Diane Roy
Vice President, Regulatory Affairs

Gas Regulatory Affairs Correspondence
Email: gas.regulatory.affairs@fortisbc.com

Electric Regulatory Affairs Correspondence
Email: electricity.regulatory.affairs@fortisbc.com

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

September 28, 2017

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Mr. Patrick Wruck, Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

Re: FortisBC Inc. (FBC)

Project No. 3698875

Application for Reconsideration and Variance of Order G-199-16 FBC Net Metering Program Tariff Update Decision ~ Phase 2 (the Application)

Response to the British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

On March 17, 2017, FBC filed the Application referenced above. In accordance with Commission Order G-127-17 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCUC IR No. 1.

If further information is required, please contact Corey Sinclair, Manager, Regulatory Affairs at (250) 469-8038.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

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A. REMOVAL OF CUSTOMERS FROM THE NET METERING PROGRAM ON THE BASIS OF PERSISTENT NET EXCESS GENERATION

FBC states that it has always had the right to remove customers from the Net Metering (NM) Program if they produce persistent Net Excess Generation (NEG). The Information Requests in this section (with the exception of IR 1.4) address the nature of that right in the specific context of the current structure/framework of the NM Program.

1.0 Reference: REMOVAL OF NET METERING CUSTOMERS

Exhibit B-1 (Reconsideration Application), pp. 5, 12; FBC Net Metering Tariff Update Application (NM Application) proceeding, Exhibit B-4, BCUC IR 5.6

Service to removed Net Metering customers

On page 5 of the Reconsideration Application, FortisBC Inc. (FBC) states that "being 'removed' from RS 95 in this context and the right of 'removal' it asserts under RS 95 do not mean that customers would...be unable to offset their electricity consumption using self-generation."

FBC elaborates in response to BCUC IR 5.6 in the Net Metering (NM) Application proceeding 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, the Company 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 Tariff or the objectives of the Program. 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.

FBC states on page 12 of its Reconsideration Application that "Customers that are not eligible for RS 95 simply have no entitlement to continue to reserve service under that rate schedule and FBC has no continuing obligation to provide it."

1.1 Please explain the "benefit of the Net Metering Program in offsetting personal consumption" that a customer removed from the NM Program is entitled to in this context. Specifically, does the benefit include:

i. the ability to instantaneously offset self-generation with coincidental consumption (i.e. use of self-generated power to cover some or all of their real-time load);

ii. the ability to use NEG produced in one billing period to offset anything up to total consumption within the same billing period, but nothing beyond that; and/or

iii. the ability to use NEG accumulated in one billing period to offset excess consumption in another billing period within the year ending on March 31?

<u>Response:</u>

For clarity, with respect to the response to BCUC IR 1.5.6 (Exhibit B-4) from the FBC Net Metering (NM) Tariff Update Application referenced in the preamble above, customers participating in the NM program will necessarily be operating a customer-owned generation facility that is located on the customer side of the meter and will offset their own electricity consumption using those facilities, resulting in only net usage being served by FBC. This operating configuration exists for any such customer-owned generation, regardless of its size and regardless of whether or not the customer is a participant in the Company's NM Program. The IR response was intended to convey the fact that the primary benefit is a result of the presence of the customer-owned generation. The response could be re-phrased as, "Such a customer could continue to be interconnected with the FBC system and would continue to receive the primary benefit of customer-owned generation in offsetting personal consumption, but would not be compensated for net-generation that exceeds net-consumption in a given month."

The additional benefit provided by participation in the NM Program is, under the current structure, the ability to be credited each billing period for net excess generation (NEG), and under FBC's proposals, to store NEG on the FBC system for use in a future billing period (through the kWh Bank) and to receive compensation on an annual basis for any unused accumulated annual NEG.

Therefore, currently, with respect to items i, ii, and iii in this IR, only customers enrolled in the NM Program will currently receive any monetary benefit associated with production of NEG. All customers with generation receive the benefit described in item (i). In the event that a customer with customer-owned generation, who is not registered in the NM Program, has any net generation it will flow into the FBC system, serving load and reducing system losses to the benefit of all customers.

The Company has discussed in its response to BCSEA IR 1.8.3.1 a potential means by which a customer removed from the NM Program may continue to receive compensation for any net generation produced during a billing period and believes other options may also be appropriate, depending on the outcome of this proceeding.

1.2 Please confirm that removal in this context means that the removed customer is no longer served under rate schedule (RS) 95. If not confirmed, please elaborate.

Response:

Confirmed, although as noted in the referenced response to BCUC IR 1.5.6, a "removed" customer could continue to be interconnected with the FBC system and would continue to receive the primary benefit of customer-owned generation in offsetting personal consumption.

1.2.1 If confirmed, please identify the rate schedule under which that customer would be served under in order to receive the benefits outlined in response to IR 1.1 above.

