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**BY ELECTRONIC FILING**

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

**Attention: Ms. Erica Hamilton,  
Commission Secretary**

Dear Ms. Hamilton:

**Re: FortisBC Energy Inc.**

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

In accordance with the Regulatory Timetable set for this proceeding by Order No. G-107-13, we enclose for filing the electronic version of the Final Argument of FortisBC Energy Inc.

Twelve hard copies of the enclosed will follow by courier.

Yours truly,

**FASKEN MARTINEAU DuMOULIN LLP**

*[Original signed by Christopher Bystrom]*

Christopher R. Bystrom

CRB/ccm

Encl.

**BRITISH COLUMBIA UTILITIES COMMISSION**

**PROJECT NO. 3698699**

**FORTISBC ENERGY INC.  
BIOMETHANE POST IMPLEMENTATION AND  
PROGRAM MODIFICATION**

**FINAL ARGUMENT  
OF  
FORTISBC ENERGY INC.**

**JULY 22, 2013**

**FASKEN MARTINEAU DuMOULIN LLP**

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## 1.0 INTRODUCTION

1. On December 19, 2012 FortisBC Energy Inc. (“FEI”) filed with the British Columbia Utilities Commission (the “Commission” or “BCUC”) its Biomethane Service Offering: Post Implementation Report and Application for Approval for the Continuation and Modification of the Biomethane Program on a Permanent Basis (the “2012 Biomethane Application”).<sup>1</sup> FEI’s 2012 Biomethane Application seeks approval pursuant to Sections 59-61 of the *Utilities Commission Act* for the continuation and modification of the biomethane pilot program approved by Order G-194-10 (the “Pilot Program”) on a permanent basis.
2. The 2012 Biomethane Application includes FEI’s Post Implementation Report (“PIR”) on the Pilot Program in compliance with Order G-194-10. In accordance with Order G-1-13 issued on January 8, 2013, FEI filed a separate PIR (the “PIR Summary Report”) meeting the requirements of Order G-194-10 as Exhibit B-3 and held a workshop on the PIR on January 17, 2013.<sup>2</sup>
3. The PIR Summary Report shows that the Pilot Program has been a success to date. At the time of filing the 2012 Biomethane Application, FEI had almost 4,800 customers enrolled within 17 months of being in the market, has met its demand target<sup>3</sup> and has sufficient supply to meet that demand.<sup>4</sup> While supply has taken longer to develop than expected, and demand has come from a different demographic than expected, FEI’s PIR demonstrates that there is demand for and supply of Biomethane or Renewable Natural Gas (“RNG”)<sup>5</sup> to support the continuation and expansion of the Biomethane Program.<sup>6</sup> FEI concludes that a continuation of the essential rules of the Pilot Program will therefore

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<sup>1</sup> Exhibit B-1.

<sup>2</sup> Exhibit B-4 is FEI’s Workshop Presentation Materials.

<sup>3</sup> Exhibit B-4, Workshop Presentation Materials page 21.

<sup>4</sup> Exhibit B-1, p. 2.

<sup>5</sup> The terms “Biomethane” and “Renewable Natural Gas” (“RNG”) are used interchangeably to refer to raw biogas that has been purified (or upgraded) so that it is interchangeable with natural gas. Exhibit B-1, p.1.

<sup>6</sup> FEI will use the term “Biomethane Program” to refer generically to its program for the sale of Biomethane to its customers, as opposed to the specific Pilot Program approved by the Commission in Order G-194-10.

help provide certainty to market players and build on the success of the Pilot Program to date.

4. In FEI's submission, the starting place for the Commission's decision in this proceeding should be that FEI's Biomethane Program promotes public goods that are a benefit to the entire Province over the long term. FEI's Biomethane Program has been developed to meet customer demand and advances government policy to develop clean, renewable sources of energy and reduce waste and greenhouse gas ("GHG") emissions.<sup>7</sup> FEI's customers are demanding Biomethane to meet the same policy objectives, including GHG emissions targets. The Biomethane supply projects developed through the Biomethane Program take waste in a variety of forms that would otherwise emit methane into the atmosphere (and may also take up room in landfills<sup>8</sup>) and turn it into Biomethane that is interchangeable with, and can displace the use of, conventional natural gas.<sup>9</sup> The Biomethane Program enjoys strong support from FEI's customers,<sup>10</sup> local governments,<sup>11</sup> and the Provincial Government.<sup>12</sup>
5. In FEI's submission, the continuation and expansion of the Biomethane Program is clearly in the public interest and the role of the Commission in this proceeding should be to determine *how* the Biomethane Program will proceed, rather than *if* it will proceed.
6. For the Biomethane Program to proceed, FEI submits that regulatory certainty is required. The primary area of current uncertainty is the pilot nature of the program. FEI, potential suppliers and customers all need to know if the Biomethane Program will be

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<sup>7</sup> Exhibit B-1, Section 2.

<sup>8</sup> E.g., Earth Renu Energy's supply project uses urban waste that would otherwise be directed to landfills. See Exhibit D-7.

<sup>9</sup> Exhibit B-14, BCSEA IR 2.30.1.

<sup>10</sup> Exhibit B-1, p. 117.

<sup>11</sup> E.g., MetroVancouver and City of Richmond (Exhibit B-1, Appendices G-1 and G-2), the City of Vancouver (Exhibit C7-3) and the City of Surrey (Exhibit D-10-1).

<sup>12</sup> Exhibit B-1, Section 2; also see the Ministry of Environment's letter of March 11, 2013 indicating its support for FEI's Biomethane Program and confirming the Biomethane Program's alignment with the objectives set out in the Provincial Government's natural gas strategy as well as BC Job's Plan (FEI's Application for Reconsideration of Commission Order No. G-29-13, Appendices A and B; available on the Commission's website at: [http://www.bcuc.com/Documents/Proceedings/2013/DOC\\_34002\\_B-1\\_FEI-Amended-Application.pdf](http://www.bcuc.com/Documents/Proceedings/2013/DOC_34002_B-1_FEI-Amended-Application.pdf)).

continuing so that business decisions can be made for the future. In addition, other areas of uncertainty are the amount of supply that can be developed, the allocation of costs, treatment of interconnection costs, the recovery of any over-supply costs and FEI's ability to own upgrading facilities. FEI has already lost supply opportunities because of the uncertainty in the regulatory model<sup>13</sup> and will likely continue to do so if the uncertainties are not resolved.

7. FEI's 2012 Biomethane therefore primarily seeks the approval of a Biomethane Program on a "non-pilot" or permanent basis to provide certainty for all parties involved with the program. In FEI's submission, it is essential at this time that there be certainty in the continuation of the Biomethane Program so that FEI can continue to work in a commercially reasonable manner with market participants to develop supply and demand for Biomethane. Without regulatory certainty, FEI is concerned that it will be unable to secure high demand customers and will continue to lose supply projects from the finite amount of Biomethane supply available in the Province.<sup>14</sup>
8. The specific approvals sought by FEI to modify the Pilot Program and establish a permanent Biomethane Program are as follows:<sup>15</sup>

*Approvals for the "RNG Offering"*<sup>16</sup>

- (a) Approval of the continuation of Rate Schedules 1B, 2B and 3B, and amendments to same, permitting FEI to continue to offer Biomethane to residential and commercial customer groups with additional options for Biomethane blends other than 10%, as described in Section 3 of the 2012 Biomethane Application (see Appendix D-2 for Black-Lined versions of the proposed revisions to Tariff pages).

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<sup>13</sup> Exhibit B-1, Section 5.7.

<sup>14</sup> Exhibit B-1, Sections 5.6 and 5.7, pp. 76 to 79.

<sup>15</sup> Exhibit B-1, pp. 3-4.

<sup>16</sup> "RNG Offering" refers to FEI's service offering to customers that allows for the notional sale of Biomethane. Exhibit B-1, p. 2.

- (b) Approval of the continuation of Rate Schedules 11B and 30 (Appendix D-1) as described in Section 3 of the 2012 Biomethane Application.
- (c) Approval of the continuation of Section 28 and related definitions of FEI's General Terms and Conditions ("GT&Cs") with clarifying amendments as described in Section 3 of the 2012 Biomethane Application (see Appendix D-3 for a Black-lined version of the proposed revisions to Tariff pages).

*Approvals for the Biomethane Supply Model*

- (d) Approval that future supply contracts for the purchase of Biogas<sup>17</sup> or Biomethane filed with the Commission meet the criteria described in Section 6 of the Biomethane Application and outlined below satisfy the filing requirements in sections 71(1)(a) and 71(1)(b) of the Act:
  - (i) The supply contract is at least 10 years in length.
  - (ii) FEI has, by agreement, retained final control over injection location.
  - (iii) FEI is satisfied that the selected upgrader is sufficiently proven.
  - (iv) FEI has, by agreement, reserved the right to refuse gas if customer safety or asset integrity is at stake.
  - (v) The partner is a municipality, regional district or other public authority, or is a private party with a track record in dealings with FEI or that posts security to reduce the risk of stranding.
  - (vi) The total production of Biomethane for all projects undertaken does not exceed an annual contract amount of 3 PJ.

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<sup>17</sup> "Biogas" is a renewable energy source that is primarily composed of methane, and is produced when bacteria break down organic waste, from sources such as landfills, wastewater plants and agriculture, in a process called anaerobic digestion. In its raw form, biogas contains other gases that are not typically found in natural gas and therefore needs to be purified (or upgraded) into Biomethane, which is then interchangeable with other natural gas. Exhibit B-1, p.1.

- (vii) The maximum price for delivered Biomethane on the system is below maximum price set out in Confidential Appendix J.
- (e) Approval of the continuation of FEI's ability to purchase carbon offsets and recover the costs through the Biomethane Variance Account ("BVA") in the event of under-supply of Biomethane, at a per gigajoule unit price not exceeding the difference between the Biomethane Energy Recovery Charge ("BERC") and the Commodity Cost Recovery Charge in effect at that time, as set out in Section 9 of the 2012 Biomethane Application.

*Approvals for the Cost Allocation and Recovery Model*

- (f) Approval of a cap on the level of investment FEI will make on interconnection facilities for future supply projects set at \$1.50 / GJ average capital cost, based on a 20 year volume forecast, with the remainder of the cost of the interconnection to be funded by a contribution in aid of construction ("CIAC") from the supplier.<sup>18</sup>
- (g) Approval of the continuation of the cost allocations and accounting treatment for the costs associated with the Biomethane Program as set out in Section 10 of the 2012 Biomethane Application, including:
  - (i) The continuation of the non-rate base deferral account to capture the costs incurred by FEI to procure and process consumable Biomethane and the revenues collected through the BERC rate, and thereby accumulate any differences in the BVA.
  - (ii) The BVA balance quarterly reporting process and the BERC rate setting mechanism on a basis consistent with the FEI's existing gas cost reporting and rate setting mechanisms, with the BERC rate to be updated following and in accordance with the Commission Decision in this proceeding.<sup>19</sup>

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<sup>18</sup> Exhibit B-19, BCUC IR 2.34.1.

<sup>19</sup> Exhibit B-19, BCUC IR 2.1.1.



- (h) Approval of the recovery of costs in the BVA through the Midstream Cost Reconciliation Account (“MCRA”), subject to an application to the Commission.<sup>20</sup>
9. After filing the 2012 Biomethane Application, the Commission issued its AES Inquiry Report<sup>21</sup> which made recommendations with respect to FEI’s ownership of upgrading facilities. FEI is seeking clarification in this proceeding that it continues to be appropriate for FEI, or its regulated affiliate, to own and operate upgrading facilities in certain cases as described in Section 6.3 of the 2012 Biomethane Application and discussed in Section 3.2.2 below.
10. The 2012 Biomethane Application sought approval of four energy supply contracts and related interconnection facilities. However, through a series of Orders,<sup>22</sup> the Commission established a separate regulatory process for the review of these supply contracts. Order G-29-13 increased the supply cap of the Pilot Program by an amount sufficient to accommodate up to an additional 280,000 GJ of supply annually from the four Biomethane suppliers; and Order G-46-13 stated that the Commission would review the supply agreements as well as the capital expenditures for the related interconnection facilities in a separate proceeding. As a consequence, the review and approval of the four third party supply contracts and related interconnection facilities are not within the scope of this proceeding.<sup>23</sup>
11. Seven intervenors have registered in this proceeding: Commercial Energy Consumers Association of British Columbia (the “CEC”); British Columbia Hydro & Power Authority (“BC Hydro”); British Columbia Pensioners’ and Seniors’ Organization of B.C. et al (“BCPSO”); British Columbia Sustainable Energy Association (“BCSEA”); Greater Vancouver Sewerage and Drainage District (“GVS&DD”); CH Four Biogas; and

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<sup>20</sup> Exhibit B-17, BCUC IR 1.70.3.1 as modified by Exhibit B-19, BCUC IR 2.52.1.

<sup>21</sup> Issued with Order No. G-201-12.

<sup>22</sup> Order G-18-13; Order G-29-13; Order G-45-13.

<sup>23</sup> For details on the status of the Greater Vancouver Sewerage and Drainage District project, see Exhibit B-19, BCUC IR 2.3.1.

City of Vancouver. The CEC, BCPSO and BCSEA each filed two rounds of information request in addition to the information requests filed by the Commission.

12. In the following sections, FEI provides an overview of the PIR and its requested modifications to the Pilot Program. FEI then addresses the areas explored in the information requests.

## **2.0 POST IMPLEMENTATION REPORT**

13. FEI (then Terasen Gas Inc.) filed its first Biomethane Application on June 8, 2010 (the “2010 Biomethane Application”). On December 14, 2010, the Commission issued its Decision (the "2010 Biomethane Decision") and Order G-194-10 which approved the two-year Pilot Program. Order G-194-10 required FEI to file a PIR which was to include an examination of the following information:

- Full financial review of all projects (individual and aggregate numbers) which have been undertaken;
- Validation of the market research for customers subscribing to the “RNG Offering”;
- Enrollment and attrition rates;
- Costs and assessment of customer marketing/education programs;
- Customer segmentation and targeting;
- Assessment of Pricing Methodology and Principles for Cost Recovery;
- Future Projects that are under consideration, and
- Forecasts of Biomethane supply as well as customer demand and anticipated update for the next ten year period.

14. FEI’s 2012 Biomethane Application reported on each of these topics as shown in Table 1-1.<sup>24</sup> The PIR Summary Report provides a consolidated and summary review of these topics as well. The main conclusions of the PIR are reviewed below.

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<sup>24</sup> Exhibit B-1, p. 3.

## **2.1 Customer Segmentation and Targeting**

15. FEI has reviewed and presented a segmentation of its Biomethane customers, which shows that FEI's original research on customer targeting and motivations for signing up was largely accurate. FEI has taken away two key learnings with respect to customer segmentation and targeting. First, FEI has learned that the target demographic for residential customers is older than originally anticipated, and that there also exists a secondary market in residential customers that needs something beyond doing something good for the environment. Second, public sector organizations (“PSOs”) and organizations looking at developing cogeneration projects using Biomethane represent new market potential for Biomethane sales. FEI refers to this new market potential as the “emerging markets”.<sup>25</sup>

## **2.2 Market Research and Program Results**

16. In the 2010 Biomethane Application FEI conducted market research to understand the potential residential market uptake for the RNG Offering. While FEI targeted residential participation rates of 2% in line with the industry average, actual participation rates are tracking the industry median of 1% for similar green pricing programs in North America. Lower residential demand than targeted, however, was offset by additional volumes from commercial customers under Rates 2B, 3B and 11B. As of December 1 2012, the annual Biomethane demand of approximately 60,000 GJs exceeded the initial target of 58,613 GJ set out in the 2010 Biomethane Application.<sup>26</sup>
17. FEI has conducted market research in 2012. A key finding is that the maximum market potential for the current RNG Offering is 27% for a 10% blend assuming 100% market awareness. This is based on the results of a survey showing that 27% of respondents indicated they were willing to purchase a 10% Biomethane blend at a 6 dollar premium.<sup>27</sup>

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<sup>25</sup> Exhibit B-1, Section 4.3 and Exhibit B-3, Section 2.

<sup>26</sup> Exhibit B-1, Section 3.3 and 3.3.1; Exhibit B-4, Section 3.

<sup>27</sup> Exhibit B-1, Figure 3-9, p. 32. FEI does not consider this to be an achievable potential (Exhibit B-14, BCSEA IR 1.20.5.1).

Since customer awareness levels are at approximately 13%,<sup>28</sup> FEI has estimated a best case of 3.5% should all customers follow through with their intentions.<sup>29</sup>

18. Based on the primary and secondary research, FEI believes that the achievable residential and commercial market potential will increase and ramp up to a 2.1% participation rate in 5 years.<sup>30</sup> This is in line with trends from other utility green pricing programs in North America.

