



**Diane Roy**  
Director, Regulatory Services

**Gas Regulatory Affairs Correspondence**  
Email: [gas.regulatory.affairs@fortisbc.com](mailto:gas.regulatory.affairs@fortisbc.com)

**Electric Regulatory Affairs Correspondence**  
Email: [electricity.regulatory.affairs@fortisbc.com](mailto:electricity.regulatory.affairs@fortisbc.com)

**FortisBC**  
16705 Fraser Highway  
Surrey, B.C. V4N 0E8  
Tel: (604) 576-7349  
Cell: (604) 908-2790  
Fax: (604) 576-7074  
Email: [diane.roy@fortisbc.com](mailto:diane.roy@fortisbc.com)  
[www.fortisbc.com](http://www.fortisbc.com)

October 1, 2015

**Via Email**  
**Original via Mail**

British Columbia Utilities Commission  
6<sup>th</sup> Floor, 900 Howe Street  
Vancouver, BC  
V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

**Re: FortisBC Energy Inc. (FEI)**

**Application for Approval of Biomethane Energy Recovery Charge (BERC) Rate  
Methodology (the Application)**

**Evidentiary Update to the Application (Exhibit B-1)**

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On August 28, 2015 FEI filed the Application referenced above. On September 18, 2015, the British Columbia Utilities Commission (the Commission) issued Order G-147-15, which established the Regulatory Timetable and directed FEI to file supplementary information as outlined in Appendix B to Order G-147-15. Through the process of compiling the supplementary information, FEI became aware of an oversight in the forecast Biomethane Variance Account (BVA) balance and the customer enrollment history in the Application as filed on August 28, 2015.

## **1. Forecast BVA Balance**

The opening January 1, 2015 BVA balance in Schedule 1 of Appendix E agreed to accounting records; however, with respect to a forecast of the BERC rate, an adjustment for the transfer of the Biomethane Application Costs of \$267 thousand (net of tax) from the BVA to amortization expense for the recovery through the

delivery rates of non-bypass customers<sup>1</sup> should have been included.

Consistent with FEI's typical practice for amortization of deferral accounts, this adjustment is being amortized equally over the twelve months of 2015 and as such, no adjustment was included in the January 1, 2015 BVA balance that was embedded in the Application.

The result of this adjustment is that the closing 2015 BVA balance is now projected to be \$1,222 thousand (after-tax)<sup>2</sup>. Accordingly, FEI has updated the financial analysis to reflect this change and has updated all relevant tables and appendices as noted in Table 1 below.

## 2. Customer Enrollment History

Upon further review of the customer enrollment information, FEI found that Figures 4-4 through 4-6 double counted the historic Rate Schedule 3B information. That is, the historic Rate Schedule 2B customer data reflected a combined total of 2B and 3B customers. This oversight only affects the historic information and does not affect the customer enrollment or demand projections provided in the Application.

FEI has restated the relevant tables, figures and appendices as noted in Table 1 below to reflect the revised BVA and customer enrollment changes discussed above.<sup>3</sup> Attached, please find blacklined versions of the revised pages and revised Appendix E pages for insertion into the Application binder and the following table outlines the specific pages that have been revised. These corrections do not result in material changes from the original Application and as such do not result in any changes to FEI's proposals or the Draft Order.

**Table 1: Application Revisions**

Application Section	Revised Pages
<b>Section 1</b> – Introduction and Approvals Sought	2-3
<b>Section 4</b> – Current Challenges	24-26, 29
<b>Section 6</b> – Alternatives Considered	42-44
<b>Section 8</b> – Potential Impact on Non-RNG Customers	51-52
<b>Appendix E</b> – Financial Analysis	Schedules 1-5

<sup>1</sup> As set out in the letter dated April 8, 2015 regarding Order G-15-15 Compliance Filing and as outlined in the response to BCUC IR 1.2 of the 2015 Second Quarter BVA Report.

<sup>2</sup> As compared to \$1,490 thousand (after-tax) as provided in Exhibit B-1.

<sup>3</sup> FEI has also revised the BVA forecast to reflect a change in the forecast timing of the CCA deduction related to the COV project. In Exhibit B-1, the deduction was assumed to occur when the asset was first in rate base (i.e. January 1, 2018); however, consistent with current practice, the CCA deduction will most likely be taken in 2017 when the asset is considered available for use. As such, FEI has updated the forecast to reflect the commencement of CCA in 2017 for the COV project.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC.**

***Original signed by: Michelle Carman***

**For:** Diane Roy

Attachments

cc (email only): Registered Parties

**FORTISBC ENERGY INC.**

## BIOMETHANE ENERGY RECOVERY CHARGE RATE METHODOLOGY APPLICATION



1 Thus, with this Application, FEI proposes that the BERC rate be set based on a premium above  
 2 the Commission approved CCRA rate. Although this methodology may result in a BERC rate  
 3 that is below the cost of RNG on a per GJ basis, FEI expects that this approach will result in  
 4 maximizing the volumes sold under the RNG Program while minimizing the impact of unsold  
 5 RNG on FEI customers.

