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June 30, 2020

VIA ELECTRONIC MAIL

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Attention: Marija Tresoglavic, Acting Commission Secretary

Dear Sirs/Mesdames:

Re: FortisBC Energy Inc. Revelstoke Propane Portfolio Cost Amalgamation Application ~ Project No. 1599033

We are counsel to the Commercial Energy Consumers Association of British Columbia (the "**CEC**"). Attached please find the CEC's Final Submissions 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

FINAL SUBMISSIONS

FortisBC Energy Inc. Revelstoke Propane Portfolio Cost Amalgamation Application
Project No. 1599033

June 30, 2020

Commercial Energy Consumers Association of British Columbia

FortisBC Energy Inc. Revelstoke Propane Portfolio Cost Amalgamation Application
Project No. 1599033

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COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA

FINAL SUBMISSIONS

FortisBC Energy Inc. Revelstoke Propane Portfolio Cost Amalgamation Application Project No. 1599033

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1. The Commercial Energy Consumers Association of BC ("**CEC**") represents the interests of ratepayers consuming energy under commercial tariffs in applications before the BC Utilities Commission ("**BCUC**" or "**Commission**").

2. FortisBC Energy Inc. ("**FEI**") applies to the Commission to amalgamate the Revelstoke propane supply costs with the midstream natural gas supply resource costs in the Midstream Reconciliation Account ("**MCRA**") and to implement a revised propane gas cost rate setting mechanism (the "**Application**").[1]

3. The CEC has participated in the proceeding and provides the following Submissions for the Commission's review and consideration.

I. SUMMARY POSITION

4. The CEC supports the FEI proposal as being in the public interest and recommends that the Commission approve the Application.

II. SUBMISSIONS

Introduction

5. The Revelstoke system is a satellite, off-grid propane distribution system that serves approximately 1500 residential and commercial customers.[2]

6. Since 1990, the least cost method for providing energy service in Revelstoke has been to acquire propane to vapourize and distribute through the local distribution grid.[3]

7. Customers are supplied with propane instead of natural gas through railcars and tanker trucks which is then stored, vapourized as required and distributed to customers through an underground piped distribution system. The service, which uses propane, is otherwise indistinguishable from FEI's natural gas service to other parts of BC. It is the most cost-effective method to provide piped energy to customers.[4]

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[1] FEI Final Argument page 1

[2] FEI Final Argument page 5

[3] Exhibit B-5 CEC 1.1.1

[4] FEI Final Argument pages 3-5

8. The cost of FEI's facilities in Revelstoke has been included as part of the total FEI delivery costs for both Revelstoke and all other natural gas customers (i.e. they were never separated). It was only the propane commodity cost that was tracked separately and recovered at FEI rates, plus a rider specific to Revelstoke customers.[5]

9. Revelstoke customers already pay the same delivery rate as natural gas customers plus a rider to reflect the different commodity cost.[6]

10. Due to the difference in commodity rates, customers in the Revelstoke area typically experience substantially higher overall rates and significant volatility compared to the natural gas customers elsewhere in the province who have postage stamp rates.[7]

11. Although originally planned to have natural gas added in the future, there has been insufficient growth in the area to justify a natural gas extension.[8]

12. FEI considered a variety of options for mitigating the issues experienced by Revelstoke customers. These included options with capital investment (physical pipeline and virtual CNG/LNG pipelines) as well as other non-capital solutions.[9]

13. FEI settled on its current proposal; Revelstoke propane customers would pay the same gas cost recovery rates as FEI's natural gas customers[10] and there would be no changes in how the physical propane and natural gas supply resources are planned and managed.[11]

14. The proposed Application would mitigate rate volatility and provide rate relief to Revelstoke's propane customers.[12]

15. The specific elements of FEI's proposal include:

    a. Amalgamate FEI's Revelstoke propane supply portfolio costs with its natural gas supply portfolio costs by transferring the closing balance of the Propane Cost Deferral Account ("**PCDA**") to its existing MCRA as an opening balance adjustment;

    b. Capture all Revelstoke propane supply portfolio costs in the MCRA; and

    c. Eliminate the PCDA.[13]

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[5] Exhibit B-5 CEC 1.1.1

[6] Exhibit B-1, page 1

[7] Exhibit B-2, BCUC 1.1.1

[8] FEI Final Argument page 5

[9] Exhibit B-2, BCUC 1.8.3

[10] FEI Final Argument page 3

[11] FEI Final Argument page 4

[12] FEI Final Argument page 12

[13] FEI Final Argument page 3

16. FEI proposes to capture the Revelstoke propane supply portfolio costs in the existing MCRA because the profile of the Revelstoke propane supply varies with weather. As such, FEI's Revelstoke propane purchases are shaped to the relative level of seasonal consumption, similar to how FEI currently captures the costs for seasonally shaping its natural gas supply in the existing MCRA.[14]

17. Although the cost of gas recovery rates would be identical, Revelstoke customers would continue to be charged the carbon tax rate that is applicable to propane.[15]

18. FEI describes the proposed project as a 'least cost, innovative, non-capital solution to addressing the energy cost disparity and volatility in commodity prices experienced by Revelstoke customers'.[16]