### **2.3 Costs and Assessment of Customer Education**

19. FEI spent just under its approved customer education budget for 2010/11 and 2012.<sup>31</sup> Over the test period, FEI utilized targeted campaigns such as bill inserts, community newspapers, radio, videos, direct mail, promotional offers, news releases, consumer shows, and the FEI website, as well as its existing sales team to reach out to residential and commercial customers. FEI will continue to use its customer education budget to generate awareness of the Biomethane Program through an integrated marketing approach to achieve a 2% participation rate in the next five years. FEI has learned that bill inserts continue to be the most effective means of reaching its target audience and that Air Miles have proven to be a success in reaching a large secondary market that needs something more than environmental benefits to take part in the program.<sup>32</sup>

### **2.4 Enrolment and Attrition Rates**

20. During the six months that the Pilot Program was active in 2011, 1,158 residential customers enrolled. As of December 1, 2012, an additional 3,764 residential customers, 72 commercial customers and 3 on-system sales customers had enrolled.<sup>33</sup>

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<sup>28</sup> Based on FEI's most recent TNS survey in Exhibit B-1 Appendix E-3 and as discussed in Exhibit B-14, BCSEA IR 1.20.5.1.

<sup>29</sup> Exhibit B-1, p. 53.

<sup>30</sup> Exhibit B-1, p. 52 to 53.

<sup>31</sup> Exhibit B-3, Tables 4-1 and 4-2, respectively.

<sup>32</sup> Exhibit B-1, Section 3.2.1.1 and Exhibit B-3, Section 4.

<sup>33</sup> Exhibit B-1, Section 3.6.3 and Exhibit B-3, Section 5, p. 12.

21. FEI experienced a 6% and 7.6% drop rate in 2011 and 2012, respectively. This is line with the 2010 industry average drop rate for other green pricing programs of 7%.<sup>34</sup> However, taking into account customers that have merely moved, transferred accounts, or been disconnected, FEI believes an attrition rate of 1% in 2011 and 1.5% in 2012 more accurately portrays the true attrition rate of the program, i.e. those that returned back to the standard rate.<sup>35</sup>

## **2.5 Customer Demand Forecast for the Next Ten Year Period**

22. FEI has produced low, medium and high demand forecasts for the next 10 years. These forecasts are based on:

- Secondary Research, consisting of analysis of utility green pricing programs across North America and their adoption rates.
- Primary Research, consisting of surveys of BC residential customers.
- Letters of Intent (“LOI”) from emerging markets, representing input from large volume customers in BC to demonstrate potential uptake.

23. Based on the primary and secondary research, FEI believes that the achievable residential and commercial market potential will increase and ramp up to a 2.1% participation rate in 5 years.<sup>36</sup> This is in line with trends from other utility green pricing programs in North America.

24. The largest impact on the forecast demand is from emerging markets. These markets include power generation customers, such as the UBC, municipality customers, such as the City of Richmond and City of Vancouver, and natural gas for transportation (“NGT”) customers, such as the City of Surrey.<sup>37</sup> LOIs from such customers indicating a commitment to buy Biomethane are included in Appendix G-1 of the 2012 Biomethane

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<sup>34</sup> Exhibit B-1, Appendix F-1.

<sup>35</sup> Exhibit B-1, Section 3.6.3 and Exhibit B-3, Section 5, p. 12.

<sup>36</sup> Exhibit B-1, p. 52 to 53.

<sup>37</sup> Exhibit D-10-1; Exhibit B-19, BCUC IR 2.25.3.1.

Application. The projected demand from emerging markets is in the range of approximately 2.5 to 3.5 PJs.<sup>38</sup>

25. At the time of writing the PIR Summary Report, FEI noted that in each of the three forecast scenarios, the potential demand outstrips supply from existing supply projects, including the City of Kelowna Landfill project, beyond 2015.<sup>39</sup> The Commission has since increased the supply cap of the Pilot Program, and approved the EarthRenu Energy Corp. ("Earth Renu"), Seabreeze Farm Ltd. ("Seabreeze") and Dicklands Farms ("Dicklands") supply contracts in Order G-79-13 to meet the demand.
26. The most recent update to FEI's demand scenarios is found in Exhibit B-19, BCUC IR 2.22.1. Even with the newly approved supply projects, new supply will be required to meet the demand from emerging markets customers, such as UBC.

## **2.6 Review of Supply Projects**

27. FEI had three Biomethane supply projects approved at the time of the PIR: the Fraser Valley Biogas project; the Columbia Shuswap Regional District ("CRSD") or Salmon Arm Landfill project; and the City of Kelowna Landfill project. FEI reported that the Fraser Valley Biogas Plant is injecting supply, and that the Salmon Arm Landfill is producing pipeline quality gas and would soon be injecting supply into the grid, although later than anticipated.<sup>40</sup>
28. FEI's actual interconnect costs for existing projects came in less than the budgeted amount, but the upgrader cost for the Salmon Arm Landfill project came in higher than anticipated. The net cost at Salmon Arm Landfill is projected to be approximately \$695 thousand higher than the forecast costs in the 2010 Biomethane Application.<sup>41</sup>
29. Based on its experience with the Fraser Valley Biogas project, FEI now strongly advocates for independent gas volume estimates from reputable third parties and FEI staff

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<sup>38</sup> Exhibit B-1, p. 53, Table 4-3.

<sup>39</sup> Exhibit B-1, Section 4.5. and Exhibit B-3, Section 6.

<sup>40</sup> Exhibit B-3, Section 7.

<sup>41</sup> Exhibit B-1, Section 5.2.5 and Exhibit B-3, Section 7.

have undertaken training to better understand biogas production. The result is that FEI can better test the volume and cost assumptions that project developers share during the feasibility stage of new project assessment. (See Section 5.1.2 of the 2012 Biomethane Application for further information.) Based on its experience with the Salmon Arm Landfill project, FEI has taken a number of steps to improve confidence in a vendor's ability to deliver on time and on budget for projects where FEI owns the upgrader facilities. These include steps to increase confidence in the gas composition, gas volume and a bid evaluation procedure to select the most appropriate vendor. FEI will incorporate these learnings and will budget accordingly for future projects.<sup>42</sup>

30. Overall, FEI's experience with supply projects has demonstrated that it takes several years before a new project is injecting Biomethane into the system.<sup>43</sup> Further, once a project is injecting Biomethane, it takes time to ramp up production, with current volumes at 60% of that expected.<sup>44</sup>
31. FEI has also found that its ability to develop supply has been hampered by lack of certainty for the Biomethane Program. Two examples are potential projects with Harvest Power and Wastech both of whom decided to develop electricity projects instead of Biomethane.<sup>45</sup> While from a supplier perspective the benefits of an electricity and gas option are approximately equal, FEI's substantial and uncontroverted evidence is that it is more cost-effective for customers if such projects are developed as Biomethane projects, rather than electricity projects.<sup>46</sup> A key reason for this is that a Biomethane project delivers more than two times as much of the available raw energy to customers compared to an electricity project due to higher overall efficiency from source to customer.<sup>47</sup> This is a societal benefit as a Biomethane project makes the most out of the renewable energy

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<sup>42</sup> Exhibit B-3, Section 7.

<sup>43</sup> Exhibit B-1, Section 5 and page 119.

<sup>44</sup> Exhibit B-17, BCUC IR 1.53.4.

<sup>45</sup> Exhibit B-1, Section 5.7, pp. 78 to 79. Exhibit B

<sup>46</sup> Exhibit B-1, Section 5.6. See also responses to Exhibit B-15, CEC IR 1.29 series, and Exhibit B-20, CEC IR 2.29 and 30 series.

<sup>47</sup> Exhibit B-1, p. 77; Exhibit B-20, CEC IR 2.29.3.

resource. It also translated directly to the bottom line for customers, as demonstrated by the following:

- If a Biomethane developer decides to generate and sell power to BC Hydro instead of selling upgraded gas to FEI, the additional cost to provide the same energy for residential heating results in the electric option costing \$20.9 million more than the gas option in NPV terms over twenty years.<sup>48</sup>
- FEI has calculated the total cost of space heating for a single residential customer in the Lower Mainland using either a Biomethane or electricity generation option. The results show that using electricity for residential space heating is about 35% to 37% (or \$5,200 to \$5,500) greater in total costs (NPV) over 25 years relative to using Biomethane.<sup>49</sup>

Despite the advantages of Biomethane projects, the current uncertainty regarding the permanency of the Biomethane Program creates uncertainty for developers and has led to lost projects.

32. FEI submits that the lesson to be learned from this experience is that regulatory certainty on the future of and rules for the Biomethane Program (e.g. its permanence, cost allocation rules, ability to contract for supply and treatment of interconnection costs) is necessary so that developers do not reject the Biomethane option on the basis of real or perceived regulatory process concerns. Solidifying the permanence of and rules for the Biomethane Program will permit decisions to be made based on the cost-effectiveness of projects and benefits to customers, rather than on the degree of regulatory certainty for developers. In FEI's submission, this will be beneficial to customers in the long run and help ensure that energy resources are developed to their best use.

## **2.7 Future Supply Projects**

33. The PIR reported on the four supply projects for which FEI was seeking approval in the 2012 Biomethane Application, including Earth Renu, GVS&DD, Seabreeze and Dicklands projects. As noted above, three of these projects have now been approved by the Commission.

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<sup>48</sup> Exhibit B-15, CEC IR 1.29.3.

<sup>49</sup> Exhibit B-20, CEC IR 2.30.6.



34. FEI also reported on two key known prospects. A project with the City of Vancouver could supply approximately 200,000 GJ annually and grow to as much as 500,000 GJ annually in ten to fifteen years. A project with the City of Surry is expected to generate as much as 400,000 GJ of energy annually. FEI also indicated that it had identified five other projects that could provide an estimated 295,000 GJ annually.<sup>50</sup>
35. FEI concluded that there are ample supply projects to develop in the short term, with just under 2 PJ of known prospects and a total potential to provide up to an estimated 5.0 PJ of Biomethane.<sup>51</sup>

## **2.8 Assessment of Pricing Methodology and Principles of Cost Recovery**

36. The costs associated with the Pilot Program fall into two main categories. The first category consists of the costs associated with making the Biomethane Program available to all customers, including capital and O&M costs related to interconnection, education costs and the Biomethane Program Manager costs.<sup>52</sup> Costs in this category are incurred to extend the environmental benefits of Biomethane to all customers, and are recovered through delivery rates from all non-bypass customers. The second category consists of the costs associated with providing the supply of Biomethane to those customers that have elected to enroll in a Biomethane rate offering, and are recovered from those customers by the BERC. FEI captures these costs in the BVA.<sup>53</sup>
37. FEI reviewed the recovery of costs from the various customer groups over the two-year period in accordance with the principles of the Pilot Program.<sup>54</sup> In FEI's assessment, the pricing methodology and principles of cost recovery result in a fair and reasonable allocation of costs.<sup>55</sup>

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<sup>50</sup> Exhibit B-1, Section 5.9.2 and Exhibit B-3, Section 8.1.

<sup>51</sup> Exhibit B-1, pp. 80-81 and Exhibit B-3, Section 8.2.

<sup>52</sup> Exhibit B-1, p. 121.

<sup>53</sup> Exhibit B-1, Section 9.4; Exhibit B-3, p. 30.

<sup>54</sup> Exhibit B-1, Sections 9.2 to 9.3 and Exhibit B-3, Sections 9.2 and 9.3.

<sup>55</sup> Exhibit B-1, Section 9.4 and Exhibit B-3, Section 9.4.

38. FEI reports quarterly on the BVA and BERC rates and sets the BERC rate annually. Pursuant to Commission Order G-195-11, FEI filed within 120 days from the end of the 2011 year, a status report for the BVA similar to the annual CCRA and MCRA status reports. FEI believes that this system of reporting and rate setting for Biomethane supply is transparent, efficient, and consistent with the reporting and rate setting for conventional gas supply.<sup>56</sup>

## **2.9 Conclusions**

39. FEI submits that the PIR demonstrates that overall the Pilot Program has been a success. Not all aspects of the program have gone as planned. For example, supply projects have taken longer than expected to inject Biomethane on the system. Nonetheless, enrollment and attrition rates are trending to industry averages, demand is meeting expectations, adequate supply has been added to meet the demand and the costs have been allocated fairly and appropriately amongst the different customer groups. The estimated demand for and supply of Biomethane indicates that there is a need to continue and expand the Biomethane Program beyond the limits of the Pilot Program.
40. FEI submits that the success of the Pilot Program is clear evidence that the Biomethane Program should be continued on essentially the same rules. All the evidence indicates that the Pilot Program is gaining traction in the market, both in terms of supply and demand. A continuation of the essential rules of the Pilot Program will help provide certainty to market players and build on the success experienced to date. There is no evidence to suggest that a radical overhaul of the program is either necessary or desirable. To the contrary, FEI submits that what is needed is continuity and certainty. For this reason FEI has proposed the continuation of the Biomethane Program with modifications for its expansion that are in line with the Pilot Program which has proven to be a success. FEI explains its proposed modifications in the following section.

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<sup>56</sup> Exhibit B-1, Section 9.4.

### **3.0 PROPOSED PROGRAM CONTINUATION AND MODIFICATION**

41. FEI's 2012 Biomethane Application seeks approval of a permanent ("non-pilot") and expanded Biomethane Program. This Section focuses on FEI's proposed changes to the Pilot Program.
42. As stated in the 2012 Biomethane Application, the Biomethane Program consists of the following three components:
  - *The RNG Offering*: consists of a service offering that allows the notional sale of Biomethane to FEI customers.
  - *The Biomethane Supply Model*: addresses the acquisition and logistics of reliable and safe supply of biogas, and the upgrading of biogas to Biomethane for injection into the FEI distribution system.
  - *The Cost Allocation and Recovery Model*: addresses the recovery of costs for the product offering from the various customer groups.
43. FEI addresses these three components of its proposed Biomethane Program below, with an emphasis on its proposed modifications.

#### **3.1 The RNG Offering**

44. FEI is seeking two sets of modifications to the RNG Offering, consisting of changes to the approved Biomethane rate schedules to allow FEI to offer higher blends of Biomethane and clarifying amendments. These changes are described in Section 3.8 of the 2012 Biomethane Application and shown in Appendices D-2 and D-3.
45. As background, Commission Order G-194-10 approved FEI's Biomethane Rate Schedules 1B, 2B, 3B, 11B and 30 as well as Section 28 and related definitions of FEI's GT&Cs. In its response to BCSEA 1.6.4, Exhibit B-14, FEI set out the currently approved Biomethane Rate Schedules as follows:

| Biomethane Rate Schedules | Description   | Product  | Premium  | Corresponding Rate Schedule |
|---------------------------|---|--|--|-----------------------------|
| <b>Rate Schedule 1B</b>   | for single-family residences and separately metered multi-family residences                                   | 10% blend –<br>10% of natural gas use charged at the BERCC rate<br>90% of natural gas use charged at the current Cost of Gas | At current prices this works out to \$7.23 <sup>57</sup> more per GJ on the 10% portion (net of carbon tax) or about 10% more to the overall bill* | Rate Schedule 1             |
| <b>Rate Schedule 2B</b>   | Small commercial renewable natural gas rate for businesses with consumption of less than 2,000 GJ annually    | 10% blend –<br>10% of natural gas use charged at the BERCC rate<br>90% of natural gas use charged at the current Cost of Gas | At current prices this works out to \$7.23 <sup>58</sup> more per GJ on the 10% portion (net of carbon tax) or about 10% more to the overall bill* | Rate Schedule 2             |
| <b>Rate Schedule 3B</b>   | Large commercial renewable natural gas rate for businesses with consumption of greater than 2,000 GJ annually | 10% blend –<br>10% of natural gas use charged at the BERCC rate<br>90% of natural gas use charged at the current Cost of Gas | At current prices this works out to \$7.23 <sup>59</sup> more per GJ on the 10% portion (net of carbon tax) or about 10% more to the overall bill* | Rate Schedule 3             |

<sup>57</sup> Note that this is accurate at the time of the IR response, but no longer reflects current rates. FEI advises that based on current rates, the amount is \$6.29.

<sup>58</sup> Note that this is accurate at the time of the IR response, but no longer reflects current rates. FEI advises that based on current rates, the amount is \$6.29.

