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May 28, 2013

Via Email
Original via Mail

British Columbia Public Interest Advocacy Centre
Suite 209 – 1090 West Pender Street
Vancouver, B.C.
V6E 2N7

Attention: Ms. Leigha Worth, Executive Director

Dear Ms. Worth:

Re: FortisBC Energy Inc. (FEI or the Company)

Biomethane Service Offering: Post Implementation Report and Application for Approval for the Continuation and Modification of the Biomethane Program on a Permanent Basis (2012 Biomethane Application) (the Application)

Response to the British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Pensioners' and Seniors' Organization *et al* (BCPSO) Information Request (IR) No. 1

On December 19, 2012, FEI filed the Application as referenced above. In accordance with the British Columbia Utilities Commission Order G-53-13 setting out the Revised Regulatory Timetable for review of the Application, FEI respectfully submits the attached response to BCPSO IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed by: Ilva Bevacqua

For: Diane Roy

Attachments

cc (e-mail only): Commission Secretary
Registered Parties

FortisBC Energy Inc. (FEI or the Company) Biomethane Service Offering: Post Implementation Report and Application for Approval for the Continuation and Modification of the Biomethane Program on a Permanent Basis (2012 Biomethane Application) (the Application)	Submission Date: May 28, 2013
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1 **1.0 Reference: Exhibit B-1, page 1, Upgraded Biogas**

2 The referenced page states:

3 *Biogas is produced when bacteria break down organic waste, from sources such as*
4 *landfills, wastewater plants and agriculture, in a process called anaerobic digestion. In its*
5 *raw form, biogas contains other gases that are not typically found in natural gas. It can,*
6 *however, be purified (or upgraded) so that it is interchangeable with natural gas.*

7 1.1 Is there any difference in heating value/energy content between FEI's system
8 gas and upgraded biomethane? If so, does this difference lead to any issues
9 with respect to metering or measurement?

10

11 **Response:**

12 The heating value of biomethane meets the FEI pipeline quality specification, however, it may
13 be different than the other gas that FEI purchases off the Spectra or TransCanada systems.
14 According to sample data a Salmon Arm and Fraser Valley Biogas, the biogas can have a
15 heating value that is approximately 3 percent lower than samples of natural gas. This is due to
16 the fact that biomethane does not contain gases such as propane, butane or pentane which can
17 be found in regular natural gas.

18 FEI is accustomed to managing variation in heating values from its traditional natural gas
19 suppliers already due to variations in the heating values of that supply. The difference in heating
20 value is accounted for in the same way as FEI deals with differences in heating value with
21 traditional sources of natural gas. FEI measures gas composition received from different
22 sources at various points in its system and calculates the heating value to appropriately bill
23 customers that receive the gas from those sources. FEI reiterates that, though this gas
24 composition is lower, it is higher than the minimum required specification for natural gas in the
25 FEI system.

26 Due to this difference, FEI has a process in place to ensure that there are no issues with
27 respect to metering or measurement. More specifically, FEI measures the gas composition at
28 each biomethane injection point and derives the heating values for that gas. The potentially
29 affected customers (those nearest the injection location), are also identified. Any differences in
30 heating value are applied to the calculation used for determining the energy consumption at the
31 customers identified. In other words, any differences in heating value are accounted for and
32 managed by FEI and these differences do not impact customers.

33

34



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1
2 1.2 Has FEI experienced any compatibility, safety, or reliability issues with respect to
3 comingling upgraded biomethane and natural gas? If so, please provide details.

4
5 **Response:**

6 No. FEI has not experienced any compatibility, safety or reliability issues with respect to mixing
7 biomethane and natural gas.

8



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1 **2.0 Reference: Exhibit B-1, page 5, Right to Refuse Gas**

2 The referenced page states:

3 *FEI has, by agreement, reserved the right to refuse gas if customer safety or asset*
4 *integrity is at stake*

5 2.1 Has FEI ever exercised this right to refuse gas? If so, please provide details.

6

7 **Response:**

8 Yes. In the usual course of monitoring gas received at the Fraser Valley Biogas station, FEI has
9 refused biomethane that does not fully meet specification.