19. FEI is not expecting any O&M efficiencies from the proposed amalgamation.[17]

III. THEORETICAL JUSTIFICATION

20. FEI submitted the Application based on its observation that FEI's Revelstoke propane customers have historically experienced greater cost of energy rate fluctuations and higher rates than FEI natural gas customers. The two equally-weighted key objectives of the Application are to provide rate relief (or rate affordability) and to mitigate the propane rate volatility experienced by Revelstoke customers.[18]

21. There is broad community support in Revelstoke for the Application.[19]

22. FEI has had continuous, multi-year dialogue with customers and stakeholders in Revelstoke, which is reviewed in Exhibit B-7, BCUC 2.15.1 and 2.15.4.[20] The dialogue raised issues with respect to the rates and volatility of the propane commodity used to serve Revelstoke.[21]

23. FEI has provided evidence to demonstrate the historical differences in the propane and natural gas commodity pricing which results in higher pricing (including on an energy-equivalent basis) and greater volatility for Revelstoke customers.

24. The CEC submits that FEI has adequately demonstrated a substantial difference in rates for similar, though different, service.

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[14] FEI Final Argument page 3

[15] FEI Final Argument page 4

[16] Exhibit B-2, BCUC 1.3.1

[17] Exhibit B-5, CEC 1.2.5.2

[18] Exhibit B-2, BCUC 1.2.1

[19] FEI Final Argument page 12

[20] Exhibit B-7, BCUC 2.15.1 and 2.15.4

[21] Exhibit B-2, BCUC 1.2.5

25. FEI also points out that 'In support of BC energy objectives under Section 2(h) and 2(k) of the *Clean Energy Act*, the Revelstoke annual energy bill reductions proposed may contribute to encouraging other Revelstoke energy users to switch from higher-carbon heating oil to propane, economic development, creation and retention of jobs.'[22] The CEC provides its comments with respect to these items later in these submissions.

26. Overall, it is expected that Revelstoke customers would experience the following benefits with a small cost impact to non-Revelstoke customers.

27. Most importantly, it would mitigate rate volatility and provide rate relief to FEI's Revelstoke propane customers.[23]

	Benefits	Costs
Revelstoke customers	1-Increased rate stability of commodity-related rates as they will be amalgamated with the commodity costs of natural gas which are historically more stable; 2-Total annual bill savings of approximately $407 per year for an average Revelstoke propane residential customer with 50 GJ per year consumption; 3-GHG emission reduction in Revelstoke from potential conversion from heating oil to propane; and 4-Encourage economic development and support creation and retention of jobs. Please refer to the response to BCUC IR 1.2.10.	5-No costs to Revelstoke customers.

Benefits	Costs

[22] Exhibit B-2, BCUC 1.1.1.1

[23] Exhibit B-2, BCUC 1.2.10

Non-Revelstoke customers (FEI natural gas customers)	• Overall GHG emission reduction to the Province of BC resulting from potential conversion from heating oil to propane in Revelstoke; • Potential load growth in Revelstoke which	• Small midstream rate impact of approximately $0.98 per year for an average FEI natural gas residential customer with 90 GJ annual consumption.
	Benefits	**Costs**
	customers; and • Non-capital solution with minimal rate impact to FEI's natural gas customer for providing rate stability and rate relief to Revelstoke propane customers. All other solutions are capital related with higher rate impact to FEI's natural gas customers. Please refer to the response to BCUC IR 1.3.1 and 1.8.3.	

[24]

28. FEI also points out that fully amalgamating the propane and natural gas portfolio costs on an equal basis ensures that FEI customers in Revelstoke do not experience differing cost of energy recovery rates for gas service due to their location within FEI's service territory.[25]

A. RATE AND BILL IMPACTS

29. As noted above, it is expected that there would be an annual bill saving of approximately $407 per year for an average Revelstoke propane residential customer with 50 GJ per year consumption[26] which is in the order of 45%.

30. Small commercial customers will have an average bill reduction of 49%, or about $2116, while large commercial customers will experience an average bill reduction of 56% or about $48,259 as shown below:

[24] Exhibit B-2, BCUC 1.3.1

[25] FEI Final Argument page 4

[26] Exhibit B-5, CEC 1.3.2

Table 5-1: Summary of Average Annual Bill Impact for Revelstoke Propane and FEI Natural Gas Customers (RS 1 to 3)[22]

Rate Schedule	Average UPC (GJ)	Average Annual Bill Impact ($)	Average Annual Bill Impact (%)
Revelstoke Customers (Propane)			
Rate Schedule 1 - Residential Service	50	$ (407)	(45%)
Rate Schedule 2 - Small Commerical	300	$ (2,116)	(49%)
Rate Schedule 3 - Large Commerical	6,650	$ (48,259)	(56%)
FEI's Mainland and Vancouver Island (Natural Gas)			
Rate Schedule 1 - Residential Service	90	$ 0.98	0.12%
Rate Schedule 2 - Small Commerical	340	$ 4.00	0.16%
Rate Schedule 3 - Large Commerical	3,770	$ 33.72	0.15%

[27]

31. Conversely, average annual bill increases for FEI natural gas customers would remain relatively small. There is a midstream rate impact of approximately $0.98 per year (0.12%) for an average FEI natural gas residential customer with 90 GJ annual consumption. Small commercial customers would experience an average annual bill increase of $4 (0.16%), while large commercial customers would experience an average annual bill increase of $33.72, or 0.15%.