6 Specifically, FEI is proposing to change from a single rate to two BERC rates that reflect two  
 7 distinct RNG service offerings:

8 1. Short Term Contract: this service is for customers in residential, commercial and  
 9 industrial rate classes that have, or wish to have, the flexibility to adjust their participation  
 10 in the RNG Program (i.e. term, volume, blend, etc.) on a monthly basis. FEI proposes  
 11 that the BERC rate for Short Term Contract customers be equal to the Commission  
 12 approved January 1st CCRA rate charged per GJ, plus the current British Columbia  
 13 Carbon Tax applicable to natural gas customers (Carbon Tax), plus a premium of \$7.00  
 14 per GJ; and,

15 2. Long Term Contract: this service is for larger commercial and industrial customers who  
 16 wish to be able to lock in their RNG service for a fixed length term. This offering has a  
 17 minimum term of 10 years and a fixed volume commitment of 500 GJs per month. FEI  
 18 proposes that the BERC rate for the Long Term Contract customer be set at a \$1.00 per  
 19 GJ discount to the Short Term Contract BERC rate (as described above) that is in place  
 20 at the time the Long Term Contract is entered into.<sup>4</sup>

21 Consistent with the 2013 Biomethane Decision, FEI is proposing to begin the transfer of unsold  
 22 biomethane older than 18 months each year or greater than 250,000 GJs out of the BVA to the  
 23 Midstream Cost Reconciliation Account (MCRA). Further, FEI is also proposing an annual  
 24 amortization of other unrecovered RNG Program costs through the delivery rates of non-bypass  
 25 customers.  
 26

27 The proposed change in BERC methodology to a market-based rate, the creation of distinct  
 28 service offerings and the transfer mechanisms will provide a more cost-effective means for  
 29 voluntary customers to participate and are expected to result in increased participation in the  
 30 RNG Program. At the same time, the expected increase in RNG Program participation at the  
 31 proposed rate will result in recovery of more costs associated with RNG and therefore reduce  
 32 potential future impacts of unsold RNG on natural gas rates.

33 FEI estimates that the rate impact to non-RNG customers of the proposed approach is  
 34 approximately \$9 million recovered through Storage and Transportation rates over the next five  
 35 years, or an average of \$0.015 per GJ, and approximately \$1.3 million recovered through  
 36 delivery rates over the next five years, or an average of \$0.015 per GJ. For a Mainland  
 37 Residential customer consuming approximately 90 GJs per year, these two impacts equate to

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<sup>4</sup> FEI is not proposing that Long Term Contract rates fluctuate per customer on an annual basis, rather that once a contract is entered into, the Long Term Contract rate in the year of commencement is the rate that applies throughout the life of the contract (subject to contract escalation if applicable).

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## BIOMETHANE ENERGY RECOVERY CHARGE RATE METHODOLOGY APPLICATION



an annual bill impact of less than \$3 per year (approximately \$15 over five years). This proposal compares to a forecast accumulated balance in the BVA of \$43 million in 2020 if the status quo is maintained, which could be left for recovery from all customers in the event the Program continues to see a decline in voluntary participation. Although it is unlikely that such a large balance would be recovered over a single year, this balance equates to an estimated delivery rate impact of \$0.24~~3~~ per GJ or an approximate annual bill impact of \$22.<sup>5</sup>

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In this Application, FEI will also describe its plan to resume its marketing efforts to increase the customers' awareness of the RNG Program to increase participation and minimize potential RNG impacts to non-RNG customers.

## 1.2 APPROVALS SOUGHT

FEI is seeking the following approvals:

1. Approval of a Short Term Contract BERC rate at the Commission approved January 1st CCRA rate per GJ, plus the current Carbon Tax applicable to natural gas customers, plus a premium of \$7.00 per GJ, applicable to all affected biomethane rate schedules within the Mainland, Vancouver Island and Whistler Service Areas, to be effective the later of the start of the first quarter after the Commission's Decision in this Application or January 1, 2016 as discussed in Section 7 of the Application.
2. Approval that the Long Term Contract BERC rate be set at a \$1.00 per GJ discount to the Short Term Contract rate;
3. Approval to discontinue the quarterly BERC and BVA report and replace it with a single annual report in conjunction with the Fourth Quarter CCRA & MCRA report;
4. FEI may apply to transfer unsold biomethane supply that is greater than 18 months in age and/or 250,000 GJs in the BVA to the MCRA at the prevailing CCRA rate on January 1 each year; and,
5. Approval to amortize the forecast December 31 balance in the BVA, net of the transfer of unsold inventory and remaining supply costs, through the delivery rates of all non-bypass customers effective January 1 of the subsequent year.

A draft form of order sought is included in Appendix F.

## 1.3 REGULATORY PROCESS

FEI is proposing a written regulatory process for review of this Application. This Application does not represent a change in the nature of the RNG Program that has been recently reviewed by the Commission or the supply of renewable natural gas; rather, it proposes some changes that affect the rates for the RNG Program and the regulatory accounting mechanisms aligned

<sup>5</sup> Storage and Transportation rate impacts based on non-bypass sales customers and Delivery rate impacts based on sales and transportation non-bypass customers.