Response:

A customer that is no longer enrolled in the NM Program, i.e. Rate Schedule (RS) 95, would continue to be served under the appropriate non-NM rate schedule the customer would have been using concurrently with RS 95. This is not a single rate schedule as various customer types are eligible for the NM Program.

1.3 For whichever rate schedule is identified in response to IR 1.2, please explain, with reference to the specific terms contained in that tariff, how it would be applied to provide the "benefit of the Net Metering Program in offsetting personal consumption" as explained in response to IR 1.1.1 above.

Response:

As described in the response to BCUC IR 1.1.1, the primary benefit for customers enrolled in the NM Program is the ability to offset, potentially entirely, any consumption occurring when generation is occurring. This benefit applies to any customer with properly approved and installed generation located downstream of the FBC meter. As such, no specific terms contained in the tariff schedules provide this benefit, which is not related to enrolment on a particular rate schedule.

1.3.1 Without intending to limit the depth or breadth of your response, please include answers to the following scenarios of customers whom FBC argues it has the right to have "removed from RS 95 in this context":

- How does the rate schedule allow for NEG within the billing period to be valued at one rate just so long as it is offset against consumption within the period (i.e. at the retail rate when generation is used to offset consumption), but at another rate (i.e. zero) if it is surplus at the end of the period?
- If the benefit includes the ability to offset consumption in another billing period, please explain how this would be accomplished (i.e. since the kWh Bank does not currently exist).
- If a customer is removed from the NM Program having determined that they are a persistent NEG producer, but by the end of the year it turns out that their total cumulative NEG was more than fully offset by consumption at other times of the year, how does the tariff accommodate any end-of-year adjustments to the final (or prior) billings?

<u>Response:</u>

1. *How does the rate schedule allow for NEG within the billing period to be valued at one rate just so long as it is offset against consumption within the period (i.e. at the retail rate when generation is used to offset consumption), but at another rate (i.e. zero) if it is surplus at the end of the period?*

FBC assumes the "rate schedule" referenced in this question is the underlying rate schedule, described in the response to BCUC IR 1.1.2.1 above, which would continue to apply to a customer's service after removal from RS 95. NEG is, by definition, only the amount by which the customer's net generation exceeds the customer's net consumption within a billing period. It is inaccurate to say that NEG is "*offset against consumption within the period"*. The energy produced by a customer's generation is used to offset the customer's consumption without any visibility by FBC, and inherently has a value to the customer equal to the retail rate at which it would have been charged. At any given time, a customer's generation may exceed personal consumption and there will be a flow into the FBC system; at other times, the reverse will be true. The reconciliation of this situation occurs at the end of the billing period and, if net consumption exceeds net generation, then it is assumed that no energy flowed from the customer into the FBC system over the course of the billing period.

If the reverse is true, and there is NEG at the end of the billing period, the current RS 95 provides that it will be valued at the applicable retail rate.

In the absence of RS 95, there is no provision in any rate schedule for compensation of NEG at any rate.

2. *If the benefit includes the ability to offset consumption in another billing period, please explain how this would be accomplished (i.e. since the kWh Bank does not currently exist).*

The ability to offset consumption in a future billing period, either using the monetary credit in the current RS 95 or the proposed kWh Bank, only exists for customers enrolled in the NM Program.

3. *If a customer is removed from the NM Program having determined that they are a persistent NEG producer, but by the end of the year it turns out that their total cumulative NEG was more than fully offset by consumption at other times of the year, how does the tariff accommodate any end-of-year adjustments to the final (or prior) billings?*

If a customer has annual "total cumulative NEG", it is not possible by definition that it could be fully offset by consumption. Annual total cumulative NEG can only result where net generation exceeds net consumption over the course of the year.

Regardless, the Company does not believe that a customer with a reasonable prospect of having annual net consumption greater than annual net generation would be removed from the NM Program. Were this hypothetical situation to arise, FBC would review the circumstances and take appropriate steps to correct the situation, which may include a retroactive reinstatement on RS 95.

1.4 Please respond to IRs 1.1 and 1.3 above, under a scenario in which the NM program is implemented as proposed by FBC in its Reconsideration Application.

Response:

For reference, in its Reconsideration Application, the Company is seeking the following three outcomes:

1. That FBC not be directed to submit to the Commission changes to the NM Tariff, RS 95, which require that RS 95 customers not be removed from the NM Program solely on the basis of producing NEG on an annual basis;
2. That a kWh bank to carry forward NEG accumulated in an NM customer's billing period to offset consumption in a future billing period, with an annual settlement for remaining unused NEG, be approved for implementation; and
3. That the terms of RS 95 be amended such that NM customers are compensated 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 (BC Hydro) RS 3808 Tranche 1 rate.

FBC has reviewed the responses to BCUC IRs 1.1.1 and 1.1.3, above, and these three outcomes and the implementation of the related proposals does not have any impact on the responses.

The only impact is that if the Company retains its right to remove a customer that no longer complies with the eligibility criteria stated in RS 95, at Sheet 45 (the Eligibility Criteria), then the portions of the responses that discuss hypothetical outcomes for customers that may be removed from the NM program could actually transpire.