32. The CEC submits that these are very small bill impacts for non-Revelstoke customers.

33. In CEC 1.6.1, FEI provides the range of potential bill impacts for each customer class.

Rate Schedule	Range of UPC - 2018 Actual (GJ)	Minimum Bill Impact ($)	Minimum Annual Bill Impact (%)	Maximum Bill Impact ($)	Maximum Annual Bill Impact (%)
Revelstoke Customers (Propane)					
Rate Schedule 1 - Residential Service	0 - 669	$ -	-	$ (5,451)	(52.56%)
Rate Schedule 2 - Small Commerical	0 - 2,439	$ -	-	$ (17,200)	(52.87%)
Rate Schedule 3 - Large Commerical	2,872 - 28,717	$ (20,842)	(54%)	$ (208,399)	(56.48%)
FEI's Mainland and Vancouver Island (Natural Gas)					
Rate Schedule 1 - Residential Service	0 - 4,765	$ -	-	$ 52	0.15%
Rate Schedule 2 - Small Commerical	0 - 21,466	$ -	-	$ 4	0.16%
Rate Schedule 3 - Large Commerical	0 - 45,411	$ -	-	$ 34	0.15%
Rate Schedule 4 - Seasonal Firm Gas Service	0 - 22,898	$ -	-	$ 183	0.21%
Rate Schedule 5 - General Firm Service	4 - 83,582	$ 0.04	0.00%	$ 686	0.23%
Rate Schedule 6 - Natural Gas Vehicle Service	28 - 5,766	$ 0.11	0.01%	$ 23	0.08%
Rate Schedule 7 - General Interuptible Service	0 - 179,834	$ -	-	$ 1,439	0.21%

[27] Exhibit B-1, page 20

34. The CEC notes that the maximum impacts are generally very low, being under ¼ of 1% for all rate schedules.

35. Mr. Suchy provided evidence as to his view of the likely energy use per customer ("**UPC**") and conversion rates in Exhibit C1-4 and in responses to various information requests. Mr. Suchy uses Heating Degree Days as the basis for his evidence.

36. FEI acknowledges that using FEI's actual 10-year average residential UPC for Vancouver of 102 GJ and Mr. Suchy's estimation methodology would result in estimated residential UPC for Revelstoke of 169 GJ, as compared to Revelstoke's propane average of 50 GJ.

37. Mr. Suchy's evidence was rebutted by FEI in its Rebuttal Evidence (Exhibit B-15) and in its responses to information requests.

38. The CEC has reviewed the evidence and considers that Mr. Suchy's point - that there can be multiple heating sources which could also convert to propane - may have some validity, but does not accept Mr. Suchy's evidence as being as credible as FEI's. The CEC notes that FEI's evidence regarding UPC is backed up by FEI's historical data over a large service territory[28], points out the limited correlation between different geographical locations, notes limited correlation between HDD and UPC as compared to other factors, and notes the lack of elasticity information.[29]

39. Accordingly, the CEC recommends that the Commission place little weight on Mr. Suchy's evidence.

40. Further, while the CEC notes that Mr. Suchy's scenarios do result in higher impacts than those of FEI, the CEC submits that the impacts are not excessive, particularly for residential and small commercial customers, when compared to the benefits delivered to the Revelstoke customers.

41. FEI's scenarios demonstrate that average bill impacts under Mr. Suchy's hypothesis are as follows:

[28] Exhibit B-15, pages 2-3

[29] Exhibit B-16, BCUC 3.23 series

Table 2 – Average Annual Bill Impact to FEI's Natural Gas Customers under Mr. Suchy's Hypothetical Scenarios

		Average Annual Bill Impact ($)	
Rate Schedule	Average UPC (GJ)	Revelstoke Residential UPC @ 72 GJ/yr (Mr. Suchy Updated Table 4 to FEI's IR1 4.1)	Revelstoke Residential UPC @ 150 GJ/yr (Mr. Suchy Evidence - Directly Proportional with HDD)
FEI's Mainland and Vancouver Island (Natural Gas)			
Rate Schedule 1 - Residential Service	90	$ 1.71	$ 2.88
Rate Schedule 2 - Small Commerical	340	$ 6.38	$ 10.80
Rate Schedule 3 - Large Commerical	3,770	$ 60.11	$ 101.58

[30]

42. Overall, the CEC finds FEI's assessment of bill impacts to be credible, and to demonstrate a very small impact to non-Revelstoke customers even in the 'extremely unlikely scenario' put forth by Mr. Suchy.[31]

Use Per Customer and Load Growth

43. The CEC notes that there could be potential for load growth in Revelstoke which lowers overall delivery rate for all FEI customers.[32]

