



**ORDER NUMBER**  
**G-199-16**

IN THE MATTER OF  
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Inc.  
Net Metering Program Tariff Update Application

**BEFORE:**

H. G. Harowitz, Panel Chair/Commissioner  
R. I. Mason, Commissioner  
R. D. Revel, Commissioner

on December 29, 2016

**ORDER**

**WHEREAS:**

- A. On April 15, 2016, FortisBC Inc. (FBC) filed its Net Metering Program Tariff Update Application (Application) with the British Columbia Utilities Commission (Commission);
- B. In the Application, FBC requests approval for:
  - Changes to Rate Schedule 95 (RS 95) to clarify the intent of the Net Metering Program as described in Section 4 of the Application and reflected in the revised RS 95 tariff contained in Appendix C of the Application,
  - Use of a kWh Bank to carry forward Net Excess Generation (NEG) for an annual period with compensation at the end of the annual period ending on March 31 of each year, and
  - Compensating customers for that remaining unused NEG at the British Columbia Hydro and Power Authority RS 3808 Tranche 1 rate instead of the excess being valued at rates specified in the applicable Rate Schedule and credited to the customer's account as a dollar value that contributes to the overall financial standing of the account;
- C. In addition, FBC requests Commission acceptance of its approach to the billing calculation method for RS 95. FBC submits this requires no changes to the tariff or program documentation but will remove the potential for misunderstanding about the application of the Net Metering Tariff schedule;
- D. On May 3, 2016, by Order G-59-16, the Commission established a Regulatory Timetable for review of the Application through a written hearing process with one round of information requests;
- E. By Order G-75-16, the Regulatory Timetable was amended to invite applicant and intervener submissions on further process after information request No. 1 responses. The amended Regulatory timetable was further amended by Order G-94-16 to grant a two-week extension for FBC to respond to information request No. 1;
- F. By Order G-126-16 dated August 2, 2016, the Commission established further review process to include a second round of information requests, followed by arguments;

- G. In this proceeding, British Columbia Old Age Pensioners' Organization *et al.*, BC Sustainable Energy Association and the Sierra Club BC, Commercial Energy Consumers Association of British Columbia, Resolution Electric Ltd., Randy Engman, Barbara Fischer, Paul McCavour, Donald Scarlett and Andy Shadrack registered as interveners;
- H. FBC filed its final argument on September 16, 2016, interveners filed their final arguments by September 23, 2016, followed by FBC's reply argument filed on September 30, 2016;
- I. During the proceeding, the Commission received two submissions from interested parties and seven letters of comment; and
- J. The Commission reviewed the Application, the evidence and the submissions of the parties and finds that amendments to RS 95 are warranted.

**NOW THEREFORE** pursuant to sections 59 to 61 of the *Utilities Commission Act* and for the reasons contained in the reasons for decision included in Appendix A to this order, British Columbia Utilities Commission orders as follows:

1. The Commission approves FortisBC's (FBC) proposed changes to the RS 95 tariff that clarify that new customers will not be accepted into the Net Metering Program if their proposed generating capacity exceeds their anticipated annual consumption. However, FBC's proposed revisions alone do not provide the appropriate remedy.
2. FBC is directed to submit to this Panel, proposed changes to RS 95 within 90 days of the date of this order to clarify that:
  - customers who are already participants in the Net Metering Program and wish to remain in the Net Metering Program, must not increase their generating capacity without prior approval of FBC, which shall be granted on the same basis as a new customer will be evaluated for entry into the Net Metering Program;
  - RS 95 customers cannot be removed from the Net Metering Program solely on the basis of producing annual Net Excess Generation.
3. The Commission rejects the proposed change in the purchase price of Net Excess Generation.
4. The Commission rejects FBC's application to create a kWh bank to carry forward Net Excess Generation.
5. The Commission accepts FBC's proposed interpretation of the billing method.
6. The Commission determines that existing Net Metering Program participants who are in a Net Excess Generation position shall be afforded the same protection under the tariff as any new entrants to the Net Metering Program, regardless of how that Net Excess Generation came about and they cannot be removed from the Net Metering Program by reason of the Net Excess Generation.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 29<sup>th</sup> day of December 2016.

BY ORDER

*Original signed by:*

H. G. Harowitz  
Commissioner

Attachment



British Columbia  
Utilities Commission

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**IN THE MATTER OF**

**FortisBC Inc.**

**Net Metering Program Tariff Update Application**

**REASONS FOR  
DECISION**

**December 29, 2016**

**Before:**

**H. G. Harowitz, Commissioner/Panel Chair**

**R. I. Mason, Commissioner**

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**ATTACHMENT 1      DISSENTING OPINION OF COMMISSIONER REVEL**

## **1.0 INTRODUCTION**

### **1.1 Background**

In April 2009, FortisBC Inc. (FBC) applied for approval of a Net Metering Tariff. The Net Metering Tariff (Rate Schedule (RS 95) was developed in response to the 2002 and 2007 Provincial Energy Plans and customer interest. By Order G-92-09 dated July 29, 2009, the British Columbia Utilities Commission (Commission) approved the FBC Net Metering program (the NM Program). As of March 31, 2016, FBC had 86 customers enrolled in the Program, 22 of which are served on commercial rate schedules with the balance served on a residential rate.<sup>1</sup>

### **1.2 Approval sought**

On April 15, 2016, FBC filed its Net Metering Program Tariff Update Application (Application) with the Commission. In the Application, FBC requests approval for changes to the RS 95 tariff to:

- Clarify the intent of the NM Program as described in Section 4 of the Application and reflected in the revised RS 95 tariff contained in Appendix C to the Application;
- Use a kWh bank as described in Section 5 of the Application to carry forward Net Excess Generation(NEG) accumulated in a billing period forward to offset consumption in a future billing period, with an annual settlement for any annual remaining unused NEG; and
- Compensate customers for any positive kWh balance remaining in the kWh bank at the end of the annual period using the British Columbia Hydro and Power Authority RS 3808 Tranche 1 rate.

FBC also requests Commission acceptance of FBC's approach to the billing calculation method to remove the potential for misunderstanding about the application of the RS 95 tariff.<sup>2</sup>

### **1.3 Legislative and regulatory context**

FBC (the Applicant) requests that the Commission approve revisions to the RS 95 tariff, pursuant to section 60 of the *Utilities Commission Act* (UCA).<sup>3</sup> The Commission has evaluated this Application under sections 59 to 61 of the UCA. Section 59 of the UCA requires that a public utility must not make, demand or receive an unjust, unreasonable, unduly discriminatory or unduly preferential rate for a service provided by it in British Columbia.

The *Clean Energy Act* (CEA) was introduced on April 10, 2010, by the Provincial Government of British Columbia, and contains a list of British Columbia's energy objectives in section 2 of the CEA. One of these objectives is to "use and foster the development in British Columbia of innovative technologies that support ... the use of clean and renewable resources."

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<sup>1</sup> Exhibit B-1, pp. 3–4.

<sup>2</sup> Ibid., pp. 1, 8, 10, 11, Appendix C.

<sup>3</sup> Exhibit B-4, BCUC IR 1.1.

Prior to the introduction of the CEA, the provincial government's emphasis on the promotion of energy efficiency was articulated in both the 2002 and 2007 Energy Plans. The 2007 Energy Plan is subtitled: "A Vision for Clean Energy Leadership" and includes as Policy Action #25: "Ensure the procurement of electricity appropriately recognizes the value of aggregated intermittent resources."

#### **1.4 Regulatory process**

The Application was reviewed by a written hearing process with two rounds of information requests. Nine parties registered as interveners in this proceeding:

- British Columbia Old Age Pensioners' Organization *et al.* (BCOAPO);
- BC Sustainable Energy Association and the Sierra Club BC (jointly, BCSEA-SCBC);
- Commercial Energy Consumers Association of British Columbia (CEC);
- Resolution Electric Ltd. (Resolution);
- Randy Engman (Engman);
- Barbara Fischer (Fischer);
- Paul McCavour (McCavour);
- Donald Scarlett (Scarlett); and
- Andy Shadrack (Shadrack).

The Commission also received two submissions from registered interested parties and seven letters of comment during the proceeding.

#### **2.0 DECISION SCOPE**

As noted in the prior section of these reasons for decision, FBC has requested approval for: a change in the tariff wording to clarify the intent of the NM Program; implementation of an annual energy bank; a change in the rate paid for Net Excess Generation (NEG); and approval of FBC's billing calculation method. FBC states that the changes are needed to more clearly reflect the original intent of the NM Program as approved by the Commission and to provide a better pricing signal for customers with NEG. FBC further states that the impact of these changes will be minimal to most participants.<sup>4</sup> In its final argument, FBC positions the proposed changes within the context of saying that "The Program, as it is currently structured pursuant to Commission Order G-92-09, contains a number of key characteristics that the Company is not proposing to change as part of the Update Application."<sup>5</sup>

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<sup>4</sup> Exhibit B-1, pp. 1, 11.

<sup>5</sup> FBC Final Argument p. 1.

## Panel discussion

As more set out in Section 3 of these reasons for decision, the Panel agrees with FBC that there is considerable ambiguity in the current RS 95 that creates a situation whereby some customers (current or potential future) could be producing persistent NEG, contrary to the spirit of the NM Program.

Thus, the Panel has approached this Application by identifying those changes required to the RS 95 to clarify the original intent of the NM Program. The Panel is not inclined to make broader changes to the Program at this time that go beyond the problem at hand unless there are compelling reasons. The Panel notes that FBC also has two other applications coming before the Commission which may provide broader guidance regarding FBC's self-generation strategy: the 2016 Long Term Electric Resource Plan & Long Term Demand Side Management Plan (LTERP); and the FBC Self-Generation Policy Stage II Application (SGP). The Panel feels that these broader issues (for example, whether the Program should be expanded beyond its original intent) are more appropriately addressed following the LTERP and/or SGP proceedings as these proceedings may provide broader guidance regarding FBC's self-generation strategy.

### 3.0 CHANGES TO THE PROGRAM DESCRIPTION IN THE RS 95

RS 95 is available to residential, smaller commercial and irrigation customers with clean renewable self-generation capacity not more than 50 kW.<sup>6</sup> The RS 95 tariff states that, if in any billing period the eligible customer is a net generator of energy, the NEG shall be valued at the rates specified in the applicable rate schedule and credited to the customer's account.<sup>7</sup>

FBC proposes to amend the language of the RS 95 tariff by adding portions to the existing text in a number of places to state that the program is not intended for customers who generate electricity in excess of their annual requirement. Specifically, FBC proposes to amend the definition and eligibility section of the tariff as follows:<sup>8</sup>

**Net Metered System** - A facility for the production of electric energy that:

- (a) uses as its fuel, a source defined as a clean and renewable resource in the BC Energy Plan;
- (b) has a design capacity of not more than 50 kW;
- (c) is located on the Customer-Generator's Premises;
- (d) operates in parallel with the Company's transmission or distribution facilities; and
- (e) is intended to only offset part or all of the Customer-Generator's requirements for

Electricity on an annual basis. The program is not intended for customers who generate electricity in excess of their annual requirements.

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<sup>6</sup> Exhibit B-1, p. 3.

<sup>7</sup> Ibid., Appendix C.

<sup>8</sup> Ibid.

ELIGIBILITY: To be eligible to participate in the Net Metering Program, Customers must generate a portion or all of their own retail Electricity requirements using a renewable energy source. The generation equipment must be located on the Customer's Premises, Service only the Customer's Premises and must be intended to offset only a portion or all of the Customer's requirements for Electricity on an annual basis. The program is not intended for customers who generate electricity in excess of their annual requirement.

Clean or renewable resources include sources of energy that are constantly renewed by natural processes, such as water power, solar energy, wind energy, geothermal energy, wood residue energy, and energy from organic municipal waste, and shall have a maximum installed generating capacity of no greater than 50 kW.