Figure 4-4: Small Commercial Net Monthly Additions Compared to the RNG Price

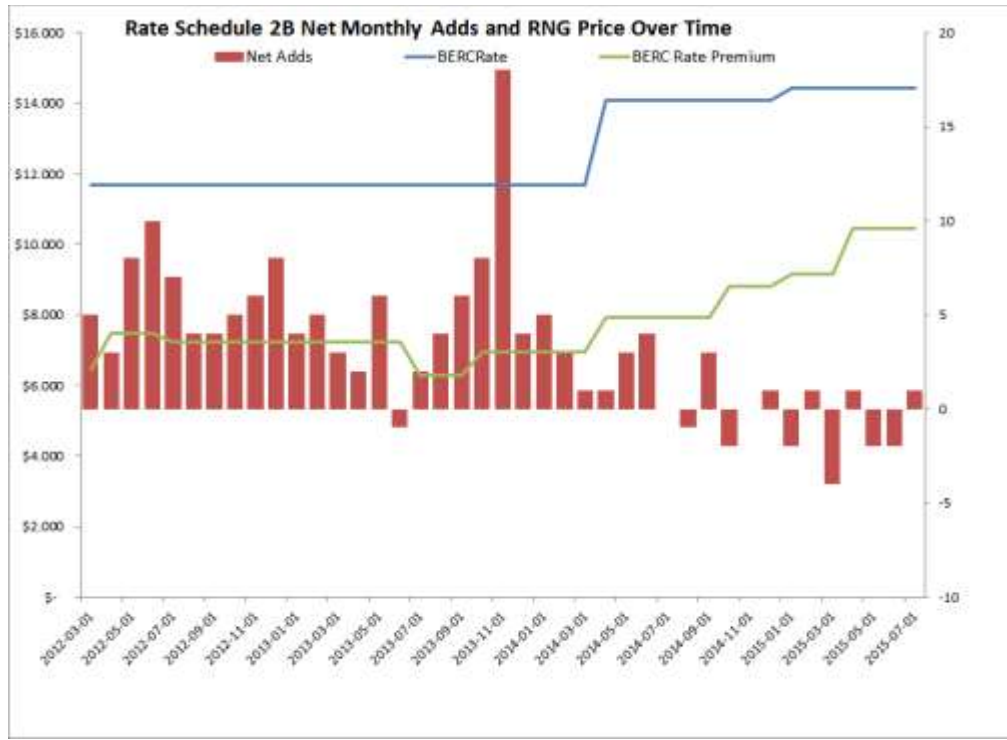
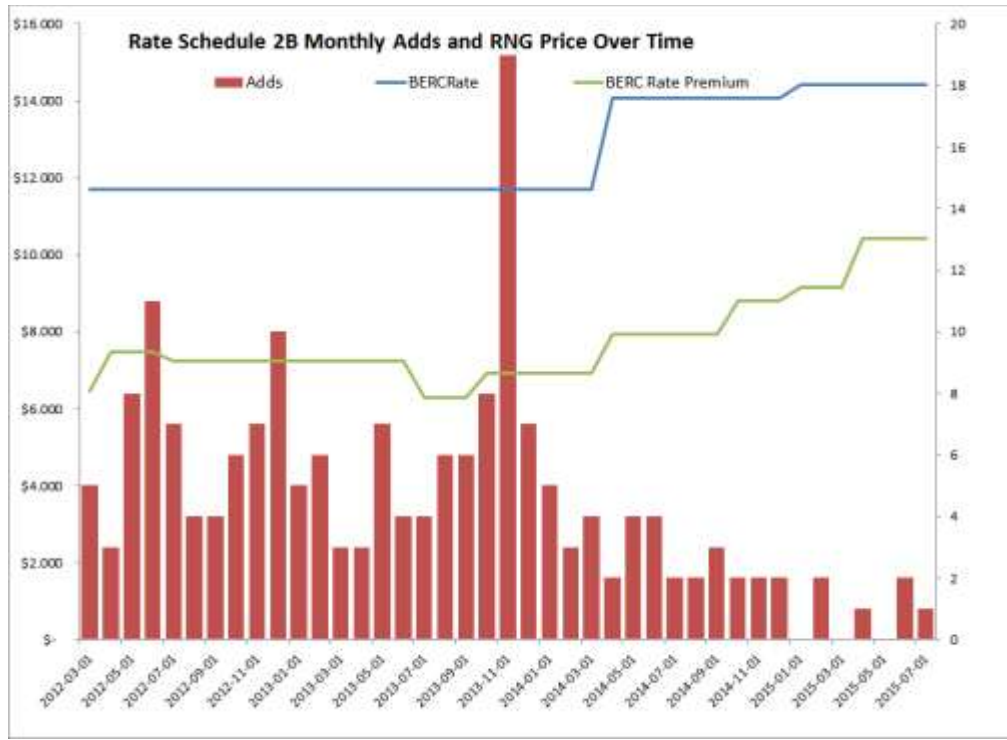


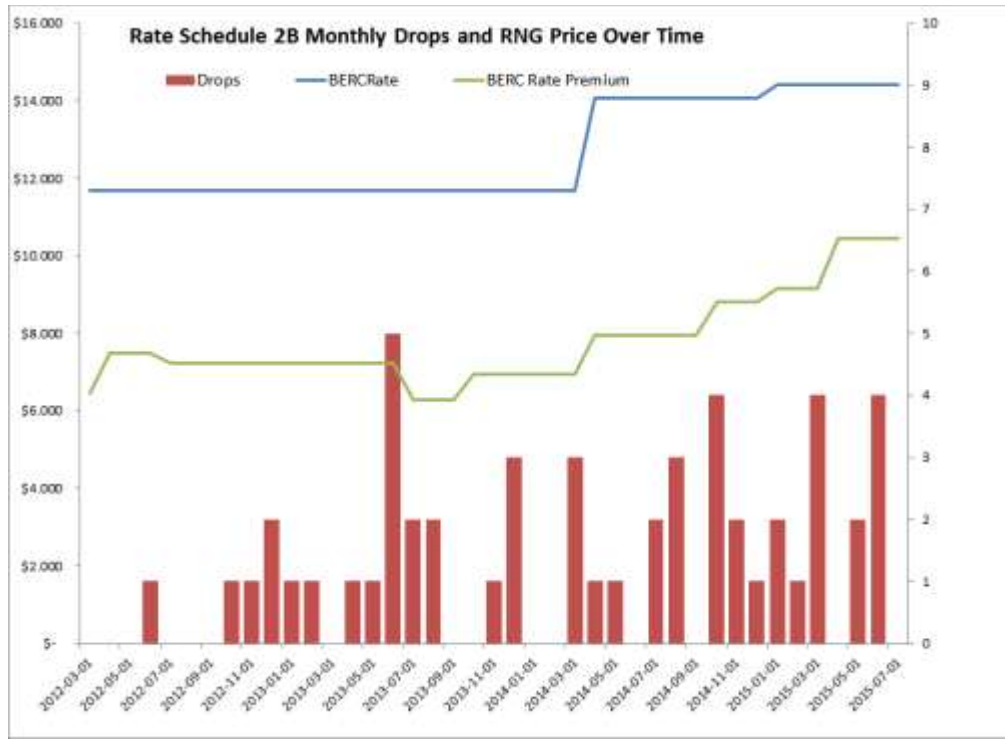
Figure 4-5 below shows the monthly additions in relation to the BERC rate. The monthly additions to the RNG Program show a general pattern of decline as the BERC rate increases. FEI was able to add an average of seven customers per month over the 2013 calendar year while adding an average of three customers per month in 2014 subsequent to the BERC rate increase. The notable spike in sales in the final quarter of 2013 is attributable to FEI temporarily allocating a sales person to undertake a commercial sales push, indicating that the additional expenditure may have had a positive impact on demand.