44. Revelstoke propane customers historically use, on average, less than FEI's natural gas residential customers[33], it is possible that Revelstoke customers may increase their usage with a decline in price. However, there is also evidence that commodity price is not a significant factor in customer use. FEI does not believe that customers will considerably change many of their behaviours as a result of commodity price[34], and identifies several factors that may influence customer use in BCUC 1.5.2.1.[35]

45. FEI has not conducted an elasticity study specifically on FEI's Revelstoke propane customers.[36]

46. FEI has relied on price elasticity studies conducted by reputable independent research entities.[37]

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[30] Exhibit B-15, page 5

[31] Exhibit B-15, page 4

[32] Exhibit B-2, BCUC 1.3.1

[33] Exhibit B-2, BCUC 1.5.2.1

[34] Exhibit B-2, BCUC 1.6.1

[35] Exhibit B-2, BCUC 1.5.2.1

[36] Exhibit B-10, CEC 2.14.1

[37] Exhibit B-10, CEC 2.14.1

47. FEI provides the following correlation between rates and energy demand for Revelstoke over the last 10 years.

Revenue per GJ	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	18.069	12.687	22.728	21.450	17.999	23.612	17.798	13.446	16.566	19.028
Rate Schedule 2	15.006	10.510	19.504	18.336	14.444	20.241	14.121	9.933	13.194	15.358
Rate Schedule 3	13.988	9.252	18.381	17.486	13.180	18.946	12.144	8.645	11.953	14.073
Revelstoke UPC (GJ)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Rate Schedule 1	55.9	51.6	54.2	54.0	52.7	51.7	52.7	54.7	56.1	54.6
Rate Schedule 2	310	309	308	307	297	295	311	301	323	321
Rate Schedule 3	4,268	4,893	5,024	6,796	7,321	6,771	9,928	6,468	7,336	7,576

Correlation Coefficient (R)	
Rate Schedule 1	(0.09)
Rate Schedule 2	(0.20)
Rate Schedule 3	(0.09)

[38]

48. The following table restates the evidence using the commodity price per GJ instead of the total energy per GJ.

Price per GJ	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	12.67	6.88	16.94	15.45	11.70	17.14	10.86	6.48	9.68	12.07
Rate Schedule 2	11.48	6.93	15.85	14.52	10.46	16.17	9.73	5.42	8.75	10.93
Rate Schedule 3	11.43	6.66	15.75	14.80	10.42	16.11	9.11	5.46	8.79	10.92
Revelstoke UPC (GJ)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Rate Schedule 1	55.9	51.6	54.2	54.0	52.7	51.7	52.7	54.7	56.1	54.6
Rate Schedule 2	310	309	308	307	297	295	311	301	323	321
Rate Schedule 3	4,268	4,893	5,024	6,796	7,321	6,771	9,928	6,468	7,336	7,576

Correlation Coefficient (R)		R^2
Rate Schedule 1	(0.09)	0.75%
Rate Schedule 2	(0.22)	4.93%
Rate Schedule 3	(0.13)	1.73%

[39]

49. FEI states that 'As demonstrated by the coefficient of determination, or R2, the variances in customer use rates are not explained (or caused) by variances in the commodity price per GJ.[40]

50. FEI also provides correlation analysis for FEI Mainland and Inland customers in CEC 1.14.1.

[38] Exhibit B-2, BCUC 1.6.1

[39] Exhibit B-10, CEC 1.14.2

[40] Exhibit B-10, CEC 1.14.2

FEI Mainland (i.e., FEI Overall)

FEI Revenue per GJ	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	12.00	11.81	10.95	10.25	10.14	10.93	10.43	8.94	9.18	8.75
Rate Schedule 2	10.81	10.54	9.66	8.89	8.85	9.49	8.82	7.36	7.58	7.11
Rate Schedule 3	10.81	10.54	9.33	8.67	8.49	9.13	7.53	6.08	6.37	5.95

FEI UPC (GJ)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	89.1	88.4	86.3	87.6	84.7	84.2	84.4	87.5	85.8	85.1
Rate Schedule 2	325	316	318	341	332	331	333	339	337	332
Rate Schedule 3	3,480	3,485	3,588	3,684	3,610	3,573	3,587	3,721	3,692	3,550

Correlation Coefficient (R)	
Rate Schedule 1	0.42
Rate Schedule 2	(0.71)
Rate Schedule 3	(0.67)

FEI Inland

Inland Revenue per GJ	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	11.65	11.47	10.53	9.81	9.68	10.51	10.43	8.94	9.18	8.75
Rate Schedule 2	10.57	10.33	9.32	8.50	8.47	9.13	8.82	7.36	7.58	7.11
Rate Schedule 3	9.67	9.39	9.33	8.67	8.49	8.09	7.53	6.08	6.37	5.95

Inland UPC (GJ)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate Schedule 1	76.9	75.7	74.7	77.0	73.6	75.1	76.1	77.8	76.7	75.6
Rate Schedule 2	282	276	273	294	284	290	293	293	288	284
Rate Schedule 3	3,424	3,495	3,441	3,774	3,664	3,780	4,052	3,872	3,722	3,423

Correlation Coefficient (R)	
Rate Schedule 1	(0.12)
Rate Schedule 2	(0.52)
Rate Schedule 3	(0.38)

[41]

51. As noted by FEI, there is a correlation for residential customers, however, in FEI Mainland, consumption increases with price. For commercial customers in RS 2 and 3, the correlation between change in UPC and change in commodity price is higher, but the analysis also demonstrates that commodity price is only one of many factors. The correlation for Inland customers is very small.[42]

52. Overall, the CEC finds that there is little evidence to contradict FEI's expectations with respect to increases in load growth as a result of the change in price.