2.0 Reference: REMOVAL OF NET METERING CUSTOMERS

Exhibit B-1, p. 11

Removal of customers due to system difficulties

FBC states on page 11 of its Reconsideration Application:

> It is plausible that persistent NEG could be considered a "difficulty" that "adversely affects" FBC's electrical system within the meaning of this provision. Section 10 of the Electric Tariff may therefore provide an independent basis for FBC's right to remove persistent producers of NEG from the NM program that was not considered in the Majority Decision.

As noted above in the preamble to IR 1.0, FBC also states 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."

2.1 Given that it is FBC's contention that a customer removed from the program on the basis of persistent NEG would still be interconnected to the system, please explain how removal from the NM Program would address the potential difficulty or adverse effects of NEG as referenced in the context of Section 10.

Response:

FBC stated in response to BCUC IR 1.5.6 in the Net Metering Tariff Update Application, as noted in the preamble to BCUC IR 1.1.0, above, that a customer ***could*** continue to be interconnected with the FBC system, not ***would*** still be interconnected to the system as is written in the question above.

The adverse system effects of an interconnected customer in the context of Section 10 are independent of whether or not the customer is enrolled in the NM Program. In this context, persistent NEG could be associated with an installation that has some characteristic, such as being oversized for existing local infrastructure, that causes an issue for FBC or its customers.

A customer removed from the program on the basis of persistent NEG could still be interconnected to the system provided that difficulties contemplated by Section 10 of the Tariff did not arise, however a customer, whether in the NM Program or not, could also be disconnected if Section 10 difficulties arose.

The provisions of Section 10 exist to protect the equipment of FBC and its customers from any adverse impacts resulting from the interconnection of customer generation.

FBC raised Section 10 of the Electric Tariff in the Reconsideration Application in the context of discussing principles of legal interpretation supporting its position that, under the terms of RS 95, customers can be removed from the NM Program if they do not meet the Eligibility Criteria.

In particular, FBC's right to remove a customer from RS 95 is consistent with similar provisions found elsewhere in the Electric Tariff and with the discretion FBC generally has with respect to its customers' self-generation. Section 10 was not relied upon as a primary justification for this aspect of the Reconsideration Application, as is evident from a subsequent passage on page 11 of Exhibit B-1, which stated that:

> FBC need not rely on s. 10 for that purpose, however. FBC submits that the existence of this provision and the significant discretion it bestows on FBC in respect of its customers' self-generation systems, is consistent with and supportive of the right of removal FBC has specifically asserted under RS 95.

2.2 If, on the other hand, removal in this context would include some change to the nature of the interconnection and/or the flow of NEG, please reconcile this answer with the responses to IRs 1.1 through 1.3 above.

Response:

Please refer to the response to BCUC IR 1.2.1.

3.0 Reference: REMOVAL OF NET METERING CUSTOMERS

NM Application proceeding, Exhibit B-6, BCSEA IR 5.2; Exhibit B-10, Shadrack IR 7a; Exhibit B-14, BCUC IR 15.1; Exhibit B-15, Scarlett IR 10

Definition of persistent NEG

In the NM Application proceeding, FBC states in response to BCSEA IR 5.2:

> Customers that 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. Customers that have persistent annual NEG may no longer meet the eligibility criteria for the Program and be removed.

FBC also states in response to Shadrack IR 7a:

> FBC understands that customer consumption may vary both within a year, and from year to year for a variety of reasons. The Company expects that for customers that may have the ability to generate power in sufficient quantities to offset person consumption, there may be over-generation in some years, but net consumption in others. Routinely, in this case, is best described as the continued accumulation of net-generation without the prospect of using it to offset consumption in subsequent billing periods"

FBC further states in response to Scarlett IR 10 that it "has no interest in unreasonably restricting the installation of generation that complies with Program parameters, or will comply within a reasonable timeframe."

In response to BCUC IR 15.1, FBC states that "The complete contractual agreement between FBC and its NM customers is contained in the FortisBC Electric Tariff, FortisBC Net Metering Tariff Rate Schedule 95, Net Metering Interconnection Guidelines and the Net Metering Interconnection Agreement."

3.1 Please elaborate on what are the specific quantum and frequency of annual NEG that would constitute non-compliance with the eligibility criteria of the NM program.

<u>Response:</u>

Any FBC rate schedule enabling retail service to customers includes criteria that determine whether or not a particular customer is eligible to take service utilizing the rate in question.

Customers are not intended to be placed on a rate if they do not meet its eligibility criteria. Similarly, if a customer is initially eligible to take service under a particular rate, but the customer's circumstances change such that the eligibility criteria are no longer met, FBC's expectation is that service would not continue to be provided on that same rate. Many rates in FBC's Electric Tariff have an eligibility criterion linked to a particular load threshold. RS 20 is an example. If an existing RS 20 customer began to exceed the maximum kVA allowable under the rate schedule, the customer would be unable to continue to take service under RS 20. None of these rates contain language that specifies the circumstances that result or process to be followed for failing to meet the eligibility criteria and none contain any language that sets a threshold for the number of billing periods or amount by which the allowable kVA threshold must be exceeded before a rate schedule change is made.

