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Dear Sirs/Mesdames:

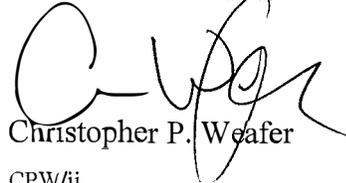
Re: FortisBC Energy Inc. – 2016 Rate Design Application ~ Project No. 3698899

We are counsel to the Commercial Energy Consumers Association of British Columbia (the "CEC"). Attached please find the CEC's Written Argument on COSA and Revenue to Cost Ratios with respect to the above-noted matter.

If you have any questions regarding the foregoing, please do not hesitate to contact the undersigned.

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer

CPW/jj
cc: CEC
cc: FortisBC Energy Inc.
cc: Registered Interveners

**COMMERCIAL ENERGY CONSUMERS
ASSOCIATION OF BRITISH COLUMBIA**

WRITTEN ARGUMENT ON COSA AND REVENUE TO COST RATIOS

**FortisBC Energy Inc.
2016 Rate Design Application
Project No. 3698899**

September 25, 2017

**Commercial Energy Consumers Association of British Columbia
Written Argument on Cosa and Revenue to Cost Ratios**

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**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA ('CEC')**

WRITTEN ARGUMENT ON COSA AND REVENUE TO COST RATIOS

FortisBC Energy Inc. ('FEI') 2016 Rate Design Application ~ Project No. 3698899

A. Overview

1. FEI's Cost of Service Allocations ('COSA') study follows standard utility practice and is generally consistent with past practice.
2. FEI points out that there is significant depth of evidence supporting its COSA studies and submits that this rigorous level of testing has demonstrated that FEI's approach to its COSA is methodologically sound, and that the Commission can be confident in the reasonableness of the results for the purposes of cost allocation and rate design.¹
3. The CEC agrees that there has been a significant depth of evidence supporting the COSA studies² which have been informed by the best and most recent available information.³
4. Both EES⁴ and Elenchus⁵ are generally supportive of FEI's COSA studies.
5. Elenchus examined the FEI evidence and generally supports the functionalization used by FEI (Gas supply, Storage, Transmission, Distribution, Marketing, Customer Accounting), the demand, energy and customer are the standard classifications and Elenchus also agrees with the allocations used by FEI (Demand Related, Energy Related, Customer Related).⁶ They also reviewed and generally support FEI's evidence regarding Gas Cost Allocations to rate classes, Assumptions and Adjustments, Fort Nelson, Revenue to Costs and Margin to Costs.⁷
6. Elenchus identified four areas that differed from the standard methodologies including the use of the 10 year levelized cost approach to the Tilbury Expansion Project, the use of the co-incident peak instead of the non-coincident peak, Mt. Hayes LNG storage and Fort Nelson-specific Peak Load Carrying Capacity.⁸
7. All issues except the approach to the Tilbury Expansion Project have been resolved by FEI.

¹ FEI Final Argument page 3

² Transcript Volume 5, page 397

³ Exhibit B-1, page 6-6

⁴ Exhibit B-1, Appendix 6-1, EES Report page 1

⁵ Exhibit A2-2

⁶ FEI COSA SRP Presentation page 4

⁷ Exhibit A2-2

⁸ Exhibit A2-18 Elenchus Presentation Materials Slide 3

8. The CEC generally accepts FEI's COSA as being appropriately functionalized, classified and allocated.
9. The CEC submits that the Tilbury Expansion Project should not utilize levelized costs, and should instead be developed using the standard approach.
10. The CEC recommends that the Commission adjust the COSA results to reflect the standard approach to the Tilbury Expansion Project.
11. FEI utilizes a Range of Reasonableness as a threshold to determine the appropriateness of rebalancing, which is supported by both EES and Elenchus.
12. The CEC does not support the use of a Range of Reasonableness in determining the appropriateness of rate rebalancing, and particularly does not support the use of a 10% Range of Reasonableness as proposed by FEI.
13. The CEC submits that the use of a Range of Reasonableness is illogical and serves to undermine the validity of the COSA study process, and reduce the opportunity for the Commission to exercise its judgement using the best available information.
14. The CEC recommends that the Commission explicitly consider the long term impact of not rebalancing periodically and recognize the bias that is embedded when rate classes persistently deviate from unity as determined using the best available information, appropriate methodologies and skilled judgement.
15. The CEC's order of magnitude assessment of the commercial sector overpayment over time as a result of not rebalancing periodically to unity is \$100 million for RS 2, and \$150 million for RS 3.
16. The CEC recommends that the Commission find this historic and persistent overpayment to be unfair.
17. The CEC recommends the Commission deny the use of the Range of Reasonableness and instead apply its judgement to the appropriate timing for rebalancing.
18. The CEC submits that the appropriate timing for rebalancing is at the point of rate design application and when the revenue to cost ratio is consistently out of balance in any one direction. A cumulative impact of \$20 million for Rate Class 2 and \$20 million for Rate Class 3 could be an appropriate materiality threshold for the Commission to consider rebalancing.
19. The CEC submits that the cost to rebalance at this time is minimal and would be appropriate at this time given the considerable history and size of overpayment by the Commercial rate classes and others over time.

20. The CEC agrees with the FEI's position that revenue to cost as opposed to margin to cost is the appropriate method to determine COSA results.
21. The CEC provides the following submissions with regard to the COSA and rebalancing.

B. Treatment of Tilbury Expansion Project

22. In Exhibit B-1, FEI states:

“FEI's general approach for known and measurable changes has been to include in its COSA model the annual cost of service for 2018 for CTS (Coastal Transmission System) projects and the first year of operations for LMIPSU (Lower Mainland Intermediate Pressure System Upgrade). For the Tilbury Expansion Project, which is the only project that has associate revenues, FEI has adopted a different approach.”

23. FEI included costs and revenues from LNG sales using a 10 year levelized approach which they believe is appropriate and provides ‘a sense of a longer-term view that Tilbury would have on the COSA and allocation of costs.’⁹ They believe that the next COSA study should result in a similar COSA to this one and will maintain stability of cost allocations, the R:C ratios and ultimately customers' rates.¹⁰ They state that:

“So the idea was, let's bring in Tilbury as -- we would expect to see it over the next ten years, so when we do the COSA study again, it should produce similar cost allocation results and ultimately keeping rates for our customers a little more stable than if we just included the 2018 costs in the COSA today.”

24. The CEC recognizes that incorporating known and measurable changes that will be in place for when the rates are enacted may be appropriate as was done for the Lower Mainland Intermediate Pressure System Upgrade (LMIPSU) and Coast Transmission System (CTS) upgrade projects but does not consider it appropriate for FEI to manipulate the modelling of its costs for a COSA in a manner to achieve a particular outcome down the road.
25. Managing stability is a matter of rate design, and should not factor into the inputs prior to the Commission's balancing of the appropriate principles.
26. The 10-year horizon approach used by FEI in its COSA study to reflect the Tilbury expansion is not consistent with standard practice. Elenchus states:

⁹ Transcript Volume 5 page 402

¹⁰ Transcript Volume 5 page 403

The 10 year horizon used by FEI in its COSA study to reflect the impact of the Tilbury Expansion project is not consistent with standard practice. Utilities undertake new investments on an ongoing basis and as a result the revenue requirement in any year includes the cost of older assets that have diminished impact on the total revenue requirement as well as new assets that have a high initial impact. Except in extraordinary cases, it would be inconsistent to levelized the costs of a single project while not levelizing the costs associated with other investments. Elenchus is not aware of any unique aspects of the Tilbury Expansion Project that make its impact on customers generally, or a class of customers, that justify exceptional treatment of this project in the form of levelizing its costs for the purposes of the COSA.¹¹

- 27. The standard approach is provided by Elenchus in BCUC 1.8.1 and does not involve any levelizing of costs.
- 28. The CEC submits that the standard approach is the correct approach.
- 29. The use of only the first year of operations changes the allocations marginally and affects the R:C ratios as provided below.