FBC submits that the NM Program was not designed to provide an additional power supply resource for FBC. In the FBC 2009 NM Tariff Application FBC stated: "It is the overriding intent of the program that customers gain the ability to offset their own consumption with a clean and renewable resource. It is not the intent of the program to provide a means for large scale Independent Power Producers (IPP) to bring their output to market."<sup>9</sup>

FBC also stated in the 2009 NM Tariff Application: "Given that a Customer-Generator must comply with the Program intent that generation is intended only to offset consumption, the likely magnitude of any NEG should be small."<sup>10</sup>

Resolution and CEC agree with FBC's position on the 2009 intent of the NM Program, with CEC stating that a plain reading of the phrasing 'must be intended to offset a portion or all of the Customer's requirements for Electricity' is quite clear. However, CEC also notes that the language in the tariff has not been especially explicit and it would appear that FBC has not been proactive in addressing the issue for some time.<sup>11</sup> BCOAPO supports the principle that the purpose of the NM Program is limited to allowing customer to offset their own consumption, and does not support the use of the Net Metering Program to supply excess generation to the utility.<sup>12</sup>

However, BCSEA-SCBC, considers that "the gist of these words in the eligibility criteria section of [the existing] RS 95 is that the generation equipment must be connected to the customer's load so that the customer's load is displaced before any customer generated power is provided to the utility, as distinct from the generation being connected directly to the utility." BCSEA-SCBC further submits: "Indeed, whether or not there is annual net excess generation is not a function of the size of the generation equipment alone but is also determined by the customer's consumption, which FBC acknowledges may change from year to year."<sup>13</sup>

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<sup>9</sup> FBC Final Argument, p. 3, FBC 2009 NM Tariff Application, p. 5.

<sup>10</sup> FBC 2009 NM Tariff Application, p. 20.

<sup>11</sup> Resolution Final Argument, para. 3; CEC Final Argument, pp. 12, 16.

<sup>12</sup> BCOAPO Final Argument, p. 2.

<sup>13</sup> BCSEA-SCBC Final Argument, p. 3.

BCSEA-SCBC further states that the proposed addition of the word “only” in the definition fundamentally changes the meaning from a description to a description plus a limitation, and that in doing so the amendment would add a limitation that is not present in the existing wording.<sup>14</sup>

Shadrack submits: “The “original intent” which FBC is referring to is, presumably, its corporate intent in 2009, and not that of its net metering customers, the provincial government, or the Commission.”<sup>15</sup>

Shadrack and Engman submit that FBC’s proposed changes in its 2010 Monitoring and Evaluation Report on the Net Metering Report (2010 NM Report) to clarify the treatment of intentional generation above a customer’s own use are contrary to those contemplated in this Application.<sup>16</sup>

In FBC’s 2010 NM Report FBC stated:

... the Company proposes to add additional language to Rate Schedule 95 that will not change the maximum allowable capacity of the program, but will clarify the treatment of generation that is in excess of an individual customer’s own use.

The Company is of the opinion that the original intention of the program (to offset all or some of the customer’s own consumption) is still valid, but there is no reason to prevent additional generation if it falls within the 50 kW cap. The principles in place for compensation for generation under the program remain essentially the same. That is, offset consumption is automatically valued at the retail rate, and a reasonable amount of generation that exceeds personal consumption will also attract that retail rate.

The proposed change to the program will affect generation that a customer-generator has installed with the intent to generate additional sales to FBC. The Company believes that compensation of these sales should be offered in a manner consistent with that of other small independent Power Producers in its service area.<sup>17</sup>

Engman questions why FBC has changed from its 2010 NM Report proposal to allow customers with a NEG balance at the end of a year (Annual NEG) on the NM rate, given that the sums involved are small, and considers FBC’s proposal in this Application to be “the final act of a ‘Bait and Switch’ trick which throws Net metering (NM) participants under the bus.”<sup>18</sup> FBC submits that the 2010 NM Report supports the original intent of the NM program, and that the current Application is entirely consistent with the changes that FBC suggested be made in the 2011 Report.<sup>19</sup>

Shadrack and Scarlett submit that, even if FBC is correct regarding the original intent of the NM program, this was not communicated to customers and has not been enforced.<sup>20</sup> CEC submits that FBC has not intentionally or inadvertently misled customers as to the specificity of the regulations with respect to the NM Program.<sup>21</sup>

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<sup>14</sup> BCSEA-SCBC Final Argument, pp. 4–5.

<sup>15</sup> Shadrack Final Argument, para. 9.

<sup>16</sup> *Ibid.*, para. 12; Engman Final Argument, para. 1.

<sup>17</sup> *Ibid.*; FBC Reply Argument, p. 6.

<sup>18</sup> Engman Final Argument, p. 1.

<sup>19</sup> FBC Reply Argument, p. 7.

<sup>20</sup> Shadrack Final Argument, paras 13-22; Scarlett Final Argument, p. 8.

<sup>21</sup> CEC Final Argument, p. 13.

Resolution submits that it is ultimately the customer's responsibility to do their due diligence, especially for such a large commitment.<sup>22</sup>

BCSEA-SCBC submits that the Commission's 2009 FBC NM decision (G-92-09) did not discuss the topic of annual NEG or a limit on annual NEG.<sup>23</sup> FBC replied that there is no reason to assume that the 2009 Commission Panel was not aware of the intent and restriction contained in the NM Program as approved.<sup>24</sup>

### **Panel determination**

The Panel finds that FBC did intend that the NM Program would only be used for customers' own consumption, with a limit on the nameplate rating of the net metered system at 50 kW. FBC's evidence here is compelling, and possibly the clearest example is in the 2009 FBC NM Tariff Application where FBC stated: "Given that a Customer-Generator must comply with the Program intent that generation is intended only to offset consumption, the likely magnitude of any NEG should be small."<sup>25</sup>

However, this Panel does not find that FBC's intent is necessarily the same thing as the Commission's intent in approving the RS 95 tariff. Our review of the evidence before us indicates that there are ambiguities in the RS 95 tariff wording, and someone could legitimately interpret the RS 95 tariff differently than FBC's intent.

The Panel makes the following observations:

- The current Program limits a customer's generation capacity to 50kW, but the Tariff is not specific as to whether customers are entitled to generate more energy on an annual basis than they consume. One reading of the tariff is that customers may generate as much energy as they wish, so long as their equipment has a capacity of 50 kW or less (and the energy is clean and renewable). The Tariff describes a net metered system as one that "is intended to offset part or all" of the customer's requirements for electricity, yet the tariff still does not explicitly limit generation to usage.
- Similarly, the eligibility section of the Tariff states that, to be eligible to participate in the Net Metering Program, customers must generate a portion or all of their own retail Electricity requirements using a renewable energy source. The primary objective of this sentence could fairly be understood to be that the energy comes from a renewable source, and the sentence is silent on excess generation.
- The eligibility section of the Tariff goes on to say: "The generation equipment must be located on the Customer's Premises, Service only the Customer's Premises and must be intended to offset a portion or all of the Customer's requirements for Electricity." As in the Tariff's definition of a net metered system, this sentence does not explicitly prevent the generation of Annual NEG, but merely refers to one possible intention of the customer for their generation equipment.

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<sup>22</sup> Resolution Final Argument, para. 3.

<sup>23</sup> BCSEA-SCBC Final Argument, p. 5; In the matter of the Utilities Commission Act and an application by FBC Inc. for the Approval of a net metering rate schedule 95 (FBC 2009 NM Decision), dated July 29, 2009, Appendix A to Order G-92-09.

<sup>24</sup> FBC Final Argument, p. 5.

<sup>25</sup> FBC 2009 NM Tariff Application, p. 20.

- In addition to these references in the Tariff to the intent of the program, the Tariff explicitly anticipates Annual NEG in the billing calculation, whereby FBC commits to purchase surplus energy.

**Based on this evidence, the Panel determines that adjustments to the RS 95 tariff are needed to remove existing ambiguities. However, it does not agree that FBC’s proposed revisions alone provide the appropriate remedy.**

It is clear from the evidence before us that the RS 95 tariff as currently worded leaves room for significantly different interpretations, and that clarification is necessary and in the public interest.

The crux of the issue is how to clarify the existing stated intent of the NM Program “to offset part or all of the Customer-Generator’s requirements for electricity.”<sup>26</sup> The Panel has broken this into three distinct (if related) questions regarding eligibility to join and/or remain in the NM Program. Specifically, how should this general statement of intent be translated into:

- Limits on installed generation capacity at the time of initial investment and/or initial application to participate in the NM Program;
- Limits on additions to installed generation capacity by a participant already in the NM Program; and
- Limits on continued participation in the NM Program if/when a participant subsequently becomes a consistent producer of Annual NEG.

As will become clearer in the sequential treatment of each of the above issues, FBC’s wording falls short of adequately addressing the matters at hand. With regard to clarifying limits on initial generation capacity, the proposed amendment is a more emphatic statement of the general intent, but does not explicitly address the ambiguity. With regard to clarifying what if any additions to capacity are permissible for existing participants, the proposed amendment provides no further guidance than the current wording. Finally, with regard to ongoing eligibility in the face of persistent Annual NEG, the proposed wording could be seen as conferring rights to FBC that the Panel is not prepared to grant.

### **3.1 What limits should be placed on installed generation capacity at the time of initial investment and/or initial application to participate in the NM Program?**

FBC submits that it has not rejected a submitted Application on the basis of the system’s average kWh production level, although FBC has advised prospective applicants that the size of a planned installation should be reduced prior to an Application being submitted.<sup>27</sup>

FBC states that the NM Program is not the correct program to set the rate to buy power that is in excess of that required to offset a customer’s own use. However, FBC states that it has no tariff or program in place to purchase IPP power.<sup>28</sup>

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<sup>26</sup> Exhibit B-1, Appendix C, sheet 44.

<sup>27</sup> Exhibit B-10, Shadrack IR 9a.

<sup>28</sup> Exhibit B-4, BCUC IR 9.3.5; Exhibit B-12, BCUC IR 13.5.

BCOAPO submits it does not support use of the Net Metering Program to supply excess generation to the utility, but may support a program that allows small generators to be paid to supply power to the utility.<sup>29</sup>

CEC submits that it is reasonable for FBC to continue to restrict the NM program because other customers would be disadvantaged and selling energy to FBC is properly covered under such contracts as energy purchase agreements. CEC also submits that it could also be appropriate for FBC to establish a maximum NEG beyond which the utility would not pay in order to ensure further clarity amongst customers.<sup>30</sup>

In response to a question from Resolution as to whether FBC recognizes the benefit of solar photovoltaic (PV) offsetting electrical consumption, FBC submits that the 2013 conservation potential review update found that a 3kW residential solar PV was not cost-effective, failing the total resource cost test by a large margin.<sup>31</sup> However, Scarlett submits that prices of solar panels and controllers have plummeted over the past few years and micro-hydro generation typically has a much shorter payback period than solar photovoltaic.<sup>32</sup> Engman also submits that the intentions of NM participants, who invested thousands, were not purely financial.<sup>33</sup>

BCSEA-SCBC submits that if the price for Annual NEG produces an unacceptable outcome (e.g., not in the public interest, or unduly discriminatory) then the solution is to set an acceptable price for Annual NEG, not to ban NM systems that produce Annual NEG.<sup>34</sup> Shadrack submits that this was the approach proposed in FBC's 2010 NM Report.<sup>35</sup>

Scarlett submits that FBC's proposal will be a barrier to investors who would be willing to construct generation as economically efficient as possible as, when building a micro-hydro power plant, the cost per kilowatt of capacity at a given site is always lower with increased size.<sup>36</sup>

BCSEA-SCBC also argues that "There is no practical way for either FBC or a prospective NM participant to anticipate the future annual load at the premises with accuracy and certainty. In residential premises, the number of occupants may change. In commercial premises, the nature or size of the business may change. New sources of load may be added, existing sources of load may be removed. Conservation and efficiency measures may be implemented. The premises, including the generation equipment, may be sold to a new owner who uses the premises differently. There is also potential uncertainty on the generation side. While some types of generation equipment, such as PV, may support fairly accurate estimates of annual energy generation, the output of other types of generation equipment, such as run-of-river, is variable and harder to forecast. As a result of these uncertainties, an exclusion of NM participants with annual net excess generation would be difficult to apply."<sup>37</sup>

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<sup>29</sup> BCOAPO Final Argument, p. 2.