Figure 4-5: Small Commercial Monthly Additions Compared to the RNG Price



The monthly customer drops from the RNG Program are shown in Figure 4-6 below. Due to the low participation levels, it is hard to conclude whether a correlation exists between customers dropping out of the RNG Program and the BERC rate increase, although an upward trend in customer drops as compared to the 2010-2013 period is visible.

Figure 4-6: Small Commercial Monthly Drops Compared to the RNG Price



Taken together, the net impact of reduced enrollment and higher abandonments suggests a trend of overall decline in participation corresponding to increases in the premium of RNG to natural gas.

#### 4.1.3 Large Commercial Customers Stagnant (Rate Schedule 3B)

FEI has also tracked the addition of larger volume commercial customers since the inception of the RNG Program. The current number of customers enrolled in Rate Schedule 3B is fourteen. Over calendar year 2014 there was a net increase of two customers and in 2015 (as at July 31<sup>st</sup>) there have been no customer additions. The customer additions and drops are demonstrated below in Figure 4-7.



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anticipated to remain reasonably close to today's prices, thus suggesting that the current premium of \$10.438 per for RNG will grow.

Table 4-2 below provides the forecast balance in the BVA and BERC rate if the existing situation continues. Ultimately, if left unaddressed, FEI believes that BERC rate levels with significant RNG premiums will result in a situation where there may be a very limited number of voluntary RNG customers, and, as such, nearly all of the costs of the RNG Program will be left to be recovered from non-RNG customers.

**Table 4-2: Status Quo BERC Rate and BVA Five Year Outlook<sup>26</sup>**

	2016	2017	2018	2019	2020
BVA Balance (\$000)	3,288	8,002	17,409	29,088	42,632
BERC Rate (\$/GJ)	15.73	14.88	15.61	16.31	16.81

In accordance with the 2013 Biomethane Decision, FEI is currently notionally banking unsold biomethane. Banking is an important aspect of the RNG Program because it accounts for situations where supply is greater than demand in a given period, and it likewise reduces risk of undersupply (i.e. where demand is greater than supply). FEI has observed both situations since the 2013 Biomethane Decision. For example, during the 2014 calendar year, FEI sold more biomethane than it purchased; but during the summer months of 2014, FEI was purchasing more biomethane than it sold.

At the current BERC rate, FEI is projecting that the situation of supply exceeding demand will be exacerbated and the amount of banked biomethane will continue to grow. While Order G-210-13 provides for the ability to transfer unsold biomethane quantities to the MCRA, FEI believes that this transfer will not increase voluntary participation in the program as it results in a BERC rate that is similar to the status quo outlook for the next several years as shown in Table 4-3 below and Table 4-2 above, respectively.

**Table 4-3: BERC Rate and BVA Five-Year Outlook with Transfer of Unsold Quantities<sup>27</sup>**

	2016	2017	2018	2019	2020
BVA Balance (\$000)	3,288	8,002	9,050	5,991	4,983
BERC Rate (\$/GJ)	15.73	14.88	15.61	11.79	9.34

Thus, FEI believes that the solution should take advantage of the ability to transfer unsold quantities of biomethane on a regular basis but must also include modifications to the BERC

<sup>26</sup> Demand outlook based on estimated BERC between \$15 and \$17 per GJ; unsold quantities over 18 months old remain in the BVA and cost of service is based on existing and forecast supply projects out to 2020.

<sup>27</sup> Demand outlook based on estimated BERC between \$15 and \$17 per GJ; unsold quantities over 18 months old transferred to the MCRA and cost of service is based on existing and forecast supply projects out to 2020.

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## BIOMETHANE ENERGY RECOVERY CHARGE RATE METHODOLOGY APPLICATION



Table 6-2: Five-Year Average (2016-2020) RNG Program Alternatives Estimated Impacts

	Status Quo <sup>38</sup>	Yearly Clearing	Universal "Green Portfolio"	Market-based Rate + Yearly Clearing
Storage & Transport Rate (\$/GJ)	-	\$0.019	\$0.078	\$0.015
Delivery Rate Impact (\$/GJ)	\$0.243	\$0.031	-	\$0.015
BVA Balance (\$Millions) <sup>39</sup>	\$43	\$5	-	\$19
Residential Annual Bill Impact (\$) <sup>40</sup>	\$22	\$5	\$7	\$3

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### 6.1 STATUS QUO

Under this alternative, the RNG Program would be left "as is" with all the current pricing mechanisms in place. If the RNG Program is left as-is, FEI expects the trend of declining enrollment to continue, which will ultimately result in an increase in costs held in the BVA.

In this scenario, at some point in the future, FEI would have to file an application to transfer costs out of the BVA for recovery from non-RNG customers. As a worst-case scenario, if there were zero participation in the RNG Program, the total amount transferred would be the remaining balance in the BVA. As provided in Table 4-2, the forecast 2016 closing BVA balance assuming the status quo is maintained is approximately \$3.3 million and grows to approximately \$42.6 million in 2020. These balances represent a delivery rate impact of approximately 0.5% and 5.9% respectively, if recovered from all customers.

