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Utilities Commission

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August 3, 2017

Sent via eFile

FORTISBC INC. COMMUNITY SOLAR PILOT PROJECT EXHIBIT A-10

Ms. Diane Roy
Vice President, Regulatory Affairs
FortisBC Inc.
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Re: FortisBC Inc. – Project No. 1598911 – Community Solar Pilot Project – Information Request No. 2

Dear Ms. Roy:

Further to your April 26, 2017 filing of the above-noted application, please find enclosed British Columbia Utilities Commission Information Request No. 2. In accordance with the regulatory timetable, please file your responses no later than Wednesday, August 23, 2017.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

/ad
Enclosure



FortisBC Inc.
Application for a Community Solar Pilot Project

INFORMATION REQUEST NO. 2 TO FORTISBC INC.

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A. CUSTOMER FEEDBACK AND ENGAGEMENT

19.0

Reference: CUSTOMER FEEDBACK AND ENGAGEMENT Exhibit B-1 (Application), p. 1, Appendix D, February 2016 Survey Results, p. 11, Appendix E, December 2016 Survey Results, p. 4; Exhibit B-2, BCUC IR 9.2, 9.4, 9.4.1, 13.3; Attachment to BCUC IR 3.14, December 2016 Final Survey Results, pp. 4, 9; Exhibit B-4, BCSEA IR 4.2, 4.3; Exhibit B-5, ICG IR 2.3 Customer surveys

In response to British Columbia Utilities Commission (Commission, BCUC) IR 13.3, FortisBC Inc. (FBC) states that under two different rate escalation scenarios the point at which the customer will save enough to offset the panel cost occurs after year 40 in one scenario and year 17 under another scenario.

The findings on page 11 of the December 2016 survey results stated:

[I]nterest in community solar is driven primarily by the prospect of saving money overall. However...the prospect of being part of a green project in the community is a relatively strong secondary motivator.

FBC states in response to BCSEA IR 4.2 that “customers may believe that participation in a solar project, whether rooftop or community based, will have a greater financial benefit than is the case. Customers may choose not to participate [in the Community Solar Pilot Project] once the current economics of solar are understood.”

19.1 Given FBC’s response to BCUC IR 13.3 which shows that energy savings would likely not occur for at least 17 years and the results of the customer surveys which indicate that customer interest in community solar is driven primarily by the prospect of saving money, please further discuss the likelihood that customers will: (i) subscribe for an initial 12-month term to the Community Solar Pilot Project (CSPP); and (ii) continue to subscribe after the initial 12 month period.

- 19.2 Please discuss the likelihood, based on the results of the customer surveys, that customers' interest in being part of a green community is a strong enough secondary motivator to overcome the lack of energy savings in the short to medium term expected from subscribing to the CSPP.

FBC states in response to BCUC IR 9.2 that the CSPP "is not expected to result in greenhouse gas reductions."

- 19.3 Based on the information gathered in the customer surveys, does FBC consider that its customers may not have a strong understanding/awareness that the CSPP or other community solar offerings would not result in GHG emission reductions? Please discuss.

On page 4 of the February 2016 survey results, it states that customers were asked which of six energy sources they consider clean and renewable and that customers were most likely to select solar (90%) with 50% selecting hydro.

FBC states in response to BCUC IR 9.4 that the "output of the CSPP will likely offset hydro-based energy purchases and therefore will have little to no effect on FBC's overall percentage of clean generation."

FBC further states in response to BCUC IR 9.4.1 that it estimates that 95% of its 2017 forecast load, after planned demand-side management, will be served by "Clean and Renewable Resources."

- 19.4 Based on the information gathered from the customer surveys, does FBC consider that its customers may not have a strong understanding/awareness of the fact that FBC's resource stack is predominantly clean and renewable? Please discuss.
- 19.5 Did FBC ask any questions in either the February or the December surveys to better gauge customers' understanding of the meaning of "clean" energy? Please explain why or why not.
- 19.6 What types of resources comprise the remaining 5% of FBC's resource stack?

FBC states the following in response to BCSEA IR 4.3:

Although the CSPP will be seen by some customers as addressing the 'conserving the environment' motivation, since the current stack of resources relied upon by the Company is already primarily clean and renewable, the actual environmental benefit is negligible if present at all. As far as the "energy security/energy independence" motivation, FBC agrees that the CSPP does not directly address this. [Emphasis added]

- 19.7 Given that conserving the environment and reduction in GHG emissions can be viewed as a strong motivator for customers choosing solar energy, please explain why neither the February nor December 2016 surveys attempted to gain a better understanding of customer's perception of clean energy and how it relates to FBC's current stack of resources.

FBC states in response to BCUC IR 3.6 that it "did not ask questions regarding customer price sensitivity to participate in a community solar project in either survey. The necessary line of questioning was omitted because there were no definitive contribution amounts available at the time the research was conducted."

- 19.8 Given that FBC did not ask survey questions regarding customer price sensitivity, please explain how FBC is able to determine with any reasonable level of certainty that customers will be willing to pay the proposed \$7.20 per month or \$86 per year to subscribe to the CSPP.

