

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

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)

**EXPERT REPORT OF MICHAEL ROSENZWEIG
OF NERA ECONOMIC CONSULTING**

August 22, 2014

Table of Contents

I.	Assignment, Qualifications, and Report Structure	3
II.	Summary	5
A.	What Claimant is seeking.....	5
B.	Claimant's arguments are flawed.....	8
1.	Mercer's Argument is too narrowly drawn.....	8
2.	Claimant's Discrimination Assertion	10
C.	The support Claimant provides for its case is deficient	12
D.	Conclusions	14
III.	Analysis of Claim	16
A.	The principles of economic regulation of electric utilities and their acquisition of generation resources set the context for this case	16
1.	Utility regulation.....	16
2.	Resource acquisition	18
B.	The economic and regulatory principles employed by BC Hydro in the acquisition of generation resources	19
1.	The BC regulatory framework and BCUC orders follow the regulatory principles outlined above.....	19
2.	BCH followed a consistent process and methodology for setting GBLs which it applied to all GBLs NERA investigated, including Celgar's.....	21
a.	Economic principles behind BC Hydro's GBL methodology.....	22
b.	Specifics of BC Hydro's GBL methodology	23
c.	Summary of BC Hydro GBL determinations	26
C.	Mr. Switlishoff's arguments are unsustainable	28
1.	Mr. Switlishoff defines issues incorrectly	30
2.	Mr. Switlishoff misunderstands that utilities acquire resources efficiently and in a way that protects ratepayers	31
3.	Mr. Switlishoff bases his analysis on an unjustifiably narrow set of comparators.....	34
4.	Mr. Switlishoff does not consider the substantive differences between Celgar and other mills which compelled case-by-case GBL determinations by BCH	38
5.	Mr. Switlishoff incorrectly claims that Celgar is being forced to provide "free" load displacement service.....	42

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

6.	Mr. Switlishoff mischaracterizes the net-of-load restriction	44
7.	Celgar not being able to arbitrage below its GBL is no different than the treatment accorded to other mills	47
8.	Mr. Switlishoff fails to understand that regulation is an evolutionary process	48
9.	Mr. Switlishoff misunderstands the cost-causality principle.....	48
10.	Claimant clearly did not need an incentive to invest in Celgar so an incentive would have been economically inefficient	49
11.	Mr. Switlishoff is silent on subsidies from Canada	52
D.	From an economic perspective, Claimant's quantum is unreliable	56
1.	Mr. Kaczmarek's damages analysis is flawed as its entire foundation is Mr. Switlishoff's flawed analysis.....	57
2.	Neither of the measures for which the Claimant seeks damages has resulted in the harm that it claims.....	58
a.	Mr. Kaczmarek has failed to show that the Claimant has suffered any loss arising out of the 40 MW GBL set in its EPA with BC Hydro	59
i.	Claimant has failed to substantiate any negative effect on its competitive position related to the setting of its GBL in its EPA	59
ii.	Mr. Kaczmarek's analysis assumes a greatly overstated GBL adjustment and uses a speculative FortisBC tariff for sales to Celgar	61
b.	Claimant could not be financially damaged by Order G-48-09	62
c.	Mr. Kaczmarek's analysis is speculative, error-filled and unreliable	65
i.	Mr. Kaczmarek's results are speculative	65
ii.	Quantitative errors in Mr. Kaczmarek's discount rate analysis.....	68
iii.	Quantitative errors in Mr. Kaczmarek's cash flow analysis	70
iv.	Mr. Kaczmarek over designs model.....	73
IV.	Conclusions.....	75

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

I. Assignment, Qualifications, and Report Structure

1. I am Michael Rosenzweig, a Special Consultant with NERA Economic Consulting. I have been asked by the Government of Canada (“Canada”) to prepare this expert report in response to the Memorial and accompanying expert reports filed by Mercer International Inc., the Claimant in this NAFTA arbitration.¹
2. My qualifications for submitting this report include extensive experience in economic and regulatory matters with specific application to international arbitral disputes involving infrastructure industries, such as electricity, natural gas and airports. I also have over 35 years of experience in government and in consulting for private and public utilities on economic and regulatory matters including investment issues related to resource adequacy. I acted as the technical assistant to a Commissioner at the US Federal Energy Commission as well as held the position of head of the Electric Power Division in the Energy Information Agency of the US Department of Energy. Most recently, I have acted as an expert in more than a dozen international arbitrations addressing liability and damages issues from an economic perspective. The details of my experience are available at Appendix 1.
3. My report is organized into three parts. A summary of my findings is presented in Section II. Section III addresses the economic and regulatory bases for assessing the claim put forward in Mercer’s Memorial and supporting expert reports and analyzes Claimant’s quantum assessment. Specifically, in Section III.A, I present a brief discussion of the basic principles of the economic regulation of electric utilities and resource acquisition as they relate to the present case. In Section III.B, I assess, with respect to the results of the previous section, the process and methodology employed by BC Hydro (“BCH”) to determine the Generator Baseline (“GBL”) contained in the energy purchase agreements (“EPA”) BCH negotiated with each pulp mill analyzed by Claimant’s expert. Next, in

¹ Mercer’s Memorial, dated March 31, 2014 (“Mercer’s Memorial”); Expert Statement of Elroy Switlishoff, P. Eng., M. Eng., (“Mr. Switlishoff”) dated March 27, 2014 (“Switlishoff Expert Report”); Expert Report of Brian C. Kaczmarek, CFA (“Mr. Kaczmarek”), dated March 31, 2014 (“Kaczmarek Expert Report”).

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Section III.C, I respond to specific issues raised by Claimant and its expert in regards to the GBL process and its application to Claimant. In Section III.D I present my analysis of Claimant's quantum assessment. Finally in Section IV, I present the conclusions of my analysis. Supporting materials are contained in the Appendices.

II. Summary

A. What Claimant is seeking

4. In its Memorial materials, Claimant paints a picture of a defenseless “Cinderella”² asking to be treated the same as others that are just like it, but who are, it claims, receiving better treatment at the hands of an unfair government. This picture is at odds with reality. Claimant and its experts arrive at their depiction of events by narrowly cropping the picture. As I demonstrate below, Claimant “photoshops” its presentation by ignoring the key economic and regulatory issues underpinning the treatment accorded Claimant and others; focusing instead on a single, irrelevant metric, *i.e.*, the “Below-Load Access Percentage.”³ With a proper scope rather than Claimant’s narrow focus, the treatment afforded Claimant is seen to be no different than that afforded to most, if not all, of the other British Columbia (“BC”) mills.
5. In this proceeding, Claimant seeks a monetary award to compensate it for alleged loss of profits and diminution in its value resulting from what it claims is the discriminatory and unfair treatment it has received from Canada resulting from limits imposed on its ability to arbitrage self-generated electricity against cheaper, embedded-cost electricity it purchases.⁴
6. In reality, Claimant is asking to be granted what amounts to a subsidy from BCH that would be contrary to the regulatory policies already in force when Claimant first invested in the Celgar mill: namely, the incentivizing of incremental generation⁵ to increase BCH generation resources in a manner that is not economically disadvantageous to BCH

² Mercer’s Memorial, ¶ 642. However, as shown below, unlike in the Cinderella story, Claimant does not deserve the glass slipper of an unwarranted subsidy.

³ Switlishoff Expert Report, ¶ 96; Mercer’s Memorial, ¶¶ 496-498.

⁴ Claimant complains about two specific “treatments”: a limit on such sales (the GBL) in its contract with BC Hydro and an order by the British Columbia Utilities Commission (“BCUC”), the utility regulator in BC (Order G-48-09). Mercer’s Memorial, ¶ 6.

⁵ Incremental generation is the amount of electricity generated in excess of what a mill typically generates over a certain period.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

ratepayers.⁶ None of the pulp mills that I have analyzed in response to Mercer's Memorial has been provided this type of incentive without conforming to the policies.⁷ Specifically, recipients of incentives from BCH have not been able to access low, embedded-cost power uneconomically; *i.e.* in a way that rewards investment previously made without any incentive.

7. In fact, Claimant's request is inconsistent with economic efficiency. Acceding to it would simply transfer wealth from BC ratepayers to Claimant's shareholders. Ratepayers would pay more for electricity and Claimant would not be providing anything that increased economic value in return.
8. Consistent with both BC policies and economic principles, the other pulp mills named by Claimant as receiving incentives from BCH have provided, in a cost effective manner, additional generation capability to their utility's system. That is, the cost to ratepayers of BCH providing this capability itself by, for example, buying electricity from an independent power producer ("IPP"), would be more than the cost to ratepayers of providing the incentive.⁸
9. Claimant, on the other hand, wants the incentive but does not offer to increase system capability. It offers an accounting sleight of hand. Claimant wants to "sell" (in the context

⁶ The policies were publicized in orders of the BCUC prior to Claimant's purchase of the Celgar mill. As used in this report, an incentive is an economic inducement to achieve the desired outcome of increasing the provision of environmentally benign generating resources from non-utility sources.

⁷ Prior to receiving Mercer's Memorial, the scope of my review included all nine BC pulp and paper mills with EPAs (including GBLs) concluded with BCH and for which Claimant had obtained document production from Canada. Claimant had also requested document production for three BC saw mills. Upon receiving Mercer's Memorial and expert reports, which primarily focus on three of these mills, I have focused my report on the mills of central interest to Claimant, namely Celgar, Tembec ("Skookumchuck") and Howe Sound ("Port Mellon").

⁸ In light of the constraints on BCH's ability to build new generation and Provincial environmental policies (e.g., BC *Clean Energy Act*), the most likely alternative generation resource would be a small, run-of-river IPP hydro unit. The approximate cost of such a plant, I have been informed, is C\$ 125/MWh. Alternatively, the average, firm energy price from BC Hydro's Clean Power Call in 2010 could be a valid metric. This price was C\$ 124/MWh. See BC Hydro, Clean Power Call Request for Proposals, Report on the RFP Process, 3 August 2010, online:
http://www.bchydro.com/content/dam/hydro/medialib/internet/documents/planning_regulatory/acquiring_power/2010q3/cpc_rfp_process_report.pdf, NERA-01, at 12. If BCH contracts for an equivalent amount of power for C\$ 110/MWh from a "green" generator, ratepayers are better off financially and environmentally.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

of its quantum calculation) the output of its generators to BCH and meet its load by buying the same amount of power, at a low, regulated price, from BCH through the intermediation of its local utility, FortisBC, itself a customer of BCH. This arrangement does not add any capability to BCH's resource portfolio; it only adds to Claimant's bottom line.

10. Claimant asserts that its claim is not about being denied subsidies by Canada notwithstanding that this is precisely the focus of its damages arguments.⁹ Rather, according to Claimant, “[a]t issue in this case are the regulatory measures imposed by BC Hydro and the BCUC that, since 2009, have eliminated Mercer’s access to embedded cost utility power while it is selling power net of its 2007 load … the very purpose of the G-38-01 proceeding with which these regulatory measures began …”¹⁰. From an economic perspective, these assertions rely upon the regulatory arguments of Claimant’s expert, Mr. Switlishoff, which I show below are based on an incomplete and incorrect understanding of regulatory principles. A clear example of Mr. Switlishoff misunderstanding regulatory matters is his mischaracterization of Order G-48-09 as applying a “net-of-load” standard for sales of self-generated electricity to customers of FortisBC.¹¹
11. The issue keeping Claimant from achieving its goal of arbitraging embedded cost electricity is its failure to reach an agreement with FortisBC under which FortisBC would supply Celgar at system average cost for the load it currently self-supplies. FortisBC rejects this proposal since it would result in higher costs for its other customers without any offsetting benefit.¹²
12. It is of interest to note that all of Claimant’s arguments ignore the possible implications of a Ministers’ Order (“MO”) related to an expansion of the generating facilities at the Celgar site. In return for exemption from certain Sections of the Utilities Commission

⁹ Mercer’s Memorial, ¶ 426.

¹⁰ Mercer’s Memorial, ¶ 428.

¹¹ See Section III.C.6 below for a discussion of this issue.

¹² See Witness Statement of Dennis Swanson, ¶ 149.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Act (“UCA”) and a Provincial Energy Project Certificate, a predecessor owner of the mill committed to use the output of a new generator only for supplying the mill's own electrical needs.¹³ When Claimant purchased the mill out of bankruptcy, it accepted this commitment along with others as part of the transfer of ownership.¹⁴ The generator involved in the MO, which commits it to self-supply, is precisely the generator whose output Claimant now argues it is being forced to use for self-supply since it is not allowed to sell the output in the market. Neither Claimant nor its experts address whether, and if so to what extent, this commitment affects their arguments that I outlined above and discuss in detail below.

B. Claimant’s arguments are flawed

1. Mercer’s Argument is too narrowly drawn

13. One part of Claimant's articulation of the discrimination and unfair treatment it alleges avoids the key issues noted above and focuses instead on the narrow enquiry of whether some other mills have received a higher (what it styles as) “Below-Load Access Percentage”. The basis for its claim is narrowed further by limiting its assessment, without a valid rationale, to a small subset of BC mills.¹⁵ As demonstrated by my assessment, even this limited-scope analysis is incorrect, as it relies on misinterpreting BCH's process under the regulatory policy for acquiring incremental generation capability from pulp mills.¹⁶
14. Claimant asserts that BCH's approach to the granting of incentives was capricious.¹⁷ To the contrary, my analysis of mills with BCH contracts providing incentives in return for

¹³ Witness Statement of Peter Ostergaard, Section B.

¹⁴ MER00282123_CONFIDENTIAL, Schedule B, Part B, number 10.

¹⁵ Switlshoff Expert Report, ¶ 91. The criteria selected by Mr. Switlshoff can be satisfied by many other BC kraft mills with the exception of two irrelevant conditions (a restricted 10-year historic period on generation investment and only NBSK mills) that limit the comparator mills. Mr. Switlshoff selects as his comparators two mills, Tembec’s Skookumchuck mill and Howe Sound’s Port Mellon mill. He also “examined one aspect of the regulatory treatment afforded to Canfor’s Prince George and Intercon pulp mills” (¶ 93). This tangential aspect of Mr. Switlshoff’s comparator analysis is addressed in Section III.C.5.

¹⁶ See Appendix 2 and Section III.B.2.c.

¹⁷ Mercer’s Memorial, ¶¶ 472-475.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

incremental electricity generation demonstrates that BCH adopted and applied a consistent approach.¹⁸

15. Claimant misstates BCH's approach when it compares its purchase and initial upgrade of the Celgar mill, based on what Claimant had determined as its own business case and financial advantage, with the situation of mills that received BCH's incentives to operate idle or build incremental generation facilities. Clearly, Claimant did not need an incentive to upgrade its mill beyond the financial payoff it saw from its investments in the mill. Receiving the "after-the-fact subsidy" it sought from BCH (and now seeks from Canada in this proceeding in the form of damages) would have run at cross-purposes with BCH's approach, as it would have been economically inefficient. Indeed, such an after-the-fact subsidy would constitute an expenditure on the part of BCH, without the economic benefit of increased generation, and would represent nothing more than a transfer of wealth from BCH's ratepayers to Claimant.
16. In Claimant's case, such an incentive was transparently unnecessary. BC ratepayers would not have received any incremental benefit if an incentive had been awarded retroactively for upgrades to the Celgar mill that Claimant had already performed of its own accord, relying on its own business case, and which would not have resulted in additional electricity generation. In other words, Celgar asked for a payment from ratepayers while providing nothing of value in return that did not already exist.¹⁹

¹⁸ See Section III.B.2 and Table 1.

¹⁹ It would be as if someone wanted to be the first to have a new iPhone and it was worth it to him to pay \$700 for the privilege two years ago. Now Apple sees the need to incentivize new customers so it offers the phone for \$450 but the initial buyer complains that he is being mistreated unless he gets the \$250 incentive (or subsidy) that others are now receiving. The flaw in the logic is clear. Apple's price reduction is designed to increase iPhone sales. It is willing to reduce its revenues from such sales presumably because each sale adds sufficient marginal profits, which would be missed if the phones were not sold, to make the discount/subsidy economically worthwhile. Giving the initial buyer an after-the-fact subsidy would not provide any additional sale or profit but would simply reduce Apple's economic well-being. Also, it would be difficult to characterize Apple's treatment of the initial buyer as unfair or discriminatory. Similarly, it is difficult to see how the initial buyer would have suffered any economic harm in this hypothetical.

2. Claimant's Discrimination Assertion

17. Claimant also asserts that it is being singled out among BC pulp mills for special treatment.²⁰ To support its assertion, Claimant presents a series of flawed arguments.
18. As mentioned above, my investigation of the BCH process for setting GBLs shows that Claimant is wrong to assert that it was treated uniquely. Claimant overlooks significant differences among BC mills when it argues that Canada is treating its Celgar mill differently than other pulp mills in BC, including Tembec and Howe Sound. These differences range from the readily apparent (mills are located within different local utility service territories) to the crux of this case (mills that receive incentives are to provide an incremental benefit to BC ratepayers). As opposed to the other mills, Celgar is not situated in BCH's service area and, fundamentally, is not offering to provide something of economic value in return for the arbitrage-based incentive it retroactively seeks.²¹
19. In a variant of its argument, Claimant asserts that the BCUC is "Taking from Celgar Load Displacement Services it Paid Other NBSK Pulp Mills to Provide."²² This statement mischaracterizes the relationship between Celgar and the BC regulatory regime. Celgar was not required to reduce its purchases of electricity as it would have been in a load displacement agreement.²³ Celgar could consume as much electricity from its local utility as it deemed economic. Historically, for financial and strategic reasons, Celgar chose to service its load through self-generated electricity, instead of purchasing

²⁰ Claimant is somewhat equivocal about this issue. See Mercer's Memorial, ¶ 419. Claimant asserts that "[r]ather, the GBL provision in Celgar's EPA, and in all other BC Hydro EPAs, provides that the self-generator may not sell electricity generated below its GBL *to any person*, including but not limited to BC Hydro." (Emphasis added, footnote omitted). Celgar's GBL is identical to its load as shown below in ¶ 86 of this report and a primary focus of its damage claim is the inability to sell power below its load, *i.e.*, its GBL. Since all mills with BCH EPAs are treated in the same manner in this regard, the basis for the alleged discrimination is unclear.

²¹ Mercer's Memorial, ¶ 323. Claimant argues that its investment in upgrading the Celgar mill in 2006-7 is the *quid pro quo* it offers. But from a ratepayer perspective, that will not increase generation resources in BC since this resource already exists.

²² Mercer's Memorial, Section VI.E.1; Switlshoff Expert Report, ¶ 141.

²³ A load displacement agreement ("LDA") is a contractual arrangement which provides remuneration to a customer in return for a commitment to reduce its consumption of electricity from its local utility under conditions specified in the contract. To purchase such additional energy from its utility, Celgar might also have to reconcile its commitments to remain self-sufficient as a condition of the 1991 MO related to the mill.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

electricity from its utility, FortisBC, to meet its load. Nothing that the BCUC had mandated restricted such consumption or dictated Celgar's choice. Claimant's confusion about LDAs is but one of several instances of regulatory misunderstanding coloring its arguments.