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The primary benefit of this approach is that the existing, established principles for cost allocation as set out in the 2013 Biomethane Decision are not changed. The mechanism for the transfer of additional costs from the BVA to non-RNG customers has been approved by the Commission in principle, but has not been used to date because the BVA balance has not yet reached an unmanageable level<sup>41</sup>.

However, this option does not address the current challenges faced by the RNG Program as described above, including declining program enrollment and the difficulty of entering into larger volume contracts. As such, this option does not seek to maximize participation in the RNG program on a voluntary basis or minimize the potential rate impact to non-RNG customers. FEI therefore rejected this option.

<sup>38</sup> Forecast impact in 2021 of full balance of BVA recovered through delivery rates. This recovery would likely not occur over one year, but spread out over multiple years

<sup>39</sup> Forecast balance as at December 31, 2020

<sup>40</sup> Approximate annual impact based on 5 year average per GJ impact and Mainland Residential customer consuming 90 GJs per year

<sup>41</sup> In the 2012 Application FEI indicated that this limit may 250 TJ of RNG for a period of greater than 24 months.

## 6.2 INCORPORATE AUTOMATIC YEARLY CLEARING

This option maintains the existing BERC rate methodology but adds an annual clearing of the RNG inventory that is greater than a certain age.

The primary benefits of this option are that it limits the costs in the BVA on a yearly basis and it allows for the capture of environmental benefits for the remaining RNG held notionally in storage. By transferring costs out on a yearly basis, it helps mitigate the growth in the BVA balance and as such, the rate impact to non-RNG customers should the entire balance need to be recovered at some point in the future.

As shown in Table 4-3 above, this option results in a BERC rate that is in the range of \$15 to \$17 per GJ for the first several years. Due to the current age of inventory, the annual transfer of RNG supply to the MCRA is not expected to occur until 2018 and is forecast to be approximately \$1.7 million in 2018, \$4.2 million in 2019 and \$5.6 million in 2020. The remaining difference between the BERC rate and the CCRA rate, after the transfer to the MCRA, would be recovered through delivery rates and is forecast to be approximately \$6.7 million in 2018, \$11.0 million in 2019 and \$9.7 million in 2020.

Like the first option considered above, this approach does not address the current challenges faced by the RNG Program, and does not seek to maximize voluntary participation or minimize potential rate impacts to non-RNG customers. FEI therefore rejected this option.

## 6.3 UNIVERSAL GREEN PORTFOLIO

A third option would be to transfer all costs and all RNG into FEI's existing natural gas supply portfolio. Conceptually, this would have the effect of reducing the carbon emissions of the entire portfolio while spreading the extra costs associated with RNG to all sales customers. While this option would address the current challenges faced by the RNG Program, this would require a radical restructuring of the RNG Program.

A significant challenge with this approach would be the elimination of the option for voluntary customers to take advantage of the GHG benefits for their operations. The ability to purchase RNG for use in existing natural gas equipment (notionally) while receiving recognition that GHGs are reduced is required for certain customers. The use of RNG allows these customers to reduce their emissions without changing their gas equipment.

Furthermore, this option is not aligned with the Commission's 2013 Biomethane Decision. Notably, it would not seek to maximize voluntary participation or minimize rate impacts to non-RNG customers. In short, this option would involve a complete revisiting of the RNG Program from a regulatory perspective. The rate impact of this option would be an average of approximately \$9.5 million recovered each year through the MCRA rates applicable to all sales customers or approximately and average of \$0.078 per GJ over the five year period.

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## BIOMETHANE ENERGY RECOVERY CHARGE RATE METHODOLOGY APPLICATION



FEI believes that while a viable and reasonable alternative, the universal green portfolio approach should only be considered once opportunities to maximize voluntary RNG Program participation are exhausted and as such, it is not FEI's preferred alternative at this time.

#### 6.4 MARKET-BASED RATE

The fourth option is a market-based rate that would set the rate for RNG at a level that the market can bear. If priced properly, this option would increase voluntary participation in the program and minimize the potential rate impact to non-RNG customers. The analysis of RNG Program enrollment data, the interviews with other utilities and the market research make it clear that the demand for biomethane could be significantly greater at reduced rates. In particular, large volume customers have indicated an appetite for more RNG if the pricing is more in line with their business plans.

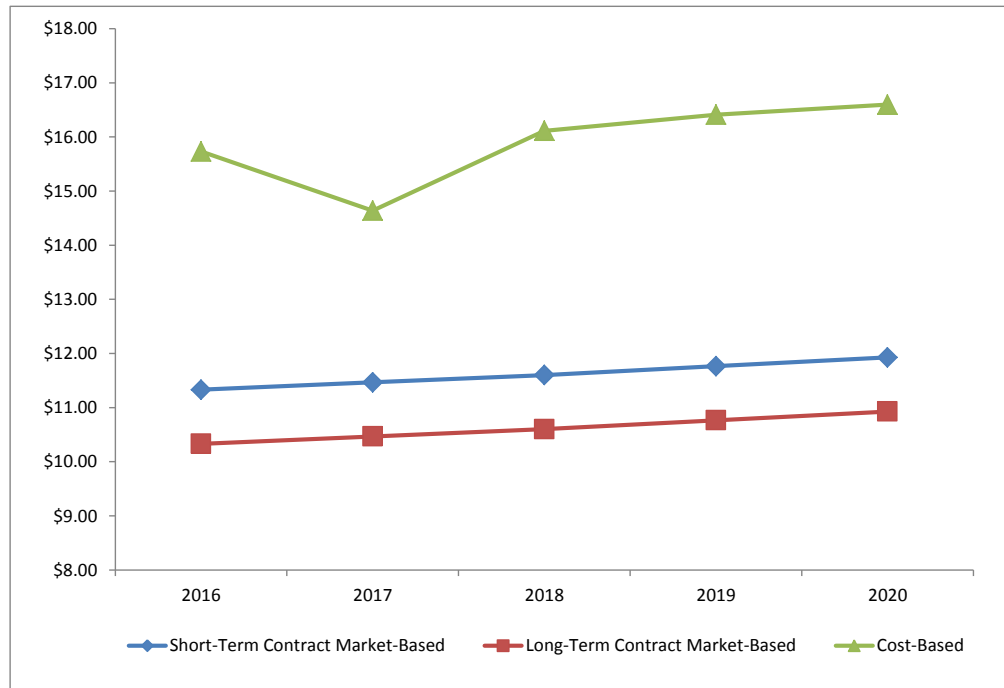
This option gives RNG customers the ability to achieve GHG reductions while at the same time minimizes impact to the natural gas delivery and commodity rates. Through this approach, FEI expects to recover most RNG Program costs from RNG customers. Along with a lower BERC rate, FEI expects higher demand, which will reduce unsold RNG inventory. These two factors together will reduce the potential rate impacts to non-RNG customers as compared to the other alternatives discussed above and as shown in Table 6-2 above.