- 19.9 Why did FBC consider it necessary to have a definitive contribution amount in order to include survey questions about price sensitivity? Please explain.
- 19.10 Why was FBC not able to, at minimum, provide a range of prices in the survey to gain an understanding of customers' willingness to subscribe to the CSPP at different price points? Please explain.
- 19.11 Given that the results in the two surveys indicated that customers are motivated by financial and environmental reasons, please explain why further research and consultation, such as a third survey, was not conducted once the price for the CSPP was determined to further probe these motivators, specifically customer price sensitivity and customers' perceptions of FBC's current clean and renewable resource stack.
- 19.12 Based on the results of the February and December customer surveys, what would FBC conclude are the top three motivators for customers to: (i) initially subscribe to the CSPP; and (ii) continue to subscribe to the CSPP beyond the initial 12-month term?
- 19.12.1 Please also explain how the design of the CSPP aligns with and addresses these motivators.

In the final version of the December 2016 survey results provided as an attachment to BCUC IR 3.14, it states on page 4 that one of the survey objectives was to "[m]easure current interest in installing rooftop solar with net metering".

FBC states in response to ICG IR 2.3 that net metering "was not investigated in the Sentis surveys."

- 19.13 Please explain FBC's response to ICG IR 2.3 given the stated objective in the Sentis December 2016 survey.
- 19.14 Please explain why FBC included this objective as part of the research conducted for the CSPP.

On page 9 of the final December 2016 survey results, it states: "FortisBC needs to be mindful of these consumers' impressions and motivations if it moves forward with a solar rooftop offering." [emphasis added]

- 19.15 Based on the above statement, please explain if FBC is/was considering a solar rooftop offering.

FBC states on page 1 of the Application that the CSPP will "provide information to consider in the development of potential expanded offerings in the future."

- 19.16 Does FBC's reference to potential expanded offerings include the possibility that it would offer services beyond just community solar programs? Please explain.

**Reference: CUSTOMER FEEDBACK AND ENGAGEMENT
Procedural Conference Transcript Volume 1, pp. 10–11; Terasen Gas Inc. (TGI) 2010 Application for Approval of a Biomethane Service Offering and Supporting Business Model, for the Approval of the Salmon Arm Biomethane Project and for the Approval of the Catalyst Biomethane Project (Biomethane Service Offering), Exhibit B-1, Appendix D; FortisBC Energy Inc. (FEI) Biomethane Service Offering: Post Implementation Report and Application for Approval of the Continuation and Modification of the Biomethane Program on a Permanent Basis (2012 Biomethane Application), Exhibit B-1, section 3, pp. 21–49; FEI 2012 Biomethane Application Decision and Order G-210-13, dated December 11, 2013, p. 14
Customer surveys**

At the Procedural Conference on June 1, 2017, FBC referenced the 2010 FEI (then Terasen Gas Inc.) application for two biomethane pilot projects.

In the 2010 TGI Biomethane Service Offering proceeding, TGI provided its primary research study as Appendix D to the application, which included residential and commercial customer surveys.

- 20.1 Please summarize the key findings regarding customer interest in biomethane service offerings drawn from the surveys and presented in TGI's 2010 application.
- 20.2 Please compare the following between the surveys conducted for the 2010 TGI Biomethane Service Offerings application and the FBC CSPP application:
- Number of customers surveyed;
 - Level of resources put into conducting the surveys, including number of surveys conducted, size of surveys, methods of obtaining survey results (i.e. phone, online, etc.), and time period over which the surveys were conducted;
 - Level of detail asked in the surveys regarding price information for subscribing to the pilot offerings; and
 - Level of customer interest/support for the programs based on the survey results.

In 2012, FEI filed the 2012 Biomethane Application. FEI discussed the results of the biomethane pilots in section 3 of the application.

In the Commission's decision on the 2012 Biomethane Application, the Commission stated the following:

FEI acknowledge that the residential customer participation rates have been lower than expected. Original targets for residential customers in the 2010 Biomethane Application estimated that there would be 12,340 enrollments by the end of 2012. At 4,777, the number of residential subscribers is significantly lower than this...It therefore appears that although the original research showed the biggest uptake potential to be residential customers, the actual results to date have not fully supported this.

- 20.3 Please describe the actual levels of customer participation in the biomethane pilot projects based on the results at the conclusion of those pilot projects. Please compare the actual results to the expected participation levels based on the survey findings described in the TGI 2010 Biomethane Service Offering Application.

- 20.4 Based on the Commission’s statements in the 2012 Biomethane Decision, it appears that participation rates were lower than what was anticipated by the surveys conducted in 2010. Please explain what, if any, conclusions were drawn by FEI about the accuracy of the information provided by the surveys and why the actual results fell short of the findings from the surveys.

B. PROJECT DESCRIPTION

- 21.0 **Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 5.1, 11.4
Replacement of solar panels**

In response to BCUC IR 5.1, FBC states the following:

FBC expects to have to replace 7-8 panels annually due to performance issues. Replacing a single panel would require two to three hours for a two-person crew. The cost to diagnose and replace these panels is the bulk of the submitted annual O&M expense (approximately \$8 thousand).