	RS 1	RS 2	RS 3/23	RS 5/25	RS 6/6P	RS 22A	RS 22B	RS 22	RS 4	RS 7/27
Change	+0.2%	-0.2%	-0.3%	-0.3%	+0.9%	+2.0%	+1.8%	+0.0%	+1.1%	+0.9%

- 30. The CEC notes that General Service (RS 7 and RS 27 and Large Industrial (RS 22) customers are not allocated Tilbury costs because on the days of extreme cold weather their service would be curtailed to preserve the capacity of the system to serve the firm load.
- 31. The CEC notes that there are occasions when RS 7/27 and RS 22 consumed Tilbury LNG on the same day as a Tilbury cold-weather send-out, however FEI states that no correlation or inferences can be drawn from this information as it is only a ‘snap shot’ and there are various reasons why interruptible volumes may be delivered on the same day.¹²
- 32. The CEC accepts that the RS7/27 and RS 22 rate classes need not be allocated any Tilbury costs.
- 33. The CEC recommends that the Commission alter the allocation of Tilbury costs using the standard approach as identified by Elenchus.

¹¹ Exhibit A2-2, page 22

¹² Exhibit B-11 CEC 1.12.1.2

C. Fort Nelson

34. Elenchus reviewed the functionalization, classification and allocations for Fort Nelson at pages 23 to 27 of their report.
35. Elenchus noted that the PLCC adjustment for Fort Nelson should be based on the characteristics for Fort Nelson, the same way as the results for the Minimum System Study reflects Fort Nelson's own circumstances and Fort Nelson's results are different than the minimum system results for FEI.
36. FEI filed an evidentiary update (Exhibit B1-1-1) to provide a Fort Nelson specific PLCC in conjunction with the Fort Nelson specific minimum system.
37. In B-11-1 FEI corrected its Fort Nelson Weighting Factors figures in its response to CEC 1.66.1.
38. FEI's analysis shows that the difference is that the PLCC for Fort Nelson is 1.178 GJ per customer as compared to the 0.205 GJ per customer for FEI as a whole. The reason given by FEI for the higher PLCC value for Fort Nelson relates to lower density and fewer larger customers in Fort Nelson's system compared to the FEI system as a whole.¹³
39. The CEC agrees with FEI's alterations to its Fort Nelson classification.
40. The CEC is satisfied with the results of the COSA study for Fort Nelson.
41. The CEC recommends that the Commission approve the COSA results for Fort Nelson.

D. Coincident Peak Methodology

42. FEI uses the Coincident Peak (CP) to allocate demand related assets and expenses to rate schedules. Elenchus' experience is that non-coincident peak (NCP) is used to allocate distribution demand related assets and expenses by the electric utilities. However, FEI notes that:
 - (a) It does not have the necessary metering in place in order calculate NCP by customer class;
 - (b) Approximately 80% of FEI customer volumes are heat sensitive and the NCP would be the same as their coincident demand in a peak day; and
 - (c) The FEI system is designed to satisfy demand during a peak day.

¹³ Exhibit As-2 page 24

43. Elenchus accepts FEI's explanation and notes that even if the data were available the results would be unchanged.¹⁴
44. FEI excludes July and August to from the demand data to estimate peak day demand. The purpose of the regression analysis conducted by FEI using average monthly temperature and actual demand data for ten months is to estimate the peak day demand. Peak day demand is heat sensitive and excluding months when there is no heating is consistent with the principles of regression analysis.¹⁵
45. The CEC accepts the use of the Coincident Peak as being the appropriate allocator for demand related assets and expenses.

E. Mt. Hayes

46. Elenchus states that:

“FEI's treatment of Mt. Hayes LNG storage is unusual in the way that the related costs are separated into storage and transmission components and the costs are allocated accordingly. The storage component costs are estimated based on avoided cost of third party storage and transportation and are allocated to Sales customers based on peak day demand in the Cost of Gas model. The transmission component costs are allocated to Sales and Transport customers based on peak day demand in the delivery COSA model.”

47. For other utilities, the on-system storage facilities are functionalized based on the purpose of each facility.¹⁶
48. Elenchus states that the facility has a dual purpose and that it is Elenchus' understanding that the unique treatment reflects the unique role that Mt. Hayes LNG Storage serves in the FEI system. Consequently, it is appropriate to reflect the multi-faceted role of the facility in the cost of service allocation methodology.¹⁷
49. The CEC has reviewed the evidence related to the allocation of Mt. Hayes and accepts it as being appropriate.

¹⁴ Exhibit A2-2, pages 17 and 18 and Appendix A pages 1 and 3

¹⁵ Exhibit A2-8, CEC 1.11.3

¹⁶ Exhibit A2-5 Elenchus, BCUC 1.3.1

¹⁷ Exhibit A2-8, Elenchus, CEC 1.5.1

F. Minimum System Study and Peak Load Carrying Capacity (PLCC) Adjustment

50. FEI utilized a Minimum System Study to determine the proportion of mains that are customer related and the PLCC adjustment to reduce the demand allocator to reflect the demand-related costs that are embedded in the capacity of the minimum system study.¹⁸ An alternative accepted method is the Zero Intercept method.¹⁹ Elenchus is not aware of any generalizable conclusions that can be drawn about the two methods except that different results can be expected.²⁰ Elenchus outlines the Pros and Cons of various alternative methods in A2-8, CEC 1.8.1.
51. Elenchus considers the minimum system methods to be conceptually equivalent after the PLCC adjustment is made, and is not aware of any reason to consider one approach superior to the others.²¹
52. FEI uses 60 mm pipe which is FEI's minimum standard²² and is accepted by Elenchus as the appropriate minimum system standard.²³ Elenchus considers the key consideration should be the availability of appropriate cost data and notes that the costs are readily available and accurate.²⁴
53. The CEC has reviewed the evidence with respect to the Minimum System Study and the PLCC and accepts FEI's results as being reasonable.
54. The CEC recommends that the Commission find the results of the MSS and PLCC as reasonable for use in the COSA.

G. Customer Weighting Factors

55. FEI uses 'average customers' for allocating land, structures, mains, measuring and regulating equipment costs which reflects both past and standard practice.²⁵
56. FEI uses 'average customers' for allocating service lines, meters, customer billing and customer contact services including supporting infrastructure and energy solution costs which reflects both past and standard practice for these costs.²⁶

¹⁸ FEI Final Argument page 9

¹⁹ Exhibit A2-2 page 13

²⁰ Exhibit A2-8, Elenchus, CEC 1.9.1

²¹ Exhibit A2-5, Elenchus BCUC 1.4.1

²² Exhibit B-5, BCUC 1.7.3

²³ Exhibit A2-5, Elenchus, BCUC 1.5.1

²⁴ Exhibit A2-5, Elenchus, BCUC 1.4.2

²⁵ Exhibit B-11, CEC 1.15.1

²⁶ Exhibit B-11, CEC 1.15.2

57. The remaining 55% of costs include general items such as Distribution Supervision, Distribution Operations, Human Resource Services, Rate Base Return, Depreciation and Taxes associated with General Plant²⁷ are allocated based on the results of the previous 2 allocations. 32% are allocated using total distribution rate base classified as customer.²⁸
58. The CEC notes that the customer weightings have changed rather significantly over the years.²⁹ FEI has used the best possible information it has available to determine the weightings.³⁰
59. Both Elenchus and EES are supportive of FEI's methodologies.
60. The CEC has reviewed the evidence related to the customer weighting factors and finds them to be reasonable.
61. The CEC recommends that the Commission accept FEI's customer weighting factors as being appropriate for use in the COSA.