FBC did not apply for any changes to RS 95's Eligibility Criteria in its original NM Tariff Update Application, other than to clearly state the existing intent that the program is not for customers who generate electricity in excess of their annual requirements. The Commission has agreed that this was FBC's intent when the NM Program was initiated.[1] FBC did not seek to include any specific provision in RS 95 stating that a customer would be removed for any reason including the production of persistent excess NEG. This is consistent with other rate schedules and the Company does not believe such language is necessary.

This matter, while important, did not arise until the question was posed during the IR process for the NM Tariff Update Application, in BCSEA IR 1.5.1.2 and BCUC IR 1.5.6.

FBC provided the only response that is consistent with how the eligibility criteria operate for any other rate schedule; that is, if an eligibility criterion is not met, then a customer may be removed from a particular rate schedule.

As FBC noted in its response to Scarlett IR 2.10 in the NM Tariff Update Application process, "FBC has no interest in unreasonably restricting the installation of generation that complies with Program parameters, or will comply within a reasonable timeframe."

In light of this sentiment, the Company is reluctant to set a hard number that would delineate when annual NEG becomes unacceptable. A variety of factors need to be considered and the issue is not simply subject to an absolute trigger. FBC does not believe that such a trigger is in the best interests of customers and such a trigger would remove the flexibility to consider factors such as past and future variations in generation, load and customer intent.

The Company is primarily interested in maintaining adherence to the intent of the NM Program. It is possible for a properly sized NM system to produce annual NEG and FBC accepts that at points in time there may be non-adherence. FBC does not foresee that action on its part would

[1] The Panel noted at page 8 of Appendix A to Order G-199-16, "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."

necessarily be required in these situations. Further attention may be warranted when annual net generation will clearly and consistently exceed annual net consumption or if annual NEG has been produced for consecutive years. FBC views the likelihood of occurrences of this nature to be small, and, should the NEG compensation rate be set at an appropriate avoided-cost price, the impetus for customers to install generation in excess of their consumption would be further diminished.

From a practical perspective, setting a quantum at a definitive level related to either premise consumption or the relationship between annual net generation and annual net consumption is problematic. FBC does not have visibility of premise consumption for NM customers (assuming that any generation is being produced), and timing differences between the consumption and generation of different customers could result in two customers with identical annual NEG being afforded different allowable NEG.

In consideration of all the above discussion and in order to be responsive, the Company anticipates that as a guiding principle, it would be unlikely to review any NM account until a customer was producing annual NEG in an amount that exceeded the expected annual generation of the particular installation by somewhere in the range of 5 to 10 percent. At 10 percent, for a 5 kW solar PV installation producing an annual average of 1,100 kWh/kW over the course of a year (5,500 kWh), this would mean allowable NEG of 550 kWh. The other factors discussed above would still be considered even at this threshold.

3.2 Please identify the conditions and terms in the contractual agreement between FBC and its NM customers that set out the specific standards against which ongoing eligibility is measured vis-à-vis ‘producing persistent NEG’.

Response:

FBC does not have any specific terms in any tariff that set out how NM customers maintain eligibility beyond the Eligibility Criteria themselves.

3.2.1 If the conditions are not identified in FBC’s contractual agreement with its NM customers, are there specific guidelines in place that provide a consistent and measurable set of criteria that can be applied, and if so, are they readily available to the public and/or NM participants?

Response:

Please refer to the responses to BCUC IRs 1.3.1 and 1.3.2.

3.2.2 If no such guidance is set out, what processes/practices has FBC relied upon to ensure fair and consistent assessment to determine whether a customer is producing persistent NEG, and therefore can/should be removed from the NM program?

Response:

FBC has relied on setting the size of NM systems in accordance with the Eligibility Criteria in RS 95 which, in the majority of cases, should result in persistent annual NEG being a rare occurrence. As evidenced by the relative rarity of systems that produce annual NEG at all, this has proven to be the case. As discussed in the responses to BCUC IRs 1.4.1 and 1.4.1.1, FBC has not previously engaged in a detailed audit and review of the circumstances of NM customers that produce annual NEG to determine whether they should be removed from the program.

4.0 Reference: REMOVAL OF NET METERING CUSTOMERS

Exhibit B-1 (Reconsideration Application), pp. 20, 27; Exhibit B-4, Part 2, p. 1; NM Application proceeding, Exhibit B-1 (NM Application), pp. 4, 9–10; Exhibit B-4, BCUC IR 5.4

Historical experience with persistent NEG customers

FBC states on page 4 of its NM Application that "the Company cannot determine with certainty the number of customers that will have a positive NEG balance after a 12 month period however a review of the accounts suggests that 6-8 Program participants may be in this position."

