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May 15, 2025

Residential Consumer Intervener Association
1130 W Pender Street
Vancouver, B.C.
V6E 4A4

Attention: Abdulrahman (Abdul) Abomazid,

Dear Abdul Abomazid:

Re: FortisBC Inc. (FBC)

2025 Cost of Service Allocation (COSA) and Revenue Rebalancing (Application)

Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1

On February 14, 2025, FBC filed the Application referenced above. In accordance with the regulatory timetable established in BCUC Order G-60-25 for the review of the Application, FBC respectfully submits the attached response to RCIA IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Interveners

CHAPTER 5: 2025 COSA STUDY METHODOLOGY AND RESULTS

1.0 Reference Exhibit B-1, Page 17

5.2.2.2 Distribution Rate Base

FBC states: *"For the classification of distribution plant, a minimum system study (MSS) was performed to determine the split between customer- and demand-related costs. A similar approach was taken in the 2017 COSA. The MSS assumes a certain size of the distribution plant such as the number of poles, conductions, and transformers is required to serve the minimum load requirements of customers, thus the costs associated with such minimum system are dependent on the number of customers, i.e., customer-related regardless of their level of load demand. The remaining costs of the distribution plant are then classified as demand-related since any cost associated with the distribution plant beyond the minimum system requirement is considered to be due to the customers' level of load demand being greater than the level that a minimum system can serve."*

1.1 Have there been any changes to the assumptions that form the basis of the methodology used to determine the minimum system study in the current COSA compared to the previous one? If so, provide a clear explanation of each change and its justification.

Response:

The following response has been provided by EES Consulting and FBC:

No, there have not been any changes to the methodology for the Minimum System Study. However, as described in the response to BCUC IR1 6.1, FBC inadvertently excluded neutral conductors from the line length data provided to EES Consulting as part of the 2025 MSS analysis. The impact of correcting for this error (i.e., including the neutral conductors) is that the customer-related portion of conductor costs decreases from 71 percent to 65 percent. As a result of this and a few other changes to the COSA model inputs, FBC has filed an updated COSA model and Updated Application concurrently with these IR responses. Please refer to the cover letter to the Updated Application for further details of the changes.

1.2 Are the "minimum load requirements" applied in this study identical to those used in previous COSA study? If not, specify exactly what has changed and provide reasoning for each difference.

Response:

The following response has been provided by EES Consulting:

There has been no change from the previous COSA study. The approach takes a minimum system rather than a minimum load approach. The minimum system is the smallest or lowest price equipment purchased to deliver one kWh to the end point service compared to the as-built system.

1.3 What specific minimum household energy consumption level is assumed in the current COSA? Include the numerical value(s) used and the rationale behind this assumption.

Response:

The following response has been provided by EES Consulting:

The minimum system equipment includes a 15 kVa transformer, a 40-foot pole, and No. 2 aluminum conductor steel reinforced (ACSR). The minimum household consumption is 1 kWh (or less) and the likely maximum would be less than 15 kVA peak demand. This configuration is appropriate because it is typical of the minimum sized equipment that would be installed for the smallest service.

1.4 Describe how the current assumptions about minimum load requirements take into account each of the following factors:

- Time-of-use rates
- Net metering
- Demand side management programs
- Electric vehicle adoption (including the specific adoption assumptions used)

Response:

The following response has been provided by EES Consulting:

Generally, with respect to an actual physical system, time-of-use rates and demand side management can be approaches to limit the need for over-sized service installations above the minimum system. However, net metering and electric vehicle adoption typically require larger than minimum system equipment to provide adequate service. Typically, these are not factors that feed

into a minimum system analysis as they are generally retail rate and after-the-system-is-built optimization considerations as opposed to the theoretical construction of a minimum system necessary to deliver one kWh to an end-point service. Please also refer to the response to RCIA IR1 1.2.

