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VIA ELECTRONIC MAIL

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Attention: Mr. Patrick Wruck, Commission Secretary and Manager, Regulatory Support

Dear Sirs/Mesdames:

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

We are counsel to the Commercial Energy Consumers Association of British Columbia (CEC). Attached please find the CEC's second set of Information Requests to FortisBC Energy Inc. with respect to the above-noted matter.

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

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer

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

**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA**

INFORMATION REQUEST #2 to FortisBC Energy Inc.

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

68. Reference: Exhibit B-11, CEC 1.20.1

- 20.1 Please describe the competing objectives in this rebalancing and what makes a one time 5% change the appropriate end-point.

Response:

FEI's reasoning for the proposed 5 percent revenue-neutral increase to Basic Charge and the review of corresponding rate design considerations for this proposal are described in detail in Sections 7.5, 7.6 and 7.8 of the Application. FEI provides the following summary discussion.

The main objective of FEI's proposal is to improve the balance among competing rate design considerations. On one hand, an increase in the share of fixed charges in the recovery of fixed costs will improve the intra-rate schedule fairness and will ameliorate possible imbalances in interests among residential customers, particularly between the low use and medium / high use groups. The proposal will also slightly improve revenue and rate stability, and is consistent with practices in other Canadian natural gas distribution utilities, as well as Commission's past decisions. On the other hand, government energy policies and bill impact analysis limit the desirability of making larger increases to the Basic Charge. The proposed 5 percent revenue-neutral increase does not lead to any significant bill impact for any individual residential customer and does not discourage customers' involvement in demand-side management programs since a significant portion of customers' monthly bills continues to be recovered through volumetric charges. As such FEI believes that 5 percent increase is reasonable and should be approved as proposed.

- 68.1. Does FEI expect to increase the basic charge in the future to continue to improve intra-class fairness? Please explain why or why not.

69. Reference: Exhibit B-11, CEC 1.21.1

- 21.1 What options does FEI suggest should be considered to counter or fairly mitigate the prospect of overall reduction in customer demand based on declining use per customer.

Response:

As suggested in the preamble to this question, the impact of declining use per customer on total throughput and customer rates can be mitigated by actions and initiatives that support the attachment of new customers and encourage the existing customers to remain as natural gas customers. For instance, FEI's recent system extension application and decision (Order G-147-16, dated September 16, 2016) introduced new customer connection policies that will help potential customers to attach to FEI's system. Continuing the pursuit of growth opportunities in other sectors, such as natural gas for transportation in trucking, marine and mining, or remote power generation also presents possibilities for partial mitigation of lost revenues from declining residential use while serving other government policy objectives such as GHG emission reductions.

- 69.1. Please provide the historical natural gas commodity prices over the last five years.
69.2. Please provide the forward price curve for the natural gas commodity.
69.3. Is it possible or likely that declining natural gas commodity prices could serve to mitigate the declining use per customer by making natural gas bills cheaper overall? Please explain.

70. Reference: Exhibit B-11, CEC 1.22.10 and 1.22.11

- 22.10 Could seasonal rates more accurately reflect the cost of serving customers? Please explain why or why not.

Response:

Yes. FEI is a winter peaking utility. As stated in Table 7-2 as shown in the preamble to the IR, a seasonal rate can be used as a proxy for a demand charge to ensure that the costs of serving peak winter demands are allocated to those most responsible for causing them. In practice, the calculation of price differential between winter and summer months can impact the effectiveness of seasonal rates in providing the right price signals. Seasonal rates are also more complex than flat rates and do not fare as well as flat rates on customer understanding and acceptance.

- 22.11 Please confirm that there is no explicit regional 'price' differential using seasonal rates. Rather, there is likely to be a consumption differential which is controlled by the customers.

Response:

FEI confirms that under a seasonal rate option, there will be no "explicit" regional price differential. However, in practice, customers in northern regions of FEI's service territory with longer and colder winters may pay a higher average rate (due to higher use during winter months) than customers in other regions, thus creating an "implicit" regional rate differential. As explained on page 7-11 of the Application, a seasonal rate differential was applied to BC Gas' rates from 1994 to 1998. Despite the theoretical appeal, the seasonal rates did not perform well in respect to the rate design principle of customer understanding and acceptance. Some customer groups objected to this rate structure and claimed that seasonal rates unfairly impact the customers who are located in colder regions of the province. Following these complaints and a review process, the Commission decided to terminate the seasonal differential. This experience indicates that even though there was no "explicit" regional price differential, the customers' perception of such a regional differential was sufficient to lead to the ultimate termination of seasonal rates after only 4 years.

FEI does not entirely agree with the second statement in the question which expresses that the consumption differential is controlled by the customers. Customers living in northern regions of FEI's territory for example have no control over the longer and colder winters and, despite their best efforts, may not be able to consume at the same level as customers in warmer regions of

FEI's service area. Therefore, while customers have some control over their consumption, they do not have absolute control.