20. Similarly, in an effort to justify the other leg of its case, Claimant and its expert mischaracterize both a BCUC order (No. G-48-09) and a condition of Claimant's Energy Purchase Agreement ("EPA") with BCH to create the impression that Celgar is subject to a unique and disadvantageous treatment. The assertion is that Celgar, and only Celgar, is subject to a "net-of-load" standard that restricts its ability to arbitrage its self-generated electricity that it has been using to meet its own load. As discussed below in Section III.C.6, this assertion first conflates two separate issues (the BCUC Order and the BCH contract term) and second it is incorrect with respect to both.
21. For the former issue, the allegation that the BCUC imposed a net-of-load standard in Order No. G-48-09 misreads the restrictions placed on FortisBC, Celgar's local utility, as applying instead to Celgar. In reality, Celgar only needs to reach an agreement with FortisBC to achieve its objective. For the latter issue, Claimant has confused a net-of-load restriction with the standard condition in BCH purchase agreements under its green power program, *i.e.*, that sellers cannot sell power below a threshold (designated the "GBL") designed to prevent subsidization by ratepayers. The confusion arises because the GBL reflects the level of the seller's self-supply and Celgar self-supplied its entire load. So, in Celgar's case, its historic load is its GBL. The condition in the purchase contract is "net-of-GBL" not "net-of-load" and this is the source of the mischaracterization.
22. A final point on net-of-load, Mr. Switishoff simply ignores the reality that BCH has gone to extra lengths, in practice, to provide Celgar [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. See ¶ 83 below.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

23. In addition, Claimant disregards the principle that regulation is designed to protect customers by promoting economic efficiency. This principle underlies BCUC orders cited by Claimant.²⁴
24. Further, Claimant implies unequal treatment due to a “Made-For-Celgar rate methodology.”²⁵ Its expert, Mr. Switlishoff, is incorrect to criticize the development of a rate based on the utility’s cost to support Celgar’s plan to arbitrage its self-generated electricity. Such a rate is the only economically rational rate that would satisfy the regulatory principle of cost-causality (See Section III.A) according to which costs should be assigned to the customers that cause the costs to be incurred.
25. Another fact that Claimant’s discriminatory treatment argument ignores is that Canada, through the federal government’s Pulp and Paper Green Transformation Program (“PPGTP”), has treated Claimant at least as well as other similar industrial entities by providing it with a large subsidy to facilitate the installation of the second turbine at the Celgar site. Because of this federal subsidy, Claimant is earning an extraordinarily high return on its investment in this second turbine, the output of which is purchased by BCH under its EPA with Claimant. Basically, Claimant is receiving the benefits of incentive payments from BCH (through the EPA) for the construction of a new generator that was mostly paid for by Canada. Such treatment appears at odds with Claimant’s general characterization of its treatment by Canada.

C. The support Claimant provides for its case is deficient

26. Claimant relies on the expert report of Mr. Switlishoff to support its claims of discrimination and less favorable treatment. However, this is an unreliable foundation upon which to build a case as Mr. Switlishoff’s approach is to arbitrarily and very

²⁴ For example, Order G-38-01 prohibits arbitrage of embedded cost electricity by self-generators if it adversely affects ratepayers (BCUC, Order G-38-01, “British Columbia Hydro and Power Authority Obligation to Serve Rate Schedule 1821 Customers with Self-Generation Capability”, 5 April 2001 (“Order G-38-01”)) **NERA-12**.

²⁵ Switlishoff Expert Report, ¶ 87.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

narrowly define the boundaries of this case and also to mischaracterize certain regulatory actions.²⁶

27. Mr. Switlishoff does the former in two ways. First, he limits the issue to a single metric, the Below-Load Access Percentage, which allows him to avoid all the real issues that confront Claimant's case, namely, the economic/regulatory rationales that validate the limits on arbitraging embedded cost electricity. Essentially, Mr. Switlshoff constructs a straw man which he then proceeds to cut down.
28. Second, to demonstrate the alleged difference in treatment, Mr. Switlshoff, without a valid basis, narrowly chooses the mills he deems comparable to Celgar.²⁷ As a result, he ignores a number of other BC mills which have been accorded the same treatment as Celgar. In addition, Mr. Switlshoff misconstrues the details of his two chosen comparators, namely Howe Sound and Tembec. As a result, the fact that both mills received the same treatment as Celgar risks being lost in a miasma of inaccurate and incomplete comparisons, such as ignoring the preexisting contracts that these mills had with BC Hydro.
29. Claimant then relies on the expert report of Mr. Kaczmarek to calculate the quantum of damages. This is a doubly unreliable foundation. First, Mr. Kaczmarek completely relies on Mr. Switlshoff's report when attempting to demonstrate that Claimant has been damaged and is due recompense. Given the frailty of that reed, Mr. Kaczmarek's analysis is moot. Second, Mr. Kaczmarek errs in his own analysis, such as when he assumes BC Hydro would buy all of the generation output of the Celgar mill in perpetuity.
30. Further, Mr. Kaczmarek does not demonstrate how Claimant is harmed. Instead of linking the alleged mistreatment suffered by Claimant to the quantity of electricity at the price used in his analysis, he simply assumes that link via his reliance on Mr.

²⁶ ¶ 21 above provides an example of the latter point.

²⁷ Switlshoff Expert Report, ¶ 91. An example of an arbitrary and unfounded selection criterion that Mr. Switlshoff employs is his decision to consider only mills that "invested in substantial new generation capacity in the decade prior to the BCUC's issuance of Order G-38-01 in 2001". There is no explanation for the 10-year limitation.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Switlishoff's opinion and at the request of Counsel.²⁸ On the basis of these unverified and speculative assumptions,²⁹ Mr. Kaczmarek proceeds to mechanically compute his results.³⁰

31. Finally, Mr. Kaczmarek also neglects certain costs that would act to reduce his quantum.³¹ Specifically, he assumes that Celgar can purchase power from FortisBC at a blended rate that has not been approved for Celgar and which includes a rate for which Celgar has been declared ineligible.³²

D. Conclusions

32. My economic and regulatory analysis of the Claimant's filing reveals the unsustainability of its assertion that it has been treated, to its disadvantage, unfairly and differently than other BC pulp mills. BCH applied a consistent, coherent and correct (based on sound economic and regulatory principles) policy to Celgar, as well as the mills Claimant chooses to compare itself with, when dealing with the arbitrage of embedded cost electricity. Claimant's arguments fail to attend to those underlying economic and regulatory principles. Claimant is forced to put forward an artificially narrow analysis to camouflage that failure. Claimant's defects in regulatory matters lead it to misunderstand the BCUC order that is key to its case. What Claimant sought first by contract from its utility, FortisBC,³³ and then through orders of the BCUC³⁴ (and now seeks in this

²⁸ Kaczmarek Expert Report, ¶¶ 96, 204.

²⁹ Kaczmarek Expert Report, ¶¶ 196, 197, 203.. For example, Mr. Kaczmarek assumes that Celgar will be able to sell its self-generated electricity at a highly remunerative price in perpetuity.

³⁰ Kaczmarek Expert Report, Section IX. Mr. Kaczmarek employs a large and involved cash-flow model as the principal tool in his computation. He dedicates about 25 pages of his report to an explanation of the model's inputs. This complexity may mislead a reader about the intellectual rigor of Mr. Kaczmarek's analysis. Since he employs a differential analysis to derive his quantum (*i.e.*, he subtracts the financial outcome assuming Claimant's viewpoint from what has or is projected to actually occur), a simple four line model could essentially produce the same results. *See III.D.2.c.iv* for a discussion of this model.

³¹ For example, Mr. Kaczmarek ignores transmission related costs that Celgar would need to pay, and transmission capacity it would need to obtain to execute the transactions that he models if the purchaser is not BCH.

³² Kaczmarek Expert Report, ¶¶ 203-204. Also, see Section III.D.2.a below.

³³ Power Supply Agreement between Zellstoff Celgar Limited Partnership and FortisBC Inc., MER00279313, **NERA-02**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

arbitration) is seen, from an economics perspective, to be an unproductive transfer of wealth from BC electricity consumers to itself. As a result, in addition to its quantitative shortcomings, Claimant's damages argument fails, as Claimant does not demonstrate that it has been economically harmed.

³⁴ For example, see BCUC Orders G-156-10 and G-188-11, **NERA-03 and NERA-04**.

III. Analysis of Claim

A. The principles of economic regulation of electric utilities and their acquisition of generation resources set the context for this case

33. Claimant's case constitutes in essence a criticism of two elements that determine BCH's procurement of generation resources from BC pulp mills. One element is the policy parameters which the utility regulator in BC, the BCUC, has set to regulate this type of resource acquisition. The other element is the process which the utility, BC Hydro, has developed to carry out the BCUC policy. As such, the context for this case is necessarily the nexus of utility regulation and utility resource acquisition. These two elements are critical to the arguments being made in this case and provide a sound economic/regulatory basis for assessing the differing analyses and conclusions of Claimant and Canada. Consequently, in this section, I briefly introduce and discuss these elements.

1. Utility regulation

34. Utility regulation is the control mechanism under the social compact that exists between citizens/customers and a utility which is granted a monopoly or a franchise in exchange for the utility's obligation to provide service at reasonable rates. In this context, the focus of utility regulators is primarily economic regulation, with specific attention paid to the costs of providing service and the recovery of those costs from customers, while also addressing other aspects of utility operations such as safety and reliability.³⁵

35. The theory and practice of utility regulation in North America are based on four foundational principles that are designed to protect the economic interests of both

³⁵ The BCUC states that its "mission is to ensure that ratepayers receive safe, reliable, and non-discriminatory energy services at fair rates from the utilities it regulates, and that shareholders of those utilities are afforded a reasonable opportunity to earn a fair return on their invested capital." British Columbia Utilities Commission, Organization Profile - Mission Statement, online: <http://www.bcuc.com/CorpProfile.aspx>, NERA-05.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

consumers and their utility, while producing economically efficient outcomes in the absence of a market:³⁶

- a. Protect customers from a natural monopolist who could otherwise extract excessive rents via excessive prices;³⁷
- b. Protect utilities from expropriation by setting prices that allow them to recover costs and a reasonable return;³⁸
- c. Ensure that costs are borne by those who cause them, *i.e.*, the principle of cost causality;³⁹

³⁶ See, for example, *Utilities Commission Act*, R.S.B.C. 1996, c. 473 (“Utilities Commission Act” or “UCA”), ss. 59(1)(a), 59(5)(a), 60(1)(b)(i), **NERA-30**; British Columbia Utilities Commission, Understanding Utility Regulation – A Participant’s Guide to the British Columbia Utilities Commission, Original Publication: October, 1996, Revised: July 11, 2002, http://www.bcuc.com/Documents/Guidelines/2011/DOC_3939_ParticipantGuide_July2002.pdf, c. 1, p. 2: “While the monopoly market structure can lead to cost advantages to the public, it also poses potential risks from abuse of monopoly power. If customers have no choice but to purchase energy from the only utility operating in their area, the utility could potentially charge excessive prices while paying insufficient attention to customer service.”

³⁷ *BC Gas Utility Ltd. v. British Columbia Hydro and Power Authority et al.*, [1995] B.C.J. No. 1194 (British Columbia Court of Appeal), ¶15; BCUC, Order G-201-12, In the Matter of FortisBC Energy Inc. inquiry into the Offering of Products and Services in Alternative Energy Solutions and other New Initiatives”, Report, 27 December 2012 (“Order G-201-12”), online: <http://www.bcuc.com/Documents/Arguments/2012/DOC_33032_12-27-2012-G-201-12_FEI-AES-Inquiry-Report_WEB.pdf>, at 14, **NERA-72**, (“Regulation exists to protect consumers against the abuse of monopoly power...”).

³⁸ BCUC, Order G-110-12 and Decision in the Matter of An Application by FortisBC Inc. for Approval of 2012-2013 Revenue Requirements and Review of 2012 Integrated System Plan, August 15, 2012, at 30: “In the Commission Panel’s view, the “fair return standard” is therefore intended to protect the utility. This is also apparent from the wording of subsection 59 (5)(b) that a rate is “unjust” or “unreasonable” if it is insufficient to yield a fair and reasonable compensation for the service provided by the utility or a fair and reasonable return on the appraised value of its property”; See also, BCUC, Order G-201-12, In the Matter of FortisBC Energy Inc. inquiry into the Offering of Products and Services in Alternative Energy Solutions and other New Initiatives”, Report, 27 December 2012 (“Order G-201-12”), online: <http://www.bcuc.com/Documents/Arguments/2012/DOC_33032_12-27-2012-G-201-12_FEI-AES-Inquiry-Report_WEB.pdf>, at 39, citing Supreme Court of Canada decision in *ATCO Gas and Pipelines Ltd. v. Alberta (Energy and Utilities Board)*, [2006] 1 S.C.R. 140, ¶63: “Under the regulatory compact, the regulated utilities are given exclusive rights to sell their services within a specific area at rates that will provide companies the opportunity to earn a fair return for their investors. In return for this right of exclusivity, utilities assume a duty to adequately and reliably serve all customers in their determined territories, and are required to have their rates and certain operations regulated.”, **NERA-74**.

³⁹ As the BCUC states in its Order G-156-10, “An assessment of the fairness of rates is typically based on a comparison of the revenues collected from each class of customer with the cost of providing service to them.”

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- d. Produce economically efficient outcomes by setting policies that approximate market forces to the extent possible.⁴⁰
- 36. These are the principles against which the regulatory policy must be assessed, rather than any *ad hoc* metric which does not consider whether a policy is deficient or discriminatory. Otherwise, an incorrect assessment is almost unavoidable.
- 37. One immediate consequence of this regulatory structure is that utility regulation substitutes for the discipline normally provided by markets in unregulated sectors.⁴¹ In unregulated markets, companies that fail to attend to the dictates of their market suffer the consequences. Similarly, while utilities are generally given broad discretion in how they implement the policies of their regulators, if they fail to carry out those policies they suffer the consequences.⁴² As a result, utilities are typically very responsive to commission policies just as companies operating in unregulated sectors, tend to carefully respond to market dictates.

2. Resource acquisition

(“In the Matter of FortisBC Inc. 2009 Rate Design and Cost of Service Analysis, Decision”, October 19, 2010). That Order also references the so-called Bonbright Principle of “Fair apportionment of costs among customers” (a reference to the principles in the “Principles of Public Utility Rates”, by James C. Bonbright. and others, *see note 41*). *See also* Charles F. Phillips & Robert G Brown, *The Regulation of Public Utilities* (Public Utilities Reports, Inc., 1993) at 435, **NERA-06**.

⁴⁰ Market forces produce economically efficient outcomes which are those in which resources are put to their highest-value uses by all economic actors. As recently stated in a Decision by the BCUC: “Efficiency benefits can be described as promotion of: (i) efficient customer consumption and investment decisions, (ii) efficient utility investment and operational decisions and (iii) innovation.” As an example of the fact that this principle plays a role in its regulation, the BCUC noted in that same Decision: “The Commission Panel [BCUC] determines that the New PPA passes the Bonbright Efficiency Principle evaluation, as it results in a net improvement in efficiency from the entire British Columbia perspective compared to the 1993 PPA. The New PPA decreases the amount of generation capacity BC Hydro is required to hold back to meet potential FortisBC load. The Panel considers that these benefits will exceed the incremental capital and scheduling costs associated with the New PPA.” BCUC, Decision, “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” (“G-60-14 Decision”), 6 May 2014 at 55-57, **NERA-07**.

⁴¹ James C. Bonbright, Albert L. Danielsen & David R. Kamerschen, *Principles of Public Utility Rates* (Arlington: Public Utilities Reports, Inc., 1988) at 141, 158, **NERA-08**. In Canada, as in many other jurisdictions, the actions and decisions of utility regulators are designed to be independent of governmental influence.

⁴² UCA, ss. 42, 106 (1), **NERA-30**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

38. A utility's procurement processes must account for the implications of a utility's social compact with its customers and the reality of the critical effect that regulators can have on the wellbeing of the utility.⁴³
39. As a result of the social compact, and in order to operate consistent with their service obligations, utilities must ensure they have adequate resources to reliably meet customer demand.⁴⁴ In so doing, utilities must plan to acquire and manage resources, including generation resources, which are sufficient and available when needed to meet the demands of customers. Utilities must also satisfy the additional constraints imposed by their regulators, such as acquiring and managing resources in a cost effective manner and in accordance with regulators' policies concerning resource acquisition.⁴⁵
40. It follows that to assess whether a utility's procurement policies are deficient or discriminatory in any way, the utility's resulting processes must be evaluated in this larger context.

B. The economic and regulatory principles employed by BC Hydro in the acquisition of generation resources

1. The BC regulatory framework and BCUC orders follow the regulatory principles outlined above

41. The processes disputed by Claimant relate to the various programs sponsored by BCH to incentivize the development of new or incremental generation from self-generators in BC.⁴⁶

⁴³ UCA, ss. 42, 106(4), **NERA-30**.

⁴⁴ UCA, s. 38, **NERA-30**.

⁴⁵ Specifically, *Clean Energy Act*, S.B.C. 2010, c. 22, **NERA-31**; *Special Direction No. 10 to the British Columbia Utilities Commission*, B.C. Reg. 245/2007, **NERA-32**; other Cabinet regulations; and UCA, ss. 44, 45, and 71.

⁴⁶ E.g., BC Hydro, Bioenergy Phase 1 Call for Power, online: <http://www.bchydro.com/energy-in-bc/acquiring_power/closed_offerings/phase_1_rfp.html>, **NERA-09**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

42. These processes were governed by policies set out by the BCUC and the Provincial Government.⁴⁷ As outlined below, the policies and resulting resource acquisition processes conformed to the regulatory principles discussed above.
43. The 2002 and 2007 Provincial Energy Plans addressed the means by which BCH was to meet its resource needs as required by Section 38 of the UCA. The 2007 BC Energy Plan, in particular, promoted the use of incremental generation from the Province's pulp and paper mills to the extent that BCH could acquire such resources on a cost efficient basis.⁴⁸ Therefore, to meet its resource acquisition requirements, BCH could only purchase electricity from a self-generator if that resource were either idle or not yet constructed, since purchasing electricity from a self-generating facility that was already active in the Provincial generation mix would not contribute to meeting BCH's resource needs.
44. In addition, BCH had to ensure that any such purchase provided greater value to customers than alternative resources available to BCH, such as contracting with an independent power producer, and also met the policy constraints set out in the 2007 Energy Plan. Otherwise, BCH would also violate the regulatory principle of customer protection from unfair tariffs, as required by the UCA.⁴⁹
45. BCH also needed to protect customers from bearing costs due to the actions of other customers.⁵⁰ For example, allowing a mill to arbitrage embedded-cost power would increase other customers' rates or other citizens' tax burden, thus violating the economic efficiency requirement as well as the cost causality principle.

⁴⁷ The BC Energy Plan: A Vision for Clean Energy Leadership (“2007 Energy Plan”), CAN038730/bates 048500-048542, **NERA-10**; *BC Hydro Public Power Legacy and Heritage Contract Act*, S.B.C. 2003, c. 86 (“HCA”), **NERA-33**; BC’s Bioenergy Strategy: Growing BC’s Natural Energy Advantage (“2008 Bioenergy Strategy”), CAN529813/bates 027907-027920, **NERA-11**. There were also a series of BCUC Orders implementing these policies: Order G-38-01, **NERA-12**; BCUC, Order Number G-17-02, “British Columbia Hydro and Power Authority Obligation to Serve Rate Schedule 1821 Customers with Self-Generation Capability”, 14 March 2002 (“Order G-17-02”), **NERA-13**. *See also* at note 45.

⁴⁸ *Ibid.*

⁴⁹ UCA, ss. 59, 60, **NERA-30**. See also Special Directive 10 which required the BCUC to consider the effects of these contracts from a social welfare perspective.