Under this option, RNG Program cost transparency will remain in place with all costs allocated to the BVA in accordance with the 2013 Biomethane Decision. Although the market based approach may result in a recovery from voluntary customers that is less than the costs captured in the BVA, overall the expected rate impact of this approach is estimated to be \$0.015 per GJ and result in lower expected costs to non-RNG customers as compared to other options. This option would also include the annual transfer of RNG supply to the MCRA. Under this scenario, with increased demand, the transfer to the MCRA is forecast to be approximately \$1.1 million in 2018, \$3.3 million in 2019 and \$5.0 million in 2020. Over the five-year period, and including the remaining difference between the average supply cost and the CCRA rate from the transfer to the MCRA, FEI forecasts an average of approximately \$2.6 million per year to be recovered through natural gas delivery rates.

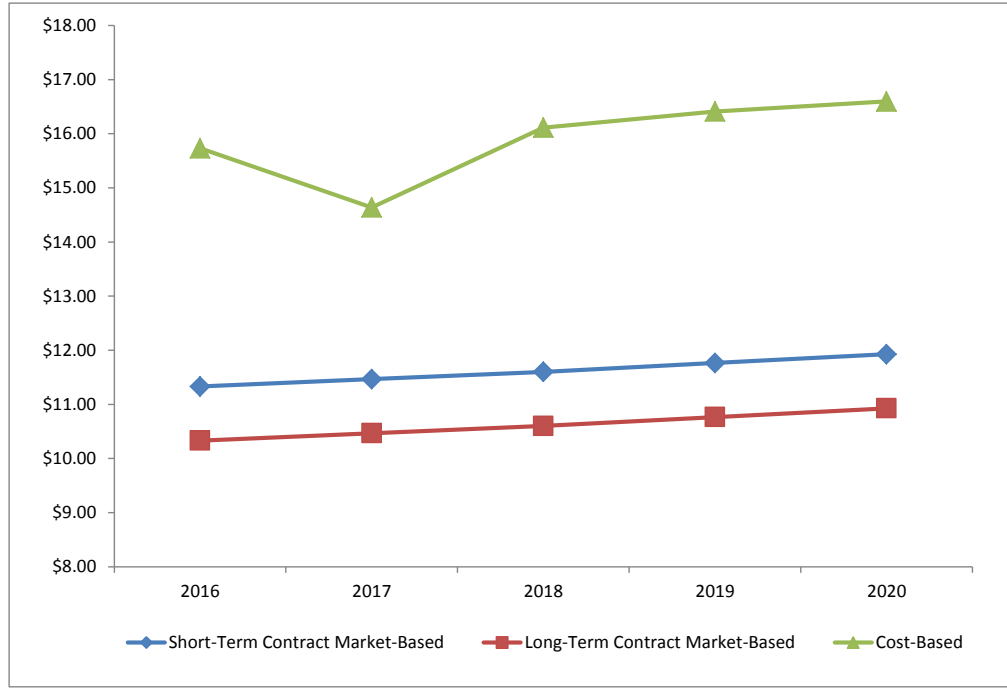
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Further, this alternative provides the benefit of being able to continue to offer voluntary participation and the opportunity for customers to quantify their reduction in GHG emissions. As such, FEI concluded that the market-based rate option was the preferable option.

**Figure 8-2: Comparison of Market and Cost Based BERC Rates (2016-2020), \$/GJ**



**Figure 8-3: Summary of Market-Based Rate + Yearly Clearing Impacts to the BVA, MCRA and Non-RNG Customers<sup>45</sup>**



<sup>45</sup> Estimated impacts as at December 31

FORTISBC ENERGY INC.  
 2015 BERC Rate Methodology Application  
 Financial Analysis

*Proposed Alternative*

Schedule	Description
1	Forecast Biomethane Variance Account- Activity and Closing Balance
2	Forecast Demand and Recoveries by Rate Schedule at Market-Based BERC Rate
3	Forecast Impacts at Market-Based BERC Rate
4	Forecast Cost-Based BERC Rate
5	Summary of Alternatives Considered

FORTISBC ENERGY INC.  
2015 BERC Rate Methodology Application  
Forecast Biomethane Variance Account- Activity and Closing Balance

