

Diane Rov

Vice President, Regulatory Affairs

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

Electric Regulatory Affairs Correspondence Email: <u>electricity.regulatory.affairs@fortisbc.com</u> **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

July 7, 2017

British Columbia Public Interest Advocacy Centre Suite 208 – 1090 West Pender Street Vancouver, B.C. V6E 2N7

Attention: Ms. Leigha Worth, Executive Director

Dear Ms. Worth:

Re: FortisBC Inc. (FBC)

Project No. 1598911

Application for Community Solar Pilot Project

Response to the British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) 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 BCOAPO 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 British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 1

1	1.0	Refer	ence: Exhibit B-1, page ES-1
2 3 4 5 6		1.1	The pilot project is to be constructed on land currently owned by the Company at its existing Ellison Substation. In the event the pilot is successful and expanded, are there other sites currently owned by FortisBC that would be suitable for a solar installation of a similar size?
7	Respo	onse:	
8 9	Please	e refer t	o the response to ICG IR 1.4.2.
10 11 12	Doon	1.2	If yes, how many such sites are there?
13	Respo	onse:	
14	Please	e refer t	o the response to BCOAPO IR 1.1.1.
15 16			
17 18 19 20 21	Respo	onse:	1.2.1 Where are the sites the Company has identified as potential locations for solar installations?
22			o the response to BCOAPO IR 1.1.1.
23 24	. Todo		
25 26 27 28 29	Rosne	1.3	If no, when does the Company anticipate identifying and leasing/purchasing additional sites suitable for solar installations of a similar size?
	Respo		
30	The response to BCOAPO IR 1.1.1 was yes.		



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 2

1 2.0 Reference: Exhibit B-1, page 1

2.1 While the Application is for a "pilot project", will the resulting installation be considered as contributing to FortisBC's future load/resource balance?

Response:

6 Please refer to the response to BCUC IR 1.1.2.

2.2 If not, please explain why the project will not be included in FBC's future load/resource balance.

Response:

14 Please refer to the response to BCUC IR 1.1.2.

2.3 Whether yes or no, please indicate what contribution a 240 kW solar array installation would or could be assigned in terms of the energy and capacity.

Response:

As discussed in Section 4.5 of the Application, the expected annual energy output of the CSPP in the first year is approximately 290,000 kWh, or 0.29 GWh. This output is expected to decline at approximately 0.5 per cent annually, which is typical for solar panels. The capacity of the CSPP is about 200 KW (AC), or 0.2 MW, during peak summer sunlight conditions; however, winter peak capacity is expected to be minimal. For reference, as discussed in Section 3.2 of the FBC 2016 LTERP, FBC's 2016 gross load was 3,544 GWh and peak demand was 731 MW for the winter and 590 MW for the summer..



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 3

3.0 Reference: Exhibit B-2, pp. 2-3

Preamble: The February 2016 Survey indicated that main reason residential and commercial customers may not consider rooftop solar is that it will be too expensive to install and that the strongest secondary reason is that it will take too long to get a full return on investment.

3.1 Please compare the proposed cost per kWh under FortisBC's solar offset model with the cost of incremental purchases under FortisBC's current Residential and Commercial rates.

Response:

11 The rate included in the Solar Offset pricing model is \$0.246 /kWh.¹ The current energy rates for Residential and Commercial service are below.

Rate	Tier 1 Rate (Threshold) (\$/kWh)	Tier 2 Rate (\$/kWh)
RS01 (Residential default rate)	0.10117 (1,600 kWh bi-monthly)	0.15617
RS03 (Exempt Residential rate)	0.11749	n/a
RS20 (Small Commercial)	0.10195	n/a
RS21 (Commercial)	0.08663 (8,000 kWh monthly)	0.07191
RS30 (Large Commercial – Primary)	0.05571	n/a
RS31 (Large Commercial – Transmission)	0.05516	n/a

3.2 How many years does FortisBC expect it would be before the cost (per kWh) of incremental Residential and Commercial purchases under FortisBC's Tariff rates would exceed the proposed levelized rate of \$0.231/kWh?

Response:

21 Please refer to the response to BCUC IR 1.13.3.

¹ Rate updated in the Errata to the Application filed concurrently with these IR Responses.



FortisBC Inc. (FBC or the Company)	Submission Date:
Community Solar Pilot Project Application (the Application)	July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 4

4.0 Reference: Exhibit B-1, page 4

4.1 Is there not a risk that, if the cost of solar PV continues to fall as predicted by Elon Musk, then customers who sign up for FortisBC community solar program may, due to the high front end costs of self-installation, later choose to opt-out and install their own systems – particularly if it is clear that the cost of the solar energy is less if they install/own a new (lower cost) system?