⁵⁰ See section III.A above.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

46. The method used by BCH to meet these constraints was to accept supply offers only from new or incremental resources, such as the output from Celgar's new turbine (as opposed to its original turbine that was already meeting the mill's electricity needs). To ensure that the simultaneous sale of power and purchase of embedded-cost supply by a mill did not result in the inefficient subsidization of one customer at the expense of all other customers, BCH instituted the GBL limitation that is at the heart of Celgar's complaint.
47. What I show next is that BCH designed and consistently applied the GBL setting process to Celgar and all of the mills mentioned by Mr. Switlishoff that successfully sought an EPA.

2. BCH followed a consistent process and methodology for setting GBLs which it applied to all GBLs NERA investigated, including Celgar's

48. BC Hydro has entered into EPAs with nine pulp and paper mills, including Celgar. These agreements have been an important component of BCH's resource acquisition process in recent years.⁵¹ Additionally, each of these agreements contains a GBL⁵² which represents the dividing line between historical generation and incremental or new generation which sets the threshold amount of its load that the mill is required to continue to self-supply before it is allowed to receive preferential, clean-energy prices. I reviewed BCH's process and methodology for setting GBLs in each of the agreements analyzed by Mr. Switlshoff and found that BCH's GBL methodology was consistent for each of these mills, including Celgar, as I show below and in Appendix 2.⁵³

⁵¹ These EPAs have been signed over the 2009 to 2012 period.

⁵² BCH utilizes two types of GBLs, contracted and non-contracted. Contracted GBLs are established in a contract, generally an EPA; the self-generating customer must generate this amount for self-supply prior to making any sales. My report focuses on BCH's methodology in determining contracted GBLs. Non-contracted GBLs are assigned to BCH's transmission customers with self-supply that do not have an EPA or similar agreement with BCH; these GBLs represent the customer's historic self-supply and are part of BCH's two-tiered rate scheme for transmission customers. See BC Hydro's Transmission Voltage Customers with Self-Generation, BC Hydro's Transmission Service Rate ("TSR") Customer Generator Baselines ("GBLs") Submission of June 20, 2012 ("BCH 2012 Information Report"), CAN038596 / bates 048116-048179, **NERA-14**.

⁵³ See Section III.B.2.

a. Economic principles behind BC Hydro's GBL methodology

49. Fifteen industrial transmission-service customers⁵⁴ served by BCH possess self-generation capability, and most of these utilize renewable fuels including biomass to generate electricity.⁵⁵ I understand that historically generation from these resources has not been maximized either because of the underutilization of existing capacity or the lack of investment in additional generation capacity or efficiency enhancements. In line with the Provincial Government's twin goals of (i) increasing generation from the industrial customers with co-generation capabilities and (ii) increasing generation of "clean" power,⁵⁶ BCH provides economic incentives to those industrial facilities capable of generating clean power, in order for them to increase their generation beyond their historical level. However, in providing these incentives, BCH must also consider its economic and regulatory obligations as a utility. As a result, any incentive it grants must be "economically efficient" – an incentive that is too low would fail to bring about the desired additional generation; while an incentive that is too high would fail to protect ratepayers.
50. EPAs with contracted GBLs have served as a key tool in providing effective economic incentives.⁵⁷ By providing EPAs with contractually-determined energy prices and sales amounts, BCH can incentivize generation that would have otherwise not been economically viable for these mills. The GBLs in these contracts serve the overlapping purposes of aiding efficient resource acquisition, protecting customers, and complying with BCUC's regulatory framework. Specifically, by setting a GBL, BCH can ensure

⁵⁴ Transmission-service customers take power directly from the BC Transmission System rather than its lower-voltage distribution system.

⁵⁵ BCH 2012 Information Report at bates 048140-1, **NERA-14**, Appendix A; *See also* Appendix 2.

⁵⁶ 2007 Energy Plan & 2008 Bioenergy Strategy.

⁵⁷ See Witness Statement of Lester Dyck, ¶ 29. BCH also utilizes various other contracts to incentivize transmission customers with self-generation. For example, under a load displacement agreement, BCH generally provides a direct payment to a customer to cover part of the costs of a generation project in exchange for an agreement to self-supply a certain amount of the customer's energy load for a specified period of time, with penalties for failing to self-supply at this level. For example, see the 2003 load displacement agreement between BCH and Domtar, which provided C\$ [REDACTED] in funding for a new turbine, and required that this new turbine generate [REDACTED] GWh per year to displace load. Power Smart Incentive Program, bates 062770-062786, **NERA-15**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

that these mills maintain their historical level of self-supply and not increase their consumption of low-cost regulated power.⁵⁸ In other words, GBLs are designed to prevent mills from using the EPAs to derive arbitrage profits from simultaneously selling their generation below their GBL, i.e. the electricity they had historically used to self-supply, and replacing it with low-cost electricity purchases from their utility.

51. Further, the GBLs set by BCH are in line with BCUC orders that address arbitrage, including order G-38-01, which states that sales of additional power from self-generation customers can be made “provided the self-generating customers do not arbitrage between embedded cost utility service and market prices. *This means that B.C. Hydro is not required to supply any increased embedded cost of service energy to a RS 1821 customer selling its self-generation output to market.*”⁵⁹ (Emphasis added)

b. Specifics of BC Hydro’s GBL methodology

52. My review of the GBL setting process shows that Mr. Switlishoff is incorrect in his assertion that BCH’s process was discretionary, inconsistent, and unfair.⁶⁰ To the contrary, BCH established GBLs for the mills reviewed by Mr. Switlishoff, namely Tembec,⁶¹ Howe Sound and Celgar,⁶² using a consistent methodology in line with the overarching principles of efficient resource acquisition, protection of customers, and preventing arbitrage of embedded-cost power through the sale of electricity historically used for self-supply. In his witness statement, Lester Dyck identifies the factors relevant to the GBL methodology, stating that, fundamentally, the purpose of setting a GBL is to determine the [1] annual self-generated energy used by the customer for self-supply, [2]

⁵⁸ Assuming the same or a lower customer load. If the load of a customer with a contracted GBL were to increase due to an increase in production at its mill, the increment could be served with purchases of embedded-cost electricity from BCH.

⁵⁹ BCUC Order G-38-01 at 2, **NERA-12**.

⁶⁰ Switlishoff Expert Report, ¶¶ 206-208.

⁶¹ Tembec was the owner of the mill until 2013 when it was sold to Paper Excellence (<http://tembec.com/en/Media/Press-Releases/tembec-announces-closing-sale-its-nbsk-pulp-mill-skookumchuck-british-columbia>).

⁶² Mr. Switlishoff also makes limited arguments with respect to BC Hydro’s LDA with Canfor (Prince George). See Section III.C.5 below.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

in the absence of a contract, [3] in a normal current operating year, [4] as of the time period the EPA is negotiated.⁶³ These four factors allow me to break down the GBL procedure to assess how that procedure was applied to various mills.

- 1) **Annual use by the customer for self-supply:** The annual GBL figure should be determined based on the level of self-generation used by the customer/facility to self-supply over a period of a year. However, contracted GBLs also may be specified on an hourly, monthly, or seasonal basis.⁶⁴
- 2) **In the absence of a contract:** On some occasions, the EPAs replaced pre-existing contracts between BCH and self-generators in an effort to restore the incentives provided by the original contract and improve economic efficiency.⁶⁵ To do so, BCH set GBLs to reflect what the level of self-supply would have been in the absence of any existing contract.⁶⁶ BCH will also assess normal operations in the absence of the prospective incentive of the contract in order to protect BC Hydro and its ratepayers from “gaming the system” in advance of negotiations by, for example, lowering their generation levels for the purpose of setting a lower GBL.⁶⁷
- 3) **In a normal current operating year:** GBLs are based on self-supply generation in a year that reflects normal current operating conditions for the self-generation customer. I understand that, in 2006, BCH introduced two-tiered rates for its transmission customers. For the purposes of these rates, BCH customers

⁶³ Witness Statement of Lester Dyck, ¶¶ 43-46, 135 and 140.

⁶⁴ Witness Statement of Lester Dyck, ¶¶ 64.

⁶⁵ As with any contract, the underlying economics may change, e.g., changes in production costs, which may lead to a situation where it is in the parties’ mutual best interest to renegotiate the financial incentives or other terms in the contract; to cancel the contract; or to replace the older contract with a new one.

⁶⁶ See Witness Statement of Lester Dyck, ¶ 46.

⁶⁷ See Witness Statement of Lester Dyck, ¶ 44. In a few cases existing contracts were not canceled or additional new contracts were entered into at the same time as an EPA. In these cases, the effects of those contracts on generation were considered when setting the EPA’s GBL (see Witness Statement of Lester Dyck, ¶ 45).

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

were assigned a Customer Baseline Load (“CBL”) and a non-contracted GBL.⁶⁸ Generally, if there was no significant change in operations since a customer’s non-contracted GBL was set, that amount would be used as the contracted GBL in any agreement with BCH. The year 2005, namely the year prior to the introduction of the two-tiered rates, was BCH’s default base year for establishing CBLs and non-contracted GBLs. Therefore, for certain customers, generation in 2005 ultimately became their contracted GBL. However, BCH considered each customer’s unique circumstances in determining a normal current operating year, including any existing and prior contractual arrangements, significant historical or planned changes at the mill, and current and anticipated changes to mill operations. For these reasons, mills’ GBLs were set based on mill-specific calculations that reflect each mill’s uniqueness. This was the situation for the principal mills analyzed in Claimant’s case.

- 4) **As of the time period the EPA is negotiated:** In other words, GBLs are set based on information available at the time of the negotiation of the EPA.
53. Basing the GBL on the historical amount of self-generation used for self-supply that occurred in the absence of a contract (with appropriate consideration of unique circumstances) ensures that there is no harm caused to ratepayers through arbitrage under EPAs. These agreements are designed to prevent customers from purchasing their under-GBL load at low-cost regulated rates and selling an equivalent amount of generation into the market or under an EPA. Specifically, GBLs ensure that the associated agreement does not lead to an uneconomic increase in the level of embedded-cost-of-service energy supplied and sold by BCH to the self-generator, as prohibited by BCUC orders.⁶⁹

⁶⁸ CBLs are a baseline measure of a customer’s purchases from BCH. CBLs and non-contracted GBLs were set such that CBL + non-contracted GBL = Plant Load. Two-tiered rates work by billing customers a lower average-cost rate for the first 90% of a customer’s CBL and a higher marginal-cost rate for energy purchased above the 90% CBL threshold. This incentivizes energy efficiency as the marginal electricity cost is generally higher than the embedded average cost. CBLs and GBLs do not change from one year to the next year, though they can be reset if a change in normal operations occurs.

⁶⁹ For example, Order G-38-01, **NERA-12**.

54. As an example, consider a hypothetical customer without an EPA, with a load of 30 MW and self-generation capacity of 20 MW. Assume for economic reasons, the customer historically only generated 12 MW, and hence bought the remaining 18 MW from BCH. Also assume that the customer's new EPA with BCH contains a GBL of 12 MW and a firm sales commitment of 8 MW. Post-EPA, the customer would thus generate 20 MW, sell 8 MW to BCH, and still buy 18 MW from BCH to serve its 30 MW load. The new EPA with GBL therefore successfully incentivized an increase in generation (from 12 MW to 20 MW) without increasing the purchases of embedded-cost energy (constant at 18 MW).⁷⁰

c. Summary of BC Hydro GBL determinations

55. My review of Celgar and the two comparators Mr. Switlishoff focuses on⁷¹ clearly demonstrated a consistent methodology used by BCH when negotiating GBLs. First, BCH consistently followed the four-element procedure presented above (¶ 52). As part of the negotiation, BCH considered relevant information for each mill to reflect site-specific conditions. BCH evaluated the inherent characteristics of each mill, the existing contractual relationships between BCH and the mills, and the unique economic circumstances at the time each EPA was signed. Further, in line with its policy goals, BCH sought to provide only that level of economic incentives required to utilize (or restart) idle generation in the Province, and increase “green” generation, while protecting ratepayers by preventing arbitrage from the sale of existing self-generation historically used for self-supply. Although the specific economic incentives used in the EPAs for

⁷⁰ In physical terms, BCH's energy resources are only used to supply the 10 MW not otherwise generated by the self-generator (instead of 18 MW pre-EPA), with the remaining 20 MW now self-supplied. In financial terms, the self-generator obtains the incentive revenues without which it would not have increased its generation, namely the EPA sales price for 8 MW of self-generation sold to BCH minus the purchase price of 8 MW of embedded-cost electricity from BCH. For BCH, the incentive paid in relation to this clean energy is lower than the cost of acquiring long-term clean energy from other sources. The EPA and its GBL can be viewed as lowering the physical demand BCH must serve (from 18 MW to 10 MW) or increasing BCH's supply resources (by 8 MW). Either way, the incentive put in place by BCH contributed to BCH's resource acquisition in an economically efficient manner – the 8 MW clean energy increment being generated at a lower cost to BCH than if it were obtained through other methods, such as contracting for independent generation resources.

⁷¹ Howe Sound and Tembec. Mr. Switlshoff also refers to the Canfor mill as a “useful comparator” related to his argument that Celgar is being forced to provide LDA service without compensation. I discuss this subsidiary complaint in Section III.C.5 below

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

each of the mills may have differed, the overarching methodology used by BCH was consistent with these principles, as shown in the following table:

Table 1
Comparison of Process Used By BC Hydro to Set GBLs for Comparison Mills

Company	Mill	GBL Set Based on:		Agreement with BCH Provides:	
		A Current Normal Operating Year Using Information	Absence of Load Self- Supplied in Available at Time of Negotiation¹	Required to Increase Generation or Utilize Idle Capacity²	Incentives That Protect Ratepayers²
Canfor	Northwood	✓	✓	✓	✓
Canfor	Prince George	✓	✓	✓	✓
Cariboo	Quesnel	✓	✓	✓	✓
Catalyst	Powell River	✓	✓	✓	✓
Domtar	Kamloops	✓	✓	✓	✓
Howe Sound	Port Mellon	✓	✓	✓	✓
Mercer	Celgar	✓	✓	✓	✓
Nanaimo	Harmac	✓	✓	✓	✓
Tembec	Skookumchuck	✓	✓	✓	✓

Pulp and Paper Mills:

Canfor	Northwood	✓	✓	✓	✓
Canfor	Prince George	✓	✓	✓	✓
Cariboo	Quesnel	✓	✓	✓	✓
Catalyst	Powell River	✓	✓	✓	✓
Domtar	Kamloops	✓	✓	✓	✓
Howe Sound	Port Mellon	✓	✓	✓	✓
Mercer	Celgar	✓	✓	✓	✓
Nanaimo	Harmac	✓	✓	✓	✓
Tembec	Skookumchuck	✓	✓	✓	✓

Saw Mills³:

Conifex	Mackenzie	n/a	n/a	✓	✓
Nechako	Vanderhoof	n/a	n/a	✓	✓
Tolko	Armstrong	n/a	n/a	✓	✓

Notes:

¹ These criteria reflect the general process used by BCH as I have described above.

² These criteria represent the overarching policy goals of the GBL process.

³ None of the three sawmills had generation facilities prior to their first agreement with BCH, so the first two columns are not applicable, as the mills' agreements do not contain GBLs.

56. As stated, the detailed methodology applied to the various mills followed the four steps described above. I present my detailed review of the GBL setting process applied to each pulp and paper mill discussed by Mr. Switlishoff in Appendix 2. Additionally, the next

subsection presents a discussion of the unique circumstances of Howe Sound and Tembec that Mr. Switlishoff has not accounted for in his analysis.⁷²

C. Mr. Switlishoff's arguments are unsustainable

57. Claimant argues that Canada⁷³ has discriminated against it by frustrating Celgar's efforts to arbitrage the output of its generation that it historically used to meet its own load requirements.⁷⁴ According to Claimant, several actions by Canada have led to this allegedly discriminatory result:
- The use of the regulatory process (and possibly other economic disincentives) to dissuade FortisBC from supplying 100% of Celgar's load, which would have freed Celgar to engage in arbitrage through the sale of electricity historically used by Celgar to supply its own load.⁷⁵ Or, alternatively, the use of the regulatory process to force FortisBC to charge Celgar all incremental costs incurred to serve its mill load while Celgar was engaging in such arbitrage.⁷⁶
 - Granting a GBL for Celgar that was less economically favorable than those of comparable mills⁷⁷
 - Imposing a net-of-load standard on Celgar while allowing other comparable mills to sell power when purchasing embedded-cost electricity to meet all or part of their load. Claimant argues that this effectively forced Celgar to provide a load displacement

⁷² Further, in III.C.4, I address the agreements at Howe Sound and Tembec prior to their EPA with GBLs: Howe Sound's 2001 agreement with Powerex and Tembec's 1997 EPA with BCH. I also addresses Mr. Switlishoff's flawed analysis of those agreements.

⁷³ Represented by BC Hydro, the BCUC, and the BC Provincial Government.

⁷⁴ Mercer's Memorial, ¶ 426.

⁷⁵ Mercer's Memorial, ¶ 358.

⁷⁶ Mercer's Memorial, ¶¶ 361-368. This is the so-called "Made-For-Celgar" rate that Mr. Switlishoff discusses (Switlishoff Expert Report, ¶¶ 86-87). Such a rate is under discussion in BC but has not been approved.

⁷⁷ Mercer's Memorial, ¶ 467.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

service without being subject to, nor being compensated through, a load displacement agreement.⁷⁸

- Incentivizing incremental generation from other mills but not from Celgar.⁷⁹
58. Claimant's case relies heavily on the report produced by Mr. Switlishoff to support its arguments that it was harmed due to discriminatory actions by BC Hydro, the BCUC, and the BC Government. As I demonstrate below, Mr. Switlishoff's arguments are unsustainable due to a multitude of economic and regulatory misunderstandings, conceptual flaws, and analytical mistakes; namely, Mr. Switlishoff:
- Defines treatment in relation to other mills incorrectly
 - Does not account for the BC policy requirement for efficient resource acquisition that also protects customers
 - Utilizes an unjustifiably narrow set of comparators
 - Ignores substantive differences between Celgar and other mills, differences which compelled the case-by-case GBL determinations by BCH
 - Claims, incorrectly, that Celgar is being forced to provide "free" LDA service
 - Mischaracterizes the net-of-load restriction
 - Misunderstands that Celgar not being allowed to arbitrage below its GBL is no different than the treatment accorded to other mills
 - Misunderstands that regulation is an evolutionary process
 - Misunderstands the regulatory principle of cost causality
 - Misunderstands that Claimant clearly did not need an incentive to invest in Celgar and in the subsequent upgrading of the mill
 - Fails to acknowledge subsidies provided to Celgar by Canada

I address each of these points in the sections that follow.⁸⁰

⁷⁸ Mercer's Memorial, ¶ 333.

⁷⁹ Mercer's Memorial, ¶ 611.

1. Mr. Switlishoff defines issues incorrectly

59. The analytical framework used by Mr. Switlishoff to test discriminatory treatment is flawed since he investigates an irrelevant measure. Mr. Switlishoff states that:

“in analyzing the Province’s treatment of either Howe Sound or Tembec, the proper focus is on the percentage of the pulp mill’s 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.”⁸¹

60. Mr. Switlishoff goes on to present formulas to calculate this percentage, arguing that “the most compelling comparison [of Celgar, Howe Sound, and Tembec] is that of the Below-Load Access Percentage.”⁸²
61. Not only is the Below-Load Access Percentage a flawed metric, it is one entirely of Mr. Switlishoff’s creation. Mr. Switlishoff’s analysis effectively is a straw man that he creates and then knocks down. For him, Celgar having zero percent and Howe Sound having [REDACTED] percent under his metric is sufficient to prove different treatment.⁸³ To make this argument, however, Mr. Switlishoff is required to discount economic, regulatory, and mill-specific issues, which were integral and necessary (from an efficiency perspective) considerations of BCH’s GBL-setting process.⁸⁴ As I show here and in Appendix 2, Mr. Switlishoff’s analysis is myopic.

