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Utilities Commission

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ORDER NUMBER
G-144-24

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Energy Inc.
2023 Cost of Service Allocation and Revenue Rebalancing

BEFORE:
D. A. Cote, Panel Chair
E. A. Brown, Commissioner
M. Jaccard, Commissioner

on May 21, 2024

ORDER

WHEREAS:

A. On July 20, 2023, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC), pursuant to sections 58 to 61 of the *Utilities Commission Act*, its 2023 Cost of Service Allocation (COSA) study and application for approval of revenue rebalancing, effective January 1, 2025 (Application);

B. By Orders G-218-23 and G-21-24, the BCUC established the regulatory timetable for the proceeding, which included intervener registration, one round of information requests (IRs), submissions on further process, and final and reply arguments;

C. Residential Consumer Intervener Association (RCIA), the Commercial Energy Consumers Association of British Columbia (the CEC), British Columbia Old Age Pensioners' Organization et al. (BCOAPO), and Direct Energy registered as interveners in the proceeding;

D. In its final argument, RCIA recommends that Rate Schedule (RS) 1, RS 2, and RS 6 absorb the revenue shift proportional to their delivery revenues from rebalancing RS 5/25 and RS 22 to a revenue to cost (R:C) ratio of 105 percent;

E. By letter dated April 11, 2024, the BCUC requested supplemental evidence and allowed an opportunity for supplemental arguments on RCIA's recommended revenue rebalancing proposal as outlined in recital D of this order; and

F. The BCUC has considered the Application, evidence and submissions of the parties and makes the following determinations.

NOW THEREFORE pursuant to sections 58 to 61 of the *Utilities Commission Act* and for the reasons provided in the decision issued concurrently with this order, the BCUC orders as follows:

1. FEI is directed to reduce revenues from RS 5/25 and RS 22 sufficient to bring the R:C ratios of each down to the 105 percent upper boundary of the range of reasonableness, and correspondingly increasing the revenues of RS 1, RS 2 and RS 6 in proportion to their contribution to delivery revenues, by adjusting the associated rates. FEI is directed to include adjustments to RS 2 and RS 3/23 to maintain the economic crossover between these rate schedules and to implement the resulting rate changes to its rate schedules, effective January 1, 2025.

2. FEI is directed to file revised tariff pages with the BCUC for endorsement within 60 days of this order.

3. FEI is directed to file a report no later than May 1, 2025 examining the merits of relying primarily on the margin to cost ratio that excludes gas costs as a reference point for future rate rebalancing or to provide options to minimize the impact of gas costs on the R:C ratio. As part of this report, FEI is directed to address the items outlined in Section 4.1 of the decision issued concurrently with this order.

4. FEI is directed to file its next COSA study with the BCUC by January 1, 2029.

5. FEI is directed to provide in its next COSA study an analysis of the continued effectiveness of the balancing charges related to FEI's Transportation Service, the incremental variable costs to balance the system, and an assessment on whether these charges remain reasonable and appropriate.

DATED at the City of Vancouver, in the Province of British Columbia, this 21st day of May 2024.

BY ORDER

Original signed by:

D. A. Cote
Commissioner

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Executive Summary

On July 20, 2023, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC) its 2023 Cost of Service Allocation (COSA) study (2023 COSA Study) and application for approval of revenue rebalancing, effective January 1, 2025 (Application). In its Application, FEI seeks BCUC determinations that: (i) FEI's 2023 COSA Study has yielded reasonable results demonstrating a full rate design is not required; (ii) FEI's rebalancing proposal represents the best balancing of rate design considerations and should be approved; and (iii) the costs and revenues associated with the Transportation Service model have no material impact on FEI's 2023 COSA Study.

British Columbia Old Age Pensioners' Organization et al. (BCOAPO), the Commercial Energy Consumers Association of British Columbia (the CEC) and Residential Consumer Intervener Association (RCIA) actively participated as interveners in the proceeding.

FEI's 2023 COSA Study follows the three-step, industry-standard practice used for COSA studies to allocate the cost of service: functionalization, classification, and allocation.[1] FEI's revenue requirement (or cost of service) is allocated into two categories in the 2023 COSA Study: delivery costs and gas costs.

FEI 2023 COSA Study

In the view of the Panel, the evidence supports using a COSA methodology that is broadly consistent with the 2016 COSA methodology and the limited changes in the 2023 COSA Study from the 2016 COSA methodology have been adequately explained and justified by FEI. **The Panel finds the 2023 COSA Study methodology employed by FEI is an appropriate basis for setting rates that are just and reasonable subject to determinations on a number of issues raised by interveners.**

The Panel considered the following five issues:

- The classification of costs related to the Tilbury 1A expansion;
- FEI's proposed allocation of DSM related expenses;
- The Transportation Service model;
- The definition of Minimum System; and
- The activity view of operating and maintenance expenses.

Following the review of these issues, the Panel determined that FEI's handling of each of these within the 2023 COSA Study was justified and therefore fair and reasonable.

The results of the COSA study indicate that the revenue to cost (R:C) ratios are within the 95 percent to 105 percent range of reasonableness for all rate schedules except two. Rate Schedule (RS) 5/25 and RS 22 are 1.6 percent and 5 percent above the upper limit of this range and rebalancing would be required to bring them to 105 percent, the nearest boundary.

[1] Exhibit B-1, Section 4.1, p. 16, Section 4.7, p. 49.

Revenue Rebalancing

The review of FEI's revenue rebalancing was addressed in two key areas:

- *FEI's proposed use of the R:C ratio and range of reasonableness*: The Panel notes the acceptance of the interveners for FEI to use the R:C ratio and the 95 to 105 percent range to inform the need for and the degree of rate rebalancing among the rate classes for the 2023 COSA Study. **Noting only marginal rebalancing is needed to bring all rates to within the 95 to 105 percent range, the Panel approves the use of the R:C ratio to inform the need for and the degree of rate rebalancing among the rate classes based on the 2023 COSA Study.**
- *Rate balancing proposals by FEI*: FEI developed five options that bring RS 5/25 and RS 22 into the accepted range of reasonableness. The Panel assessed FEI's options as well as alternatives offered by BCOAPO and RCIA. FEI and RCIA suggest rebalancing using one or more rate schedules where R:C ratios are below 100 percent. **The Panel directs FEI to adopt RCIA's preferred option, where revenues from RS 1, RS 2 and RS 6 are adjusted upwards to correct for the over-contributions from RS 5/25 and RS 22. In addition, FEI is directed to include adjustments to RS 2 and RS 3/23 to maintain the economic crossover between these rate schedules.**

FEI's Next COSA Study

The Panel directs FEI to file its next COSA study with the BCUC by January 1, 2029 and to consider the impact of the energy transition.

However, based on concerns raised by RCIA with respect to FEI's inclusion of commodity and midstream costs (gas costs) in its R:C calculations rather than delivery costs only, the Panel directs FEI, no later than May 1, 2025, to file a report examining the merits of relying primarily on the margin to cost (M:C) ratio as a reference point for future rate rebalancing or to provide options to minimize the impact of gas costs on the R:C ratio.

1.0 Introduction

On July 20, 2023, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC) its 2023 Cost of Service Allocation (COSA) Study (2023 COSA Study) and application for approval of revenue rebalancing, effective January 1, 2025 (Application). FEI has proposed to rebalance rates in several rate schedules (RS) based on the results of the 2023 COSA Study.[2]

The Application is filed pursuant to sections 58 to 61 of the *Utilities Commission Act* (UCA)[3] and in accordance with the BCUC's decision and Order G-4-18 (2016 COSA Decision) and its decision and Order G-135-18 (2016 Rate Design Application [RDA] Decision).[4] In the 2016 COSA Decision, the BCUC directed FEI to file a comprehensive and updated COSA study for each of FEI and Fort Nelson for review by the BCUC five years after the release of the 2016 RDA Decision.[5] In October 2022, the BCUC approved the implementation of common delivery rates for FEI and the Fort Nelson Service Area (FEFN), effective January 1, 2023.[6] Therefore, a separate COSA for FEFN is no longer required and FEI prepared the 2023 COSA Study for all its service areas, including FEFN.[7]

Additionally, by Order G-372-22, FEI was directed to provide an analysis of the costs and revenue associated with its Transportation Service model as part of its next COSA study filing,[8] which FEI has also addressed in the Application.[9]

1.1 FEI's COSA and Rate Design History

FEI states its 2023 COSA Study in general is based on the same methodology as its 2016 COSA study.[10] A COSA study is conducted to confirm whether the rates in each rate schedule adequately recover the allocated cost of each rate schedule,[11] whereas rate design determines how rates are structured. FEI's current rate design was developed through several proceedings over the years, including the two-phased RDA process in 1991 and 1993,[12] the 1996 RDA,[13] the 2001 RDA,[14] the 2012 Common Rates, Amalgamation and RDA,[15] and the 2016 COSA and RDA proceeding.[16]

[2] Exhibit B-1, pp. 1, 6.
[3] Exhibit B-1, p. 6.
[4] Exhibit B-1, p. 1.
[5] Order G-4-18 dated January 9, 2018, Directive 4.
[6] Decision and Order G-278-22 dated October 6, 2022 (FEFN Common Rates Decision).
[7] Exhibit B-1, p. 1.
[8] Order G-372-22 dated December 16, 2022, Directive 2.
[9] Exhibit B-1, pp. 87–89.
[10] Exhibit B-1, Section 4.5, Table 4-16, pp. 45–46, Exhibit B-4, BCUC IR 12.1: FEI clarified a typographical error in Table 4-16, which should have read "the costs of Tilbury 1A expansion are classified as ***Demand-related*** and allocated based on the delivery cost of service of all non-bypass customers."
[11] Exhibit B-1, Section 4, p. 15.
[12] Order G-92-91 dated September 23, 1991 and Order G-68-93 dated August 13, 1993.
[13] Order G-98-96 dated October 7, 1996.
[14] Order G-116-01 dated November 7, 2001.
[15] Order G-21-14 dated on February 26, 2014.
[16] Exhibit B-1, Section 3.1, p. 9, Order G-4-18 dated January 9, 2018 and Order G-135-18 dated July 20, 2018.

As part of the 2016 COSA and RDA proceeding, the BCUC's independent consultant, Elenchus Research Associates Inc. (Elenchus), produced two independent reports, a COSA Report[17] (Elenchus COSA Report) and a Rate Design Report[18] (Elenchus RDA Report) (together the Elenchus Reports). The Elenchus COSA Report consists of expert analysis on FEI's 2016 COSA study including Elenchus' analysis of FEI's COSA methodology as well as use of revenue to cost (R:C) and margin to cost (M:C) ratios to determine if a rate class is paying its fair share of costs.[19] The Elenchus RDA Report consists of Elenchus' review of FEI's 2016 RDA, which included a jurisdictional review of other gas utilities across Canada and in the Pacific Northwest U.S.[20]

In the 2016 COSA Decision, the BCUC found that the 2016 COSA study generally followed standard practice, and both EES Consulting[21] and Elenchus were of the view it was reasonable and acceptable for setting just and reasonable rates for FEI.[22] The BCUC also determined that the R:C ratios as employed by FEI should be used to inform rate design and rate rebalancing proposals, and directed FEI to use an R:C ratio range of reasonableness of 95 percent to 105 percent, representing a change from the previously used R:C range of 90 percent to 110 percent.[23] The range of reasonableness is the range of acceptable R:C or M:C values indicating the rate class is paying its fair share of costs (i.e. revenue rebalancing is not required if the ratios are within the range of reasonableness).[24] The BCUC further directed FEI to present both the R:C and M:C ratios for each rate schedule in the next COSA study filing and RDA[25] noting that while the R:C ratios will inform rate design and rate rebalancing, the M:C ratios will provide useful context for stakeholders.[26]

1.2 Approvals Sought

To rebalance revenue and rates based on the results of the 2023 COSA Study, FEI seeks BCUC approval pursuant to sections 58 to 61 of the UCA to implement rate changes effective January 1, 2025, shown in Table 1 below:[27]

[17] Exhibit B-7, Attachment 1.1A.
[18] Exhibit B-7, Attachment 1.1B.
[19] Exhibit B-7, Attachment 1.1A, Section 1, pp. 1–2, Section 6, p. 27.
[20] Exhibit B-7, Attachment 1.1B, Section 1, p. 1.
[21] FEI retained EES Consulting Inc. (EES Consulting), a third-party expert, to review and assist in developing FEI's 2016 COSA study and rate design.
[22] 2016 COSA Decision, Section 4.2, p. 11.
[23] 2016 COSA Decision, Section 7.1, p. 25, Section 7.2, p. 38.
[24] Exhibit B-7, Attachment 1.1A, p. 29.
[25] Order G-4-18 dated January 9, 2018, Directive 5.
[26] 2016 COSA Decision, Section 7.1, p. 25.
[27] Exhibit B-1, pp. 6–7.