10 The FEI monitoring equipment allows the interconnection station to automatically divert
11 biomethane back to the supplier. This has happened several times as a result of either low
12 heating value, high oxygen content or high H₂S content. Over time, the frequency of this
13 occurring has been very low. FEI expects that this is a result of the suppliers' efforts to deliver
14 biomethane that meets specification.

15

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1 **3.0 Reference: Exhibit B-1, Company Use Gas**

2 3.1 Has FEI considered using biomethane or a blend including biomethane and
3 natural gas for its own requirements, i.e., for compressor fuel and utility space
4 and water heating requirements?

5
6 **Response:**

7 Yes, FEI has considered using Biomethane for its own use gas requirements. At this time FEI
8 has proposed, as part of this Application, a method to recover the Biomethane costs via
9 midstream rates from Core customers for any excess unsold Biomethane. Allocating
10 Biomethane to own use gas would be another use for Biomethane and the costs for this would
11 be recovered from all non-bypass customer via delivery rates.

12 The forecast volume of own use gas for FEI compressors, line heaters, facilities, and Tilbury
13 LNG is approximately 300 TJ per year. The 2013 amount budgeted in O&M was approximately
14 \$2.2 million. Based on current costs, using Biomethane for all of FEI's own use gas
15 requirements would increase O&M costs by approximately \$0.9 million.

16

17

18

19

20 3.2 If biomethane or blended gas were used for company use gas, would it be
21 appropriate to recover the costs of company use gas in delivery rates?

22

23 **Response:**

24 If the purchase of biomethane is used for company use gas, it would be appropriate to recover
25 the costs in delivery rates as it would be a cost of providing public utility service. As discussed
26 in the response to BCPSO IR 1.3.1, if FEI proceeds with this it would be included as an O&M
27 cost item in FEI's revenue requirements.

28

29

30

31 3.3 Please provide the most recently available data regarding (i) annual Company
32 Use gas volumes and (ii) total annual distribution system volumes.

33



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1 **Response:**

2 Please refer to the response to BCPSO IR 1.3.1 for Company Own Use gas volumes.

3 The total 2012 FEI distribution system throughput was approximately 178.3 PJ.

4

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1 **4.0 Reference: Exhibit B-1, Section 3.2.1.2 and Appendix E, Residential Customer**
 2 **Demographics**

3 4.1 Does FEI have, or can FEI infer, any demographic information that pertains to
 4 the participation rate by low-income customers?

5
 6 **Response:**

7 FEI does not collect information regarding the household size or income of the RNG participants
 8 which is required to properly infer the participation rates by low-income customers.

9 FEI has provided in Attachment 4.1 the demographics of the RNG AIR MILES participants,
 10 which includes income information but not household size or location.

11
 12

13
 14 4.2 Does FEI have any information regarding the prices, terms, or the participation
 15 rate of Customer Choice customers in green supply programs?

16
 17 **Response:**

18 FEI found two Customer Choice programs offering a green option with rates. FEI does not have
 19 any information regarding participation or terms of these programs. Please refer to the
 20 response to BCUC IR 1.6.1 for a comparison of offset-based programs to FEI's energy based
 21 program.

22 1. Access Gas offers a Residential Green Energy Option:

23 Green Energy prices for residential customers with the following rates:

Term	1 Year	3 Year	5 Year
Price	\$5.64/GJ	\$6.14/GJ	6.89/GJ

24

25 Access Gas does not provide any information on their website regarding the supply,
 26 certification, benefits or methodology of pricing for the Green Energy Option.

27



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1 2. Just Energy offers an offset based program with the following rates:

2

Tons of Carbon	20	12
Price per month	19.99	14.99

3

4 Just Energy offers a monthly subscription to offset either 12 or 20 tons of carbon which
5 on their website implies is equal to offsetting a families home, transportation, and waste
6 for a single year.

7 Just Energy supports projects all across North America, and therefore offsets are not
8 necessarily local but they are independently reviewed and verified.

9

10

11

12 4.3 Please provide a breakdown of total residential customers and volumes between
13 system customers and non-system customers.

