH at the incentivized rates must be the same as the threshold for under-generation penalties. By failing to properly adjust this penalty threshold to represent the firm energy amounts in his But-For Scenarios, Mr. Kaczmarek continues to overstate damages in each of his scenarios.

21. Specifically, Mr. Kaczmarek never specifies the precise level of firm energy that he assumes that BCH (or BCH plus a third party) has contracted for from Celgar in his But-for scenario. However, taking his zero GBL scenario as an example, the *contracted* amount of firm energy he assumes in the But-for scenario must be at least 546 GWh/year, as he assumes sales at firm energy EPA prices of this amount in the highest-sales year he has modelled.[30]

22. More realistically, Celgar's firm energy *contracted* amount would be 566 GWh in Mr. Kaczmarek's zero GBL scenario, as this is the firm energy contracted amount in Celgar's actual EPA with BCH (238 GWh) *plus* the below-GBL generation Celgar desires to sell

---

[29] Kaczmarek Second Report, ¶¶ 139-141.

[30] **NERA-91**, worksheet "3.B_Model_But-For", cell P69 (his assumed sales in 2020). While this is from Mr. Kaczmarek's (corrected) first damages model, which assumes slightly higher sales from Celgar than his second model, Mr. Kaczmarek has made no indication that he assumes a different firm sales amount in his updated modeling. Also, my conclusions would not change even if I took the highest firm energy sales year from his second model.

(328 GWh[31]). However, regardless of whether Celgar contracts for 546 GWh or 566 GWh of firm energy, Mr. Kaczmarek continues to maintain that Celgar is only obliged to provide 238 GWh to avoid penalties.

23. For example, Celgar's 2013 generation would lead to 442 GWh of firm energy sales in his zero GBL scenario,[32] well below the corrected firm energy contracted amount of 566 GWh, but Mr. Kaczmarek erroneously continues to model that Celgar would pay no penalties in this situation.[33]

5. Additional errors identified in Mr. Kaczmarek's model

24. In preparing my rejoinder report, I identified two additional errors in Mr. Kaczmarek's damages model. One of these errors – failing to account for FortisBC transmission tariffs that Celgar would need to pay in order to deliver its additional energy – represents a misunderstanding of the full cost of Celgar selling additional power to third parties (or to BCH). The second error – miscalculating the interest on the historical damages he calculates – is a calculation error in his Excel model. I discuss each of these in turn.

i. Failure to account for transmission tariffs

25. Mr. Kaczmarek's damages model assumes that Celgar does not pay any transmission tariffs to FortisBC (other than in the form of line losses) on the electricity that it delivers to BCH, via the FortisBC system. However, as pointed out by Mr. Swanson of FortisBC, Celgar is responsible for paying transmission tariffs under Rate Schedules 103 and 104 on any electricity that it transmits over the FortisBC grid.[34] Celgar has to pay these

---

[31] This is Celgar's GBL of 349 GWh times (100% - 6.08%), where 6.08% represents its transmission losses (see **NERA-91**, worksheet "3.B_Model_But-For", cell C68).

[32] See Kaczmarek Second Model, **NERA-79**, worksheet "3.B_Model_But-For", cell I69, when Mr. Kaczmarek's zero GBL scenario is turned on in that model.

[33] This error applies in each of Mr. Kaczmarek's scenarios because any decrease in Celgar's GBL would result in an equivalent increase in its contractual obligation to deliver. Therefore, Mr. Kaczmarek is incorrect when he rejects my criticism in ¶ 140 of his second report. Mr. Kaczmarek says I am wrong because he includes penalties in some scenarios. While he does include penalties in some scenarios, this does not change the fact that he under-calculates penalties in all his scenarios, even those where he has some penalties.