<sup>30</sup> CEC Final Argument, p. 4.

<sup>31</sup> Exhibit B-8, Resolution IR 12.

<sup>32</sup> Scarlett Final Argument, p. 4.

<sup>33</sup> Engman Final Argument, para. 5.

<sup>34</sup> BCSEA-SCBC Final Argument, p. 5.

<sup>35</sup> Ibid., FBC Reply Submission, p. 6.

<sup>36</sup> Scarlett Final Argument, p. 10.

<sup>37</sup> BCSEA-SCBC Final Argument, pp. 5–6.

## Panel determination

**The Panel approves FBC’s proposed changes to the RS 95 tariff that clarify that new customers will not be accepted into the NM Program if their proposed generating capacity exceeds their anticipated annual consumption** (i.e. in addition to being limited by the 50kW maximum).

The Panel notes it is currently FBC’s practice to discuss generating capacity with Program applicants prior to accepting them into the Program and that FBC “has advised that the size of a planned installation should be reduced prior to an Application being submitted.”<sup>38</sup>

The Panel agrees that FBC does, in fact, have the right to continue to reject applications that are sized beyond the customer’s expected consumption. The intent of the Program is for customers to generate a portion or all of their own consumption, so it is appropriate that FBC has the right to include only those customers who make a reasonable attempt, at the outset, to limit their generation capacity to their expected annual consumption.

The Panel approves FBC’s proposed wording changes to the RS 95 tariff, including the insertion of the word “only” in the phrase “...must be intended to offset *only* a portion or all of the Customer’s requirements for Electricity...” (emphasis added). The Panel finds that this does, in fact, impose a limit on customers’ use of the program, and that this is appropriate and within the original intent of the program.

The Panel reiterates its comments made earlier in this reasons for decision that broader issues, such as whether the scope of the NM programs should be expanded to include customers who generate power in excess of the customer’s own use, are more appropriately addressed as part of, or following the LTERP and/or SGP proceedings as they may provide broader guidance regarding FBC’s self-generation strategy.

### **3.2 What limits should be placed on additions to installed generation capacity by a participant already in the NM Program?**

FBC states there has been a NM customer with capacity upgraded from 5kW to 20.5kW, and provides the following description of the incident:

FBC understands that the original 2011 installation for the referenced NM customer was a micro-hydro turbine with a nameplate capacity of 5kW. A system of this size is not clearly oversized for some residential applications (depending on water flow). Given that billing records indicate that the account associated with this installation averaged annual consumption of over 30,000 kWh in the three years prior to the installation the size does not appear unreasonable. FBC understands that the system was upgraded in 2012 to a 20.5kW maximum output, which is clearly above what a residential customer would normally require. FBC cannot locate any paperwork related to the 2012 upgrade.<sup>39</sup>

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<sup>38</sup> Exhibit B-10, Shadrack IR 9a.

<sup>39</sup> Exhibit B-15, Scarlett IR 8.

Special Conditions 1 of the RS 95 tariff states: “Prior to the interconnection of a Net Metering System the Customer-Generator must submit a Net Metering Application for review and execute a written Net Metering Interconnection Agreement with the Company.”<sup>40</sup>

In BC Hydro’s Net Metering Tariff (RS 1289), Special Conditions 2 includes: “The Customer shall not ... add to or modify the Generating Facility without the prior written consent of BC Hydro.”<sup>41</sup>

### **Panel determination**

**The Panel directs FBC to submit to this Panel, proposed changes to the RS 95 tariff that clarify that customers who are already participants in the NM Program and wish to remain in the NM Program, must not increase their generating capacity without prior approval of FBC, which shall be granted on the same basis as a new customer will be evaluated for entry into the NM Program.** For greater certainty, this change to the tariff should only speak to additions to capacity, and must not obligate customers to obtain approval from FBC if they intend to reduce their generating capacity.

The Panel notes that the RS 95 tariff has no special condition requiring participants to seek FBC approval of changes, such as increases, to their generating capacity. This silence could be interpreted as allowing a customer to be approved for the Program at a generating capacity to match their level of consumption, but subsequently to increase their generating capacity as long as it was still within the 50kW limit. This does not appear to the Panel to be within the spirit of the NM Program.

The Panel also notes that BC Hydro’s net metering program does have such a condition imposed on participants.

### **3.3 What limits should be placed on continued participation in the NM Program if/when a participant subsequently becomes a consistent producer of Annual NEG?**

FBC submits that under the current program structure, in the event that a system that was properly sized when installed subsequently started to produce NEG on an annual basis, FBC would reserve its right to remove the customer from the NM Program as it would no longer be in compliance with either the eligibility criteria contained in the RS 95 tariff or the objectives of the NM Program. FBC submits that such a customer could continue to be interconnected with the FBC system and would continue to receive the primary benefit of the Net Metering Program in offsetting personal consumption, but would not be compensated for net-generation that exceeds net-consumption in a given month.<sup>42</sup>

FBC also states that customers who install generation that is reasonably intended to offset only a portion or all of annual consumption, but that have periodic and/or minimal annual unused excess generation, would continue to meet the eligibility criteria of the NM Program.<sup>43</sup> FBC submits it understands that customer

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<sup>40</sup> Exhibit B-1, Appendix C.

<sup>41</sup> <https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/integrated-resource-plans/current-plan/schedule-1289-net-metering-service.pdf>

<sup>42</sup> Exhibit B-4, BCUC IR 5.6.

<sup>43</sup> Exhibit B-6, BCSEA-SCBC IR 5.2.

consumption may vary both within a year, and from year to year for a variety of reasons and so there may be over-generation in some years, but net consumption in others, and that FBC has no interest in unreasonably restricting the installation of generation that complies with NM Program parameters, or will comply within a reasonable timeframe.<sup>44</sup>

However, FBC submits that customers that have persistent Annual NEG may no longer meet the eligibility criteria for the NM Program and be removed.<sup>45</sup>

FBC submits that the changes proposed in the Application will have no effect on the eligibility to the NM Program as it currently exists, and that these are not changes and do not impact the treatment of current or potential Program participants.<sup>46</sup>

### Views of parties

BCSEA-SCBC opposes the concept of exclusion of systems with annual NEG, and submits that trying to exclude Annual NEG would be fraught with uncertainty and controversy.<sup>47</sup> BCSEA-SCBC states they would strongly oppose an outcome in which an otherwise compliant net metering system is denied any participation in the Net Metering Program due solely to non-compliance with a limit to do with regular annual net NEG.<sup>48</sup>

A letter of comment states that "... [FBC] should never have the right to expel us from the Net Metering Program because we consistently produce more power than we purchase from [FBC], as the way our system was sized was based upon the information that [FBC] gave us when we signed onto this program. The fact that [FBC] mislead us should not give them the right to change the program after we have invested on the basis of how they told us the program would work for us."<sup>49</sup>

Shadrack submits that "... as far as practical implementation, obvious questions and problems arise, such as difficulty in reliably calculating fluctuating consumption levels, for which [FBC] has supplied no clear answers."<sup>50</sup>

### **Panel determination**

**The Panel directs FBC to submit to this Panel, proposed changes to the RS 95 tariff to clarify that RS 95 customers cannot be removed from the NM Program solely on the basis of producing Annual NEG.**

FBC argues that it currently has the right (whether or not they would choose to exercise it) to remove a customer from the Program if the customer becomes a consistent producer of Annual NEG. The Panel finds to

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<sup>44</sup> Exhibit B-15, Scarlett IR 10; Exhibit B-10, Shadrack IR 7a.

<sup>45</sup> Exhibit B-6, BCSEA-SCBC IR 5.2.

<sup>46</sup> Exhibit B-6, BCSEA-SCBC IR 5.3; Exhibit B-4, BCUC IR 5.5.1.

<sup>47</sup> BCSEA-SCBC Final Argument, pp. 5–6.

<sup>48</sup> Ibid. p. 7.

<sup>49</sup> Exhibit E-4-1, p. 1.

<sup>50</sup> Shadrack Final Argument, para. 21.

the contrary, that FBC does not have this right under the current RS 95 tariff, nor should they going forward. In looking to the underlying intent of the NM Program, there are two fundamental reasons why the right to remove a participant is not in the public interest.

Firstly, risk of being excluded from the NM Program after initial qualification would likely pose an unacceptable risk to some customers who might otherwise wish to participate in the NM Program. Investment in self-generation capacity has a long-term payback, and hence any uncertainty in the duration of eligibility would be a deterrent to participation (i.e. in making their initial investment).

Secondly, there are many circumstances in which a customer might in good faith generate Annual NEG after having their initial investment approved for the program. For instance, a change in occupancy of a property, an investment in power-saving devices, or a lifestyle change of the occupants leading to fewer months of occupancy. The Panel feels that these customers should still be entitled to compensation for all the energy that they generate, given that they were approved into the Program with appropriately sized generation capacity; denying these customers compensation for their Annual NEG runs the risk of eliminating or dampening the incentive for them to reduce electricity consumption.

#### **4.0 RATE FOR COMPENSATION OF NET EXCESS GENERATION**

The Panel has previously determined under Section 3.1 that FBC has the right to restrict NM rate eligibility to only those customers who make a reasonable attempt, at the outset, to limit their generation capacity to their expected annual consumption. The Panel will now turn its mind to the question of what price FBC should pay for any excess generation produced by enrollees in the NM Program under the RS 95 tariff.

In FBC's 2009 NM Tariff Application, FBC proposed to value positive monthly NEG at the end of each billing period at the applicable retail rate contained in the tariff under which the customer receives service. FBC submitted that, on an annual basis, a credit balance may be refunded to the customer. FBC supported this approach as providing the following benefits:

1. NEG is automatically valued at the retail rate, and this rate will automatically be adjusted as the retail rate changes;
2. The account balance is visible to the customer-generator on each bill; and
3. No additional resources are required to maintain a separate account for a customer's generator information.<sup>51</sup>

FBC stated in the 2009 NM Tariff Application that, as the likely magnitude of any NEG should be small, the monetary impact to the typical customer-generator of using the FBC retail rate compared to the BC Hydro Standing Offer Program (SOP) rate (8.16c/kWh) would be negligible. FBC also stated that the NM purchase rate did not include any amount as an incentive.<sup>52</sup>

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<sup>51</sup> FBC 2009 NM Tariff Application, p. 10.

<sup>52</sup> *Ibid.*, pp. 20, 22.