<sup>59</sup> Note that this is accurate at the time of the IR response, but no longer reflects current rates. FEI advises that based on current rates, the amount is \$6.29.

|   |  |   |                         |                                     |
|---|--|---|-------------------------|-------------------------------------|
| <b>Rate Schedule 11B – on system</b>          | On-system interruptible sales rate for customers entering into a contract for the short-term sale and purchase of biomethane   | Bulk purchases of biomethane at a select volume amount for sales within FEI’s service territory     | BERC Rate               | N/A (only through high-end charges) |
| <b>Rate Schedule 30 / GasEDI – off system</b> | Off-system interruptible sales rate for customers entering into a contract for the short-term sale and purchase of natural gas | Bulk purchases of biomethane at a select volume amount for sales outside of FEI’s service territory | BERC Rate <sup>60</sup> | Rate Schedule 30/ GasEDI            |

46. FEI addresses its proposed changes to these Rate Schedules below.

**3.1.1 Higher Blends under Rate Schedules 1B, 2B and 3B**

47. FEI is seeking approval of amendments to Rate Schedules 1B, 2B and 3B that would give FEI the ability to offer blends of Biomethane in 10% increments from the existing 10% blend to 100% Biomethane.<sup>61</sup> The flexibility of different blends requires one change to FEI’s GT&Cs, with references to “pre-determined” percentages of Biomethane in Section 28.5 to be removed and replaced with the phrase “elected by the Customer and determined by FortisBC Energy.”<sup>62</sup>

48. As indicated in the table above, the current RNG Offering allows residential and commercial customers to designate 10% of their current gas consumption as renewable natural gas under Rate Schedules 1B, 2B and 3B. Leading with a single service consisting of a 10% blend of Biomethane allowed for tighter control over the number of

<sup>60</sup> FEI clarified in Exhibit B-19, BCUC IR 2.37.2, there would be a delivery charge the same as is applicable under Rate 27 for sales under Rate Schedule 30 and that Rate Schedule 30 does not currently require the sale of Biomethane at the BERC rate. As discussed in the response to BCUC IR 2.52.1, FEI is proposing to seek approval of the Commission before selling Biomethane at a discount under Rate Schedule 30.

<sup>61</sup> Exhibit B-17, BCUC IR 1.27.1.

<sup>62</sup> Exhibit B-1, pp. 45-46.

enrolments which was necessary given the limited supply in the first year.<sup>63</sup> While this 10% blend was useful to control demand in the initial stages of the Biomethane Program, this limitation on the RNG Service Offering is no longer necessary.

49. Primary research of existing residential and commercial subscribers indicates the following:<sup>64</sup>
- 66% of residential participants indicated that they would be interested in increasing their current blend.
  - Almost 20% of residential participants said they would subscribe for a blend as high as 50-100%.
  - 75% of commercial customers surveyed would be interested in increasing their blend from the current 10% offering.
50. A specific example of a customer wishing to purchase higher blends is UBC, for whom a 10% blend is not a viable option to meet their objectives.<sup>65</sup> Local governments may also wish to purchase higher blends of Biomethane to meet their GHG reduction targets.<sup>66</sup> For example, the City of Surrey has indicated a desire to move to 100% Biomethane supply for its contracted fleet of refuse and recycling trucks at 80,000 GJ/yr.<sup>67</sup> Limiting the RNG Offering to a 10% blend prevents such customers from fully using Biomethane to meet their needs.
51. The evidence is clear that customers are interested in purchasing higher percentage blends. Now that FEI has Biomethane supply being injected into the system and has experience with the level of demand, there is no longer any need to limit blends to 10%. FEI submits that its customers should be given the opportunity to purchase higher blends and maximize their participation under the program if they wish to do so.

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<sup>63</sup> Exhibit B-1, p. 29.

<sup>64</sup> Exhibit B-1, pp. 43-44 and Appendix E-1.

<sup>65</sup> Exhibit B-17, BCUC IR 1.42.6.2 and 1.42.6.2.1.

<sup>66</sup> Exhibit B-1, Section 2.1, pp. 16-17.

<sup>67</sup> Exhibit B-19, BCUC IR 2.25.3.1.

52. FEI can implement the offering of higher blends at a cost of \$14 to \$15.5 thousand. No additional costs for the customer care/call centre are anticipated.<sup>68</sup>
53. FEI submits that its proposal to offer different blends will safely and reliably expand the Biomethane Program, will meet customer demand for the commodity, and is just and reasonable. FEI therefore submits that its proposed changes to Rate Schedules 1B, 2B, and 3B and Section 28.6 of the GT&Cs, as shown in Appendix D-2 and D-3 of the 2012 Biomethane Application, should be approved.

### **3.1.2 Clarifying Amendments**

54. FEI also submits that its proposed clarifying amendments to the GT&Cs are just and reasonable and should be approved. These clarifying amendments are:<sup>69</sup>
- (a) FEI has changed the definition of Biomethane by adding the phrase “also referred to as renewable natural gas.”
  - (b) Section 28.6(d) of the GT&Cs has been updated to specify the Availability of Biomethane Service, subject to the availability specified in each rate schedule.
  - (c) Section 28.6(e), which describes the options for a customer should they move to a new premise where Biomethane Service remains available, has been clarified by changing the words “Service Area described above” to the words “the applicable rate schedule”.
  - (d) Amendments to Section 28.6(f) remove references to “conventional natural gas” and clarify that when a customer opts out of the RNG Offering, the applicable rate schedule to the customer would be determined at that time. This is important in case the characteristics of the customer have changed since opting in and out of the RNG Offering.

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<sup>68</sup> Exhibit B-17, BCUC IR 1.28.1 and 1.28.2.

<sup>69</sup> Exhibit B-1, Section 3.8, pp. 45 to 47.

55. FEI submits that these proposed changes are simple, not controversial, and should be approved as filed.

### **3.2 The Biomethane Supply Model**

56. The Biomethane Supply Model includes the criteria required for Biomethane supply contracts to satisfy the filing requirements in Sections 71(1)(a) and 71(1)(b) of the *Utilities Commission Act*, FEI's ability to purchase carbon offsets and recover the costs through the BVA in the event of under-supply of Biomethane, and FEI's ability to own upgrading facilities in certain circumstances.
57. FEI is seeking continuation of the approved Biomethane Supply Model with two changes to the supply criteria, including an increase in the supply cap and a change to the maximum purchase price. FEI addresses these modifications, as well as FEI's ability to own upgrading facilities, below.

#### **3.2.1 Supply Criteria**

58. An essential aspect of the Pilot Program is the approved criteria that future supply projects must meet to satisfy the Commission's filing requirements in Sections 71(1)(a) and 71(1)(b) of the *Utilities Commission Act*. The purpose of setting the criteria is to allow FEI to develop contracts that meet those criteria so that the contracts can be reviewed in a streamlined and efficient process. In the 2010 Biomethane Decision the Commission accepted the need for the streamlined process, stating at p.41:

“The Commission Panel accepts that there is a need for streamlining of the approval process as it is likely that many of the projects which will be proposed in the future will be small in size and subjecting them to rigorous scrutiny in each case would not be in the public interest.”

59. Since the 2012 Biomethane Decision, the energy supply contract for the City of Kelowna Landfill project<sup>70</sup> and the three recent Biomethane rates for Dicklands, Seabreeze and Earth Renu<sup>71</sup> were approved in accordance with the approved supply criteria.

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<sup>70</sup> Order No. E-19-12, dated October 23, 2012.

<sup>71</sup> Order No. G-79-13, dated May 14, 2013.



60. Establishing criteria for streamlined future review of projects remains appropriate and provides important benefits.
61. First, the criteria will allow for the safe, economic and timely development of additional Biomethane supply projects. Supply developers need assurance that their respective agreements can be accepted in a reasonable timeframe because they make financial investments before and during the regulatory process. The financial risk incurred by developers when they enter agreements in good faith is increased with time. Therefore a protracted review process is not acceptable for most project developers and will lead to increased costs for customers or missed opportunities for supply development.<sup>72</sup> Having criteria set in advance is therefore important so that FEI has the ability to enter negotiations with project proponents with advance knowledge of the Commission-endorsed parameters, which will allow projects to be reviewed and evaluated expeditiously and provide a measure of commercial certainty to project proponents.<sup>73</sup>
62. Second, establishing criteria in advance promotes regulatory efficiency. The Commission always retains the discretion to depart from the proposed criteria, and can require further process to address the public interest on a case-by-case basis as necessary. However, establishing criteria will permit a more efficient assessment of energy supply contracts going forward. Customers are the ultimate beneficiaries of an efficient process.<sup>74</sup>
63. FEI submits that the criteria established for the Pilot Program remain appropriate. The criteria adopted cover key risks associated with each supply contract. These key risks are the control of the interconnect point, the stability of FEI's partner, and the maximum purchase price. FEI has been able to negotiate supply contracts that meet these criteria and the Commission's approval of the contracts for the City of Kelowna Landfill, Dicklands, Seabreeze and Earth Renu projects shows that the criteria have also been acceptable to the Commission. In FEI's view, the criteria only need to be adjusted to

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<sup>72</sup> Exhibit B-1, p. 92.

<sup>73</sup> Exhibit B-19, BCUC IR 2.33.2.

<sup>74</sup> Exhibit B-19, BCUC IR 2.33.2.

allow for the expansion of the program. In particular, the supply cap needs to be increased to allow for supply to meet demand and the maximum purchase price needs to be modified. FEI addresses these two proposed modifications below.

### 3.2.1.2 Supply Cap

64. FEI proposes to increase the supply cap to 3 PJs.<sup>75</sup> FEI submits that the 3 PJ cap is a reasonable balance of future demand and potential supply and will improve FEI's ability to respond to both customer demand and project developers, while limiting the possibility of over supply.<sup>76</sup>
65. FEI's proposed supply cap is based on its evidence of supply and demand for Biomethane. FEI chose 3 PJs as a reasonable balance of the future demand, the potential supply it is confident it can acquire, and the need to limit the possibility of over-supply. FEI explained as follows:<sup>77</sup>

“On the demand side, FEI has forecast a total market demand of almost 4.0 PJs per year by 2017 (see Figure 4.1, Section 4.4 of the 2012 Application). FEI further refined the high demand scenario by assuming a 50 percent capture rate of emerging markets. The resulting forecast demand by 2017 is then approximately 1.3 PJs (see Figure 4.2, Section 4.4 of the 2012 Application).

On the supply side, FEI has experienced lower-than expected volumes from its existing supply contracts. To date, that volume has been approximately 60 percent of the expected volumes. Therefore, working backwards, FEI is requesting a supply cap that will cover any potential shortfall in future supply at a rate of 60 percent. The proposed cap of 3.0 PJs multiplied by 60 percent leaves a volume of 1.8 PJs. Given the uncertainty of future supply volumes and the timing of those supply volumes, FEI believes that it is reasonable to have a supply volume of 0.5 PJs available (1.8 PJs less 1.3 PJs) for future demand.

Also on the supply side, FEI has forecast a maximum supply potential of approximately 4.8 PJs (see figure 5-5, Section 5.8 of the 2012 Biomethane

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<sup>75</sup> Exhibit B-1, Section 6.5.1.

<sup>76</sup> For perspective, 3 PJs is approximately 2.5% of the total non-bypass customer volume: Exhibit B-17, BCUC IR 1.53.5.

<sup>77</sup> Exhibit B-17, BCUC IR 1.53.4.

Application). The analysis done by FEI to determine the maximum supply volume was not exhaustive (please also refer to the responses to BCSEA IRs 1.16.1 and 1.16.10).<sup>78</sup> FEI has also taken into consideration the risk of a potential shortfall in supply.

In summary, the 3.0 PJs supply cap balances the possibility of lower than expected supply with demand.”

66. As seen in the quote above, a key consideration is that experience has shown that it takes time for supply projects to ramp up production, so that a supply cap of 3 PJ, which would reflect the maximum supply under all supply contracts, would unlikely result in 3 PJ of actual production.
67. FEI’s proposed supply cap is in the public interest for a number of reasons.
68. First, FEI’s proposed supply cap will provide opportunities to develop new supply agreements more expeditiously. This will benefit the customers who want to participate in the Biomethane Program and the Province generally through the development of clean, renewable and innovative resources and the reduction of waste and GHG emissions.
69. The impact of a low cap has been felt during the term of the Pilot Program. The current supply cap limits FEI’s ability to negotiate contracts in a timely manner and may result in lost opportunities for new supply. FEI has experienced longer than anticipated times to finalize agreements with suppliers, making it difficult to project when supply will be available. Uncertainty regarding a continued volume cap has slowed contract development as other parties need time to understand how it may impact their respective projects.<sup>79</sup> For example, a supply cap could force FEI to accept only a portion of the volume of gas required by the developer to have a viable business case for the project. This would lead to a missed opportunity for new supply, which in turn limits the amount of Biomethane available for customers. Expansion of the supply cap as proposed will increase certainty for developers and simplify contract discussions. This in turn will help

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<sup>78</sup> Also see Exhibit B-21, BCSEA 2.33.1.

<sup>79</sup> Exhibit B-1, p. 89.

FEI enter into supply contracts more expeditiously and take advantage of the best available opportunities for customers.<sup>80</sup>

70. Second, the higher supply cap will allow FEI to negotiate supply for customers in emerging markets. The demand from emerging markets is typically driven by external policy requirements to lower GHG emissions or to meet corporate environmental objectives. Limitations on FEI's ability to secure supply will cripple FEI's ability to meet the needs of these significant customers, as well as their environmental objectives.<sup>81</sup>
71. For example, in the case of UBC, there is a perceived risk that FEI will not be able to fully supply Biomethane to meet its future demand. In order to develop this project, UBC needs certainty that more than 500,000 GJ of Biomethane will be available annually by the end of 2015. UBC has confirmed that it cannot proceed without RNG from FEI.<sup>82</sup> In this case, the availability of Biomethane is a critical component of the business case. Unless UBC is confident that FEI can meet its needs, it cannot enter into a long-term Biomethane purchase agreement.
72. Third, the increase in the supply cap will allow for a greater number and diversity of supply contracts which will improve reliability of supply and rate stability. For example, with only three suppliers, a single gap in supply due to a single supplier outage could account for a 47% shortfall in the total supply pool. The relative impact on the total amount of supply is reduced to approximately 14% once the four new contracts are added to the supply pool (including the GVS&DD project). FEI expects that further diversification of this supply (with additional projects) will improve its ability to provide reliable supply.<sup>83</sup>
73. Diversification of supply will also contribute to improved Biomethane rate stability. This rate stability will result from having multiple, long-term contracts. For example, when combined, the Earth Renu, Dicklands, Seabreeze agreements will result in a combined

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<sup>80</sup> Exhibit B-1, p. 89.

<sup>81</sup> Exhibit B-1, p. 90.

<sup>82</sup> Exhibit B-19, BCUC IR 2.28.3.

<sup>83</sup> Exhibit B-1, p. 90.

rate that will have a predictable slope for at least ten years. Likewise, more projects with long-term agreements will prolong this effect.<sup>84</sup>

74. Fourth, the proposed supply cap of 3 PJ imposes a high-level limit on FEI's ability to contract for new supply and therefore limits over-supply risk for customers. This cap is reasonable considering the forecast demand.<sup>85</sup>
75. In summary, the increase in the supply cap will provide opportunities to develop new agreements more expeditiously, meet demand from customers, improve supply reliability, and provide Biomethane rate stability. At the same time, continuation of a cap will continue to limit over-supply risk and represents a measured approach to expanding the Biomethane Program. FEI therefore submits that its proposed supply cap of 3 PJ should be approved.

### **3.2.1.3 Maximum Purchase Price**

76. FEI's proposal for adjustment to the maximum purchase price is set out in Exhibit B-1-1, Confidential Appendix J-3 to the 2012 Biomethane Application. FEI has sought to keep the proposed adjustments confidential so that it will be able to negotiate the best price for supply for Biomethane customers.
77. The maximum purchase price for the Pilot Program was based on BC Hydro's Residential Inclining Block (RIB) step two rate. FEI explained the rationale for this approach as follows:<sup>86</sup>
- Biomethane is in the early stages of development as a new renewable energy resource and there is no established market price or other public benchmark for Biomethane to use in setting the price.
  - The RIB Step 2 rate is a proxy for the price signal that residential energy consumers in BC are facing with respect to the cost of renewable energy. This is deduced from the fact that the RIB Step 2 rate is derived from BC Hydro's marginal cost of new electricity supply and that BC Hydro's recent

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<sup>84</sup> Exhibit B-1, p. 90.

<sup>85</sup> Exhibit B-1, p. 90.

<sup>86</sup> Exhibit B-17, BCUC IR 1.49.3.

calls for power, from which the marginal supply cost is derived, have been for clean and renewable power.

- The RIB Step 2 rate is publicly available and approved by the Commission. Even if the RIB Step 2 price resetting process involves a phase-in to a new level for the marginal supply cost it is still the competitive price signal being experienced by residential energy consumers with respect to the cost of new and renewable resources.

78. While this rationale continues to apply, FEI is not proposing to revise the maximum purchase price to \$19.48/GJ (as derived from the current RIB Step 2 rate)<sup>87</sup> because the current price has been sufficient to obtain supply. A maximum price at that level would therefore unnecessarily increase the overall cost of Biomethane to customers. FEI is confident that it can succeed in attracting new Biomethane supply contracts without having to raise the Biomethane maximum price to the level implied by the current RIB Step 2 rate.

79. In response to information requests, FEI clarified its view on how the maximum purchase price criteria would be applied:

- (a) Where FEI owns and operates the upgrader, the sum of the biogas price under the agreement plus the levelized cost of service over the life of the upgrader should not exceed the maximum supply price.<sup>88</sup>
- (b) At the time of initial approval of any contract, the current BCUC approved maximum rate is used to evaluate the Biomethane price.<sup>89</sup>
- (c) Over time, the price should be compared to the approved rate at that point in time. This would allow the price FEI pays for Biomethane to increase in accordance with the price escalation clause in the contracts.<sup>90</sup>

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<sup>87</sup> Exhibit B-17, BCUC IR 1.49.2.