- 70.1. Are there rate design options for a seasonal rate such that customers generally contribute according to their cost causation, and have a price signal that demonstrates the cost causation but also mitigates the effect of the 'regional differences'? Please explain.
- 70.2. Are seasonal rates implemented in other jurisdictions?
- 70.2.1. If yes, please provide the jurisdictions and a brief discussion on how 'regional differences' are handled.

71. Reference: Exhibit B-11, CEC 1.24.1

- 26.1 Please provide a qualitative and quantitative comparison of residential and commercial customers identifying the characteristics that suggest the appropriateness of having separate rate schedules.

Response:

EES Consulting provides the following response.

The cost of serving residential and commercial customers differs as a result of differences in use per customer, load factor and the facilities that must be installed for different types of customers.

Customer-related costs differ between residential and commercial customers because of the difference in the type and cost of meters installed, as well as the complexity of meter reading and billing. Customer-related costs differ by class, with a cost of \$0.947 per customer/day for RS 1, \$1.329 per customer/day for RS 2 and \$3.111 per customer/day for RS 3/23.

Demand-related costs also differ due to the load factors associated with each class. Demand-related costs are \$2.719 per GJ for RS 1, \$3.080 per GJ for RS 2 and \$2.664 per GJ for RS 3/23.

Because of these cost differences, there is a justification for maintaining separate classes with the cost of service study and separate rate schedules.

- 71.1. Please confirm that the customer related differences related to the types of meters installed and the complexity of meter reading and billing are a result of having different rate schedules, and not of an inherent difference in rate class.
71.1.1. If not confirmed, please explain why not.

72. Reference: Exhibit B-11, CEC 1.29.1

29. Reference: Exhibit B-1, page 8-7

Table 8-2: Multi Jurisdiction Review of Commercial Rate Schedules

Company	Description	Eligibility	Type
<i>Small Commercial</i>			
FEI	Small Commercial	<2,000 GJ	Flat Rate
PNG	Small Commercial	<5,500 GJ	Flat Rate
AltaGas	Small General	<5,326 GJ	Flat Rate
Sask Energy ¹⁵⁰	Small Commercial	<3,825 GJ	Flat Rate
Manitoba Hydro	Small General	<535 GJ	Flat Rate
Gaz Metro	Distribution	<419 GJ	Declining
<i>Large Commercial</i>			
FEI	Large Commercial	>2,000 GJ	Flat Rate
PNG	Large Commercial	>5,500 GJ	Flat Rate
ATCO	Mid Use	1,200 – 8,000 GJ	Flat Rate
AltaGas	Large General	>5,326 GJ	Flat Rate
Sask Energy	Large Commercial	3,825 – 25,245 GJ	Flat Rate
Manitoba Hydro	Large General	535 – 26,010 GJ	Flat Rate
Union Gas	Large General	>1,712 GJ	Declining
Enbridge	General	No limit	Declining

29.1 Under what tariff does ATCO gas serve customers under 1200 GJ?

Response:

EES Consulting provides the following response.

Customer with consumption below 1200 GJ per year would be served under the Low Use Delivery Service Rates.

72.1. Are the ATCO “Low Use” delivery service rates the same rates as for residential customers?

73. Reference: Exhibit B-11, CEC 1.32.1

- 32.1 Does FEI consider 'at least half of FEI's allocated costs' to be a threshold of reasonableness? Please explain why or why not.

Response:

FEI considers the percentage of Basic Charge revenue compared to allocated customer cost as appropriate for RS 2 and RS 3/23. These percentages are higher than the corresponding percentage for residential customers. Recovering the balance of allocated customer costs through the volumetric charge leaves room for the commercial rate structures to have price signals that accommodate policy objectives such as energy conservation and efficiency. FEI did not intend "at least half" to be a threshold of reasonableness, but made the statement to confirm that commercial basic charges are recovering a significant portion of the allocated customer costs.

Please refer to the response to BCUC-FEI IR 1.23.3 for a discussion on the factors FEI used to derive rates for RS 2 and RS 3/23.

- 73.1. Does FEI consider it important that residential customers also experience price signals that accommodate policy objectives such as energy conservation and efficiency? Please explain why or why not.
- 73.2. If yes, how does FEI seek to achieve these policy objectives in the residential rate class?

74. Reference: Exhibit B-11, CEC 1.36.1

36. Reference: Exhibit B-1, page 9-9

The change in method to calculate the Daily Demand requires the Demand Charge to be reset to continue to send the appropriate price signals so that only customers with greater than 40% load factor have an incentive to take service under RS 5/RS 25. Customers with a load factor less than 40% should be taking service under FEI's Large Commercial rate schedules. FEI's proposed solution is to increase the Demand Charge by \$3.00 which will send the appropriate price signals to customers

36.1 On what basis has FEI established a 40% load factor as the appropriate threshold for customers to take service under RS 5/RS 25? Please provide the rationale and the evidence to support it.

Response:

FEI has not established a threshold for customers to take service under RS 5/25. However, as described in Section 9.5.2 of the Application, General Firm Service is intended for customers that generally use natural gas in a process – a load that is relatively non-temperature sensitive with an average load factor of 40 percent or more.