Table 1: FEI's Proposed Rate Changes to Rebalance Revenue[28]

Rate Schedule (RS)	Current 2023 Approved Rates	Proposed Rate Changes	Estimated Final Rates After Proposed Changes
RS 1 - Residential			
Basic Charge ($/Day)	$ 0.4085	$ -	$ 0.4085
Delivery Charge ($/GJ)	$ 6.010	$ 0.055	$ 6.065
RS 2 - Small Commercial			
Basic Charge ($/Day)	$ 0.9485	$ 0.2026	$ 1.1511
Delivery Charge ($/GJ)	$ 4.568	$ (0.225)	$ 4.343
RS 3/23 Large Commercial			
Basic Charge ($/Day)	$ 4.7895	$ 0.4730	$ 5.2625
Delivery Charge ($/GJ)	$ 3.893	$ (0.050)	$ 3.843
RS 4 - Seasonal			
Basic Charge ($/Month)	$ 14.4230	$ -	$ 14.4230
Delivery Charge - Off-Peak ($/GJ)	$ 1.904	$ (0.309)	$ 1.595
Delivery Charge - Extended ($/GJ)	$ 2.549	$ (0.069)	$ 2.480
RS 5/25 - General Firm Service			
Basic Charge ($/Month)	$ 469.0000	$ -	$ 469.0000
Delivery Charge ($/GJ)	$ 1.085	$ (0.071)	$ 1.014
Demand Charge ($/GJ/Month)	$ 30.278	$ (1.989)	$ 28.2890
RS 6 - Natural Gas Vehicle			
Basic Charge ($/Day)	$ 2.0041	$ -	$ 2.0041
Delivery Charge ($/GJ)	$ 3.733	$ -	$ 3.733
RS 7/27 - General Interruptible Service			
Basic Charge ($/Month)	$ 880.0000	$ -	$ 880.0000
Delivery Charge ($/GJ)	$ 1.748	$ (0.095)	$ 1.653
RS 22 - Large Volume Transportation			
Basic Charge ($/Month)	$ 3,664.0000	$ -	$ 3,664.0000
Firm Demand Charge ($/GJ/Month)	$ 32.199	$ (0.505)	$ 31.694
Firm MTQ ($/GJ)	$ 0.1930	$ (0.009)	$ 0.1840
Interruptible MTQ ($/GJ)	$ 1.2520	$ (0.026)	$ 1.2260

FEI also requests the BCUC to make the following determinations in this proceeding:[29]

- the results of FEI's 2023 COSA Study are reasonable and demonstrate a full rate design is not required;
- FEI's rebalancing proposal represents the best balancing of rate design considerations and should be approved; and
- The costs and revenues associated with the Transportation Service model have no material impact on FEI's 2023 COSA Study.

[28] Exhibit B-1, Table 5-24, p. 84. The firm and interruptible MTQ delivery charges shown for RS 22 is defined as "Monthly Transportation Quantity". The term "GJ" denotes gigajoule.
[29] FEI Final Argument, pp. 1–2.

1.3 Regulatory Process

By Order G-218-23 dated August 17, 2023, the BCUC established the regulatory timetable for the review of the Application which included public notice of the Application, intervener registration, one round of BCUC and intervener information requests (IRs), and submissions on further process.

The following interveners registered for this proceeding:

- Residential Consumer Intervener Association (RCIA);
- The Commercial Energy Consumers Association of British Columbia (the CEC);
- British Columbia Old Age Pensioners' Organization et al. (BCOAPO); and
- Direct Energy.[30]

Following the submissions on further process from FEI and interveners, the BCUC established a further regulatory timetable proceeding to final and reply arguments.[31]

The BCUC made a request for further information from FEI[32] following FEI's reply argument, and offered the opportunity for interveners' supplemental argument and FEI's reply.

1.4 Legislative Framework and Rate Design Principles

The Panel's review of the Application is in accordance with sections 58 to 61 of the UCA as well as accepted rate design principles. Pursuant to sections 60(1)(a) and (b) of the UCA, when setting rates, the BCUC must consider all proper and relevant matters affecting the rate and must have due regard to setting a rate that is just and reasonable and not unduly discriminatory or unduly preferential.

The Panel considers the rate design principles identified by Dr. James C. Bonbright (Bonbright Principles)[33], which are discussed by FEI in the Application when assessing revenue rebalancing options.[34] FEI states that the eight principles are not applied "in any priority or with any particular weighting." FEI further elaborates stating that revenue rebalancing is a complex balancing process of weighing multiple and sometimes conflicting principles as well as considering the viewpoints from various stakeholders. FEI also explains that different rate design principles may have varying levels of importance in different contexts, and this requires the application of experience and judgment to consider and balance the most relevant principles in each context. Accordingly, "rate design should strive to strike a balance among competing rate design principles based on the specific characteristics of customers in each rate schedule."[35]

Framework for the Panel Review of the Application

The review of this Application is separated into three sections. In Section 2.0, the Panel addresses the 2023 COSA Study methodology and whether it is a reasonable basis for setting rates, in addition to issues raised in

[30] While Direct Energy registered as an intervener in this proceeding, it did not participate.
[31] Order G-21-24 with reasons for decision dated January 23, 2024.
[32] Exhibit A-6, BCUC Request for Supplemental Argument.
[33] *The Principles of Public Utility Rates*, James C. Bonbright, Albert L. Danielsen, David R. Kamerschen (Second Edition, 1988) Public Utilities Reports, pp. 383–384.
[34] Exhibit B-1, p. 50.
[35] Exhibit B-1, p. 51.

relation to the 2023 COSA Study. Section 3.0 addresses FEI's revenue rebalancing proposal. The Panel then addresses matters pertaining to the next COSA study and rebalancing review including timing in Section 4.0.

2.0 FEI 2023 COSA Study

FEI states that a COSA study is a fundamental component of a utility's rate design and provides contextual information for assessing the performance of the rates and rate structures against relevant rate design principles. A COSA study helps assess the ability of the rates to recover the cost of service, the fairness of cost apportionment among each rate class, and the potential of any undue discrimination or revenue instability due to the current/proposed rate design.[36]

The Elenchus COSA report in the 2016 COSA and RDA proceeding refers to the significance of a COSA study in utility rate regulation as follows:[37]

- "It is standard practice in Canada and in many jurisdictions internationally to rely on cost allocation studies, also referred to as COSAs, or the cost allocation method, to apportion utility assets and expenses to a utility's rate classes."
- "Because most of the assets and expenses of a utility are used jointly by multiple rate classes, cost of service allocation studies are used to apportion a utility's assets which form the utility's rate base and the utility's revenue requirement among rate classes on a fair and equitable basis as guided by the principle of cost causality."
- "Cost causality refers to the principle of identifying the rate classes that "cause" particular expenses to be incurred by the utility."

2.1 2023 COSA Study Methodology

FEI states that the 2023 COSA Study reflects the 2023 costs and revenues approved by the BCUC as part of FEI's Annual Review for 2023 Delivery Rates, plus any known and measurable changes expected around the proposed effective date for revenue rebalancing of January 1, 2025.[38] FEI chose the 2023 approved costs because they reflect the current operating conditions, include both FEI and FEFN under common delivery rates, and were the most recently available approved costs at the time the 2023 COSA Study was prepared.[39]

Consistent with the 2016 COSA study, FEI's revenue requirement (or cost of service) is allocated into two categories in the 2023 COSA Study: delivery costs and gas costs.[40]

[36] Exhibit B-1, p. 9.
[37] Exhibit B-7, Attachment 1.1A, p. 3.
[38] Exhibit B-1, pp. 15, 19, Footnote 41: The 2023 delivery rates were approved on an interim basis pursuant to Order G-352-22, pending the outcomes of Stage 1 of the BCUC's Generic Cost of Capital proceeding and FEI's Application for Acceptance of Demand Side Management (DSM) Expenditures Plan for 2023 proceeding (Decision and Order G-45-23, dated March 6, 2023).
[39] Exhibit B-1, p. 19.
[40] Exhibit B-1, Section 4.1, p. 16, Section 4.7, p. 49.

Delivery Costs

FEI's delivery costs are defined as FEI's revenue requirement excluding commodity and midstream (i.e. storage and transport) costs (collectively referred to as 'gas costs') and are allocated to rate schedules through a delivery margin COSA model. FEI's 2023 COSA Study follows the three-step, industry-standard practice used for COSA studies to allocate the cost of service: functionalization, classification, and allocation.[41] This is described below:

1. Functionalization

The first step in the COSA study is the functionalization of costs. The functionalization step involves separating the costs from the test year revenue requirement into the major categories that reflect the utility's plant investment code of accounts and different services provided to customers. For FEI, the 2023 COSA Study contains the following functions:

a) Gas Supply Operations;

b) Transmission;

c) Distribution;

d) Liquefied Natural Gas (LNG) Storage;

e) Marketing; and

f) Customer Accounting.

2. Classification

The second step in the COSA study is to classify the functionalized costs into cost-causation categories. The three cost drivers in standard use and used by FEI are:

a) Demand: those costs incurred to meet peak daily flow requirements;

b) Energy: those costs that vary with amount of energy or volume of gas delivered; and

c) Customer: those costs incurred due to existence of a customer on the system.

3. Allocation

The third step of the COSA study is to allocate the classified functions to each of the rate schedules based on an appropriate allocator.[42]

a) Energy-related classification: by volume/load;

b) Demand-related classification: by peak-day demand; and

c) Customer-related classification: by average customers or average customers with a weighting factor.[43]

[41] Exhibit B-1, Section 4.1, p. 16.
[42] Exhibit B-1, Section 4.3.3, p. 35.
[43] Exhibit B-1, Section 4.3.3.3, p. 38.

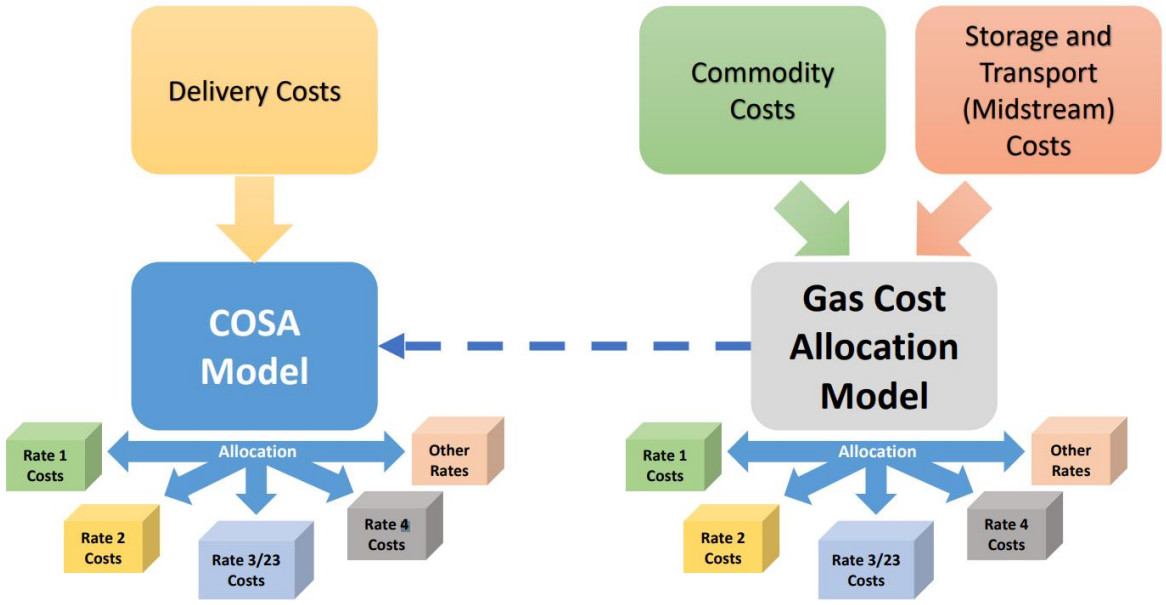
Gas Cost Allocation Model

In FEI's 2023 COSA Study, FEI's gas costs are allocated to rate schedules through a gas cost allocation model (shown in Figure 1).[44] This model and methodology remains largely consistent with what was approved in the 1991 Phase A Rate Design[45] and consists of:

1. Classifying the commodity costs as energy-related and allocating those costs to sales customers based on throughput. The unit cost of gas charge for FEI's sales customers, being market-priced and therefore variable, is determined from FEI's quarterly applications to the BCUC.[46]

2. Classifying the storage and transport costs as demand-related and allocating those costs on a load factor adjusted volumetric basis. A three-year weighted average load factor is used both for the storage and transport cost allocation and for the demand-related allocations for delivery costs.[47]

Figure 1: FEI Cost Allocation Overview[48]



FEI explains that the allocated costs are compared to the revenue collected, by rate schedule, to calculate the R:C ratio of each rate schedule, which indicates whether there is a need for revenue rebalancing.[49] R:C ratios and revenue rebalancing are further discussed in Section 3.0 of this decision.