H. Large Volume Industrial Transportation Customers

62. FEI did not allocate a portion of distribution costs to Rate Schedules 22A and 22B, and consequently the rates for RS 22A and 22B are lower than other industrial customers under the RS 22 (existing or proposed).³¹
63. FEI points out that changing the cost allocation to Rate Schedules 22A and 22B is a rate design issue that could be determined by the Commission in the rate design component of the proceeding. Additionally, they state that rebalancing of RS 22A and 22B is also outside the scope of the component of the proceeding.
64. FEI also states that:

“It is only after taking into account the changes to the COSA due to rate design proposals that the R:C ratio of 22A shifts to 113%, outside the range of reasonableness.”

And,

“FEI is not proposing to rebalance RS 22A this is a closed rate schedule. RS 22A and RS 22B are not allocated costs in a postage stamp manner in the COSA as they are not allocated a portion of FEI's distribution system costs. FEI has continued to allocate costs in this manner to be consistent

²⁷ Exhibit B-11, CEC 1.15.6

²⁸ Exhibit B-11, CEC 1.15.5

²⁹ Exhibit B-11, CEC 1.16.2

³⁰ Exhibit B-11, CEC 1.15.8

³¹ FEI Final Argument page 13

with past practice and the rate schedules' grandfathered status. Rebalancing the charges under RS 22A would be inconsistent with continuing to grandfather the terms and conditions of service under this rate schedule. Since RS 22 is available for all large industrial customers, grandfathered RS 22A (and RS 22B) customers may elect this rate schedule as an alternative."³²

65. The CEC reiterates its view that the 'range of reasonableness' is not an appropriate test for whether or not rebalancing should occur.
66. The CEC submits that rebalancing for this rate class is likely appropriate given its high variance from unity.
67. The CEC accepts that rebalancing can be achieved at a later time in this proceeding.

BC Hydro Island Generation (IG) and Vancouver Island Gas Joint Venture (VIGJV)

68. FEI states that its treatment of the BC Hydro IG and VIGJV is consistent with past practice, and it points out that a decision to change the treatment of the VIGJV and BC Hydro IG in the COSA would result from a rate design determination that should be addressed in the later stage of this proceeding. FEI's proposal is to create a firm and interruptible rate which would be applicable to all large industrial customers including RS 22, BC Hydro IG and VIGJV and is a rate design issue not in the scope of this component of the proceeding.³³
69. The CEC agrees with FEI with regard to these issues and makes no submission at this time.

I. Load Factor Adjustment to RS 5 Customers

70. The only change in FEI's approach to allocation of its gas costs in FEI's COSA study is the load factor for Rate Schedule 5.³⁴
71. FEI has transitioned from using a 50% load factor adjustment for RS 5 to using a rolling average which is the same as that used for RS 1, RS 2, and RS 3.³⁵ The result is 45%. The use of the original 50% was a result of a Negotiated Settlement Process (SRP) and is not a matter of public record.
72. The CEC notes that the historical evidence supports the use of the lower load factor³⁶ in that the previous values were in the 48% range and have been general declining.

³² FEI Final Argument COSA revenue to cost ratios page 14

³³ FEI Final Argument COSA revenue to cost ratios page 15

³⁴ FEI Final Argument page 15

³⁵ Exhibit B-1, page 6-30

³⁶ Exhibit B-11, CEC 1.18.2

- 73. FEI has used its best available information to determine load factors.³⁷
- 74. The CEC is satisfied with FEI's proposed adjustment to RS 5.

J. Revenue to Cost Ratio and Inappropriate Application of a 'Range of Reasonableness'

- 75. FEI provides both revenue to cost and margin to cost ratios at page 6-35 of its application.
- 76. The CEC supports the use of Revenue to Cost ratios which is the ratio traditionally used by other gas utilities.³⁸
- 77. Revenue to cost ratios are a key metric in evaluating the 'fairness' principle in rate design. They are intended to illustrate whether the revenues generated from a rate class equate to the costs caused by that same rate class.
- 78. As noted in Elenchus' submission (Exhibit A2-2) at page 6:

"Comparison of Cost and Revenues is done to determine to what extent the customer class is paying their fair share of the costs imposed on the utility. A revenue to cost ratio of 1.00 or above 1.00 means that the class is paying their fair share of costs or even more than their fair share. A revenue to cost ratio below 1.00 means that the class is not paying for their fair share of costs."

- 79. Indeed, by definition a revenue to cost ratio of 1, or unity, is indicative of a customer class recovering its cost of service.
- 80. This concept is fundamental to an appropriate cost allocation and revenue requirement for each rate class and must be treated as such. The appropriate principle is to use the best information available without bias to any rate class over time.
- 81. Unfortunately in this proceeding and others, the existence of uncertainty, assumptions, estimates, judgements, simplification and the lack of a 'correct' answer³⁹ in establishing the costs have been addressed by applying a 'range of reasonableness' to the result which is inappropriate and contributes to fuzzy and illogical analysis.
- 82. Moreover, it is ultimately detrimental to the rate classes (such as Commercial rate classes) that have a revenue to cost ratio of over 1.

³⁷ Exhibit B-11, CEC 1.18.3

³⁸ Exhibit A2-2 page 28

³⁹ Transcript Volume 5 page 514

83. FEI states that a “Range of Reasonableness” is required due to the use of assumptions (test year forecast and known and measurable changes), judgement (demand allocation methods), simplifications (common costs) and estimations (peak day demand).
84. However, the application of a ‘range of reasonableness’ results in the dismissal of important cost and revenue considerations that have been made using the best available information and appropriate judgement, and without bias.
85. The CEC notes that the evidence regarding the costs is calculated to two, three or four decimal places⁴⁰ and utilizes the best available data.
86. Good load data is available if a utility has good load profile information for each customer class and good costing data is based on an appropriately designed system of accounts that facilitates detailed functionalization, classification and allocation as well as strict procedures for ensuring that all financial information is accurately and systematically recorded.⁴¹ Elenchus’ expects that FEI’s data quality is similar to the data quality of other utilities. FEI has been operating in a regulated environment for many years, its evidence has been subject to review by the Regulator, Stakeholders have had opportunities to review FEI’s data and FEI’s data has been accepted for Cost Allocation and Rate Design purposes.⁴²
87. The CEC submits that the utility can be considered to have good load and costing data.
88. The CEC submits that assigning a 10% Range of Reasonableness dismisses the value of the COSA analysis in a fashion that grossly overwhelms the evidence.
89. Ms. Tabone states that a revenue to cost ratio above or below unity, but within the Range of Reasonableness becomes a ‘non-factor’, and that they ‘don’t distinguish between 92 and 102, for example’.⁴³
90. The CEC submits that this approach is inappropriate and serves to bake in significant error and bias into the best available information and most appropriate judgements that have been used to develop the revenue to cost ratios, effectively moving the best information to worse information.
91. The CEC recognizes that the historic use of a ‘Range of Reasonableness’, however, the most recent relevant evidence of Canadian regulators dealing with gas utilities is to move to targeting unity as evidenced by the Elenchus juridical review.

⁴⁰ Exhibit B-18, CEC 2.71.1

⁴¹ Exhibit A2-5, Elenchus BCUC 1.9.3

⁴² Exhibit A2-5, Elenchus BCUC 1.9.4

⁴³ Transcript Volume 5 page 492

92. Elenchus states that:

“Since the allocation of shared costs amongst various customer classes can’t be done in a perfectly accurate way and parameters or allocators are used to split shared costs, in many jurisdictions, a range of revenue to cost ratio is accepted as reflecting the fair allocation of costs to customer classes instead of striving to achieve a revenue to cost ratio of 1.00 for all customer classes.”

93. Elenchus’ evidence is that at least half of the Canadian jurisdictions reviewed consider unity to be the appropriate target for gas utilities, including gas utilities with multiple customer classes such as Centra Gas, Union Gas and Enbridge.