FBC states on page 1 of Part 2 of its evidence that based on billing analysis for the period from April 1, 2015 to March 31, 2016, "There are four customers that are worse off under the proposed methodology; those that have annual unused NEG. The production of annual unused NEG by these customers is contrary to the intent of the NM program."

On page 20 of the Reconsideration Application, FBC submits there are a number of negative consequences of excess NEG being compensated at the current retail rate. FBC states on page 27 that "FBC is intrinsically receiving lower rates for the energy it delivers than is required for it to make the approved, just and reasonable return." FBC also states on pages 9 to 10 of its NM Application that FBC would be "purchasing power on non-participating customer's behalf at rates far above what is available from other sources."

FBC states in response to BCUC IR 5.4 in the NM Application proceeding that "The language in the Tariff indicates that service to the customer under the Net Metering Program is initiated with a minimum one year term and is self-renewing unless terminated by the customer. As with any tariff rate, the customer must continue to meet the eligibility criteria as contained in the rate schedule."

4.1 Please confirm, or explain otherwise, that amongst the customers that FBC has identified as producers of NEG, some fall into the category that FBC considers to be persistent NEG producers.

Response:

FBC can confirm that a small number of NM customers produce NEG on an annual basis and it appears that they will continue to do so. Unless there are mitigating factors (such as those described in the response to BCUC IR 1.3.1) of which FBC is unaware, these customers are likely to continue to be consistent NEG producers.

4.1.1 If confirmed, please explain how the answer to IR 3.0 above has been brought to bear on determining which customers are persistent NEG producers.

Response:

The criteria discussed in the response to BCUC IR 1.3.1 have been developed in order to be responsive to the information requests of parties to this process. They have not, therefore, been applied historically.

FBC maintains, as a principle that applies across all rate schedules that eligibility criteria form the basis on which to evaluate whether or not a customer can be enrolled or can remain on a given rate. However, the matter has not been examined previously to the degree that it has in this Commission process. FBC has not actively audited customer accounts against the eligibility criteria for any rate in the past, but has instead dealt with individual instances of customers becoming ineligible for certain rate schedules as they are encountered. Prior instances of ineligibility have typically been due to load changes. This has not occurred in regard to NM customers.

4.1.2 If confirmed, given that FBC argues it has always had the right to remove them from the NM Program, and given the issues with paying for persistent NEG as stated by FBC, please explain why has FBC not removed these customers when FBC first realized they were persistent NEG producers?

Response:

Please refer to the responses to BCUC IRs 1.4.1 and 1.4.1.1.

B. KWH BANK

5.0 Reference: KWH BANK

Exhibit B-1, pp. 17–18

Relation to NEG price

FBC states on page 17 of its Reconsideration Application that "the kWh bank proposal had numerous benefits for FBC's customers that are independent of the specific NEG pricing change that FBC also proposed."

FBC further states on page 18 of its Reconsideration Application:

> FBC's Application presented the kWh bank and the new NEG compensation rate as a package of NM program changes. There is an interrelationship between these proposed changes. For example, implementing a kWh bank and carrying-forward and then compensating for any NEG annually would be problematic if tiered retail rates are retained as the basis for NEG compensation.

5.1 Please confirm that a NEG pricing change away from the tiered retail rates is necessary in order to implement the kWh bank mechanism. If not confirmed, please explain the interrelationship between the two requests.

<u>Response:</u>

FBC has not stated that a kWh Bank could not be implemented if tiered rates remain applicable, but has stated, as referenced in the preamble, that doing so would be problematic.

There are numerous problems with using tiered rates under a kWh Bank.

One problem is consistency and equity in compensation for NEG between Residential and Commercial customers. Both FBC's Residential (RS 1) and Commercial (RS 21) rates have a tiered structure for their respective energy charges. However, while RS 1 has an inclining block, RS 21 has a declining block structure. As a result, residential NM customers receive a higher compensation price for increased generation, while commercial NM customers receive a lower price for increased generation. The pricing incentives between the customer classes are completely the opposite of each other.

Further, if tiered retail rates are used, Residential customers may receive one of two rates under RS 1 depending on how much NEG remains in the kWh Bank, as would Commercial customers under RS 21. For the reasons explained at pages 23-25 of the Reconsideration Application the rationale for valuing electricity *consumed* by customers at different tiers does not apply to the valuation of excess *generation* produced by NM customers.

An additional issue with using tiered retail rates to compensate NEG under a kWh Bank methodology is increased administrative burden and associated cost as compared to a uniform compensation rate. Billing under a kWh Bank system would be a manual process, as is the current dollar bank system. If a single compensation rate is used for NEG, such as BC Hydro's RS 3808 rate as FBC has proposed, then annual account reconciliation is a simple process that only involves multiplying the amount of unused kWh in a customer's bank at year-end by the compensation price. On the other hand, if tiered rates such as RCR continue to apply, then an additional manual process would be required to segregate any excess generation into Tier 1 and Tier 2 buckets each billing period and then to track how much of the banked generation from each bucket is used to off-set consumption at the applicable tiers over the course of the year and the amount of remaining unused NEG at year-end that is to be compensated at Tier 1 or Tier 2 rates.