[44] Exhibit B-1, p. 16.
[45] Exhibit B-1, p. 43.
[46] Exhibit B-1, pp. 43–44.
[47] Exhibit B-1, p. 44.
[48] Exhibit B-1, Figure 4-1, p. 16.
[49] Exhibit B-1, Section 4, p. 15.

Positions of the Parties

The CEC states that it generally accepts FEI's 2023 COSA Study as being functionalized, classified, and allocated appropriately. The CEC notes that FEI's use of the prior year actual activity view of gross operating and maintenance (O&M) is consistent with the allocation methodology employed in the 2016 COSA study and submits that FEI has properly included gross O&M expenses and recommends approval of the methodology by the BCUC. While providing general support for the approach taken by FEI in the 2023 COSA Study, the CEC raised a number of issues it would like to see addressed in the next COSA study.[50]

RCIA states that it endorses the methodology employed by FEI in preparing the 2023 COSA Study noting that it did not identify any significant shortcomings.[51]

BCOAPO outlined its concern with the allocation methodology for Demand Side Management (DSM) expenses but otherwise raised no concerns with the 2023 COSA Study methodology.[52]

Panel Determination

Subject to the determinations on the issues addressed in Section 2.2, the Panel finds the 2023 COSA Study methodology employed by FEI is an appropriate basis for setting rates that are just and reasonable. The Panel notes that FEI's 2023 COSA Study methodology generally follows approved methodologies as established in the 2016 COSA and Rate Design proceeding and is satisfied the limited changes from the 2016 COSA methodology have been adequately explained and justified by FEI. In the view of the Panel, the evidence supports using a COSA methodology that is broadly consistent with the 2016 COSA methodology.

2.2 Issues Raised in Relation to FEI's 2023 COSA Study

As noted, several concerns were raised throughout the proceeding in relation to various aspects of FEI's implementation of the COSA methodology and the assumptions and adjustments used by FEI in its COSA study. These include the following:

- The classification of costs related to the Tilbury 1A expansion;
- FEI's proposed allocation of DSM related expenses;
- The Transportation Service model;
- The definition of Minimum System; and
- The activity view of O&M expenses.

2.2.1 Tilbury 1A Expansion

The Tilbury facility consists of two separate functions: the Tilbury Base Plant LNG storage facility (Base Plant), constructed in 1971 as a peaking resource for the supply of gas on extreme cold weather days; and the Tilbury 1A expansion (Tilbury 1A), completed in 2018 to serve LNG sales service (RS 46) customers.[53]

[50] CEC Final Argument, pp. 6–7.
[51] RCIA Final Argument, p. 6.
[52] BCOAPO Final Argument, pp. 12–16.
[53] Exhibit B-1, Section 4.3.1.2, pp. 28–29.

In the 2016 COSA study Tilbury 1A was included as a known and measurable change as the costs were not yet included in FEI's rate base. At that time, it was classified as demand related and allocated on a peak day demand basis to firm customers only, consistent with the Base Plant.[54] In the 2016 COSA Decision, FEI's 10-year levelized approach for the cost of service and revenues for Tilbury 1A in its 2016 COSA study "to reflect that costs are typically high when a new asset enters rate base but the related revenues would grow over time" was accepted. However, at that time the BCUC noted the treatment of the costs and revenues associated with Tilbury 1A could be explored further in the next COSA study when FEI had actual cost and revenue data.[55]

For the 2023 COSA Study, FEI has maintained the demand classification for the Base Plant.[56] FEI states that the cost of service for Tilbury 1A is included in rates for all non-bypass customers, including both firm and interruptible, and the RS 46 revenues are treated as an offsetting credit to all firm and interruptible non-bypass customers.[57] FEI explains that if the 2016 COSA allocation approach were maintained, all interruptible customers would receive RS 46 revenue benefits but would not have any costs allocated to them since these were allocated on the basis of peak demand to firm customers only. Therefore, FEI has functionalized the Tilbury 1A expansion separately from the plant and "allocated costs to all non-bypass customers based on the delivery cost of service margin of each rate schedule in the 2023 COSA."[58] FEI no longer proposes the 10-year levelized approach and instead has proposed to revert to the standard approach for its 2023 COSA Study which was supported by Elenchus in its 2016 COSA Report.[59] This standard approach is to include the 2023 forecast cost of service and RS 46 revenue that were included in FEI's approved 2023 delivery rates in the COSA model.[60] Further, FEI states that all RS 46 revenues are treated as an offsetting credit to all non-bypass customers by way of a reduction in delivery rates in FEI's annual review each year, for both firm and interruptible customers.[61] To align the costs and revenues related to Tilbury 1A, FEI has allocated the related costs to all non-bypass customers based on the delivery cost of service margin of each rate schedule in the 2023 COSA Study.[62] However, FEI notes a portion of the Tilbury 1A liquefaction capacity is reserved for the Base Plant for peak shaving purposes with the associated costs considered part of the Base Plant for the 2023 COSA Study.[63]

Positions of the Parties

The CEC states that it supports the allocation of net costs but argues that liquefaction capacity as a primary value for the Tilbury 1A plant should be considered to be peak demand related costs not classified as an energy cost. The CEC submits that the BCUC should direct FEI to consider all the liquefaction capacity of Tilbury 1A as a primary value to be a peak demand-related cost and suggests the RS 46 revenues net of operating costs should be credited to all non-bypass customers on an energy basis for COSA purposes.[64]

In reply, FEI submits that the CEC's recommendation is unsupported and should be rejected. It has allocated the portion of liquefaction capacity of Tilbury 1A that is reserved to serve peak demand based on peak demand,

[54] Exhibit B-1, Section 4.3.1.2, p. 28.
[55] Exhibit B-1, Section 4.2.2.5, p. 23.
[56] Exhibit B-1, Section 4.3.2.2, p. 32.
[57] Exhibit B-1, Section 4.3.1.2, p. 29.
[58] Exhibit B-1, Section 4.3.1.2, p. 29
[59] Exhibit B-1, Section 4.2.2.5, p. 23.
[60] Exhibit B-1, Section 4.2.2.5, p. 23.
[61] Exhibit B-1, Section 4.3.1.2, p. 29.
[62] Exhibit B-1, Section 4.3.1.2, p. 29.
[63] Exhibit B-1, Section 4.3.1.2, p. 28.
[64] CEC Final Argument, p. 7.

consistent with the Base Plant.[65] FEI states that the CEC offers no rationale for RS 46 revenue to be allocated based on energy explaining:

> RS 46 was authorized by Direction No. 5 to the BCUC and is set separately from FEI's delivery rates. Therefore, the revenue from RS 46 LNG sales is treated as a credit allocated to each non-bypass rate schedule based on each rate schedule's delivery margin. That delivery margin includes fixed and variable charges as well as demand charges, not just energy and allocating RS 46 revenue based on energy would be inappropriate.[66]

Panel Determination

The Panel finds FEI's classification and allocation of Tilbury 1A costs appropriate and aligned with the treatment of RS 46 revenues in its 2023 COSA Study. The costs of Tilbury 1A are classified as demand-related, consistent with the 2016 COSA and there is insufficient evidence to justify a change to this classification. We are persuaded the allocation of Tilbury 1A costs based on the delivery cost of service margin of each rate schedule is reasonable to align the costs and revenues related to Tilbury 1A. If FEI continued to allocate these costs based on a peak day demand, all interruptible customers would benefit from the offsetting RS 46 revenue but would not have any costs allocated to them. We also find FEI's allocation of costs associated with the liquefaction capacity of Tilbury 1A on a peak demand basis to be appropriate as it is consistent with the Tilbury Base Plant. This capacity is reserved to serve peak demand for the Base Plant. **With respect to the CEC's suggestion to allocate RS 46 net revenue on an energy basis, the Panel is not persuaded that this would be reasonable. We note the delivery margin is not just energy and therefore find FEI's approach to ensure all non-bypass customers are allocated both the related costs and revenues based on delivery margin to be appropriate.**

2.2.2 Demand Side Management (DSM) Expenses Allocation

Concern was raised as to whether FEI's direct assignment approach to allocating DSM costs is "out of step with the situation today".[67] Consistent with past practice, FEI states that the 2023 COSA Study splits DSM costs based on the incentive spending between residential, commercial, and industrial customers.[68] DSM costs within each subgroup are then allocated based on energy, as the intent of DSM is to achieve conservation of energy and the result is mostly energy conservation and reduction, not peak demand reduction. Further, the resulting greenhouse gas (GHG) emission reductions of DSM are directly tied to energy reduction and conservation.[69]

Positions of the Parties

BCOAPO recommends that this Panel reject FEI's proposed allocation of its DSM related expenses, stating FEI's approach to allocating DSM costs is "no longer compatible or fair given the overall intent and benefits of the Utility's DSM investments" and "has the potential to create unfair and discriminatory treatment between those paying for much higher levels and costs of DSM […] and those deemed to be benefiting (all customers)." BCOAPO argues these costs will be borne disproportionately by its residential rate class while all customers benefit from FEI meeting its GHG emission reduction targets. BCOAPO notes that DSM costs are increasing as

[65] FEI Reply Argument, p. 3.
[66] FEI Reply Argument, p. 4.
[67] BCOAPO Final Argument, p. 15.
[68] Exhibit B-7, RCIA IRs 11.1 and 11.2, Exhibit B-5, BCOAPO IR 6.4.
[69] Exhibit B-7, RCIA IR 11.1.

have the costs of extracting reductions in GHG emissions and argues "it is clear that FEI's current direct assignment approach is no longer compatible or fair" considering the intent and benefits of these DSM investments. BCOAPO recommends the BCUC either approve an alternative allocation methodology based on a straight or weighted energy factor to apply to all classes or approve this recommendation but order FEI to explore alternative solutions to address their issue.[70]

BCOAPO also asks the Panel to direct FEI to address how it has traditionally allocated low-income costs in its next application. BCOAPO argues that the provision of DSM for low-income customers is a societal obligation that should be paid for by those who benefit, that is all customers.[71]

FEI argues that its method of allocating DSM expenses follows the principle of cost causation, is consistent with what was approved in the 2016 COSA Decision and is just and reasonable for the following reasons:[72]

i) DSM costs are split between customer groups based on incentive spending and within each group allocated costs are based on energy;

ii) While all customers benefit from GHG reductions, participating customers receive the direct benefit of reduced energy costs and reduced installation costs of energy efficiency measures; and

iii) It is unclear how FEI's approach based on a weighted energy factor differs materially from BCOAPO's proposal to use a straight or weighted energy allocator to all rate classes.

Further, FEI interprets BCOAPO's position to be that all customers should pay for the costs of low-income customers because they are low income. FEI argues that the BCUC has previously determined that "it does not have the jurisdiction to set rates on such a basis as it would be unduly discriminatory under the UCA."[73]

The CEC generally supports DSM being classified as energy related stating this is consistent with FEI's approach in the 2016 COSA study noting that DSM programs are funded for the purpose of conservation and this approach is reflective of the energy reductions coming from DSM expenditures. That said, the CEC recommends that FEI, for its next COSA submission, be directed to classify DSM with significant impact on peak demand requirements as demand related.[74]

In reply, FEI reiterates that the intent of DSM is to achieve conservation of energy and the result is mostly energy conservation and reduction, not peak demand reduction. Further, noting that the CEC agrees with this approach, FEI explains that using a demand classification would result in no costs being allocated to interruptible customers who are also benefiting from conservation and GHG emission reductions. FEI concludes stating there is no basis for such a change at this time but if DSM costs have changed materially by the next COSA study, it can investigate other allocation options.[75]

Panel Determination

[70] BCOAPO Final Argument, p. 15.
[71] BCOAPO Final Argument, p. 16.
[72] FEI Reply Argument, pp. 8–9.
[73] FEI Reply Argument, pp. 8–9.
[74] CEC final Argument, p. 2.
[75] FEI Reply Argument, p. 7.