<sup>88</sup> Exhibit B-19, BCUC IR 2.33.4.1 and 2.33.4.2.

<sup>89</sup> Exhibit B-19, BCUC IR 2.33.4.3.1.

<sup>90</sup> Exhibit B-19, BCUC IR 2.33.4.2 and 2.33.4.3.1.

- (d) At all times, FEI will ensure that the price it pays is below the current or any future maximum approved Biomethane price as a matter of course in the monitoring of its Biomethane contracts.<sup>91</sup>
80. Alternatives to FEI's maximum price such as a fixed price/standing offer or competitive bidding are not preferable at this time for a variety of reasons. Most importantly, these alternatives are better suited to a market situation where there are many potential supply projects that could be developed at the same time. The present situation with respect to supply projects is one where there is a very limited number of suppliers and where each project faces its own hurdles with respect to proceeding to completion.
81. Individual negotiations as conducted to date provide an effective and relatively flexible means to support such projects to successful completion. The existing process has also proven to result in rates below the maximum price, can be administered easily by existing staff and is a low cost option.<sup>92</sup>
82. It would be particularly undesirable to subject the existing known supply options with the City of Vancouver and the City of Surrey to a call process. Given that the City of Vancouver and City of Surrey have already indicated their intent to move forward with their projects, a call process would add unnecessarily time and cost to the development of these supply options.<sup>93</sup>
83. FEI relies on its confidentially filed materials<sup>94</sup> in support of its proposed change to the maximum purchase price and submits that it should be approved.

### **3.2.2 Ownership of Upgrading Facilities**

84. As set out in the 2012 Biomethane Application FEI proposes to continue the current ownership model where FEI may or may not own the upgrading facilities required for a

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<sup>91</sup> Exhibit B-19, BCUC IR 2.33.4.2.

<sup>92</sup> Exhibit B-17, BCUC IR 1.49.3 and 1.49.5 and 1.55.2.1.

<sup>93</sup> Exhibit B-17, BCUC IR 1.55.3 and 1.55.4.

<sup>94</sup> Exhibit B-1-1, confidential Appendix J-3 to the 2012 Biomethane Application; Exhibit B-17-1, FEI Confidential Response to BCUC IR No. 1.

Biomethane supply project.<sup>95</sup> FEI's consistent position has been that ownership of the upgrading facilities is sometimes necessary to secure supply for its customers, ensure a consistent and reliable supply of Biomethane, and provide a signal to the market that Biomethane projects can be undertaken with confidence by other project developers.

85. Based upon existing and currently proposed projects, FEI believes that it is more likely to own upgrading facilities when there is a municipal or regional government involved as a partner. In these cases, the partner may have limited internal competence in operating process equipment (such as at landfills) and the motivation for the project is not purely profit driven. In contrast, independent project developers prefer to own upgrading facilities. In these cases the supplier has either a strong operational background with process equipment or wants an opportunity to maximize profit.<sup>96</sup>
86. In the following subsections responds to the recommendations of the AES Inquiry Report and submits that it should be permitted to own and operate upgrading facility in the situations described above.

### **3.2.2.1 AES Inquiry Report**

87. Subsequent to the filing of the 2012 Biomethane Application, the AES Inquiry Report was issued. The AES Inquiry Report recommended that FEI not own upgrading facilities where there are viable options. The AES Inquiry Report states (at p. 49):

“With respect to FEU ownership of upgrader facilities, the Commission Panel, in keeping with the Extension of Ownership principle, recommends that the utility not own the upgrading facilities where there are viable options. A viable option is put forward by the FEU where biomethane is supplied from third parties and is regulated through filing supply contracts under section 71 of the UCA. In the case where FEU own the upgrader, the upgrader should be owned and operated in a Regulated Affiliated Business and biogas supplied to FEI under a section 71 contract.”

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<sup>95</sup> Exhibit B-1, Sections 6.2 and 6.3.

<sup>96</sup> Exhibit B-1, pp. 86-87.



88. The extension of ownership principle referenced above also left open the possibility of ownership in exceptional circumstances. The principle was stated in the AES Inquiry Report as follows:<sup>97</sup>

“The ownership of facilities by a regulated utility outside of the bounds of the traditional gas distribution utility is not recommended where there are viable alternative options and should only be allowed in exceptional circumstances, or where required by legislation.”

89. The Commission’s discussion on this principle indicated that the concern was cross-subsidization and again indicated the possibility of an exception in extenuating circumstances. The discussion was as follows:<sup>98</sup>

“As discussed earlier, cross-subsidization by the traditional utility ratepayer is an issue in this Proceeding. Therefore, to reduce the likelihood of cross-subsidization, the Panel finds that ownership of facilities by a utility outside the bounds of the traditional utility system should not be allowed unless there are extenuating circumstances that make such ownership in the public interest. The onus is on the utility to prove that such extenuating circumstances exist.”

90. FEI’s position on the ownership of upgrading facilities generally fits within the recommendation of the AES Inquiry Report, as FEI is only expecting to own upgrading facilities in certain exceptional circumstances. FEI explains these circumstances further below and why it is in the public interest for FEI to own the upgrader in these circumstances.

### **3.2.2.2 Exceptional Circumstances for Owning and Operating Upgrading Facilities**

91. FEI submits that it is in the public interest for it to own and operate upgrading facilities in cases where the partnership is with a regional or municipal government. The evidence suggests that this will usually be in the case of landfill projects.

92. FEI has direct experience with two cases where ownership of upgrading facilities was necessary to ensure that Biomethane supply was developed for its customers. At both the Salmon Arm Landfill and the Kelowna Landfill, FEI ownership of the upgrader provided

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<sup>97</sup> AES Inquiry Report, p. 32.

<sup>98</sup> AES Inquiry Report, p. 32.

an opportunity to supply Biomethane to its customers that would not have otherwise been available.<sup>99</sup>

- (a) In the case of the Salmon Arm Landfill, the CSRD indicated that a partnership with FEI would ensure that the landfill gas was fully utilized rather than flared at site. By owning and operating the upgrader, FEI was able to use the landfill gas to make Biomethane available to its customers.
- (b) The City of Kelowna approached FEI directly about developing a project at its landfill with the intention of utilizing its landfill gas beneficially. In this case, the City of Kelowna indicated that the absence of a partnership with FEI would have resulted in an electricity project rather than a Biomethane project, thereby missing the opportunity to supply Biomethane to FEI customers. In addition, the evidence is clear that Biomethane is a more cost-effective option than electricity option.<sup>100</sup>

93. An example of a future project where FEI may own the upgrading facilities is with the City of Vancouver, which has filed evidence in this proceeding<sup>101</sup> and responded to IRs from the Commission and intervenors.<sup>102</sup> The City of Vancouver states that timely implementation of FEI's proposed program modifications will ensure that the City of Vancouver and other municipalities have a mechanism to make beneficial use of otherwise wasted landfill gas ("LFG") resources. The City explained that it is currently capturing almost 60% of the LFG from the Vancouver Landfill in Delta, B.C. A portion of the captured LFG is sold to Maxim Power Corp. ("Maxim"), but Maxim has no further capacity for LFG.<sup>103</sup> The City describes five important benefits that partnering with FEI will offer.<sup>104</sup> Significantly, the City of Vancouver states:

“Without a commitment for external capital investment from FEI, it is very unlikely that City will be able to move beyond supplying LFG to Maxim and

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<sup>99</sup> Exhibit B-1, p. 85.

<sup>100</sup> Exhibit B-1, p. 77; Exhibit B-20, CEC IR 2.29.3 and 2.30.6.

<sup>101</sup> Exhibit C7-3.

<sup>102</sup> Exhibit C7-4 to 6.

<sup>103</sup> Exhibit C7-4, BCSEA 3.1.

<sup>104</sup> Exhibit C7-3, pp. 1-2.

flaring of the remaining LFG to meet government regulations. In our opinion this would be a wasted opportunity and a lost benefit to the City and the region”.<sup>105</sup>

94. The City of Vancouver project is therefore consistent with FEI’s experience with the CSRD and the City of Kelowna projects.
95. The trend appears to be that it is more likely that FEI would own upgraders in cases where the regional or municipal government owns and operates a landfill. In these cases, FEI believes that municipal or regional governments have some comfort with FEI as a regulated utility and believe that FEI staff is better qualified to manage upgrading facilities. FEI has demonstrated experience with natural gas equipment and pipelines, whereas typical landfill operations are run by staff with skills in earth moving and landfill management. Regional and municipal governments also attach some value to participating in Biomethane projects and collaborating with an organization like FortisBC as a means to do so. The revenues seem to have less bearing on the final agreement provided there is at least a break-even.<sup>106</sup>
96. This is in contrast to digester projects developed by farms or entrepreneurs, the overriding factors for whom seem to be control of the assets and opportunity to earn revenue. These project developers seem to prefer higher revenues associated with Biomethane sales even though it comes with an associated larger capital investment.
97. In addition, if the regional and municipal projects were developed by independent developers, it is likely that the addition of another party between FEI and the landfill owner would increase the final price of Biomethane. In the case of its two landfills where FEI owns the upgrader, FEI has seen that the final price of Biomethane is lower than that of the Biomethane purchased from independent developers.<sup>107</sup> The City of Vancouver has confirmed that it believes that FEI is correct in these statements.<sup>108</sup>

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<sup>105</sup> Exhibit C7-3, p. 2.

<sup>106</sup> Exhibit B-17, BCUC IR 1.50.1.

<sup>107</sup> Exhibit B-17, BCUC IR 1.50.2; Exhibit B-15, CEC IRs 1.24.2 and 1.24.2.

<sup>108</sup> Exhibit C7-4, BCSEA 1.3.

98. In cases such as these, FEI submits that it is in the public interest, and consistent with the recommendations of the AES Inquiry Report, for FEI to own the upgrading facilities. In these cases of partnership with regional or municipal governments that own and operate a landfill, FEI's partnership may be the difference between the resource being wasted or used for Biomethane. FEI's partnership in these cases will also help keep the final price of Biomethane lower for FEI's customers. FEI therefore submits that there are exceptional circumstances in these cases that justify FEI owning and operating the upgrading facilities.
99. The AES Inquiry Report recommends that where FEI owns the upgrading facility, that it be owned by a regulated affiliate, but makes it clear that the utility may prove that extenuating circumstances exist to justify a variation from this recommendation. FEI submits that extenuating circumstances exist in this case and that it should be permitted to own the upgrading facilities rather than an affiliate.
100. FEI has indicated that a regulated affiliate could own the facility, but that it would only serve to increase costs for Biomethane customers:<sup>109</sup>

“FEI can arrange for a regulated affiliate, such as FAES, to own the upgrader. In the event that regulated affiliate owned the upgrader, a contract would need to be established and administered as a result of the need to use the FEI distribution system to receive the biomethane. The establishment and ongoing administration of the contract would add cost and administrative burden, which would raise the cost of RNG for customers.

...

Since there will likely be relatively few expected future projects where FEI may own the upgrader, FEI believes that it would be more practical to keep the upgraders within FEI. This will avoid the costs and administrative burden of having the upgraders in a separate entity with contractual arrangements with FEI. Allowing the upgraders to remain in FEI would therefore result in lower rates for biomethane customers. Tracking the costs separately as required by the previous Commission Orders approving the two existing FEI-owned upgraders will allow any costs of ownership to be

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<sup>109</sup> Exhibit B-17, BCUC IR 1.51.1.

tracked and recovered appropriately from RNG customers through the BERC rate”.

101. Thus, from FEI’s customers’ perspective, leaving ownership within FEI is preferable as it would minimize costs and thereby reduce the costs of Biomethane. In FEI’s submission, the interests of its customers must be the principle factor in the Commission’s analysis.
102. FEI also submits that there is no competing public interest rationale for having an affiliate own the upgrading facilities. The concern in the AES Inquiry Report with FEI owning upgrading facilities was cross-subsidization. However, in the exceptional cases where FEI would own the Biomethane upgrading facilities, cross-subsidization should not raise any concerns and it is not clear to FEI who would be protected by imposing this additional regulatory burden. In these cases, forcing FEI’s affiliate to own the upgrading facility would not protect any competitive or potentially competitive market, but would have the sole effect of increasing costs for FEI’s Biomethane customers. To be clear, forcing FEI’s affiliate to own the upgrading facilities would not lower the cost for the suppliers, who would receive the same deal in either case, and would therefore have no impact on FEI’s competitive position. Instead, the extra administrative costs of having FEI’s affiliate own the upgrading facility would be passed on to FEI’s Biomethane customers. FEI submits that there is no public interest benefit flowing from this result.
103. Finally, the primary rationale for the Biomethane Program is government policy to develop clean, renewable and innovative resources, to reduce waste and to reduce GHG emissions, which is in the interest of the entire Province.<sup>110</sup> These same policies are driving regional and municipal governments to make the most of their landfill resources, reduce waste and meet GHG reduction targets. FEI submits that it advances these same policies to keep the price of Biomethane as reasonable as possible to foster the development of the Biomethane Program in the Province. Having FEI own the upgrader in the particular circumstances would serve that function, and therefore is preferable from a public policy perspective.

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<sup>110</sup> Exhibit B-1, Section 1.

104. FEI submits that in the particular circumstances of regional and municipal governments the circumstances are such that it is in the public interest for FEI to own and operate the upgrading facilities. FEI therefore submits that the Commission should make an exception to the extension of ownership principle articulated in the AES Inquiry Report and allow FEI to own and operate upgrading facilities in the identified circumstances.

### **3.3 The Cost Allocation and Recovery Model:**

105. FEI is seeking to continue the Cost Allocation and Recovery Model approved for the Pilot Program with the addition of an interconnection test and the MCRA cost-recovery mechanism. In the following Sections, FEI addresses the consistency of this model with the AES Inquiry Report, why it is just and reasonable to continue to recover certain costs from all customers and then FEI's proposed modifications.

#### **3.3.1 Consistency with AES Inquiry Report**

106. The AES Inquiry Report issued after the filing of the 2012 Biomethane Application confirms the appropriateness of the Cost Allocation and Recovery Model in several respects.
107. First, the AES Inquiry Report has confirmed that Biomethane service is part of FEI's regulated service offering and that Biomethane service is appropriately considered a Separate Class of Customer within the natural gas class of service.<sup>111</sup> This confirms that Biomethane customers should be treated the same as all other customers within FEI's natural gas class of customers.
108. Second, the AES Inquiry Report recommends that detailed cost allocation decisions take into account the Principle and Guidelines on cost allocation set out in Section 2.4<sup>112</sup>. As indicated below, the cost allocation model is consistent with the principle and guidelines.

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<sup>111</sup> AES Inquiry Report, p. 46.

<sup>112</sup> AES Inquiry Report, p. 47.

109. Section 2.4 of the AES Inquiry Report states that the “Key Principle” is: “The basis of cost allocation is cost causality.” The Commission’s discussion and determination in Section 2.4 indicates that the principle of cost causation as applied to services using an existing class of service (such as the Biomethane service) does not suggest any significant changes to the Commission’s existing practices. The AES Inquiry Report states:<sup>113</sup>

“For new products or services using an existing class of service, FEU argue that allocation of costs among different customer groups within the utility is a matter of rate design. FEU state that the fundamental test in rate design as mandated by the UCA is that rates must not be unduly discriminatory or preferential. Imbedded within this is the principle of “cost causality” with the provision that those causing costs should be responsible for them. (FEU Final Submission, p. 41).

The Panel does not believe that the principle of cost causality suggests any significant change to the practices that have been consistently followed by the Commission. The aim of this principle is to have customers bear the share of costs that are attributable to their service, to prevent cross-subsidization among customer groups”.

110. Thus, the principle of cost causation simply requires the Commission to apply its existing practices to the allocation of costs to the Biomethane Program.

111. The Guidelines set out in Section 2.4 relate primarily to new business activities through a regulated or non-regulated affiliated business or separate class of service. However, two of the guidelines appear to apply to the Biomethane service, namely:<sup>114</sup>

- There should be transparency in cost allocation among different customer groups.
- All proposals for new business activities must be accompanied by a clear and concise description of the planned cost allocation methodology.

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<sup>113</sup> AES Inquiry Report, p. 34.

<sup>114</sup> AES Inquiry Report, p. 33.