The Company can implement a kWh Bank regardless of the manner in which the compensation rate is determined but believes that a consistent compensation rate that reflects the value of the energy is, for these reasons, appropriate.

5.2 Please confirm, or explain otherwise, that the kWh bank and the new NEG compensation rate is a package of NM program changes, and therefore the package must be reviewed as a whole (i.e. the commission's decision to approve or reject the two requests must be consistent).

Response:

The kWh Bank and the annual NEG compensation rate can be implemented independently.

If the kWh Bank was not implemented, a different annual NEG rate could be applied to an annual dollar credit by calculating the number of kWh that produced the NEG (by some agreed-upon methodology) and then applying an annual NEG rate to those kWh.

Similarly, the existing retail rates could be applied to an annual kWh banked surplus as described in the response to BCUC IR 1.5.1.

On the other hand, it is administratively simpler to implement both the kWh Bank and annual NEG compensation changes at the same time. While the proposals are not strictly a "package" they do have an inter-relationship. In FBC's view, the Commission should, if it determines that approval of the kWh Bank proposal is appropriate and reasonable, have regard for its independent benefits in considering the appropriate compensation rate for annual NEG because maintaining the use of the RCR in particular would be problematic and impractical under a kWh Bank system.

6.0 Reference: KWH BANK

Exhibit B-4, Part 1, BCUC IR 70.1

Recovery of customer charge

FBC states in response to BCUC IR 70.1 in Part 1 of FBC's evidence:

> …the compensation for NEG each billing period at the retail rate instead of the use of a kWh Bank enables customers with small-scale generation, such as those in the NM Program, to avoid even the minimum contribution to fixed charges if their bill is less than the Customer Charge. A customer that reduces their bill to zero, or less, is still using the FBC system, and still driving a system cost, which in the absence of a sufficient bill amount will fall to the account of the remaining customers.

6.1 Please confirm, or explain otherwise, that a NM customer will pay the Customer Charge for each billing period if a kWh Bank is implemented.

Response:

The Customer Charge appears on customer bills regardless of whether the kWh Bank is implemented or not. However, if the kWh Bank is implemented, the minimum amount owing each billing period will be the Customer Charge plus applicable taxes, whereas in the absence of the kWh Bank the minimum amount owing can be zero or a credit to the customer's account.

6.1.1 If confirmed, please explain whether the issue of recovering system costs incurred by NM customers from other FBC customers is fully addressed with the implementation of a kWh Bank, independent from the quantum of the annual NEG price.

Response:

Implementation of a kWh Bank will not address the inherent subsidy provided by non-participating customers to those enrolled in the NM Program. A reduction in the compensation rate will reduce the potential impact of the subsidy. An increase in the Customer Charge would also be required to fully address the issue.

For example, consider the case where a NM customer matches generation and consumption in each billing period such that net energy use is zero. This customer would pay no energy charges and would be billed only for the Customer Charge each month, despite being connected to the FBC system in all hours and constantly using the grid to balance supply and demand throughout the day. Since the Customer Charge only collects about 45 percent of the actual fixed costs for the residential class, the lack of energy charges means that no further contribution is being made by this customer.

Compensation for NEG at any rate exacerbates this issue by further reducing the contribution to fixed costs; however, a lower compensation rate will reduce the impact.

C. PRICE OF NET EXCESS GENERATION

7.0 Reference: PRICE OF NET EXCESS GENERATION

Exhibit B-1, p. 23; NM Application proceeding, Exhibit B-4, BCUC IR 9.6

NEG compensation

On page 23 of the Reconsideration Application, FBC contends that the Panel "erred in concluding that the circumstances had not changed sufficiently to warrant a new price for the compensation of NEG. The implementation of the two-tiered [Residential Conservation Rate] does represent a rate design change that affects a majority of customers in the NM program."

In response to BCUC IR 9.6 in the NM Application proceeding, FBC provides the pros and cons of a number of NEG compensation pricing options, one of which is the FBC Exempt Residential Service (RS 3) rate at 11.433 c/kWh.

7.1 Please confirm, or explain otherwise, that the change in circumstances upon which the NM Application sought a change to NEG pricing is singularly the implementation of the Residential Conservation Rate (RCR). If other changes underpin FBC's request to change the NEG pricing, please identify where, in the record of the NM Application proceeding, these other changes are brought forward to support its request.