⁸⁰ This list does not include the failure of Mr. Switlishoff to consider the implications of the commitment to self-supply Celgar’s load associated with the MO underlying the Provincial Energy Project Certificate.

⁸¹ Switlishoff Expert Report, ¶ 96. Howe Sound and Tembec are the two mills Mr. Switlishoff chooses as comparators for Celgar.

⁸² Switlishoff Expert Report, ¶ 194. Parenthetical is my insertion.

⁸³ Switlishoff Expert Report, ¶¶ 130, 194, 203.

⁸⁴ Switlishoff Expert Report, ¶¶ 61-73. In addition to Celgar’s GBL, Mr. Switlishoff also complains about Celgar’s net-of-load restriction from Order G-48-09, as a separate yet related alleged mistreatment of Celgar. I address the net-of-load issue in Section III.C.6 below.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

2. Mr. Switlishoff misunderstands that utilities acquire resources efficiently and in a way that protects ratepayers

62. Mr. Switlishoff overlooks several important regulatory policy and economic issues to reach his conclusion that Celgar was subject to “arbitrary, unfair and discriminatory” treatment compared to other mills with respect to access to embedded cost electricity.⁸⁵
63. First, Mr. Switlishoff does not take into account a key principle of economic utility regulation: economic efficiency. The sort of arbitrage Claimant seeks is economically inefficient because Claimant would be pocketing an incentive designed to increase societal welfare in BC (through increasing green energy generation at a lower cost to ratepayers than other supply options available to BCH), but without providing any societal benefit. In addition, this arbitrage also runs contrary to Provincial and regulatory policy in BC. BC’s Ministry of Energy, Mines and Petroleum Resources (“MEM”) reiterated provincial policy in a January 2009 filing with the BCUC to support amending the PPA between BCH and FortisBC to prevent Celgar from arbitraging low-cost embedded-cost power supplied by BCH to Celgar’s utility, FortisBC, and then supplied by FortisBC to Celgar.⁸⁶ The MEM wrote:

“The proposed amendment is consistent with the goal of ensuring that BC Hydro’s heritage assets continue to provide benefits for all BC Hydro customers, and not to benefit one set of customers who seek to use the heritage assets as the basis for arbitrage between the low cost energy from the heritage assets and market prices.”⁸⁷

64. Mr. Switlishoff also does not take into account a specific component of economic efficiency, efficient resource acquisition, i.e., acquisition in a cost-effective manner. Adhering to this principle benefits ratepayers, and failing to do so is harmful to them. It is common practice for utilities to use incentives to get customers to provide generation

⁸⁵ Switlishoff Expert Report, ¶ 3.

⁸⁶ This amendment was ultimately approved in Order G-48-09, which created the so-called net-of-load standard, which I address in detail in Section III.C.6.

⁸⁷ Ministry of Energy, Mines and Petroleum, Final Argument, Re: BCH and Power Authority Application to amend s. 21 of Rate Schedule 3808 Power Purchase Agreement, 23 January 2009, bates 048339-048342 at bates 048339, ¶ 1, **NERA-16**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

resources (or to reduce their energy consumption) when the incentive is less costly than other acquisition options. For example, BCH's EPAs that include GBLs with Howe Sound and Tembec provide incentives to increase generation above previous levels, as I demonstrate in Appendix 2. The below-load GBLs at these mills (which are a key concern of Mr. Switlishoff) incentivized the mills to utilize idle generation, providing an economic good for BCH and its customers. This incentive is also in line with provincial policy, as articulated by the MEM:

“The underlying policy behind [allowing the purchase of incremental generation even if below load, but not re-pricing existing generation below load] is the desire to promote competitive supply options and, therefore, competitive electricity rates. If self-generators were able to re-price their existing self-generation, they could engage in arbitrage to generate revenue at the expense of BC Hydro's other ratepayers. But by allowing only new generation to be sold to market, self-generators are able to bid into BC Hydro's bioenergy calls. This allows for a competitive acquisition process without undermining competitive rates. BC Hydro gains a new source of supply, and ratepayers are held whole because the new supply is priced competitively.”⁸⁸

65. In contrast, the lower GBL that Claimant seeks in this arbitration (and which Mr. Switlshoff's seeks to justify) would provide an *after-the-fact* subsidy for the generation capacity it had already built as well as improved and the generation output it already used for self-supply. By definition this would be an unnecessary subsidy, and hence would be economically inefficient.⁸⁹ Allowing Celgar to arbitrage below its GBL would lead to no additional generation at Celgar or in BC.

⁸⁸ From a January 11, 2010 MEM briefing note on Mercer's request to establish a new, low generation baseline and increase electricity sales. MEM, Briefing Note for Decision, Mercer International Group's request to establish a new, low generation baseline and increase electricity sales, 11 January 2010, bates 009136-009143 at bates 09137, **NERA-17**.

⁸⁹ MEM, Briefing Note for Decision, Mercer International Group's request to establish a new, low generation baseline and increase electricity sales, 11 January 2010, bates 009136-009143 at bates 09138, **NERA-17**. As BC's Energy Ministry wrote in a briefing note:

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

66. Authorities in BC have supported BCH's resource acquisition via incentives provided by EPAs with GBLs, but have rejected Celgar's requests for a subsidy without a commensurate economic benefit for BC. Mr. Switlishoff does not seem to appreciate that BC's regulatory actions are guided by the regulatory principle of cost effectiveness or economic efficiency.
67. Second, Mr. Switlishoff's analysis does not reflect another key principle of economic utility regulation: ratepayer protection. The citizens and businesses of British Columbia are generally captive customers whose only realistic option for electricity service is from their local utility. Regulators are entrusted with ensuring that utilities act to protect customers from paying unreasonable rates. The ability to arbitrage that Claimant seeks would result in a wealth transfer from ratepayers to the Claimant since the extra revenues that Claimant seeks must come from somewhere; the ratepayers in British Columbia would be left with the bill; and they would get nothing in return. Allowing Celgar to arbitrage below its GBL, set at its historical level of self-generated electricity used for self-supply, would lead to an increase in purchases by Celgar of embedded-cost electricity from its utility, FortisBC. This, in turn, would lead to an increase in purchases of BCH embedded-cost electricity by FortisBC, thus harming either its or BCH's ratepayers.⁹⁰ The result would be unreasonable rates.
68. By failing to acknowledge that what Claimant is seeking is an unneeded incentive (or subsidy), Mr. Switlishoff misunderstands that Claimant's desired outcome violates one of the core principles of utility regulation: protection of customers.

⁹⁰ As BC's MEM wrote, "The second reason for my decision [to reject Mercer's request for a lower GBL] is that supporting [Mercer's] request would result in an unacceptably high cost to utility rate payers. To replace the electricity Mercer International would be selling, BC Hydro would have to acquire new electricity at a significantly higher price than what FortisBC pays under Rate Schedule 3808. The increased costs to BC Hydro would be reflected in BC Hydro's rates." Letter from Blair Lekstrom to David Gandossi and Brian Merwin dated February 22, 2010 at MER00186107(CONF), **NERA-18**. Rate Schedule 3808 sets what FortisBC pays for power it receives from BCH. FortisBC and BCH have a "hybrid" relationship, where they are both independent utilities, but BCH also provides power to FortisBC under a contract between the parties. See BCUC, Order Number G-27-93, "Application by British Columbia Hydro and Power Authority for Rate Schedule 3808 and Revised Power Purchase Agreement with West Kootenay Power Ltd.", 22 April 1993, **NERA-19**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

69. These policy issues (economic efficiency and efficient resource acquisition, and protection of ratepayers) are also consistent with the policy in BCUC edicts, specifically Order G-38-01. That order allowed arbitrage of embedded cost power as an incentive to motivate increased generation where such generation would not have developed otherwise and where the generator would not have increased purchases of embedded-cost electricity. Arbitrage without such benefit is not allowed, but this would be the outcome of Celgar's desired scenario where there is no commensurate societal benefit for the subsidy Celgar has pursued.⁹¹

3. Mr. Switlishoff bases his analysis on an unjustifiably narrow set of comparators

70. In addition to Celgar, eight other pulp and paper mills in British Columbia have EPAs with GBLs, yet Mr. Switlishoff limits his analysis to two mills, i.e., Tembec and Howe Sound.⁹² These are also the two mills identified by Claimant for purportedly having received different treatment with respect to access to embedded cost energy.⁹³ I find Mr. Switlishoff's analysis of only two mills to be unjustifiably narrow.
71. In choosing these two mills to determine the consistency of British Columbia's treatment of pulp and paper mills, Mr. Switlishoff considered the following criteria:⁹⁴

⁹¹ Order G-38-01 at 2, **NERA-12** ("B.C. Hydro is not required to supply any increased embedded cost of service to a [transmission-service] customer selling its self-generation output to market") (parenthetical added). Yet, Celgar seeks to purchase more embedded cost electricity and then sell an equivalent amount of generation.

⁹² Mr. Switlishoff also performs a limited analysis with respect to BCH's LDA with Canfor (Switlshoff Export Report ¶¶ 135-141). I address this issue in Section III.C.5 below.

⁹³ Mercer's Memorial, ¶ 474. In a February 2013 internal Mercer review of the Celgar investment, Mercer compares Celgar's performance to that of Canfor Pulp, owner of two mills with self-generation, Northwood and Prince George, while neither Claimant nor Mr. Switlshoff considers these mills as relevant when evaluating BCH's GBL process. *See* Mercer Investment Review, February 2013, MER00094712(RA), **NERA-20**.

⁹⁴ These are the mill characteristics listed by Mr. Switlshoff (Switlshoff Expert Report, ¶ 91). For convenience, I have added the numbering one to five. Applying these five criteria does yield his two comparator mills. Mr. Switlshoff is vague in his description of the steps he followed in selecting Tembec and Howe Sound, stating that he based his selection on "the legal factors for 'like circumstances' that [he] was provided by Mercer's counsel, and [his] own sense of which self-generators would provide a fair comparison." (Switlshoff Expert Report, ¶ 91, footnote omitted) However, as these are the characteristics he specifically enumerates, I am led to believe these essentially were his selection criteria.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- 1) Production of NBSK market pulp
 - 2) Production of biomass-based self-generated electricity, and sale of such green electricity
 - 3) Being located in British Columbia
 - 4) Having an EPA with BCH containing a GBL
 - 5) Having “[i]nvested in substantial new generation capacity in the decade prior to the BCUC’s issuance of Order G-38-01 in 2001.”⁹⁵
72. From an analytical viewpoint, the fifth criterion is arbitrary and self-serving. When evaluating the consistency of BCH’s GBL setting process, there is no relevance to distinguishing between investing in new generation five, ten, twenty, or more years prior to Order G-38-01, i.e. there is no rationale for limiting the installation of new generation to the decade preceding G-38-01. Mr. Switlishoff fails to provide any economic argument for his selection. The practical effect of limiting consideration to mills that satisfy Mr. Switlishoff last criterion, is to ignore four mills: Domtar’s Kamloops (“Kamloops”), Canfor’s Northwood (“Northwood”), Nanaimo’s Harmac (“Harmac”), and Cariboo’s Quesnel (“Quesnel”), which otherwise also satisfy Mr. Switlishoff’s initial criteria (1 to 4). Only Tembec’s Skookumchuck and Howe Sound’s Port Mellon mills manage to qualify for comparison with Celgar under the last, unjustified criterion.
73. Mr. Switlishoff’s first criterion—producing NBSK market pulp—may also be overly restrictive for the purposes of evaluating the consistency of British Columbia’s treatment of pulp and paper mills. My understanding is that all pulp and paper mills with generation capacity in BC share the same salient feature of energy generation fundamentally connected with mill processes, and that all of these mills utilize biomass to produce electricity.⁹⁶ As the mechanics of producing self-generation is similar across pulp and

⁹⁵ *Ibid.*

⁹⁶ The “salient feature” is having an extraction turbine that both generates electricity and regulates the steam used in mill processes. Therefore, the mill’s generation and mill processes are thermally connected.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

paper mills, it would appear logical that all these mills, rather than just the NBSK mills be analyzed when evaluating the GBL setting process. By limiting his analysis only to NBSK pulp mills, Mr. Switlishoff has eliminated two additional mills, Canfor's Prince George ("Prince George") and Catalyst's Powell River ("Powell River"), from the scope of his report.⁹⁷

74. Table 2 below summarizes my criteria versus Mr. Switlishoff's.
75. My detailed review of each mill addressed by Mr. Switlishoff's report is provided in Appendix 2. As shown in that appendix, my assessment reveals that all of these mills alleged by the Claimant to have received more favorable treatment were subject to the same GBL-setting process as Celgar, contrary to Mr. Switlishoff's depiction.⁹⁸

⁹⁷ Actually, based on his stated criteria, Mr. Switlishoff might have eliminated Prince George for either of two reasons: it is not NBSK, and it invested in its generation turbine after Order G-48-01. Both criteria are arbitrary. As shown in Table 2, Prince George, like the other pulp and paper mills, has an EPA with BCH that contains a GBL. It is an appropriate comparator to evaluate the consistency of BCH's GBL methodology.

⁹⁸ It is interesting to note that the two mills that happen to meet the criteria set by Mr. Switlishoff also happen to be the two mills with the most unique circumstances affecting the process of setting their GBLs.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Table 2
Summary of Pulp and Paper and Saw Mills Analyzed by NERA

Mill Characteristics:										
Company	Mill	Transmission			Generating			Substantial Generation		
		Customer with Self-Generation and Contract with BCH	Mill and Generator Electrically Connected	Contract Contains GBL #	Turbine Regulates Steam for Mill Operations ^	Kraft Mill +	NBSK Mill #	Installed Prior to Order G-38-01 and Still in Operation #,*	BCH Customer	
Mercer	Celgar	✓	✓	✓	✓	✓	✓	✓	✓	X ⁷
Canfor	Northwood	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cariboo	Quesnel	✓	✓	✓	✓	✓	✓	✓	✓	✓
Domtar	Kamloops	✓	✓	✓	✓	✓	✓	✓	✓	✓
Howe Sound	Port Mellon	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nanaimo	Harmac	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tembec	Skookumchuck	✓	✓	✓	✓	✓	✓	✓	✓	✓
Canfor	Prince George	✓	✓	✓	✓	✓	X ⁵	X ⁶	✓	✓
Catalyst	Powell River	✓	✓	✓	✓	X ⁴	X	✓	✓	✓
Conifex	Mackenzie	✓	✓	X ²	X	X	X	X ⁶	✓	✓
Nechako	Vanderhoof	✓	✓	X ²	X	X	X	X ⁶	✓	✓
Tolko	Armstrong	✓	X ¹	X ³	X	X	X	X ⁶	✓	

Notes:

[#] These criteria were used by Switlishoff in determining comparator mills.

[^] All pulp and paper mills I reviewed satisfy this criteria, and none of the sawmills do.

⁺ These mills utilize recovery boilers to burn black liquor for electricity generation and to recover chemicals.

^{*} This is a criteria used by Switlishoff, however, he limited this criteria to mills with generators constructed within 10 years of G-38-01. This column does not limit this characteristic to 10 years.

¹ The Armstrong mill's electricity producing turbine has a separate interconnect with the BCH grid and is not able to directly supply the saw mill.

² These mills do not have GBLs as they did not have generating units prior to their agreements with BCH.

³ The Armstrong mill does not have a GBL as its generating unit is considered a separate IPP (see note 1) and also because it did not have a generating unit prior to its first EPA with BCH.

⁴ The Powell River mill produces specialty paper using a TMP (thermomechanical pulp) process.

⁵ The Prince George mill produces unbleached NSK.

⁶ Each of these mills constructed their first turbine after order G-38-01, and in each case the construction was tied to an agreement with BCH (LDA or EPA).

⁷ Celgar is a Fortis BC customer.

4. Mr. Switlishoff does not consider the substantive differences between Celgar and other mills which compelled case-by-case GBL determinations by BCH

76. Mr. Switlishoff's report does not consider the substantial differences between Celgar and his two chosen mills, Tembec and Howe Sound. Significantly, these differences explain the GBL contained in each mill's EPA with BCH. My review demonstrates that BCH appropriately considered the following differences in its GBL-setting process:

- Share of own load met by self-generation prior to EPA with BCH (i.e. level of self-supply). This is a fundamental reason why different mills have different GBLs. Prior to its EPA, Celgar, on an annual basis, self-supplied 100% of its load, but other mills did not for various reasons including insufficient existing capacity or idle capacity resulting in less generation available for self-supply.⁹⁹ BCH's methodology ensures the use of the historical level of self-supply at a mill as the starting point for providing incentives for incremental generation. It accomplishes this by initially setting the mill's GBL at that historical level.¹⁰⁰ For some mills, this GBL starting point was less than their load, i.e., BCH was supplying part of their load. This provided BCH with a valid economic reason for incentivizing increased self-generation. In contrast, the below-load GBL that Celgar seeks would be economically inefficient, as Celgar was already meeting its load with self-supply, a valid economic reason for BCH not incentivizing increased generation beyond the incentives for the turbine in Celgar's 2010 Green Energy Project ("GEP"), whose generation is sold to BCH under an EPA.
- Pre-existing contracts. Howe Sound and Tembec had pre-existing contracts with BCH when their GBLs were set, but Celgar did not. BCH's process was to establish GBLs based on self-supply *in the absence of a contract*:

⁹⁹ For example, Howe Sound's generation facilities, [REDACTED], as discussed in Appendix 2.

¹⁰⁰ There could be additional adjustments to reflect the effects of existing contracts on the level of self-supply, as discussed above in III.B.2.b.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- Consistent with its process, in setting Howe Sound's GBL, BCH

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]¹⁰¹ [REDACTED] resulted in the BCH-Howe Sound EPA revitalizing the incentive for incremental generation as originally intended in the preceding Enabling Agreement, which was canceled in favor of the new 2010 EPA.

- Tembec built its 2001 turbine specifically for its 1997 EPA with BCH. Initially, under the incentives of that agreement, Tembec operated the new turbine at a relatively high generation level (nearly three times the output of the previous turbine). [REDACTED]¹⁰²

[REDACTED]

[REDACTED]

[REDACTED]¹⁰³ To determine an appropriate GBL for a new EPA, BCH calculated the amount of energy Tembec would have generated in current operations assuming, hypothetically, it had no EPA contract with BCH.¹⁰⁴

¹⁰¹ See Witness Statement of Pierre Lamarche, ¶¶ 39-40.

¹⁰² These changes included [REDACTED]. See Appendix 2, Tembec memo. *See also* BC Hydro Inter-office memo Re: Tembec Skookumchuck Pulp Operations – CBL / GBL / EPA Analysis dated April 8, 2009 (“BCH Memo”), bates 037395-037399, **NERA-21**.

¹⁰³ In March 2009, due to changing economic conditions, Tembec’s Skookumchuck mill and its generation units shut down operations. [REDACTED]

[REDACTED]. *See* BCH Memo, **NERA-21**. Further, BCH understood that absent a new contract Tembec would have sought early termination in 2011 of the 1997 EPA, [REDACTED]

[REDACTED] (*see* BCH Memo, **NERA-21**).