In 2001, the load factor for Large Commercial Service customers was 33 percent and for General Firm Sales Service (RS 5) was 45 percent; in 2016, the respective load factors were 37 percent and 45 percent. The midpoint between these average load factors is approximately 40 percent for both 2001 and 2016.

74.1. FEI states that General Firm Service is intended for customers ‘with an average load factor of 40% or more’. Please explain the rationale behind the 40% figure.

75. Reference: Exhibit B-11, CEC 1.40.2

40.2 Please provide the anticipated outcomes for customers under each of the alternatives, including anticipated bill changes, and % bill changes and the number of customers affected in each of the load factor categories.

Response:

In the tables below, the bill impact is the change in the annual bill compared to what the bill would be using the current 1.25 multiplier applied to the COSA Demand Charge of \$21.596 / month / GJ of Daily Demand. For each of the methods shown below, the bill impacts include the reduction in the monthly Administration charge applicable to RS 25 customers. The cost of gas has not been included in the annual bill, so the percentage bill impact change is related to the proposed increase in the Demand Charge and the reduced Administration fee. For each of the methods, the annual bill impact also includes the change in the determination of the Daily Demand. As can be seen from the tables below, FEI's proposed alternative has the least annual bill impact.

Change to Average Consumption on Coldest 3 Days

Average Consumption on Coldest 3 Days	# of Customers	Current Method @ COSA Rates Annual Bill	Ave Consumption on Coldest 3 Days @ Proposed Rate Annual Bill	Change In Bill	Percentage Change
Customers with Zero Demand	7	\$ 182,052	\$ 106,621	\$ (75,430)	-41.4%
< 40% Load Factor	44	\$ 2,838,477	\$ 2,949,613	\$ 111,136	3.9%
40% - 45% Load Factor	54	\$ 2,504,826	\$ 2,657,705	\$ 152,879	6.1%
45% - 50% Load Factor	93	\$ 3,761,270	\$ 3,880,329	\$ 119,059	3.2%
> 50% Load Factor	576	\$ 30,155,871	\$ 27,118,475	\$ (3,037,396)	-10.1%
Total	774	\$ 39,442,496	\$ 36,712,743	\$ (2,729,753)	-6.9%

Change to Average Consumption on Coldest 5 Days

Average Consumption on Coldest 5 Days	# of Customers	Current Method @ COSA Rates Annual Bill	Ave Consumption on Coldest 5 Days @ Proposed Rate Annual Bill	Change In Bill	Percentage Change
Customers with Zero Demand	4	\$ 81,120	\$ 50,862	\$ (30,258)	-37.3%
< 40% Load Factor	33	\$ 2,303,742	\$ 2,344,943	\$ 41,201	1.8%
40% - 45% Load Factor	43	\$ 2,344,713	\$ 2,361,057	\$ 16,344	0.7%
45% - 50% Load Factor	87	\$ 3,371,433	\$ 3,476,441	\$ 105,009	3.1%
> 50% Load Factor	607	\$ 31,341,487	\$ 28,496,380	\$ (2,845,108)	-9.1%
Total	774	\$ 39,442,496	\$ 36,729,683	\$ (2,712,812)	-6.9%

Change to Modified Formula

Modified Formula	# of Customers	Current Method @ COSA Rates Annual Bill	Modified Formula @ Proposed Rate Annual Bill	Change In Bill	Percentage Change
Customers with Zero Demand	1	\$ 7,980	\$ 7,512	\$ (468)	-5.9%
< 40% Load Factor	35	\$ 2,338,749	\$ 2,381,575	\$ 42,826	1.8%
40% - 45% Load Factor	43	\$ 2,344,713	\$ 2,361,057	\$ 16,344	0.7%
45% - 50% Load Factor	87	\$ 3,371,433	\$ 3,476,441	\$ 105,009	3.1%
> 50% Load Factor	608	\$ 31,379,621	\$ 28,998,679	\$ (2,380,942)	-7.6%
Total	774	\$ 39,442,496	\$ 37,225,265	\$ (2,217,231)	-5.6%

75.1. The Change to Average Consumption over 5 days results in increased reductions to customer bills and nearly equal increases. Both the Change to Average Consumption over 3 and 5 days results in lower Total Annual Rate Bills than under the Modified Formula.

Please discuss with quantification the expected impacts to other ratepayer groups if FEI were to use Average Consumption instead of the Modified formula for determining daily demand.

76. Reference: Exhibit B-5, BCUC 1.30.4

- 30.4 If FEI were to implement a minimum load factor eligibility criterion for RS 5 and RS 25:
- i. Please explain what the desired minimum load factor would be; and
 - ii. Please explain how FEI could implement the minimum load factor and ensure customers are being placed in the appropriate rate class and being billed accordingly.

Response:

FEI does not recommend a minimum load factor eligibility criterion. The rest of the response is based on adopting a load factor eligibility criterion, contrary to FEI's recommendation.