R/C Ratio Range of Reasonableness Utility Range of Reasonableness

AltaGas	95% to 105%
ATCO	95% to 105%
Union Gas	Close to unity
Enbridge	Close to unity
Centra Gas	100%
SaskEnergy	95% to 105% ⁴⁴

94. Regardless of other jurisdictions’ use, the concept that uncertainty and the use of estimates in ratemaking justifies a modification to the results of the COSA is illogical and incorrect in Commission decision-making.

95. The CEC submits it is appropriate for the Commission to address this error in logic as has been done by other Canadian regulators who are targeting unity.

96. Uncertainty, estimates, the use of judgement, simplification and the absence of a ‘right’ answer are replete in many aspects of human endeavour as well as nearly every decision that is undertaken in rate design and revenue requirements decisions. The existence of these circumstances do not represent a valid reason for effectively defeating the best result by assigning a ‘range of reasonableness’ is increasingly being rejected by Canadian regulators according to the jurisdictional review of Elenchus.

97. Utilizing figures other than the actual results ends up in a Commission determination that is known to be incorrect based on the best information and judgment available. The CEC submits that this is a key concept for the Commission to recognize.

98. The only appropriate reason to adjust a result that uses the best information and judgement is if it is known to include bias. Logic dictates that unless there is a bias the result is as likely to be ‘accurate’ as it is to be ‘inaccurate’, and a non-biased +/- variance in either direction makes the middle of the range the appropriate set point.

⁴⁴ Exhibit A2-10 Table 4, page 33

99. Additionally, the logic that because there is no ‘correct’ answer a Range of Reasonableness becomes appropriate is also faulty. If there is no ‘correct’ answer from which to vary the calculated R:C ratio (based on the use of best information and judgement) then whatever is determined to be the correct R:C ratio is the ‘correct’ answer.
100. Finally, the CEC notes that the ‘Range of Reasonableness’ logic appears to be that it is appropriate to establish and largely rely on a bright line of +/- 10% (or more commonly +/- 5% if a Range of Reasonableness is used at all), rather than the best available information and that somehow the bright line can be used to delineate the difference between ‘imprecision’ from an actual result that does not exist because there are too many different methodologies to declare one as being correct.⁴⁵
101. Elenchus also agrees with FEI’s statement that:
- “Hence, unless the level of cost recovery is outside the specified range of reasonableness, differential rate increase would not be considered equitable since small deviations from 100 percent are as likely to be the results of the imprecision of the methodology as they are to be the results of true cost difference.”⁴⁶
102. There is no reason to consider a bright line of +/- 10% represents a better threshold than the actual, and relying on it could equally well be taking the threshold further from the ‘actual’ as it is towards the ‘actual’ if an actual were to exist. Since the ‘actual’ doesn’t exist, the assumption has to be that the determined R:C ratio represents the best answer, and the Range of Reasonableness is simply a departure from this figure.
103. In Elenchus’ argument there is wrongly no assumption being made that the R:C ratio determined by FEI represents a correct, or even middle of the road determination. If this were so, it would be appropriate to rely on the information and not assign a ‘range of reasonableness’. If not, then the argument that the result cannot be relied upon then equally suggests that the +/- 10% is a deviation from something that could be significantly ‘incorrect’ and the 10% deviation is taking the accuracy further away from the ‘correct answer’.
104. The CEC submits that ultimately it is unreasonable to apply a Range of Reasonableness bright line threshold to an R:C ratio which is considered to vary from an unknown target. If the assumption is that the information regarding the R:C is good, then it should be relied upon. This is what the jurisdictional review indicates is correct and fair.
105. Additionally, the CEC considers that Mr. Todd’s argument (above) is flawed because it compares the effect of change on the rate class and uses this to justify the use of a range

⁴⁵ Transcript Volume 5

⁴⁶ Transcript Volume 5, page 508

of reasonableness. Effectively an 89% R:C ratio is being considered as significant, whereas a 91% cost ratio is being considered as insignificant. The difference between a 90% R:C and a 110% R:C ratio is 20% which would be deemed to be acceptable, but would not be deemed to be acceptable in comparing an 80% R:C ratio to a 100% R:C ratio.

106. Importantly, the rate classes together must make up the Revenue Requirement. One rate class could have a R:C ratio of 85% (deemed unacceptable and under-collecting) but the other rate classes could simultaneously have R:C ratios of 105%, and deemed to be paying their appropriate share and not over-collecting.
107. In its response to CEC 1.18.4 regarding the likelihood of a R:C ratio of having a 50/50 probability that a rate class is contributing more or less revenues than its costs of service Elenchus replied as follows:

CEC 1.18.4:

Please confirm that an R:C ratio of 1 would be indicative of an equal (50:50) probability that a rate class is contributing more or less revenue than its costs of service.

Response:

Elenchus does not view it as appropriate to interpret an R:C ratio in this way. Cost allocation is not a statistical exercise that has a probabilistic interpretation. Given the imprecision of COSA models, which derives in part from the fact that there are multiple legitimate methods that can be used to allocate costs, each one producing a different R:C ratio, Elenchus is of the view that any R:C ratio that is within the defined Range of Reasonableness can be considered to be full cost recovery. An R:C ratio that is below the range is considered to indicate under-recovery of costs and any R:C ratio that is above the range indicates over-recovery of costs. In a probabilistic situation, such as a sample survey, there is a true value that is being estimated. In the case of cost allocation there is no underlying true value that is being estimated. There are multiple possible ways of defining cost causality, each of which is equally valid, which implies that is a range of values that could each be considered to be the true value. In COSA work, rather than attempting to determine R:C ratios using multiple reasonable methods, a Range of Reasonableness is used.

108. The CEC submits that the response is flawed regarding the uncertainties and determinations inherent in ratemaking. Not all COSA methodologies are equally valid. The evidence in this proceeding is replete with FEI using its best judgement to use the

best methodologies after evaluating its choices, and these are supported by both EES and Elenchus as being appropriate.

109. What the Commission determines as the 'correct' methodology and assumptions are the true value as much or more than there is in any sample survey, which is also subject to assumptions and variations in methodologies.
110. Further, unless there is bias, a fair and equal +/- Range of Reasonableness would have to assume that there is equality in the likelihood that a rate class is contributing more or less revenue than its cost of service. Otherwise, the outcome is biased and unfair.
111. Mr. Todd was unwilling to discuss the issue of probabilistic statistics in the SRP⁴⁷, which the CEC submits would have potentially shed important light on the logical issues regarding the use of the Range of Reasonableness.
112. The calculations and determinations that are undertaken using the best available information and skilful judgement of the Commission can and should be relied upon and then balanced with other considerations as outlined in the Bonbright principles. This is the standard means of making decisions in the regulatory environment which has been described as being more 'art than science'. This process should not be defeated in this instance.
113. The CEC notes that the cost of service, revenue requirement, return on equity calculations, DSM effectiveness calculations and a host of other inputs to Commission decision-making employ significant estimates in the form of forecasts, judgements, depreciation, risk, inflation rates etc. etc. etc. There are no 'correct' answers in these determinations either. The inputs used to derive these determinations are not adjusted with a 'range of reasonableness' before they are used. Rather, they are accepted as the best information, relied upon, and then balanced at the end with other considerations in the art and science of regulation. It would be incorrect for the Commission to diminish the value of any one or more of the inputs by assigning a 'range of reasonableness' and second-guessing the result using less than the best information available.
114. By way of example it would be highly inappropriate for the Commission to assign a Range of Reasonableness of 10% to FEI's designated return on equity in its RRA determination because there are a 'judgements', 'estimates' and alternative means of calculating the best answer embedded in that determination. The Commission utilized a host of judgements and estimates, made a determination of the appropriate return on equity and this is adhered to in determining the revenue requirement. It would be inappropriate for the Commission to facilitate a 5% to 10% excess earning above a determination of the appropriate rate of return based on the best information provided without bias, and treat it as though it was the 'same' thing. Similarly, it would be irresponsible of FEI to consistently accept a 5% or 10% lower return than they are

⁴⁷ Transcript Volume 5 pages 508-516

entitled to because there are ‘judgements and estimates’ involved in the assessment of risk and all the other factors that contributed to the ROE decision. Such situations could warrant legal challenges from ratepayers and/or FEI.