112. FEI submits that the allocation methodology approved for the Pilot Program and proposed by FEI in 2012 Biomethane Application satisfies the key principle and guidelines in the AES Inquiry Report, and continues to be appropriate.
113. In particular, FEI submits it is just and reasonable that the interconnection, education and Biomethane Program Manager costs continue to be allocated to all non-bypass customers. There are number of reasons for this, as discussed below.
- (a) The costs allocated to all customers are those required to make the service available to all customers and, as such, it follows as a matter of cost causation that they be recovered from all customers. It is fair that the costs of making the program available and providing every customer with the choice of taking the service, be borne by all customers who are given that benefit. This is consistent with the Commission's existing practices of having all customers pay the costs of making services available, such as with the Customer Choice program.<sup>115</sup> Another example is FEI's Energy Efficiency and Conservation program, the costs of which are recovered from all customers.<sup>116</sup>
- (b) The costs of making the service available should also be borne by all customers since the program has the effect of attracting and retaining customers on the system.<sup>117</sup> The 2010 Biomethane Decision recognized this fact. The Commission stated:<sup>118</sup>

The Commission Panel is cognizant of the new post CEA environment which is challenging TGI to innovate and adapt its utility service model. In this regard, the Commission Panel agrees with Terasen and the CEC that it is in the long term interest of all Terasen utility customers that new initiatives contribute to retention and the addition of throughput in the system, which will result in system costs

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<sup>115</sup> Exhibit B-1, p. 121.

<sup>116</sup> See, e.g., the Commission's Decision regarding the FortisBC Energy Utilities 2012-2013 Revenue Requirements Application, dated April 12, 2012, Section 8.0.

<sup>117</sup> Exhibit B-17, BCUC IR 2.13.2.

<sup>118</sup> At page 51.



being spread over a larger base. The Commission Panel also notes the dual role of the Commission in balancing the interests of ratepayers and the utility.

**It is in this context that the Commission Panel approves the cost allocation methodology proposed by Terasen Gas for the test period as just and reasonable.**

FEI submits that this conclusion is still true today and that it is in long-term interest of FEI's customers that FEI be offering Biomethane service that will contribute to customer retention and additional throughput. For instance, if FEI does not provide its customers with low carbon product offerings, some customers may migrate over time to other energy products such as electrical base board heaters. This would lead to loss of system load and increase delivery costs to remaining customers.<sup>119</sup>

- (c) The Biomethane Program is being undertaken to achieve government policy to develop clean, renewable and innovative resources, to reduce waste and to reduce GHG emissions.<sup>120</sup> As this is a provincial policy which provides a benefit to all customers, it is appropriate for all customers to pay for the cost of making the service available.
- (d) Allocating these costs to all non-bypass customers helps keep the price of Biomethane at current reasonable levels, which have proven to be successful to date and on which the Pilot Program was based. FEI's research has shown that price is the largest point of contention and barrier for the RNG program.<sup>121</sup> If, for example, suppliers must recover their interconnection costs in the price they charge to FEI for Biomethane, this would add a significant amount to the cost of Biomethane, in the order of \$3 per GJ, which can be expected to reduce adoption rates. On the other hand, recovery of these costs from all FEI non-bypass

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<sup>119</sup> Exhibit B-17, BCUC IR 1.60.4.

<sup>120</sup> Exhibit B-1, Section 2.

<sup>121</sup> Exhibit B-19, BCUC IR 2.12.2.

customers the cost is relatively insignificant at \$0.002/GJ.<sup>122</sup> Given that the Biomethane Program advances government policy to the benefit of the entire province, it is in the public interest for the price of Biomethane to remain reasonable so that the program can succeed. This in turn promotes the development of the user-pay aspect of the program which minimizes the costs all customers ultimately may bear.

- (e) A large proportion of customers are open to a universal price model borne by all customers for the Biomethane Program.<sup>123</sup> This indicates that there is customer support for allocation of costs to all non-bypass customers.
- (f) This approach is consistent with the cost allocation approach for the electricity supply model, such as where BC Hydro incorporates its costs of clean electricity projects into its overall supply portfolio.<sup>124</sup>

114. FEI also submits that the potential opposing view, that all costs of the Biomethane Program be borne by Biomethane Customers, does not accord with the principle of cost causation and would not be in the public interest. It would be unfair for Biomethane customers to pay the costs of educating non-participants of the program and bear the entire cost of making the program available to all customers. Furthermore, those who sign up for the program are not the sole cause of the program and are not the sole recipients of its benefits. As FEI has emphasized, the Biomethane Program advances the objectives of developing clean renewable sources of energy, reducing waste and reducing GHG emissions. These objectives have been legislated in the *Clean Energy Act*, and, more generally, are policy objectives of the Province's elected government, as well as elected local governments, which are designed to benefit all customers. It is therefore in the public interest for all customers to bear some costs of this program.

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<sup>122</sup> Exhibit B-17, BCUC IR 1.61.6.

<sup>123</sup> Exhibit B-1, Section 8, pp. 117-118.

<sup>124</sup> Exhibit B-1, p. 121. Note that interconnection costs of IPPs, e.g., are incorporated into the costs borne by customers. See Exhibit B-17, BCUC IR 1.61.1.

115. Furthermore, shifting more costs to Biomethane customers would increase the BERC rate,<sup>125</sup> dampening demand for Biomethane and threatening the viability of the user-pay model.<sup>126</sup> As noted above, FEI's research has shown that price is the largest point of contention and barrier for the RNG program.<sup>127</sup> FEI submits that this could jeopardize the program and the advancement of public policy, which cannot be in the public interest.<sup>128</sup>
116. FEI therefore submits that its cost allocation model is consistent with the Commission's existing cost allocation approaches, is just and reasonable, is in the public interest, and should be approved.

### **3.3.2 Proposed Modifications**

117. FEI is seeking two modifications to the cost allocation model: approval of an interconnection test and approval of a MCRA cost-recovery mechanism. These modifications are addressed below along with FEI's proposal to update the BERC rate.

#### **3.3.2.1 Interconnection Test**

118. FEI has proposed an interconnection test that would impose a cap on the level of investment FEI will make on interconnection facilities for future supply projects set at \$1.50 / GJ average capital cost, based on a 20 year volume forecast, with the remainder of the cost of the interconnection to be funded by a CIAC from the supplier.<sup>129</sup>
119. While FEI has proposed an interconnection test in response to Commission concerns, FEI submits that the costs of interconnection facilities in principle should be borne by all customers. FEI discusses this point before turning to its proposed interconnection test below.

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<sup>125</sup> See Exhibit B-19, BCUC IR 2.21 for a series of examples of impacts to the BERC rate.

<sup>126</sup> Exhibit B-19, BCUC IR 2.36.1.

<sup>127</sup> Exhibit B-19, BCUC IR 2.12.2.

<sup>128</sup> E.g., Exhibit B-17, BCUC IR 1.61.3.1.

<sup>129</sup> Exhibit B-19, BCUC IR 2.34.1.

### **Interconnection Costs Should be Borne by All Customers**

120. FEI submits that in principle all interconnection costs should be borne by all customers. In this regard, FEI relies on its submission set out in Section 3.1.1 above, but also adds the following that applies to interconnection costs in particular.

121. It is important to clarify exactly which interconnection pipe is being referred to. In this respect, FEI notes the following facts:<sup>130</sup>

- The interconnection facilities in question are downstream of the receipt point. Where a third-party owns the upgrading facility, the third-party is responsible for the pipe from the upgrader to the receipt point. FEI would only own the pipe from the upgrader to the receipt point when FEI also owns the upgrading facility.
- In all cases FEI owns and operates the necessary interconnection facilities that are downstream of the receipt point.
- As a safety matter, FEI seeks to have the interconnection station, including the point and odorizing equipment, close to the upgrading facility to minimize the distance of pipe through which unodorized gas is passing.
- This is the same arrangement that FEI has with the interconnection facilities from interprovincial pipelines.
- FEI interconnection facilities for Biomethane supply serves the same function as interconnection facilities from interprovincial pipelines, namely: to measure and control the flow of gas onto the system; to add odorant to the gas; and to take the gas via pipeline to FEI's system.
- These facilities, whether they are located at pipeline interconnections or at Biomethane supply points, are required for all FEI customers to receive pipeline quality gas that can be consumed by customers' gas appliances. Whether it is conventional natural gas or renewable natural gas does not alter the purpose or character of the facilities downstream of the receipt point.

122. As noted above, FEI's Biomethane interconnection facilities are similar to and serve the same function as connections to interprovincial pipelines. The AES Inquiry Report recognized the similarity between these classes of assets where it states that "neither

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<sup>130</sup> Exhibit B-1, p. 122; Exhibit B-5, p. 5.

biomethane upgraders nor the pipe connecting them to the traditional distribution utility are extensions of the utility system as contemplated in subsections 45(1) and (2) of the *UCA*. These pipes are a connection to a new source of supply similar to connections to interprovincial pipelines.”<sup>131</sup> Significantly, the costs of interconnections to interprovincial pipelines are recovered from all customers.<sup>132</sup>

123. FEI submits that the interconnection facilities for Biomethane gas supply should be treated no differently than interconnections to interprovincial pipelines for conventional natural gas supply. As noted above, FEI also relies on the reasons expressed in section 3.1.1 above regarding the recovery of costs from all customers.

### **Proposed Interconnection Test**

124. FEI’s position on the applicability of an interconnection test for Biomethane supply projects has evolved over the course of the proceeding. While FEI explored the potential for such a test in the 2012 Biomethane Application,<sup>133</sup> FEI did not propose that one be applied at that time. In the first round of information requests, FEI maintained its position that interconnection costs should be borne by all customers, but expressed that it was open to the possibility of an interconnection test. In the second round of information requests, FEI developed a test which it believes would be appropriate to apply, indicating that it recognizes the concern that there should be a limit on the amount of interconnect facility costs that FEI will invest in to allow Biomethane supply to enter the distribution system.
125. FEI set out the proposed interconnection test as follows:<sup>134</sup>

“On the basis that the interconnection costs of existing supply projects have been reasonable and accepted by the Commission, FEI would propose using the current maximum \$/GJ of the accepted projects as a threshold for interconnection costs for future projects. FEI’s response to CEC IR 1.23.1

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<sup>131</sup> At page 47.

<sup>132</sup> Exhibit B-5, p. 5.

<sup>133</sup> Exhibit B-1, Section 6.5.2.

<sup>134</sup> Exhibit B-19, BCUC 2.34.1.

indicates that the average capital cost for interconnection facilities per GJ (for 20 year volume) ranged from \$0.34 per GJ to \$1.48 per GJ.

FEI therefore proposes that a \$1.50/GJ average capital cost, based on a 20 year volume forecast, be used to set a cap on the level of investment FEI will make on interconnection facilities for future supply projects.

Under this proposed test, in those instances in the future when a new prospective supplier wishes to supply biomethane and the average cost of the interconnection facilities exceeds the \$1.50/GJ, the supplier would be required to make a CIAC such that the net average capital cost is equal to \$1.50/GJ. FEI would apply the same test to projects where it owns upgraders by looking at the costs associated with the interconnection of those projects.

If a new supplier was required to provide a CIAC, it is anticipated the supplier would attempt to recover the cost of the contribution amount through the supply agreement price. To the extent that the contribution amount was being recovered in the supply agreement price, this would be embedded in the BVA and recovered through the BERC rate from biomethane customers. FEI would not need to make any adjustments to charge the BVA as the CIAC would offset the excessive interconnect facility costs.

The ability for the supplier to recover its CIAC in the supply agreement price would be limited by the maximum price for biomethane set by the Commission. The result may be that some biomethane supply projects cannot proceed because the contribution required from the supplier is too high to be accommodated within the maximum purchase price. In other cases, project developers may be unwilling to pay a contribution”.

126. There are a number of benefits of this approach:

- (a) Setting an appropriate limit should provide comfort to the Commission that the extent of interconnection costs that will be recovered from all customers is reasonable.
- (b) The maximum purchase price would continue to ensure that the price for Biomethane customers was not too high.
- (c) Since the test is based on the cost of the interconnection facilities for existing projects, FEI believes this approach would be seen as fair and equitable for new prospective suppliers.

- (d) The test is simple to administer and easy for prospective suppliers to apply to their planning for the sizing of facilities, costs and volume deliverability.
127. The tradeoffs of achieving these benefits are twofold. First, the BERC may be higher in the future than it might otherwise be. Second, the development of Biomethane supply may be constrained in the future if suppliers are unwilling to move forward due to the contribution. However, these disadvantages are lessened by the fact that, based on the current list of prospective suppliers for Biomethane, FEI does not foresee any CIAC requirement having to be made under this test.<sup>135</sup>
128. FEI submits that overall the benefits of the interconnection test outweigh the disadvantages, and that the test should be approved.

### **3.3.2.2 MCRA Cost Recovery Mechanism**

129. FEI is requesting that the Commission approve a MCRA cost recovery mechanism as a final method for the cost recovery of Biomethane that cannot be sold at the BERC rate.<sup>136</sup> The essential purpose of the cost recovery mechanism is to provide certainty with respect to what would happen to balances in the BVA that cannot be sold at the BERC rate.
130. FEI has refined its proposed MCRA cost recovery process in its response to BCUC IR 1.70.3.1 in Exhibit B-17 and BCUC IR 2.52.1 in Exhibit B-19. In the following Sections, FEI explains when it proposes to use the mechanism, how the mechanism would work, any why it is just and reasonable.

### **When FEI would use the Mechanism**

131. A key feature of FEI's MCRA cost recovery mechanism is that it is a mitigation measure of last resort. Before utilizing the mechanisms, FEI will make every effort to sell all Biomethane at the BERC rate through existing sales channels to mitigate the risk of moving any balances from the BVA to the MCRA. These channels include sales to the

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<sup>135</sup> Exhibit B-19, BCUC 2.34.1. Note that FEI already takes the approach of minimizing the amount of pipe required to connect a supply project (Exhibit B-19, BCUC IR 2.31.3).

<sup>136</sup> Exhibit B-1, Section 8.2.2.1.

residential and commercial sectors and emerging markets, and the on and off-system sale to customers such as WesPac as discussed in Section 8.2.2 of the 2012 Biomethane Application and in Section 4.9 below. FEI, in fact, does not anticipate having to utilize the MCRA mechanism due to the forecast demand for Biomethane and its over-supply risk mitigation measures.<sup>137</sup>

132. FEI intends to maintain a suitable “bank” or inventory in order to meet customer demand in the short term and manage risk associated with supplier failure. Renewable natural gas sales do not have a defined protocol or time limit in Canada, so at this time there is no strict time limit on how long inventory may sit in the BVA. (Please refer to the response to BCUC IR1.64.1 for further details.)<sup>138</sup>
133. While there is no strict time limit on the inventory in the BVA, FEI would generally consider the volume of unsold Biomethane to be unmanageable when FEI has large volumes of unsold Biomethane for a period of time in its current portfolio with no large volume buyer commitments in the near term. By looking at certain industry timeline standards as explained in the response to BCUC IR 1.64.1, FEI currently believes holding a cumulative inventory in excess of 250,000 GJ for a consecutive 24 month period would be considered unmanageable.<sup>139</sup>

### **How the Mechanism Would Work**

134. In the event FEI determines it has unmanageable inventory of Biomethane that it is unable to sell through any channels at the BERC rate, FEI would first seek to mitigate the loss on the sale of Biomethane by selling the Biomethane at a price lower than the BERC, but higher than the cost of conventional natural gas.<sup>140</sup> FEI would seek Commission approval of any proposals to sell Biomethane volumes at a discount under Rate Schedule 30 or other such agreement. FEI would request that, upon approval, that the sale and loss on sale would be booked into the BVA and that the loss be transferred to the MCRA for

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<sup>137</sup> Exhibit B-17, BCUC IR 1.70.3.1.

<sup>138</sup> Exhibit B-17, BCUC IR 1.70.3.1.

<sup>139</sup> Exhibit B-17, BCUC IR 1.70.3.1.

<sup>140</sup> Exhibit B-17, BCUC IR 1.70.3.1.



recovery from core customers. Once transferred to the MCRA, FEI proposes that the balance be recovered from core customers through midstream rates in the ordinary course.<sup>141</sup>

135. As the timing of the application would be driven by the timing of the discounted sale, FEI would file the application separately from its quarterly gas reports. FEI's application to the Commission would describe the actions it has taken to sell the Biomethane at the BERC rate and at a discounted price, and why FEI has concluded that the balance it is seeking to transfer to the MCRA is otherwise not recoverable.<sup>142</sup> Depending on the nature of the sale, FEI may have to request an expedited review process to accommodate the transaction.<sup>143</sup>
136. FEI submits that this process would be fully transparent and allow for Commission oversight and approval of all rate impacts to the MCRA.

#### **Why the Mechanism is Just and Reasonable**

137. FEI's submits that its proposed MCRA cost recovery mechanism is just and reasonable and that there are important policy reasons for approving such a mechanism, both from the perspective of the Biomethane Program and the risk allocation between FEI and its customers. FEI provides its reasons in support of this submission below.

##### *The Risk is Limited*

138. It is first important that the overall risk being taken on by customers is limited because the MCRA mechanism is unlikely to be used. FEI has developed a number of over-supply risk mitigation tools by which it can sell Biomethane at the BERC rate either on or off FEI's system as evidenced, for instance, by the LOI provided by WesPac for up to 1.5 million GJ of RNG at the BERC rate. With these options available, FEI does not expect to actually use the MCRA cost recovery mechanism.