*Schedule 1*

Line No.	Particulars	2015	2016	2017	2018	2019	2020	Total
1	<b>Biomethane Variance Account</b>							
2	Opening Balance (after tax)	\$ 1,097	\$ 1,222	\$ 2,821	\$ 7,511	\$ 15,467	\$ 20,896	
3	Additions - Tax Effectuated							
4	Cost of Biomethane	1,999	3,349	7,119	10,841	12,594	14,399	
5	Operating and Maintenance Expense	618	959	1,644	1,919	1,980	2,043	
6	Property Tax Expense	13	20	20	21	24	28	
7	Earned Return - Debt Component	251	273	301	902	911	919	
8	Subtotal	2,880	4,600	9,084	13,683	15,510	17,389	
9	Tax Offset	(749)	(1,196)	(2,362)	(3,558)	(4,033)	(4,521)	
10	Total Additions - Tax Effectuated	2,131	3,404	6,722	10,125	11,477	12,868	
11	Additions - Non-Tax Effectuated							
12	Depreciation	133	361	387	1,162	1,201	1,240	
13	Negative Salvage Provision Expense	-	-	1	4	5	6	
14	Notional Income Tax	(700)	(276)	(1,211)	(1,236)	(308)	153	
15	Earned Return - Equity Component	233	253	279	835	844	851	
16	Subtotal	(334)	338	(544)	765	1,742	2,250	
17	Total Additions	1,798	3,742	6,179	10,891	13,219	15,118	
18								
19	BERC Recoveries	(2,260)	(1,880)	(2,166)	(2,371)	(2,575)	(2,784)	
20	Tax Offset	588	489	563	617	669	724	
21	Net Recoveries	(1,672)	(1,391)	(1,603)	(1,755)	(1,905)	(2,060)	
22								
23	Aged inventory write-off - non-tax effectuated	-	-	-	(1,073)	(3,308)	(4,970)	(9,352)
24	Transfer all costs except Supply ending balance	-	(751)	114	(107)	(2,576)	(9,538)	(12,858)
25								
26	<b>BVA Closing Balance (after tax)</b>	<b>\$ 1,222</b>	<b>\$ 2,821</b>	<b>\$ 7,511</b>	<b>\$ 15,467</b>	<b>\$ 20,896</b>	<b>\$ 19,446</b>	
	<i>(Balance remaining is Ending supply in GJs at current BERC rate)</i>							



FORTISBC ENERGY INC.  
 2015 BERC Rate Methodology Application  
 Forecast Demand and Recoveries by Rate Schedule at Market-Based BERC Rate

*Schedule 2*

Line No.	Particulars	2015	2016	2017	2018	2019	2020
1	<b>BERC Recoveries/Sales</b>						
2	<b>Rate 1: Residential Volume (GJ)</b>	68,058	74,162	86,459	97,966	108,455	120,317
3	BERC Rate \$ /GJ	\$ 14.414	\$ 11.330	\$ 11.467	\$ 11.600	\$ 11.765	\$ 11.926
4	Recovery from Residential (\$000)	\$ 981	\$ 840	\$ 991	\$ 1,136	\$ 1,276	\$ 1,435
5							
6	<b>Rate 2: Small Commercial Volume</b>	5,390	6,173	6,829	7,121	7,358	7,595
7	BERC Rate	\$ 14.414	\$ 11.330	\$ 11.467	\$ 11.600	\$ 11.765	\$ 11.926
8	Recovery from Small Commercial (\$000)	78	70	78	83	87	91
9							
10	<b>Rate 3: Large Commercial Volume</b>	6,449	6,822	7,330	7,554	7,635	7,703
11	BERC Rate	\$ 14.414	\$ 11.330	\$ 11.467	\$ 11.600	\$ 11.765	\$ 11.926
12	Recovery from Large Commercial (\$000)	93	77	84	88	90	92
13							
14	<b>Other On-System Volume (Gas marketer)</b>	6,716	7,052	7,404	7,775	8,163	8,572
15	BERC Rate	\$ 14.414	\$ 11.330	\$ 11.467	\$ 11.600	\$ 11.765	\$ 11.926
16	Recovery from Other On-System (\$000)	97	80	85	90	96	102
17							
18	<b>Transportation Sector/CNG</b>	-	1,172	2,000	3,000	5,000	5,765
19	BERC Rate	\$ 14.414	\$ 11.330	\$ 11.467	\$ 11.600	\$ 11.765	\$ 11.926
20	Recovery from Other Off-System (\$000)	-	13	23	35	59	69
21							
22	<b>Large/Fixed Volume / Cogen</b>	70,180	77,425	86,388	88,638	89,888	91,138
23	BERC Rate	\$ 14.414	\$ 10.330	\$ 10.467	\$ 10.600	\$ 10.765	\$ 10.926
24	Recovery from Other Off-System (\$000)	1,012	800	904	940	968	996
25							
26	Total Sales Volumes (GJ)	156,793	172,806	196,410	212,054	226,499	241,090
27	<b>Total Recoveries (\$000)</b>	\$ 2,260	\$ 1,880	\$ 2,166	\$ 2,371	\$ 2,575	\$ 2,784

FORTISBC ENERGY INC.  
 2015 BERC Rate Methodology Application  
 Forecast Impacts at Market-Based BERC Rate

Schedule 3

Line No.	Particulars	2016	2017	2018	2019	2020
1						
2	<b><u>Aged Inventory Transfer to Storage and Transport Rates</u></b>					
3	GJs > 18 months in age	\$ -	\$ -	\$ 346,070	\$ 1,013,201	\$ 1,450,737
4	Forecasted Natural Gas Commodity rate	\$ 2.83	\$ 2.97	\$ 3.10	\$ 3.27	\$ 3.43
5	Aged inventory transfer - non-tax effected (\$000)	-	-	(1,073)	(3,308)	(4,970)
6	Non-bypass Sales Volume	124,017.9	124,017.9	124,017.9	124,017.9	124,017.9
7	<b>IMPACT TOTAL CUSTOMERS PER GJ</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (0.0087)</u>	<u>\$ (0.0267)</u>	<u>\$ (0.0401)</u>
8	IMPACT % of delivery margin	<u>0.00%</u>	<u>0.00%</u>	<u>0.15%</u>	<u>0.46%</u>	<u>0.69%</u>
9						
10						
11						
12						
13						
14	<b><u>Transfer to Delivery Rates</u></b>					
15	Transfer all costs except Supply ending balance	(751)	114	(107)	(2,576)	(9,538)
16	Non-bypass Sales & Transportation Volume	175,315.3	175,315.3	175,315.3	175,315.3	175,315.3
17	<b>IMPACT TOTAL CUSTOMERS PER GJ</b>	<u>\$ (0.0043)</u>	<u>\$ 0.0006</u>	<u>\$ (0.0006)</u>	<u>\$ (0.0147)</u>	<u>\$ (0.0544)</u>
18	IMPACT % of delivery margin	<u>0.10%</u>	<u>-0.02%</u>	<u>0.01%</u>	<u>0.36%</u>	<u>1.32%</u>
19						
20						
21						
22						
		<b>\$ 720,884</b>	Delivery margin			