14

15 **Response:**

16 By definition, all residential customers are system customers.

17 Please refer to the responses to BCSEA IR 1.20.01 and CEC IR 1.1.1.

18



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1 **5.0 Reference: Exhibit B-1, Appendices E-3 and E-4, Ideal Price Point**

2 5.1 Please define what is meant by the “ideal price point.” For example, is it the
3 price that will result in the highest participation rate, the highest RNG volumes,
4 etc.?

5
6 **Response:**

7 Ideal price point refers to the price point or an acceptable range that would result in highest
8 participation rates.

9

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1 **6.0 Reference: Exhibit B-1, Appendix E-2 and Exhibit A-12 BCUC IR 1.12.1, Survey**

2 6.1 In terms of volumes taken or other criteria, was the sample of the nine
3 respondents to the commercial survey representative of the 40 existing RNG
4 customers?

5
6 **Response:**

7 Please refer to the response to BCUC IR 1.12.2. Due to the small sample size, the data
8 received from this survey should be treated as qualitative research.

9 Survey respondents were only asked to identify themselves if they wished to be contacted
10 regarding further research about FEI's RNG program. Only three of the nine respondents
11 provided their contact information and, therefore, FEI is not able to draw further conclusions on
12 the demographics of the respondents.

13 The only comparable criterion is sector/industry. The survey results included in Exhibit B-1,
14 Appendix E-2 demonstrate that the responses come from a variety of sectors. When comparing
15 the results of the survey to the sector of the participating commercial customers, Exhibit B-1,
16 Figure 3-5, the sectors that are not covered by the survey are, non-profit, PSO, and Builder/
17 Developer.

18

Attachment 4.1



Fortis BC & AIR MILES for Social Change

Responder Analysis

Friday, January 11th 2013



Fortis BC & AIR MILES for Social Change

Analytics Key Insights



- Both RNG and EEC Responders are over indexed in older age brackets, particularly in the 51-65+ age range
 - Opportunity to continue to grow current segment or find ways to influence younger responders
- Both RNG and EEC Responders are over indexed in the Boomer and Senior segments
 - Potential to target offers to the "Family" Lifestage Segment
- Both RNG and EEC Responders are over indexed in the Small Business segment
 - Potential to target small business owners
- RNG and EEC Responders are significantly over indexed in the high-income segment
- Opportunity to grow and eventually target the Fortis BC "Best Collector Segment"
- These are top line insights through our analytics - should we drill down further?

Profile: Fortis Responders (as at January 3, 2013)