115. The CEC submits that embedding a ‘range of reasonableness’ to the Revenue to Cost ratio (R:C) is knowingly employing less than the best information and judgements available. The CEC submits that this is inappropriate and unfair to all rate classes who are paying more than their cost of service based on the best available information and judgements of the Commission. Further, it is clearly falling out of favour in the Canadian gas utility regulatory environment as evidenced by the Elenchus jurisdictional review.

K. ‘If’ and ‘When’ to Rebalance

116. The CEC submits that the determination of ‘If’ and ‘When’ to rebalance are separate considerations from the R:C ratio and should be treated accordingly.

117. ‘If’ and ‘When’ to rebalance considerations have unfortunately become wrongly mixed, embedded in a ‘Range of Reasonableness’ factor and applied to the Revenue:Cost ratio input into decision-making.

118. As stated in the Streamlined Review Process (SRP):

“... while they may be asking for approval for a range of reasonableness, what they’re really asking for is approval to rebalance. So, its really the rebalancing numbers that they request approval for and then further down the road the rates.”

119. Additionally, Mr. Bystrom agrees that the Range of Reasonableness is:

“something that is looked to by both Fortis and the Commission in terms of whether there should be rebalancing”.⁴⁸

120. In CEC 3.1 Elenchus replies as follows:

Please confirm that, to the extent the COSAs are done rationally and reasonably, none of the Bonbright principles would be violated by having periodic rebalancing to return rate classes to a revenue to cost ratio of 1.

RESPONSE:

Periodic rebalancing would not violate the Bonbright principles, although it would not be consistent with common practice.

⁴⁸ Transcript Volume 5, page 489

One of the reasons for rebalancing to the range rather than to 1.00, is that the result would be likely to violate Bonbright's principle #3, since the differential rate increases would be less stable than results from rebalancing only when the ratio for a class is outside the range.⁴⁹

121. The CEC submits that this response is not accurate and is indicative of flawed logic. Stability is a function of the underlying COSA data. There would be no less or greater 'stability' based on rebalancing to a target range than if rebalancing were done to unity on a reasonably scheduled basis and undertaken according to Commission determinations as to the appropriate time. Additionally, the CEC notes that smaller variations would result in smaller rate changes. Relying on a +/-10% threshold would result in more significant rate changes if the target for rebalancing was unity.
122. It is tempting to consider the 'Range of Reasonableness' as being useful as a general guideline to address the 'If' and possibly 'When' to rebalance question. However, the Range of Reasonableness as discussed above is not appropriately applied as it embeds bias, ignores the important element of the time-based impact of costs on rate groups and is incorrectly justified based on the use of estimates as discussed above.
123. There are many considerations that should be assessed in determining 'if' (and when) to rebalance, however the use of estimates and judgement in the R:C ratio is not a valid one.
124. To the extent that the R:C ratio is not a useful measure it would be appropriate for the Commission to apply less weight to that factor rather than embedding error into it and using a Range of Reasonableness as an incorrect bright line to answer the 'If' and 'When' question. One consideration could be whether or not there is consistency in the R:C ratios, or if they appear to be consistently demonstrating a lack of unity.
125. As noted in the SRP, issues such as the cost impact on customers, customer acceptance, the likelihood of the R:C ratio and over and underpayments balancing out over time, and the cost of rebalancing are all legitimate considerations in the question of 'If' and 'When' to rebalance, and should be treated accordingly.
126. The CEC notes that these issues were enmeshed in the discussion of the value of the Range of Reasonableness rather than being addressed independently⁵⁰ as part of the flawed logic that is characteristic of this discussion.
127. The CEC submits that the appropriate considerations for 'If' and 'When' to rebalance cannot be summed up in a single metric, and particularly one based incorrectly on the concept of 'imprecision'.

⁴⁹ Exhibit A2-8, Elenchus CEC 1.3.1

⁵⁰ Transcript Volume 5 page 490-491

128. The CEC submits that the question of ‘If’ to rebalance is appropriately addressed through the revenue to cost ratios as determined by the best available information, the impact of the costs to ratepayers and skilled judgement of the Commission. Where there is no unity in the R:C ratio, rebalancing should be considered an option. The question of ‘When’ to rebalance is the appropriate point for consideration of the cost of rebalancing, impacts on ratepayers and the utility etc.
129. The materiality of any departure from unity is an appropriate consideration and should be evaluated over time.
130. The CEC submits that such considerations may be appropriately evaluated using inputs such as those provided below and may reasonably be addressed under a Bonbright analysis.

If and When to Rebalance	Bonbright Principle Considerations	Criteria	Calculation
Fairness to ratepayers	6. Fairness of the specific rates in the apportionment of total cost of service among different ratepayers	<ul style="list-style-type: none"> • Cost based Customer classes all fully recover their costs of service (unity) • Materiality of the cost to ratepayers overpaying and benefit to ratepayers underpaying (is the impact de minimus over the short and long term?) • Market based customer classes are adjusted using Bonbright fairness principles 	<ul style="list-style-type: none"> • Revenue to Cost Ratios • Extent of overpayment and underpayment over time • Average Cost of overpayment to ratepayer • Maximum cost of overpayment to ratepayer • Likelihood of over and underpayments balancing over time.
Cost to Rebalance	9. Simplicity, certainty, convenience of payment, economy of collection, understanding, public acceptability and feasibility	<ul style="list-style-type: none"> • What is the cost to ratepayers and the utility? • What is the rate impact of the costs of rebalancing? 	<ul style="list-style-type: none"> • Total cost of rebalancing including hearings, communication etc.
Frequency of change	3. Stability and predictability of the rates themselves	<ul style="list-style-type: none"> • Commission determination of ‘reasonable’ time for change • Would a regular time for rebalancing be appropriate? 	<ul style="list-style-type: none"> • Time interval between rebalancing • Cost of overpayment and or underpayment over time • Average Cost of overpayment to ratepayer • Maximum cost of overpayment to ratepayer

<p>Potential for Rate Shock⁵¹</p>	<p>3. Stability and predictability of the rates themselves 4. Static efficiency of the rate classes and rate blocks in discouraging waste and encouraging justified use⁵² 9. Simplicity, certainty, convenience of payment, economy of collection, understanding, public acceptability and feasibility.⁵³</p>	<ul style="list-style-type: none"> • What is the rate impact for individual customers in rebalancing? • Opportunities for implementing over a given time period. 	<ul style="list-style-type: none"> • Maximum % cost impact and maximum \$ value cost impact
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The following Bonbright Principles then apply:

1. Effectiveness in yielding total revenue requirements under fair return standard without undesirable social implications
 2. Revenue stability and predictability
 3. Stability and predictability of the rates themselves
 4. Static efficiency of the rate classes and rate blocks in discouraging waste and encouraging justified use
 5. Reflections of all the present and future private and social costs and benefits
 6. Fairness of the specific rates in the apportionment of total cost of service among different ratepayers
 7. Avoidance of undue discrimination in rate relationships
 8. Dynamic efficiency in promoting innovation and responding to demand and supply
 9. Simplicity, certainty, convenience of payment, economy of collection, understanding, public acceptability and feasibility
 10. Freedom from controversy as to proper interpretation
131. FEI has developed the following revenue to cost ratios based on appropriate load and costing data which cannot be improved upon.⁵⁴