The Panel finds that FEI's approach for allocating DSM costs among the rate classes is fair and reasonable. We acknowledge BCOAPO's concerns regarding future trends of DSM expenditures and the potential cost burden this may have on residential customers, especially those in the low-income group. However, we agree with FEI that it is equitable to split the costs between the rate classes based on incentive spending and note that while all customers may benefit from GHG emission reductions only participating customers receive the reduced energy and installation costs benefits. Moreover, FEI's approach for allocating DSM costs is consistent with FEI's 2016 COSA study which was approved following a comprehensive review in the 2016 COSA and RDA proceeding and was supported by experts in that proceeding.[76] Given the lack of evidence supporting modification of the DSM expense allocation methodology at this time, the Panel dismisses BCOAPO's suggestion.

With respect to the CEC's recommendation to classify DSM with significant impact on peak demand requirements as demand related in the next COSA study, the Panel agrees with FEI that DSM is not intended to reduce peak demand. However, while DSM expenditures are aimed at reducing consumption, the deployment of DSM initiatives will naturally result in a reduction of peak demand. Therefore, we encourage FEI to address this in the next COSA study.

2.2.3 Transportation Service Model

The 2016 RDA Decision approved various changes to the Transportation Service (T-Service) model, including new and updated customer-balancing tariff terms, conditions, and charges (New Rules) effective November 1, 2018. The New Rules included the elimination of monthly balancing provisions, the implementation of daily balancing for all T-Service customers, a reduction of the daily balancing tolerance from 20 percent to 10 percent, and a new balancing charge of $0.25/gigajoule(GJ) for balancing within the 10 percent to 20 percent range.[77]

In compliance with the 2016 RDA Decision, FEI filed a report with the BCUC (Transportation Service Report) to assess the impact of the New Rules and in that report, FEI concluded, among other things, the New Rules are working as intended.[78] By Order G-372-22, the BCUC accepted FEI's Transportation Service Report and directed FEI to include, as part of its next COSA study filing, the analysis discussed in the subsection below.[79]

FEI submits that the New Rules act as an incentive to shipper agents to better match their daily supply with the daily demand requirements of T-Service customers and the balancing charges act as a disincentive to shipper agents for failing to balance daily supply within the applicable tolerance range.[80] FEI further explains the New Rules and the balancing charges are not designed to be revenue generating or revenue neutral, but rather to act as an incentive for shipper agents to appropriately manage their gas customers' supply requirements.[81]

FEI analyzed the costs and revenues associated with the T-Service model. FEI submits that the average 2018–2023 annual incremental variable costs of $0.26/GJ to rebalance its system as a whole is reasonably close to the current average annual balancing charge of $0.25/GJ under the T-Service model when balancing in the 10

[76] Exhibit B-7, Attachment 1.1A and Attachment 1.1B.
[77] Exhibit B-1, Section 6, p. 85. The New Rules were implemented in the Lower Mainland (including Vancouver Island) and Interior regions effective November 1, 2018, and in the Columbia region (including East Kootenay) effective November 1, 2019. Balancing charges are in $CAD dollars.
[78] Exhibit B-1, Section 6, p. 86.
[79] Exhibit B-1, Section 6, p. 87; Order G-372-22, Directive 2.
[80] Exhibit B-1, Section 6.1, p. 87.
[81] Exhibit B-1, Section 6.1, p. 87.

percent to 20 percent tolerance. FEI concluded that given the quantum of balancing charges under the T-Service model are minimal and are mostly offset by the incremental variable costs to balance the system, there is no material impact on FEI's midstream costs and also no material impact on FEI's 2023 COSA Study.[82]

During the proceeding, FEI was asked to discuss whether it would be appropriate to allocate a portion of FEI's midstream resource costs to T-Service customers based on their annual use of midstream resources (from 2018 to 2022). In response FEI stated it did not consider it appropriate and doing so would be detrimental to incenting shipper agents to balance the supply and demand of their customers. In addition, FEI included excerpts from an IR response to a similar query in the 2022 Transportation Service Report proceeding providing the following reasons why it did not propose allocating midstream costs to this group:

i) A charge applied to all shipper agents would penalize the T-Service customers of shipper agents that more proactively manage balancing on FEI's system;

ii) Having midstream costs would remove the obligation for shipper agents to match supply and demand;

iii) In the 2016 RDA workshops shipper agents raised concerns with this methodology; and

iv) Shipper agents expressed the view that applying a tighter tolerance versus applying a fee or charge would provide a better incentive to improve balancing behaviour.[83]

FEI submits there is no basis for allocating FEI's midstream costs to T-Service customers as shipper agents are responsible for acquiring their own midstream resources for these customers to deliver the gas to the interconnect points to FEI's system.[84] FEI explains that from the perspective of cost causation, T-Service customers do not cause midstream costs as it is the responsibility of the shipper agents to secure their own midstream resources to bring gas to the FEI interconnect with Enbridge or TransCanada. If a midstream fee were to be charged to T-Service customers, it would be a step away from cost causation/cost recovery principles as not all shipper agents cause incremental midstream costs. Conversely, under the existing T-Service model, customers are incented through pricing for imbalances and where the 10 percent tolerance limit is exceeded, the marketer then bears the charges.[85]

Positions of the Parties

RCIA has no issues with FEI's position that balancing charges are only a small percentage compared to the costs allocated by the 2023 COSA Study. In addition, RCIA agrees with FEI that midstream costs are not incurred to provide service to these customers and, as dictated by cost causation principles, costs should be borne by those causing the costs. Consequently, RCIA also agrees that applying balancing charges when an accepted tolerance level is exceeded provides an appropriate signal to shipper agents to ensure they balance their respective customer' loads. [86]

The CEC agrees that balancing charges under the T-Service model are 'minimal'. However, in the view of the CEC, a better context for comparison would be to present transportation charges as a percentage of the cost of service for FEI's midstream resources. The CEC notes that in 2022, transportation balancing charges were as high as 5.3 percent of FEI's total midstream costs while acknowledging that on average over the period 2015 to 2023,

[82] Exhibit B-1, Section 6.1, p. 87, Section 6.2, p. 89, Exhibit B-4, BCUC IR 22.1.
[83] Exhibit B-4, BCUC IR 22.4
[84] FEI Final Argument, p. 22.
[85] Exhibit B-4, BCUC IR 22.5.
[86] RCIA Final Argument, p. 18.

they represent one percent. The CEC argues that based on the information provided approximately one-third of the total gas moved is for transportation volume and this is of the essence in determining whether FEI should allocate T-Service customers a portion of the midstream costs. It is the CEC's position that this volume is sufficient to warrant consideration of allocating a portion of FEI's midstream costs to this customer group and the BCUC should direct FEI to consider this in its next COSA study.[87]

BCOAPO did not express concerns with FEI's balancing charges for T-Service customers.

FEI submits that there is no reasonable basis for why the BCUC-approved balancing charges should now be replaced by allocating a midstream charge to T-Service customers as recommended by the CEC. FEI argues that the proportion of transported gas to the total gas volume is not "of the essence" and is only marginally relevant. In FEI's view, the only question is the extent to which they rely on FEI's midstream resources to balance their supply since T-Service customers pay for the cost of moving their gas on FEI's system. In a scenario where T-Service customers perfectly balance their supply and demand, they would not use any midstream resources regardless of the volume of transported gas and there would be little rationale for assessing a midstream charge. In FEI's view what is important is the extent that T-Service customers rely on FEI's midstream resources and whether the related costs are reasonably recovered by the current methodology. FEI points out that the $0.25/GJ average annual balancing charge is very close to the 2018–2023 average annual incremental variable costs of $0.26/GJ and thus, the amount charged is reasonable and appropriate noting also that a midstream charge would not incent T-Service customers to better balance their supply and demand.[88]

Panel Determination

There are two issues that arise in relation to the T-Service model. The first issue is whether it is appropriate to move away from the current balancing methodology in favour of the CEC's recommendation that FEI consider charging a portion of its midstream costs to all T-Service customers in the next COSA study. The second is whether the $0.25/GJ balancing charge is an appropriate amount given the evidence presented.

The Panel finds that the evidence does not support the CEC's contention that it would be better if T-Service customers were charged a portion of midstream costs as opposed to the current methodology. The application of a midstream charge would not be supported from a cost causation standpoint as shipper agents for T-Service customers secure their own resources and, as a result, midstream costs are not incurred to serve these customers. The only midstream costs incurred because of T-Service customers are the costs related to balancing which are only incurred in those instances where balancing is required. Therefore, only those instances where an imbalance exists would incur additional costs. Thus, moving to a midstream charge for all T-Service customers, as suggested by the CEC, would reduce the incentive for this group of customers to better balance their supply and demand. Thus, the current balancing charge methodology continues to be an effective mechanism to incent shipper agents to manage supply imbalances.

In addition, the Panel finds the $0.25/GJ balancing charge to be reasonable. We note that it is close to the FEI's calculated 2018–2023 average annual balancing charge of $0.26/GJ and are not persuaded there is a need for change at this time. However, we acknowledge there may be a greater variance going forward. **Therefore, the Panel directs FEI to provide in its next COSA study an analysis of the continued effectiveness of the balancing**

[87] CEC Final Argument, pp. 15–16.
[88] FEI Reply Argument, pp. 20–21.

charges, the incremental variable costs to balance the system, and an assessment on whether these charges remain reasonable and appropriate.

2.2.4 Definition of Minimum System

FEI conducted a Minimum System Study (MSS) to aid the classification of distribution costs into both customer and demand related costs.[89] FEI states that the results of the MSS for the 2023 COSA Study are based on actual 2022 data, with the customer-related component and the demand-related component each approximately 50 percent.[90] In response to IRs, FEI explained that the only changes in the MSS between the 2016 and 2023 COSA studies are the underlying cost of steel and plastic pipe, and the variations in total length of pipe in FEI's minimum system.[91] FEI reflected both steel and plastic pipes in its calculation of the minimum system as it continues to use both pipes in its system, whereas the 2016 MSS only included the valuation of plastic pipe. FEI noted that this change as well as the increase in steel prices are the main drivers that led to the change from the 30/70 percent split between customer-related and demand-related in the 2016 MSS to the 50 percent split in the 2023 MSS.[92]

Positions of the Parties

RCIA endorses the use of an MSS for the purposes of FEI's 2023 COSA Study.[93]

The CEC submits that FEI's explanation of the changes in what constitutes the minimum system in an MSS is unclear. The CEC recommends that the BCUC should direct FEI to revisit, as part of its next COSA study, what ought to constitute 'minimum system' for the purposes of its COSA studies.[94]

FEI submits the CEC's requested direction is not warranted as it has provided a reasonable explanation of the changes to minimum system. FEI asserts its MSS method is widely used in the industry and previously approved by the BCUC in the 2016 COSA Decision and is the same MSS method used in the 2023 COSA Study. FEI submits that the changes in the minimum system for the purpose of the MSS supporting FEI's 2023 COSA Study are primarily related to updating the costs and length of pipe in the minimum system. These are factors that are expected to change and, therefore, need updating with each COSA study.[95]

Panel Determination

The Panel finds that FEI has adequately justified the reasons for the changes in what constitutes the minimum system and therefore the changes to the split between the customer-related and demand-related costs. Accordingly, we deny the CEC's request to consider the use of a different method for the next COSA study. We consider FEI's use of actual 2022 data in its 2023 MSS to be reasonable and concur with FEI and RCIA on this matter.

[89] Exhibit B-1, Section 4.1.1.2, p. 18.
[90] Exhibit B-1, Section 4.3.2.4, p. 33, Appendix E: Minimum System Study Results and Peak Load Carrying Capacity Study Results, Section 1.2, p. 2.
[91] Exhibit B-4, BCUC IR 9.1.
[92] Exhibit B-4, BCUC IR 9.1.
[93] RCIA Final Argument, p. 22.
[94] CEC Final Argument, p. 7.
[95] FEI Reply Argument, pp. 4–5.