78 Response:

- 9 The risk described in the question exists. There are risk-mitigating factors, such as:
 - 1. FBC expects that customers that enroll in the Program may not have the ability to install their own solar panels due to physical or building ownership constraints.
 - 2. Although the cost of solar installations may fall, electricity prices will increase and the relative financial benefit of the FBC CSPP will increase.
 - The CSPP is a pilot program and as such, changes to the Program may be required in the future to respond to various changes in the environment or other factors.
 - 4.2 Has FortisBC considered how it would address such a risk if the pilot is expanded to a full program?

Response:

24 Please refer to the response to BCOAPO IR 1.4.1.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
esponse to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre <i>et al.</i> (BCOAPO) Information Request (IR) No. 1	Page 5

1 5.0 Reference: Exhibit B-1, pp. 5-6

5.1 Will the CCSP installation at the Ellison substation be a roof-top or a ground mounted system?

3 4 5

2

Response:

6 The CCSP installation at the Ellison substation will be a ground mounted system.

7 8

9

5.2 If ground mounted, could the land be used for some other purpose (e.g. storage of inventory, etc.) or sold?

111213

Response:

- 14 The land which is to be used for the CSPP is currently zoned Agriculture 1 (A1). Although most 15 of the principle uses for this zone are largely agriculture related, there is one use referred to as 16 "Utility Services, Minor Impact", which is defined as follows:
- Utility Services, Minor Impact means development for utility infrastructure purposes which is likely to have only minor impact on the environment or adjacent land uses by virtue of its appearance, noise, size, traffic generation or operational characteristics.
- 21 Following consultations with the City of Kelowna, the CSPP meets the definition of "Utility
- 22 Services, Minor Impact". Any alternative use for the property would need to be reviewed by the
- 23 City of Kelowna.
- 24 The current zoning and the proximity to the substation has considerable impact on the
- commercial value of the property. While FBC has the option to sell the property, it is unlikely to
- 26 gather much interest from developers.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 6

1	6.0	Refere	ence:	Exhibit B-1, pp 6-7
2 3 4 5		6.1	include	confirm that the capital cost is based on "incremental costs" and does not any compensation for or contribution towards the use of the existing land ities owned by FortisBC.
6	Respo	onse:		
7 8				mated capital cost does not include any compensation for or contribution existing land or facilities owned by FBC.
9 10				
11 12 13		6.2	Is the A	AFUDC rate used based on FortisBC's incremental cost of capital in 2017?
14	Respo	onse:		
15 16 17 18	2017 FBC's	Rates ² .	The ac	utilized is the one that has been approved in FBC's Annual Review for stual AFUDC rate used will depend on the timing of the capital spending; ill be revised January 1, 2018 when a new rate is approved in the Annual s.
19 20 21 22	greate consis	er than stent wit	3 mont h the B0	ual Review for 2017 Rates at page 52, FBC applies AFUDC to projects that are this in duration and greater than \$100 thousand. FBC's approved treatment is CUC Uniform System of Accounts for Electric Utilities which discusses Allowance for onstruction at page 101.
23 24				rd practice to utilize the approved AFUDC rate, FBC has not calculated an an incremental cost of capital.
25 26				
27 28 29 30			6.2.1	If not, what is it based on and why is this value appropriate if the project is to be priced on an incremental basis as indicated at page 1 (lines 18-19)?

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



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 7

Response: Please refer to the response to BCOAPO IR 1.6.2. 6.2.2 If not, what is the difference between FortisBC's incremental cost of capital in 2017 and the AFUDC rate that will be used? Response: Please refer to the response to BCOAPO IR 1.6.2. 6.3 Does the capital cost include all costs that will be incurred in connecting the solar facility to FortisBC's distribution system? Response: Yes, the estimate provided in the Application includes all of the costs to connect the solar facility to the FBC distribution system. 6.4 Will FortisBC incur any additional distribution costs in order to integrate the power received from the solar facility into its system? Response: No. Please refer to the response to BCOAPO IR 1.6.3. 6.4.1 If so, what are they and have they been fully included in the cost estimate?



FortisBC Inc. (FBC or the Company)	Submission Date:
Community Solar Pilot Project Application (the Application)	July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 8

Response: Please refer to the response to BCOAPO IR 1.6.4. How was the expected annual energy output from the CCSP for its first year of 6.5 operation determined? Response: Please refer to the response to BCUC IR 1.7.2.



