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August 30, 2016

British Columbia Utilities Commission
Sixth Floor
900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Ms. Laurel Ross, Acting Commission Secretary and Director

Dear Ms. Ross:

Re: FortisBC Inc. (FBC)

Project No. 3698875

Application for the Net Metering Program Tariff Update (the Application)

Response to the British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 2

On April 15, 2016, FBC filed the Application referenced above. In accordance with Commission Order G-126-16 establishing further process in the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCUC IR No. 2.

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

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

12.0 Reference: CLARIFICATION OF PROGRAM INTENT

Exhibit B-1 (Application), Appendix C, sheet 45; Exhibit B-4, BCUC IR 3.2, 5.6

Energy Cap

In response to BCUC Information Request (IR) 3.2, FBC described the 2009 net metering objectives: "A successful Net Metering Program will promote distributed renewable generation, and allow customers to take responsibility for their own power production, and to reduce their environmental impact." [Emphasis added]

In Appendix C of the application, the blacklined version of the proposed tariff includes the following additional wording to the existing tariff, among other edits: "The program is not intended for customers who generate electricity in excess of their annual requirement."

In response to BCUC IR 5.6, FBC stated 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."

12.1 Please explain whether the proposed wording change is aligned with the 2009 Net Metering objectives as stated in the preamble.

Response:

The additional wording proposed by the Company is not in conflict with the Net Metering Program objectives as described in the 2009 Application. The additional wording reflects the original intent of the Program as it existed at the time the objectives were first considered. While the wording in the tariff is being expanded to more clearly communicate the intent of the Program, this is not a change to the Program itself, which the Company has consistently viewed as a means for customers to offset their own consumption, but not as a means to sell energy to FBC.

12.2 Please confirm that, based on the Eligibility criteria contained in the current tariff, there is no restriction for a Net Metering (NM) customer to install a generation equipment that can generate more than enough energy to "offset…all of the customer's requirement for Electricity". If not confirmed, please explain.

Response:

In the view of the Company, the restriction on the amount of generated energy permitted under the Program is implicit in the description contained in the tariff that, *"…consumers with small, privately-owned generators can efficiently <u>offset part or all of their own electrical requirements</u> by utilizing their own generation."* (emphasis added)

When originally drafted, this language was intended to convey the position that was described in the 2009 Application process, which was that consumers could offset part or all of their electrical requirements, but not to generate power that was in excess of those requirements. A customer that generates more that they require is no longer just "offsetting" their own requirements. The intent of the Program as it was described and explored during the 2009 Application Process is summarized in Section 4 of the current Application.

Although FBC believes the existing language is already reasonably clear, the tariff wording change leaves no doubt that offsetting part or all of a customer's electrical requirements should not be interpreted to mean offsetting part or all of personal consumption and then continuing to generate power such that additional funds are raised to further offset the cost of the generation installation.

12.3 Please explain whether "requirement for Electricity" in the existing wording has a broader interpretation, and can be interpreted to include peak demand, than "requirement for Electricity on an annual basis" in the proposed wording.

Response:

A description of the background to considering the "requirement for electricity" to be the "requirement for Electricity on an annual basis" is included in the response to BCUC IR 1.5.3. While it is possible for a reader to adopt or prefer a different interpretation than the one provided in that response, it would not be consistent with the meaning originally intended for the Program, or the manner in which it has been used to date.

Furthermore, the Program would have been impossible to administer if equipment was to be sized to offset "all or a portion" of a customer's peak demand. Until the implementation of AMI, it was not possible to determine the peak demand of a residential customer, and therefore this could not have been the intent of the language.

12.4 Please specify, under the existing tariff <u>and</u> under the proposed tariff, i) the clause in the tariff that grants FBC the right to remove a NM customer from the program and ii) the criteria and detailed process FBC uses to remove a NM customer who started to produce net excess generation (NEG) on an annual basis from the program.