In this Application, FBC submits that under the flat rate that was in effect at the time of the 2009 Application, all generation, whether used to serve load or fed back into the FBC system, was given the same value within the same customer class (although each customer class would have a different value). Under the existing flat residential rate used for exempt residential customers, this would have resulted in a value of 11.433 c/kWh for residential NEG. However, with the introduction of the stepped residential conservation rate (RCR), NEG for residential customers is now compensated at the Tier 1 rate (9.845 c/kWh) up to the threshold of 1,600 kWh over 2 months, and at the Tier 2 rate (15.198 c/kWh) for amounts over 1,600 kWh over 2 months.<sup>53</sup>

The compensation for NEG for other customer classes includes 11.433c/kWh for residential customers exempt from the RCR rate, 9.921 c/kWh for small commercial (RS 20) customers, and a declining rate for commercial customers on RS 21 (first 8,000 kWh at 8.43 c/kWh, with additional at 6.998 c/kWh). In addition, commercial and irrigation customers on time of use rates are also eligible for NM Program and have seasonal/within-day rates varying from 3.892 c/kWh to 18.013 c/kWh.<sup>54</sup>

FBC submits that the valuation of NEG arising from the introduction of the RCR (15.198 c/kWh for generation over 1,600 kWh in a 2 month period) is not reasonable as: (i) NEG can be valued at different amounts depending on the level generated, without any particular rationale; (ii) 15c/kWh is above FBC's long run marginal cost and is far in excess of the cost of other resources available; and (iii) the high level of compensation incents generation above the levels intended by the NM program.<sup>55</sup>

FBC proposes that that Annual NEG is valued at the price of power it is able to purchase from BC Hydro under RS 3808 (currently 4.475 c/kWh plus a 5% rate rider).<sup>56</sup> FBC submits that the energy acquired from excess energy purchases is short-term in nature, and that the Tranche 1 of BC Hydro RS 3808 is an appropriate proxy for FBC's short-run cost of energy.<sup>57</sup> FBC's average cost of market and contracted energy purchases (firm and non-firm) in 2015 was 4.5 c/kWh, with short-term non-firm contracts ranging from 1.7 c/kWh to 4.3c/kWh.<sup>58</sup>

FBC recognizes that if the intent of the NM Program is adhered to, and customers enrolled in the NM Program have generation sized only to meet the approximate load of the premises, the compensation rate will have only a minor financial impact to other customers since any amount of Annual NEG should be small.<sup>59</sup>

FBC states that the customer systems with the greatest amounts of unused Annual NEG are those with small hydro-electric installations.<sup>60</sup> FBC suggests that 6-8 customers of 86 NM Program participants could experience a positive Annual NEG balance after a 12 month period. FBC states that there are two small hydro-electric

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<sup>53</sup> Exhibit B-1, p. 9; Exhibit B-4, BCUC IR 9.6.

<sup>54</sup> FBC Tariff, <https://www.fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/FortisBCElectricTariff.pdf> .

<sup>55</sup> Exhibit B-1, p 9; Exhibit B-4, BCUC IR 9.6.

<sup>56</sup> Exhibit B-1, p. 11; Exhibit B-7, CEC IR 8.2.

<sup>57</sup> Exhibit B-4, BCUC IR 9.4.2, 9.3.2; Exhibit B-12, BCUC IR 14.1.

<sup>58</sup> Exhibit B-7, CEC 8.2; Exhibit B-12, BCUC IR 14.1.

<sup>59</sup> Exhibit B-1, p. 10.

<sup>60</sup> Exhibit B-8, Resolution IR 6.

installations that have NEG well in excess of their requirements which (to the best of FBC's knowledge) are both run-of-river plants and have system capacities of 10 and 21 kW.<sup>61</sup> FBC provides the following summary of NEG sold to FBC:<sup>62</sup>

Year	Total NM Customers	Total Installed Capacity (kW)		NEG Sold to FBC (\$)
		Incremental	Cumulative	
2010	4	34	34	0
2011	12	98.5	132.5	0
2012	16	43	175.5	0
2013	20	16	191.5	4,345
2014	43	99	290.5	8,830
2015	83	227	517.5	16,926
2016 (Apr)	86	17	534.5	34,402

Views of the parties

The following table summarizes the key proposals:

Proponent	Rate for Annual NEG	Rate source	Reference
FBC	4.70 c/kWh	BC Hydro RS 3808, Tranche 1	Application p. 11; Exhibit B-4, BCUC IR 9.6; Exhibit B-7, CEC IR 8.2
BCOAPO	4.70 c/kWh	BC Hydro RS 3808, Tranche 1	BCOAPO Final Argument, p. 4; Exhibit B-7, CEC IR 8.2
CEC	Lower than 4.70 c/kWh	Lowest price equivalent energy (e.g., Mid-C market price, freshet market rates)	CEC Final Argument, p. 6-10; Exhibit B-7, CEC IR 8.2
BCSEA-SCBC	11.2 c/kWh	FBC's long-run marginal cost of BC-clean energy (LRMC)	BCSEA-SCBC Final Argument, p. 9
Shadrack	9.99 c/kWh or 11.2 c/kWh	BC Hydro RS 1289 – price paid for Annual NEG or FBC LRMC	Shadrack Final Argument, para 46
Engman	9.99 c/kWh	BC Hydro RS 1289 – price paid for Annual NEG	Engman Final Argument, p. 2
Resolution	9.845 c/kWh	FBC Residential Conservation Rate (RCR), Tier 1	Resolution Final Argument, para. 2
Scarlett	For a RCR customer, for NEG in each period: <ul style="list-style-type: none"> <li>9.845 c/kWh for the first 1,600 kWh</li> <li>15.198 c/kWh for additional</li> </ul>	Status quo, based on the retail rate that the customer is on: inclining block for residential, flat for small commercial, declining block for larger commercial, TOU/seasonal etc.	Scarlett Final Argument, p. 11

<sup>61</sup> Exhibit B-1, p. 4; Exhibit B-12, BCUC IR 13.3; Exhibit B-4, BCUC IR 2.1.

<sup>62</sup> Exhibit B-4, BCUC IR 2.1.

Additional pricing options include using the flat rate for residential customers exempt from the RCR (11.43 c/kWh).<sup>63</sup>

BCOAPO, CEC and BCSEA-SCBC argue that the existing retail rate is not appropriate as it includes customer and capacity costs and it has the potential to adversely impact other customers.<sup>64</sup>

BCOAPO supports FBC's proposal to pay the BC Hydro RS 3808 Tranche 1 rate for Annual NEG on the basis of simplicity and consistency with the rate paid for other unscheduled deliveries to the FBC system. BCOAPO submits that FBC has a residential inclining block, a commercial declining block, time of use rates and irrigation seasonal rates, and that under the existing approach it becomes difficult to determine which rate to apply to a customer's generation over the course of a year.<sup>65</sup>

CEC agrees with FBC's arguments that the purchase of Annual NEG should not be at the retail rate. CEC considers that the energy delivered from net metering customers would more likely displace market-based resources than BC Hydro RS 3808 purchases. CEC therefore recommends that the Commission approve an Annual NEG price based on the lowest priced equivalent energy purchasable by FBC, or at the market price for which the NEG energy could be sold on the Mid-C market.<sup>66</sup>

CEC submits that potentially the spring to summer freshet market rates may also be an appropriate basis for valuing NEG energy as FBC is not able to make good use of the energy it receives as it has only very limited seasonable storage availability. CEC also submits that it may also be reasonable to consider the cost of DSM energy (11.2 c/kWh) in assessing a higher bound for the price of NM energy.<sup>67</sup>

BCSEA-SCBC submits that FBC's long-run marginal cost (LRMC) of clean or renewable resources in BC is the appropriate referent price (11.2 c/kWh).<sup>68</sup> FBC submits that energy generated from a distribution connected customer is short-term in nature as there is no long term-commitment from the customer.<sup>69</sup> However:

- FBC submits the lifetime of distributed generation sources as ranges from 14 years to 38 years.<sup>70</sup>
- FBC states that NM customers do not have the option of selling generation to a third party other than FBC, and that FBC has no tariff or program in place to purchase IPP power other than the NM rate.<sup>71</sup>

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<sup>63</sup> Exhibit B-4, BCUC IR 9.6; Exhibit B-1, p. 9; FBC RCR tariff (RS 1).

<sup>64</sup> BCOAPO Final Argument, p. 2; CEC Final Argument p. 6; BCSEA-SCBC Final Argument, pp. 8–9.

<sup>65</sup> BCOAPO Final Argument, p. 4.

<sup>66</sup> CEC Final Argument, pp. 6–10.

<sup>67</sup> Ibid.

<sup>68</sup> BCSEA-SCBC Final Argument, p. 9.

<sup>69</sup> Exhibit B-4, BCUC IR 9.3.2.

<sup>70</sup> Exhibit B-4, BCUC IR 9.3.

<sup>71</sup> Exhibit B-4, BCUC IR 9.3.1; Exhibit B-12, BCUC IR 13.5.

- A letter of comment states: “Small producers should be protected and treated as larger IPP’s when it comes to solar. A system like this can’t be just dismantled and moved to an area where its more financially feasible to install.”<sup>72</sup>
- Scarlett argues: “The primary reason NM customers don’t make a long term commitment is that FBC has not to date given them the opportunity to do so.”<sup>73</sup>
- Scarlett also submits that FBC’s proposal does not acknowledge the value of aggregated small energy sources, contrary to Policy Action #25 in the BC Energy Plan which states: “Ensure the procurement of electricity appropriately recognizes the value of aggregated intermittent resources.”<sup>74</sup>

Shadrack submits that, instead of using BC Hydro’s RS 3808 Tranche 1 rate (4.70 c/kWh), FBC should use BC Hydro’s NM rate (RS 1289) for Annual NEG (9.99 c/kWh) which Shadrack submits was specifically created to meet

BC Hydro’s net metering program requirements, or that FBC should develop its own comparable net metering tariff based on FBC’s LRMC of acquiring electricity generated from clean or renewable resources of 11.2 c/kWh as calculated in FBC’s Long Term Resource Plan (2012).<sup>75</sup> Engman also submits that, to provide a level playing field for all BC residents, FBC should match BC Hydro’s tariff for NEG above consumption.<sup>76</sup>

Resolution argues for valuing Annual NEG at the Tier 1 RCR (9.845 c/kWh) on the basis that it is similar to the BC Hydro NM rate for Annual NEG (9.9 c/kWh).<sup>77</sup>

Scarlett argues for the use of the retail rate to match the status quo as closely as possible.<sup>78</sup> Scarlett argues that FBC is proposing in this Application to reimburse the NM customer at retail rates for energy used to offset their own consumption, and so this value for be used for NEG energy that flows to a neighbour’s house.<sup>79</sup>

## **Panel determination**

### **The Panel rejects the proposed change in the purchase price of NEG.**

By design, the Program is intended for customers to offset their own consumption. This point has been made repeatedly by FBC, and is accepted by the Panel. The Panel also notes that the Commission, in approving the initial NM Program, found that compensating NEG at retail rates was in the public interest.

The question before this Panel, then, is whether circumstances have changed sufficiently to warrant a departure from that original determination. In our view, they have not. The problem of persistent NEG, if left unresolved,

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<sup>72</sup> Exhibit E-3, Beregovoy.

<sup>73</sup> Scarlett Final Argument, p. 5.

<sup>74</sup> Scarlett Final Argument, p. 3.

<sup>75</sup> Shadrack Final Argument, para. 46; Exhibit B-7, CEC IR 8.2.

<sup>76</sup> Engman Final Argument, p. 2.

<sup>77</sup> Resolution Final Argument, para. 2.

<sup>78</sup> Scarlett Final Argument, p.11.

<sup>79</sup> Scarlett Final Argument, p. 5.

could potentially argue for considering a change to the price of NEG, but the Panel has resolved that issue on a go-forward basis by way of changes to the RS 95 tariff outlined in section 3 of these reasons for decision. FBC also raised the point that the introduction of two-tiered pricing in some tariffs argues for a change in the price of NEG. That said, given the changes to the tariff, the anticipated Annual NEG for any given Program participant is expected to be in the range of the amounts that FBC anticipated at the outset of the Program when it put forward arguments in favour of using the retail rates for NEG, and the Panel considers those arguments to still be compelling today.

In addition, FBC's proposal is based on an implicit change in the analytic paradigm from valuing (i.e. pricing) NEG in the context of what a customer pays for each kWh purchased from FBC, to valuing that same kWh in terms of its replacement cost to FBC (i.e. versus competing/comparable energy acquisition alternatives). FBC recognizes that if the intent of the program is adhered to, and customers enrolled in the Program have generation sized only to meet the approximate annual load of the premises, the compensation rate will have only a minor financial impact to other customers since any amount of Annual NEG should be small. As a result, the Panel questions the need to revisit the previously approved analytic paradigm at this time.