2.2.5 Activity View of Operating and Maintenance (O&M) Expenses

FEI's rates are currently set under the BCUC approved Multi-year Rate Plan (MRP) framework. As a result, the majority of FEI's gross O&M expenses are determined using a formula and not developed on an activity view basis. Therefore, FEI has split its gross O&M into an activity view using percentages derived from its 2022 actual activity view of O&M to allocate O&M expenses in its 2023 COSA model. FEI notes that this approach is consistent with that used for FEI's 2016 COSA study.[96]

Positions of the Parties

The CEC agrees that the use of the prior year activity view of gross O&M is consistent with the methodology employed in the 2016 RDA and COSA proceeding and recommends the BCUC approve FEI's methodology. However, notwithstanding, the CEC supports FEI exploring in future COSA studies, error-free ways to split its net O&M expenses into an activity view. The CEC submits that the BCUC should direct FEI to provide its net O&M expenses split into an activity view as part of future rates applications following the 2020–2024 MRP.[97]

In reply, FEI submits there is no activity view of net O&M, and the activity view of O&M is always on a gross basis with a single line item that removes capitalized overheads. Further, splitting the 2023 net O&M would rely on the use of the 2022 gross O&M by activity view, which consist of known actuals, but also on a contrived and erroneous split of capitalized overhead and biomethane credit. In addition, FEI states that this request is out of scope as it relates to rate applications, not a COSA study.[98]

Panel Determination

Given that there is no activity view of net O&M under FEI's current rate framework and preparing such an activity view would result in capitalized overhead being erroneously split, there is limited benefit to FEI providing a split of its net O&M expenses into an activity view and therefore, the Panel denies the CEC's request.

3.0 Revenue Rebalancing Proposal

The three-step allocation process outlined in Section 2.1 allows FEI to derive R:C and M:C ratios.[99] Relying on the results of the 2023 COSA Study, FEI has proposed revenue rebalancing to shift the rate schedules with R:C ratios that are outside of the range of reasonableness to the nearest boundary. The sections below address the use of R:C ratios versus M:C ratios and the use of a range of reasonableness to inform whether revenue rebalancing is required for FEI, as well as comparing revenue rebalancing options explored in this proceeding.

3.1 Use of R:C Ratio and Range of Reasonableness for Assessing Rebalancing Options

The range of reasonableness is the range within which R:C or M:C ratios indicate that the rate class is paying its fair share of costs (i.e. revenue rebalancing is not required if the ratios are within the range of reasonableness).[100] FEI calculates the R:C and M:C ratios as follows:[101]

[96] Exhibit B-1, Section 4.2.2.1, p. 20.
[97] CEC Final Argument, p. 6.
[98] FEI Reply Argument, pp. 2–3.
[99] Exhibit B-1, p. 19.
[100] Exhibit B-7, Attachment 1.1A, p. 29.
[101] Exhibit B-1, Section 4.1.2, p. 19, Section 4.6.1, p. 47.

- **R:C ratios** - By dividing the delivery margin revenue (which includes the basic charge, demand charge, volumetric delivery charge, and administrative charge revenue) and the gas cost recovery revenue (which includes cost of gas and storage and transport charge) from each rate schedule by the allocated delivery cost of service and the allocated gas costs.
- **M:C ratios** - By dividing the delivery margin revenue from each rate schedule by the allocated delivery cost of service.

The Elenchus Reports made the following findings relevant to the question of choosing between the R:C and M:C ratios, range of reasonableness and for rebalancing considerations:

- The purpose of rebalancing is to bring all rate classes within the accepted range of R:C ratios.[102]
- R:C ratios within the range of reasonableness are considered to be fully recovering their costs since cost allocation studies are not precise. Therefore, unless the R:C ratio is outside the range of reasonableness, differential rate increases would not be 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.[103]
- There is no requirement to bring the R:C ratios for rate classes to be equal to 1.00 (i.e. unity). Rather, for classes with R:C ratios above the upper end of the accepted range, the revenue shortfall from reducing rates to bring rate classes down to the upper bound should be recovered from rate classes that have R:C ratios below 1.00. And the reverse also applies.[104]
- The M:C ratio has merit as a primary reference since it excludes flow-through costs.[105]
- For the range of reasonableness of the R:C ratio to be applied in a manner equivalent to a range of reasonableness for the M:C ratio, the R:C ratio range would have to be narrower than the equivalent M:C ratio range.[106]
- One ratio must be used as the primary reference point. The most important consideration in choosing between the R:C and M:C ratios is consistency over time.[107]

These findings were explored among BCUC, FEI and interveners during the comprehensive review in the 2016 COSA and RDA proceeding where the BCUC determined that reliance on the R:C ratio was appropriate.

Use of R:C vs M:C Ratios

Based on the BCUC's determination in the 2016 COSA Decision, FEI states that continuing to use the R:C ratios to inform FEI's rate design and rebalancing proposals is preferable because it is consistent with previous applications[108] which is consistent with the Elenchus Reports. FEI states that the pros and cons of using R:C

[102] Exhibit B-7, Attachment 1.1B, p. 34.
[103] Exhibit B-7, Attachment 1.1B, p. 34.
[104] Exhibit B-7, Attachment 1.1B, p. 34.
[105] Exhibit B-7, Attachment 1.1B, p. 35.
[106] 2016 COSA and RDA proceeding, Exhibit A2-5, BCUC IR 9.1.
[107] Exhibit B-7, Attachment 1.1B, p. 35.
[108] Exhibit B-4, BCUC IR 17.1.

and/or M:C ratios to guide rate design and revenue rebalancing were discussed extensively as part of the 2016 COSA and RDA proceeding and the reasons for adopting the R:C ratio were detailed in that decision.[109]

Consistent with the 2016 COSA Decision, FEI's 2023 COSA Study applies a range of reasonableness of 95 percent to 105 percent to evaluate the R:C ratio for all rate schedules, except for rate schedules RS 22A/B, RS 4, and RS 7/27 which are interruptible or remain closed and continue their grandfathered status.[110]

The results that FEI arrived at before rebalancing are shown in Table 2 below which shows both the R:C and M:C ratios.

Table 2: R:C and M:C Ratio Results before Rebalancing[111]

Rate Schedule	R:C	M:C	In/Out of Range of Reasonableness 95% < R:C < 105 %
Rate Schedule 1	97.3%	95.0%	In
Rate Schedule 2	98.0%	95.6%	In
Rate Schedule 3/23	104.0%	111.2%	In
Rate Schedule 5/25	106.9%	126.9%	Out (1.9% over)
Rate Schedule 6	96.2%	91.0%	In
Rate Schedule 22	110.0%	110.2%	Out (5.0% over)
Rate Schedule 22A	101.8%	101.9%	In
Rate Schedule 22B	100.1%	100.1%	In

FEI states that the only rate schedules that are outside of the R:C range of reasonableness are RS 5/25 and RS 22.[112] If M:C ratios were used instead, the M:C range of reasonableness would need to be 89 percent to 111 percent to be equivalent to the current 95 percent to 105 percent R:C range. This is based on its total cost of gas being close to 55 percent of its total allocated cost of service. Based on an expanded M:C range, RS 3/23 and RS 5/25 would be outside of the upper bound of the range of reasonableness.[113]

[109] Exhibit B-4, BCUC IR 17.1.
[110] Exhibit B-1, Section 4, p. 15.
[111] Exhibit B-1, Table 4-17, p. 48.
[112] Exhibit B-1, Section 4.6.1, Table 4-17, p. 48.
[113] Exhibit B-4, BCUC IR 17.3.

Citing the recommendation of Elenchus and the 2016 RDA Decision, FEI asserts that balancing to unity would not be reasonable, since unity does not necessarily measure the true cost to serve a particular rate class. FEI further asserts the following with respect to the application of the range of reasonableness: [114]

- As long as rates are within the range of reasonableness, they are sufficient to recover their fair or fully allocated costs to serve that rate schedule.
- Rebalancing to the boundaries of a range is standard utility practice and minimizes rate impacts for all rate classes.
- No changes in circumstances have occurred since the 2016 COSA and RDA decisions that would suggest a change in approach to rebalancing is warranted.

FEI proposes to use the R:C ratio as the primary reference for its 2023 COSA Study, consistent with the Elenchus Reports findings and the 2016 RDA Decision. This approach in FEI's view is reasonable, and to depart from it would result in rate instability for customers.[115]

Positions of the Parties

RCIA agrees with FEI's approach and recommends that R:C ratios be used to determine the need for revenue rebalancing in the current proceeding, citing a historically consistent approach as its primary advantage. However, RCIA argues that the use of M:C ratios may be more appropriate in the future, stating that "M:C ratios are not affected by changes in gas commodity or transportation costs, which are flow-through costs and are not allocated by the COSA study."[116]

The CEC agrees with FEI's approach that R:C is preferred over M:C as a method to determine COSA results and inform rebalancing proposals.[117]

BCOAPO's final argument did not provide a viewpoint one way or the other regarding the use of R:C or M:C ratios.

Panel Determination

To address FEI's proposal to use the R:C ratio as the primary reference in this proceeding, the Panel is informed by the comprehensive review conducted for the 2016 COSA. The 2016 COSA and RDA proceeding provided evidence from third-party independent expert witnesses that the BCUC relied upon in selecting the use of R:C ratios over M:C ratios. The Panel places weight on the merits of an approach that is consistent with the previous COSA and notes that none of the parties took issue with this approach. **Given these factors and noting the interveners are generally in agreement, the Panel approves the use of the R:C ratio to inform the need for and the degree of rate rebalancing among the rate classes based on the 2023 COSA Study.**

The Panel notes that the expert testimony acknowledges there could be credible reasons to use M:C ratios in the future, thereby excluding gas costs when assessing rebalancing options. However, before considering a change to an M:C ratio potentially impacting numerous rate classes, additional evidence is required to justify such a change. This is discussed further in Section 4.1.

[114] Exhibit B-4, BCUC IRs 19.2 and 19.4.
[115] FEI Final Reply, p. 15.
[116] RCIA Final Argument, pp. 7–8.
[117] CEC Final Argument, pp. 3, 11.

Use of Range of Reasonableness

The Elenchus Reports noted in Section 1.1 above were filed by FEI in this proceeding.[118] In those reports, Elenchus found, and the BCUC accepted in the 2016 COSA and RDA proceeding, that there is no requirement to bring the R:C ratios for rate classes to be equal to 1.00 (i.e. unity). Elenchus further stated that for classes with R:C ratios above the upper end of the accepted range, the revenue shortfall from reducing rates to bring rate classes down to the upper bound should be recovered from rate classes that have R:C ratios below 1.00. The reverse also applies.[119]

Positions of the Parties

RCIA states that achieving a unity R:C ratio is "unnecessary and undesirable" citing FEI's and the BCUC's views that an R:C ratio is derived from "estimates, assumptions and judgements" causing the R:C to be inherently imprecise. RCIA also cites the BCUC's independent expert Elenchus who stated that a range of reasonableness is appropriate due to the "imprecision of COSA models and the multiple legitimate methods to allocate costs".[120]

The CEC recommends the BCUC direct FEI to consider, in its next COSA study, preparing rebalancing proposals that periodically aim towards unity, ultimately doing away with the use of a range of reasonableness.[121]

BCOAPO states that rate rebalancing complexities that link a class's particular rate design (such as the economic crossover between two classes) to inter-class cost allocation rebalancing is likely an indicator that the range of reasonableness of 95 percent to 105 percent is too tight.[122] While not opposed to using a range of reasonableness, BCOAPO recommends the next COSA study should be comprehensive and revisit the appropriateness of the range of reasonableness.[123]

In reply to the CEC, FEI submits there is no basis to change the range of reasonableness from the 95 percent to 105 percent range determined by the BCUC in the 2016 COSA Decision. Further, FEI notes there have been no "new facts or arguments" to support doing away with the range of reasonableness.[124]

In reply to BCOAPO, FEI submits there is no logical connection between whether the economic cross-over point is shifted and the range of reasonableness. If a change is to be made to RS 2, RS 3/23 or RS 5/25, there will be implications for the economic cross-over points. This is unrelated to the range of reasonableness.[125]

Panel Determination

FEI's approach to assess the need for rebalancing a rate class is to rely on a range of reasonableness of 95 percent to 105 percent within which a rate schedule's revenue is considered to be recovering its costs. The CEC has raised no concern with this methodology in the current proceeding but has recommended the BCUC direct FEI in the next COSA proceeding to prepare rebalancing proposals that aim towards unity and ultimately do

[118] Exhibit B-7, Attachment 1.1A and Attachment 1.1B.
[119] Exhibit B-7, Attachment 1.1B, p. 34.
[120] RCIA Final Argument, pp. 14, 15, 17.
[121] CEC Final Argument, p. 4.
[122] BCOAPO Final Argument, pp. 9, 19.
[123] BCOAPO Final Argument, p. 19.
[124] FEI Reply Argument, p. 13.
[125] FEI Reply Argument, p. 14.

away with the range of reasonableness. The Panel disagrees. The evidence in this proceeding suggests that an R:C ratio calculation is derived from forecast revenues and costs for the test year and the COSA is reliant upon numerous assumptions and judgements. Thus, an R:C ratio has inherent uncertainty and it follows that R:C ratios are best interpreted as a range on either side of a theoretical mid-point of unity. Therefore, the Panel agrees with FEI's approach to use an R:C range within which a rate schedule's revenue is considered to be recovering its costs to assess the need to rebalance a rate class. **Because of this, the Panel is not persuaded by the CEC that there is a need to achieve unity and rejects the CEC's recommendation to depart from the use of a range of reasonableness to assess the need for and the degree of rebalancing required, in this or the next COSA study.**

To address BCOAPO's concern about a range of reasonableness that is too tight, the Panel notes that in the BCUC's 2016 COSA Decision a 95 to 105 percent range was assigned relying on Elenchus' study of ranges in use by comparable utilities in other jurisdictions. In addition, following the 2023 COSA Study, only marginal rebalancing is needed to bring all rates to within this range.[126] Therefore, the Panel endorses FEI's proposal to continue to employ a 95 percent to 105 percent range of reasonableness to guide the rebalancing.