3

4

5

6

7

8

10

11

12

13

14

15

16 17

18

19

20

21

FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al.	Page 9

7.0 Reference: Exhibit B-1, page 8

7.1 Please confirm (or correct) the following understanding of the treatment of the proposed CSPP capital expenditures under the PBR Plan:

(BCOAPO) Information Request (IR) No. 1

- If the total capital spending for 2017 (including the CSPP spending) is inside
 the dead band then there will be no adjustment to the rate base during the
 PBR term for purposes of setting rates.
- If the total capital spending for 2017 (including the CSPP spending) is inside
 the dead band then the associated additions to rate base are included in the
 calculation of any earnings sharing between customers and FortisBC for 2017.
- If the total capital spending for 2017 (including CSPP spending) is outside the dead band then the excess capital will be added to rate base for the following year (i.e., 2018) for purposes of setting rates.
- If the total capital spending for 2017 (including CSPP spending) is outside the dead band then the excess capital is excluded from the earnings sharing calculation for 2017.

Response:

FBC confirms this treatment of the CSPP capital expenditures under the 2014 – 2019 PBR Plan, with the understanding that the third and fourth bullets refer to capital spending being not just outside the dead band but also in excess of the dead band³ and that "excess capital" refers to the amount by which the capital expenditures exceed the dead band.

2223

24

25

26

27

28

29

- 7.2 Please confirm (or correct) the following understanding of the incremental O&M costs that will be incurred in 2019:
 - There will be no adjustment to the determination of O&M costs in 2019 for rate setting purposes.
 - Variances in O&M (including the O&M for the CSPP) will be subject to the earnings sharing mechanism.

.

³ This is as opposed to a scenario where capital expenditures are outside the dead band, but below the dead band, in which case the rate base for the following year will be reduced by the amount the capital expenditures vary from the dead band.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 10

Response:

- 3 FBC confirms this treatment of the incremental O&M expenses related to the CSPP under the
- 4 2014 2019 PBR Plan.



IR 1.8.1.

FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al.	Page 11

1	8.0	Refer	ence:	Exhibit B-1, page 10 and Appendix A
2 3 4 5		8.1	noted	ding to Appendix A, all customers of FortisBC (excepting those specifically are eligible for both rates. Does this mean that FortisBC's transmission ected customers would also be eligible?
6	Respo	onse:		
7	Please	e refer	to the re	esponse to BCSEA IR 1.11.1.
8 9				
10 11 12 13		8.2		any of FortisBC's transmission connected customers expressed interest in energy?
14	Respo	onse:		
15 16 17 18	regard since	ling sol it is a	lar enero Iso in tl	contacted by any of its transmission connected Commercial customers gy. The Company assumes that Nelson Hydro is interested in solar energy he process of commissioning a community solar project, but it has not acquiring solar energy form FBC.
19 20				
21 22 23 24	Posne	8.3	-	please provide a schedule setting out those Rate Schedules under which atly served customers would be eligible to participate.
25	Respo			nomination contains and all with the Planes are for to the many of POOAPO
26	Not ap	plicabl	e as tra	nsmission customers are eligible. Please refer to the response to BCOAPO



FortisBC Inc. (FBC or the Company)	Submission Date:
Community Solar Pilot Project Application (the Application)	July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 12

1	9.0 Re	erence: Exhibit B-1, pp. 10-13
2 3 4	9.	Is there any experience from other jurisdictions or FortisBC's service area to support the 40 year expected life?
5	Response	
6 7		t use direct experience from other jurisdictions or the FBC service area to support life. Please refer to the responses to BCUC IRs 1.11.1 and 1.11.2.
8 9		
10 11 12 13 14	Response	9.1.1 If so, please provide the materials that have informed FortisBC's 40 year expected life.
15	Please ref	r to the responses to BCUC IRs 1.11.1 and 1.11.2.
16 17		
18 19 20 21 22 23 24 25	9.2	Page 10 (lines 15-18) indicate that FortisBC does not intend to adjust the rates on an annual basis. However, at page 12 (lines 30-33) and page 13 (lines 10-13) the Application indicates that, while the rates will not be increased in the future, they may be decreased. 9.2.1 Please provide examples of circumstances that could lead to a reduction in the rates.
26 26		reduction in the rates.