<u>Response:</u>

FBC 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. For instance, in order to be eligible to take service under Rate Schedule 31, a customer must be served at transmission voltage and have a load in excess of 5,000 kVA. While there is no clause that explicitly states that if a customer drops below the 5,000 kVA threshold it will no longer be eligible, it is understood that were this to happen, the customer would be removed from that rate because it no longer meets all of the eligibility criteria. Similarly, 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. If a customer were to connect a small natural gas generator to an existing behind-the-meter net-metering infrastructure, he would fail to meet the “clean and renewable” criterion and would no longer be eligible to take part in the Net Metering Program despite there being no explicit language in the rate schedules stating that FBC would have the right to remove the customer from the Program in that case. The Company has no written detailed process to address these situations. 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. This has not occurred to date with a net metering customer.

13.0 Reference: CLARIFICATION OF PROGRAM INTENT

Exhibit B-7, CEC IR 1.5.1; Exhibit B-8, Resolution IR 6; Exhibit B-10, Shadrack IR 9a;

Energy Cap

In response to CEC IR 1.5.1, FBC stated: "However, under the proposed rate, as any excess energy purchased would be at the short-term value, the impact to other customers would be mitigated."

13.1 Does FBC consider that, if the price for annual NEG reflects the estimated market value, there is a need for a net metering rate energy cap (limiting annual NEG) and capacity cap (currently set at 50MW) in order to protect other customers? Please explain.

<u>Response:</u>

Yes, the rationale for maintaining the 50 kW cap was explained in BCUC IR 1.6.2 and the pricing of NEG has no bearing on the whether or not this cap is maintained. When considering the amount of generation permitted under the Program up to the 50 kW cap, FBC believes that limiting the self-generating output of net metering systems to annual consumption is reasonable and necessary. The price for annual NEG does not reflect the estimated market value but is simply the current BC Hydro PPA rate. FBC displaces significant amounts of BC Hydro PPA power through more cost effective market purchases and these market based purchases are not reflected in the annual NEG rate.

Without the current restriction the timing of the energy purchased could not be managed effectively. While the smaller volumes currently experienced can be managed with the controls in place, higher volume purchases could be unfavorable to other customers in years where loads are light. To a certain extent timing is simply a price issue, however, it is also an important energy management issue in that FBC may be purchasing NEG energy at times of the year when we are looking to minimize energy purchases in order to control energy storage levels. This will most commonly occur in May, June, July, August and September. 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.

Under the Canal Plant Agreement there are two storage seasons, the first covers August to April of the following year and the second covers May through July. Energy cannot be transferred from one season to the next and therefore if it is inadvertently stored, it reduces storage in the following season. This is not a huge issue in April but July is another matter entirely as positive storage balances in July directly reduce winter storage and therefore reduce winter energy security. August and September is a different issue as those are the final two months of the BC Hydro PPA operating year of October to the following September. If PPA purchases have been running light we now need to maximize the purchase of PPA power to ensure the minimum purchase amounts are taken. In this scenario, NEG purchases that displace PPA purchases are not helpful to overall system management and could result in difficulty to make the required PPA purchases.

In response to Shadrack IR 9a, FBC stated: "FBC has not rejected a submitted Application. Through discussion with prospective Applicants, FBC has advised that the size of a planned installation should be reduced prior to an Application being submitted."

13.2 Please describe the discussion with prospective applicants referred to in Shadrack IR 9a above. Specifically, what type/size of generation did the customer(s) consider installing, how much annual NEG would have been generated, and did the customer's investment decision change as a result of these discussions with FBC?

Response:

The majority of prospective applicants contacting FBC are interested in installing photovoltaic generation. The system size discussed in an initial inquiry and the corresponding amount of expected annual NEG vary widely. In general, customers are willing to select an appropriate system size in order to ensure that the system will be eligible for the Net Metering Program.

In response to Resolution IR 6, FBC stated: "Customer systems with the greatest amounts of unused annual NEG are those with small hydro-electric installations."

13.3 Please describe the general size and types of the small hydro-electric installations that have the greatest amounts of unused annual NEG.

Response:

There are two small hydro-electric installations that have NEG well in excess of both the requirements of the associated premises, and relative to any other installation that has a smaller amount of annual NEG.

To the best of FBC's knowledge, both are run-of-river plants and have system capacities of 10 and 21 kW.

13.4 Does FBC currently have any technical or safety concerns regarding customer investment in small hydro-electric installations that cannot be adequately addressed through FBC's connection policy? If yes, please explain.