⁵¹ Exhibit As-10 page 7 and A2-16 Elenchus CEC 2.20.2

⁵² Exhibit A2-16, Elenchus CEC 2.23.1

⁵³ Exhibit A2-16, Elenchus CEC 2.27.1

⁵⁴ Exhibit A2-8, CEC 1.18.1

FEI	Revenue to Cost Ratio
Rate Schedule 1 Residential	95.6
Rate Schedule 2 Small Commercial Service	101.3
Rate Schedule 3/23 Large Commercial Sales and Transportation	101.6
Rate Schedule 5/25 General Firm Sales and Transportation	104.9
Rate Schedule 6 Natural Gas Vehicle Service	131.2
Rate Schedule 22A Transportation (Closed) Inland Service Area	109.5
Rate Schedule 22B Transportation (Closed) Columbia Service Area	99.7
Rate Schedule 4 Seasonal Firm Gas Service	147.4
Rate Schedule 7/27 General Interruptible Sales and Transportation	139.6
Rate Schedule 22 Large Volume Transportation	1425.5

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Fort Nelson	Revenue to Cost Ratio
Rate 1 Domestic Residential	90.5
Rate 2.1 General (Small Commercial Service)	108.3
Rate 2.2 General (Large Commercial Service)	113.2
Rate Schedule 25 General Firm Transport	112.1

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132. The CEC submits that the above R:C are appropriate and should be relied upon by the Commission for their true value that they represent the best information available to the Commission.
133. FEI has used the most recent available data for its load forecast and approved costs at the time the COSA Study was prepared. FEI utilized 2016 approved load forecast and costs from its Annual Review for 2016 Delivery Rates proceeding for allocation within the COSA model. FEI chose these approved amounts because they reflect current operating conditions, and they reflect the amalgamation of the gas utilities.⁵⁷
134. The CEC submits that the above Revenue to Cost ratios are indicative that, to the extent that the R:C ratios are consistently similar over time, stable rebalancing should occur.

⁵⁵ Before Rebalancing - Exhibit B19, FEI COSA SRP Presentation Materials page 6

⁵⁶ Before Rebalancing- Exhibit B-19, FEI COSA SRP Presentation Materials page 7

⁵⁷ Exhibit B-11, CEC 1.2.2

135. FEI provides the following historical evidence related to R:C ratios in CEC 1.19.3:

Particulars	Residential	Small		Seasonal	General Firm	NGV / VRA	Interruptible Small Industrial	Large	Large	Large
		Commercial	Commercial					Industrial F-Service RS 22	Industrial F-Service RS 22A	Industrial F-Service RS 22B
1993 Post Phase B Decision M:C										
Coincident Peak	90%	95%	100%	127%	117%	82%	790%	754%	123%	90%
Non-Coincident Peak	96%	104%	113%	87%	124%	83%	140%	80%	85%	84%
Average & Excess	97%	107%	112%	79%	114%	79%	126%	76%	82%	81%
1996 Rate Design Application M:C										
Coincident Peak	87.1%	95.0%	117.0%	181.1%	186.1%	67.8%	875.4%	1827.8%	111.2%	115.5%
Non-Coincident Peak	90.8%	101.0%	127.6%	158.2%	203.7%	68.4%	171.4%	164.9%	89.4%	126.4%
Average & Excess	91.0%	103.1%	128.3%	137.5%	184.0%	66.9%	155.8%	144.9%	83.7%	121.7%
1996 Rate Design Settlement M:C										
Coincident Peak	91.4%	96.1%	103.9%		137.5%	67.3%			108.8%	111.8%
1996 Rate Design Settlement R:C										
Coincident Peak	95.3%	98.2%	101.0%			74.3%				
2001 Rate Design Application M:C										
Coincident Peak	92.0%	104.2%	118.2%	288.1%	123.3%	102.1%			93.4%	110.0%
2001 Rate Design Application R:C										
Coincident Peak	96.5%	101.5%	105.1%	119.8%	102.1%	101.0%				
2012 Common Rates, Amalgamation & Rate Design R:C⁵⁸										
Coincident Peak	93.4%	104.6%	107.9%		110.4%	112.7%				
2016 Rate Design Application M:C Initial COSA										
Coincident Peak	93.1%	102.5%	103.3%	550.9%	112.2%	159.1%	712.3%	1864.4%	109.8%	99.7%
2016 Rate Design Application R:C										
Coincident Peak	95.6%	101.3%	101.6%	147.4%	104.9%	131.2%	139.6%	1425.5%	109.5%	99.7%
2016 Rate Design Application M:C COSA after Rate Design Proposals										
Coincident Peak	94.4%	104.1%	107.6%	578.3%	116.0%	160.4%	713.6%	100.0%	111.4%	103.1%
2016 Rate Design Application R:C										
Coincident Peak	96.4%	102.2%	103.6%	150.2%	106.3%	131.7%	139.3%	100.0%	111.0%	103.1%

⁵⁸ 2012 Common Rates, Amalgamation and Rate Design Application, Page 220, Table 9-10.

136. The CEC submits that the evidence is that the Residential class has been consistently under-recovering its cost of service since 1993.

137. Additionally, the evidence is that the Small and Large Commercial rate classes have been over-recovering their cost of service for most years dating back to 1993 and every year since 2001.

138. General Firm service, NGV and other rate classes have also experienced significant over-recovery for a long period of time. These non-cost based rates have been justified as market based rates that contribute to the overall revenue requirement.

⁵⁸ Exhibit B-11, CEC 1.19.3

139. The CEC submits that there is virtually no likelihood that the R:C ratios will balance out over time, and that the imbalance will continue into the future.
140. The CEC submits that the evidence is clear that it would be appropriate for the Commission to consider the extent of the revenues being over-recovered by the Commercial rate class and evaluate the costs and benefits of rate rebalancing at this time.
141. Elenchus indicates that at least every five years is the appropriate time frame for conducting COSA studies,⁵⁹ but that revisiting the COSA studies are appropriate as industry changes.⁶⁰
142. The CEC submits there is a significant risk that a COSA study may not be undertaken for some time. Elenchus states that updates are typically expected at least every five years,⁶¹ and FEI does not anticipate one for 4-6 years.⁶²
143. The CEC notes that rebalancing can only be rebalanced as part of the rate-setting process⁶³ and has not been undertaken for some time. It is appropriate for rate rebalancing to be undertaken when it is cost-effective to do so.
144. The CEC submits that it would be cost-effective for rebalancing to occur at this point as the COSA studies are complete and there would be limited incremental costs to doing so.

L. Impact and Materiality of Persistent Deviation from Unity

145. The CEC submits that the persistent over and under-recovery of rate classes has resulted in significant unfairness and should be addressed by the Commission.
146. The CEC has conducted an order of magnitude calculation of the cost of overpayment undertaken by the Commercial classes based on the above R:C ratios provided in Exhibit B-11, CEC 1.19.3 and the revenues provided in the Rate Design Application Appendix 12.⁶⁴
147. Rate Schedule 2 will have over-paid their costs by nearly \$100 million over the last 20 years.
148. Rate Schedule 3/23 will have over-paid their costs by nearly \$150 million over the last 20 years.

⁵⁹ Exhibit A2-2, Section 2 page 5

⁶⁰ Exhibit A2-5 BCUC 1.1

⁶¹ Exhibit A2-2, page 5

⁶² Transcript Volume 5 page 471

⁶³ Exhibit A2-8, Elenchus CEC 1.1

⁶⁴ Exhibit B-1, Appendix 12 Schedule 1

149. The CEC submits that a materiality threshold should be considered as an appropriate consideration for when to rebalance. A cumulative impact of \$20 million over time may be the appropriate materiality threshold for the RS 2 and RS 3.
150. The CEC notes that to the extent the R:C ratios are generally stable, this can likely be expected to result in relatively infrequent rebalancing requirements and would not result in the application of costs that exceeded the benefits.
151. The CEC recommends that the Commission undertake to rebalance the rate classes to unity at this time.