The Panel notes that the need to address the economic crossover will arise whenever a revenue shift occurs from or to RS 2, RS 3/23 or RS 5/25. If not corrected, a misalignment arises with the rate design principle regarding price signals that encourage efficient use and discourage inefficient use.[127] The Panel therefore agrees with FEI that use of a particular range of reasonableness is not connected to the economic crossover adjustments. The need for economic cross-over adjustments arises from a selected inter-class allocation rebalancing approach, rather than vice versa.

3.2 Rebalancing Options

The purpose of rebalancing is to bring R:C ratios for all rate classes within the accepted range of reasonableness.[128] As outlined in Table 2 above, FEI states the results of the 2023 COSA Study show that only RS 5/25 and RS 22 have R:C ratios above the upper limit of the range of reasonableness of 95 percent to 105 percent. The R:C ratios for RS 5/25 and RS 22 are 106.9 percent and 110 percent, respectively, and FEI notes that only a small revenue rebalancing is needed to move both rate schedules back to within the range of reasonableness. To address this, FEI developed five potential revenue rebalancing options and assesses these options against the Bonbright Principles. While all five options bring RS 5/25 and RS 22 to the upper boundary of 105 percent, they differ in how they re-apportion revenue responsibility among RS 1, RS 2 and RS 3/23 as outlined in Table 3:[129]

[126] BCUC Decision G-4-18 FortisBC Energy Inc., 2016 Rate Design Application, p. 37.
[127] Exhibit B-1, Section 5.2.2, p. 52, Section 5.3.3, p. 69, Section 5.3.5, p. 77.
[128] Exhibit B-7, Attachment 1.1B, p. 34.
[129] Exhibit B-1, Section 1, pp. 2–3, Section 5.1, p. 50, Section 5.3.6, pp. 78–79.

Table 3: Revenue Shift between Rate Schedules under FEI's Rebalancing Options ($000s)

	Revenue Shift ($000s)					
	Option 1: Status Quo	Option 2a: Revenue Rebalancing Only Using RS 1	Option 2b: Revenue Rebalancing Only Using RS 2	Option 3: Revenue Rebalancing Using RS 1 plus Maintaining Economic Crossover between RS 2 and RS 3/23, and between RS 3/23 and RS 5/25	Option 4: Revenue Rebalancing Using RS 2 plus Maintaining Economic Crossover between RS 2 and RS 3/23, and between RS 3/23 and 5/25	Option 5: Revenue Rebalancing Using RS 1 plus Maintaining Economic Crossover between RS 2 and RS 3/23 Only
RS 1	-	4,519	-	4,519	-	4,519
RS 2	-	-	4,519	4,071	4,075	145
RS 3/23	-	-	-	(4,071)	444	(145)
RS 5/25	-	(3,344)	(3,344)	(3,344)	(3,344)	(3,344)
RS 6	-	-	-	-	-	-
RS 22	-	(151)	(151)	(151)	(151)	(151)
RS 22A	-	-	-	-	-	-
RS 22B	-	-	-	-	-	-
RS 4	-	(46)	(46)	(46)	(46)	(46)
RS 7/27	-	(978)	(978)	(978)	(978)	(978)

FEI proposes Option 5. This rebalances revenue by relying primarily on RS 1 plus smaller adjustments to RS 2 and RS 3/23 to maintain the economic crossover[130] point between them. FEI explains that this does not address the economic crossover point between RS 3/23 and RS 5/25, as that would result in an increase to the RS 3/23 basic charge causing a misalignment with the rate design principle regarding price signals that encourage efficient use and discourage inefficient use.[131]

As well as preserving the economic crossover point between RS 2 and RS 3/23 customers, FEI submits its preferred rebalancing option reflects the best balance of Bonbright Principles when compared to the other revenue rebalancing options, while also minimizing the bill impacts to both residential and commercial customers. Further, its preferred option results in the least bill impact to the average RS 2 customer at approximately $1.65 per year, while keeping the bill impact to RS 1 customers relatively small at approximately $4.95 per year, and also offering a small reduction to RS 3/23 customer bills of approximately $10 per year. Table 4 shows the final 2023 COSA Study results after FEI's preferred revenue rebalancing, including the average annual percentage bill impact that results for each rate schedule:[132]

[130] The economic crossover is maintained between rate classes when at any given level of usage the cost of the gas commodity and delivery in one class is more cost-effectively reached under the class's pricing rather than in the pricing of another class.
[131] Exhibit B-1, Section 5.2.2, p. 52, Section 5.3.3, p. 69, Section 5.3.5, p. 77.
[132] Exhibit B-1, Section 5.4, Table 5-23, pp. 81–83.

Table 4: Final 2023 COSA Study Results after FEI's Proposed Revenue Rebalancing

Rate Schedule	Initial COSA R:C	Initial COSA M:C	Revenue Shift ($000s)	Approx. Annual Bill Impact (%)	COSA after Rebalancing R:C	COSA after Rebalancing M:C
Rate Schedule 1 *Residential Service*	97.3%	95.0%	4,519	0.4%	97.7%	95.6%
Rate Schedule 2 *Small Commercial Service*	98.0%	95.6%	145	0.04%	98.1%	95.7%
Rate Schedule 3/23 *Large Commercial Sales and Transportation*	104.0%	111.2%	(145)	(0.04%)	103.9%	111.0%
Rate Schedule 5/25 *General Firm Sales and Transportation*	106.9%	126.9%	(3,344)	(1.8%)	105.0%	119.5%
Rate Schedule 6 *Natural Gas Vehicle Service*	96.2%	91.0%	-	-	96.2%	91.0%
Rate Schedule 22 *Large Volume Transportation Service*	110.0%	110.2%	(151)	(4.5%)	105.0%	105.1%
Rate Schedule 22A *Transportation Service (Closed) Inland*	101.8%	101.9%	-	-	101.8%	101.9%
Rate Schedule 22B *Transportation Service (Closed) Columbia*	100.1%	100.1%	-	-	100.1%	100.1%

Rate Schedule (Rates Not Set Using Allocated Costs)	Initial COSA R:C	Initial COSA M:C	Revenue Shift ($000s)	Approx. Annual Bill Impact (%)	COSA after Rebalancing R:C	COSA after Rebalancing M:C
Rate Schedule 4 *Seasonal Firm Gas Service*	124.1%	339.0%	(46)	(3.0%)	120.5%	302.5%
Rate Schedule 7/27 *General Interruptible Sales and Transportation*	122.4%	628.0%	(978)	(1.1%)	121.1%	596.6%

Additional rebalancing options were explored in IRs, including revenue rebalancing using RS 1 and RS 2 proportional to their delivery revenues (which results in a 0.3 percent annual bill impact for both RS 1 and RS 2),[133] as raised by RCIA, and reallocating the revenue shift to all rate schedules (excluding RS 4 and RS 7/27) with R:C ratios capped at 105 percent, as raised by BCOAPO.[134]

Positions of the Parties

The CEC supports FEI's Option 5 proposal for rebalancing based on its analysis of the potential impacts to commercial customers on RS 2 and RS 3/23 resulting from the 2023 COSA Study.[135]

RCIA recommends that RS 1, RS 2, and RS 6 absorb the revenue shift proportional to their delivery revenues from rebalancing RS 5/25 and RS 22 to an R:C ratio of 105 percent.[136] This alternative is similar to RCIA's option explored in IRs, as noted above, with the exception that it also includes RS 6. RCIA points out that the R:C ratios for the RS 1 and RS 2 rate classes are nearly the same at 97.3 percent and 98 percent, respectively. According to RCIA, the imprecision in the COSA model, as acknowledged by Elenchus (see Elenchus finding listed in Section 3.1) and supported by FEI and the BCUC, does not support the conclusion that RS 1 is recovering less of its allocated costs than is RS 2.[137] RCIA notes also that RS 6 has an R:C ratio at the lowest level among all classes, at 96.2 percent.[138] Based on the BCUC's 2016 RDA and COSA decision, RCIA is of the view that because RS 1, RS 2, and RS 6 have R:C ratios below 100 percent it is appropriate to shift revenues to these classes proportional to

[133] Exhibit B-7, RCIA IR 19.1, Table 1.
[134] Exhibit B-5, BCOAPO IR 1.8.
[135] CEC Final Argument, p. 4.
[136] RCIA Final Argument, pp. 13, 17, 22.
[137] RCIA Final Argument, p. 15.
[138] RCIA Final Argument, pp. 14–16.

their delivery revenues.[139] In comparison to RS 1 and R 2, RCIA recognizes that RS 6 has few customers and only limited revenues, so it cannot absorb a large revenue shift. However, RCIA suggests RS 6, as well as RS 1 and RS 2, should absorb a proportional amount of the revenue shift corresponding to its delivery revenues.[140]

In reply, FEI submits that RCIA's suggested option is inferior to FEI's preferred option. FEI denies RCIA's allegation that it is "targeting" RS 1 because it has the lowest R:C ratio. FEI submits that based on past practice it analyzed various options including all rate schedules with R:C ratios below 100 percent and concluded its preferred option is the best balance of rate design considerations. FEI makes clear that the trade-off to using RS 2 to absorb the revenue shift is that RS 2 and RS 3/23 would see larger increases in their basic charge, which would mostly impact the commercial customers which consume small volumes.[141]

BCOAPO presents two further options in its final argument which propose to spread the revenue shift among all classes within the range of reasonableness on an equal percentage basis. BCOAPO's Options 1 and 2 reduce FEI's proposed impact (or revenue shift) of $4.519 million to residential customers by nearly 50 percent and spread the residual amount to other classes within the range of reasonableness on an equal percentage basis. BCOAPO states its two options sought better consistency with the principles established in the 2016 RDA and COSA Decision such that all classes within the range of reasonableness would make some contribution to rate rebalancing of those classes outside the range of reasonableness.[142] BCOAPO submits that its Option 2 which excludes RS 4 and RS 7/27 is appropriate.[143]

In reply, FEI submits that BCOAPO's approach is not consistent with standard utility practice as approved in the 2016 RDA and COSA decisions, whereby rate schedules with R:C ratios less than 100 percent are used for absorbing revenue shifts noting that its strategy moves all rate schedules closer together. FEI argues that with BCOAPO's approach there is a higher likelihood that these classes will exceed the range of reasonableness and need rebalancing when the next COSA study is conducted.[144] Further, FEI states BCOAPO's proposal ignores the economic crossover points, and therefore does not properly consider the rate design principle of sending the right price signals that encourage efficient use and discourage inefficient use.[145]

Supplemental Evidence

As outlined above, RCIA presented a revised preferred option in its final argument. To provide all parties an opportunity to comment, the BCUC requested[146] and FEI filed supplemental evidence and argument with respect to this option.[147]

Tables 5 and 6 below outline FEI's revised summary of respective revenue shifts and bill impacts that would result from RCIA's revised recommendation and the five FEI options previously shown.[148]

[139] RCIA Final Argument, pp. 15–16, 22.
[140] RCIA Final Argument, pp. 15–16, 22.
[141] FEI Reply Argument, pp. 15–16.
[142] BCOAPO Final Argument, p. 10.
[143] BCOAPO Final Argument, pp. 11–12.
[144] FEI Reply Argument, p. 18.
[145] FEI Reply Argument pp. 19–20.
[146] Exhibit A-6, BCUC Request for Supplemental Arguments.
[147] FEI Supplemental Evidence and Argument.
[148] FEI Supplemental Evidence and Argument, p. 2.