Load Factor is a derived value of average consumption divided by peak consumption; for FEI, it is average day consumption divided by peak consumption. The derivation of the load factor is not as important as the derivation or definition of peak consumption. In response to the two questions posed above:

- i) In FEI's judgment, the minimum Load Factor should be 40 percent; the class average is anticipated to be approximately 50 percent to 55 percent.
- ii) FEI would review customers' historical daily demands and consequent load factors to see if the customer should be moved to an alternate rate schedule. The review would also consider the forecast demand and expected load factor as well.

Whether or not a minimum eligibility criterion is adopted, what is most important is the determination of the appropriate Daily Demand and the Demand Charge. A proper determination of Daily Demand with the Demand Charge should be 'self-policing' to incent customers on a prospective basis to take service under the most economic rate schedule. To ensure these firm customers have an appropriate billing determinant, FEI recommends using Method 2 or Method 5. With an appropriate determination of Daily Demand (or Peak), a

customer's Load Factor can be derived. By adopting Method 2 or Method 5, all customers would fairly contribute to the recovery of the rate schedules' allocated cost of service.

With a minimum load factor requirement, similar to the Commercial customers, annual reviews of customers' consumption and load factor would need to be done to identify customers that should consider switching to another rate schedule.

- 76.1. Please explain why using Method 2 or 5 would result in all customers contributing fairly, while the other methodologies would not.
- 76.2. Please confirm that annual reviews of customer consumption and load factors for those customers near the threshold would not necessarily be difficult or costly.
 - 76.2.1. If not confirmed, are the Commercial customer annual reviews of consumption and load factors difficult and/or costly? Please explain.

77. Reference: Exhibit B-11, CEC 1.44.1

9.5.9 Bill Impact Analysis

The bill impact from the reduction in the multiplier in the Daily Demand formula is offset by the \$3 increase in the Demand Charge. The net impact on RS 5/RS 25 revenues is an incremental \$45 thousand of revenue, which is approximately a \$0.003 per GJ increase or \$5 per customer per month.

- 44.1 The economic crossover is increased for all load factor and remains almost double for customers with load factors of 40%. Please comment on FEI's expectation of the impact of the higher crossover for customers with load factors of 40%, 45% and 50%.

Response:

Considering the combined effect of lowering the Daily Demand and increasing the Demand Charge by \$3/Month/GJ of Daily Demand, FEI does not anticipate any additional migration of customers either into RS 5/25 or out of RS 5/25 than would already be incented to move either way based on the current multiplier of 1.25 and 2016 COSA Rates - Demand Charge. Overall, the net bill impact of these changes as shown in Exhibit B-1, Table 12-2, Page 12-5, is an additional \$45.2 thousand which is offset by revenue shifts to RS 1.

With regard to customers who are in the 40 percent to 50 percent load factor range and whose annual volume is less than 8,000 GJ per year, these customers should consider switching to Large Commercial Service, which is the case even at the 2016 COSA Rates. FEI does periodic reviews and, as warranted, will advise customers of their options and that they may want to consider switching to other rates that may result in lower annual bills.

- 77.1. Why are the offset revenue shifts to RS1 rather than to all non-bypass customers?

78. Reference: Exhibit B-11, CEC 1.44.2.1 and 1.44.31

44.2.1 Please provide a discussion of the bill impact of such a change.

Response:

Changing the Demand Charge increase to \$2 would erode the stability of the overall Rate Design and adversely impact residential customers.

Reducing the increase to the Demand Charge from \$3 per month per GJ of Daily Demand to \$2 would result in a shift from a surplus of \$45.2 thousand to a deficit of \$776.1 thousand that must be made up by residential customers. Reducing the increase to the Demand Charge also lowers the load factor that would economically enable customers to move from Large Commercial service to General Firm Service. With FEI's proposed rates, customers consuming 15,000 GJ to 20,000 GJ would need a load factor of approximately 40 percent to 41 percent to be just as well off under RS 25 as under RS 23. However, with the increase in the Demand Charge reduced from \$3 to \$2, the load factor decreases to 38 percent to 40 percent for a customer to be just as well off under RS 25. From the 2015 Bill Frequency Analysis, there were 50 Large Commercial customers that consume more than 15,000 GJ and approximately 25 customers whose consumption exceeds 20,000 GJ. Changing the Demand Charge increase to \$2 could therefore lead to customer migration between rate schedules. If enough customers migrate, costs would need to be reallocated in the COSA model, possibly requiring rate resetting for RS 5/25 and then RS 3/23 and RS 2 to maintain a 2,000 GJ economic crossover.

44.3.1 Please provide a discussion of the bill impact of such a change.

Response:

Changing the Demand Charge increase to \$3 to \$1 would erode the stability of the overall rate design and adversely impact residential customers.

Increasing the Demand Charge by only \$1 per month per GJ of Daily Demand would result in a shift from an RS 5/25 surplus of \$45.2 thousand to a deficit of \$1.6 million that FEI anticipates would be made up by residential customers. In addition, lowering the Demand Charge increase also lowers the load factor at which it would be economically sensible for customers to move from Large Commercial Service to General Firm Service. With FEI's proposed rates, customers consuming 15,000 GJ to 20,000 GJ would need a load factor of approximately 41 percent to 40 percent to be just as well off under RS 25 as under RS 23. However, with only a \$1 Demand Charge increase, the customer's required load factor decreases to 38 percent and 36 percent, respectively, to be just as well off under RS 25 as under RS 23. From the 2015 Bill Frequency Analysis, there were 50 Large Commercial customers that consume more than 15,000 GJ and approximately 25 customers whose consumption exceeds 20,000 GJ. These customers may therefore be incented to switch to RS 5/25, which would have cost and revenue allocation impacts, and would require the charges to be re-examined.