IV. COST CAUSATION AND CROSS SUBSIDIZATION

53. FEI acknowledges that its proposal will shift cost recovery from Revelstoke customers to all FEI gas (natural gas and propane) customers but argues that a degree of cross-subsidization already exists and is accepted within FEI's natural gas service territory.[43]

[41] Exhibit B-10, CEC 2.14.4

[42] Exhibit B-10, CEC 2.14.4

[43] Exhibit B-5, CEC 1.8.5

54. The CEC agrees that there is already geographic subsidization occurring in FEI's service territory as a result of the amalgamation and postage stamping of rates in 2014. The CEC supported the postage stamping of rates based on a hierarchical analysis of the public interest in amalgamation before rate design and pointed out that 'the purpose of regulated utilities is ultimately to provide for shared services and cross-subsidies which are inherent within the utility services'.[44]

55. The CEC stands by this position and submits that it is reasonable for the Commission to consider overall the value of more complete amalgamation of Revelstoke into FEI's postage stamp rates. As noted above, delivery rates are already the same across the territories.

56. The CEC notes that there is also ongoing rate class subsidization in that the commercial classes typically have a revenue-to-cost ratio which exceeds 1, while the residential rate classes have a revenue-to-cost ratio which is lower than 1.

57. In the CEC's view it is reasonable for the Commission to recognize that the Revelstoke service is differentiated by the commodity and not just geographic cost disparities, and to factor this into its deliberations when assessing the impact of cross-subsidization. There could be additional commodity price risk that would not accrue with geographic subsidization as demonstrated in Tables 3-3 and 3-4 of the Application and in CEC 1.7.4.

58. FEI acknowledged that it is not aware of other jurisdictions which provide two different gas types, with distinct supply, demand, pricing and volatility dynamics, and that have been amalgamated into the same gas cost recovery rate.[45]

59. The CEC submits that while it may not be appropriate to establish an ongoing principle of postage stamping different commodity services, it is appropriate to examine the individual applications to determine if it is reasonably justified on a holistic basis such as with a Bonbright test as outlined in BCUC 1.9.6. As noted by FEI, fair apportionment of costs among customers is only one of the principles of rate design.[46]

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[44] FEI Application for Reconsideration and Variance of Order G-26-13 Common Rates, Amalgamation and Rate Design Application Phase 2 CEC Final Argument page 9

[45] Exhibit B-2, BCUC 1.9.7 (B-5, CEC 1.8.3 and 1.8.4)

[46] Exhibit B-2, BCUC 1.9.6

Principle	Description	Importance to Propane Cost Amalgamation Application
Principle 1: Recovering the Cost of Service	The aggregate of all customer rates and revenues must be sufficient to recover the utility's total cost of service.	Low: Continued use of deferral accounts ensures continuation of recovery of the commodity costs of propane and natural gas, as well as the midstream costs, will maintain recovery of FEI's cost of service irrespective of the whether FEI's proposal is accepted.
Principle 2: Fair apportionment of costs among customers	Appropriate cost recovery should be reflected in rates.	High: The issue of the fair apportionment of commodity and midstream costs for the same service between customers in Revelstoke and all other FEI customers is a primary consideration in FEI's proposal. It is a question of fact that the BCUC must decide if the proposed amalgamation would be unduly discriminatory.
Principle 3: Price signals that encourage efficient use	Appropriate price levels and structures that encourage efficient use and as a corollary discourage inefficient use.	Mixed: Theoretically, there could be a trade-off of lower postage stamp commodity / midstream rates resulting in higher consumption for current propane customers versus the lower prices attracting potential customers to fuel switch from heating oil resulting in lower GHG emissions. However, FEI's experience is there is very little movement of demand from changes in price for propane (See FEI's response to BCUC IR 1.6.1). Consequently, FEI would expect that overall GHG emissions would decline from any conversions from heating oil to propane. In addition to the price of energy from FEI, potential customers for conversion to propane will also factor in their own costs as well and how long it would take for energy savings to offset the customer's cost of conversion (See FEI's response to BCUC IR 1.7.3.1).
Principle 4: Customer Understanding and Acceptance	"The related, practical attributes of simplicity, certainty, convenience of payment, economy in collection, understandability, public acceptability, and feasibility of application. Freedom from controversies as to proper interpretation"[8].	High: As a result of the Inquiry Report and associated letters of comment[9] it is clear that Revelstoke customers understand that they are postage stamped when it comes to electric rates yet not postage stamped when it comes to gas rates. With this understanding, Revelstoke customers felt that this was inequitable considering how close they