Response:

The "connection policy" that specifies the technical and safety aspects of the interconnection of net-metering installations are addressed in the *Net Metering Interconnection Guidelines,* the Special Conditions contained in Rate Schedule 95, and the FortisBC BCUC Electric Tariff No. 2, particularly Section 10.

The Company does not currently have technical or safety concerns regarding customer investment in small hydro-electric installations that meet the interconnection guidelines.

13.5 Under which program/rate schedule, and at what price, would a customer investing in a small hydro-electric installation generally receive for energy fed into FBC's grid if they were not eligible for the net metering rate? Please explain.

Response:

FBC has no tariff or program in place to purchase IPP power. However, FBC purchases from a small number of IPP's at a monthly energy rate ranging from $17 to $43 per MWh for 2015, based on individual contracts with the IPP.

14.0 Reference: NET EXCESS GENERATION VALUATION

FBC Application for Approval of Demand Side Management Expenditures for 2015 and 2016, Order G-186-14 and Decision dated December 3, 2014 (FBC 2015/2016 DSM Decision), p. 6; Exhibit B-7, BCUC IR 7.1

Rationale for existing approach

The Commission stated on page 6 of the FBC 2015/2016 DSM Decision: "the Commission Panel accepts FBC's LRMC of BC new clean resources as $112 per MWh and the deferred capital expenditure value of $35.60 per kW per year for the purpose of the 2015-2016 DSM Plan."

In response to CEC IR 7.1, FBC stated that "FBC considers that the BC Hydro RS3808 Tranche 1 rate is a reasonable proxy to use to purchase excess energy. This is below the expected rate required to build new long term generation but above the rate from several existing long term sources of supply."

14.1 Please complete the following table for BC clean energy delivered to the FBC distribution network:

Estimated market value of delivered energy	¢/kWh estimate (or range)	Source/Key assumptions
Short-term (less than 3 years) non-firm		
Short-term firm		
Long-term (more than 15 years) non-firm		
Long-term firm		

<u>Response:</u>

The following table is based on actual 2015 purchases by FBC.

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.

Estimated market value of delivered energy	₵/kWh estimate (or range)	Source/Key assumptions
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.

14.1.1 Please reconcile any (i) ₵/kWh estimated difference between the long-term firm and long-term non-firm value of power with (ii) FBC's estimate of its long-term value of deferred capital expenditures ($35.60 per kW per year) in FBC's 2015-2016 DSM Plan.

Response:

As stated in the response to BCUC IR 2.14.1 FBC does not have any long-term non-firm power supply contracts at this time. However, the long-term value of deferred capital expenditures is only appropriate to consider for supply that reduces the infrastructure requirements at peak load periods. As any potential long-term non-firm source of supply is unlikely to do so, FBC does not believe it is a relevant factor in any analysis between long term firm and non-firm costs.

14.2 Please elaborate on the quality, cleanliness, and source of the "several existing long term sources of supply" which FBC purchases at a rate below the British Columbia Hydro and Power Authority (BC Hydro) RS3808 Tranche 1 rate.

Response:

Alternative long term sources of supply that FBC purchases at a rate below the RS3808 Tranche 1 rate include purchases under the Brilliant Power Purchase Agreement (BPPA), purchases under the Brilliant Power Purchase Second Amendment Agreement, and purchases under the Brilliant Tailrace Agreement. These contracts are between FBC and subsidiaries of Columbia Power Corporation, for generation located on the Kootenay River, downstream from the FBC owned facilities. These plants are operated in accordance with the Canal Plant Agreement (CPA), consistent with FBC owned facilities. Under the CPA, BC Hydro takes into its system all power actually generated by the Entitlement Parties' plants. In exchange for permitting BC Hydro to determine the output of these facilities, the Entitlement Parties are contractually entitled to their respective "entitlements" of capacity and energy from BC

Hydro. The Entitlement Parties receive their entitlements irrespective of actual water flows to the Entitlement Parties' generating plants, and are thus insulated from the hydrology risk of water availability. FBC has certainty of annual output and availability of capacity, and considers the quality of these contracts as very high. Furthermore, these are considered a clean or renewable resource under the Clean Energy Act.