The Panel reiterates its comments made earlier in this decision that broader issues, such as whether the scope of the NM programs should be expanded to include customers who generate Annual NEG, and if so what the appropriate price should be, are more appropriately addressed as part of or following the LTERP and/or SGP proceedings as they may provide broader guidance regarding FBC's self-generation strategy. However, there is no compelling reason to change the NEG price to solve the problem at hand.

## **5.0 CHANGE TO A KWH BANK**

FBC proposes to adopt the use of a kWh bank that alternately carries monthly NEG forward to offset consumption in a future billing period, or applies previously accumulated monthly NEG in a billing period when net consumption exceeds net generation.<sup>80</sup> FBC submits that the monthly NEG carry-forward method is consistent with that used by BC Hydro and other utilities surveyed across Canada. In situations where a customer under RS 95 has a balance in its kWh bank at March 31, those kWh hours will be purchased by the Company. FBC states that March 31 has been chosen as it allows customers to take full advantage of any banked kWh through the high consumption winter season.<sup>81</sup> FBC submits that "Should the Commission approve the use of a kWh Bank, then a determination must be made as to the appropriate rate for the Company's purchase of the kWhs remaining in a customer's kWh Bank at the end of a 12 month period."<sup>82</sup>

### Views of parties

BCSEA-SCBC, CEC, and Resolution are in favour of the kWh bank proposal. Shadrack has no objection to FBC switching to a kWh "bank" provided that the definitions and criteria for billing from such a "bank" accord with

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<sup>80</sup> Exhibit B-1, p. 10.

<sup>81</sup> Ibid.

<sup>82</sup> FBC Final Argument, p. 5.

the definitions of “rate” and “service” found within the UCA, such that the annual electrical requirement billed for includes the Basic Charge, GST, and any other non-consumptive charges.<sup>83</sup>

In response to Shadrack, FBC submits: “Under the status quo, the customer’s bill at the end of each billing period would be zero, and there would be no Annual NEG pay-out. With the kWh Bank method, the customer would pay the non-consumptive charges each billing period and bank the excess NEG kWh. The customer would receive an annual pay-out for the kWh in the bank. In both cases, the customer would pay the same on an annual basis (assuming the rate paid for the NEG was the same). Shadrack’s concerns with the kWh bank should be given no weight.”<sup>84</sup>

BCOAPO does not support the kWh bank on the basis that annualizing generation/consumption through a kWh bank negates the primary system benefit provided by the Net Metering Program, which is its potential to off-set load during winter peak.<sup>85</sup> If generation/consumption is netted (or assessed) only annually, the benefit of winter generation is reduced and the benefit of summer generation is increased (i.e., because both now have the same value). In BCOAPO’s view, this change is not desirable.<sup>86</sup>

In response to BCOAPO, FBC submits: “BCOAPO is advocating for a system where any NEG is purchased by FBC at the end of each billing period. While this is a possible solution, FBC believes it to be inferior to the annual reconciliation since it is more complex from a billing perspective and because it creates more billing variability. For example, customers may pay nothing for electric service during the shoulder season when their demand for electricity is lower, and then have higher bills the rest of the year. A kWh bank smooths out billing for customers.”<sup>87</sup>

BCSEA-SCBC supports FBC’s proposal for a March 31 year end for the kWh bank if it is approved. BCSEA-SCBC agrees with FBC that March 31 “allows customers to take full advantage of any banked kWh through the high consumption winter season.”<sup>88</sup> Scarlett submits that FBC’s proposal to bank NEG kWh credits and pay for them on a set date in March of the following year is reasonable.<sup>89</sup> No other parties commented on the Annual NEG reconciliation date.

## **Panel determination**

### **The Panel rejects FBC’s application to create a kWh bank to carry forward Net Excess Generation.**

The Panel has previously determined the existing practice of valuing NEG generated in each billing period at the customer’s retail rate should be continued. As a result, there is no need for the development of an energy bank mechanism to implement FBC’s proposed pricing method.

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<sup>83</sup> Shadrack Final Argument, para. 24, pp. 4-5.

<sup>84</sup> FBC Reply Argument, p. 2.

<sup>85</sup> BCOAPO Final Argument, p. 3.

<sup>86</sup> Ibid., pp. 3–4.

<sup>87</sup> FBC Reply Argument, pp. 2–3.

<sup>88</sup> BCSEA-SCBC Final Argument, p. 9.

<sup>89</sup> Scarlett Final Argument, p. 11.

## **6.0 BILLING CALCULATION METHOD**

FBC states that with the introduction of the RCR, it is possible to treat the net kWh produced or received by the customer in two distinct ways, each of which could represent a conceivable interpretation of the existing Tariff language. FBC submits that the distinction between the two is whether or not the 1,600 kWh threshold in the RCR is applied to the net consumption or generation before or after the two registers are themselves netted.<sup>90</sup>

Currently, FBC applies the 1,600 kWh threshold prior to netting the two registers.<sup>91</sup> Under FBC's preferred interpretation, the Net Generation and Net Consumption recorded at a premise during a billing period would themselves be netted prior to the calculation of the customer's bill. FBC states that during the preparation of the current Application it became apparent that a single customer complaint was resolved by adopting the proposed billing method for that customer. The Complaint was resolved after discussions with the Commission however a ruling was not required. FBC does not believe that it is acceptable that customers within a rate are treated differently and has therefore sought Commission direction with respect to which billing interpretation the Company should apply to all customers billed the stepped rates on a go forward basis.<sup>92</sup>

### Views of parties

BCSEA-SCBC, BCOAPO, CEC, and Scarlett are in favour of FBC's preferred billing method. Shadrack is opposed to the preferred billing calculation method described in Section 6 of the Application unless such method includes the Basic Charge, GST and any other non-consumptive charges in a particular billing period and as part of the annual settlement calculation of what constitutes the point when a NEG payment should be made.<sup>93</sup>

In response to Shadrack, FBC submits that the fact that the percentage of the total bill that the Basic Charge represents increases as consumption drops, whether through conservation efforts or on-site generation, is a reality for all customers, whether net metered or not, and is not germane to the current process. FBC submits that the production of NEG in no way reduces the need to recover the costs associated with customer service or existing infrastructure that do not vary with the level of consumption.<sup>94</sup>

### **Panel determination**

#### **The Panel accepts FBC's proposed interpretation of the billing method.**

The evidence is clear that the current Program leaves room for (at least) two possible interpretations of how the billing should be calculated, and that clarification is required. The Panel is persuaded that offsetting the metered consumption and generation before arriving at a NEG amount to be compensated in is in keeping with the Program's intent, and is the appropriate algorithm for billing.

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<sup>90</sup> Application, Appendix B, p. 1.

<sup>91</sup> Exhibit B-4, BCUC IR 10.3.

<sup>92</sup> Exhibit B-6, BCSEA-SCBC IR 8.1.

<sup>93</sup> Shadrack Final Argument, para. 29,p. 5.

<sup>94</sup> FBC Reply Argument, p. 3.

## 7.0 TREATMENT OF EXISTING CUSTOMERS

FBC states it does not support a ‘grandparent’ approach to implementing the proposed revisions to the NM Program. FBC submits that ‘grandparenting’ would be unfair to new customers and would be more complicated to administer.<sup>95</sup>

### Panel determination

**The Panel determines that existing NM Program participants who are in a NEG position shall be afforded the same protection under the tariff as any new entrants to the NM Program, regardless of how that NEG came about.** More specifically, even in those situations where a participant’s generation capacity is clearly greater than their anticipated annual consumption, they cannot be removed from the NM Program by reason of the NEG.

As discussed in Sections 3 and 4 of these reasons for decision, the Panel has determined that the current RS 95 tariff wording is ambiguous. It is the Panel’s view that it is this very ambiguity that is at least in part responsible for the cases of installed capacity that are well in excess of expected annual consumption for those NM Program participants.

The Panel is not willing to apply the new tariff (as ordered in Section 3 of these reasons) conditions as an eligibility test for ratepayers that are already in the NM Program.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 29<sup>th</sup> day of December 2016.

*Original signed by:*

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H. G. Harowitz  
Panel Chair/Commissioner

*Original signed by:*

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R. I. Mason  
Commissioner

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<sup>95</sup> Exhibit B-6, BCSEA-SCBC IR 13.1.

## 1.0 DISSENTING OPINION OF COMMISSIONER REVEL

### 1.1 Background

I agree with the determinations and findings of the majority, except for the items that are the subject of my dissenting opinion.

I find that I am unable to concur with my colleagues' conclusion under sections 59 to 61 of the *Utilities Commission Act* (UCA) that the majority of the applied for relief by FortisBC (FBC) is not supportable. I thus present my Dissenting Decision as follows.

### 1.2 Approval sought

On April 15, 2016, FBC filed its Net Metering (NM) Program Tariff Update Application (Application) with the British Columbia Utilities Commission (Commission). In the Application, FBC requests approval for changes to a Net Metering Tariff (Rate Schedule (RS) 95) to:

- Clarify the intent of the Net Metering Program (NM Program) as described in Section 4 of the Application and reflected in the revised RS 95 tariff contained in Appendix C to the Application.
- Use a kWh Bank as described in Section 5 of the Application to carry forward Net Excess Generation (NEG) accumulated in a billing period forward to offset consumption in a future billing period, with an annual settlement for any annual remaining unused NEG.
- Compensate customers for any positive kWh balance remaining in the kWh bank at the end of the annual period using the BC Hydro RS 3808 Tranche 1 rate.

FBC also requests Commission acceptance of FBC's approach to the billing calculation method to remove the potential for misunderstanding about the application of the RS 95 tariff.<sup>1</sup>

### 1.3 Legislative and regulatory context

Section 60 (1) of the UCA states that in setting a rate under this Act:

- a) the commission must consider all matters that it considers proper and relevant affecting the rate,
- b) the commission must have due regard to the setting of a rate that
  - i. is not unjust or unreasonable within the meaning of section 59,
  - ii. provides to the public utility for which the rate is set a fair and reasonable return on any expenditure made by it to reduce energy demands, and
  - iii. encourages public utilities to increase efficiency, reduce costs and enhance performance.

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<sup>1</sup> Exhibit B-1, pp. 1, 8, 10, 11, Appendix C.

#### 1.4 Regulatory process

The Application was reviewed by a written hearing process with two rounds of information requests. Nine parties registered as interveners in this proceeding:

- British Columbia Old Age Pensioners' Organization *et al.* (BCOAPO);
- BC Sustainable Energy Association and the Sierra Club BC (jointly BCSEA-SCBC);
- Commercial Energy Consumers Association of British Columbia (CEC);
- Resolution Electric Ltd. (Resolution);
- Randy Engman (Engman);
- Barbara Fischer (Fischer);
- Paul McCavour (McCavour);
- Donald Scarlett (Scarlett); and
- Andy Shadrack (Shadrack).

The Commission also received two submissions from registered interested parties and seven letters of comment during the proceeding.

#### 1.5 Request #1: Clarify the Intent of the NM Program

FBC has indicated in its Application that there is some lack of clarity and the possibility of alternate interpretations of its present program definition and that it would be beneficial to improve the program definition, and that, at this point it wishes to remove that ambiguity of the NM Program through improved clarity.<sup>2</sup>

To that end, FBC proposes to amend the language of the RS 95 tariff by adding the underlined portions to the existing text in a number of places:

*The generation equipment must be located on the Customer's Premises, Service only the Customer's Premises and must be intended to offset only a portion or all of the Customer's requirements for Electricity on an annual basis. The program is not intended for customers who generate electricity in excess of their annual requirement.*<sup>3</sup>

##### *Original intent of the NM Program*

FBC submits that the NM Program was not designed to provide an additional power supply resource for FBC, and that this was articulated in the FBC 2009 NM Tariff Application where FBC stated: "It is the overriding intent of the program that customers gain the ability to offset their own consumption with a clean and renewable

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<sup>2</sup> FBC Final Argument, p. 1.