Principle	Description	Importance to Propane Cost Amalgamation Application
		were to BC Hydro dams and electric generation which would, if not postage stamped, result is less costly electricity to them.
Principle 5: Practical and cost-effective to implement	Sustainable and meet long-term objectives.	Low: Whether rates are postage-stamped or differentiated based on fuel type (propane or natural gas) there are negligible issues with cost effectiveness to implement.
Principle 6: Rate Stability	Customer rate impact should be predictable and managed.	High: For Revelstoke customers the proposal would increase rate stability. For all other FEI customers it would have a negligible impact on rates.
Principle 7: Revenue Stability	Utility revenues / customer cost should be predictable and stable.	Low: Revenue stability is not an issue as FEI's revenue would be unaffected by the approval of the proposal..
Principle 8: Avoidance of undue discrimination	Interclass equity must be enhanced and maintained	Mixed: It is a question of fact that the BCUC must decide whether the changes being applied for, now, by FEI would result in undue discrimination and would be unduly preferential. It is FEI's position that the changes requested are not unduly discriminatory or unduly preferential but significantly enhance revenue and energy cost stability for customers in Revelstoke without a compromising on the fair allocation of the provision of energy service.

[47]

60. The CEC accepts FEI's Bonbright assessment as being reasonable. Overall, the CEC finds that FEI's proposal provides significant benefits to Revelstoke customers without significant expense to other customers.

61. The CEC submits that the proposal is not unduly discriminatory.

V. CONSISTENCY WITH BC ENERGY OBJECTIVES

62. FEI considers that the Application supports BC's Energy Objectives under section 2(h) and (k) of the *Clean Energy Act*:

> (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia; and
>
> (k) to encourage economic development and the creation and retention of jobs.[48]

[47] Exhibit B-2, BCUC 1.9.6

[48] *Clean Energy Act*, SBC 2010, c22, s.2(h) and (k).

Fuel Switching and GHG Impacts

63. FEI notes in its Final Argument that one benefit of the Application could be accelerated load growth with conversions from other fuel types.[49]

64. There is overall GHG emission reductions to the Province of BC resulting from potential conversion from heating oil to propane in Revelstoke.[50]

65. FEI does not have a detailed breakdown of Revelstoke energy users that use heating oil as their fuel source.[51]

66. In Exhibit B-1 FEI provides 'Current Forecast' and 'Upper Bound' scenarios with respect to the potential for fuel switching to propane from other heating sources.

67. In the Current Forecast none of the 1,063 identified 'conversion' residential customers within 30 metres connects to the Revelstoke, while in the Upper Bound scenario, all connect within 1 year.[52]

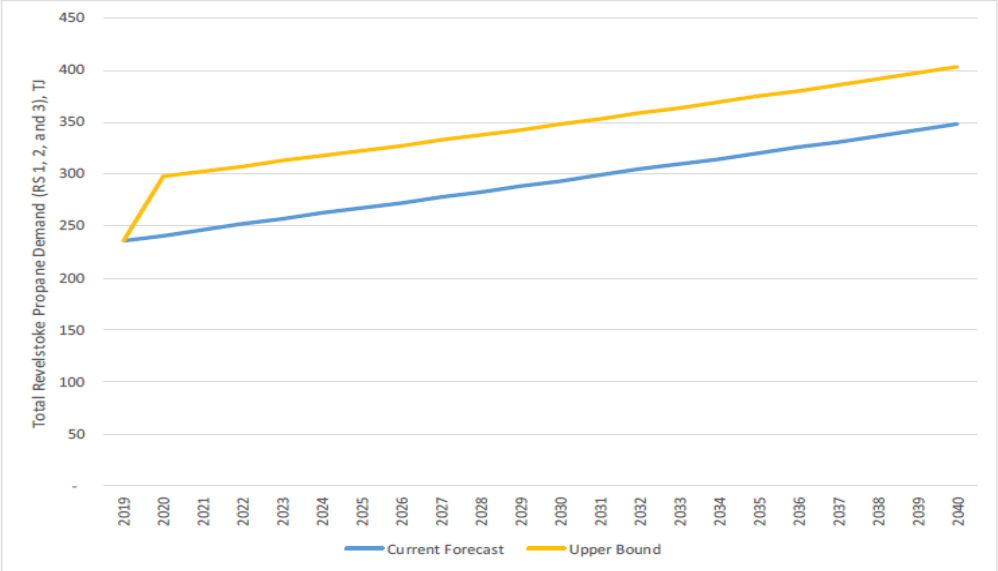
[49] FEI Final Argument page 9

[50] Exhibit B-2, BCUC 1.3.1

[51] Exhibit B-2, BCUC 1.2.7

[52] Exhibit B-1, page 17 and Appendix B page 9-10

Figure 4-2: Total Annual Propane Demand in TJs



Figures 4-1 and 4-2 above show that, in the unlikely event that all 1,063 residential dwellings identified within 30 metres of an existing main in Revelstoke convert to propane immediately in 2020, the total propane demand in Revelstoke is forecasted to increase by approximately 26 percent, from the current forecast demand of 236 TJ to 298 TJ in 2020. In the following sections, FEI outlines the capital upgrades that would be required to Revelstoke's propane distribution system based on this Upper Bound demand forecast as shown in Figure 4-2 above and the resulting Upper Bound delivery rate impact to both FEI's and Revelstoke's customers if the Upper Bound scenario were to occur.