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<sup>141</sup> Exhibit B-19, BCUC IR 2.52.1.

<sup>142</sup> Exhibit B-19, BCUC IR 2.52.1.

<sup>143</sup> Exhibit B-19, BCUC IR 2.52.1.

139. The risk is also limited because if it is utilized, the rate impact to customers is minor. For example, based on the current BERC rate, if 100 TJ of Biomethane were sold at the price of natural gas (meaning FEI was unable to mitigate the loss to any extent), then the rate impact to a typical residential customer would be \$0.003/GJ or 29 cents per year based on average consumption of 95 GJ for each of the following three years.<sup>144</sup> Or, assuming a BERC rate of \$12.001/GJ (being the rate FEI has applied for as of January 1, 2013), if FEI transferred 250 TJ of unsold Biomethane to the MCRA, the impact to the typical residential customer would be \$0.86 per year, or a .1% annual impact.<sup>145</sup>
140. Moreover, the cost benefits of having a Biomethane supply project instead of an electricity option are substantial and outweigh the limited supply risk.<sup>146</sup>

*Beneficial for the Biomethane Program*

141. Second, having assurance that the costs of Biomethane will be recovered from all customers is beneficial for the Biomethane Program as it will provide certainty for supply to be developed to meet demand. With this assurance, FEI could potentially develop more cost-effective supply projects to meet demand, instead of the pursuit of projects that are tailored to meet a specific short-term demand need.<sup>147</sup>

*Consistent with Electricity Supply Model*

142. Incorporating Biomethane supply into the supply portfolio is consistent with the electricity supply model, such as where BC Hydro incorporates its costs of clean electricity projects into its overall supply portfolio. FEI would be incorporating its clean energy supply at a much more limited level, as the Biomethane Program would remain a user-pay model, with recovery through the MCRA used only as a mitigation measure of last resort.<sup>148</sup>

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<sup>144</sup> Exhibit B-1, p. 116.

<sup>145</sup> Exhibit B-19, BCUC IR 2.44.1.

<sup>146</sup> Exhibit B-15, CEC IR 1.29.3; Exhibit B-20, CEC IR 2.30.1 and 2.30.6.

<sup>147</sup> Exhibit B-1, p. 116.

<sup>148</sup> Exhibit B-1, p. 116.

*Consistent with Treatment of other Gas Supply*

143. In principle FEI believes that Biomethane supply should be treated in the same manner as other gas supply. Biomethane is interchangeable with conventional natural gas, is mixed with all other sources of supply and consumed by customers. It is established Commission practice that gas supply costs are treated as a “flow-through” cost. This practice reflects the fact that the gas supply is purchased for customers who consume the commodity, that gas supply costs are outside the control of the utility and that the utility earns no return on gas supply costs.<sup>149</sup>
144. FEI has developed a Biomethane Program which is primarily a "user pay model" in which customers choosing Biomethane pay a premium reflecting its currently higher cost of production. However, this user pay model does not negate the fact that Biomethane is a commodity purchased by FEI for consumption by its customers. Therefore, if there is Biomethane that cannot be sold at the BEREC rate, then such Biomethane should be considered as a part of the overall gas supply for all customers and treated consistently with all other gas supply.

*Consistent with Purpose and Benefits of the Program*

145. The Biomethane Program was designed to meet customer demand for RNG. FEI's primary research both in 2009 and in 2012 shows there is a high level of support for FEI to be investing in RNG projects.<sup>150</sup> Almost half of FEI's customers support a program where costs are supported by all customers. When the rate impact was tested, a similar portion supported between a rate impact of between 1 to 5%.
146. The Biomethane Program was also advanced to meet public policy objectives such as to develop clean, renewable and innovative resources, to reduce waste and to reduce GHG emissions. As described in detail in Section 2 of the 2012 Biomethane Application, it is clear that public policy from all levels of government supports the development of

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<sup>149</sup> E.g. see Section 61(4) of the *Utilities Commission Act*.

<sup>150</sup> Exhibit B-1, pp. 116-118 and Appendix E, Market Research.

Biomethane. This policy is reflected in “British Columbia’s energy objectives” found in the *Clean Energy Act* which are incorporated by reference into the Act.

147. In recognition of FEI’s advancement of these policy objectives, FEI has been awarded the Green Economy Leadership Award from the Ministry of Environment. The Ministry of Environment’s letter of March 11, 2013 has indicated its support for FEI’s Biomethane Program and confirmed the Biomethane Program’s alignment with the objectives set out in the provincial government’s natural gas strategy, as well as BC Job’s Plan priority to maintain a competitive advantage in the clean energy technology sector by supporting the use of clean energy technology in the domestic market.<sup>151</sup>
148. It is significant that policy objectives are not only reasons to pursue the Biomethane Program in themselves, but are real factors affecting natural gas customer behavior. FEI’s customers are pursuing the same policy objectives, such as to reduce GHG emissions and use clean and renewable resources. Prime examples of such customers are UBC and municipalities, such as the City of Richmond and the City of Vancouver, whose own policy objectives to reduce GHG emissions have led to their interest in purchasing RNG from FEI.
149. Given that the Biomethane Program was designed to meet customer demand and policy objectives, FEI submits that it is appropriate that the costs of the program be recovered from customers.

*Consistent with Regulatory Compact*

150. Having customers bear the risk of over-supply as set out in the proposed MCRA cost recovery mechanism is consistent with the regulatory compact. As the Commission has previously concluded, under Sections 59 and 60 of the *Utilities Commission Act*, a public utility must be provided an opportunity to recover its prudent cost of service and a fair

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<sup>151</sup> FEI’s Application for Reconsideration of Commission Order No. G-29-13, Appendices A and B. Available on the Commission’s website at: [http://www.bcuc.com/Documents/Proceedings/2013/DOC\\_34002\\_B-1\\_FEI-Amended-Application.pdf](http://www.bcuc.com/Documents/Proceedings/2013/DOC_34002_B-1_FEI-Amended-Application.pdf).

return on its investment.<sup>152</sup> This is rooted in the case law which makes it clear that a utility has a right to a fair return on its investment.<sup>153</sup> The opportunity to earn fair return is only a real opportunity if a fair return can be reasonably achieved through prudent management, as reflected in the Commission's acceptance of the test of prudence when reviewing past management decisions.<sup>154</sup>

151. Absent any finding of lack of prudence on the part of FEI, the presumption is that all costs spent on the Biomethane Program are prudently incurred. All Biomethane and Biogas supply agreements have been or will be approved by the Commission and the Biomethane Program initiated and operated in accordance with Commission-approved rules. Given the presumption of prudence, FEI submits that it follows that the presumption should be that the costs of the Biomethane Program will be recovered from FEI customers. The MCRA cost recovery mechanism provides clarity and certainty regarding how this would occur in the case of Biomethane not sold at the BERC rate.

*Summary*

152. FEI must be proactive in order to meet the future growth of the RNG offering and therefore requests the addition of the MCRA Cost Recovery Mechanism as an additional measure to allow for growth of the Biomethane Program while mitigating excess supply inventory to account for timing lags between demand and supply. FEI submits that cost recovery through the MCRA as a last resort is a prudent request to deal with the challenges related to growing supply and demand in tandem.

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<sup>152</sup> *An Application by Pacific Northern Gas Ltd (PNG-West and Granisle) for Approval of 2006 Rates*, Reasons for Decision to Order No. G-99-06, dated August 16, 2006, at pp. 23-24. Online at:

[http://www.bcuc.com/Documents/Decisions/2006/DOC\\_12356\\_G-99-06\\_PNG\\_2006RR\\_Reasons.pdf](http://www.bcuc.com/Documents/Decisions/2006/DOC_12356_G-99-06_PNG_2006RR_Reasons.pdf).

<sup>153</sup> For example, in *Hemlock Valley Electrical Services Ltd. v. British Columbia Utilities Commission et al.*, 1992 CanLII 5959 (BC CA), the B.C. Court of Appeal confirmed (at para. 55) that the utility has a "statutory right to the approval of rates which will afford it the opportunity to earn a fair and reasonable rate of return upon the appraised value of its property." Online at:

<http://www.canlii.org/en/bc/bcca/doc/1992/1992canlii5959/1992canlii5959.pdf>.

<sup>154</sup> *In the Matter of British Columbia Hydro and Power Authority and F2009 and F2010 Revenue Requirements*, March 13, 2009 (Order No. G-16-09), at pp. 31-39. Online at:

[http://www.bcuc.com/Documents/Decisions/2009/DOC\\_21287\\_BCH-2009RR\\_WEB.pdf](http://www.bcuc.com/Documents/Decisions/2009/DOC_21287_BCH-2009RR_WEB.pdf).

### **3.3.3 BERC Rate**

153. As accepted by the Commission in Order G-194-10, FEI has reported quarterly on the balance in the BVA and set the BERC rate annually.<sup>155</sup> FEI applied to set the BERC rate in the ordinary course for January 1, 2013; however, pursuant to Commission Order G-179-12, dated December 5, 2012, the Commission deferred changing the BERC rate effective January 1, 2013 pending a full review at the time FEI files its Post Implementation Report. As such, the BERC has remained unchanged since January 1, 2012.
154. FEI proposes that, following the Commission's final decision in this proceeding, FEI will file updated financial schedules on the BVA with the proposed rate and effective date for the BERC taking into account any directions from the Commission. The Company would file its updated BVA report and BERC rate proposals on their own or as part of its next quarterly gas cost report to the Commission. FEI submits that this is a reasonable approach which would allow the BERC to be updated in accordance with directions from the Commission in a timely fashion and should be approved.<sup>156</sup>

## **4.0 AREAS EXPLORED IN INFORMATION REQUESTS**

155. FEI received 1066 information requests from the Commission and intervenors in this proceeding which explored a variety of topics. In this Section, FEI addresses the main topics that appeared to be of interest to the Commission and intervenors, especially those topics that were pursued in the second round of information requests.

### **4.1 Effectiveness of Current Marketing**

156. Commission information requests explored the effectiveness of FEI's customer communications.<sup>157</sup> FEI has provided comprehensive evidence regarding its customer education activities, including its residential and commercial customer communications

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<sup>155</sup> Exhibit B-1, Section 9.4 outlines the history of the BERC rate.

<sup>156</sup> Exhibit B-19, BCUC IR 2.1.1.

<sup>157</sup> E.g., Exhibit B-19, BCUC IR 2.5 to 2.7.

and marketing plan and related marketing materials,<sup>158</sup> market research,<sup>159</sup> and FEI's detailed responses to information requests on a variety of topics. In FEI's submission, the evidence shows that FEI's program has been successful and must continue in order to education customers, generate awareness, and promote and maintain participation in the Biomethane Program.

157. FEI's integrated marketing plan utilizes a number of channels to reach customers. In the residential segment, FEI has used radio ads, local papers, digital advertising, print, bill inserts, and community events to generate awareness, as well as social media, such as tweets on an ongoing basis, FEI's website, internal communication with employees and quarterly newsletters. In the commercial segment, FEI has used a combination of direct sales and targeted communications to reach customer segments. FEI has developed partnerships with external channels, such as Climate Smart and Greenstep, to further promote and educate about RNG within the customer base of these partners. FEI has used speaking engagements at industry events where appropriate. FEI has also used bill inserts, targeted print ads, radio and digital ads, as well as FEI's website and customer testimonial videos to generate awareness and understanding of the program in the commercial segment. FEI's multi-channel plan is guided by the accepted proposition that customers need to hear things at least seven times before they take action.<sup>160</sup>
158. FEI has taken numerous steps to measure the success of its program, including comparing the timing of customer enrollments and timing of campaigns, use of outside media experts, use of Google Analytics for its website, tracking URLs on digital ads, QR codes on certain print ads, tracking calls to its customer support line and surveying existing and potential customers for feedback.<sup>161</sup> The evidence shows that FEI's integrated, multi-channel approach has been successful in achieving its objectives to:<sup>162</sup>

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<sup>158</sup> Exhibit B-17, BCUC IR 1.10.1, Attachment 10.1.

<sup>159</sup> Exhibit B-1, Appendices E-1 to E-4.

<sup>160</sup> Exhibit B-17, BCUC IR 1.10.1, 1.10.4 and 1.15.3 and Attachment 10.1; Exhibit B-19, BCUC IR 2.6.2, 2.8.1 and 2.8.1.1 and Attachment 8.1.1.

<sup>161</sup> Exhibit B-17, BCUC IR 1.10.2, 1.15.4, and 1.15.4.2; and Exhibit B-19, BCUC IR 2.14.1.

<sup>162</sup> The objectives of the marketing plan (Exhibit B-17, Attachment 10.1, p. 1) are the same as the components of the education activities as original set out in FEI's 2010 Biomethane Application (Exhibit B-17, BCUC IR 1.14.3).

- generate awareness and understanding of Biomethane as a renewable energy and its availability;
  - generate awareness and understanding of the program;
  - stimulate interest and participation in the program; and
  - maintain participation and support of the program.
159. For example, there is a strong correlation between FEI's customer education and promotions and enrollments. This is shown by the sharp increase in enrollments from June and following months after a series of campaigns in May 2012.<sup>163</sup> There is also a correlation between FEI's campaigns in the market and the number of views of its RNG website.<sup>164</sup> Both of these correlations show an increase in enrollments and website visits as a result of multiple, simultaneous campaigns.
160. FEI's customer education program has been successful in reaching participation levels comparable to other similar green pricing programs. With less than two years in the market, FEI's current level of participation is trending towards the industry median of 1%.<sup>165</sup>
161. While FEI's program has been successful, customer awareness levels are still low (at 13%) and continued effort is needed to increase awareness levels.<sup>166</sup> FEI has explained that it is continuously evaluating the effectiveness of its communications activities and adjusting accordingly.<sup>167</sup> For example, FEI has plans to better target the 35-55 age demographic, which has not enrolled to the levels expected, and the secondary target market.<sup>168</sup>

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<sup>163</sup> Exhibit B-17, BCUC IR 1.10.2.1; Exhibit B-19, BCUC IR 2.5.1.

<sup>164</sup> Exhibit B-17, BCUC IR 1.15.4; Exhibit B-19, BCUC IR 2.6.1.

<sup>165</sup> Exhibit B-17, BCUC IR 1.15.2.

<sup>166</sup> Exhibit B-19, BCUC IR 2.7.1.

<sup>167</sup> Exhibit B-19, BCUC IR 2.14.1.

<sup>168</sup> Exhibit B-17, BCUC IR 1.15.1; Exhibit B-19, BCUC IR 2.7.2.



162. FEI submits the evidence demonstrates that an integrated marketing campaign which utilizes multiple channels to reach potential customers is needed to continue to educate customers, increase awareness and encourage and retain participation.

#### **4.2 AIR MILES**

163. Commission information requests questioned whether the AIR MILES component of FEI's education activities should be recovered from Biomethane customers alone. BCSEA also questioned whether it was appropriate to use AIR MILES given its connection with air travel. FEI submits that the costs associated with the AIR MILES campaign should be treated the same as other educational activities, and for the reasons discussed in Section 3.3.1 above, should be allocated to all non-bypass customers. These reasons include the fact the costs of the AIR MILES program are costs incurred to encourage all customers to participate in the Biomethane program, and that all environmental benefits from the Biomethane program will be enjoyed by all customers.
164. FEI's partnership is with AIR MILES for social change (AMSC), which inspires positive social change to benefit the environment. AMSC has been successful in increasing participation rates in other energy efficiency, utility and government offerings in other jurisdictions and can offer a lower participant acquisition cost when compared to other communications channels. While it is possible that customers could use AIR MILES for air travel, this does not necessarily mean it is incremental air travel. AIR MILES is just another currency that could be used for air travel that may have been purchased with cash otherwise. Moreover, most collectors today redeem their points for non-flight based rewards. Additionally, AIR MILES has added over 100 'green' rewards to its "My Planet" rewards section.<sup>169</sup>
165. FEI's partnership with AMSC is a cost-effective tool that FEI uses to provide Biomethane Program information to potential customers and encourage customer participation and ongoing support for the Biomethane Program.<sup>170</sup>

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<sup>169</sup> Exhibit B-14, BCSEA IR 1.26.1.

<sup>170</sup> Exhibit B-19, BCUC IR 2.14.3.