Table 5: Summary of Revenue Shift Between Rate Schedules for all Rebalancing Options

	Revenue Shift ($000s)					
	Option 2a: Revenue Rebalancing Only Using RS 1	Option 2b: Revenue Rebalancing Only Using RS 2	Option 3: Revenue Rebalancing Using RS 1 plus Maintaining Economic Crossover between RS 2 and RS 3/23, and between RS 3/23 and RS 5/25	Option 4: Revenue Rebalancing Using RS 2 plus Maintaining Economic Crossover between RS 2 and RS 3/23, and between RS 3/23 and 5/25	Option 5: Revenue Rebalancing Using RS 1 plus Maintaining Economic Crossover between RS 2 and RS 3/23 Only	RCIA Argument: Rebalancing to RS 1, RS 2, and RS 6
RS 1	4,519	-	4,519	-	4,519	3,466
RS 2	-	4,519	4,071	4,075	145	1,053
RS 3/23	-	-	(4,071)	444	(145)	0
RS 5/25	(3,344)	(3,344)	(3,344)	(3,344)	(3,344)	(3,344)
RS 6	-	-	-	-	-	1*
RS 22	(151)	(151)	(151)	(151)	(151)	(151)
RS 22A	-	-	-	-	-	-
RS 22B	-	-	-	-	-	-
RS 4	(46)	(46)	(46)	(46)	(46)	(46)
RS 7/27	(978)	(978)	(978)	(978)	(978)	(978)

* : Amount is equal to $590 rounded to the nearest $000

Table 6: Summary of Bill Impact in % and $ for an Average Customer in each Rate Schedule for Rebalancing Options

	Option 2a		Option 2b		Option 3		Option 4		Option 5		RCIA Argument	
	Avg. Bill Impact (%)	Avg. Bill Impact ($)	Avg. Bill Impact (%)	Avg. Bill Impact ($)	Avg. Bill Impact (%)	Avg. Bill Impact ($)	Avg. Bill Impact (%)	Avg. Bill Impact ($)	Avg. Bill Impact (%)	Avg. Bill Impact ($)	Avg. Bill Impact (%)	Avg. Bill Impact ($)
RS 1	0.4%	$ 4.95	-	$ -	0.4%	$ 4.95	-	$ -	0.4%	$ 4.95	0.3%	$ 3.76
RS 2	-	$ -	1.2%	$ 50	1.1%	$ 45	1.1%	$ 45	0.04%	$ 1.65	0.27%	$ 11.67
RS 3/23	-	$ -	-	$ -	(1.2%)	$ (469)	0.1%	$ 123	(0.04%)	$ (10)	0.00%	$ 8.94
RS 5/25	(1.8%)	$ (2,942)	(1.8%)	$ (2,942)	(1.8%)	$ (2,942)	(1.8%)	$ (2,942)	(1.8%)	$ (2,942)	(1.8%)	$ (2,942)
RS 6	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	0.3%	$ 45
RS 22	(4.5%)	$ (29,978)	(4.5%)	$ (29,978)	(4.5%)	$ (29,978)	(4.5%)	$ (29,978)	(4.5%)	$ (29,978)	(4.5%)	$ (29,978)
RS 22A	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
RS 22B	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
RS 4	(3.0%)	$ (2,843)	(3.0%)	$ (2,843)	(3.0%)	$ (2,843)	(3.0%)	$ (2,843)	(3.0%)	$ (2,843)	(3.0%)	$ (2,843)
RS 7/27	(1.1%)	$ (12,673)	(1.1%)	$ (12,673)	(1.1%)	$ (12,673)	(1.1%)	$ (12,673)	(1.1%)	$ (12,673)	(1.1%)	$ (12,673)

FEI's supplemental evidence and argument indicate that the above tables show largely the same impacts that FEI presented in response to RCIA IR 19.1. Consistent with its response to RCIA IR 19.1, FEI asserts that this option is inferior to FEI's Option 5 and state that including RS 6 in the rebalancing is neither effective nor reasonable due the limited degree of contribution this class makes compared to the overall revenue shift needed. FEI points out that the bill increases of $11.67 to RS 2 and $8.94 to RS 3/23 are much higher than the corresponding bill impacts in FEI's Option 5. FEI also expresses concern with a $45 average bill impact to RS 6 customers under RCIA's proposal, an impact higher than the increases to any other rate schedule.[149]

RCIA responded to FEI's supplemental evidence endorsing the rebalancing option revised to add RS 6 to RS 1 and RS 2 in accepting revenue shifted from RS 5/25 and RS 22 to bring these classes to the boundary of the range of reasonableness. RCIA notes that, as expected, the revenue shifts, impact and ratios were not materially different as a result of the proportionate revenue shifted to RS 6.

[149] FEI Supplemental Evidence and Argument.

BCOAPO responded to FEI's supplemental evidence stating that RCIA's proposal is preferable to FEI's preferred option. BCOAPO maintains that BCOAPO's preferred option is superior to both RCIA's and FEI's proposals for three reasons: It shifts the least revenue to RS 1 among all three options, it results in a fairer outcome for the far larger RS 1 class compared to FEI's option and is consistent with the previous BCUC finding that there is no distinction among R:C ratios within the range of reasonableness given the inherent inaccuracy of cost allocation results.[150]

In its supplemental reply argument, FEI submits that its proposed Option 5 is more balanced when considering the impact to all rate schedules and more appropriate than either RCIA's proposal or BCOAPO's preferred option. FEI states it relies on its arguments made in its reply submission which sets out reasons why Option 5 is more balanced and appropriate. BCOAPO's preferred option spreads the revenue shift among all classes within the range of reasonableness, while FEI's proposed option was developed based on the principle that only rate classes below 100 percent are eligible for this shift. FEI takes issue with BCOAPO's argument that its option better supports consistency with past practice, referring to the 2016 RDA Decision which found "RS 1's R:C ratio is the only rate class below 100 percent and RS 1 customers have the capacity to absorb these amounts with the lowest bill impact to individual customers."[151]

Panel Determination

The Panel notes that under FEI's preferred option, RS 1 would provide nearly all the revenue that needs re-assignment to bring RS 5/25 and RS 22 to within the range of reasonableness. FEI's proposal incorporates additional rate adjustments to restore and maintain the economic crossover between RS 2 and RS 3/23 and thereby send the correct price signals to encourage efficient use and discourage inefficient use in accordance with accepted regulatory principles. The rates proposed with this option would not, however, address the reduced economic crossover point between RS 3/23 and RS 5/25. The benefits from correcting price signals between these two schedules by increasing basic charges to RS 3/23 would, from FEI's perspective, not be worth the degree of impact that would be directed to the smallest, low-volume commercial customers. The Panel agrees with FEI there is a need to strike a balance between creating clear price signals that encourage efficient use while keeping bill impacts to reasonable levels.

BCOAPO's proposal apportions the revenue shift to all rate schedules with R:C ratios within the range of reasonableness on an equal percentage basis. The Panel acknowledges that classes in the range of reasonableness are to be viewed as paying their share of allocated costs. However, shifting revenue to a class with an R:C that is above 100 percent will cause its ratio to drift further from unity, increasing the potential need to rebalance in the future. **The Panel therefore rejects BCOAPO's rebalancing proposal.**

The Panel finds RCIA's rebalancing suggestion to use all rate schedules where R:C ratios are below 100 percent, while correcting for the economic crossover between RS 2 and RS 3/23, is more equitable than FEI's preferred option. In the view of the Panel, FEI's preferred option unduly relies on RS 1 to absorb the requisite revenue shift. The Panel acknowledges that RS 1 is the largest rate class, whether in delivery and revenue terms, the number of customers or terajoules consumed annually. RS 1 is therefore able to absorb a revenue adjustment with the least total bill impact. However, barring a significant change in rate class definitions, RS 1 will always be best suited to absorb a significant adjustment with a relatively minor impact on a total bill basis. This treatment is, however, misaligned with the accepted rate rebalancing practice established in the 2016 RDA

[150] BCOAPO Supplemental Argument, pp. 2–3.
[151] FEI Supplemental Reply Submission, pp. 1–2.

Decision (see Elenchus findings discussed in Section 3.1) where rate classes with an R:C ratio below unity should contribute to the recovery of revenue shortfall from reduced rates to bring rate classes down to the upper bound of the range of reasonableness. Under RCIA's option, revenues from RS 1, RS 2 and RS 6 are adjusted upwards to correct for the over-contributions from RS 5/25 and RS 22 based on the COSA study. This, together with the further adjustment between RS 2 and RS 3/23 to correct for the economic crossover, yields a fair and equitable set of rate adjustments, with the same percentage increases for RS 1, RS 2, and RS 6. RCIA's proposal yields a set of revised rates that brings all classes to within the range of reasonableness.

Therefore, the Panel directs FEI to reduce revenues from RS 5/25 and RS 22 sufficient to bring the R:C ratios of each down to the 105 percent upper boundary of the range of reasonableness, and correspondingly increasing the revenues of RS 1, RS 2, and RS 6 in proportion to their contribution to delivery revenues, by adjusting the associated rates. FEI is directed to include adjustments to RS 2 and RS 3/23 to maintain the economic crossover between these rate schedules and FEI is directed to implement the resulting rate changes to its rate schedules, effective January 1, 2025.

Need for Comprehensive Rate Design

FEI submits that the existing rates and rate designs are working well noting that all rate schedules except RS 5/25 and RS 22 are within the range of reasonableness of 95 percent and 105 percent, the accepted range for R:C ratios to evaluate the adequacy of each rate schedule's ability to recover its costs. Further, the R:C ratios for RS 5/25 and RS 22 are only 1.9 and 5 percent respectively out of the range of reasonableness. Therefore**,** FEI concludes a comprehensive redesign of FEI's existing rates is not warranted.[152]

Positions of the Parties

RCIA concurs with FEI that a comprehensive redesign of FEI's rates is not required at this time.[153]

BCOAPO disagrees with FEI with regards to the need for a comprehensive rate redesign. BCOAPO states that the evidence does not lend itself to drawing such a conclusion, and raises this as a general concern citing the following concerns:

- sizable changes to the cost allocation results in 2023 compared to 2016, prior to rate rebalancing;[154]
- FEI's DSM allocation methodology;[155]
- whether the range of reasonableness is too tight for FEI given an economic crossover adjustment is being made as part of rebalancing between classes RS 2 and RS 3;[156] and
- lack of basis for the discount from firm rates provided to interruptible customers.[157]

The CEC does not express an opinion regarding the need for a comprehensive rate design.

[152] Exhibit B-1, pp. 48, 49.
[153] RCIA Final Argument, pp. 6-7.
[154] BCOAPO Final Argument, p. 17.
[155] BCOAPO Final Argument, p. 19.
[156] BCOAPO Final Argument, p. 19.
[157] BCOAPO Final Argument, p. 19.

In reply, FEI asserts that the only "sizeable" changes were in RS 4 and R S7/27 (seasonal and interruptible services respectively), which are not held to the range of reasonableness as they are interruptible, seasonal services. They are priced at a discount to RS 5, rather than using a cost allocation. FEI also reiterates that changes to R:C within the range of reasonableness (in RS 1 and RS 2) that BCOAPO identified as "sizeable" are by BCOAPO's own submission without distinction and therefore, BCOAPO has not identified a need for a full rate design to occur.[158]

Panel Determination

The Panel notes that a full rate design would involve an analysis of the rate structure of each rate class, a consideration of the merits and demerits of making changes and a regulatory process in response to FEI's application to the BCUC. Therefore, the potential benefits of FEI undertaking this would need to override the costs.

In the view of the Panel, the changes to the cost allocation results from 2016 to 2023 are either inconsequential, as the changes remain within the range of reasonableness, minor in the case of RS 5/25 and RS 22 with only 0.15 percent and 0.007 percent of revenue shifting as a portion of FEI's annual revenue at 2023 rates[159] or not relevant given that RS 4 and RS 7/27 are not priced using a cost allocation approach.

With regards to the concerns raised by BCOAPO, the Panel has addressed issues related to DSM, the range of reasonableness being too tight given the crossover adjustment and, as noted above, considers the changes in the COSA results between 2016 and 2023 to be either inconsequential or minor. The basis of the interruptible rate class design was also questioned by BCOAPO in its final argument. However, the Panel was not provided specific evidence or analysis related to these rates pointing to a potential problem. The Panel finds that BCOAPO's arguments are unpersuasive and fail to justify the need for a full rate redesign at this time.

Therefore, the Panel finds that undertaking a comprehensive rate design now would not yield enough of a difference to the proposed rates to warrant the costs.

4.0 FEI's Next COSA Study

As noted above, RCIA supported the use of R:C ratios in the current proceeding to determine whether revenue rebalancing is required. However, looking ahead to the next COSA study and Revenue Rebalancing RCIA raised a concern with respect to the use of R:C ratios versus M:C ratios and submits that the evidence supports a move away from R:C ratios in favour of the use of M:C ratios in future proceedings.[160] This issue is addressed in Section 4.1 following.