[53]

68. The Upper Bound scenario illustrates the Upper Bound in annual propane demand if all conversions materialize immediately in year 1 after the proposed amalgamation is approved.[54] The total propane demand in Revelstoke would be forecasted to increase by approximately 26 percent, from the current demand forecast of 236 TJ in 2020 to 298 TJ.[55]

69. FEI included the Upper Bound scenario to illustrate the extent of the impact that could potentially be triggered by the proposed amalgamation.[56] FEI characterizes this as an unlikely situation, but does believe that some conversions will likely occur given the price difference.[57]

70. FEI provides the following table of the potential for Metric Tonnes of CO2e Saved depending on the proportion of Light Oil Fuel Customers that switch to propane.

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[53] Exhibit B-1, page 17

[54] Exhibit B-2, BCUC 1.2.7.3

[55] Exhibit B-1 page 17

[56] Exhibit B-5, CEC 1.10.2

[57] FEI Final Argument page 9

% of Light Fuel Oil Customers that Switch to Propane	Metric Tonnes of CO_2e Saved	Proportion of 2017 BC Emissions
100%	100	0.00016%
75%	75	0.00012%
50%	50	0.00008%
25%	25	0.00004%

[58]

71. In CEC 1.13.1 FEI calculated the GHGs that could be saved assuming various percentages of Light Fuel Oil customers that switch to propane and assuming an increase in the average UPC.

72. The CEC submits that this might reasonably be considered as a 'maximum' of potential CO2e savings.

% of Light Fuel Oil Customers that Switch to Propane	CO_2e Savings (tonnes)		
	Revelstoke	Mainland	Inland
100%	100	169	141
75%	75	127	106
50%	50	84	71
25%	25	42	35

[59]

73. The CEC submits that the potential impact on GHG savings is very small, but is nonetheless directionally beneficial.

74. Mr. Suchy argues that GHG emissions will rise by 46% if all Revelstoke heat energy were provided by propane.

75. FEI filed rebuttal evidence in Exhibit B-15 and points out that Mr. Suchy's assumptions are flawed in that they ignore the financial and technical challenges associated with conversions which they demonstrate as being significant.[60]

76. The CEC notes that the cost for ratepayers to convert from one or more existing fuel types to propane is expected to vary widely, and FEI is unable to provide an estimate of

[58] Exhibit B-10, CEC 2.12.1

[59] Exhibit B-10, CEC 2.13.1

[60] Exhibit B-15, page 7

the ratepayer conversion costs in each rate class.[61] FEI is not expecting additional commercial customers in Revelstoke to switch to propane.[62]

77. The CEC accepts FEI's evidence in this matter.

78. The CEC recommends that the Commission apply little weight to Mr. Suchy's evidence.

79. FEI also provides evidence that it is unlikely that the Application will encourage customers to switch from electric appliances to propane, and notes that the payback period is approximately 11 years.[63]

80. Overall the CEC finds that there is limited evidence to suggest that there will be significant GHG benefits or harm from fuel switching as a result of the Application.

81. The CEC recommends that the Commission assign little weight to the actual potential GHG benefits, but recognize that the Application is likely generally consistent with government policy in encouraging fuel switching from higher GHG fuels to propane.

82. The CEC notes that to the extent that FEI had proposed alternative means of addressing the cost and volatility issues of Revelstoke such as with a capital project, the costs and environmental impacts might have been significantly more detrimental.

Economic Impacts

83. FEI also points out that there are potential economic benefits arising from the Application due to lower and more predictable energy costs.[64]

84. Energy costs can account for a significant proportion of input costs for commercial and industrial activities. As such, less volatile (and thus more predictable) as well as lower energy input costs could free up funds that commercial and industrial enterprises may use for investments, such as the creation and retention of jobs.[65]

85. Commercial customers may invest in added staff and research or production capacity in Revelstoke. However, multiple factors influence such consumption and production decisions and the specific quantitative effects in Revelstoke are uncertain as FEI does not have any economic input-output factors specific to Revelstoke.[66]

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[61] Exhibit B-5, CEC 1.9.2

[62] Exhibit B-2, BCUC 1.8.2

[63] Exhibit B-7, BCUC 2.17.4

[64] FEI Final Argument page 12

[65] Exhibit B-2, BCUC 1.2.10

[66] Exhibit B-10, CEC 2.15.2

B. FUTURE CAPITAL UPGRADES

86. FEI intends to upgrade propane storage and distribution mains in Revelstoke if the Application is approved and the forecast demand materializes.[67]

87. Assuming the Upper Bound scenario, system upgrades are expected to be in the order of $2.8 million in 2019 dollars.[68] The delivery rate impact due to the capital upgrades under the Upper Bound scenario is $0.0004 per GJ, which amounts to about $0.04 as an annual total bill impact for residential customers.