166. Partnering with AIR MILES enables FEI to leverage the communication channels owned by AIR MILES, including the FEI'S RNG webpage on the AIR MILES website, RNG program emails sent to collectors of AIR MILES by AIR MILES, and RNG promotion messages on AIR MILES' social media accounts to educate and promote the offering. These channels reach customers in a new way that would otherwise be unavailable to FEI and leverages the influential AIR MILES brand and program. FEI is also able to take advantage of rich data analytics available through AIR MILES.<sup>171</sup>
167. The success of the AIR MILES program is clear. The AIR MILES program has resulted in enrollments and visits to FEI's Biomethane website.<sup>172</sup> Over 70% of surveyed customers indicated that AIR MILES was a motivation to sign up for the Biomethane Program. The ability for customers to collect points is also a cost-effective way to retain customers. AIR MILES has also been successfully used by other utilities, including the Ontario Power Authority and BC Hydro.<sup>173</sup>
168. The fact that the AIR MILES program results in direct incentives to Biomethane customers appears to have led to a misunderstanding of the benefits from FEI's participation in the AIR MILES program. Paying only for the actual AIR MILES delivered is simply the mechanism by which AIR MILES determines how much FEI pays for the program, and does not reflect the range of benefits that FEI is actually deriving. Regardless of how many customers sign up and receive AIR MILES, FEI receives the full benefits of the use of the AIR MILES program to spread awareness and information about the Biomethane Program broadly and in new and otherwise inaccessible ways. Payment for AIR MILES only when the customers choose to participate is actually a beneficial and cost-effective aspect of the program for FEI's customer education purposes.
169. For these reasons, forcing Biomethane customers to pay for the AIR MILES program would be to unfairly charge them for the cost of reaching out to and informing all

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<sup>171</sup> Exhibit B-17, BCUC IR 1.14.3.

<sup>172</sup> Exhibit B-17, BCUC 1.15.4; Exhibit B-19, BCUC IRs 2.5.1 and 2.6.1.

<sup>173</sup> Exhibit B-17, BCUC IR 1.14.3.

customers about the Biomethane Program. It would also tend to undermine the incentive provided by the AIR MILES program if customers were directly paying for the incentive they received.

170. In summary, the facts demonstrate that the AIR MILES program fits squarely within the objectives of customer education, i.e. to generate awareness and understanding of Biomethane and the Biomethane Program, to stimulate interest and participation, and to maintain participation. Moreover, the AIR MILES program has proven to be successful in achieving these objectives and is highly cost-effective as FEI receives a wide range of benefits for the Biomethane Program but only pays for AIR MILES when customers choose to actually participate in the program. As such, it is just and reasonable that the costs of the AIR MILES program be recovered from all non-bypass customers similar to all other education costs for the reasons discussed in Section 3.3.1 above.

#### **4.3 Communications Budget**

171. Commission information requests explored measures for setting a communications budget for the Biomethane Program and FEI has responded fully to those information requests.<sup>174</sup> However, the Commission has approved FEI's communications budget for 2012 and 2013 and FEI is not seeking approval for any communications budget in this proceeding. For the next five years, FEI has proposed a Performance Based Rate Plan which would encompass FEI's O&M spending over that time period and provide incentives for FEI to control and reduce costs. FEI therefore submits that setting a communications budget is outside the scope of this proceeding.

#### **4.4 Forecast Demand: Emerging Markets**

172. Commission information requests explored FEI's basis for its forecast demand from emerging markets and the basis of FEI's low, medium and high forecasts of the demand. FEI submits that its emerging market forecast provides a conservative range of potential demand based on direct evidence of demand in these markets.

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<sup>174</sup> E.g., Exhibit B-19, BCUC IR 2.13 and 2.17 series.

173. FEI's assumptions for its demand forecasts are explained in Section 4 of the Application. The demand scenarios have been most recently updated in Exhibit B-19, BCUC IR 2.22.1. As demonstrated in the 2012 Biomethane Application and FEI's response to information request, the demand from emerging markets is based on direct evidence from the potential customers. This evidence includes the following:
- (a) UBC has committed to 20,000 GJ of demand for existing buildings in 2013. UBC has also stated its interest in a further 100,000 GJ of Biomethane for its Bioenergy cogeneration facility in 2014, and has submitted an LOI for 500,000 GJ initially and up to 1.5 PJ for its Campus Energy Centre and Combined Heating and Power facility (the "CEC and CHP") in 2017.<sup>175</sup> The evidence (with input from BC Hydro and UBC) is clear that UBC is committed to real CO<sub>2</sub> reductions and requires 100% RNG from FEI for these projects.<sup>176</sup> UBC has indicated that the business case for its CEC and CHP project is strong. E.g., the electrical commodity savings and load displacement revenue would more than offset the premium paid for the Biomethane.<sup>177</sup>
  - (b) The Haida Gwaii opportunity is based on the FortisBC's competitive proposal in response to the Request for Expressions of Interest ("RFEOI") issued by BC Hydro, with an earliest in-service date in 2016.<sup>178</sup>
  - (c) Two District Energy Systems that are in the early stages of project development have a potential demand of 150,000 GJ with forecast in-service dates of 2016 and 2017.<sup>179</sup>

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<sup>175</sup> Exhibit B-1, Appendix G-1; Exhibit B-17, BCUC IR 1.42.2; Letter of Support from UBC date March 20<sup>th</sup>, 2013, filed as Exhibit E-1 in the FortisBC Energy Reconsideration of G-29-13 proceeding, on the Commission's website at:

[http://www.bcuc.com/Documents/Proceedings/2013/DOC\\_34080\\_E-1\\_UBC\\_Submitting-Comments.pdf](http://www.bcuc.com/Documents/Proceedings/2013/DOC_34080_E-1_UBC_Submitting-Comments.pdf)

<sup>176</sup> Exhibit B-17, BCUC IR 1.42.6, 1.42.6.1, 1.42.6.2, 1.42.6.2.1; Exhibit B-19, BCUC IR 2.28.1, 2.28.2 and 2.28.3.

<sup>177</sup> Exhibit B-17, BCUC IR 1.42.5 and 1.42.6.2.

<sup>178</sup> Exhibit B-1, p. 54; Exhibit B-17, BCUC IR 1.44 series; Exhibit B-19, BCUC IR 2.24.1, 2.24.2 and 2.24.2.1

<sup>179</sup> Exhibit B-1, p. 54; Exhibit B-17, BCUC IR 1.43.1.

- (d) The City of Richmond's has committed to buy up to 360 GJ in 2012 and up to 10% of its overall consumption across all city facilities in 2013.<sup>180</sup>
  - (e) The City of Vancouver has purchased the equivalent of approximately 9,000 GJ per year to cover 100% of their overall consumption at City Hall.<sup>181</sup>
  - (f) FEI's estimate of potential NGT Biomethane demand is based on 900,000 GJ of forecast demand for CNG and LNG vehicles multiplied by a .5%, 1% and 5% capture rate for its low, medium and high demand scenarios, respectively. The medium scenario is achievable with existing vehicles.<sup>182</sup> In addition, the City of Surrey has stated its desire to move to 100% Biomethane for its fleet of refuse and recycling trucks at a demand of 80,000 GJ/year, which would exceed FEI's high demand forecast.<sup>183</sup>
174. FEI's low, medium and high demand forecasts for emerging markets are conservatively based on the realization of 10%, 30% and 50% of the demand from these markets. FEI believes that the medium demand forecast is the most likely. However, these percentages do not reflect probabilities as FEI does not have any historical or other information on which to make such estimates. Rather, these percentages were chosen to provide a conservative range of potential demand.<sup>184</sup>
175. FEI submits that there is direct evidence of the demand forecast from emerging markets and that FEI's demand forecasts represent a conservative range of potential demand from this market. These conservative demand forecasts show that there is the clear potential for demand from emerging markets to outpace supply from approved Biomethane projects. As such, the demand supports the further expansion of the Biomethane Program.

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<sup>180</sup> Exhibit B-1, Appendix G-1; Exhibit B-17, BCUC IR 1.41.1.

<sup>181</sup> Exhibit B-1, p. 55; Exhibit B-17, BCUC IR 1.40 series.

<sup>182</sup> Exhibit B-19, BCUC IR 2.25.1; Exhibit B-17, BCUC IR 1.45.3 (note the capture rates are corrected to be .5%, 1% and 5% in the different forecast scenarios).

<sup>183</sup> Exhibit D-10-1; Exhibit B-19, BCUC IR 2.25.3.1.

<sup>184</sup> Exhibit B-17, BCUC IR 1.39.1, 1.39.2, Exhibit B-19, BCUC IR 2.26.1.1, 2.26.3, and 2.26.3.1.

#### **4.5 Supply Criteria: Use of Contract Template**

176. Commission information requests have explored the use of a contract template as an additional criterion for future supply projects. FEI submits that while the contract template it has provided is a useful tool, there are too many variations required from the template for it to be used as a strict requirement for future supply contracts. FEI has proposed that it would explain and justify any variations from the contract template when seeking approval of the supply contract.
177. FEI provided a contract template upon request<sup>185</sup> but has consistently emphasized that it cannot foresee all deviations from the contract template. The contract template and potential deviations initially provided were drafted for digester-based, Biomethane supply projects and do not apply to landfill gas or biogas agreements.<sup>186</sup> FEI does not have a contract template for landfill gas or biogas agreements, but would start with the contract template for digester-based, Biomethane supply projects and, if applicable, its existing biogas agreements.<sup>187</sup> The variations that FEI can foresee at this time for supply projects for landfill gas or biogas agreements have been set out in BCUC IRs 2.30.2.1.1 and 2.30.2.2.1. As shown in those responses, the list of potential variations is long.
178. FEI will explain and justify any deviations from standard Biomethane agreements when filing for approval of the contract and FEI can make it clear to future suppliers that deviations may require additional review by the Commission.<sup>188</sup>
179. However, FEI submits that adherence to the template cannot be a criterion for future supply projects. The contract template provided by FEI was not created for this purpose. The extent of deviations required from the contract template, and the fact that such deviations cannot all be foreseen, would effectively negate the desired benefits of setting the criteria for future supply contracts. As FEI has submitted above, FEI needs to have a reasonable level of assurance in its negotiations with suppliers that the Commission's

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<sup>185</sup> Exhibit B-17, BCUC IR 1.1.2.1.

<sup>186</sup> Exhibit B-19, BCUC IR 2.30.2.

<sup>187</sup> Exhibit B-19, BCUC IR 2.30.2.1.2 and 2.30.2.2.2.

<sup>188</sup> Exhibit B-19, BCUC IR 2.33.2.

review of the contract will be expeditious if the energy supply contract complies with the Commission's criteria.<sup>189</sup>

#### **4.6 Wheeling Option**

180. Commission information requests, such as 1.48.1.1, and the 1.54 and 2.41 series, explored the possibility of FEI entering into wheeling arrangements to serve municipal customers. In FEI's submission, the current model where FEI enters into the supply agreement with the supplier, and the Biomethane volumes are pooled is the preferred model for a variety of reasons. The benefit of the wheeling program of mitigating risk to other customers would be more effectively provided through the use of long-term contracts to mitigate supply risk. FEI explains below.

181. FEI's current model where FEI enters into the supply agreement with the supplier and the Biomethane volumes are pooled is preferable to a wheeling model for a number of reasons, including the following:<sup>190</sup>

- FEI's model increases the security of supply for the customers as well as the security of demand for the suppliers.
- FEI's model provides that customers have the advantage of a more secure supply pool of Biomethane, whereas suppliers are able to sell their supply to a single entity (FEI) that is able to in-turn sell the product to a larger and more diverse base of customers.
- FEI's model can allow customers to sign up for long term agreements, which would mitigate FEI's over-supply risk when securing supply for large volume customers.
- Customers such as UBC have indicated their preference to buy gas from FEI through the current program for the flexibility and security of supply.

182. FEI has also identified various disadvantages associated with third parties entering into an agreement directly with the supplier, including the following:<sup>191</sup>

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<sup>189</sup> Exhibit B-19, BCUC IRs 2.33.1, 2.33.2 and 2.33.2.1.

<sup>190</sup> Exhibit B-17, BCUC IR 1.54.3.2; BCUC IR 1.54.3.1; BCUC IR 1.68.4.

<sup>191</sup> Exhibit B-17, BCUC IR 1.54.3.2, 1.67.1 and 1.68.4; and Exhibit B-19, BCUC IR 2.41.1 and 2.41.2.

- It is difficult to match and balance gas from a single supply source injecting a continuous volume to a fluctuating customer demand.
  - Customers do not benefit from the Biomethane pool price and are limited to the cost of one project.
  - Biogas development is limited if projects are only brought on to serve one large customer at a time.
  - Projects would have to be found to match particular demand from the wheeling customers. Matching supply and demand for the wheeling customers would require matching of timing of supply, volume of supply, and reliability of supply. Other terms and conditions of supply and demand, including price, would have to be acceptable to all parties.
  - It is foreseeable that supply projects would not be found to match demand for a number of reasons. The result could be that demand is not met and available supply is not developed, such that the methane from biogas sources continues to enter the atmosphere and sources of RNG are wasted or developed in less efficient ways.
  - Projects would be matched to particular large demand which would mean fewer projects developed to the benefit of all participants in the program. All customers would therefore have less diversity and reliability of supply. This would also make it more difficult to adjust the Biomethane Program to respond to changing market conditions.
  - It would be unproductive and uneconomic for each large volume customer to have to develop a system to source Biomethane that would in effect be a duplication of the system developed by FEI for use by all customers.
  - Wheeling arrangements would also force FEI to create rules and charges to balance the inventory. Multiple areas would need to be reviewed in detail. An end to end assessment of the impacts throughout the system including IT upgrades and gas supply impacts as well as RNG program rule changes would need to be conducted.
  - Growth in Biomethane usage will be greatly restricted if customers are expected to take on the task of building up their own individual supply pools and those individual supply pools would not be the most efficient approach to serving the market.
183. Ultimately, the benefit of forcing large customers such as municipalities to match their demand with supply is to limit the cost risk to other customers. As FEI has demonstrated, however, the cost risk to customers is limited and would only materialize if all other supply risk mitigation was not successful. In FEI's view, this small and manageable risk



is acceptable to allow the Biomethane supply in B.C. to develop in an efficient manner for the benefit of the entire province and to provide customers with the benefits identified above.<sup>192</sup>

184. As an alternative to a wheeling arrangement that similarly limits the cost risk to other customers, FEI is looking to enter into long-term purchase agreements with high-demand customers. Under this arrangement, FEI would have long-term Biomethane purchase agreements and the customer would enter into a long-term purchase agreement under Rate Schedule 11B or another firm contract. While similar to wheeling the gas, FEI's model has benefits that would not be available under a strict gas wheeling contract model as discussed above.

185. FEI explained its long-term contract approach as follows:<sup>193</sup>

“It is FEI's intent to develop long-term biomethane purchase agreements for large volume customers. FEI has secured LOIs from 2 such customers that indicate they would enter into a long-term agreement for security of RNG supply. FEI believes this is a suitable mechanism in order to serve a customer such as UBC whom would be relying on RNG in order to meet commitments on their end for a Load Displacement agreement with BC Hydro.

FEI believes that the long-term agreement could still access the volumes from the Biomethane pool and does not have to be tied to a specific project as the diversity of supply would help mitigate the risk of being able to deliver on the supply commitments. However, it would make it more difficult to secure a long-term price commitment; FEI would need to forecast the projected pool price for the duration of the contract.

FEI is currently reviewing existing tariffs to see if they would be suitable to amend for longer-term arrangements. A take or pay provision is also being considered in order to backstop the investment of securing new supply projects. FEI believes a 10-15 year term would be suitable to match the supply agreements FEI has in place and that are coming into effect.

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<sup>192</sup> Exhibit B-19, BCUC IR 2.41.1.

<sup>193</sup> Exhibit B-17, 1.67.1.

As of today, there are already existing tariffs (Rate Schedule 30 and 11B) that could serve large bulk sales as is, which provide flexibility in the business model.”

186. By committing large volume customers to long-term purchase contracts, FEI’s long-term contract approach provides a way to mitigate supply risk to customers in a way which preserves the many advantages of FEI’s pooled Biomethane approach.
187. In FEI’s submission, FEI’s existing model of developing Biomethane supply and demand with the potential use of long-term demand contracts provides significant benefits over a wheeling option and should be approved.

#### **4.7 Renewable Portfolio Standard or Allowance Supply Models**

188. Commission information requests explored the concept of a Renewable Portfolio Standard (“RPS”) or Renewable Portfolio Allowance (“RPA”). FEI’s submits that its proposed model is the best way for promoting renewable natural gas in a user-pay model, and that its model has many of the beneficial elements of a RPS or RPA approach.
189. A RPS approach would be one where FEI would be required to have a certain amount of renewable natural gas as a part of its supply portfolio and would not be a user-pay model. A true RPS approach would be a product of legislation.<sup>194</sup>
190. In response to Commission information requests, FEI has indicated that it would support a RPS approach with some qualifications. Given the limited supply available, the renewable supply requirement should be optional rather than mandatory, which FEI would call a “Renewable Portfolio *Allowance*” approach. FEI also indicated that under such an approach it should continue to be able to offer higher blends of Biomethane to those that wished to contract for that supply to meet GHG reduction targets or other objectives.<sup>195</sup>
191. FEI identified the following attributes of its suggested hybrid user-pays, RPS/RPA model based on the proposed 3 PJ supply cap, where FEI continues to promote a user-pays

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<sup>194</sup> Exhibit B-19, BCUC IR 2.42.3.