14.3 In response to BCUC IR 1.9.3, FBC provided lifetime estimates by generator type. Please state (with reasons) whether the energy generated from each generator type (up to 100kW) should be considered (i) firm or non-firm, and (ii) short-term or long-term.

Response:

As explained in the response to BCUC IR 1.9.3.2 such DG is considered short-term in nature as there is no long-term commitment. As further explained in the response to BCUC IR 1.9.4.1 small IPP power provides no certainty of either timing or volume. Therefore, it must also be considered non-firm.

15.0 Reference: NET EXCESS GENERATION VALUATION

Exhibit B-1, p. 8; Exhibit E-4 (Letter of Comment), Attachment, p. 2

Net Metering contractual agreement

On page 2 of the attachment in Exhibit E-4, it is stated that "FortisBC is proposing to cut the payment from the Tier 1 rate of 9.845 cents and Tier 2 rate of 15.198 cents to 4.303 cents per kWh. In any commercial situation this proposal would be regarded as a breach of contract between the parties."

On page 8 of the Application, FBC states that "The additional documents used in the administration of the Program, (Application for Net Metering Program, Net Metering Interconnection Guidelines, and Net Metering Interconnection Agreement) are technical in nature and do not speak to the Program intent and require no changes."

15.1 Please provide the complete contractual agreement between FBC and its NM customers.

Response:

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. These documents can be found on FortisBC's website at:

https://www.fortisbc.com/Electricity/CustomerService/NetMeteringProgram/Pages/default.aspx

15.2 Please explain in detail whether FBC considers a reduction in NEG compensation a breach of the agreement between FBC and its existing NM customers.

Response:

FBC does not consider a reduction in NEG compensation to be a breach of the agreement between FBC and its existing NM customers.

The agreement between FBC and its existing NM customers is contained in the FBC Electric Tariff, Schedule 95 - Net Metering, the Net Metering Interconnection Guidelines and the Net Metering Interconnection Agreement.

The NEG compensation is established by Schedule 95. Schedule 95 specifies that the NEG shall be valued at the rates specified in the Rate Schedule under which the Customer receives Electric Service. The Tariff provides that the customers shall pay for Electricity in accordance with the applicable rate schedule, as amended from time to time and accepted for filing by the British Columbia Utilities Commission. As a result, any change in NEG compensation, if accepted by Commission, will not be a breach of the agreement between FBC and its existing customers.

16.0 Reference: NET EXCESS GENERATION VALUATION

Exhibit E-4, Attachment, p.1,

Billing scenario

On page 1 of the attachment in Exhibit E-4, it is stated that "While FortisBC does not state it specifically in its application, they are proposing to eliminate the allowing of retail NEG credits to be used to offset the Basic Charge, the GST and other nonconsumptive charges."

The table on page 3 of the attachment to Exhibit E-4 illustrates the total bill difference under the existing and proposed billing methodology.

16.1 Please comment on the accuracy of the statement and billing calculation referenced above. If there are any inaccuracies, please explain and provide a revised version that is consistent with FBC's proposal in its application.

Response:

The billing calculation included with Exhibit E-4 was provided by FBC to the customer upon request as part of the consultation process. It is an accurate depiction of the billing that would have occurred over the historical period given the amount of annual generation that was in excess of personal consumption.

It is not accurate to state that a customer's ability to offset non-consumptive charges will be eliminated. Because of the implementation of the kWh Bank, non-consumptive charges are not offset each billing period, however to the extent that annual unused NEG will be purchased by the Company at the end of the 12-month period, some offsets can be considered to occur on an annual basis. The changes proposed in the Application were not identified in an effort to impact the offset to non-consumptive charges. In fact, most customers benefit from the proposed changes, inclusive of non-consumptive charges, on an annual basis.

The Company considers it to be entirely appropriate that fixed charges that are assessed each billing period, such as the Customer Charge, should not be avoided by net metering customers. The costs that are associated with these charges, which represent a portion of the costs associated with providing service to customers regardless of consumption level, do not disappear simply because a customer is a periodic load on the system. If net metering customers avoid paying these charges, they become the responsibility of the remaining customers.