78.1. Please confirm that the residential customer class R:C ratio would likely move closer to unity by absorbing the deficit of \$776.1 thousand, and a deficit of \$1.6 million.

78.1.1. If not confirmed, please explain why not and provide quantification in the response.

79. Reference: Exhibit B-11, CEC 1.47.1

From the customer's perspective, the economic decision to take firm or interruptible service is dependent on whether the discount from firm is sufficient to compensate for the cost to have an alternate backup system and fuel that can be used or the cost from ceasing operations. Setting the discount either too high or too low would send the wrong price signals and could cause rate and revenue instability for customers and FEI, respectively. If the discount is too low, this may discourage new customers from considering interruptible service and may also cause existing interruptible customers to migrate to firm service. If the discount is too high and if the expected level of curtailment is very low, too many customers with firm service may elect to contract for interruptible service.

47.1 Please confirm that the appropriate discount rate should heavily consider the value to FEI, and to ratepayers of reducing peak demand.

Response:

Not confirmed. The interruptible discounts should be set at a level that maximizes the revenues from interruptible customers to offset as much as possible the largely-fixed utility cost of service otherwise borne by firm service customers. With that in mind, the appropriate discount from firm service should consider the incremental costs that interruptible customers may incur for alternate fuel, equipment costs and other costs as a result of being interrupted or the value of lost opportunities as a result of reduced production. As part of the 1996 Rate Design process the value of the discount was expressed as a Load Factor equivalent which was agreed to as part of the negotiated settlement and approved by the Commission. FEI takes into consideration the value of interruptible customers not being firm and of the avoided incremental cost of service, but this does not form the basis for estimating the amount of discount to offer Interruptible service versus Firm Service.

- 79.1. Please confirm, otherwise explain, that FEI's largely-fixed utility cost of service is significantly impacted by its peak demand.
- 79.2. Please confirm, otherwise explain, that reducing peak demand can reduce the overall utility cost of service for ratepayers in the future.

80. Reference: Exhibit B-5, BCUC 1.18.1 and 1.18.2

- 18.1 Please explain if FEI considers that the trend of declining use rates across FEU's regions has continued since the 2012 FEU REUS.

Response:

The trend of declining residential use rates across FEI's service territory has continued since 2012. Please refer to Figure 7-6 of the Application entitled "FEI's historical residential normalized UPC". Figure 7-6 provides the residential UPC rates from 2006 until 2015. This graph indicates that UPC has decreased from 87.6 GJ in 2012 to 84.4 GJ in 2015. In addition, despite occasional year over year UPC increases, FEI's long-term resource plan forecasts indicate that in the medium and long-term, the declining residential use per customer trend will continue.

- 18.2 Does FEI consider that increasing the residential fixed charge could result in low-use residential customers leaving FEI's system or being reluctant to connect to FEI's system? Please explain your response.

Response:

In general, residential customers are known to have low elasticity of demand, meaning that their demand for natural gas does not significantly change with changes in price levels. Therefore, it is unlikely that a small increase of 5 percent in Basic Charge along with a corresponding decrease in volumetric charge will lead to a material decrease in number of customers. Previous increases in FEI's Basic Charge, such as the 15 percent increase in the Basic Charge from the 2001 rate design decision, did not lead to a material decrease in the number of customers. Nevertheless, if the magnitude of increase in fixed charges is significant, low-use customers such as those with convenience load (for instance, customers who use natural gas only for fireplaces, BBQs or dryers) may decide to leave the system.

- 80.1. Please confirm that City of Vancouver (CoV) regulations regarding the installation of natural gas appliances in new multi-family residential developments are expected to increase the cost of installing and hence using natural gas to those residential customers in the CoV.
- 80.2. Does FEI expect to see increased price sensitivity to the cost of natural gas service in the CoV as compared to other regions? Please explain why or why not.
- 80.3. Is it expected that the installation of natural gas into new multifamily residential buildings in the CoV is anticipated to be increasingly limited to higher end buildings? Please explain why or why not.
- 80.4. Does FEI expect the residential use rate to experience greater declines in the CoV area than other areas in the future? Please explain why or why not.
- 80.4.1. If yes, how does FEI expect the CoV residential use rates to impact its overall residential use rates? Please provide quantification.

81. Reference: Exhibit B-5, BCUC 1.20.3

20.3 Please explain if FEI’s proposal for “a one-time 5% increase to Basic Charge and corresponding decrease in the volumetric Delivery Charge” will result in a misalignment between fixed costs and the Basic Charge over time as the volumetric Delivery Charge is changed annually.