Response:

The primary change in circumstances that prompted FBC to seek a change in the compensation rate for NEG is the introduction of the RCR. Compensation at the higher Tier 2 rate versus the Tier 1 rate has no particular basis. The absence of a justification also highlights an additional change in circumstances: the prevailing value of power from alternate resources, which has fallen significantly since the introduction of the NM Program. This comparison is mentioned in the Reconsideration Application, at paragraph 76, where FBC notes that *"In the absence of these rationales, there is no justification for FBC to pay NM customers for excess generation at a Tier 2 rate that is significantly higher than the market value of the energy and that is higher even than FBC's LRMC."*

7.2 Please confirm that the FBC Exempt Residential Service Rate (RS 3) is equivalent to the residential flat rate prior to the introduction of the RCR. If not confirmed, please explain in detail what amount would be an appropriate proxy for the residential flat rate (i.e. prior to introduction of the RCR).

Response:

The Exempt Residential Service Rate (RS 3) is equivalent in structure to the residential flat rate prior to the introduction of the RCR and its current value is equal to the flat rate that would be in effect had the RCR never been implemented.

7.3 Given the response to IR 7.1 and 7.2, please explain why FBC did not propose a change in the NEG price to the residential flat rate (or its proxy) as a remedy for the introduction of the RCR, and instead proposed the lower BC Hydro RS 3808 Tranche 1 rate.

Response:

Utilizing the Exempt Residential Service rate (referred to as the residential flat rate in the remainder of this response) as the compensation rate for NEG does not address the issue as discussed further below.

If the question is why FBC did not propose the residential flat rate as an annual NEG compensation rate only for the residential customers enrolled in the NM program, FBC's response is that this would not address the unjustified difference in the value of annual NEG for residential as compared to the other customers enrolled in the program (assuming they would continue to receive their respective retail rates for annual NEG).

If the question is why FBC did not propose the residential flat rate as a compensation rate for all customers enrolled in the NM program, FBC's response is that the residential flat rate has no relevance whatsoever to the non-residential customers enrolled in the program.

In either case, the residential flat rate (or any other retail rate) cannot be justified on the basis of an appropriate alternate resource and does not mitigate the inherent subsidy referenced in the response to BCUC IR 1.6.1.1 to the same extent as the RS 3808 rate.

7.4 Please confirm, or otherwise explain, whether FBC considers that establishing the NEG compensation price at the BC Hydro RS 3808 Tranche 1 rate as proposed in the NM Application, is consistent with FBC's understanding of the original intent of the program when the NM Program was first established in 2009.

Response:

FBC does not consider that the particular rate at which the annual NEG compensation is set forms part of the primary intent of the NM Program, either now, or at the time of the original NM Application. FBC's understanding of intent is related to facilitating the ability of customers to offset their own consumption with a clean and renewable resource. Therefore, any particular annual NEG compensation rate would have no impact on the primary intent of the NM Program and could be considered consistent with it.

The Company recognizes that the original NM Application included the provision that certain NEG would be compensated at retail rates, which reflects the intent of net metering, and that given the intent of the NM Program annual NEG would be a rare occurrence. This also reflected, in part, FBC's belief that using retail rates would create less administrative burden and cost than a separate NEG compensation rate. Experience since the inception of the NM Program has shown that billing NM customers is a predominantly manual process, which charging retail rates has not eased.

7.4.1 If confirmed, please identify where, in the record of the NM Application proceeding, the case is brought forward that RS 3808 would have been a preferable alternative to using the residential rate when the NM Program was established in 2009.

Response:

FBC did not evaluate other potential rates against the retail rate when the original NM Application was filed in 2009.

7.5 Under the scenario that FBC has the right to remove NM customers who produce persistent NEG and FBC's request to compensate NEG at the RS 3808 Tier 1 level were approved, please comment on whether the annual NEG eligible for compensation would be within the spirit of a revised RS 95 and FBC would have no basis for removing them from RS 95 as such customers would be in compliance and consequently not be at risk of removal.

Response:

The intent of the program is to offset consumption, not incent consistent annual NEG. The change in compensation rate, while not justifying persistent annual NEG, removes a distorted incentive to produce annual NEG on a consistent basis.

Customers that do not produce persistent annual NEG or who can reasonably be expected not to produce annual NEG on a persistent basis in the future, should be compensated appropriately for their annual NEG.

The compensation rate for NEG does not change what may constitute persistent annual NEG, or the amount of annual NEG that may trigger examination of the account, as has been discussed in the response to BCUC IR 1.3.1.

8.0 Reference: PRICE OF NET EXCESS GENERATION

Exhibit B-4, Part 2, pp. 1–2

Additional billing analysis

In Part 2 of Exhibit B-4, FBC provides additional billing analysis for 35 residential customers that were active participants in the NM program for the period from April 1, 2015 to March 31, 2016. FBC states on page 1 that "For the purposes of the "Customer Impact" columns in the table, kWhs remaining in the kWh Bank at the end of March 2016 are assumed to be purchased at the current BC Hydro Rate Schedule 3808 Rate."

8.1 Please replicate the analysis with i) the residential flat rate (or its proxy) as set out in the answer to IR 7.2 and ii) the RCR, instead of at the BC Hydro RS 3808 rate as presented in FBC's analysis.