Segments		RNG Responders		Index vs. Baseline1	Index vs. Baseline3	EEC Responders		Index vs. Baseline2	Index vs. Baseline3	Baseline 1: 12M Active Collectors from RNG FSAs		Baseline 2: 12M Active Collectors from EEC FSAs		Baseline 3: 12M Active BC Collectors	
Segment Size		2,672				7,927				913,188		1,130,488		1,124,838	
Collector Age	Unknown	234	9%	-52%	-51%	815	10%	-42%	-42%	166,050	18%	201,504	18%	200,737	18%
	<= 18	1	0%	-61%	-62%	3	0%	-62%	-61%	886	0%	1,126	0%	1,105	0%
	19-30	109	4%	-63%	-64%	188	2%	-79%	-79%	101,159	11%	125,719	11%	125,980	11%
	31-40	303	11%	-19%	-18%	596	8%	-46%	-46%	128,277	14%	156,277	14%	156,295	14%
	41-50	477	18%	3%	5%	1,109	14%	-18%	-18%	158,727	17%	192,185	17%	191,511	17%
	51-64	817	31%	26%	26%	3,386	43%	75%	75%	220,978	24%	275,518	24%	273,905	24%
	65+	731	27%	82%	76%	1,830	23%	46%	48%	137,111	15%	178,159	16%	175,305	16%
Avg Age		55.75		12%	12%	56.54		13%	13%	49.67		49.97		49.88	
Collector Gender	Unknown	790	30%	-16%	-15%	2,426	31%	-11%	-12%	320,105	35%	390,567	35%	390,065	35%
	Female	1,053	39%	3%	2%	3,238	41%	6%	6%	349,195	38%	437,141	39%	432,872	38%
	Male	829	31%	16%	16%	2,263	29%	7%	6%	243,888	27%	302,780	27%	301,901	27%
Lifespan Segment	Gen X	213	8%	-60%	-60%	393	5%	-75%	-75%	183,246	20%	224,832	20%	225,625	20%
	Family	720	27%	-14%	-11%	1,925	24%	-20%	-20%	285,150	31%	341,725	30%	340,140	30%
	Boomer	994	37%	15%	13%	3,705	47%	42%	42%	296,080	32%	371,437	33%	369,394	33%
	Senior	729	27%	83%	76%	1,832	23%	48%	49%	136,166	15%	177,034	16%	174,189	15%
	Unscored	16	1%	-56%	-57%	72	1%	-34%	-34%	12,546	1%	15,460	1%	15,490	1%
Small Business	No	2,031	76%	-12%	-12%	5,845	74%	-15%	-15%	789,720	86%	979,776	87%	974,765	87%
	Yes	641	24%	77%	80%	2,082	26%	97%	97%	123,468	14%	150,712	13%	150,073	13%
Contact	Mailable	2,601	97%	7%	7%	7,801	98%	8%	8%	831,200	91%	1,028,271	91%	1,022,287	91%
	E-mailable	1,994	75%	73%	72%	7,703	97%	124%	124%	394,857	43%	490,766	43%	488,463	43%
	Web active (12 months)	2,103	79%	86%	83%	7,211	91%	112%	111%	387,228	42%	486,116	43%	484,684	43%
	Web active (6 months)	1,784	67%	120%	115%	6,747	85%	175%	175%	277,004	30%	349,511	31%	348,755	31%
	Web active (2 months)	1,397	52%	166%	160%	6,028	76%	279%	278%	179,544	20%	226,823	20%	226,296	20%
	Web ever active	2,551	95%	25%	25%	7,881	99%	30%	30%	694,703	76%	863,796	76%	860,220	76%
Household Median Income (Married)	Unknown	17	1%	-49%	-51%	27	0%	-74%	-74%	11,487	1%	15,015	1%	14,467	1%
	<\$20000	5	0%	-64%	-65%	9	0%	-79%	-79%	4,782	1%	6,147	1%	6,056	1%
	\$20000 - \$34999	85	3%	-52%	-54%	218	3%	-60%	-60%	60,564	7%	77,354	7%	77,607	7%
	\$35000 - \$49999	350	13%	-27%	-28%	1,001	13%	-33%	-31%	162,982	18%	211,717	19%	205,468	18%
	\$50000 - \$74999	960	36%	0%	-2%	2,886	36%	0%	0%	328,704	36%	412,779	37%	410,745	37%
	\$75000 - \$99999	775	29%	17%	18%	2,398	30%	24%	23%	227,193	25%	274,782	24%	276,788	25%
	\$100000 - \$124999	359	13%	40%	49%	1,047	13%	50%	47%	87,754	10%	99,727	9%	101,370	9%
	\$125000 - 149999	86	3%	31%	49%	262	3%	52%	53%	22,499	2%	24,559	2%	24,352	2%
	>= \$150000	35	1%	66%	85%	79	1%	34%	40%	7,223	1%	8,408	1%	7,985	1%
Top 10 Sponsors Visited By Miles Earned (Last 12 Months)	1	SAFEWAY - CANADA	MPC			SAFEWAY - CANADA	MPC			BMO MASTERCARD	MPC	BMO MASTERCARD	MPC	BMO MASTERCARD	MPC
	2	BMO MASTERCARD	898			BMO MASTERCARD	879			SAFEWAY - CANADA	988	SAFEWAY - CANADA	1,007	SAFEWAY - CANADA	1,017
	3	AMERICAN EXPRESS	1,563			AMERICAN EXPRESS	1,508			AMERICAN EXPRESS	347	AMERICAN EXPRESS	363	AMERICAN EXPRESS	370
	4	SHELL RETAIL	770			SHELL RETAIL	641			SHELL RETAIL	498	SHELL RETAIL	498	SHELL RETAIL	499
	5	FORTIS BC	113			FORTIS BC	115			BMO BUS MASTERCARD	72	BMO BUS MASTERCARD	71	BMO BUS MASTERCARD	71
	6	BMO BUS MASTERCARD	72			BMO BUS MASTERCARD	46			BMO RETAIL	2,620	BMO RETAIL	2,682	BMO RETAIL	2,700
	7	YOURSHOPS.CA	3,629			YOURSHOPS.CA	2,087			TIM-BR MART	248	TIM-BR MART	249	TIM-BR MART	250
	8	BMO RETAIL	181			BMO RETAIL	136			RONA	102	RONA	25	RONA	26
	9	RONA	271			RESEARCH NOW	261			THE BAY	24	THE BAY	102	THE BAY	100
	10	TIM-BR MART	25			THE BAY	72			GOODYEAR	134	GOODYEAR	134	GOODYEAR	136