Response:

- 28 There are three primary circumstances in which the rates could be reduced:
- 29 1. The panel degradation is less than expected.
- 30 2. The capital or operating costs of the CSPP are materially less than expected.
- 3. There are significant changes in CSPP participation rates.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 13

 9.2.2 At pages 12 and 13 it is suggested that the rates may be decreased in response to the competitiveness of the Program with other renewable options. Does this mean that the rates could be set at levels that would not recover the incremental cost of the Program? If so, please explain why this is appropriate.

Response:

In the future, if FBC believes it has become more economic from a general ratepayer perspective to reduce rates and increase subscription levels than it is to maintain rates and have lower subscription levels, FBC would apply to reduce rates. This may result in rates that do not fully recover the incremental cost of the Program but would minimize any negative rate impacts on non-participants.

9.3 There appears to be no allowance in the determination of the rates for incremental costs associated with attracting customers to the Program and, subsequently, administering customer participation in the program, including any revisions that may be necessary to billing systems and maintenance of a waiting list. Please confirm that this is the case.

Response:

Any costs associated with activities noted in the question are expected to be negligible and can be carried out by FBC staff in the normal course of work responsibilities. As such, they are not expressly recognized in the rate derivation.

32 9.3.1 What are the estimated incremental costs of such activities?

Response:

Please refer to the response to BCOAPO IR 1.9.3.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 14

9.3.2 If yes, please explain why these costs are not included in the associated solar rates. Response: Please refer to the response to BCOAPO IR 1.9.3. 9.4 There appears to be no separate provision for taxes in the determination of the Please explain how any incremental taxes (income tax or other) attributable to the Project are addressed and included in the rate calculation. Response: Incremental taxes due to the Project are included in the financial analysis and rate derivation. Please refer to Appendix B-2 of the Application, Line 4 for the Property Taxes and Line 6 for the Income Taxes. 9.4.1 If not included in the calculation, what would be the impact of including taxes? Response: Please refer to the response to BCOAPO IR 1.9.4. 9.4.2 If not included in the calculation, please explain why these costs are not included in the associated solar rates.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre <i>et al.</i> (BCOAPO) Information Request (IR) No. 1	Page 15

1 Response:

2 Please refer to the response to BCOAPO IR 1.9.4.



FortisBC Inc. (FBC or the Company)	Submission Date:
Community Solar Pilot Project Application (the Application)	July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 16

10.0 Reference: Exhibit B-1, page 14

10.1 The text at lines 13-14 indicates that any unsubscribed power from the CSPP will be absorbed into the FBC resource stack and displace other sources of power. Wouldn't the "subscribed power" also be absorbed into FBC's resource stack and offset other sources of power? What is different about the subscribed vs. unsubscribed power in terms of FBC's resource stack and the operation of its system?

8 9 Response:

- FBC confirms that, from an FBC power supply operational perspective, there is no difference between subscribed and unsubscribed power.



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al. (BCOAPO) Information Request (IR) No. 1	Page 17

1	11.0	Refer	ence.	Pages 14-15
2 3 4 5	11.0	11.1	If the p	ilot were to lead to a Community Solar Program with multiple installations, confirm (per page 14, lines 16-2) there would be a separate "rate" for estallation based on its costs.
6	Respo	onse:		
7	Please	e refer t	to the res	sponse to BCSEA IR 1.18.1.
8 9				
10 11 12 13 14 15			11.1.1	Under such circumstances, please confirm that the proposed terms and conditions do not prevent customers from opting out of participating in an earlier installation and then subscribing for participation in a later (lower cost) installation?
16	Respo	onse:		
17 18 19	FBC is		ng a pilot	program only at this time and cannot speculate on how this Program may
20 21 22 23 24 25	Respo	onse:	11.1.2	If no such provisions are contemplated, is there not a risk of earlier (higher cost installations) becoming stranded assets?
26	Please	e refer t	o the res	sponses to BCOAPO IR 1.11.1. and 1.11.1.1.
27 28				
29 30 31 32		11.2	Why a	re the term and cancellation provisions not included in the actual tariffs in dix A?



FortisBC Inc. (FBC or the Company) Community Solar Pilot Project Application (the Application)	Submission Date: July 7, 2017
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre et al.	Page 18

1 Response:

- 2 For the Solar Offset rate, the term is included in the rate schedules attached as Appendix A in
- 3 Special Provision 2.
- 4 For the Virtual Solar Rate, it appears that the final page of the rate schedule was omitted from
- 5 the original filing. This page has been included as part of the Errata filed concurrently with the
- 6 submission of these IR responses and includes the term as Special Provision 1.