[34] Swanson Second Witness Statement, ¶ 24.

tariffs on the above-GBL electricity that it sells to BCH under its existing EPA. However, if Celgar were allowed to sell additional, below-GBL, electricity to BCH, it would need to pay these tariffs on that electricity as well.[35] By ignoring these costs, Mr. Kaczmarek overstates damages.[36]

ii. Incorrect calculation of accrued interest on lost profits

26. Mr. Kaczmarek's damages model has two errors in the way that it applies his interest rates to his calculation of historical damages. The first is an error that was present in his previous calculation of damages and persists in the calculation associated with his second expert report. This is a formula error in his calculation of cumulative interest, which results in the double counting of interest for each year between 2009 and 2014. The second error is also a calculation error and appears in the formula that he uses to calculate interest for half years. This error is new to his updated damages model. Both of these calculation errors result in the overstatement of damages.

C. Alternative damages correction table

27. As I stated in my report, Mr. Kaczmarek has calculated damages using two different interest rates to bring damages in the historic period forward. In my report I presented a table showing the corrected calculations based on Mr. Kaczmarek's damages using the Canadian Prime rate + 2%. Below is a similar table correcting for Mr. Kaczmarek's damages calculations using his 20-Year Canadian bond rate.

---

35 The combined per unit cost of these tariffs was C$ 2.31 / MWh in 2014.

36 Due to this error alone, Mr. Kaczmarek has overstated damages by about C$ 9 million, considering his zero GBL scenario.

Table A2.1: Correction of Mr. Kaczmarek's Damages Calculations Using Canadian 20-Year Bond Rate[37]

Mr. Kaczmarek's Damages Scenario	GBL (MWh)	Mr. Kaczmarek's Uncorrected Damages (C$ '000s)	Mr. Kaczmarek's Corrected Damages (C$ '000s)	Overstatement in Damages (C$ '000s)	Percentage Overstatement (%)
No Load Displacement Obligation and/or Comparable to Skookumchuck Mill's 1997 EPA	[redacted]	[redacted]	[redacted]	[redacted]	70%
Comparable to Tolko Industries Ltd.'s GBL	148,674	142,451	81,182	61,270	75%
Comparable to Howe Sound's 2010 EPA	[redacted]	[redacted]	[redacted]	[redacted]	76%
Celgar's 2001 generation-to-load (Order G-38-01)	186,123	116,103	65,305	50,797	78%
Levels comparable to Skookumchuck Mill's 2009 EPA	[redacted]	[redacted]	[redacted]	[redacted]	78%
Celgar's 2002 generation-to-load (2003 Heritage Contract)	220,022	92,186	50,934	41,252	81%
Celgar's avg. 1994-2006 generation-to-load (Ministers' Order)	249,700	71,050	38,352	32,699	85%
Celgar's 2006 generation-to-load (BC Hydro EPA)	268,200	57,808	30,509	27,299	89%
Celgar's avg. 2005 & 2006 generation-to-load (Before Project Blue Goose)	271,095	55,720	29,281	26,439	90%
Celgar's 2007 generation-to-load (BC Hydro EPA)	326,715	14,814	5,692	9,122	160%

[37] Appendix 3.B, worksheet "Appendix 3.B.2 - Summary".

Appendix 3.A

Details of Corrections to Mr. Kaczmarek's Model

1. In an effort to reduce the possible disagreements regarding the alternative damages figures I present in my report, I have not created my own damages model. Rather, I have used Mr. Kaczmarek's spreadsheet model, which he provided as an appendix to his second expert report.[1] I have corrected his errors directly in his spreadsheet, indicating any changes I have made. This corrected model is attached to this report as a spreadsheet, labeled Appendix 3.B.[2] This appendix presents the details of how I implemented my corrections to his analysis.