¹⁰⁴ I understand that the 14 MW GBL in Tembec’s EPA reflects a calculation of [REDACTED]

[REDACTED] For details, *see* Appendix 2.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- Treatment of pre-EPA sales. Mr. Switlishoff's report suggests that it was discriminatory and unfair that Celgar's [REDACTED]
[REDACTED]
[REDACTED].¹⁰⁵ But there are key differences in how Celgar and Howe Sound operated their mills and turbines, [REDACTED]
[REDACTED]. Leading up to its EPA, Celgar generated more than 100% of its load, on an annual basis, without any contractual agreement incentivizing that generation.¹⁰⁶ This level of historical generation was the appropriate baseline above which an EPA should incentivize incremental generation.¹⁰⁷ In contrast, Howe Sound made [REDACTED]
[REDACTED]
[REDACTED].¹⁰⁸ [REDACTED]
[REDACTED]
[REDACTED].¹⁰⁹

¹⁰⁵ Switlshoff Expert Report, ¶¶ 132, 181, 190, and 212. By historical, I mean the period prior to a mill's EPA with BCH that served as the basis for determining a mill's GBL.

¹⁰⁶ Essentially 100% of Celgar's generation—including generation for sales—was a byproduct of operations at the mill. As Claimant stated in a May 12, 2010 presentation, “Celgar became [the] first NBSK mill in BC that could supply all of its heat and electricity needs from Black Liquor without requiring supplemental hog fuel.” Black Liquor is a byproduct of its operations. *See* Mercer International Group, Addressing Bioenergy Barriers in BC Workshop, dated May 12, 2010, online: <http://www.mercerint.com/i/pdf/presentations/Bioenergy_Barriers_Conference.pdf>, NERA-22.

¹⁰⁷ But since Celgar's historical generation exceeded its load on an annual basis, the latter formed its GBL because BCH's process was to set GBLs equal to the level of self-generation used for supplying a mill's load so GBLs would not exceed a mill's load.

¹⁰⁸ This protected customers as this meant that Howe Sound was therefore using the generation that was essentially a byproduct of operations of its mill to supply its own load. *See* Appendix 2, Howe Sound GBL memo, for more information. Also see Witness Statement of Fred Fominoff, ¶ 34.

¹⁰⁹ In contrast, subtracting Celgar's historical sales from its generation would have increased the amount of electricity that Celgar could arbitrage and would have been an unnecessary incentive since Celgar was generating this electricity incentivized by the profits from its related pulp operations. The generation that Celgar sold historically was effectively a by-product of its mill operation; Celgar did not need a special incentive to generate that electricity, as discussed above. So, if Celgar's GBL in its EPA with BCH were lowered to account for Celgar's historical sales, Celgar would then be allowed to sell that additional amount at firm, EPA prices, which would be tantamount to a retroactive and hence inefficient incentive. This would also violate the commitment made to self-supply the mill load made to the Province (See ¶ 12).

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- Commitments to self-supply. I am informed that Celgar is, and has been since 1991, bound by the terms of a BC Ministers' Order that effectively requires Celgar to operate its generating turbine to self-supply its load, making it energy self-sufficient.¹¹⁰ I am not aware of any similar agreements that bind Howe Sound and Tembec.
- Different Products. Howe Sound, unlike Celgar, produces paper as well as pulp, which leads to different economics of generation at the mills, and is an important reason why Howe Sound self-supplies a lower percentage of its load than Celgar does. Basically, Howe Sound's paper production is non-kraft, and so does not produce black liquor. Black liquor is effectively a free fuel that the mills burn to produce electricity (and steam). Not having as much "free fuel" as Celgar, it is not economic for Howe Sound to generate as much of its load as Celgar.¹¹¹ Mr. Switlishoff's argument of unfair and different treatment for Celgar based on his below-load access percentage ignores this important difference between the mills.

77. In addition to his claim that Celgar received a less-favorable GBL, Mr. Switlishoff also claims unfair treatment based on two adjustments to GBLs in EPAs. First, Mr. Switlishoff claims that that Tembec was treated more favorably than Celgar because Tembec's GBL was shaped in a purportedly beneficial way and Celgar's was not. Second, he claims that Howe Sound was treated more favorably because its [REDACTED] [REDACTED], and Celgar's does not.¹¹² However, Mr. Switlishoff ignores that Celgar, like all Bioenergy Call participants, had the option to negotiate a shape for its GBL, where that shape could reflect typical maintenance outages, and it had the opportunity to negotiate other GBL adjustments.¹¹³ Moreover, neither Mr. Switlishoff nor Claimant (nor Mr. Kaczmarek) claim that BCH prevented

¹¹⁰ See Witness Statement of Peter Ostergaard, Section B.

¹¹¹ Claimant acknowledges the energy-intensity of Howe Sound's paper production in an internal strategy document from 2008 where Claimant discusses pulp and paper mill acquisition options in BC. Mercer International Group, Strategic Planning, MER00015467 at MER00015494, **NERA-23**.

¹¹² Switlishoff Expert Report, bullet points after ¶ 210

¹¹³ Witness Statement of Lester Dyck, ¶ 63.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Celgar from having a GBL shaped like Tembec's GBL [REDACTED]
[REDACTED]. As to shaping specifically, Celgar proposed a GBL shape to BCH, which was accepted; they could have proposed a shape similar to Tembec's, but they chose not to.¹¹⁴ Further, Clause 7.10 of Celgar's EPA states that Celgar is free, during the term of the EPA, to propose a new GBL shape and such a request could not be unreasonably denied by BCH.¹¹⁵ To my knowledge, Celgar has never made such a request. So, Mr. Switlishoff's claims ring hollow. Further, Mr. Switlishoff's complaint about Howe Sound's [REDACTED]
[REDACTED]
[REDACTED].¹¹⁶

78. Appendix 2 provides my full analysis of the GBL setting process for Tembec, Howe Sound, and Celgar. It shows in detail how differences between these mills explain differences in their GBLS.

5. Mr. Switlishoff incorrectly claims that Celgar is being forced to provide “free” load displacement service

79. Mr. Switlishoff argues that the Province is using regulation to force Celgar to provide load displacement services for free while other mills are being compensated for providing the same service. Mr. Switlishoff concludes that this is “far less favourable treatment” for Celgar.¹¹⁷ Mr. Switlishoff, however, mischaracterizes the relationship between Celgar and the BC regulatory regime. Each mill that is compensated for providing a load displacement service has entered into a Load Displacement Agreement (“LDA”) with BCH that specifies target levels of load displacement, provides incentives to the mill for agreeing to meet those targets, and penalizes the mill for failing to meet them. Celgar, in

¹¹⁴ See Witness Statement of Lester Dyck, ¶¶ 89 and 111-113.

¹¹⁵ See Clause 7.10 for details, e.g., Celgar can reshape the GBL once per year.

¹¹⁶ Witness Statement of Lester Dyck, ¶ 131. Also see my Appendix 2. Though Mr. Switlishoff suggests this interpretation in ¶ 131 of his report, he is silent on this point when presenting his less-favorable treatment argument in ¶ 210.

¹¹⁷ Switlishoff Expert Report, ¶ 141. *See also* note 23 above for descriptions of load displacement service and LDA.

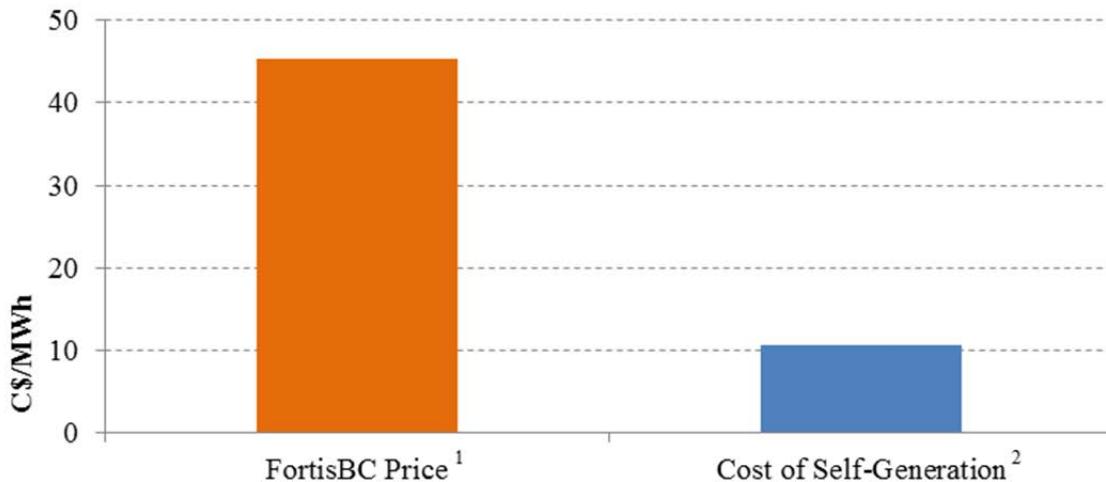
PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

contrast, has not been required to reduce its consumption of electricity as in a LDA. Unlike mills subject to LDAs, Celgar is free to purchase whatever amount of regulated-cost or, if under a supply contract, contract electricity that it deems to be economic.¹¹⁸ For its own economic reasons, Celgar historically chose to self-supply 100% of its load, instead of purchasing its electricity needs from its local utility.¹¹⁹ Celgar did not require any incentive (i.e. any LDA) to operate according to this business plan. Figure 1 below illustrates the strong incentive that Celgar had to self-supply its load in the absence of an EPA, as its cost to self-supply was far below the cost of purchasing electricity from FortisBC.

Figure 1
Celgar's Cost of Purchasing Load from FortisBC
vs. Supplying Load with Self-Generation

¹¹⁸ What Celgar has currently failed to do is to agree to an arrangement with FortisBC to allow it to increase its purchase of low embedded-cost electricity and simultaneously sell an equivalent amount of its generation. See Witness Statement of Dennis Swanson, ¶¶ 147-149. BC regulation, as well as BCH's EPAs, prevents this sort of arbitrage for **all other** mills. Celgar could also be constrained by the commitment to self-supply in the Minister's Order permitting the expansion of the mill.

¹¹⁹ In fact, Celgar accepted a commitment made by a predecessor to self-supply the mills load from its 52 MW generator as an integral aspect of obtaining a required permit to build that generator. That commitment may be a reason that Celgar chose not to attempt to sell its below-load generation. See ¶ 12 above.



Notes and Sources:

¹ FortisBC energy charge under R.S. 31 tariff in 2012. Source: Mr. Kaczmarek Expert Report Appendix 3.A

² Conservative estimate of variable operation and maintenance costs (VOM) for Celgar's 52 MW extraction turbine, which provides the electricity to self-supply the mill's load. Only VOM costs included, as Celgar essentially incurs no fuel costs to self-supply its load (see Kaczmarek Expert Report, ¶ 17). I used VOM for an Oil/Gas Steam unit as a proxy (adjusted for inflation and foreign exchange), as I do have access to Celgar's VOM costs by unit. Source for VOM of proxy: US Energy Information Administration Annual Energy Outlook Report (AEO), Assumptions file, for 1996 (the oldest assumptions file available at <http://www.eia.gov/forecasts/aoe/archive.cfm>, accessed July 3, 2014; Celgar's extraction turbine began operation in 1993).

6. Mr. Switlishoff mischaracterizes the net-of-load restriction

80. Mr. Switlishoff states that Celgar has suffered discriminatory treatment by the application of what he perceives as net-of-load restrictions. There are two aspects of this alleged discrimination: first, a restriction on FortisBC purchases of PPA power from BCH in Order G-48-09 and second, Celgar's GBL with BCH established in its EPA.
81. With respect to Order G-48-09, Mr. Switlishoff's characterization¹²⁰ is misleading in several ways.
82. First, Order G-48-09 limits FortisBC's purchases of electricity under its PPA with BCH whenever FortisBC is supplying Celgar at embedded-cost rates while Celgar is selling below-load generation. However, nothing in the Order prevents Celgar and FortisBC from negotiating an agreement under which FortisBC would supply Celgar some or all of

¹²⁰ Switlshoff Expert Report, ¶¶ 65-67, 69, 87, 88, 170-171, 194, 201.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Celgar's load under terms and conditions (including price) that meets BCUC rate standards. Celgar would then be free to sell generation below its load to third parties.¹²¹

83. Second, while this Order effectively prevents FortisBC from supplying low-embedded cost energy from BCH's resources to Celgar, Mr. Switlishoff fails to mention that BCH has been providing Celgar with [REDACTED]

[REDACTED].¹²² [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]. So, Mr. Switlishoff is incorrect; in effect, Order-48-09 has not subjected Celgar to a net-of-load restriction [REDACTED]

[REDACTED].¹²³

84. Third, while Celgar effectively cannot access embedded cost electricity below its GBL while selling below-GBL generation, this is no different than the treatment afforded other mills, as I discuss in Section III.C.7. Moreover, if Celgar had unique access to low embedded-cost power below its GBL, and could effectively resell that power at higher rates, this would harm other ratepayers, as I discussed above in Section III.C.2.

85. Fourth, FortisBC has proposed a plan for supplying all Celgar's load, at a price that matches FortisBC's cost of supplying Celgar.¹²⁴ Clearly, were such a rate to be approved, Celgar would not be subject to a net-of-load standard. While Mr. Switlishoff complains about this proposed rate, calling it a "Made-For-Celgar" rate, he ignores the fact that this rate is required under the cost-causality principle, which is a core principle of utility regulation.

¹²¹ So far, the parties have not reached an agreement, see Witness Statement of Dennis Swanson ¶ 147-149. Celgar might also have to seek a waiver of the 1991 Ministers' Order related to being energy self-sufficient.

¹²² Witness Statement of Jim Scouras, ¶¶ 62-63.

¹²³ Mr. Switlishoff incorrectly states that a net-of-load standard prevents Celgar from accessing embedded cost power in Switlishoff Expert Report at ¶¶ 65, 69, 171, 201.

¹²⁴ See FortisBC Inc. Application for Stepped and Stand-By Rates for Transmission Customers, March 28, 2013 [C-218]

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

86. With respect to the second aspect of Mr. Switlishoff's criticisms, Celgar's GBL with BCH, Mr. Switlishoff appears to suggest that Celgar's GBL is tantamount to a net-of-load standard, whereas other mills are instead subject to a "historical usage" standard.¹²⁵ However, Mr. Switlishoff misses the fact that for mills historically self-supplying 100% of their load, the GBL, which equals the self-supplied portion of the load, coincidentally, is, in this instance, indistinguishable from a GBL based on historical load.
87. In reality, Celgar's access to embedded cost power is effectively the same as that of other mills. In 2007, Celgar supplied fully, on an annual basis, its own load of 349 GWh with self-generation, and that became its GBL with BCH. So, under its EPA, Celgar's commitment is to sell any generation above that amount to BCH. Since 2007, however, Celgar's load has increased, raising the issue of what happens to the electricity it needs to meet its new load? Celgar cannot self-supply that load because it must sell all its output above 349 GWh to BCH in accordance with its EPA. To resolve this issue, as discussed above, BCH has an agreement with Celgar [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].¹²⁶ This renders moot Mr. Switlshoff's concerns, [REDACTED]
[REDACTED]
[REDACTED]. This arrangement effectively guarantees Celgar the continuous application of the "historical usage" standard that Mr. Switlshoff claims it was denied.
88. Further, like the other mills with EPAs with GBLs that I have analyzed, Celgar:
- Has a GBL that is based on its historical self-supply generation. But in Celgar's case this is 100% of its load, which Mr. Switlshoff has chosen to characterize as net-of-load.

¹²⁵ Switlshoff Expert Report, ¶¶ 71, 89, 180, 184-185, 202, and 208-209, and the bullet points after ¶ 210.

¹²⁶ [REDACTED]

[REDACTED] This is briefly mentioned by Mr. Merwin (Witness Statement of Brian Merwin, dated March 28, 2014 ("Merwin Witness Statement") at n. 62).

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- Has a GBL that is fixed for the term of its contract with BCH.
 - Can sell at EPA prices a pre-defined quantity of its generation, and which is not affected by changes in mill load.
 - From a financial perspective, [REDACTED]
[REDACTED]
89. An EPA with an actual “net-of-load” GBL would be different with respect to all four aspects.¹²⁷ In other words, such a net-of-load GBL in an EPA would mean that 1) the GBL would vary with changes to a mill’s load over the term of the EPA; 2) for a given generation level, the level of sales made at EPA prices would vary depending on mill load; 3) incremental load would need to be served by self-supply; and 4) historical generation would become irrelevant, and the GBL would always reflect contemporaneous load. None of these accurately describe Celgar’s situation.

7. Celgar not being able to arbitrage below its GBL is no different than the treatment accorded to other mills

90. BCH’s EPAs with GBLs concluded with Tembec and Howe Sound prevent these mills from selling their generation below their GBLs – Celgar’s EPA is no different in this regard.
91. BC’s MEM addressed this issue in a briefing note on Claimant’s request for a lower GBL. The MEM states that granting Claimant’s GBL request would be [REDACTED]
[REDACTED]
[REDACTED]

128

¹²⁷ I am not aware of any such EPA existing.

¹²⁸ MEM, Briefing Note for Decision, Mercer International Group’s request to establish a new, low generation baseline and increase electricity sales, 11 January 2010, (CAN032401/bates 09136-43) at 009140, **NERA-17** [same as exhibit C-233].

8. Mr. Switlischoff fails to understand that regulation is an evolutionary process

92. Over time, regulators adjust their regulation to reflect changes in the operating environment of the utilities they regulate. Like any organization, Regulatory Commissions, and the policies they endorse, are not static. In order to provide effective regulation that is in line with current operating environments, regulators cannot be bound by decisions of past Commissions that were rendered in past operating environments.¹²⁹
93. Mr. Switlischoff seems not to understand, or not to accept, this basic principle. For example, he criticizes the BCUC Order G-156-10, which held that Celgar is ineligible for the FortisBC rate structure under which it had been taking power from FortisBC since 2006 (RS33).¹³⁰ Mr. Switlischoff also has concerns about the uncertainty and potential unfairness of anticipated future rate changes for Celgar (including the so-called “made-for-Celgar” rate).¹³¹ Such changes are, however, consistent with the evolutionary nature of regulation, where rates and rate structure are not, and cannot be, static.¹³²

9. Mr. Switlischoff misunderstands the cost-causality principle

94. Mr. Switlischoff implies that the proposed “NECP Rate Rider”, which he labels the “Made-for-Celgar Rate”, is unfair because it requires Celgar to pay the additional cost to FortisBC of acquiring electricity to serve Celgar’s load.¹³³ As Mr. Switlischoff notes, “FortisBC has proposed to charge Celgar for the full incremental cost of all electricity it

¹²⁹ UCA, s. 75, **NERA-30**.

¹³⁰ Switlischoff Expert Report, ¶¶ 76-77.

¹³¹ Switlischoff Expert Report, ¶¶ 76-77, 80-88. I discuss Mr. Switlischoff’s concern about the “made-for-Celgar” rate in Section III.C.9 next.