Appendix A – EES CONSULTING COSA REPORT

2.0 Reference Exhibit B-1, Page 19

3.4.3 Peak Load Carrying Capability Adjustment (PLCC)

FBC states: *"While the minimum system is, in theory, designed to carry only a minimal amount of load, the actual facilities chosen as the minimal size can carry some amount of demand, therefore the minimum system without adjustment, overstates the customer-related component. The actual amount of demand capability within the minimum system is a function of load density, minimum required clearances, minimum equipment standards, temperature, and other engineering considerations. Under traditional cost allocation techniques, each customer/connection attracts an equal allocation of the minimum system, plus demand costs allocate based on the total customer class's non-coincident peaks. As such, it has been argued that a customer class's non-coincident demand allocator is too large, because a portion of these peak demand-related costs are being covered through the per customer/connection minimum system allocation.*

The correction of the problem of over-allocation demand can be achieved by the application of a PLCC adjustment. The precise amount of a PLCC adjustment should match the definition of the minimum system adopted. In the FortisBC case, it was determined that the average PLCC for the FortisBC system is 0.97 kW per customer. This update reflects the same PLCC adjustment methodology as previous studies"

2.1 On what basis was the PLCC adjustment left unchanged in the current COSA study? Please provide an explanation for why no update was made, including any rationale supporting this decision.

Response:

The following response has been provided by EES Consulting:

The PLCC adjustment methodology did not change from 2017 since the underlying MSS methodology also remained the same. However, since the inputs into the PLCC model changed in number and costs between the 2017 and 2025 studies, the result changed from 1.09 to 0.97, with both values close to 1.0.

2.2 Provide an explanation of how the PLCC adjustment is expected to be affected by each of the following factors. If no impact is expected, explain the reasoning behind that conclusion:

- Time-of-use rates
- Net metering

- Demand-side management programs
- Electric vehicle adoption, including the specific assumptions regarding adoption levels

Response:

The following response has been provided by EES Consulting:

The PLCC analysis includes measured demands on the system by feeder. These measured demands include whatever mix of factors caused those demands to be higher or lower, including the factors listed in the question, which are all present on the FBC system.

2.3 Could FBC provide a comparison of Peak Load Carrying Capability (PLCC) adjustments across different jurisdictions?

2.3.1 What are the main factors or drivers that account for any observed differences in how PLCC is applied?

Response:

FBC does not have a jurisdictional comparison of PLCC factors.

The main factor or driver for the PLCC adjustment is the actual demands on each feeder compared to the carrying capacity of each feeder, considering a reliability margin of 20 percent of peak kVA.

Appendix B – FBC Final COSA 2025 Model

3.0 Reference Exhibit B-1

"Load" worksheet

FBC presents the following:

Group Coincidence Factor	Residential	Small Commercial 20	Commercial 21/22	Large Comm Primary 30/32	Large Comm Transmission 31	Lighting	Irrigation	Wholesale Primary 40	Wholesale Transmission
Jan-22	43.63%	54.26%	67.73%	75.58%	97.55%	58.41%	38.17%	96.55%	91.20%
Feb-22	38.60%	54.81%	68.91%	74.38%	96.43%	59.04%	38.14%	93.72%	97.52%
Mar-22	33.52%	49.69%	64.67%	82.00%	96.86%	55.89%	27.94%	80.47%	95.58%
Apr-22	28.89%	45.68%	60.83%	69.60%	95.85%	51.91%	32.80%	76.66%	86.57%
May-22	27.03%	43.49%	62.36%	76.97%	97.22%	55.35%	42.99%	91.60%	80.71%
Jun-22	36.06%	51.04%	67.50%	74.84%	96.83%	62.29%	61.18%	92.46%	90.29%
Jul-22	43.30%	58.42%	72.91%	80.56%	97.14%	63.59%	61.00%	100.00%	97.78%
Aug-22	40.40%	56.07%	70.43%	83.23%	98.33%	63.70%	59.74%	84.65%	86.40%
Sep-22	39.67%	57.29%	71.34%	83.04%	97.95%	56.30%	60.00%	99.06%	96.05%
Oct-22	28.20%	43.10%	62.73%	73.89%	96.99%	52.30%	37.58%	82.15%	74.09%
Nov-22	38.14%	60.10%	80.23%	82.79%	92.14%	53.44%	39.91%	99.42%	43.33%
Dec-22	46.42%	58.66%	69.04%	83.23%	97.24%	61.51%	36.92%	98.02%	99.19%

3.1 What is the methodology used to derive the Group Coincidence Factors in the current COSA study?

Response:

The following response has been provided by EES Consulting:

The Group Coincidence Factor is the percentage of individual meters that peak at the same time. It is determined by dividing the class peak by the sum of individual peaks, where the sum of individual peaks is the aggregate total of the maximum values for each meter for the month regardless of time, and the class peak is the maximum hourly value for the class (all meters added at the same time).