Comments on Age:
Both RNG and EEC Responders are over indexed in older age brackets, particularly in the 51-65+ age range

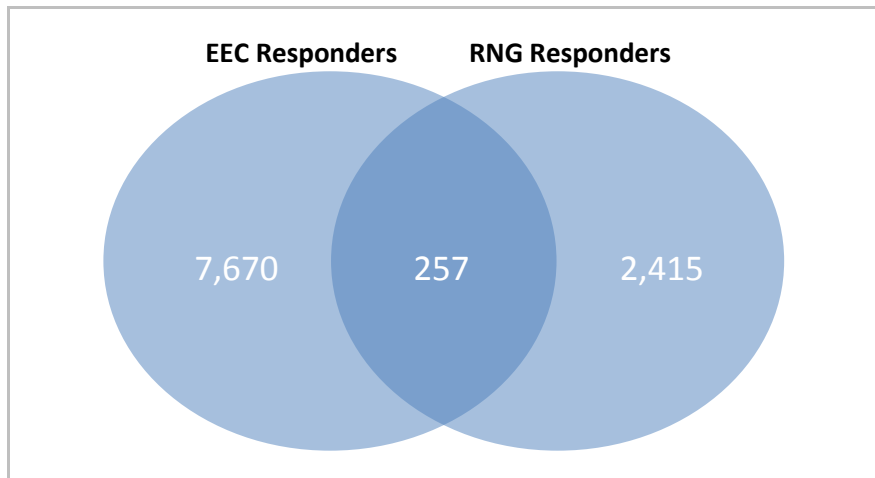
Comments on Lifespan:
Both RNG and EEC Responders are over indexed in the Boomer and Senior segments

Comments on Small Business:
Both RNG and EEC Responders are over indexed in the small business owner segment

Comments on Household Income:
Both RNG and EEC Responders are significantly over indexed in the high income segments

Overlap Analysis

Campaign	Responders	% of Total
EEC Only	7,670	74%
RNG Only	2,415	23%
EEC & RNG	257	2%
Total	10,342	100%



Comments:

A total of 10,342 Collectors responded to Fortis offers in 2012. Majority of responders were Collectors who took up the EEC offers. Over time, this segment can be grown to identify a Fortis BC/AIR MILES target base, as well as a "Best Collector" segment among those who have participated in multiple offers.

Measurement Methodology

OFFER CODES:

Offer	Offer Codes
EEC	25BPLO, 20SIGNUP
RNG	10MTHLY, 30SIGNUP, 10SIGNUP

UNIVERSE:

Segment	Segment Definition
EEC Responders	Collectors who had earned one or more miles under the EEC offer codes listed above
RNG Responders	Collectors who had earned one or more miles under the RNG offer codes listed above; unable to distinguish Spring responders vs. Fall responders because offer codes were not unique to each wave
Baseline 1	12M Active Collectors from FSAs provided for RNG email targeting (i.e. active in the AMRP November 1, 2011 - October 31, 2012)
Baseline 2	12M Active Collectors from FSAs provided for EEC email targeting (i.e. active in the AMRP November 1, 2011 - October 31, 2012)
Baseline 3	12M Active British Columbia Collectors (i.e. active in the AMRP November 1, 2011 - October 31, 2012)