<sup>3</sup> Exhibit B-1, Appendix C.

resource.” FBC submits that it is “not proposing to change this limitation, or the manner in which this aspect of the Program is administered, but is seeking to add clarifying language to the tariff as described in Section 4.4 of the Update Application.”<sup>4</sup>

FBC states that this intent was reflected in the approved RS 95 in the definition of both Net Metering and Net Metered System, and as part of the Eligibility conditions. In each case, net metering is described with words to the effect that the intent of net metering is to, “...offset part or all of the Customer-Generator’s requirements for Electricity.”<sup>5</sup>

Resolution and CEC agree with FBC’s position on the 2009 intent of the NM Program, with CEC stating that a plain reading of the phrasing ‘must be intended to offset a portion or all of the Customer’s requirements for Electricity’ is quite clear. However, CEC also notes that the language in the tariff has not been especially explicit and it would appear that FBC has not been proactive in addressing the issue for some time.<sup>6</sup> BCOAPO supports the principle that the purpose of the Net Metering Program is limited to allowing customer to offset their own consumption, and does not support the use of the Net Metering Program to supply excess generation to the utility.<sup>7</sup>

However, BCSEA-SCBC considers that “the gist of these words in the eligibility criteria section of RS 95 is that the generation equipment must be connected to the customer’s load so that the customer’s load is displaced before any customer generated power is provided to the utility, as distinct from the generation being connected directly to the utility.” BCSEA-SCBC further submits: “Indeed, whether or not there is annual net excess generation is not a function of the size of the generation equipment alone but is also determined by the customer’s consumption, which FBC acknowledges may change from year to year.”<sup>8</sup>

BCSEA-SCBC opposes the concept of exclusion of systems with Annual NEG, and submits that trying to exclude Annual NEG would be fraught with uncertainty and controversy.<sup>9</sup> BCSEA-SCBC further states that the proposed addition of the word “only” in the definition fundamentally changes the meaning from a description to a description plus a limitation, and that in doing so the amendment would add a limitation that is not present in the existing wording.<sup>10</sup>

Shadrack and Engman submit that FBC’s proposed changes in its 2010 Monitoring and Evaluation Report on the Net Metering Report (2010 NM Report) to clarify the treatment of intentional generation above a customer’s own use are contrary to those contemplated in this Application.<sup>11</sup>

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<sup>4</sup> Exhibit B-1, pp. 5–6; FBC Final Argument, p. 3; FBC 2009 Net Metering Tariff Application, p. 5.

<sup>5</sup> FBC Final Argument, p. 3.

<sup>6</sup> Resolution Final Argument, para 3; CEC Final Argument, pp. 12, 16.

<sup>7</sup> BCOAPO Final Argument, p. 2.

<sup>8</sup> BCSEA-SCBC Final Argument, p. 3.

<sup>9</sup> BCSEA-SCBC Final Argument, pp. 5–6.

<sup>10</sup> BCSEA-SCBC Final Argument, pp. 4–5.

<sup>11</sup> Ibid., para 12; Engman Final Argument, para. 1.

In FBC's 2010 NM Report, FBC stated:

... the Company proposes to add additional language to Rate Schedule 95 that will not change the maximum allowable capacity of the program, but will clarify the treatment of generation that is in excess of an individual customer's own use.

The Company is of the opinion that the original intention of the program (to offset all or some of the customers own consumption) is still valid, but there is no reason to prevent additional generation if it falls within the 50 kW cap. The principles in place for compensation for generation under the program remain essentially the same. That is, offset consumption is automatically valued at the retail rate, and a reasonable amount of generation that exceeds personal consumption will also attract that retail rate.

The proposed change to the program will affect generation that a customer-generator has installed with the intent to generate additional sales to FortisBC. The Company believes that compensation of these sales should be offered in a manner consistent with that of other small independent Power Producers in its service area.<sup>12</sup>

FBC submits that the 2010 NM Report supports the original intent of the NM Program, and that the current Application is entirely consistent with the changes that FBC suggested be made in the 2011 Report.<sup>13</sup>

Shadrack and Scarlett submit that, even if FBC is correct regarding the original intent of the NM Program, this was not communicated to customers and has not been enforced.<sup>14</sup> CEC submits that FBC has not intentionally or inadvertently misled customers as to the specificity of the regulations with respect to the NM program.<sup>15</sup> Resolution submits that it is ultimately the customer's responsibility to do their due diligence, especially for such a large commitment.<sup>16</sup>

BCSEA-SCBC submit that the Commission's FBC 2009 NM decision (G-92-09) did not discuss the topic of Annual NEG or a limit on Annual NEG.<sup>17</sup> FBC reply that there is no reason to assume that the 2009 Commission Panel was not aware of the intent and restriction contained in the Program as approved.<sup>18</sup>

BCOAPO submits it does not support use of the Net Metering Program to supply excess generation to the utility, but may support a program that allows small generators to be paid to supply power to the utility.<sup>19</sup> CEC submits that it could also be appropriate for FBC to establish a maximum NEG beyond which the utility would not pay in order to ensure further clarity amongst customers.<sup>20</sup>

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<sup>12</sup> Ibid.; FBC Reply Argument, p. 6.

<sup>13</sup> FBC Reply Argument, p. 7.

<sup>14</sup> Shadrack Final Argument, paras. 13-22; Scarlett Final Argument, p. 8.

<sup>15</sup> CEC Final Argument, p. 13.

<sup>16</sup> Resolution Final Argument, para. 3.

<sup>17</sup> BCSEA-SCBC Final Argument, p. 5; In the matter of the Utilities Commission Act and an application by FortisBC Inc. for the Approval of a net metering rate schedule 95 (FBC 2007 NM Decision), dated July 29, 2009, Appendix A to Order G-92-09.

<sup>18</sup> FBC Final Argument, p. 5.

<sup>19</sup> BCOAPO Final Argument, p. 2.

<sup>20</sup> CEC Final Argument, p. 4.

*Acceptable NEG to be considered eligible for the NM Program*

FBC submits that the changes proposed in the Application will have no effect on the eligibility to the NM Program as it currently exists, and that these are not changes and do not impact the treatment of current or potential Program participants.<sup>21</sup>

FBC submits it understands that customer consumption may vary both within a year, and from year to year for a variety of reasons and so there may be over-generation in some years, but net consumption in others, and that FBC has no interest in unreasonably restricting the installation of generation that complies with NM Program parameters, or will comply within a reasonable timeframe.<sup>22</sup>

*Removal of ineligible NM customer*

FBC states that it is FBC's current practice to ensure that applications for the NM Program meet the intent of the NM Program and are sized to offset some or all of a customer's annual consumption, and not to export excess generation to the Company. FBC states that installations that are sized to have persistent unused Annual NEG will need to be amended or the installation will not be eligible for the Net Metering Program.<sup>23</sup> FBC submits that customer wishing to take part in the NM Program are required to complete the Application for Net Metering form that is found on the Company's website. FBC submits that, once the completed form is submitted, an FBC Regional Engineer will contact the customer to discuss the Application and work with the customer on the details of the installation and will ensure compliance with the provisions of the NM Program and the RS 95 tariff.<sup>24</sup>

FBC submits that it has not rejected a submitted NM Application on the basis of the system's average kWh production level, although FBC has advised prospective applicants that the size of a planned installation should be reduced prior to an Application being submitted.<sup>25</sup> FBC states that customers who install generation that is reasonably intended to offset only a portion or all of annual consumption, but that have periodic and/or minimal annual unused excess generation, would continue to meet the eligibility criteria of the Program.<sup>26</sup>

However, FBC submits that customers that have persistent Annual NEG may no longer meet the eligibility criteria for the Program and be removed.<sup>27</sup> FBC submits that, under the current program structure, in the event that a system that was properly sized when installed subsequently started to produce NEG on an annual basis, it would reserve its right to remove the customer from the NM Program as it would no longer be in compliance with either the eligibility criteria contained in the RS 95 tariff or the objectives of the NM Program. FBC states that such a customer could continue to be interconnected with the FBC system and would continue to receive

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<sup>21</sup> Exhibit B-6, BCSEA-SCBC IR 5.3; Exhibit B-4, BCUC IR 5.5.1.

<sup>22</sup> Exhibit B-15, Scarlett IR 10; Exhibit B-10, Shadrack IR 7a.

<sup>23</sup> Exhibit B-5, BCOAPO IR 4.1.

<sup>24</sup> Exhibit B-4, BCUC IR 5.5.

<sup>25</sup> Exhibit B-10, Shadrack IR 9a.

<sup>26</sup> Exhibit B-6, BCSEA-SCBC IR 5.2.

<sup>27</sup> Ibid.

the primary benefit of the NM Program in offsetting personal consumption, but would not be compensated for net-generation that exceeds net-consumption in a given month.<sup>28</sup>

FBC submits that its tariff schedules do not generally contain clauses that specify when a customer can be removed from a rate schedule. Rather, tariff schedules contain eligibility criteria that a customer must meet in order to be served under a particular rate, and that if a customer taking service pursuant to the Net Metering tariff schedule no longer meets some aspect of the eligibility criteria, service under that schedule could be suspended and the customer would be moved to a rate schedule they were eligible for. FBC submits that it has no written detailed process to address these situations and, where a customer needs to be notified that they no longer meet the eligibility criteria for a particular rate, they would be contacted directly by customer service staff and the situation would be discussed. FBC submits this has not occurred to date with a net metering customer.<sup>29</sup>

The language in the RS 95 tariff indicates that service to the customer under the NM Program is initiated with a minimum one-year term and is self-renewing unless terminated by the customer.<sup>30</sup> No FBC customer has been unable to renew their NM contract with FBC after the first year of program participation.<sup>31</sup> Given the eligibility criteria, FBC considers that the option to enforce the eligibility criteria is available, and it reserves the right to do so in the future.<sup>32</sup>

BCSEA-SCBC states they would strongly oppose an outcome in which an otherwise compliant net metering system is denied any participation in the net metering program due solely to non-compliance with a limit to do with regular Annual NEG.<sup>33</sup>

A letter of comment states that "... [FBC] should never have the right to expel us from the net metering program because we consistently produce more power than we purchase from [FBC], as the way our system was sized was based upon the information that [FBC] gave us when we signed onto this program. The fact that [FBC] mislead us should not give them the right to change the program after we have invested on the basis of how they told us the program would work for us."<sup>34</sup>

Shadrack submits that "... as far as practical implementation, obvious questions and problems arise, such as difficulty in reliably calculating fluctuating consumption levels, for which [FBC] has supplied no clear answers."<sup>35</sup>

CEC submits that it is reasonable for FBC to continue to restrict the Net Metering Program to avoid a situation in which a customer had a large system that provided consistent and relatively large amounts of unused NEG

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<sup>28</sup> Exhibit B-4, BCUC IR 5.6.

<sup>29</sup> Exhibit B-12, BCUC IR 12.4.

<sup>30</sup> Exhibit B-1, Appendix C, sheet 46, special condition 4 in the RS 95 tariff.

<sup>31</sup> Exhibit B-4, BCUC IR 5.7.

<sup>32</sup> Exhibit B-15, Scarlett IR 2.

<sup>33</sup> Ibid. p. 7.

<sup>34</sup> Exhibit E-4-1, p. 1.

<sup>35</sup> Shadrack Final Argument, para. 21.

because other customers would be disadvantaged and selling energy to FBC is properly covered under such contracts as energy purchase agreements.<sup>36</sup>

### **Dissenting determination**

The determinations and findings of the majority on FBC's request to clarify the intent of the NM Program are:

1. The Commission approves FortisBC's (FBC) proposed changes to the RS 95 tariff that clarify that new customers will not be accepted into the Net Metering Program if their proposed generating capacity exceeds their anticipated annual consumption. However, FBC's proposed revisions alone do not provide the appropriate remedy.
2. FBC is directed to submit to this Panel, proposed changes to RS 95 within 90 days of the date of this order to clarify that:
  - customers who are already participants in the Net Metering Program and wish to remain in the program must not increase their generating capacity without prior approval of FBC, which shall be granted on the same basis as a new customer will be evaluated for entry into the Net Metering Program;
  - RS 95 customers cannot be removed from the Net Metering Program solely on the basis of producing Annual Net Excess Generation.
6. The Commission determines that existing Net Metering Program participants who are in a Net Excess Generation position shall be afforded the same protection under the tariff as any new entrants to the Net Metering Program, regardless of how that Net Excess Generation came about and they cannot be removed from the Net Metering Program by reason of the Net Excess Generation.