¹³² Switlischoff Expert Report, ¶¶ 76-77. Specifically, Mr. Switlischoff raises concerns about BCUC Order G-156-10, that ruled Celgar was ineligible for RS 33. Yet, Mr. Switlischoff is silent on BCUC’s reasoning for that ruling, namely its finding that Celgar’s load factor was inconsistent with the tariff’s philosophy. Based on my understanding of the variable nature of Celgar’ demand for power under RS 33, this seems a reasonable and prudent determination. I discuss Mr. Switlischoff’s complaint about the “made-for-Celgar” rate in Section III.C.9 next.

¹³³ Switlischoff Expert Report, ¶ 86. In its memorial, Claimant states that the NECP rate rider would be discriminatory if it were approved (Mercer’s Memorial, ¶ 369).

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

must purchase from third-parties”¹³⁴ to serve the load that Celgar would no longer self-supply if, as it wants, it sold this self-generation into a market. Rather than being unfair, Mr. Switlishoff’s own description makes it clear that this rate follows the cost-causality principle: customers should be charged for the costs they cause a utility to incur. If Celgar were allowed to sell generation that it previously had used for self-supply, this would impose a cost on FortisBC, as it would have to replace that electricity. If FortisBC replaced that electricity with BCH embedded-cost electricity under Rate Schedule 3808, it would harm BCH ratepayers who would have to fund the acquisition of replacement energy at market rates. But it would have been Celgar that would have caused this cost to be incurred not BCH ratepayers. Similarly, if FortisBC replaced that electricity with electricity from other sources, without transferring its costs to Celgar, it would harm FortisBC ratepayers, who, similarly, would not have caused this cost to have been incurred. Under the cost-causality principle, this cost should appropriately be assigned to Celgar, the causal actor.

95. Mr. Switlishoff also is silent about the implications of Celgar being in a different utility service area. Celgar is a FortisBC customer and the other pulp mills are BCH customers. The two utilities have different tariff structures, average rates, production costs and different incentive programs.¹³⁵ It is typical that electric utilities will differ in these regards, even neighboring utilities. Therefore, the fact that Celgar may have a rate that differs from the rates under which mills in BCH’s service territory are served should not be unexpected.

10. Claimant clearly did not need an incentive to invest in Celgar so an incentive would have been economically inefficient

¹³⁴ Switlishoff Expert Report, ¶ 86.

¹³⁵ BCUC, Order Number G-110-12, “An Application by FortisBC Inc. for Approval of 2012-2013 Revenue Requirements and Review of 2012 Integrated System Plan”, 15 August 2010 (“BCUC Order G-110-12”), **NERA-24**. In Order G-110-12 (“Application by FortisBC Inc. for Approval of 2012-2013 Revenue Requirements and Review of 2012 Integrated System Plan”), the BCUC noted “that [BCH and FortisBC] operate with a different set of supply resources and a different customer base in terms of geography, population density and the residential/commercial/industrial mix. Therefore the Panel is of the view that there is no mandate nor would it be appropriate to expect FortisBC to have programs and rates that mirror those of BC Hydro.”

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

96. Celgar's GBL was based on the mill's level of self-supply generation in 2007. In that year Celgar was able to generate slightly more than its load, in part due to benefits realized from Claimant's investment in the Blue Goose project undertaken between 2005 and 2007.¹³⁶ Mr. Switlishoff argues that BCH was inconsistent and unfair to count Celgar's incremental generation due to the Blue Goose project in its GBL.¹³⁷ He argues that since Claimant/Celgar funded the Blue Goose project, they should be able earn arbitrage profits on any resulting incremental electricity. However, Mr. Switlishoff misses that this would be an economically inefficient outcome and would be harmful to BCH's customers.
97. It is a truism that an unneeded incentive is an inefficient one. Obviously, Claimant made its investments in the Blue Goose project without the need of any incentive from BCH, and without any indication that they expected to be able to reap arbitrage profits from such an investment. Rather, Claimant invested in the Blue Goose project for its own business purposes.¹³⁸ Claimant expected that investment to pay for itself many times over based solely on how that project improved mill operations¹³⁹ and Claimant's own documents indicate that the Blue Goose project exceeded Claimant's profit expectations.¹⁴⁰ What Claimant now seeks is an after-the-fact, or retroactive, incentive for investments it had already profitably made without any incentive. This is not only unnecessary, it would also be disadvantageous for electricity customers in BC – Celgar would provide no additional economic activity and yet would be the recipient of funds from BCH's ratepayers, i.e., a wealth transfer. This is in direct contrast to the cases of

¹³⁶ I understand that the Blue Goose project had numerous benefits for Celgar, and that increased generation for self-supply was one of them. See Project Performance Analysis, dated January 24, 2012, MER00149781(RA) at MER00149795-MER00149812, **NERA-25**.

¹³⁷ Switlishoff Expert Report, ¶¶ 181, 183, 192, 208, the bullet points after 210, 212.

¹³⁸ While Claimant did receive an C\$ 82 thousand dollar contribution towards Blue Goose from FortisBC's PowerSense program (see witness statement of Dennis Swanson, ¶ 52) presumably Claimant's decision to invest in Blue Goose did not depend on this relatively small (less than ½%) contribution towards a project that cost C\$ 27 million (Witness Statement of Brian Merwin, ¶ 55). Further, what is important in the present case is that *BCH* did provide (and *BCH* did not need to provide) an incentive to Claimant to undertake the Blue Goose project.

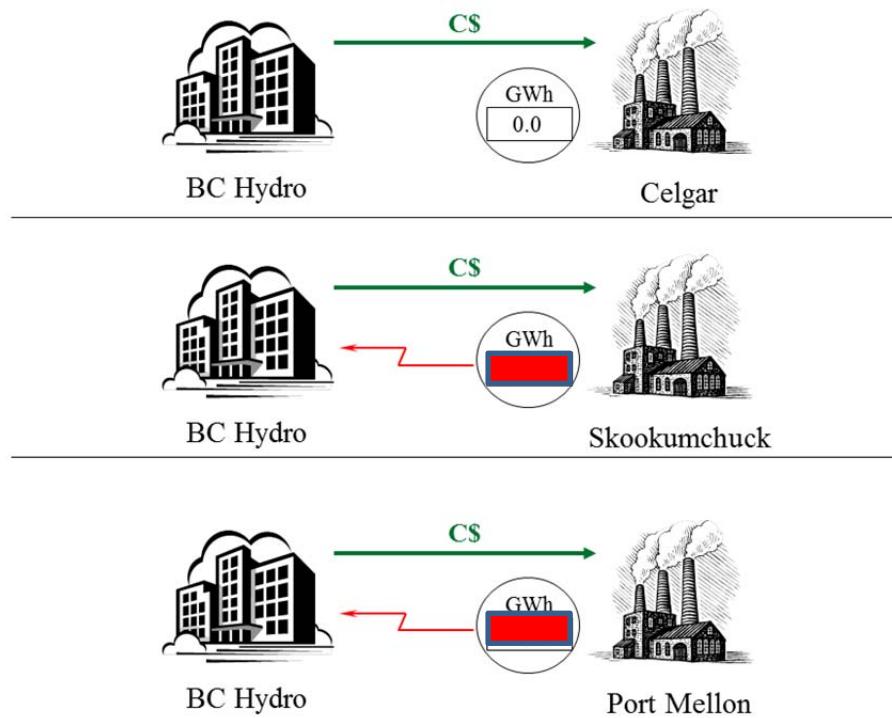
¹³⁹ Project Performance Analysis, dated January 24, 2012, MER00149781(RA) at MER00149811, **NERA-25**.

¹⁴⁰ Project Performance Analysis, dated January 24, 2012, MER00149781(RA) at MER00149811, **NERA-25**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Howe Sound/Port Mellon and Tembec/Skookumchuck, which provided incremental generation. Figure 2 below is an illustration of this key difference.

Figure 2
Incremental Flows Under Claimant's But-For Scenario



Notes:

Incremental flows for Skookumchuck and Port Mellon are represented by the annual quantity of firm energy above their GBLs they are required by their EPAs to generate. Celgar would produce no incremental flows (to BCH or FortisBC) were it to be granted the additional subsidy it seeks in this arbitration.

11. Mr. Switlshoff is silent on subsidies from Canada

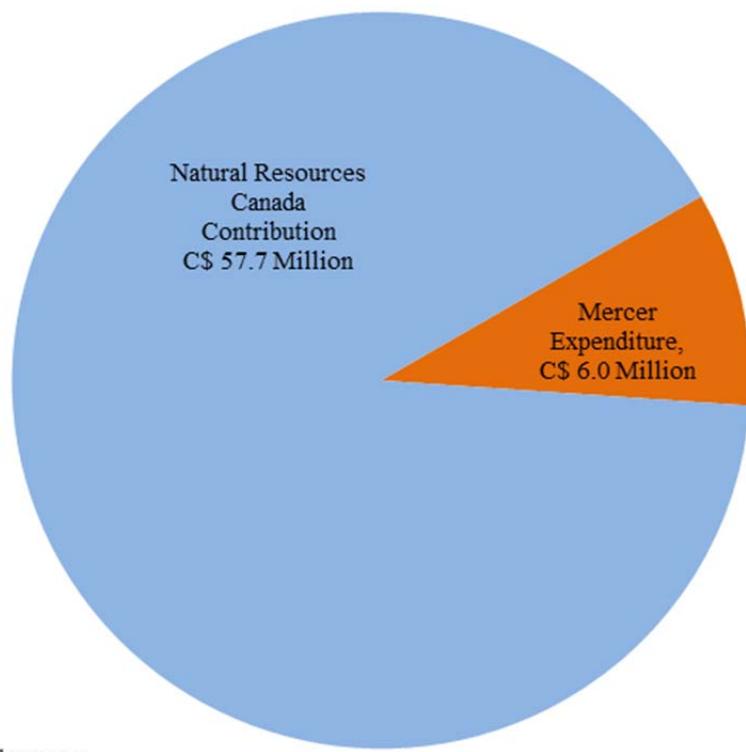
98. Mr. Switlishoff states that a key difference between the comparators that he has chosen and Celgar is that “in the three comparator cases ... each self-generator received some sort of compensation from BC Hydro to install and operate electricity generation equipment;”¹⁴¹ while in comparison “Celgar has installed all of its generation equipment with no assistance from BC Hydro or the Province.”¹⁴² By restricting the forms of

¹⁴¹ Switlishoff Expert Report, ¶ 196. Note that Mr. Switlishoff only uses Canfor as a chosen “comparator” in the context of LDAs which, as far as I can determine, has never been Claimant’s objective in its multi-year and multi-forum campaign to obtain a retroactive subsidy from BCH for its below-GBL generation. As I mentioned above, Celgar did not require an LDA to choose to self-supply its entire load.

142 Switlishoff Expert Report, ¶ 200.

“assistance” that he considers to those from BCH or the Province, Mr. Switlishoff entirely overlooks the fact that Celgar was the recipient of a C\$ 57.7 million subsidy from the Federal Government for the purposes of installing its new generation equipment.¹⁴³ This subsidy from the Canadian government covered over 90% of the total investment costs of the Green Energy Project and resulted in an extraordinarily high expected return. See Figure 3.

Figure 3
Green Energy Project
Total Project Cost: C\$ 63.7 Million



Notes and Sources:

Source for total GEP project cost: C-181 p. 48. Source for total Canada subsidy: NAV-056.

This figure ignores the return realized by Celgar (in the tens of millions of dollars) through the EPA with BCH, which was made possible by this investment, funded mainly by the subsidy from Canada.

¹⁴³ Through funds granted by the Government of Canada's Pulp and Paper Green Transformation Program ("PPGTP"). (See Kaczmarek Expert Report, NAV-056) Celgar's accounting for these funds suggests a lower level of grant funds was attributed to the GEP. (See Mercer's Memorial ¶ 313) However, from an economic perspective, Celgar received C\$ 57.7 million from Canada and the benefit of those funds inured to Claimant's bottom line irrespective of the accounting choices. So, it is equivalent (and computationally simpler) to assess the effects on return to Claimant assuming all the funds went to the GEP as I do in this subsection. If I were to ignore the benefit that Claimant enjoys from the C\$ 11 million that it chose not to attribute to the GEP (Claimant attributes C\$ 46.8 million to the GEP, *see* Merwin Witness Statement, ¶ 113), then the expected returns reported below would be lower, but still extraordinarily high.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

99. However, even by Mr. Switlishoff's very narrow definition of "assistance", his characterization of the financial incentives received by Celgar is wrong. The rate at which BCH purchases power under its Green Energy EPAs is meant to incentivize *incremental* or *new* generation, which is exactly what it did in the case of Celgar. Therefore, the EPA from BCH is another form of financial benefit received by Claimant which Mr. Switlishoff ignores – the EPA allows for annual firm energy revenues of up to approximately C\$ 26 million per year,¹⁴⁴ with indexed price escalation. Mr. Switlishoff fails to acknowledge that Claimant has already earned *outstanding* returns on its investments in generation assets due to EPA's incentive pricing,¹⁴⁵ as well as the C\$ 57.7 million subsidy from the Federal Government.
100. Using the metric Claimant uses to assess investment opportunities, and accounting for the contribution from the Canadian government, Claimant's forecasted IRR would be [REDACTED] on Claimant's two large-scale capital investments that affected Celgar's level of generation undertaken since Claimant acquired the Celgar mill, the Blue Goose project and the Green Energy Project.¹⁴⁶ This is without considering the subsidy the Claimant now seeks.
101. Considering specifically the Green Energy Project, Claimant's largest generation investment, and that Claimant received a C\$ 57.7 million subsidy from the Canadian government, Claimant's forecasted internal rate of return is an outstanding [REDACTED].¹⁴⁷ Prior to being awarded the C\$ 57.7 million, Claimant forecasted a still high IRR of

¹⁴⁴ Celgar's EPA specifies firm sales of 238 GWh, and prices of C\$ 107/MWh in 2010, representing about C\$ 25.5 million in potential annual revenue. The return due to this revenue is quite substantial given that Celgar's incremental cost to achieve it was only about C\$ 6 million. (See Figure 3, above)

¹⁴⁵ According to Claimant, obtaining a BCH EPA was very important for the profitability of Celgar's Green Energy Project. For example, Mercer's "Final Analysis" report on the project states that [REDACTED], and the same document goes on to show the much higher profits Celgar anticipated with a BCH EPA than without one. See Celgar Energy Project, Final Analysis, October 4, 2007, MER00098466(CONF) at MER00098472, **NERA-26**.

¹⁴⁶ IRR represents the multi-year return as a percentage of invested capital a project or company expects to generate based on a set of assumptions about future financial and operating conditions. I also calculate what I call an "adjusted IRR" based on actual costs (including construction costs) and returns through 2013, with Claimant forecasted data thereafter. See Appendix 3 for IRRs I calculated.

¹⁴⁷ See Appendix 3. The adjusted IRR, ignoring the C\$ 11 million that Claimant received but does not attribute to the GEP, would still be [REDACTED].

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

[REDACTED], assuming it would get the benefit of an EPA with BCH.¹⁴⁸ Without either the C\$ 57.7 million or the EPA with BCH, Claimant still expected to realize an average IRR no lower than [REDACTED], which, although respectable, is a small fraction of its forecasted earnings given the financial support of Canada.¹⁴⁹ Another standard measure that Claimant employs is the simple payback period which is the time it would take to recover an investment.¹⁵⁰ Claimant's initial estimated payback period was 3.2 years.¹⁵¹ With Canadian Government support, the payback period drops to 5 months;¹⁵² an astoundingly short period for an asset with a 30-year productive life. Clearly, Claimant has already benefited substantially from Canadian largess.

102. Likewise, the Blue Goose project alone has been extremely profitable for Claimant, and if these very high actual returns continue into the future, the project's "adjusted" internal rate of return would be approximately [REDACTED],¹⁵³ an amazing result. This high return on Blue Goose is achieved without the benefit of Canadian subsidies, while Blue Goose's improvements mainly related to optimization of Celgar's pulp business, it also led to generation improvements that helped Celgar to generate enough to meet its own load, whereas both the subsidy from Canada and the incentive pricing contained in Celgar's EPA incentivized Celgar to generate even more than its load.
103. The high earnings Claimant has realized on the projects that it undertook at the Celgar mill fail to support the notion that it has been financially encumbered by alleged discriminatory actions on the part of Canada. Quite the opposite, Celgar's financial

¹⁴⁸ Celgar Energy Project, Final Analysis, dated October 29, 2007, MER00084252(RA) at MER00084254(RA), **NERA-27**. While this average return covers only 10 years, it would not be much higher if it covered more years, as the early years are most important in determining the rate of return.

¹⁴⁹ Celgar Energy Project, Final Analysis, dated October 29, 2007, MER00084252(RA) at MER00084270(RA), **NERA-27**. Claimant's calculation of average return based on not having a BCH contract.

¹⁵⁰ This is the amount of time it takes for an investor or a company to recover the actual amount it invested.

¹⁵¹ Celgar Energy Project, Final Analysis, dated October 29, 2007, MER00084252(RA) at MER00084254(RA), **NERA-27**.

¹⁵² Celgar's cost to build the GEP net of the Canadian PPGTP subsidy, divided by average monthly revenue in 2011 due to the GEP according to Mr. Kaczmarek's modeling.

¹⁵³ See Appendix 3. The originally forecasted return was somewhat lower but still outstanding, at [REDACTED].

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

results support the notion that it has been treated not only fairly, but quite generously by Canada, and has earned and will continue to earn handsome returns on its investments.

104. Despite its already very high profits on Blue Goose and its Green Energy Project, Celgar seeks an additional subsidy through the present arbitration to profit even more from generation below its load, a windfall at the expense of taxpayers – Claimant is seeking an additional subsidy from Canada of roughly C\$ 15 million per year.¹⁵⁴ Had Claimant been allowed to arbitrage below its load, as it was seeking, the result would be an extraordinary [REDACTED]¹⁵⁵ “adjusted” internal rate of return on the Blue Goose project. Alternatively, if I accounted for the additional subsidy Claimant now seeks as part of its return on its investment in its new turbine (the Green Energy Project), Claimant would see an amazing [REDACTED]¹⁵⁶ IRR on that investment. Finally, calculating the combined return that Claimant has actually realized (and is assumed to continue to earn in the future) on both its Blue Goose and Green Energy projects, with the additional subsidy sought in this arbitration, would result in Claimant seeing an [REDACTED] “adjusted” internal rate of return on these investments.¹⁵⁷ These figures do not support the notion that Claimant is proposing a legitimate request for redress from harm due to treatment by Canada.

D. From an economic perspective, Claimant’s quantum is unreliable

105. The analysis presented by Claimant’s damages expert, Mr. Kaczmarek is deficient on several grounds because it:

¹⁵⁴ Kaczmarek Expert Report Appendices 3.A and 3.B present his damages calculations in his Actual and But-For Scenarios. The average annual cash flow differences between the two scenarios is about C\$ [REDACTED] million per year (average of his 2010 to 2020 value for “Free Cash Flow to Firm”; these are the years for which he provides a full cash flow calculation, excluding 2009, which is not a full year of damages in Mr. Kaczmarek’s model).

¹⁵⁵ See Appendix 3.

¹⁵⁶ See Appendix 3. I also calculated an adjusted IRR of [REDACTED], ignoring, as discussed above, the C\$ 11 million that Claimant received but does not attribute to the GEP. On a forecasted basis, the IRR on this project with the subsidy Claimant now seeks would have been an astronomical [REDACTED].

¹⁵⁷ See Appendix 3.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- relies on Mr. Switlishoff's flawed analysis to establish Canada's liability without independently establishing any economic basis for Claimant's alleged harm;
- fails to show that the Claimant has suffered any loss arising out of its 40 MW GBL;
- fails to demonstrate that Claimant was damaged by Order G-48-09;
- contains several analysis errors that render his quantum baseless, or at best unreliable; and
- fails to support several key aspects of the analysis.