M. Application of a Range of Reasonableness

152. As discussed above, the CEC disagrees with the use of a Range of Reasonableness as proposed by FEI. The CEC notes that 3 of the 6 jurisdictions cited by Elenchus do not provide a 'range of reasonableness' and instead consider unity to be the appropriate revenue to cost ratio target indicated that FEI's approach is not an industry standard.
153. However, to the extent that the Commission determines that a 'Range of Reasonableness' is appropriate, the CEC submits that the Range of Reasonableness should be reduced to the greatest extent possible.
154. FEI is requesting a Range of Reasonableness of +/- 10%, which they indicate is the appropriate threshold at which rebalancing should occur.
155. The CEC submits that there is little evidence to support a range as high as 10%, which is significantly above all the other jurisdictions identified in the Elenchus study.
156. The CEC submits that in Canada unity and a maximum of +/- 5% is the regulatory standard, particularly in recent Canadian gas utility decisions.
157. FEI submits that the 'For natural gas utilities, including FEI, the long-standing Commission precedent for the Range of Reasonableness for the R:C ratio has been 90 percent to 110 percent'.⁶⁵ They cite a 1991 order for PNG and a 1993 order for FEI.
158. In CEC 1.5.2 FEI provides evidence related to prior Commission determinations.
159. The CEC submits that the evidence is that the most recent Commission decisions that have directly considered the appropriate Range of Reasonableness have supported a smaller range of reasonableness.

⁶⁵ FEI Final Argument page 19-21

N. Unity is the Appropriate Target when Rebalancing

160. The CEC submits that unity remains the appropriate target for rebalancing in order to ensure that the classes ultimately recover costs appropriately and fairly. This avoids a situation in which certain customer classes continue to support other customer classes in perpetuity. Establishing unity as the appropriate target is supported by the Commission’s historical decisions, and is used extensively in other jurisdictions.

161. In FortisBC’s July 2009 Public Open House materials ‘Rate Rebalancing and Rate Design’ (page 9) FBC states its goal is to:

“Move classes as close to 100 per cent as possible over 5 years”.⁶⁶

162. Additionally, on page 10 it identifies the movements that are required to move the rate classes to 100%.

163. In Order G-130-07 the Commission wrote:

“The Commission Panel is further persuaded by the Intervenors’ argument that under BC Hydro’s approach of not making adjustments within its 90-110 percent band, those classes that start high will remain high and vice versa. Accordingly, the Commission finds that the appropriate target for R/C ratios in each class is unity or one in this RDA, and that future rebalancing should only be required when a customer falls outside of the range of reasonableness.”⁶⁷

164. In Order G-156-10 the Commission wrote:

“The Commission is further persuaded by Big White’s argument that targeting unity in the rate rebalancing, rather than the end points of the range of reasonable, will result in a more equitable distribution of revenue to cost ratios amongst customer classes at the end of five years.

Accordingly, the Commission Panel finds that the appropriate target for revenue to-cost ratios in each class is unity or one, and that future rebalancing should only be required when a customer class falls outside of the range of reasonableness.

.....

⁶⁶ Exhibit B-11, CEC 1.5.2
<https://www.fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/RDA%20Open%20House%20presentation%20July%2026%20final.pdf> page 9

⁶⁷ Exhibit B-11, CEC 1.5.2

FortisBC is directed to adjust its rates with the goal of achieving revenue-to-cost ratios of one for each class.”⁶⁸

165. The CEC recommends that the Commission undertake to rebalance the rate classes to unity at this time.

O. Obfuscation

166. The CEC submits that many of the views on the record related to rebalancing and unity are not representative of the evidence, or logic, and are instead examples of obfuscation.
167. The CEC submits that the following responses, among others, are incorrect and detract from a logical review of the revenue to cost ratio, and appropriateness of the role of the Range of Reasonableness in the Canadian regulatory context.
168. The CEC submits that obfuscation and unwillingness to address the issue is in and of itself evidence that the treatment of the Revenue:Cost ratios with the addition of a Range of Reasonableness is not supported.
169. CEC 1.1.2 asked:

Please confirm that Principle 1, Principle 2, Principle 3, Principle 4, Principle 5, Principle 7 and Principle 8 of FEI’s Principles would all be supported by a rate design at unity in revenue to cost ratios for each rate class.

Response:

Not confirmed, although Principles 2 and 8 are supported by achieving revenue to cost ratios within the range of reasonableness. Achieving unity implies a level of precision that does not exist with any COSA.

170. The CEC submits that the above response is incorrect and is illustrative of bias. Achieving unity in a revenue to cost ratio has no lack of precision. It is a precise calculation. The above principles would be supported by a rate design at unity in revenue to cost ratios for each rate class.

171. CEC 1.2.1 asked:

2.1 Please confirm that Revenue/Cost ratio is a key indicator of fair apportionment of costs.

⁶⁸ Exhibit B-11, CEC 1.5.2

Response:

Not confirmed. As described in Section 6.2.1 of the Application, the first three steps of the cost allocation process lead to the fair apportionment of costs. The final step of the COSA study is to derive Revenue to Cost Ratios, which indicates whether the rates charged for each rate.

172. The CEC submits that the above response is incorrect, contrary to logic and illustrative of bias. Logically if the cost of service process allocation leads to a fair apportionment of cost then revenue collection on that basis would be fair.

173. CEC 1.2.4 asked:

2.4 Please confirm that moving Revenue/Cost ratios towards 100% or 1 is directionally not unfair.

Response:

Revenue to cost ratios that fall within the Range of Reasonableness indicate that the rates of the customer classes recover the allocated cost of service. If revenue to cost ratios fall within the range of reasonableness, there is no compelling evidence to indicate that movement in any direction is required from the perspective of FEI's rate design Principle 2.

174. The CEC submits that FEI's reply is unresponsive to the question, and illustrative of bias. The CEC submits that moving Revenue/Cost ratios towards 1 would not be directionally unfair and the FEI response is obfuscating.

175. CEC 1.3.2 asked:

Are there any legal or other requirements preventing FEI from rebalancing toward achieving unity? Please explain.

Response: Rebalancing towards achieving unity would require a sufficient evidentiary foundation regarding what unity precisely is for each rate schedule. For the reasons discussed in Section 6.5.1 of the Application, FEI's COSA results are not accurate enough to provide a sufficient evidentiary basis to support Commission approval of rebalancing towards unity. Indeed, achieving unity implies a level of precision that does not exist with any COSA. Further, there are various factors to consider and balance when setting rates and therefore it may not be appropriate in many circumstances to rebalance toward achieving unity even if the results of the COSA were precise.

176. The CEC submits that FEI did not respond to the question. The CEC submits that there is no legal or regulatory evidence preventing the Commission from rebalancing the R:C ratio to 1, and indeed the jurisdictional review by Elenchus shows this is at a minimum the directional trend in Canada.

177. CEC 18.4.2 asked:

Please confirm that as the R:C ratio moves away from unity, there is an increasing probability that the rate class is contributing either more or less revenue than its cost of service.

RESPONSE:

As long as the revenue to cost ratio for a rate class is within the acceptable range of values, (e.g. 0.90 to 1.10), it is considered that the class is paying its fair share of allocated costs.

178. The CEC submits that the reply is non-responsive to the question and represents obfuscation on the part of FEI.

179. The CEC submits that the appropriate logic is that a greater distance from unity is indicative of more distance from the cost of service recovery. Indeed, this logic is the basis for the +/- threshold being proposed in the range of reasonableness. There is no logic that the +/- 10% represents a bright line for whether or not a rate class is contributing according to its share.

180. CEC 1.19.4 asked:

Please confirm that despite the existence of a 'range of reasonableness' and the use of assumptions it remains appropriate for the utility to achieve unity in its cost of service ratios based on the data available.

Response:

Not confirmed. It is not appropriate for the utility to achieve unity in its cost of service ratios for each rate schedule based on the data available. Please refer to Section 6.5.1 of the Application and the response to BCUC-FEI IR 1.14.1.

181. The CEC submits that this response is incorrect and obfuscates the issue and the value of targeting unity in R:C ratios.

182. The CEC submits that there is no reason why it would be inappropriate for cost of service based rate classes to have R:C ratios based on unity. The CEC submits that unity is the underlying objective in having a rate class recover its cost of service.