4.1 Use of R:C vs M:C

The Elenchus Reports state that one ratio must be used as the primary reference point and the most important consideration in choosing between R:C and M:C is consistency.[161] Elenchus noted that "the pass-throughs vary across different classes. So using an M:C ratio for all the classes as the primary measure, in a sense, makes more

[158] FEI Reply Argument, p. 11.
[159] Exhibit B-1, p. 48.
[160] RCIA Final Argument, p. 7.
[161] Exhibit B-7, Attachment 1.1B, p. 35.

sense when you're comparing classes."[162] Further, as stated previously, Elenchus concluded that the M:C ratio has merit as a primary reference since it excludes flow-through costs but the R:C ratio is so widely accepted that it would not be inappropriate as the primary reference.[163]

As noted above, in the next revenue rebalancing proceeding, RCIA recommends that M:C ratios, as opposed to R:C ratios, be used for examining whether revenue rebalancing is required. RCIA recommends an M:C range of reasonableness of 90 percent to 110 percent be adopted which is close to FEI's estimate of 89 percent to 111 percent required to make the M:C range equivalent to the current R:C range. RCIA recommends that an appropriate translation of the range of reasonableness take place now.[164]

In RCIA's view, FEI has it backwards noting:[165]

> The M:C ratio measures only the costs that are actually allocated by the COSA, unlike the R:C ratio which combines both the allocated costs with the non-allocated flow-through costs. With the R:C ratio, as the proportion of gas costs with respect to total allocated costs changes, the meaning and validity of the 95% to 105% range of reasonableness changes.

In RCIA's view, the primary advantage of R:C ratios over M:C ratios is its reliance on historical data and notes that in the 2016 COSA proceeding the BCUC found that remaining consistent with previous rate designs was the most important point. That said, the M:C ratio has the benefit of evaluating only costs that are allocated by the COSA against the revenues that recover those costs from customers. Therefore, RCIA argues "M:C ratios are not affected by changes in gas commodity or transportation costs, which are flow-through costs and are not allocated by the COSA study." In RCIA's view, revenue rebalancing is focused on adjusting only the delivery rates and not flow through costs (gas and midstream costs) and the purpose of looking at R:C or M:C ratios is to provide a means where revenue rebalancing is required. Therefore, the preferred metric to focus on delivery costs is the M:C ratio.[166]

RCIA states that the use of an M:C range is important at this time because the flow-through gas commodity prices for FEI customers are expected to increase in the coming years as FEI ramps up the supply of low-carbon gases, including renewable natural gas (RNG) and hydrogen. More specifically, the cost of gas supply (natural gas, RNG and hydrogen) has been estimated by FEI to be $24/GJ by 2024 with hydrogen declining to $15/GJ by 2030. Overall gas costs will thus increase as the proportion of these more expensive gases being delivered increases. This will result in a tightening of the R:C compared to the M:C range of reasonableness.[167]

In reply, FEI submits that there is no compelling reason to depart from the existing practice of using R:C ratios and the most important consideration remains consistency with past practice. Further, FEI states that changing from the use of the R:C ratio to the M:C ratio would result in rate instability for customers and therefore should be rejected.[168]

Panel Determination

[162] 2016 COSA and RDA proceeding, FEI Streamlined Review Process Transcript Vol 5, p. 436.
[163] Exhibit B-7, Attachment 1.1B, p. 35.
[164] RCIA Final Argument, p. 11.
[165] RCIA Final Argument, p. 9.
[166] RCIA Final Argument, pp. 8–9.
[167] RCIA Final Argument, pp. 8–10.
[168] FEI Reply Argument, pp. 14–15.

The primary reason for maintaining reliance on the R:C ratio over the use of an M:C ratio to determine when rebalancing is required for FEI appears to be its consistency with past practice. The Panel accepts that maintaining a consistent approach to rebalancing will minimize or at least temper the risk of rate instability among rate classes. However, while the Panel agrees that consistency is important, the question arises as to whether the pursuit of consistency comes at the potential cost of failing to create fair, just and reasonable rates.

The R:C ratio, as employed by FEI, includes gas costs that are not included in the M:C ratio which only considers delivery costs. Gas costs vary over time and depending on their magnitude, could have a significant impact upon the R:C ratio of rate classes. It appears to the Panel that as these costs increase, so does the tendency to drive the ratio towards unity regardless of whether a rate class is above or below 100 percent. This is a consequence of growing gas costs being added to delivery costs and having an increasingly larger impact on the overall total costs. This, in effect, mutes the impact of any changes in delivery costs and could result in a rate class being within the range of reasonableness but only because of the inclusion of these costs. It appears to the Panel that by eliminating gas costs, the actual delivery costs which vary between rate classes can be more accurately compared and potentially lead to a fairer approach to rate rebalancing.

The Panel has determined that, for the purposes of the 2023 COSA Study, using the R:C ratio as proposed by FEI is the most appropriate primary reference for rate rebalancing noting the importance of consistency and the lack of conclusive evidence supporting a move away from the current approach. However, looking ahead, the Panel is concerned that continued reliance on the R:C ratios as employed by FEI may not be appropriate. As noted in this proceeding, the cost of gas is likely to rise going forward and, as a result, drive the R:C ratio of many rate classes towards unity, potentially muting the effect of changes in delivery cost allocations. Thus, the use of the R:C ratio in the future may no longer accurately indicate a need for rebalancing. The M:C ratio, which excludes gas costs, places greater emphasis on the actual delivery costs related to each rate class thereby addressing this problem. The Panel accepts that these concerns could be addressed as part of the next COSA study and revenue rebalancing project. However, to do so could result in additional processes and may cause a delay in proceedings, given that the ratio employed will inform any resulting revenue rebalancing and/or rate design proposals. **Because of this, the Panel finds there is a need to address whether the continued use of the R:C ratio as employed by FEI, or an M:C ratio that excludes gas costs, is most appropriate prior to moving ahead with the next COSA study and revenue rebalancing application. Therefore, the Panel directs FEI to file a report no later than May 1, 2025 examining the merits of relying primarily on the M:C ratio that excludes gas costs as a reference point for future rate rebalancing or to provide options to minimize the impact of gas costs on the R:C ratio.**

In preparing this report, FEI is asked among other factors to address the following:

1. A jurisdictional review of the ratio employed by primary comparators for the purposes of revenue rebalancing (e.g. R:C ratio or M:C ratio), including details of what costs are included in each ratio and the associated range of reasonableness;
2. The rationale for the current practice of including gas costs in the R:C ratio used for revenue rebalancing, as opposed to employing a ratio that excludes gas costs;
3. The comparative impact across FEI's rate classes of including gas costs in the ratio used for revenue rebalancing; and
4. An analysis of what the appropriate range of reasonableness should be in the event an M:C ratio excluding gas costs were to be adopted.

We acknowledge RCIA's requests to reset the range of reasonableness at this time. The Panel considers it to be premature to initiate changes prior to a full review of FEI's report.

4.2 Timing of the Next COSA Study

As part of its final argument, FEI proposes to file its next COSA study by January 1, 2030, or earlier if there is any significant change in circumstances impacting delivery rates. By January 1, 2030, FEI expects the impacts of climate policy and related legislation on FEI's operations to be more apparent, making it a good time to conduct the next COSA study.[169]

Positions of the Parties

There is a significant variance among the interveners as to the most appropriate timing of the next COSA study review. RCIA supports FEI's proposal to file the next COSA study in 2030.[170] BCOAPO recommends a comprehensive COSA review no later than 2028, referring to fundamental changes in FEI's business brought about by significant environmental policy changes.[171] The CEC recommends the BCUC establish the timing for the next COSA study to be 2027, referring to forward-looking elements such as RNG growth that are not included in this COSA study.[172]

In reply, FEI submits that neither the CEC nor BCOAPO's recommendations are reasonable as they do not consider the year required to complete a COSA study, and the even longer time required for a comprehensive rate design. FEI states that its proposed date will allow "… sufficient time for any business changes to occur due to the energy transition and for those changes to be reflected in the revenue requirement. Waiting for the impacts of these changes to occur and develop before beginning the COSA study process will enable FEI to see if there is any significant impact or changes needed as a result."[173]

Panel Determination

The Panel observes that only minor revenue rebalancing was needed to bring all rate schedules to within an accepted R:C ratio for the 2023 COSA Study, indicating that FEI's rates and rate design established in the 2016 RDA Decision are performing as intended. However, the Panel notes that given the current environment, potential for rising gas costs and business changes, the need for a COSA study may be sooner than the five and a half years proposed by FEI. Given these concerns the Panel directs FEI to submit its next COSA study by January 1, 2029, which is a year earlier. We acknowledge FEI's concern with allowing sufficient time for the coming business changes to be reflected in a future COSA and for FEI to complete a COSA study and accompanying comprehensive rate design. However, we consider a period of four and a half years between approval of this COSA study to the submission of the next one a reasonable balance between the competing concerns.

Accordingly, the Panel directs FEI to file its next COSA study with the BCUC by January 1, 2029. The Panel encourages FEI to consider the impact of the energy transition on both its COSA methodology and existing rate design, as part of its next COSA study filed with the BCUC.

DATED at the City of Vancouver, in the Province of British Columbia, this 21st day of May 2024.

[169] FEI Final Argument, pp. 23–24.
[170] RCIA Final Argument, p. 20.
[171] BCOAPO Final Argument, p. 19.
[172] CEC Final Argument, pp. 8–10.
[173] FEI Reply Argument, p. 22.

Original signed by:

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D. A. Cote
Panel Chair / Commissioner

Original signed by:

_____

E. A. Brown
Commissioner

Original signed by:

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M. Jaccard
Commissioner

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Energy Inc.
2023 Cost of Service Allocation and Revenue Rebalancing

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated August 10, 2023 – Appointing the Panel for the review of FortisBC Energy Inc. 2023 Cost of Service Allocation Study and and Application for Approval of Revenue Rebalancing
A-2	Letter dated August 17, 2023 – BCUC Order G-218-23 establishing a regulatory timetable
A-3	Letter dated September 29, 2023 – BCUC amending the Panel
A-4	Letter dated October 5, 2023 – BCUC Information Request No. 1 to FEI
A-5	Letter dated January 23, 2024 – BCUC Order G-21-24 establishing a further regulatory timetable with Reasons for Decision
A-6	Letter dated April 11, 2024 – BCUC request for supplemental arguments
APPLICANT DOCUMENTS	
B-1	**FORTISBC ENERGY INC. (FEI)** - 2023 Cost of Service Allocation (COSA) Study and Application for Approval of Revenue Rebalancing (Revenue Rebalancing) dated July 20, 2023
B-2	Letter dated August 18, 2023 – FEI submitting 2023 COSA Model
B-3	Letter dated August 28, 2023 – FEI submitting Public Notice G-218-23 compliance
B-4	Letter dated November 23, 2023 – FEI submitting responses to BCUC Information Requests No. 1
B-5	Letter dated November 23, 2023 – FEI submitting responses to BCOAPO Information Requests No. 1
B-6	Letter dated November 23, 2023 – FEI submitting responses to CEC Information Requests No. 1

B-7	Letter dated November 23, 2023 – FEI submitting responses to RCIA Information Requests No. 1
B-8	Letter dated December 14, 2023 – FEI submission on further process
B-9	Letter dated January 10, 2024 – FEI reply submission on further process

INTERVENER DOCUMENTS

C1-1	**RESIDENTIAL CONSUMER INTERVENER ASSOCIATION (RCIA) -** Letter dated August 28, 2023 Request to Intervene by Samuel Mason
C1-2	Letter dated October 12, 2023 – RCIA submitting Information Request No. 1 to FEI
C1-3	Letter dated January 4, 2024 – RCIA submission on further process
C2-1	**COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BC (CEC)** – Letter dated September 14, 2023 request to intervene by David Craig
C2-2	Letter dated October 12, 2023 – CEC submitting Information Request No. 1 to FEI
C2-3	Letter dated January 4, 2024 – CEC submission on further process
C3-1	**BRITISH COLUMBIA OLD AGE PENSIONERS' ORGANIZATION ET AL. (BCOAPO ET AL.)** – Letter dated September 14, 2023 late request to intervene by Irina Mis
C3-2	Letter dated October 12, 2023 – BCOAPO submitting Information Request No. 1 to FEI
C3-3	Letter dated January 4, 2024 – BCOAPO submission on further process
C4-1	**DIRECT ENERGY** – Letter dated September 19, 2023 late request to intervene by Maria Baitoiu