The first item is sufficient to conclude that no damages are warranted. For completeness, I also address the counterfactual hypothetical that damages are appropriate, and in that context, I consider the other items.

1. Mr. Kaczmarek's damages analysis is flawed as its entire foundation is Mr. Switlishoff's flawed analysis

106. At the highest level, the damages analysis carried out by Mr. Kaczmarek is unreliable because the rationale for his analysis is based on the conclusions of Mr. Switlishoff's unreliable analysis. Mr. Kaczmarek does not independently assess the economic or regulatory underpinnings of any claims of discriminatory or unfair treatment by Canada brought forth by Claimant.
107. As I discussed in Section III.C, Mr. Switlishoff's analysis contains a series of flaws that makes his analysis unreliable. They include, among others, using an inapt metric for his claim of discrimination; ignoring key policy, economic and regulatory issues; basing his analysis on an unjustifiably narrow set of chosen mills; and ignoring substantial differences amongst mills. Given the numerous errors and unfounded conclusions that render Mr. Switlishoff's analysis unreliable, Mr. Kaczmarek's reliance on this analysis as the rationale for undertaking his analyses means, inescapably, that his conclusions lack any basis

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

108. Specifically, the primary input to Mr. Kaczmarek's damages model is the amount of below-load self-generated electricity that he assumes Celgar would have sold and will sell to BC Hydro if not for the allegedly discriminatory or unfair treatments. Mr. Kaczmarek states that the values for this input were provided to him by Counsel.¹⁵⁸ These values were, in turn, primarily taken by Counsel from Mr. Switlishoff.¹⁵⁹ Mr. Kaczmarek's damages modeling is basically a mechanistic calculation of arbitrage profits, based on prices he assumes without justification, together with the key input provided by Claimant's Counsel which determined how much electricity could be arbitrated. Thus, the reliability of the quantum resulting from Mr. Kaczmarek's mechanical calculation relies completely on the validity of its key input which, in turn, is taken directly from a demonstrably unreliable source. This quantum, perforce, is unreliable.

2. Neither of the measures for which the Claimant seeks damages has resulted in the harm that it claims

109. As discussed above, Claimant has not reliably demonstrated damages due to the fatal flaws in the analysis of Mr. Switlishoff,¹⁶⁰ which Claimant relies on to justify its damages claim quantified by Mr. Kaczmarek. However, in order to assess Mr. Kaczmarek's analyses, I have also considered the hypothetical (which I have shown is unfounded) that Claimant, as it asserts, has been harmed by Celgar's GBL in its EPA with BCH or as a result of BCUC Order G-48-09.

¹⁵⁸ Kaczmarek Expert Report, ¶¶ 21, 204.

¹⁵⁹ While Mr. Kaczmarek states (Kaczmarek Expert Report, ¶ 21) that he was instructed by Claimant's Counsel to assume certain Below-Load Access Percentages, leading to certain GBLs, it was Mr. Switlishoff who concluded that below load access percentage was the correct metric. Further, I was able to confirm that Mr. Switlishoff calculated at least five of the seven GBLs assumed by Mr. Kaczmarek, as I found reference to those five values in Mr. Switlishoff's report (Switlishoff Expert Report, ¶¶ 203, 210, 215). It is unclear whether Mr. Switlishoff calculated the other two GBL values that Claimant's Counsel instructed Mr. Kaczmarek to assume. Moreover, the foundation for his analysis is even shakier if the only basis for some or all of these key inputs was the instructions received from Counsel.

¹⁶⁰ See Section III.C.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- a. **Mr. Kaczmarek has failed to show that the Claimant has suffered any loss arising out of the 40 MW GBL set in its EPA with BC Hydro**
110. Even if Celgar's GBL were found to have been set in a manner that was objectionable, the quantum claimed by Mercer is either unsupported or vastly overstated. First, Mr. Kaczmarek suggests that Celgar's competitive position has been impaired but does not support this assertion, and the evidence supports the opposite conclusion. Second, Mr. Kaczmarek's quantification of damages based on a zero GBL is unfounded and erroneously assumes that Celgar can buy the electricity that it seeks to arbitrage at a rate that was never approved by the BCUC or for which Celgar is ineligible.
111. I also hasten to note that Mr. Kaczmarek's damages analysis contains numerous additional analytical and methodological errors that overstate damages, which I will discuss below in Section III.D.2.c.
- i. **Claimant has failed to substantiate any negative effect on its competitive position related to the setting of its GBL in its EPA**
112. 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. In fact, Mr. Kaczmarek is very explicit that Celgar would produce the same quantity of pulp and electricity under its current GBL as it would under any of his damages scenarios with lower GBLs.¹⁶¹
113. In this case, Claimant's productive activity is unaffected by its inability to get the subsidy or retroactive incentive it is seeking. Celgar's generator output was only affected by operating constraints, such as required maintenance. Neither Mr. Switlishoff nor Claimant has demonstrated that the mill changed its operations in any way as a consequence of not obtaining the subsidy. The original facility and its upgrade under the

¹⁶¹ Kaczmarek Expert Report, ¶ 198.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Blue Goose project were in operation before Celgar decided that it was due the type of treatment that it deemed other mills were receiving. Those operations, as far as I can determine from Claimant's filings, are unchanged to this day. Moreover, neither Mr. Switlishoff nor Claimant has suggested that the lack of the subsidy caused Claimant to cancel expansion plans (in fact the expansion in generating capacity it undertook was supported by a subsidy from Canada). Nor has Claimant or its expert demonstrated that the lack of the subsidy compromised Claimant's competitive position so that its level of pulp sales was negatively affected.

114. Mr. Kaczmarek does suggest that Celgar's competitive position has been adversely affected by its inability to sell its below-GBL generation.¹⁶² However, Mr. Kaczmarek does not (nor does Mr. Switlishoff upon whom he relies) provide evidence that supports this claim.¹⁶³ Notably, Claimant does not make a claim for damages based on this alleged reduction in Celgar's competitiveness.¹⁶⁴ Even during the depths of the 2008-2009 recession, Celgar did not shut down while other mills did.¹⁶⁵ Also, Mr. Kaczmarek assumes in his modeling that pulp production is the same regardless of whether, or at what level, Celgar is allowed to sell below its GBL.¹⁶⁶ So, the evidence shows Celgar has suffered no ill effects due to its allegedly damaged competitive position.¹⁶⁷
115. Further, Mr. Kaczmarek has provided no analysis of the effect that Canada's C\$ 57.7 million subsidy to Mercer, and the preferentially high prices in BCH's EPA with Celgar, have had on the mill's competitive position. Collectively, these agreements provide

¹⁶² Kaczmarek Expert Report, ¶¶ 100, 104-107.

¹⁶³ Claimant's witness Mr. Merwin provides some graphics that he alleges shows that Celgar's competitive position has been harmed (Merwin Witness Statement, ¶¶ 151-157). However, he has not provided his model nor his assumptions that went into his modeling. He does not state whether he includes the benefits Claimant has already received from Canada (*see* Section III.C.11 above in my report). Moreover, he makes no argument that Claimant has been harmed in any meaningful way by the alleged reduction in Celgar's competitiveness. In fact, the evidence supports the opposite conclusion, that Celgar has suffered no harm in this regard, as I discuss here.

¹⁶⁴ Kaczmarek Expert Report, ¶ 107.

¹⁶⁵ Merwin Witness Statement, ¶¶ 96, 97, 100.

¹⁶⁶ Kaczmarek Expert Report, ¶ 198.

¹⁶⁷ As I just discussed above, Mr. Kaczmarek also assumes pulp production would not change at Celgar with a lower GBL.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

strong financial incentives for Celgar to stay operating even when pulp prices are lowered – Mr. Kaczmarek has not considered how Canada and BCH have helped Celgar's competitive position.

116. Additionally, Mr. Kaczmarek focuses on just competition in the pulp market, and he does not consider the positive effect BCH's agreements have had on competition in the electricity market. As the BC's MEM stated,

“The underlying policy behind [allowing the purchase of incremental generation even if below load, but not re-pricing existing generation below load] is the desire to promote competitive supply options and, therefore, competitive electricity rates. ... [Allowing] self-generators ... to bid into BC Hydro's bioenergy calls ... allows for a competitive acquisition process without undermining competitive rates.”¹⁶⁸

ii. Mr. Kaczmarek's analysis assumes a greatly overstated GBL adjustment and uses a speculative FortisBC tariff for sales to Celgar

117. The calculation performed by Mr. Kaczmarek that relates to Mercer's claim assumes a But-For GBL of zero. However, a GBL of zero does not reflect Claimant's own determination of the proper GBL that it should have been given in its EPA. So, the highest value that Claimant's damages should be based on is the GBL that Celgar actually determined as correct in its response to the Bioenergy Call for Power under which Celgar was awarded its EPA. In its application for the Bioenergy Call, Celgar put forward a GBL of 34.3 MW on average, writing that it “has accurately completed the attached Schedule A concerning the undersigned's estimated GBL”, where Schedule A

¹⁶⁸ MEM, Briefing Note for Decision, Mercer International Group's request to establish a new, low generation baseline and increase electricity sales, 11 January 2010, bates 009136-009143 at bates 09137, NERA-17

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

reflected the 34.3 MW average GBL.¹⁶⁹ BCH and Celgar ultimately agreed to set Celgar's GBL at 39.8 MW.¹⁷⁰

118. So, the theoretical maximum amount (ignoring any other errors) that Claimant's damages could be, under the hypothetical of this section, should be based on Claimant's own GBL figure rather than the roughly order-of-magnitude greater value that Claimant seeks based on Mr. Kaczmarek's calculation.¹⁷¹ Yet, any damages under this scenario would actually be far lower than simply a pro-rata portion of the quantum to reflect Claimant's "accurate" GBL because of the numerous errors in Mr. Kaczmarek's analysis, demonstrated in Section III.D.2.c.¹⁷²
119. Moreover, any FortisBC tariff used to quantify loss is highly speculative. Currently, the matter of a rate for sales from FortisBC to Celgar is before the BCUC.¹⁷³ Until a decision is reached in that case, it is speculative to state a rate for such sales.¹⁷⁴

b. Claimant could not be financially damaged by Order G-48-09

120. Even assuming that Order G-48-09 is objectionable and Celgar can replace its self-supplied electricity by purchases from its local utility, there are no damages.¹⁷⁵ Under

¹⁶⁹ BC Hydro Bioenergy Call for Power (Phase I) – Registration Forms, 6 March 2008, MER00278895-MER00278909, **NERA-28** Witness Statement of Lester Dyck ¶ 68. Celgar subsequently proposed a slightly lower GBL of 33 MW in the course of its negotiations with BC Hydro. See Witness Statement of Lester Dyck ¶ 79.

¹⁷⁰ For simplicity, in this section I refer to average GBLs (based on 8,760 hours in a year). The analysis and conclusions of this section would be the same using annual GBL figures. (Celgar's 349 GWh/year GBL divided by 8760 hours is 39.8 MW.)

¹⁷¹ Mercer's claim is based on seeking 39.8 MW of additional arbitrage, when in reality the maximum its damages could be would be based on 5.5 MW of additional arbitrage. 5.5 MW is the difference between the GBL that Mercer sought in the Bioenergy Call (34.3 MW) and the GBL in its EPA awarded under that Call (39.8 MW).

¹⁷² Or, in the hypothetical that it were determined that Celgar's GBL should have been zero, as Claimant seeks in its request for relief, all the errors described below still would apply. Mr. Kaczmarek's basic computations are unreliable regardless of the assumed GBL.

¹⁷³ BCUC, Order Number G-67-14, 26 May 2014, online: <http://www.bcuc.com/Documents/Orders/2014/DOC_41443_G-67-14_FBC%20Stepped-Stand-by%20Rates-Decision.pdf>, **NERA-35**. The BCUC Order G-12-14 suspended this process during the BCUC's review of the new PPA between BC Hydro and FortisBC.

¹⁷⁴ Claimant's other expert, Mr. Switlishoff, agrees. See Switlishoff Expert Report ¶ 87, or ¶ 131 below.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

this hypothetical, Celgar would need to find a buyer for its generation below the GBL in its EPA with BCH.¹⁷⁶ Mr. Kaczmarek's damages quantum relies on the highly speculative assumption that BCH would purchase, as firm energy, 100% of Celgar's below-GBL energy in his But-For Scenario.¹⁷⁷ However, since the EPA's prices serve as an incentive for self-generators to produce incremental electricity output, typically of biomass-fueled electricity, the notion that BCH would agree to purchase output at these prices from Celgar that was not incremental runs counter to the purpose of these agreements. Moreover, buying such additional power from Celgar would likely be a losing financial proposition for BCH's ratepayers and inconsistent with BCH's procurement policies.¹⁷⁸

121. If it were uneconomic and contrary to its procurement policies for BCH to contract for additional output from Celgar, as I understand it would be, then Celgar's actual options for selling its power in the But-For Scenario would be far less remunerative than what Mr. Kaczmarek assumes. One option would be to sell additional energy to BCH under *non-firm* energy prices. Celgar's EPA with BCH actually provides a non-firm pricing formula, yet these prices are so low presently that Celgar would be selling at a loss to BCH.¹⁷⁹ Thus, even with a lower GBL, it would be more economical for Celgar to use its

¹⁷⁵ Absent Order G-48-09, FortisBC could purchase power from BCH under their PPA even though Celgar was simultaneously selling below-load generation. Note that this hypothetical is limited to considerations related to Order G-48-09 and thus it assumes that there is no issue with the GBL in Celgar's EPA with BCH. Below I consider the hypothetical of both the Order and the GBL being problematic.

¹⁷⁶ This is the hypothetical situation considered in this section: it has *not* been found that Celgar's existing GBL amount with BCH is problematic and is valid, so it would be up to Celgar to find a buyer for the below-GBL generation it wants to arbitrage. To engage in such sales with a third party buyer, Celgar might also have to reconcile its commitments to remain self-sufficient as a condition of the 1991 Ministers' Order related to the mill.

¹⁷⁷ He applies this assumption in perpetuity from 2009. Kaczmarek Expert Report, ¶ 155 and Excel model.

¹⁷⁸ BCH would be purchasing additional high-cost power from Celgar without receiving any benefits for its ratepayers. Also, in his witness statement, Mr. Dyck discusses how it is not in BCH's interest to purchase non-incremental energy (¶ 43).

¹⁷⁹ The FortisBC rates forecasted by Mr. Kaczmarek are higher than the present non-firm price, which would result in a loss for Celgar. For example, Mr. Kaczmarek forecasts a FortisBC energy charge of C\$ 50/MWh in 2014 (RS 31). However, under Celgar's EPA, non-firm energy prices are set based on Mid-Columbia spot prices, which have been about C\$ 36/MWh over the last year (considering the July 2013 to June 2014 period, where I have accounted for the EPA's contractual energy losses adjustment and US\$ to C\$ exchange rates). (For the FortisBC energy charge, see Kaczmarek Expert Report, Appendix 3.A.). I use the FortisBC RS 31 tariff rate

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

self-generation to supply its own mill rather than sell to BCH. This would result in the But-For and Actual Scenarios being identical and resulting in zero damages even under Mr. Kaczmarek's flawed assumptions.

122. Additionally, there is a suggestion in Mr. Kaczmarek's report that even if BCH was unwilling to contract for all of Celgar's energy output at firm energy prices, Celgar could have sold its below GBL energy to a third party had it not been restricted from doing so.¹⁸⁰ This suggestion is also highly speculative and unlikely. Celgar has provided no evidence that either it is able to contract transmission capacity to transport power out of the province,¹⁸¹ or that it would have been able to find a buyer for its output. Since Celgar realistically cannot make such third-party sales, it cannot be harmed financially under this hypothetical.
123. In any case, Claimant has not provided evidence that it would be able to contract at a price that would make it economically efficient for Celgar to sell its output rather than self-supply in which case there would be no damages (as the But-For Scenario would be no different than the Actual Scenario).¹⁸²
124. Finally, even under the present hypothetical, none of these transactions are possible absent an agreement between Celgar and FortisBC under which FortisBC would supply Celgar's load. I note that such an agreement has eluded the parties for several years. In

from Mr. Kaczmarek's modeling simply for the purposes of this example. As I discuss below in ¶¶ 128-131, it is speculative to assume, as Mr. Kaczmarek does, a rate at which Celgar would be supplied by FortisBC, and this casts further doubt on whether Celgar actually would choose to do anything different with its generation than self-supply, even if it had an agreement with FortisBC that would allow it arbitrage that generation.

¹⁸⁰ Kaczmarek Expert Report ¶¶ 6, 85, 86, 89.

¹⁸¹ I have been informed that firm transmission access out of BC is 100% subscribed and has been 100% subscribed for several years. With firm access to outside markets not feasible, Celgar realistically would have to choose between two unattractive options: making sales out of BC on a non-firm or ad hoc basis, or making firm sales but paying significant penalties when it could not secure transmission. In practice, it likely would not be economical for Celgar to make exports at all in Mr. Kaczmarek's But-For Scenario, much less be able to make the sales at the high prices he assumes. See also Brian Merwin, Celgar Energy Project, Final Analysis, 29 October 2007, at 8, MER00084252, NERA-27. [REDACTED]

¹⁸² That is, a price higher than its cost of buying replacement electricity from its utility, an uncertain cost at this time and one which as discussed below, would likely be higher than what Mr. Kaczmarek assumes, and about which even Mr. Switlshoff notes the uncertainty. (See ¶ 131 below)

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

addition to this unstated speculation, as just discussed, Mr. Kaczmarek is forced to speculate on the rate that would be associated with any requisite service from FortisBC.¹⁸³ Mr. Switlshoff confirms this uncertainty.¹⁸⁴

125. In summary, neither Claimant nor its experts have presented any evidence of harm due to Order G-48-09, and based on my assessment, under its realistic options, Celgar would continue to self-supply below its GBL even without that Order, i.e., there cannot be damages resulting from Order G-48-09.
126. A third hypothetical would be that both the GBL and Order G-48-09 were found to be problematic. All the conclusions of the previous two subsections would be unchanged so the quantum would be zero or, at most, a small fraction of the quantum estimated by Mr. Kaczmarek if one were to ignore the speculations in his calculations discussed next.

c. Mr. Kaczmarek's analysis is speculative, error-filled and unreliable

127. Even if, in the hypothetical scenario, it is determined that Claimant has been harmed, Mr. Kaczmarek's quantum of damages is unreliable due to numerous analytical and calculation errors in his analysis.

i. Mr. Kaczmarek's results are speculative

128. The results of Mr. Kaczmarek's analysis are highly speculative. First, he speculates that FortisBC would supply Celgar with the additional energy to permit its arbitrage activities at a rate that has never been approved or for which Celgar is ineligible, as discussed above in Section III.D.2.a.
129. A key factor in Mr. Kaczmarek's quantum calculation is the price Celgar would have to pay for the electricity it is assumed to buy from its local utility to replace the electricity it currently self-supplies but wants to sell. Mr. Kaczmarek speculates that FortisBC would

¹⁸³ See ¶ 119 above.