I accept FBC's position that the NM program definition and the RS 95 tariff sheets need clarification in order to remove any perceived lack of clarity in the NM program definition the eligibility criteria and the RS 95 tariff. The positions of various interveners suggest lack of clarity also, although I am inclined to agree with CEC's position that a plain reading of the phrasing 'must be intended to offset a portion or all of the Customer's requirements for Electricity' is quite clear.

I find the proposed changes of FBC appropriate as a clarification and do not think that they change either the eligibility, intent or scope of the program. I am of the view that such changes will remove confusion among those who are contemplating registration in the program and will more effectively limit applicants to those whose intent is appropriate for the tariff. Lack of clarity in such situations often leads to inefficiencies of both time and effort.

Submissions on FBC's request for approval on 'program clarification' reach quite broadly beyond simple clarification and raise concerns and fears about the possibility of NM customers/registrants being removed from the program for producing regular NEG as a result of changing life situations such as family leaving home,

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<sup>36</sup> CEC Final Argument, p. 4.

wintering at a different location and such. I have some empathy for these fears and stresses as most people take contracts and legal matters seriously. Utility Tariffs have legal standing and can be quite imposing and signing on to the NM Program constitutes an evergreen one-year contract between FBC and the registrant. If a customer no longer complies with the eligibility criteria for a particular utility rate schedule, it seems reasonable to assume that they no longer qualify for service under that schedule. I would like to now address these concerns and fears.

I accept FBC's claim that a non-compliant customer could continue to be interconnected with the FBC system and would continue to receive the primary benefit of the NM Program in offsetting personal consumption, but would not be compensated for net-generation that exceeds net-consumption in a given month. I also accept the FBC claim that where a customer needs to be notified that they no longer meet the eligibility criteria for a particular rate they would be contacted directly by customer service staff and the situation would be discussed. These two positions of FBC make sense to me and give me some confidence that customers would not be eliminated in a high handed way.

At a specific public interest level, I must now ask if the monopoly power of the utility could be exercised to the detriment of a segment of the public, in this case, the NM customer.

The NM Program is a very small program with 86 customers (as of April 2016) and the annual cost to FBC for purchasing all the NEG from present NM customers is minimal. In such a situation it is reasonable to ask if it would be prudent of FBC to aggressively pursue the removal of customers who produce small amounts of NEG due to matters such as changing life situations. Further it is interesting to contemplate if such actions would be in the overall interests of the company and its other customers. Companies rely on 'good will' and for a large corporation to act aggressively toward an individual or family in my view would be a squanderous waste of such good will. I therefore consider such actions unlikely.

With regard to the protection of the public in the face of aggressive actions on the part of a utility, I observe that FBC has an in-house complaints process that allows any customer to register a complaint and seek resolution directly with the company. In the event that the complainant fails to have their complaint resolved, any utility customer has access to the complaints process of the BCUC. The BCUC has an obligation to address all complaints. Neither of these complaint processes should impose a financial burden on the complainant.

**It is my decision that, if all else fails, the customer is adequately protected by the available complaints programs and I therefore approve the implementation of the amendments to the wordings of the program definition and tariff sheet as proposed by FBC. FBC is instructed to make the proposed changes in all appropriate locations as well as on its website.**

## 1.6 Request #2: Use of a kWh Bank to Carry Forward Net Excess Generation for an Annual Period

FBC submits that the ability provided by the kWh bank to carry forward unused kWh to a future billing period will benefit most customers because that kWh may be valued at the Tier 2 rather than the Tier 1 rate.<sup>37</sup> FBC further submits:

Most customers do not have annual unused NEG and as such the purchase rate for these kWh has no impact. For customers that may have a small amount of annual unused NEG, whether or not there is a benefit would depend on the value ultimately realized for the kWh that are carried forward in the kWh Bank. The group of customers that are most disadvantaged by the proposed changes are those few individuals that routinely generate electricity far in excess of their load requirements and that are accustomed to receiving payments from FBC which value the associated kWh at the Tier 2 rate in each billing period (as well as the single time of use (TOU) customer that may receive on-peak rates for NEG). These customers will still receive Tier 2 value for kWh carried forward in the Bank and used in a subsequent billing period, but will have the majority of their NEG purchased at the proposed rate.<sup>38</sup>

FBC submits that the annual reconciliation of NEG allows customers the benefit of using NEG during seasons in which generation is higher than consumption to offset consumption in periods where the opposite occurs.<sup>39</sup> FBC considers that the fact that virtually all Net Metering Programs it has reviewed are structured in a similar manner is another indication that Annual NEG reconciliation is a logical approach.<sup>40</sup>

BCSEA-SCBC, CEC, and Resolution are in favour of the kWh bank proposal. Shadrack has no objection to FBC switching to a kWh “bank” provided that the definitions and criteria for billing from such a “bank” accord with the definitions of “rate” and “service” found within the UCA, such that the annual electrical requirement billed for includes the Basic Charge, GST, and any other non-consumptive charges.<sup>41</sup>

In response to Shadrack, FBC submits: “Under the status quo, the customer’s bill at the end of each billing period would be zero, and there would be no Annual NEG pay-out. With the kWh bank method, the customer would pay the non-consumptive charges each billing period and bank the excess NEG kWh. The customer would receive an annual pay-out for the kWh in the bank. In both cases, the customer would pay the same on an annual basis (assuming the rate paid for the NEG was the same). Shadrack’s concerns with the kWh bank should be given no weight.”<sup>42</sup>

BCOAPO does not support the kWh bank on the basis that annualizing generation/consumption through a kWh bank negates the primary system benefit provided by the Net Metering Program, which is its potential to off-set

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<sup>37</sup> FBC Final Argument, p. 8.

<sup>38</sup> Ibid., pp. 8–9.

<sup>39</sup> Exhibit B-4, BCUC IR 5.3.

<sup>40</sup> Ibid.

<sup>41</sup> Shadrack Final Argument, para. pp. 4–5.

<sup>42</sup> FBC Reply Argument, p. 2.

load during winter peak.<sup>43</sup> If generation/consumption is netted (or assessed) only annually, the benefit of winter generation is reduced and the benefit of summer generation is increased (i.e., because both now have the same value). In BCOAPO's view, this change is not desirable.<sup>44</sup>

In response to BCOAPO, FBC submits: "BCOAPO is advocating for a system where any NEG is purchased by FBC at the end of each billing period. While this is a possible solution, FBC believes it to be inferior to the annual reconciliation since it is more complex from a billing perspective and because it creates more billing variability. For example, customers may pay nothing for electric service during the shoulder season when their demand for electricity is lower, and then have higher bills the rest of the year. A kWh bank smooths out billing for customers."<sup>45</sup>

FBC proposes the year end kWh bank reconciliation date to be March 31, and submits that March 31 has been chosen as it allows customers to take full advantage of any banked kWh through the high consumption winter season.<sup>46</sup>

BCSEA-SCBC supports FBC's proposal for a March 31 year-end for the kWh bank if it is approved. BCSEA-SCBC agrees with FBC that March 31 "allows customers to take full advantage of any banked kWh through the high consumption winter season."<sup>47</sup> Scarlett submits that FBC's proposal to bank NEG kWh credits and pay for them on a set date in March of the following year is reasonable.<sup>48</sup> No other parties commented on the Annual NEG reconciliation date.

### **Dissenting determination**

The determination and finding of the majority is to deny FBC's request to create a kWh bank to carry forward Net Excess Generation.

I find myself persuaded of the merits of the proposed kWh bank proposal and consider that it will serve, very well, the vast majority of the current customers in the NM program who produce small amounts of NEG intermittently. I consider that it will improve their positions as it will allow them to carry any NEG forward over a year and receive, potentially, offsetting power at a time when their own production may be substantially limited. I note that it is particularly beneficial to those customers with appropriately sized NM systems to generate on average most of their residential needs and does not affect those who produce no NEG. **I therefore approve the implementation of a kWh bank, as proposed by FBC.**

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<sup>43</sup> BCOAPO Final Argument, p. 3.

<sup>44</sup> Ibid., pp. 3–4.

<sup>45</sup> FBC Reply Argument, pp. 2–3.

<sup>46</sup> Exhibit B-1, p. 10, footnote 11.

<sup>47</sup> BCSEA-SCBC Final Argument, p. 9.

<sup>48</sup> Scarlett Final Argument, p. 11.

### 1.7 Request #3: Compensation for NEG at the Rate Schedule (RS) 3808 Tranche 1 Rate

As noted earlier, it is my view that the intent of the NM Program has always been to allow a customer to be able to generate only a part or all of its electricity requirements and it is not the intent of the NM Program for the customer to become a small scale electrical producer with the intention of selling such excess electricity to FBC.

I will now turn my mind to the question of what price, if any, should FBC pay for any excess generation produced by enrollees in the NM Program under RS 95 recognizing that the express intent of the program is not to produce power for sale to FBC.

Currently, net metering customers are compensated for any NEG at the end of the year at their respective retail rate, which includes the Tier 2 rate for residential customers.<sup>49</sup> FBC are proposing that, if the energy bank is approved, any unused Annual NEG resulting from the use of a kWh bank be purchased by the Company at the price paid by FBC for power at the BC Hydro Rate 3808 Tranche 1 rate.<sup>50</sup>

FBC submits that, in the current RS 95 tariff, any NEG is valued at the rates specified in the applicable Rate Schedule. Under the flat rate that was in effect at the time of the 2009 NM Tariff Application, all generation, whether used to serve load or fed back into the FBC system, was given the same value. FBC submits that, under the existing flat residential rate used for exempt customers, this would have resulted in a value of 11.433 c/kWh for residential NEG.<sup>51</sup> However, with the introduction of the stepped residential conservation rate, NEG for residential customers is now compensated at the Tier 1 (9.845 c/kWh) rate up to the threshold of 1,600 kWh over 2 months and at the Tier 2 Rate (15.198 c/kWh) for amounts over 1,600 kWh over 2 months.<sup>52</sup>

FBC submits that this valuation for NEG is not reasonable as (i) the value differs depending on the level generated; (ii) 15 c/kWh is above FBC's long run marginal cost and is far in excess of the cost of other resources available; and (iii) the high level of compensation incents generation above the levels intended by the NM Program.<sup>53</sup>

FBC submits that, as the primary objective of the NM Program is for customers to be able to offset personal consumption and not to sell power to FBC, the most appropriate rate would be zero. However, FBC submits that, since it provides compensation to other parties for unscheduled deliveries at an avoided cost based rate, FBC is proposing that this amount should be offered to NM program participants.<sup>54</sup>

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<sup>49</sup> Exhibit B-1, p. 9.

<sup>50</sup> Ibid., p. 10.

<sup>51</sup> Ibid., p. 9; Exhibit B-4, BCUC IR 9.6.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Exhibit B-7, CEC IR 7.1.