Response:

The proposed 5 percent increase to the Basic Charge and offsetting decrease in volumetric charge does not result in misalignment, but rather decreases the misalignment. However, it is correct that over time, as the delivery margin increases and the Basic Charge is held constant,

the impact of the proposed improvement in alignment will gradually diminish. For this reason, it is important to review and potentially adjust the recovery of fixed costs from time to time.

81.1. Over what period of time, or at what threshold, does FEI believe it would be suitable to revisit the Basic Charge recovery of fixed costs?

82. Reference: Exhibit B-5, BCUC 1.29.4.1

20.4.1 In the same format as Table 7-9 in Exhibit B-1, page 7-25, please provide the bill impact of increasing the Basic Charge by 10 percent and 15 percent.

Response:

The following table provides the bill impact of increasing the Basic Charge by 10 percent.

Annual Consumption	Annual Bill impact due to the 10% Increase in Basic Charge	
	Dollar Amount	Percentage of Total Bill
0 GJ	\$14.0	10.0%
40-45 GJ	\$7.0	1.4%
60-65 GJ	\$4.0	0.5%
80-85 GJ	\$0.0	0.0%
100-105 GJ	\$(3.0)	-0.3%
120-125 GJ	\$(7.0)	-0.6%

82.1. Would FEI be averse to increasing the basic charge by 10%? Please explain why or why not.

83. Reference: Exhibit B-5, BCUC 1.20.5

20.5 For the proposed FEI residential, please complete the table below in 5 GJ increments for the 0–30 GJ range and 10 GJ increments for the 31–140 GJ range. Also include fully a functional electronic spreadsheet for the data in the table.

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Annual Consumption	Annual Revenue from Proposed Basic Charge (a)	Annual Fixed Cost based on COSA Results (b)	Difference (c) = (a) - (b)	Difference as a % of Annual Fixed Cost (d) / (b)	Annual Revenue from Proposed Variable Charge (d)	Annual Variable Cost based on COSA Results (e)	Difference (f) = (d) - (e)	Difference as a % of Annual Variable Cost (f) / (e)
Row 1	0 - 5 GJ								
Row 2	6 - 10 GJ								
Row 3	11 - 15 GJ								
Row 4	16 - 20 GJ								
Row 5	21 - 25 GJ								
Row 6	26 - 30 GJ								
Row 7	31 - 40 GJ								
Row 8	41 - 50 GJ								
Row 9	51 - 60 GJ								
...									
	131 - 140 GJ								

Response:

For clarity FEI has renamed the columns from the table provided in the following way:

- Column 3 renamed to Annual Customer Related Cost based on COSA Results;
- Column 5 renamed to Difference as a percent of Annual Customer Related Costs;
- Column 6 renamed to Annual Revenue from Proposed Volumetric Charge;
- Column 7 renamed to Total Annual Cost based on COSA Results to be recovered through Volumetric Charge; and
- Column 8 renamed to Difference as a percent of costs to be recovered through Volumetric Charge.

It is important to note that both customer-related and demand-related costs are predominantly fixed. Of the total delivery costs, there are very few costs that are variable with consumption. Because FEI's costs are predominantly fixed each customer within a rate schedule is responsible for the same amount, and for this response FEI is describing this as the annual revenue responsibility of each customer. FEI assumes that the annual revenue from proposed Basic Charge (column 2) plus the annual revenue from proposed volumetric charge (column 6) sums to the annual revenue responsibility of each customer.

The annual revenue responsibility of each customer is calculated in the following manner. The total RS 1 COSA allocated costs equal \$504,452 thousand¹⁰ multiplied by 94.4 percent M:C ratio¹¹ equals \$476,203 thousand. This is the total annual revenue responsibility for all customers in RS 1 and when divided by 886,652 RS 1 customers¹² the annual revenue responsibility for each customer equals \$537.

- Column 8 renamed to Difference as a percent of costs to be recovered through Volumetric Charge.

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Column 2 is populated using the Proposed Daily Basic Charge of \$0.4085 (as provided in Table 7-7) * 365.25.

To populate column 3 FEI has used the customer-related costs from the COSA. The customer related costs of \$305,518 thousand¹³ multiplied by 94.4 percent M:C ratio¹⁴ equals \$288,409 thousand divided by 886,652 customers¹⁵ equals a customer related cost of \$325¹⁶ per customer.

Column 6 is populated using the Proposed Delivery Charge of \$4.746/GJ (as provided in Table 7-7) multiplied by consumption from column 1.

Column 7 is the annual revenue responsibility per customer of \$537 less recoveries from the proposed Basic Charge of \$149 from column 2 which equals \$388. This column represents the costs that need to be recovered through FEI's volumetric Delivery Charge.

The requested table is provided below.