88. FEI is not expecting additional commercial customers in Revelstoke to switch to propane[69], however the potential upgrades required to support the maximum 1,063 residential conversions is also sufficient to support the equivalent of an additional 150 average small commercial customers before requiring any additional plant upgrades.[70]

89. The CEC submits that this is an appropriate consideration.

90. FEI is not proposing to perform the capital upgrades in the first year following an approval and would only install capital upgrades in the future if a larger number of customer attachment requests materializes or for other unrelated reasons.[71]

91. The trigger to install one or more upgrade projects would be Revelstoke's peak demand growing to approximately 128% of current peak demand, regardless of whether the Application is approved or the Upper Bound scenario occurs. FEI's current forecast does not project that peak demand will exceed 128% of current level within the 20 year forecast if the Application is not approved.[72]

92. Based on the evidence the CEC submits that there is some potential that the capital upgrades will be triggered over time, but does not find the cost risk to be of significant concern.

93. The CEC submits that the evidence is that risk is low that the Upper Bound Scenario will occur, that in any case the forecast capital upgrades are not excessive, with very low rate impacts, and there could be general environmental benefits from the conversion of customers from heating oil to propane.

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[67] Exhibit B-5, CEC 1.9.2

[68] Exhibit B-1, page 18

[69] Exhibit B-2, BCUC 1.8.2

[70] Exhibit B-2, BCUC 1.8.2

[71] Exhibit B-5, CEC 1.10.3

[72] Exhibit B-5, CEC 1.10.4

C. FUTURE CHANGE TO NATURAL GAS

94. As noted earlier in these submissions, FEI originally considered that sufficient economic growth and development could occur in the Okanagan to Revelstoke region to justify a natural gas extension, which did not occur.[73]

95. FEI notes that promoting conversion to propane from other fuels is not incompatible with eventually converting Revelstoke to natural gas in that converting from propane to natural gas is very straightforward and the existing delivery infrastructure is compatible with both and propane appliances can typically be readily converted to natural gas without replacement.[74]

96. If FEI proposed to convert Revelstoke to natural gas with either a physical or virtual pipeline, a business case would be developed in support of a CPCN application.

97. The CEC submits that it is an added benefit that the Application will not limit the future expansion of the natural gas system which could potentially streamline the system and have GHG benefits.

VI. IMPACT ON PROSPECTIVE COMPETITORS

98. As also noted earlier in these submissions FEI acknowledges that there may be some conversions from other heating fuels to the FEI propane system if propane rates are lower than those heating fuel prices considering the additional costs of conversion.[75] This could potentially result in negative impacts to certain businesses.[76]

99. However, FEI is of the view that the impact will be limited; that there are other ways of influencing demand; and that potential competitiveness with other energy providers is not an appropriate justification for denial of a commonly accepted rate design principle.[77]

100. In BCUC 2.16.1 and 2.16.5 FEI explains why it does not believe the impact on competition such as the Revelstoke Community Energy Corporation will be significant.

101. The CEC accepts FEI's evidence as being reasonably founded.

102. In BCSEA 3.22.1 FEI states "a payback of 9 years is one of many considerations …. that a customer would take into account when making a decision of whether to convert from an oil to a propane furnace".

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[73] FEI Final Argument page 5

[74] Exhibit B-5, CEC 1.8.9

[75] FEI Final Argument page 26

[76] Exhibit B-7, BCUC 2.15.1

[77] FEI Final Argument page 27

103. The CEC submits that 9 years is a considerable payback period and would likely diminish the likelihood of conversion.

104. In its Final Argument FEI also states:

> "FEI does not consider the potential impacts on the competitiveness of other energy providers when setting customer rates across its service territory. Impacts on the competitiveness of other service providers, particularly speculative impacts, do not provide a justification to deny FEI's propane customers the benefits of the proposed cost amalgamation. Utility regulation does not exist to perpetuate high (and differentiated) customer costs for the benefit of businesses that may provide alternative sources of energy supply and whose rates may not be set based on their cost of service."
>
> "The effect of a utility's rates on other service providers is not a commonly accepted rate design principle. For example, the effect of an electric utility's rates on the competitiveness of other service providers, such as a district energy provider (or for that matter other fuel suppliers like gas stations) has not and would not be a relevant consideration in setting the electric utility's rates."[78]

105. The CEC generally agrees with FEI's views regarding the bill impacts and rate design principles and that it is not common to accept competitiveness as a rate design principle.

106. However, the CEC points out that FEI's criticism of competition where prices are not founded on 'cost of service' is not credible, in that its own proposal to supply one commodity at the lower price of another also does not reflect its specific cost of service for the Revelstoke area.

107. As such, FEI's proposal could contribute to some disruption in the market and might not promote the efficient use of energy and competing products and services.

108. Overall the CEC is of the view that the beneficial rate reductions likely exceed the negative impacts on competitors.

VII. CONCLUSION

109. The CEC finds the FEI proposal to be appropriately justified and recommends that the Commission approve the Application as filed.

[78] FEI Final Argument page 27

ALL OF WHICH IS RESPECTFULLY SUBMITTED

David Craig

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