FORTISBC ENERGY INC.  
 2015 BERC Rate Methodology Application  
 Forecast Cost-Based BERC Rate

Schedule 4

Line No.	Particulars	2016		2017		2018		2019		2020		Notes
		\$000	TJ	\$000	TJ	\$000	TJ	\$000	TJ	\$000	TJ	
1												
2	<b>Forecast BVA Balance - Deficit at December 31</b>											
3	<b>Cost (BVA ending balance pre tax)</b>	\$ 1,651		\$ 3,813		\$ 10,150		\$ 20,901		\$ 28,238		
4	<b>Quantity unsold end of year</b>		101.66		246.05		647.48		1,314.61		1,752.15	Unsold Quantity
5												
6	<b>Forecast Costs Incurred in the 12 month period</b>											
7	<b>Cost (Jan 1 to Dec 31 costs incurred)</b>	\$ 4,938		\$ 8,540		\$ 14,448		\$ 17,252		\$ 19,639		
8	<b>Quantity (Jan 1 to Dec 31 purchases)</b>		317.20		597.85		879.19		1,010.11		1,132.67	Purchase Quantity
9												
10	<b>Biomethane Available for Sale in the 12-month period</b>											
11	<b>Total Cost to be recovered</b>	<u>\$ 6,589</u>	<u>418.85</u>	<u>\$ 12,353</u>	<u>843.89</u>	<u>\$ 24,598</u>	<u>1,526.67</u>	<u>\$ 38,153</u>	<u>2,324.72</u>	<u>\$ 47,877</u>	<u>2,884.82</u>	
12	<b>Total Quantity</b>											
13												
14	<b>Cost-Based BERC Rate</b>		<u>\$ 15.73</u>		<u>\$ 14.64</u>		<u>\$ 16.11</u>		<u>\$ 16.41</u>		<u>\$ 16.60</u>	
15			2016 rate		2017 rate		2018 rate		2019 rate		2020 rate	

Schedule 5

	2016	2017	2018	2019	2020	Total	5 year AVERAGE
<b>1 - STATUS QUO Forecast (Escalating upward) Contract Demand Scenario (\$16 to \$17 BERC used for sales)</b>							
BVA Closing Balance (after tax)	\$ 3,288	\$ 8,002	\$ 17,409	\$ 29,088	\$ 42,632		
per GJ					\$ 0.2432		
BERC RATE based on cost of service	\$ 15.73	\$ 14.88	\$ 15.61	\$ 16.31	\$ 16.81		
Customer impact based on 90 GJS					\$ 21.89		
<b>2 - Forecast (Escalating upward) Contract Demand Scenario w/ WRITE OFF of AGED INVENTORY and difference between the BERC Rate and CCRA</b>							
BVA Closing Balance (after tax)	\$ 3,288	\$ 8,002	\$ 9,050	\$ 5,991	\$ 4,983		
BERC RATE based on cost of service	\$ 15.73	\$ 14.88	\$ 15.61	\$ 11.79	\$ 9.34		
Stale dated write-off > 18 months old	-	-	(1,661)	(4,200)	(5,595)	(11,456)	
per GJ to MCRA	-	-	(0.0134)	(0.0339)	(0.0451)		(0.0185)
Difference between the average cost of supply and CCRA rate	-	-	(6,699)	(10,965)	(9,654)	(27,318)	
per GJ - all delivery	-	-	(0.0382)	(0.0625)	(0.0551)		(0.0312)
Customer impact based on 90 GJs						\$ 4.47	
<b>3 - PROPOSED - Lower Price Contract Demand Scenario (CCRA + \$7.50/\$8.50 BERC used for sales)</b>							
BVA Closing Balance (after tax)	\$ 2,822	\$ 7,510	\$ 15,466	\$ 20,897	\$ 19,446		
BERC RATE based on cost of service	\$ 15.73	\$ 14.64	\$ 16.11	\$ 16.41	\$ 16.60		
BERC RATE CHARGED to Customers	\$ 11.33	\$ 11.47	\$ 11.60	\$ 11.77	\$ 11.93		
BERC RATE CHARGED to Customers Long Term	\$ 10.33	\$ 10.47	\$ 10.60	\$ 10.77	\$ 10.93		
Stale dated write-off > 18 months old	-	-	(1,073)	(3,308)	(4,970)	(9,352)	
per GJ to MCRA	-	-	(0.0087)	(0.0267)	(0.0401)		(0.0151)
Transfer all costs except Supply ending balance	(751)	113	(107)	(2,575)	(9,538)	(12,858)	
per GJ - all delivery	(0.0043)	0.0006	(0.0006)	(0.0147)	(0.0544)		(0.0147)
Customer impact based on 90 GJS						\$ 2.68	
<b>4 - Green Portfolio</b>							
BVA Closing Balance (after tax)	\$ 4,629	\$ 10,467	\$ 21,011	\$ 33,875	\$ 48,631		
Impact to customers	\$ 0.0373	\$ 0.0471	\$ 0.0850	\$ 0.1037	\$ 0.1190	\$ 0.0784	
Customer impact based on 90 GJS						\$ 7.06	