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Annual Consumption (GJ)	Annual Revenue from Proposed Basic Charge (a)	Annual Customer Related Cost based on COSA Results (b)	Difference (c) = (a) - (b)	Difference as a % of Annual Customer Related Costs (c) / (b)	Annual Revenue from Proposed Volumetric Charge (d)	Total Annual Cost based on COSA Results to be recovered through Volumetric Charge (e) = 537 - (a)	Difference (f) = (d) - (e)	Difference as a % of costs to be recovered through Volumetric Charge (f) / (e)
Row 1	5	149	325	(176)	-54%	24	388	(364)	-94%
Row 2	10	149	325	(176)	-54%	47	388	(340)	-88%
Row 3	15	149	325	(176)	-54%	71	388	(317)	-82%
Row 4	20	149	325	(176)	-54%	95	388	(293)	-76%
Row 5	25	149	325	(176)	-54%	119	388	(269)	-69%
Row 6	30	149	325	(176)	-54%	142	388	(245)	-63%
Row 7	40	149	325	(176)	-54%	190	388	(198)	-51%
Row 8	50	149	325	(176)	-54%	237	388	(151)	-39%
Row 9	60	149	325	(176)	-54%	285	388	(103)	-27%
Row 10	70	149	325	(176)	-54%	332	388	(56)	-14%
Row 11	80	149	325	(176)	-54%	380	388	(8)	-2%
Row 12	90	149	325	(176)	-54%	427	388	39	10%
Row 13	100	149	325	(176)	-54%	475	388	87	22%
Row 14	110	149	325	(176)	-54%	522	388	134	35%
Row 15	120	149	325	(176)	-54%	570	388	182	47%
Row 16	130	149	325	(176)	-54%	617	388	229	59%
Row 17	140	149	325	(176)	-54%	664	388	277	71%

- 83.1. Please confirm that the Demand-Related costs are included in Column 7, Total Annual Cost based on COSA results to be recovered through volumetric charge.
- 83.2. Please provide the information as originally requested by the Commission such that it is possible to see the total proportion of fixed charges recovered through the Basic Charge.

84. Reference: Exhibit B-5, BCUC 1.21.1

21.1 Please explain when the economic crossover point was last re-aligned, and what the crossover point was set at.

Response:

The economic crossover point was last re-aligned in the 2001 Rate Design Application. At that time, the threshold, or crossover point, between Small Commercial and Large Commercial was 2,000 GJ/year. The threshold at 2,000 GJ/year has been the same since it was originally set in the 1993 Phase B Rate Design Application.

- 84.1. Please provide the original rationale for using 2,000 GJ as the appropriate cross over point.

85. Reference: Exhibit B-5, BCUC 1.23.1

Response:

Line 8 of the following table shows the Basic Charge as a percentage of the total customer bill for an average RS 2 customer and for an average RS 3 customer using the COSA Based Rate and the Proposed Rate for each rate schedule.

Line	RS 2 - Small Commercial		RS 3 - Large Commercial		
	COSA Based Rate	Proposed Rate	COSA Based Rate	Proposed Rate	
1	Average # of Days	365.25	365.25	365.25	365.25
2	Use / Customer (GJ)	332.6	332.6	3,587	3,587
3	Basic Charge	\$ 0.8161	\$ 0.9485	\$ 4.3538	\$ 4.7895
4	Delivery Charge	\$ 3.850	\$ 3.664	\$ 3.188	\$ 3.189
5	Cost of Gas	\$ 3.967	\$ 3.967	\$ 3.741	\$ 3.741
6	Annual Basic Charge	\$ 298.08	\$ 346.44	\$ 1,590.23	\$ 1,749.36
7	Total Bill	\$ 2,898.01	\$ 2,884.51	\$ 26,444.55	\$ 26,607.27
8	Basic Charge as a % of Total Bill	10%	12%	6%	7%

85.1. Please explain why it is appropriate for the Annual Basic Charges for both Small Commercial and Large Commercial to exceed the Basic Charge as calculated in the COSA Based rate, whereas the Proposed Delivery Rate is lower than the COSA Based rate.

86. Reference: Exhibit B-5, BCUC 1.23.2

23.2 Please elaborate on which competing principles support FEI's proposed changes to the basic and delivery charges for RS 2 and RS 3.

Response:

It is FEI's view, the proposed rates for Small and Large Commercial customers are in alignment with the eight Bonbright principles (Exhibit B-1, Page 5-2).

Principle 1: Recovering the Cost of Service - the proposed rates will continue to recover the cost of service.

Principle 2: Fair apportionment of costs among customers - the increase in the Basic Charges moves the Company to having appropriate cost recovery in rates.

Principle 3: Price signals that encourage efficient use and discourage inefficient use - the rate structure will encourage customers to focus on efficient consumption as there will not

be a gap in the average cost at and around 2,000 GJ where it would encourage customers to consume more gas just to have a lower total bill (economic crossover consideration).

Principle 4: Customer understanding and acceptance and **Principle 5:** Practical and cost-effective to implement - no changes are being recommended as the same rate structures are being proposed.

Principle 6: Rate stability and **Principle 7:** Revenue stability – please refer to the response to BCUC-FEI IR 1.22.3.

Principle 8: Avoidance of undue discrimination - will be improved as the interclass equity will be enhanced as customers who consume approximately 2,000 GJ will have, approximately, the same cost.

86.1. Please elaborate on how 'the increase in Basic Charges moves the company to having appropriate cost recovery in rates'.