A. Study horizon

2. Mr. Kaczmarek calculated the value of Celgar's lost cash flows *ad infinitum* using a perpetuity formula based on the cash flows he assumes that Celgar would generate in 2020. To correct for his inclusion of highly speculative *in perpetuity* damages[3], I adjusted Mr. Kaczmarek's calculation of the net present value of future cash flows to terminate in 2020.[4]

B. Discount rate

3. As I stated in Appendix 2, Section B.2 it is inappropriate in this case to use a WACC as a discount rate as the appropriate discount rate would be a cost of equity. Further, as discussed in Section B.3 of that appendix, the method that Mr. Kaczmarek has used to approximate a cost of equity for a hypothetical purchaser of Celgar is inapt, and the appropriate cost of equity specific to Celgar would range from [redacted] I use

---

1 Kaczmarek Second Model, **NERA-79**.

2 I added a worksheet titled "Appendix 3.B - Cover Sheet" to the spreadsheet Appendix 3.B, which describes how my changes to Mr. Kaczmarek's model can be identified in that spreadsheet. Specifically, I applied my corrections to Mr. Kaczmarek's condensed model (worksheet "2_Condensed Model" of his model), **NERA-79**.

3 See Section IV.C.2.iv of the text of my main report for details.

4 This correction can be seen in cell F127, of worksheet "Appendix 3.B.1 -Corrected Model" of Appendix 3.B.

the lower end of this range, [redacted] in my calculations.[5] I calculated these cost of equity values as follows.

- The cost of equity values are set to the IRRs implied by EBITDA forecasts from presentations by CIBC and Pöyry presented to Mercer prior to its decision to buy Celgar.[6]
- The total initial acquisition price of Celgar by Mercer is conservatively considered to have been [redacted] million.[7]
- I subtract CAPEX forecasts for Celgar from the forecasted EBITDA. These forecasts come from the [redacted] and consider anticipated Project Blue Goose costs.
- I also subtract taxes following the data and method in the CIBC presentation.
- I considered investment payback periods of 20 and 30 years, but to be conservative I used a cost of equity figure that reflects a 20 year payback period.

For details, see worksheet "Appendix 3.B.6 -Acquisition IRR", of Appendix 3.B.

C. Under-delivery penalties

4. As discussed in Appendix 2, Section B.4, Mr. Kaczmarek has erred in his But-For Scenario calculation by failing to account for all of the under-delivery penalties that Celgar would pay if it had a lower GBL. To correct for this in the model, I have set the required firm energy sales in each But-For Scenario to be:

---

[5] As discussed in Appendix 2, Section B.3, the cost of equity range of [redacted] represents the IRRs implied by various scenarios of earnings forecasts for Celgar presented to Mercer prior to its decision to purchase the mill, where these IRRs assume that Mercer undertook project Blue Goose. Forecasted IRRs that a company relies upon in making an investment decision reflects the return it expects, and demands, from the investment, and hence the IRRs are appropriate indicators of the cost of equity for that investment. My corrected cost of equity is found in cell C9 of worksheet "Appendix 3.B.4 - Model Inputs" of Appendix 3.B.

[6] **NERA-93** and **NERA-94.**

[7] This is the Adjusted Purchase Price stated in the [redacted] (**NERA-93**) (page 36), which represents the consideration for Celgar's assets plus its working capital [redacted] which represents the net effect of employee post-retirement plan considerations at Celgar, according to the [redacted] states on that page that it does not consider these post-retirement plan considerations in its value analysis, I do, to be conservative.

> [Celgar's required firm energy sales in the Actual Scenario (238 GWh)] + [the difference between Celgar's GBL in the Actual Scenario (349 GWh) and the lower GBL that applies in the But-For Scenario (varies by scenario)] * [100% – line losses (6.08%)].[8]

Celgar's penalties are then equal to the amount of required energy in each scenario not delivered times the penalty per MWh:

> [required energy - actual sales] * penalty/MWh

D. Transmission tariffs

5. As discussed in Appendix 2, Section B.5.i, Mr. Kaczmarek has failed to account for the transmission charges that Celgar pays FortisBC (under RS 103 and 104) for electricity that it sells to BCH (or to third parties). For 2009 to 2014, I rely on the historical tariff information provided by FortisBC for these tariffs.[9] For 2015-2020 I assume that these tariffs will increase at the same annual percentage rate as Mr. Kaczmarek assumes for the R.S. 31 energy charge. I added these tariffs to both Mr. Kaczmarek's Actual and But-For Scenarios, as he ignores them in both. However, I have not added these tariffs to the historical period (pre-June 30, 2014) in Mr. Kaczmarek's Actual Scenario. In this period, Mr. Kaczmarek's bases Celgar's cash flows on actual financial data from Celgar, which I assume already include these tariff charges.[10]