In response to BCUC IR 11.4, FBC states that the warranty for the linear power output and product warranty is 25 years and 10 years, respectively.

- 21.1 Please confirm, or explain otherwise, that the \$8 thousand O&M estimate only includes the labour cost of diagnosing and replacing the 7-8 panels, and does not include the capital cost of the panels.
- 21.2 Please clarify if the annual replacement costs for the 7-8 panels are included in the financial analysis for the CSPP and thus included in the calculation of the levelized rates.
- 21.2.1 If the capital cost of the replacement panels is not included in the calculation of the levelized rates, please explain why not (for instance, are the annual replacement costs covered by product warranty).
- 21.2.2 If the panels are covered under the product warranty, please explain why the cost of the panels for the period after the warranty expires has not been included as part of the levelized rate analysis.

- 22.0 **Reference: PROJECT DESCRIPTION
Exhibit B-1, pp. 12–14; Exhibit B-2, BCUC IR 9.2, 11.3
Utilities Commission Act section 44.2 requirements**

FBC states the following in response to BCUC IR 9.2:

Generally speaking, while customer desire is a consideration in the development of a rate or program, it would not be sufficient in itself to put such a project or rate in place. However, since the CSPP is designed to recover the associated costs from only those customers that participate in the Program the Company has proceeded with the Application.

On pages 12–14 of the Application, FBC explains the rate design for the FortisBC Virtual Solar Panel (Rate Schedule 85A), including the following features:

- The rate is designed to recover the costs of the CSPP over 40 years;
- The minimum subscription term for a customer is 12 consecutive months;
- After the initial 12 month term, customers can elect to leave the (CSPP)without penalty; and
- The rate, once approved, would not be increased; however, it may need to be reduced in response to changes in CSPP participation or the competitiveness of the CSPP with other renewable options that may decrease in cost during the life of the program.

- 22.1 Other than the fact that the proposed levelized rate is designed to recover the cost of the CSPP over 40 years, please explain what aspects of the proposed CSPP tariff and rate design support FBC’s assertion that the CSPP costs will be recovered from CSPP participants only.
- 22.2 Given FBC’s response to BCUC IR 9.2 and the proposed design of the CSPP, please further explain why FBC considers there to be sufficient justification to move forward this pilot project.

In response to BCUC IR 11.3, FBC states the following:

If “obsolescence” means that the CSPP panels become less efficient than newer panels, then, like most technology, they will become “obsolete” almost immediately after installation. This is the case with all solar installations.

[G]iven the panels are expected to be still producing at least 80 percent of the rated output at the end of 40 years, FBC believes it is appropriate to determine a levelized rate for the Project based on a 40-year average service life.

- 22.3 Please explain why FBC believes that customers would continue subscribing to the CSPP during the entire 40-year period if more efficient and cheaper technology for generating clean renewable energy becomes available during this time period.

C. PROJECT ALTERNATIVES

- 23.0 **Reference: PROJECT ALTERNATIVES
Exhibit B-2, BCUC IR 3.9, 17.1, 17.2
Nelson Hydro Community Solar Garden**

FBC states in response to BCUC IR 3.9 that it “also considered the Nelson Solar Garden, which is approximately half the size of the CSPP and is fully subscribed with a customer base of approximately 10,000.”

FBC states in response to BCUC IR 17.1 that “unlike the Nelson Hydro project, the CSPP does not require a contract or a sizable up-front payment which FBC believes could serve as deterrents to participation.”

In response to BCUC IR 17.2, FBC provides the upfront payment per solar panel of \$1,295.93.

- 23.1 Please discuss whether the fact that the Nelson Hydro Solar Garden is fully subscribed indicates to FBC that it would also be able to achieve full subscription for the CSPP under a program offering in which customers were required to pay the full cost of the solar panel upfront in a manner similar to Nelson Hydro’s offering.
- 23.2 Please confirm, or explain otherwise, that while a “sizable up-front payment” may be a deterrent to some of FBC’s customers, given the relatively small size of the CSPP and relatively large customer base of FBC, it is also possible that FBC would be able to achieve full subscription under a program offering which required full up-front investment in the solar panels.

- 23.3 Please confirm, or explain otherwise, that FBC does not have data on the level of customer interest or willingness to participate in a community solar program which required upfront investment of the cost of the solar panels because FBC did not explore this option in the customer surveys.
- 23.4 If the Commission were to approve the CSPP on the basis that the “rate” charged to participating customers must be based on the upfront payment of the costs associated with the CSPP (i.e. \$1,295.93 per panel), would FBC still consider moving forward with the project? Please discuss.
- 23.5 If the Commission were to approve the CSPP on the basis that the subscription term must be equal to the term used to calculate the levelized rate (i.e. 40 years as proposed by FBC) instead of a 12-month subscription term, would FBC proceed with the project? Please explain why or why not.
- 23.6 If FBC was approved to proceed with the CSPP as proposed but was not approved to recover any of the CSPP costs from non-participating customers, would FBC still proceed with the CSPP? Please discuss.