Response:

The requested responses are below. FBC has only included those customers with a balance in the kWh Bank as these are the only customers impacted by the requested variations in the NEG compensation rate.

i) Annual NEG Compensation Rate equal to RS 03 (11.433 cents/kWh)

Consumption Characteristics					Billing Under Current Rates			Billing Under Proposed Methodology					Customer Impact	
Customer	Number of Billing Periods Receiving Power from FBC	Number of Billing Periods Delivering Power To FBC	Number of Billing Periods With Net Excess Generation	Annual Net Consumption	Annual Net kWh Billed at Tier 1 Rates	Annual Net kWh Billed at Tier 2 Rates	Total Annual Energy Cost (Credit) including Customer Charges	Annual Net kWh Billed at Tier 1 Rates	Annual Net kWh Billed at Tier 2 Rates	kWh Remaining in Bank at March 31, 2016	Value of kWh Purchased from kWh Bank	Total Annual Energy Cost (Credit) including Customer Charges & kWh Bank	Bill Impact	Customer Outcome
1	6	6	6	-114,386	-9,600	-104,786	-$17,143	0	0	114,386	$13,078	-$12,885	$4,258	Worse Off
8	6	6	4	-1,461	-1,367	-94	$40	0	0	1,461	$167	$26	-$14	Better Off
21	6	6	4	-1,584	-1,584	0	$32	0	0	1,584	$181	$11	-$21	Better Off
35	4	6	6	-30,610	-8,708	-21,902	-$4,109	0	0	30,610	3,500	-3,307	$802	Worse Off

ii) Annual NEG Compensation Rate equal to RCR.

The question does not specify how the threshold is to be treated in this example. FBC has assumed that 9,600 kWh would be paid out at the Tier 1 rate of 10.117 cents. (1,600 kWh x 6 billing periods) and any surplus kWh in the kWh Bank paid out at the Tier 2 rate of 15.617 cents.

Consumption Characteristics					Billing Under Current Rates			Billing Under Proposed Methodology					Customer Impact	
Customer	Number of Billing Periods Receiving Power from FBC	Number of Billing Periods Delivering Power To FBC	Number of Billing Periods With Net Excess Generation	Annual Net Consumption	Annual Net kWh Billed at Tier 1 Rates	Annual Net kWh Billed at Tier 2 Rates	Total Annual Energy Cost (Credit) including Customer Charges	Annual Net kWh Billed at Tier 1 Rates	Annual Net kWh Billed at Tier 2 Rates	kWh Remaining in Bank at March 31, 2016	Value of kWh Purchased from kWh Bank	Total Annual Energy Cost (Credit) including Customer Charges & kWh Bank	Bill Impact	Customer Outcome
1	6	6	6	-114,386	-9,600	-104,786	-$17,143	0	0	114,386	$17,336	-$17,143	$0	No Change
8	6	6	4	-1,461	-1,367	-94	$40	0	0	1,461	$148	$45	$5	Worse Off
21	6	6	4	-1,584	-1,584	0	$32	0	0	1,584	$160	$32	$0	No Change
35	4	6	6	-30,610	-8,708	-21,902	-$4,109	0	0	30,610	$4,252	-$4,060	$49	Worse Off

8.1.1 Please present a table comparing the customer impact under i) the BC Hydro RS 3808 Tranche 1 rate, ii) the residential flat rate (or its proxy), and iii) the RCR from the analysis above.

Response:

The requested information is provided in the table below.

	Bill Impact as Compared to Existing Billing Methodology		
Customer	BC Hydro 3808 Rate	Residential Flat Rate	RCR
1	$11,772	$4,258	$0
8	$82	-$14	$5
21	$83	-$21	$0
35	$2,813	$802	$49

Note that the values in this table represent the overall change in the total annual amount billed as compared to the current billing methodology. A negative number indicates that the customer would have a total annual energy cost lower (or total annual bill credits higher for those with annual NEG) than under the current billing.

For example, Customer 1 will be $11,772 worse off (due to lower annual NEG credits) as compared to the current billing if using the BC Hydro 3808 rate for compensation for kWh remaining in the kWh Bank at the end of the annual period, $4,258 worse off if the existing flat rate is used, and would be unaffected if the RCR rates were used.

8.2 Please comment on the customer impact from using a NEG price at the residential flat rate versus the BC Hydro RS 3808 Tranche 1 rate.

Response:

As most NM customers with an appropriately sized generation system do not produce NEG on an annual basis, there is no impact for the majority of NM participants. Customers with modest amounts of annual NEG will have a minor impact that correlates with the kWh Bank balance that is paid out. Those customers with large kWh Bank balances at year end will see more significant impacts, which would vary by the amount of annual NEG multiplied by the difference between the residential flat rate and the RS 3808 Tranche 1 rate

As a matter of principle, the Company believes that generators that deliver unscheduled energy to FBC's system should all be compensated at a similar rate.