E. Interest calculation

6. Mr. Kaczmarek made multiple formula errors in his calculation of the interest that Celgar would have accrued on its purported losses due to reduced cash flows in the historic period (pre-June 30, 2014). This can be seen by looking at row 109 of worksheet

---

8 For example, if the GBL in a But-For scenario were 330 GWh, then the corrected firm energy sales requirement would be 256 GWh (= 238 GWh + (349 GWh - 330 GWh) * [100% - 6.08%]). This correction can be seen in cell D64, of worksheet "Appendix 3.B.1 -Corrected Model" of Appendix 3.B. GBLs are multiplied by line losses in this formula as GBLs represent generation pre-losses. The line losses percentage and the required firm energy sales quantities in the Actual Scenario can be found Mr. Kaczmarek's Second Report Model (**NERA-79**), worksheet "3.A_Model_Actual", cells C68 and C77.

9 **NERA-87.**

10 See rows 89 and 94 of worksheet "Appendix 3.B.1 -Corrected Model" of Appendix 3.B.

" 2_Condensed Model" in Mr. Kaczmarek's updated damages model.[11] Each cell of row 109 is intended to account for one additional year of interest accrued at the rates specified in row 108. However, the formula in column 'H' double counts interest.[12] Additionally Mr. Kaczmarek errs in his calculation of "half-year" interest in Column 'J' and (and half-year discounting in Column 'K').[13] Last, Mr. Kaczmarek has a small inconsistency in his formula in I109.[14]

F. Subtraction of historical sales in setting Celgar's GBL

7. As discussed in my report, under the hypothetical that Celgar's GBL was determined incorrectly, Mr. Kaczmarek has presented several damages scenarios that assume that *both* Celgar's GBL should be based on a different year and that its historical sales should have been subtracted from its generation to form its GBL (or equivalently that its historical purchases should have been subtracted from its load). However, he does not present scenarios that consider that the year for Celgar's GBL was incorrect, but it was *correct* to not subtract is sales (or purchases).[15]

---

[11] Kaczmarek Second Model, **NERA-79**. Each cell in that row should represent cumulative interest from the various historical periods Mr. Kaczmarek models to 30-June-2014 (his date for assessing damages). Mr. Kaczmarek calculates cumulative interest by first calculating interest for the most recent historical period (the first half or 2014). He then steps backwards in time adding on the incremental interest from each historical year. For example, the interest he applies to cash flows from 2012 would equal: a) the interest from the first half of 2014 to the date of loss basement; times b) the incremental interest from year 2013; and times c) and the incremental interest from year 2012.

[12] The formula should be "=(I109*(1+H108))^((I1-H1)/365)" but it is "=(I109*(1+H108))^((D113-H1)/365)". The reference to "I109" is the cumulative interest for column I. The reference to "(1+H108))^((I1-H1)/365" is the incremental interest for column H, which represents *one year of incremental interest*. But in his erroneous formula, instead of multiplying by the incremental interest for a single year, he multiples by interest covering a two-year period.

[13] His formulas in these cells include a term that is 365/2, but this should be just 365 (without dividing by two). The half year nature of these rates is already accounted for because in his row 1 of the same worksheet he specifies dates in Columns "J" and "K" that correspond to half years.

[14] He uses a different method to calculate interest in this column than in prior columns. Appendix 3.B, Worksheet "Appendix 3.B.1 -Corrected Model", row 117 presents the corrected interest rate calculations.

[15] See Section V.A.3 of my main report. My model is programmed for the possibility of these scenarios. Specifically, I have included *additional* scenarios that adjust Mr. Kaczmarek's But-For Scenarios' GBLs to be based on Celgar's historical generation rather than its historical generation minus sales.[15] As I discussed in my report, I have not included the results of these scenarios in my main report, to avoid the potential distraction of presenting too many scenarios.