183. CEC 1.19.8 asked:

If revenue to cost ratios were rebalanced toward 1 or unity periodically, say every 5, 10 or 20 years, would FEI find such a Commission decision to be unfair, particularly if changes to rates were made within a Range of Reasonableness for rebalancing rate changes? Please explain why or why not.

Response:

Achieving unity implies a level of precision that does not exist with any COSA. Consistent with past determinations of the Commission, a revenue to cost ratio within the Range of Reasonableness indicates that a rate schedule is recovering its fair cost, and is not compelling evidence of a need to rebalance rates. Therefore, as long as the revenue to cost ratios remain within the range of reasonableness, there would be no need to rebalance rates periodically (to unity or otherwise). FEI also notes that setting the rates for seasonal and interruptible customers served under Rate Schedules 4, 7, and 27 to achieve unity would be unfair to customers in other rate schedules in that it would allow these customers to be 'free riders' on FEI's transmission and distribution systems. Continuing to price these rate schedules on a value-of-service basis is another reason that other rate schedules do not have to have rates that result in unity.

184. The CEC submits that the above reply is non-responsive to the question, incorrect and is reflective of obfuscation. A R:C ratio is a calculation of revenue to allocated cost of service. It categorically says or implies nothing about precision in any COSA study.

185. CEC 1.60.1.2 asked:

Please confirm that it is equally unfair for a customer group to be low on the Revenue to Cost Ratio as it is for customer groups to be high on the Revenue to Cost ratio.

Response:

If a rate schedule's revenue to cost (R:C) ratio falls within the range of reasonableness, the customers in that rate schedule are deemed to be paying rates that fairly recover the costs of serving them. Section 6.5.1 of the Application further describes the context of how R:C ratios are used in evaluating fairness among customer groups.⁶⁹

⁶⁹ Exhibit B-11, CEC 1.60.1.2

186. The CEC submits that the above reply is unresponsive to the question which addresses the issue of fairness related to over and under recovery being equally unfair, not the range of reasonableness. The CEC submits that there is no evidence to suggest that either over or under recovery of cost of service is more meritorious than the other.

Inconsistency of Elenchus Evidence

187. Elenchus states that:

“Elenchus conducted a jurisdictional review and found that many jurisdictions use ranges of 0.95 to 1.05, or 0.90 to 1.10 as acceptable revenue to cost ratios when establishing revenue responsibilities by customer classes.”⁷⁰

188. Additionally, Elenchus states:

“The usual revenue to cost range of acceptable ratios that Elenchus has observed is between 0.90 and 1.10 or a narrower range of 0.95 to 1.05. A narrower range of 0.95 to 1.05 is usually used by regulators and utilities in instances when there is good load and costing data available to be used in a COSA study and the utility and regulator have had experience and history in using COSA studies in order to set rates.”⁷¹

189. Elenchus’ own evidence from its Canadian jurisdictional review shows no R:C ratios of +/- 10% but are instead half at unity and half at 95% to 100%.

190. Elenchus Rate Design Report, Table 4, page 33:

R/C Ratio	Range of Reasonableness	Utility	Range of Reasonableness
AltaGas			95% to 105%
ATCO			95% to 105%
Union Gas			Close to unity
Enbridge			Close to unity
Centra Gas			100%
SaskEnergy			95% to 105% ⁷²

191. The CEC requested the dataset for Elenchus’ jurisdictional review and was referred to BCUC 1.95 which supplied information related to the utilities noted in EES’ review.

⁷⁰ Exhibit A2-2 page 6

⁷¹ Exhibit A2-2, page 29

⁷² Exhibit A2-10 Table 4, page 33

192. Elenchus' additional evidence shows that Puget Sound Energy has a 'Desire to move toward full parity over time' and that Manitoba Hydro has a Range of Reasonableness of 'unity'.
193. PNG was shown to have a Range of Reasonableness of 0.9 to 1.1, however this Range of Reasonableness is based on a 1998 Cost of Service Allocation/Rate Design Study and is a BCUC decision rather than a true jurisdictional comparison. The CEC recommends that the Commission dismiss the PNG evidence as not being part of a proper jurisdictional comparison, and as being nearly 20 years out of date.
194. The CEC submits that the evidence is overwhelming that other jurisdictions are likely to require unity or a maximum of 95%-100% as a range of reasonableness, and that virtually no other jurisdictions use the 90%-110%.
195. The CEC submits Elenchus' submissions regarding the validity of 90%-110% contradict their own evidence on recent relevant regulatory decisions on gas utilities by Canadian regulatory bodies.
196. In exhibit A2-10 Elenchus states:

“For example, if the range of acceptable R:C ratios in a jurisdiction is between 90 and 1.10 and customer class A has a ratio of 0.91 and customer class B has a ratio of 1.11, rebalancing in order to bring the ratios to within the acceptable range would require that the R:C ratio for customer class B be reduced to 1.10 and customer class A would have to have its rates increased to absorb the reduction in revenues from customer class B, probably resulting in a ratio for customer class A that would be higher than 0.91. There is no requirement to bring the R:C ratios for either customer class to be equal to 1.00.”⁷³
197. The CEC submits that the evidence is that the BCUC has found in its most recent decisions that unity is the appropriate target when rebalancing. The CEC submits that this evidence was available to Elenchus and should have properly been brought forward.

EES Bias

198. The CEC notes that EES provides its report to FEI in support of its 2016 Rate Design Application (RDA). EES Consulting has provided assistance to FEI throughout this process by providing a review of standard and alternative COSA methodologies.

⁷³ Exhibit A2-10 page 34

199. EES acknowledges that the 90% to 110% revenue to cost ratio Range of Reasonableness is:

“a broader range than what is currently acceptable for the electric utilities in BC... it is consistent with the range previously accepted for gas utilities in the Province and the larger range is appropriate in this particular case. Generally, the greater the level of uncertainty that exists within the COSA, the greater the acceptable revenue to cost range should be. In this particular case, uncertainty exists due to the peak day demand allocators and the uncertainty inherent to the allocation of costs using any selected methodology.”⁷⁴

200. EES states that it did not include the Range of Reasonableness in its jurisdictional review because it:

“has been established by the Commission in past proceedings, and because the range of reasonableness generally reflects specific circumstances for the utility and jurisdiction. In EES’ experience the range typically is either 95 percent to 105 percent or 90 percent to 110 percent.”⁷⁵

201. The CEC submits this evidence is contrary to several of the Commission’s past decisions⁷⁶ and is not representative of the jurisdictional evidence which shows unity is the objective for at least half of all the other jurisdictions reviewed according to Elenchus.

P. Summary

202. The CEC generally accepts the FEI COSA calculations with the exceptions noted above.
203. The CEC disagrees with the use of a Range of Reasonableness and finds it to be illogical and serves to displace important considerations that should otherwise be considered in determining whether or not, and when to rebalance.
204. The CEC considers the evidence related to the Range of Reasonableness provided by Elenchus and EES is biased or incorrect, and recommends that the Commission reject this evidence.
205. The CEC recommends that the Commission dismiss the Range of Reasonableness as being inappropriate and utilize the Bonbright principles to evaluate the appropriateness of rebalancing at this time.

⁷⁴ Exhibit B-1, Appendix 6-1 EES COSA Study Report

⁷⁵ Exhibit B-11, CEC 1.6.1

⁷⁶ Exhibit B-1, pages 6-32 to 6-34 and Exhibit B-11, CEC 1.5.2

206. The CEC recommends that if the Commission continues to utilize a Range of Reasonableness then it reduce it in size considerably.
207. The CEC recommends that the Commission weigh the evidence with respect to the fairness of rates in recovering the cost of service over time, as well as the likely costs and appropriateness of rebalancing vis a vis the Bonbright principles.
208. The CEC recommends that the Commission direct FEI to rebalance to unity at this time.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

David Craig

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