<sup>195</sup> Exhibit B-17, BCUC IR 1.49.7.

model across all market segments to extract maximum value, and where risks are back-stopped by the MCRA:<sup>196</sup>

- The RPS/RPA model aspect of the hybrid model:
  - would allow FEI to fully pursue supply projects and maximize Biomethane development.
  - would allow FEI to gain broader experience in managing supply project development and building up the resources and tools to manage supply / demand imbalances.
  - would allow FEI to more fully approach the supplier market and gain regulatory efficiency for projects.
  - would enable multiple projects to be developed that could serve both markets rather than tying specific projects to demand.
- The user-pay aspect of the hybrid model:
  - would allow voluntary customers to pay for higher blends of RNG;
  - would allow voluntary customers to meet their own needs to meet GHG reduction standards, policy or objectives.
  - would keep rate impacts to non-voluntary customers smaller as there would still be user-pay demand for higher blends of RNG.
- Under this model, all voluntary customers would benefit from
  - the diversity and reliability of supply.
  - the efficiency of the blended pool price.
  - the fact that supply and demand balancing can be managed together allowing for more reliable supply.

192. The difference between the RPS/RPA approach contemplated above and FEI's proposed approach is quite small. The difference is in the level to which the Commission accepts that Biomethane supply should be freely developed up to the 3 PJ cap and backstopped by the MCRA. Under FEI's proposed approach, the concept is that the program is primarily a user-pay model and that supply should be developed in conjunction with demand. FEI's proposed approach therefore constrains the development of Biomethane in order to limit the cost risk to non-participants. While FEI is supportive of the RPA hybrid approach, FEI believes that its proposed user-pay model balances the cost risk as

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<sup>196</sup> Exhibit B-19, BCUC IR 2.42.1.2.

between voluntary participants and all non-bypass customers in a way which is more in-line with past Commission direction.<sup>197</sup>

193. FEI was also asked to comment on a hybrid model which differentiates between small and large users as follows: “small users (residential and commercial) are provided under a RPA type cap, with a reduced supply cap of approximately 1.5 PJs and all costs are rolled-in; and larger customers (such as PSOs) who require 100% Biomethane are secured by a matching of supply and demand and the use of long-term purchase agreements.”<sup>198</sup> This hybrid model essentially incorporates the wheeling option concept discussed in the section above, which FEI submits is not preferable. FEI identified the following attributes of such a model:<sup>199</sup>

- FEI would be able to pursue Biomethane supply within the RPA cap for smaller customers.
- However, FEI’s ability to develop supply beyond the RPA cap would be constrained. Projects would have to be found to match particular demand from large customers. Matching supply and demand for larger customers would require matching of timing of supply, volume of supply, and reliability of supply. Other terms and conditions of supply and demand, including price, would have to be acceptable to all parties.
- It is foreseeable that supply projects would not be found to match demand for a number of reasons. The result could be that demand is not met and available supply is not developed, such that the methane from biogas sources continues to enter the atmosphere and sources of RNG are wasted or developed in less efficient ways.
- The differentiation between small and large users under different caps takes away from the flexibility and efficiency of the program.
  - Larger customers would not have the benefit of pooled Biomethane supply, i.e. the diversity and reliability of supply and the efficiency of the blended pool price.
  - Supply and demand balancing would have to be managed through separate processes and there would be higher risk to larger customers of inadequate supply or failure of supply.

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<sup>197</sup> E.g., see Exhibit B-17, 1.36.1.

<sup>198</sup> Exhibit B-19, BCUC IR 2.42.1.2.

<sup>199</sup> Exhibit B-19, BCUC IR 2.42.1.2.

- The differentiation between small and large customers would also prevent FEI from meeting customer demand and needs. Customer preferences with respect to Biomethane purchases are not clearly divided between small and large customers, so the division proposed for this model in the question would leave some smaller customers unable to access higher percentages of Biomethane supply and some larger customers unable to opt for percentages that are less than 100% Biomethane.

194. The primary benefit of the model that differentiates between small and large users is that the costs for the small users is spread evenly over the entire group and is fixed at the cost of supply for the 1.5 PJ cap. In FEI's submission, this benefit is outweighed by the numerous disadvantages discussed above, including that it would unduly constrain the development of Biomethane in the Province to the detriment of policy objectives. In addition, while the cost burden for residential and commercial customers who would otherwise choose not to participate is fixed under the hybrid model suggested, their cost burden would be greater than under FEI's user-pay approach.
195. FEI therefore submits that its proposed model is the best user pay model for promoting renewable natural gas, and provides many of the benefits of a RPA approach discussed above. Further, FEI's proposed model remains consistent with the terms of the Pilot Program, which has proven to be successful, and will therefore promote certainty for the program going forward.

#### **4.8 Under-Supply Risk Mitigation Options**

196. FEI identified three over-supply risk mitigation options in the 2012 Biomethane Application: (1) purchase carbon offset credits; (2) remove customers from the RNG Offering; and (3) procure alternate sources of Biomethane. Few information requests were directed at exploring FEI's under-supply risk mitigation options. However, FEI notes that in its responses it has provided further details on the mechanics of these options, as follows:
- (a) FEI and its carbon consultant agency, Offsetters, have developed a process in the event FEI had to purchase carbon offsets as a risk mitigation strategy. In such a scenario, offset purchases will ensure that renewable natural gas customers will continue to receive a 10% savings in GHG emissions from combustion, despite

using 100% traditional natural gas.<sup>200</sup> In the event of an under-supply of Biomethane for PSOs, FEI is obliged to purchase offsets from the Pacific Carbon Trust, as agreed with the BC Climate Action Secretariat in Appendix C-6. The total cost of the offset would be captured in the BVA and this cost, including any costs lower, or higher, than the price which would otherwise have been paid for Biomethane supply, would be flowed through to Biomethane customers via the following year's BERC rate. Purchasing carbon credits would not increase the BERC rate.<sup>201</sup>

- (b) FEI's right to remove customers from the Biomethane Program is set out in the approved section 28 of its GT&Cs.
- (c) If FEI were to procure an alternate source of Biomethane, FEI would ensure the proper contractual instruments are in place so that the purchase of Biomethane includes the associated environmental attributes. The process would likely be something similar to a reverse of FEI's current Rate Schedule 30. The markets for such Biomethane are Ontario, New York, and Washington, or Clean Energy's landfill projects in Texas and Michigan.<sup>202</sup>

197. FEI submits that it has substantiated that it has effective risk mitigation options available in the event of an under-supply of Biomethane.

#### **4.9 Over-Supply Risk Mitigation Options**

198. FEI identified three over-supply risk mechanisms in the 2012 Biomethane Application: (1) notionally banking the Biomethane for later supply to customers; (2) off-system sales of Biomethane; and (3) on-system bulk sales under Rate Schedule 11B to parties such as on-system transport customers or gas marketers, which could include the sale of the attributes or carbon credits of the Biomethane.

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<sup>200</sup> The details of the process are presented in Exhibit B-17, BCUC IR 1.58.5 and Exhibit B-14, BCSEA 1.28.2.

<sup>201</sup> Exhibit B-17, BCUC IR 1.63.2 and 63.4. Also see BCUC IR 1.58.4 regarding cost control and the purchase of carbon offsets.

<sup>202</sup> Exhibit B-17, BCUC IR 1.63.1 and 1.63.1.1.

199. Information requests, such as Commission information requests 2.46 to 2.52 series, focused on the feasibility of FEI's off-system sales risk mitigation option. FEI submits that the evidence substantiates the fact that it has the option to sell Biomethane off-system to mitigate any risk of over-supply.
200. FEI has identified voluntary markets in the US, such as Maine, Texas, New York and Hawaii, where there is a clear pathway for Biomethane volumes to be sold.<sup>203</sup> Element Markets, a leading producer and marketer of renewable natural gas and environmental commodities in the U.S., has been engaged by FEI to provide input and feedback on off-system sales markets. FEI and Element Markets are in the process of defining the logistics, measurement and verification requirements in order to sell surplus Biomethane into US markets. Based on the information to date, it appears that FEI would be able to meet the requirements for voluntary markets. Other compliance markets such as Renewable Identification Numbers ("RINS") and Renewable Energy Credits ("RECs") and RPS would require extra costs and process and are currently being reviewed. As evidence that such sales are feasible, Clean Energy has been successful in selling over \$2 million in credits to date in the Low Carbon Fuel Standard, RPS and RINS markets in the US.<sup>204</sup>
201. FEI has received two proposals for off-system sales, one from Element Markets and one from WesPac Energy Group ("WesPac").
- (a) Element Markets has proposed to purchase FEI surplus inventory at a premium over conventional natural gas prices and act as a sump account for any unsold Biomethane that FEI may have. Element Markets indicated that the best markets would be voluntary markets and that there is a large potential demand for this gas from their client list and in the RINS markets in the US.<sup>205</sup>

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<sup>203</sup> Exhibit B-17, BCUC IR 1.47.3; Exhibit B-19, BCUC IR 2.46.1.

<sup>204</sup> Exhibit B-17, BCUC IR 1.47.3.2 and Attachment 47.3.2, and BCUC IR 1.65.1.

<sup>205</sup> Exhibit B-19, BCUC IRs 2.43.1 and 2.46.1.

(b) As indicated in their LOI submitted with the 2012 Biomethane Application, WesPac is interested in purchasing large amounts of Biomethane (up to 1.5 million GJ) in excess of current inventory amounts at the BERC rate. WesPac is a sophisticated player in the energy market and develops, constructs, owns, and operates energy infrastructure throughout North America. WesPac is working at developing markets to supply fuel to electricity generators in US states, where Biomethane would be recognized under certain jurisdictions' RPS. WesPac is capable of taking FEI's Biomethane to the volumes as indicated in their LOI.<sup>206</sup>

202. FEI's preference is to sell Biomethane within the Province and it has not included off-system sales in its forecast demand. However, in a situation where UBC or other volumes do not materialize, and FEI is facing an over-supply of Biomethane that cannot be sold in the Province, FEI expects to be able to sell Biomethane off-system, including to WesPac or Element Markets, in order reduce its volume of Biomethane inventory.<sup>207</sup>

203. FEI submits that the evidence, including proposals from sophisticated market players, demonstrates that FEI has the capability to make off-system sales of large quantities of Biomethane and that this reduces the risk of oversupply.

#### **4.10 Biomethane Offsets or Renewable Energy Certificates**

204. Commission information requests 2.59 and 2.60 series explored the possibility of creating a Biomethane renewable energy certificate ("B-REC") system. In FEI's submission, this is not a feasible option at this time.

205. In addressing this issue, it is first important to recognize that FEI is not offering an offset, but a renewable energy commodity. FEI explained that "FEI Biomethane customers are paying for gigajoules of renewable natural gas; they are not purchasing an offset or a tonne reduction in CO<sub>2</sub>e." Because customers are paying for a gigajoule of renewable natural gas, they are getting both the energy and the environmental attributes, plus the

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<sup>206</sup> Exhibit B-1, pp. 54 and 113 and Appendix G-1 (the WesPac LOI); Exhibit B-14, BCSEA IR 1.20.9 and 1.29.4; Exhibit B-17, BCUC IR 1.47.3.1; Exhibit B-19, BCUC IR 2.48.1.

<sup>207</sup> Exhibit B-1, p. 54; Exhibit B-17, BCUC IR 1.47.1.



community benefits of utilizing waste methane.<sup>208</sup> The evidence is that programs such as FEI's have more success and are more valuable to customers than an offset program.<sup>209</sup> FEI therefore does not believe that creating a B-REC or other type of offset program provides any advantage over the offering of renewable natural gas.

206. Furthermore, although FEI agrees that the creation of a B-REC system is hypothetically possible, given the small potential size of a B-REC market, FEI does not believe trying to establish such a market would be feasible. FEI states:<sup>210</sup>

“...since the biomethane market is miniscule (or non-existent) in comparison to the market for renewable electricity that gives rise to conventional electricity RECs, FEI believes that pursuing the development of B-RECs is not warranted. FEI believes that the level of cost and effort needed to establish suitable B-REC rules and protocols, validate and measure B-RECs, assign certificates, and carry out program administration would constitute an unnecessary burden in view of the small scale of biomethane development.

If something like a B-REC was put in place, any parties seeking to sell B-RECs would have to conform to the established rules in order to qualify for a certificate that is tradable. Once the B-REC is marketable, the market would determine the price. At today's market prices, it does not make sense to convert a high price commodity into something that actually is valued at something less in the market such as offsets or REC's<sup>211</sup>.”

207. FEI explained further as follows:

“In order for the B-REC to have value the entire trading infrastructure has to be created. This would require development of a standardized certificate, the verification of environmental attributes by an independent third party, acceptance of the B-REC credit on a national and international basis (as the British Columbia market alone is too small) and enough counter parties willing to trade the certificates in order to establish a market. FEI does not

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<sup>208</sup> Exhibit B-17, BCUC IR 1.3.1.

<sup>209</sup> E.g., Exhibit B-19, BCUC IR 1.34.3.2.

<sup>210</sup> Exhibit B-19, BCUC IR 2.59.1.

<sup>211</sup> As discussed in Exhibit B-17, BCUC IR 1.58.5, at the time of the IR response, offset prices are between \$10-15 tonne CO<sub>2</sub>e and the price equivalent price per tonne of Biomethane's \$7.23 GJ premium is \$144/ tonne CO<sub>2</sub>e.

believe the biomethane market is large enough at this time to warrant pursuing and developing all of these items, nor is it large enough to absorb all the associated costs.”

- 208. It would therefore not be cost-effective to develop a B-REC system at this time.
- 209. In summary, there is no evidence that a B-REC system is feasible or desirable in the BC market at this time.

## **5.0 CONCLUSION**

- 210. FEI submits that it is clear that the continuation of the Biomethane Program is in the public interest. FEI reiterates its overriding concern that the Commission establish regulatory certainty for the Biomethane Program going forward. At this stage of the Biomethane Program certainty is a necessity for FEI to be able to enter into commercial arrangements with prospective suppliers and large demand customers. Without certainty, FEI is concerned that it will continue to lose Biomethane supply project opportunities and be unable to attract important demand from customers such as UBC. These losses would be to the detriment of all customers and the Province as a whole.<sup>212</sup>
- 211. To achieve certainty for the Biomethane Program, FEI has proposed the continuation of the existing Pilot Program on a non-pilot basis with an expanded supply cap, an interconnection test and assurance of cost recovery for FEI’s shareholder through the MCRA mechanism. In FEI’s submission, these approvals will provide certainty for all participants and will allow the Biomethane Program to grow in an efficient manner for the benefits of all customers.
- 212. A theme of the issues in this proceeding is the balance of cost risk between Biomethane customers and all other customers. In FEI’s submission, the cost risk needs to be carefully balanced and shifting the balance risks the success achieved to date with the Pilot Program. FEI’s proposed approach would have non-Biomethane customers continue to bear some costs and back stop the Biomethane Program through the MCRA cost recovery mechanism. This approach allows the BERC rate to remain reasonable so

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<sup>212</sup> E.g., see Exhibit B-1, pp. 76-77; Exhibit B-15, CEC IR 1.29.3; Exhibit B-20, CEC IR 2.30.6.

that the user-pay aspect of the model remains viable and expands, which in turn lowers any risk that the MCRA cost-recovery mechanism would need to be utilized.

213. FEI's proposed approach is just and reasonable and in the public interest because all customers benefit from the Biomethane Program through such factors as the development of renewable energy resources and the reduction of waste and GHG emissions. FEI has received strong support from its customers, the Provincial Government and local governments for its pursuit of these objectives through the Biomethane Program. In FEI's submission, it is fair for all customers to bear some cost risk for the benefits that are achieved through the Biomethane Program.
214. As noted in the 2012 Biomethane Application, based on FEI's proposals, the Commission will have continued oversight of the Biomethane Program through the following reporting and approval mechanisms to ensure the interest of customers continue to be met:
- FEI will continue to seek recovery of costs allocated to all customers through its revenue requirements applications in the ordinary course.
  - FEI will seek approval of the BERC for recovery of costs allocated to Biomethane customers through its quarterly gas reports, consistent with other commodity cost approvals.
  - If FEI requires use of the proposed MCRA cost recovery mechanism, FEI would seek approval of the recovery of any costs in the MCRA.
  - FEI will continue to file the annual status report for the BVA which will include details on the costs and recoveries recorded in the BVA.
  - FEI will continue to seek acceptance from the Commission of new supply agreements pursuant to section 71 of the UCA and in accordance with the criteria approved by the Commission. Biomethane supply and demand updates will be filed to support the need for agreements.

215. The Commission will therefore have continued visibility into the progress of the Biomethane Program going forward.
216. FEI therefore submits that its proposed continuation and modifications to the Biomethane Program are just and reasonable, in the public interest and should be approved.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated: July 22, 2013

*[original signed by Christopher Bystrom]*  
**Christopher Bystrom**  
**Fasken Martineau DuMoulin LLP**  
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