87. Reference: Exhibit B-5, BCUC 1.23.3

23.3 Please explain whether FEI considered other rate adjustment options that can realign the economic crossover point at 2,000 GJ. If not, why not?

Response:

FEI did not consider any other rate structure options to realign the economic crossover at 2,000 GJ. In an effort to minimize bill impacts for RS 2 and RS 3/23 customers, FEI did try different Basic Charge and volumetric charge combinations to reset the economic crossover volume to 2,000 GJ per year. FEI used the Excel Solver function to derive the final proposed rates for RS 2 and RS 3/23 and used the constraints functionality in Excel Solver. The constraints (factors) that were used when solving for the 2,000 GJ economic crossover point, in priority order, included: minimize the revenue shift between small and large commercial rate schedules, eliminate any revenue shifts from commercial to other rate schedules, set maximum annual bill impact to any one customer to 10 percent and minimize the bill impact to customers consuming at the 2,000 GJ per year level.

- 87.1. Please confirm that FEI could have allowed for revenue shifts from commercial to other rate schedules without compromising FEI's 'range of reasonableness' considerations for the R:C ratios.
- 87.2. Please provide the rate schedules as would be derived allowing for revenue shifts from Commercial to other rate schedules constrained by a range of reasonableness of 0.1.
- 87.3. Please provide the rates as would be derived allowing for revenue shifts from Commercial to other rate schedules constrained by a range of reasonableness of 0.05.

88. Reference: Exhibit B-5, BCUC 1.32.1

Line No.	Particulars	Scenarios				
		i)	ii)	iii)	iv)	
1	Customers Operating Load Factor	100%	80%	60%	40%	
2	Proposed Multiplier	1.1	1.1	1.1	1.1	
3	Effective Load Factor	90.9%	72.7%	54.5%	36.4%	Line 1 / Line 2
4	Proposed Demand Charge	\$ 24.596	\$ 24.596	\$ 24.596	\$ 24.596	
5	Months in Year	12	12	12	12	
6	Days in Year	365	365	365	365	
7	Demand Charge Effective Rate \$ / GJ	\$ 0.889	\$ 1.112	\$ 1.482	\$ 2.224	Line 4 x Line 5 / Line 6 / Line 3
8	Delivery Charge \$ / GJ	<u>0.887</u>	<u>0.887</u>	<u>0.887</u>	<u>0.887</u>	
9	Total Effective Rate	\$ 1.776	\$ 1.999	\$ 2.369	\$ 3.111	Line 7 + Line 8
10	Proposed Interruptible Rate \$ / GJ	\$ 1.443	\$ 1.443	\$ 1.443	\$ 1.443	
11	Differential \$ / GJ	\$ 0.333	\$ 0.556	\$ 0.926	\$ 1.668	Line 9 - Line 10
12	Discount as a % of Total Firm	18.8%	27.8%	39.1%	53.6%	Line 11 / Line 9

88.1. Please comment on the appropriateness of having increasing discounts with lower load factors.

89. Reference: Exhibit B-5, BCUC 1.38.1

On original page 14-1 of Exhibit B-1, Appendix 11-1, FEI proposes to add the following section to the FEI General Terms and Conditions:

14.3 Installation of Remote Meter

If a Customer fails to provide FortisBC Energy with access to the Customer's Premises as set out in Section 14.1 (Access to Premises) or to FortisBC Energy's equipment as set out in Section 14.2 (Access to Equipment), FortisBC Energy will be authorized to install a remote meter. The Customer will be responsible for FortisBC Energy's full costs (including overheads) associated with installing and maintaining the remote meter.

38.1 Please provide the number of customers impacted by the proposed addition of section 14.3 to FEI's GT&C.

Response:

There are no customers expected to be impacted at this time by the proposed addition of Section 14.3.

This is because remote meters that are installed today are driven by Company requirements such as safety and efficiency. Where there are access issues to the premise that are driven by the customer, the Company works with the contractor and the customer to find options that allow for a successful meter read; however, this process can be challenging and may result in several estimated reads, several visits to the premise and, if a resolution cannot be achieved, ultimately may result in disconnection of service.

The inclusion of this provision would provide the Company and the customer with a final option before having to consider disconnection of service and thus it is expected that the need to implement Section 14.3 would be rare. FEI cannot estimate the number of customers that Section 14.3 would apply to, given the unique customer-specific circumstances where this would be required. The addition of Section 14.3 would provide FEI with the ability to recover the costs of installing such a meter, when required, from the individual customer on their bill.

- 89.1. Please confirm that the customer would be provided with an option for service disconnection prior to the installation of a remote meter, so that the customer does not inadvertently acquire the costs of the remote meter installation when disconnection would be preferable from the customer's viewpoint.
- 89.2. What notification would FEI be required to provide prior to installing a remote meter? Please explain.
- 89.3. Does FEI require the authorization proposed in the Application to install a remote meter, or could FEI install a remote meter with agreement from the customer without the revision to the Terms and Conditions proposed? Please explain.
- 89.4. Please provide one or more examples of when it would have been appropriate for FEI to install a remote meter rather than disconnect the customer, and explain how the matter was resolved.