FBC proposes that that Annual NEG is valued at the BC Hydro RS 3808 Tranche 1 rate (currently 4.475 c/kWh plus a 5% rate rider).<sup>55</sup> FBC states that it expects to file a nomination of 680 GWh of BC Hydro Tranche 1 RS 3808 energy (out of a total of 1,041 GWh available) for the operating year beginning October 1, 2016, and expects minimum purchases to be about this level annually through to 2033. FBC submits that the relatively small amount of BC Hydro RS 3808 Tranche 1 purchased is due to the ability of FBC cost effective market power.<sup>56</sup> FBC considers that Tranche 1 rate of BC Hydro RS 3808 is therefore an appropriate proxy for FBC's short-run cost of energy.<sup>57</sup>

FBC submits that the 2015 actual energy purchases by FBC were:<sup>58</sup>

Estimated market value of delivered energy	¢/kWh estimate (or range)	Source/Key assumptions
Short-term (less than 3 years) non-firm	0.017 to 0.043	Based on IPP's in FBC's service area (See BCUC IR2.13.5). Total volume is 5 GWh in 2015.
Short-term firm	0.038	Based on a short-term contract for a BC Clean Resource. Total volume is 79 GWh in 2015.
Long-term (more than 15 years) non-firm	n/a	FBC does not have any long-term non-firm contracts and has no information to base a price on.
Long-term firm	0.0404	Based on long-term contracts for BC Clean Resource, not including the PPA with BC Hydro. Total Volume of 917 GWh in 2015.

Given that FBC considers the energy acquired from excess energy purchases to be short-term in nature, FBC submits that the BC Hydro RS 3808 Tranche 1 rate is the appropriate rate to apply to excess energy.<sup>59</sup> FBC further submits that in the FBC service area there are no particular benefits that accrue to the broader customer base from net metering installations given the significant clean power supply resources FBC already utilizes.<sup>60</sup>

FBC submits that there is no long term value from NEG from net metering customers and a measure approaching any value for firm, dispatchable long-term power is not an appropriate NEG rate.<sup>61</sup> FBC also argues that a long-run price is not appropriate as it does not have a long-term contract with the customer.<sup>62</sup>

<sup>55</sup> Exhibit B-1, p. 11; Exhibit B-7, CEC IR 8.2.

<sup>56</sup> Exhibit B-7, CEC IR 8.4.1.

<sup>57</sup> Exhibit B-4, BCUC IR 9.4.2.

<sup>58</sup> Exhibit B-12, BCUC 14.1. The second column should read '\$/kWh'.

<sup>59</sup> Exhibit B-4, BCUC IR 9.4.2.

<sup>60</sup> Exhibit B-10, Shadrack IR 21.

<sup>61</sup> FBC Final Argument, p. 6.

<sup>62</sup> Exhibit B-4, BCUC IR 9.3.2.

FBC argues that Annual NEG contributes no network or generation capacity benefits as it is short-term in nature and so provides no certainty of either timing or volume.<sup>63</sup> CEC also submits that it is non-firm energy. BCOAPO submits that it is non-firm energy and contributes little capacity benefits. However, BCOAPO and Resolution state it has the potential to provide network capacity benefits, and Scarlett submits that states it has capacity benefits on an aggregated basis.<sup>64</sup>

FBC argues that a reduction in line losses is a localized benefit only, and should not be reflected in the Annual NEG price.<sup>65</sup> Scarlett argues that self-generation does reduce line losses because of their widespread distribution and so these benefits should be included.<sup>66</sup>

FBC argues that the value of energy varies by month, and it is possible that any NEG energy purchased May through July will either have to be spilled or if stored, it will reduce energy storage for the following winter storage season.<sup>67</sup> FBC also argues that no premium should be paid for 'BC clean' attributes given the significant clean power supply resources FBC already utilizes.<sup>68</sup> FBC states that, for 2015, the overall percentage of power from sustainable/clean sources was between 92% and 100%. FBC states that 8% was purchased from the market, and it is not able to calculate how much of this supply is from sustainable/clean generation sources.<sup>69</sup>

#### Views of the parties

The following table summarizes the key proposals:

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<sup>63</sup> Exhibit B-4, BCUC IR 9.4.1.

<sup>64</sup> CEC Final Argument, p.8; BCOAPO Final Argument, p. 3; Resolution Final Argument, p. 2; Scarlett Final Argument, p. 3.

<sup>65</sup> Exhibit B-8, Resolution IR 3.

<sup>66</sup> Scarlett Final Argument p. 3.

<sup>67</sup> Exhibit B-12, BCUC IR 13.1.

<sup>68</sup> Exhibit B-10, Shadrack IR 21.

<sup>69</sup> Exhibit B-8, Resolution IR 8.

Proponent	Rate for Annual NEG	Rate source	Reference
FBC	4.70 c/kWh	BC Hydro RS 3808, Tranche 1 rate	Application p. 11; Exhibit B-4, BCUC IR 9.6; Exhibit B-7, CEC IR 8.2
BCOAPO	4.70 c/kWh	BC Hydro RS 3808, Tranche 1 rate	BCOAPO Final Argument, p. 4; Exhibit B-7, CEC IR 8.2
CEC	Lower than 4.70 c/kWh	Lowest price equivalent energy (e.g., Mid-C market price, freshet market rates)	CEC Final Argument, p. 6-10; Exhibit B-7, CEC IR 8.2
BCSEA-SCBC	11.2 c/kWh	FBC's long-run marginal cost of BC-clean energy (LRMC)	BCSEA-SCBC Final Argument, p. 9
Shadrack	9.99 c/kWh or 11.2 c/kWh	BC Hydro RS 1289 – price paid for Annual NEG or FBC LRMC	Shadrack Final Argument, para 46
Engman	9.99 c/kWh	BC Hydro RS 1289 – price paid for Annual NEG	Engman Final Argument, p. 2
Resolution	9.845 c/kWh	FBC Residential Conservation Rate (RCR), Tier 1	Resolution Final Argument, para. 2
Scarlett	For a RCR customer, for NEG in each period: <ul style="list-style-type: none"> <li>• 9.845 c/kWh for the first 1,600 kWh</li> <li>• 15.198 c/kWh for additional</li> </ul>	Status quo, based on the retail rate that the customer is on: inclining block for residential, flat for small commercial, declining block for larger commercial, TOU/seasonal etc.	Scarlett Final Argument, p. 11

Additional pricing options include using the flat rate for residential customers exempt from the RCR (11.43 c/kWh).<sup>70</sup>

BCOAPO, CEC and BCSEA-SCBC argue that the existing retail rate is not appropriate as it includes customer and capacity costs and it has the potential to adversely impact other customers.<sup>71</sup>

BCOAPO supports FBC's proposal to pay the Tranche 1 RS 3808 rate for Annual NEG on the basis of simplicity and consistency with the rate paid for other unscheduled deliveries to the FBC system. BCOAPO submits that FBC has a residential inclining block, a commercial declining block, time of use rates and irrigation seasonal rates, and that under the existing approach it becomes difficult to determine which rate to apply to a customer's generation over the course of a year.<sup>72</sup>

<sup>70</sup> Exhibit B-4, BCUC IR 9.6; Exhibit B-1, p. 9; FBC RCR tariff (RS 1).

<sup>71</sup> BCOAPO Final Argument, p. 2; CEC Final Argument p. 6; BCSEA-SCBC Final Argument, pp. 8–9.

<sup>72</sup> BCOAPO Final Argument, p. 4.

CEC agrees with FBC's arguments that the purchase of Annual NEG should not be at the retail rate. CEC considers that the energy delivered from net metering customers would more likely displace market-based resources than BC Hydro RS 3808 purchases. CEC therefore recommends that the Commission approve an Annual NEG price based on the lowest priced equivalent energy purchasable by FBC, or at the market price for which the NEG energy could be sold on the Mid-C market.<sup>73</sup>

CEC submits that potentially the spring to summer freshet market rates may also be an appropriate basis for valuing NEG energy as FBC is not able to make good use of the energy it receives as it has only very limited seasonable storage availability. CEC also submits that it may also be reasonable to consider the cost of DSM energy (11.2 c/kWh) in assessing a higher bound for the price of NM energy.<sup>74</sup>

BCSEA-SCBC submits that FBC's long-run marginal cost (LRMC) of clean or renewable resources in BC is the appropriate referent price (11.2 c/kWh).<sup>75</sup> FBC submits that energy generated from a distribution connected customer is short-term in nature as there is no long term-commitment from the customer.<sup>76</sup>

Shadrack submits that, instead of using BC Hydro's RS 3808 Tranche 1 rate (4.70 c/kWh), FBC should use BC Hydro's NM rate (RS 1289) for Annual NEG (9.99 c/kWh) which Shadrack submits was specifically created to meet B.C. Hydro's net metering program requirements, or that FBC should develop its own comparable net metering tariff based on FBC's LRMC of acquiring electricity generated from clean or renewable resources of 11.2 c/kWh as calculated in FBC's Long Term Resource Plan (2012).<sup>77</sup> Engman also submits that, to provide a level playing field for all BC residents, FBC should match BC Hydro's tariff for NEG above consumption.<sup>78</sup>

Resolution argues for valuing Annual NEG at the Tier 1 RCR (9.845 c/kWh) on the basis that it is similar to the BC Hydro NM rate for Annual NEG (9.9c/kWh).<sup>79</sup>

Scarlett argues for the use of the retail rate to match the status quo as closely as possible.<sup>80</sup> Scarlett also argues that FBC is proposing in this Application to reimburse the NM customer at retail rates for energy used to offset their own consumption, and so this value should be used for NEG energy that flows to a neighbour's house.<sup>81</sup>

### **Dissenting determination**

The determination and finding of the majority is to deny FBC's requested change to the purchase price of the Net Excess Generation.

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<sup>73</sup> CEC Final Argument, pp. 6–10.

<sup>74</sup> Ibid.

<sup>75</sup> BCSEA-SCBC Final Argument, p. 9.

<sup>76</sup> Exhibit B-4, BCUC IR 9.3.2.

<sup>77</sup> Shadrack Final Argument, para 46; Exhibit B-7, CEC IR 8.2.

<sup>78</sup> Engman Final Argument, p. 2.

<sup>79</sup> Resolution Final Argument, para. 2.

<sup>80</sup> Scarlett Final Argument, p. 11.

<sup>81</sup> Scarlett Final Argument, p. 5.

As noted earlier, it is my view that the intent of the NM Program has always been to allow a customer to be able to generate only a part or all of its electricity requirements and it is not the intent of the NM Program for the customer to become, effectively, a small scale electrical producer and sell such excess electricity to FBC.

I note that, as the table above shows, there is considerable variation among interveners as to what an appropriate price would be for NEG produced by customers/registrants in the NM Program. With one exception, intervener positions strongly suggest that the present retail price paid for NEG generated by a residential customer is not the appropriate price.

It appears to me that the price embraced by various parties depends to a large degree upon the value that parties place upon such energy. Those who value that energy greatly, either for economic, environmental or social reasons, hold that NEG is desirable and should be bought by FBC at a relatively high rate. Those that embrace the view that the intent of the program is not to produce energy for sale to FBC, and that anything more than the equivalent replacement cost would not be appropriate, are more inclined toward a lower rate. Further, those inclined to suggest a lower purchase price for NEG also recognise that FBC is currently compliant with the CEA requirement of 93% of its energy coming from clean/renewable source and, because of energy available to FBC through the New PPA and BC Hydro RS 3808 rate, there are substantial clean sources of power available to FBC at the Tranche 1 RS 3808 rate.

**For these reasons, it is my decision that the current rate paid for NEG is not appropriate in the current situation and should be changed.**

I find myself in support of the logic that the rate available on the open market for electricity (presently in the range of \$0.038/kWh) is appropriate and, at this rate, the FBC customers would not be unnecessarily subsidising the NM customers who are generating NEG. That said, I agree with FBC, CEC and BCOAPO that this would be cumbersome to implement and would vary considerably with market prices over the short term.

**In my opinion, and thus it is my decision that the BC Hydro RS 3808 Tranche 1 rate for NEG within the FBC RS 95 is the appropriate rate for compensation for all produced NEG at the annual reconciliation date as it is simple to implement, relatively stable and consistent with compensation provided to other parties for unscheduled deliveries into the FBC system.**

DATED at the City of Vancouver, in the Province of British Columbia, this 29<sup>th</sup> day of December 2016.

*Original signed by:*

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R. D. Revel  
Commissioner