¹⁸⁴ Switlshoff Expert Report, ¶ 87.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

supply Celgar with the additional energy to permit its arbitrage activities at a rate that has never received the required approval of the BCUC or for which the BCUC has declared Celgar ineligible.¹⁸⁵ For the purposes of the hypothetical that the GBL in Celgar's EPA is problematic, Order G-48-09 is assumed to be valid. The FortisBC rate Mr. Kaczmarek assumes effectively includes low embedded cost electricity from the BCH system, so under Order G-48-09 it would be impossible for FortisBC to supply at this rate. In this situation, FortisBC would have limited options. It could: (1) stop taking PPA power entirely, but this would not be in its financial interest; (2) provide power to Celgar reflecting its incremental cost of supply, but this would not be the low embedded-cost electricity that Mr. Kaczmarek assumes; or (3) seek to supply Celgar at low rates by acquiring *new, low-cost* electricity, but this seems inconsistent with available supply options. So, not only is Mr. Kaczmarek's assumed FortisBC rate highly speculative, but any realistic rate would almost assuredly be significantly higher. Applying any reasonable guess of a realistic rate would reduce the quantum significantly or perhaps eliminate it entirely.

130. A rate under which Celgar might actually be able to purchase all of its load from FortisBC would presumably follow sound regulatory and economic principles but the rate Mr. Kaczmarek assumes does not. As I showed above in Section III.A, those principles include cost causality and protection of rate payers. A rate that follows that principle would likely be significantly higher than the rate assumed by Mr. Kaczmarek.
131. Considering a realistic rate, it would likely be uneconomic for Celgar to engage in the additional arbitrage it seeks, in which case it would continue to self-supply its mill (consistent with the original commitment to BC to self-supply that Celgar assumed when it purchased the mill¹⁸⁶). Even Mr. Switlishoff acknowledges that no one, which would

¹⁸⁵ The rate at which Mr. Kaczmarek assumes Celgar would purchase from FortisBC in his But-For Scenario is, in part, from a draft Power Supply Agreement ("PSA") that was filed with the BCUC in 2008, but was withdrawn from consideration before it was ever ruled on by the BCUC. Further, at the time, Celgar consented to withdrawing the PSA from consideration. Also, Mr. Kaczmarek uses a time-of-use rate that the BCUC has determined is inappropriate for Celgar. See Witness Statement of Dennis Swanson ¶¶ 74 and 112.

¹⁸⁶ Witness Statement of Peter Ostergaard, Section B and MER00282123 CONFIDENTIAL, Schedule B, Part B, number 10.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

include Mr. Kaczmarek, knows what the realistic rate will be and he also recognizes the possibility that Celgar will continue to self-supply: “Until [Celgar] knows the rate it must pay for access to utility electricity while selling self-generated electricity, Celgar cannot determine whether or not it even is economical for it to sell its own electricity.”¹⁸⁷ But if Celgar chooses to self-supply even though it could arbitrage, Claimant’s damages are zero.¹⁸⁸

132. Second, Mr. Kaczmarek makes the assumption that the conditions associated with Celgar’s hypothesized energy sales will remain constant from 2020 and beyond *in perpetuity*.¹⁸⁹ Mr. Kaczmarek calculates a terminal value for Celgar in 2021 assuming not only continued operations for the rest of time, but also continued damages of the same value every year from 2021 onwards in perpetuity. The speculative nature of this assumption is particularly relevant in assessing Mr. Kaczmarek’s analysis, as roughly one-third of his quantum comes from his assumption of perpetual, constant damages from 2021 onwards.¹⁹⁰ However, there are a number of aspects of this assumption of perpetual damages that make it both highly speculative and unreliable.
 - It is highly speculative to assume baldly, as Mr. Kaczmarek implicitly does, that BC Hydro will both need and be willing to re-contract with Celgar at the end of its current EPA term. Mr. Kaczmarek presents no analysis of BCH’s anticipated resource needs in 2021 or of the generation mix that it may seek. In 2021, biomass electricity may not be as attractive or economically efficient to acquire as it was in 2010.

¹⁸⁷ Switlshoff Expert Report ¶ 87.

¹⁸⁸ See ¶ 123 above.

¹⁸⁹ Kaczmarek Expert Report, ¶¶ 192, 193, 196. Specifically, Mr. Kaczmarek calculates the terminal value in 2021 using a perpetuity equation. Such an equation calculates the value of an enterprise assuming that it continues to generate the same cash flows each year, in perpetuity. Mr. Kaczmarek calculates the terminal value in both his Actual Scenario and But-For Scenario and the difference contributes to his quantum, which is mathematically equivalent to calculating damages directly from the cash flow model carried out indefinitely.

¹⁹⁰ Specifically, C\$ 81 million is the terminal damages from Mr. Kaczmarek scenario of a 0 GWh GBL for Celgar, or one third of the total claimed damages of C\$ 243 in that scenario. In Mr. Kaczmarek’s other GBL scenarios, post-2020 terminal damages are also about one third of his claimed quantum.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

- Similarly, it is speculative to assume that Celgar would receive the same electricity price in a subsequent EPA since market conditions may be different in the future.
- It is also speculative to assume that no changes will have occurred within the FortisBC region that would have affected the price at which Celgar would be able to acquire replacement power for its mill.¹⁹¹

ii. Quantitative errors in Mr. Kaczmarek's discount rate analysis

133. Mr. Kaczmarek uses a Weighted Average Cost of Capital ("WACC")¹⁹² approach to discount Celgar's cash flows in his Actual and the But-For Scenarios to determine the alleged damages suffered by Claimant. In order to calculate a WACC, Mr. Kaczmarek determines both a capital structure and a cost of equity for a hypothetical "arms-length" buyer of the Celgar project.¹⁹³

(1) Mr. Kaczmarek capital structure is flawed

134. Mr. Kaczmarek errs in his determination of the appropriate capital structure for a potential third party financing an arms-length transaction to purchase Celgar. Rather than consider how a potential investor might actually finance such a transaction, Mr. Kaczmarek calculates a presumed capital structure by taking a very rough average of the *company-wide* debt to equity ratios of four companies with NBSK mills in Canada.¹⁹⁴

¹⁹¹ Mr. Kaczmarek effectively assumes that FortisBC's rates charged to Celgar will remain constant from 2020 onwards.

¹⁹² It is standard financial practice for companies to raise funds by acquiring debt (e.g., bonds and loans) and raising equity (e.g., stocks). The combination of the two is a company's capital structure. Each component has a cost. The cost of equity reflect the investor's demanded rate of return. The cost of debt is its interest rate. WACC is a weighted average of a company's cost of debt and equity, based on the respective proportions of the company's capital structure. For example, if the capital structure of a company was 30% debt and 70% equity, then the WACC would be: 30% * Company's Cost of Debt + 70% * Company's Cost of Equity.

¹⁹³ Kaczmarek Expert Report, ¶¶ 121, 184.

¹⁹⁴ I have not been able to recreate Mr. Kaczmarek's calculation of an average debt to equity ratio of 0.33 (Kaczmarek Expert Report ¶ 185). When I averaged the four companies he chose as comparators (Canfor Pulp Products, Inc., Domtar Corp., Resolute Forest Products, Inc., and West Fraser Co. Limited), I calculated a debt to equity ratio of 0.26. If my calculation is correct, then this would be another error which would have reduced the WACC and so overstated the discounted quantum.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

There is no reason to believe, and Mr. Kaczmarek provides no supporting rationale, that the overall capital structures of these four companies aptly represent the capital structure that an arms-length purchaser would employ to finance the acquisition of a project with the high risks of an individual pulp mill such as Celgar.¹⁹⁵ In my experience, these types of transactions are typically project financed, so that most, if not all, of the purchase would be financed through equity rather than with the structure modeled by Mr. Kaczmarek.

135. A more appropriate, and accurate, analysis would be to observe the financing that has been used to purchase projects similar to Celgar. Therefore, the analysis that Mr. Kaczmarek has performed is flawed at a fundamental conceptual level and cannot be relied upon.

(2) Mr. Kaczmarek's cost of equity is flawed

136. Mr. Kaczmarek errs in two fundamental ways when determining the cost of equity used in his WACC calculation, which also makes his analysis unreliable. First, he does not provide any assessment of the return that an investor would demand in order to engage in an arms-length transaction to purchase the Celgar mill, but rather bases his analysis on the cost of equity from a company-wide perspective. By doing so, Mr. Kaczmarek disregards the idiosyncratic risks associated with a single project that a third party purchaser would consider when investing in Celgar, and therefore underestimates the return that such an investor would demand.
137. There are many reasons why one would expect the required return on equity for a single mill such as Celgar to be higher than the cost of equity for a pulp and paper company. For example, the riskiness of a company's portfolio of assets benefits from diversification, which would lead to the overall company having a risk premium that is lower than the risk premia of its individual assets. This may be particularly true if a company owns

¹⁹⁵ As shown below, Celgar presents several risks that would decrease the attractiveness of debt financing in the purchase of this project. See Mercer International Inc. - Report to the Audit Committee - Risk Assessment Update, 30 July 2012, MER00093604(CONF), **NERA-29**.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

revenue-generating assets in separate, distinct markets, such as the projects owned by Claimant, which is one of the companies Mr. Kaczmarek considers in his cost of equity determination.

138. Further, there are financial, market and operational aspects of Celgar specifically that may lead to a high return being demanded by an arms-length purchaser. For example, it appears that Celgar's EBITDA¹⁹⁶ is [REDACTED] [REDACTED].¹⁹⁷ In addition, I note that Claimant lists [REDACTED] associated with Celgar,¹⁹⁸ in its internal documents, each of which could lead to investors demanding higher returns. More generally, the histories of the mills investigated in this proceeding and the serial bankruptcies and ownership changes suggest significant business risk.¹⁹⁹ These issues of volatility and risk may be masked when looking at company-wide costs of equity, due to the more stable earnings of a company's other assets. Failing to address these issues of risk leads Mr. Kaczmarek to underestimate the discount rate used in his modeling, resulting in an overstatement of damages. In Claimant's internal business/financial decision processes, it forecasts returns on investments in Celgar that are significantly higher than the rate used by Mr. Kaczmarek.²⁰⁰ In Mr. Kaczmarek's modeling, the discount rate is particularly important as two thirds of his calculated damages come from future cash flows.

iii. Quantitative errors in Mr. Kaczmarek's cash flow analysis

139. Mr. Kaczmarek makes a number of additional errors in his modeling analysis that raise questions about the reliability of his analysis.

¹⁹⁶ EBIDTA is earnings before interest, depreciation, taxes, and amortization and is a standard measure of corporate earnings.

¹⁹⁷ Mercer Investment Review, February 2013, MER00094712(RA) at MER00094735(RA), **NERA-20**.

¹⁹⁸ Mercer International Inc. - Report to the Audit Committee - Risk Assessment Update, 30 July 2012, MER00093604(CONF), **NERA-29**.

¹⁹⁹ See Appendix 2.

²⁰⁰ See Appendix 3.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

140. First, under the hypothetical that only the level of Celgar's GBL is problematic,²⁰¹ Mr. Kaczmarek has erred by:

- starting his damages calculation when Order G-48-09 was put into effect (May 2009). Instead, damages may only be calculated beginning from the date when sales under the EPA first began (and thus when the “problematic” GBL could have begun to affect the profits of Celgar, *i.e.*, September 2010). So almost a year and a half of Mr. Kaczmarek’s damages should be excluded based on this error alone.
- including damages after 2020, when that EPA will expire, and at which point I understand BCH has no obligation to purchase additional power from Celgar. Mr. Kaczmarek’s modeling includes this assumption, thus overestimating damages.²⁰²

141. Second, 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.²⁰³ Basically, each MWh that Celgar purchases from FortisBC in an abnormal situation (e.g. during an outage) is an additional MWh that Celgar will have to generate, on a cumulative basis, before it can satisfy its GBL and can receive credit for sales to BCH under its EPA. Therefore, Mr. Kaczmarek fails to realize that there are a number of hours in which Celgar is generating above its mill load, and hence is delivering electricity, yet it cannot get credit for EPA sales to BCH because it has not met its GBL on a cumulative basis. Mr. Kaczmarek’s model assumes no revenues for delivering this electricity, implicitly assuming that Celgar would give it away for free. In reality, Celgar and BCH have agreed—and Mr. Kaczmarek overlooks—that BCH will compensate Celgar [REDACTED] resulting in understated revenues in the Actual Scenario. In the

²⁰¹ This is consistent with Mr. Kaczmarek’s quantum modeling, as Mr. Kaczmarek does not demonstrate the harm under G-48-09 (see Section III.D.2.b).

²⁰² In the hypothetical that there is harm from *both* Celgar’s GBL and Order G-48-09, damages could theoretically begin prior to the term of the EPA and could extend beyond its expiry. However, in actuality, there would be zero damages during those periods because as I demonstrated in Section III.D.2.b, neither Claimant nor its experts have shown that Celgar was damaged as a result of Order G-48-09.

²⁰³ Specifically, this error begins in 2014 in Mr. Kaczmarek’s model; prior to that year Mr. Kaczmarek uses historical data in the Actual Scenario, and of course historically Celgar’s electricity sources equaled its uses.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

But-For Scenario, the GBL is zero so this issue does not arise. So, the overlooked revenues occur only in the Actual Scenario and would reduce quantum under Mr. Kaczmarek's differential methodology, i.e., subtracting the Actual Scenario profits from the But-For Scenario profits.

142. The preceding error could have been avoided by employing the standard and simple check of whether Celgar's sources of energy (its generation and its purchases) equaled its uses (its consumption and its sales). This check is ubiquitous in any reliable analysis modeling electricity-related issues. Due to this error, Mr. Kaczmarek ignores the revenues from tens of thousands of megawatt-hours of energy at Celgar in the Actual Scenario; overstating his quantum.
143. Third, Mr. Kaczmarek errs in understanding the way that EPAs with BCH are structured and, as a result, fails to account for under-generation penalties that Celgar should accrue in his But-For Scenario. In fact, Mr. Kaczmarek assumes in his modelling that the generation from Celgar is the same in both of his Scenarios, therefore whenever Celgar fails to meet the generation requirements in the EPA, it should be subject to contract penalties in both the But-For and Actual Scenarios. But Mr. Kaczmarek ignores this penalty in the But-For Scenario. In this way, Mr. Kaczmarek has effectively changed the risk and reward balance in Celgar's EPA in the But-For Scenario to the benefit of Celgar, by breaking the connection between the reward of firm energy prices and the risk of under-generation penalties. This treatment not only misrepresents the structure of the BCH EPA contracts, including Celgar's, but also overstates quantum in his differential analysis.²⁰⁴
144. Fourth, Mr. Kaczmarek errs in using a rate for Celgar's purchases from FortisBC that has not been approved as discussed above in paragraph 119.

²⁰⁴ Since the penalties reduce profits in both Scenarios, ignoring them in the But-For Scenario overstates the profits in that case and, unavoidably, overstates the difference between the two Scenarios, i.e., the quantum.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

145. Fifth, Mr. Kaczmarek fails to account for the BC Ministers' Order under which Celgar committed to self-supply its load.²⁰⁵ Mr. Kaczmarek does not explain how he reflects this limitation in his calculation of quantum.
146. Finally, Mr. Kaczmarek makes additional modeling errors which, even though they may not explicitly affect the quantum, raise questions about the reliability of his calculation. These errors include using U.S. pulp price forecasts in his modeling of Celgar's future pulp revenues, even though Celgar primarily sells to China.²⁰⁶
147. Additionally, though they are not mentioned in the Claimant's request for relief, Mr. Kaczmarek also considers a number of other damages scenarios, with GBLs for Celgar set at levels provided by Claimant (and presumably calculated by Mr. Switlishoff). Aside from the fact the Below-Load Access Percentage is an inapt metric (see section III.C.1 above), Mr. Kaczmarek's analysis utilizing such percentages suffers from the same series of conceptual and quantitative errors discussed above for the zero GBL case.²⁰⁷ Since Mr. Kaczmarek's uses the identical (and flawed) modeling approach in his alternative scenarios based on various below-load access percentages as in the zero-GBL case, his calculations assuming these hypothetical GBLs also are both unreliable and an inapt basis for the awarding of damages.

iv. Mr. Kaczmarek over designs model

148. Mr. Kaczmarek has provided a cash flow model in Excel of more than one thousand rows. Additionally, he has spent tens of pages of his report explaining the analysis that he has done to forecast a number of inputs to his model such as pulp production levels, the corresponding amount of electricity produced, and future pulp prices. However, by the very nature of a differential analysis, all values which are the same in both the Actual

²⁰⁵ See Witness Statement of Peter Ostergaard, Section B.

²⁰⁶ Mr. Kaczmarek is well aware that Celgar sells to China, as he writes: "Through 2013, 82 percent of Celgar's sales volumes were sold to China, while only 9 percent were sold in North America." Kaczmarek Expert Report, ¶ 78. Further, Mr. Kaczmarek did have access to a forecast of Chinese pulp prices, as he includes one in his supporting materials. See Kaczmarek Expert Report, NAV-65, NAV-66.

²⁰⁷ See Section III.D.2.c.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

Scenario and the But-For Scenario have no effect on the damages outcome – they “subtract out”. By Mr. Kaczmarek’s own admission, “The only differences between the cash flows of the But-For and Actual Scenario are those related to the sale of the Celgar Mill’s self-generated electricity below its GBL under the measures (i.e., 349 GWh per year) as well as the related purchase of replacement electricity from FortisBC.”²⁰⁸

149. In fact, a simple model with as little as four lines is all that would be needed to produce effectively the same damages result.²⁰⁹ This simple calculation would require only the amount of energy that Celgar would be allowed to arbitrage (line 1) and the difference in prices between the two “markets”. Namely, the rate at which Celgar would be able to sell its output (assumed to be the EPA price) (line 2) and the price at which it would purchase power to meet its load (the FortisBC price which Mr. Kaczmarek speculative assumes) (line 3). The difference between the two prices multiplied by the quantity of arbitrage would result in the lost arbitrage profit (line 4). The entire vast array of other details in Mr. Kaczmarek’s modeling presentation (e.g., pulp price forecasts) has little or no effect on his quantum.²¹⁰

²⁰⁸ Kaczmarek Expert Report, ¶ 198.

²⁰⁹ A small number of minor changes could be made in order for this model to match Mr. Kaczmarek’s model results exactly.

²¹⁰ For example, pulp revenues, personnel costs, and maintenance costs are identical in Mr. Kaczmarek’s But-For Scenario and in his Actual Scenario so these items have no effect on the results of the differential damage calculation.

PUBLIC VERSION
CONFIDENTIAL AND RESTRICTED ACCESS INFORMATION REDACTED

IV. Conclusions

150. My economic and regulatory analysis of Claimant's filing reveals the unsustainability of its assertion that it has been treated, to its disadvantage, differently than other BC pulp mills. BCH applied a consistent, coherent and correct (based on sound economic and regulatory principles) policy dealing with the arbitrage of embedded cost electricity by Celgar, Tembec and Howe Sound. Claimant's arguments fail to attend to those underlying economic and regulatory principles. Claimant is forced to put forward an artificially narrow and conceptually flawed analysis to camouflage that failure.
151. What Claimant appears to seek first by contract from FortisBC and then from the BCUC (and now seeks here) is seen from an economics perspective to be an unproductive transfer of wealth from BC electricity consumers to itself. As a result, in addition to its quantitative shortcomings, its damages argument fails, because it cannot demonstrate that Claimant has been economically harmed. Moreover, Claimant's quantum calculations are unreliable.
152. From an economic perspective, I conclude that Claimant has not been damaged and as a direct consequence deserves no compensation from this Tribunal.

Respectfully Submitted,



8/22/14

Michael B. Rosenzweig