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July 7, 2017

PO Box 634
Kaslo, B.C.
VOG 1M0

Attention: Mr. Donald Scarlett

Dear Mr. Scarlett:

Re: FortisBC Inc. (FBC)
Project No. 1598911
Application for Community Solar Pilot Project
Response to Donald Scarlett (Scarlett) Information Request (IR) No. 1

On April 26, 2017, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-89-17 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to Scarlett IR No. 1.

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

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to Don Scarlett Information Request (IR) No. 1	Page 1

1 **Ref – Application page 10 lines 17-24:** “...and Fortis Energy Inc., when it was still Terasen,
2 this application is somewhat akin to that that Terasen, as it then was, made when it was starting
3 to engage in biomethane services. And so, like community solar, it's another means for
4 Terasen, as it then was, to put forward a product that was in the category it's engaged in, for
5 gas, for us electricity, but in a new way.”

6 **Question 1:** During the Procedural Hearing, Ludmilla Herbst made the above reference to the
7 Fortis Energy, Inc. biomethane project. Please describe your understanding of who provides the
8 investment for building equipment for methane production and feeding the digesters: is it Fortis
9 Energy, Inc. or commercial or agricultural businesses that generate the biomethane?
10

11 **Response:**

12 FortisBC Energy Inc. (FEI) describes the assets associated with production (or supply) of
13 biomethane in three distinct categories:

- 14 1. Assets required to digest organic material to create and collect raw biogas;
- 15 2. Assets required to upgrade the raw biogas to Biomethane; and
- 16 3. Interconnection facilities, including metering, monitoring and piping.

17 FEI has consistently invested in some portion of the assets required to generate biomethane
18 from raw biogas, but it has provided different investments for different projects.

19 In all cases FEI has invested in the assets required for interconnection (Item 3 above). In
20 addition, FEI has invested in production equipment related to raw biogas upgrading (item 2
21 above). The commercial or agricultural business has been responsible for the balance of
22 investment.

23 For each project, FEI has appropriately invested in the assets for which it had a higher
24 competence, or in order to demonstrate the viability of biomethane projects. For example, in the
25 case of the Salmon Arm landfill project, FEI had existing skills related to gas piping, gas quality
26 and safe operation of pressurized equipment and it was the first landfill gas to biomethane
27 project in British Columbia. It was therefore appropriate that FEI own and operate both the Item
28 2 and Item 3 assets.

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FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to Don Scarlett Information Request (IR) No. 1	Page 2

1 **Ref – Application, p.ES-1 lines 22-25:** “The second option, referred to as FortisBC Solar
2 Offset, allows customers to specify a certain percentage of consumption each billing period that
3 will be served from the Program.”

4 **Application, p.14 lines 4-8:** “If the FortisBC Solar Offset option is offered in the future, usage is
5 variable and may cause a mismatch of output to consumption. Were this to occur such that
6 there is insufficient output to satisfy the expected percentages of consumption, the individual
7 FortisBC Solar Offset customers would have their allocations reduced such that they will receive
8 the same percentage of the available output as if no shortage existed.”

9 **Question 2:** Given that solar PV production will be lowest during the winter when customer
10 electricity consumption will be highest, would you agree that “insufficient output to satisfy the
11 expected percentages of consumption” would be very likely during winter months?
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13 **Response:**

14 FBC would not characterize this situation as “very likely”, but would agree that the subscribed
15 amount would be more likely to exceed the amount of production in the winter. However, the
16 Company considers that it is reasonable that sales of energy from the CSPP should not exceed
17 the actual output of the array, and since the Solar Offset rate only charges customers for energy
18 in an amount equal to the kWhs they notionally consume from the Project, there is no harm to
19 the customer. Please also refer to ICG IR 1.5.1.

20 The Application as filed contemplates only offering the Virtual Solar pricing model. Should the
21 Solar Offset pricing become available, the Application proposes allocating a pro-rata portion of
22 available solar production to Solar Offset customers on a monthly basis in the event that the
23 available production is less than the total nominations from those customers. This ensures that
24 solar production allocated to customers will not exceed the amount of production that actually
25 occurs on a monthly basis.

26 However, in the alternative, FBC could provide Solar Offset customers with energy at the Solar
27 Offset rate for the full amount of their nomination on a monthly basis regardless of the available
28 output. The Company expects that this method would likely balance to expected annual
29 production fairly closely since subscriptions are limited to the annual consumption of customers
30 in aggregate and any shortfall should be minimal.

31 This alternative method would allow for participation by RS 81 and customers with non-
32 communicating meters.

33 The Company could implement this method from the start of the pilot if preferred by customers
34 and approved by the Commission, or could wait to gain experience from the Program and apply
35 for this change during or at the end of the pilot period.

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Response to Don Scarlett Information Request (IR) No. 1	Page 3

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2 **Question 3:** In the event of “insufficient output to satisfy the expected percentages of
3 consumption,” leading to reduced allocations to participating customers without warning, does
4 FBC expect those customers to accept that variability without concern or confusion?
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6 **Response:**

7 FBC believes that the allocation of energy on the basis it has proposed is fair and can be
8 explained in a straightforward manner. The Company does not expect that customer
9 acceptance will be an issue.

10 However, the potential for a shortfall of output relative to the subscriptions with the Solar Offset
11 option is one reason that FBC has proposed to initially only offer the Virtual Solar option.

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15 **Question 4:** What is the potential increase in energy output of solar panels that can be
16 achieved by changing the tilt of the panels according to seasonal changes in solar elevation?
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18 **Response:**

19 A tracker rack system would increase the output of the station from an estimated 290,000 kWh
20 to an estimated 305,000 kWh.

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24 **Question 5:** Do the mountings of the solar panels in the CSPP permit changes in tilt to optimize
25 solar PV generation according to seasonal changes in solar elevation?
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27 **Response:**

28 The racking system for the proposed CSPP is fixed and therefore does not allow changes in tilt
29 angle.

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33 **Question 6:** How much of the estimated \$961,000 capital cost of the CSPP will be financed by
34 FBC, for which the Company receives a 5.97% rate of return?
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FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to Don Scarlett Information Request (IR) No. 1	Page 4

1 **Response:**

2 The entire Project will be financed by FBC and recovered through rates from customers. The
3 5.97 percent rate of return (i.e., the discount rate), as discussed in Section 6.3.2 of the
4 Application, is equivalent to the Company's approved 2017 after-tax weighted average cost of
5 capital¹ which is comprised of the cost of long-term debt, short-term debt, and common equity.

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9 **Question 7:** What is FBC's average cost of self-generated and purchased energy in the most
10 recent year of record?

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12 **Response:**

13 In 2016, FBC's average cost of purchases from self-generators was \$37.66/MWh. For 2016,
14 FBC's average cost of purchased energy (excluding capacity purchases), including energy
15 purchases from the BC Hydro Power Purchase Agreement, the Brilliant Power Purchase
16 Agreement, Brilliant Expansion and market energy is equal to \$42.46/MWh.

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20 **Question 8:** What is the average price of FBC's energy sales (total income from energy sales
21 divided by the total cost of energy purchases) in the most recent year of record?

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23 **Response:**

24 An average price for energy delivered to customers could be calculated as revenue divided by
25 volume. However, FBC assumes that the question is instead referring to the price of surplus
26 energy sales. If this is the case, FBC confirms that it currently does not make any surplus
27 energy sales as all of its energy resources are used to meet load.

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¹ Order G-8-11, FBC's Annual Review for 2017 Rates, Evidentiary Update dated October 5, 2016, Section 11, Financial Schedule 26.