

Diane Roy

Director, Regulatory Services

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 6, 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. 1

On April 15, 2016, FBC filed the Application referenced above. In accordance with Commission Order G-94-16 setting out the Amended 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 Services at 250-469-8038.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)

Submission Date: July 6, 2016

Page 1

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

1 2	Table of Contents		Page No.	
	A.	GENERAL	2	
4	B.	PROGRAM INTENT	6	
5	C.	NET EXCESS GENERATION BANKING MECHANISM	20	
6	D.	NET EXCESS GENERATION VALUATION	24	
7	E.	BILLING CALCULATION METHODOLOGY	34	



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 2

ı	A.	GENE	KAL	
2	1.0	Refer	ence:	OVERVIEW OF THE APPLICATION
3				Exhibit B-1, Application, Section 1, p. 1
4				General
5 6				luded a black-lined version of the tariff with the proposed changes in fthe Application.
7 8 9		1.1		e specify which section(s) of the <i>Utilities Commission Act</i> (UCA) the ation is filed under.
0	Respo	onse:		
1	The A	pplication	on shou	ld be reviewed pursuant to section 60 of the Utilities Commission Act.
2				
3				
4 5 6 7		1.2		e specify the proposed effective date of the changes to the tariff as nated in Appendix C to the Application.
8	Respo	onse:		
9 20	Please kWh E		to the r	esponse to BCUC IR 1.7.1 for a discussion of the implementation of the
21 22	Apper	ndix C	that are	es not approve the kWh Bank methodology, the tariff changes presented in unrelated the kWh Bank and the bill calculation method described in implemented for the Billing Period following approval



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 3

2.0 Reference: BACKGROUND TO THE NET METERING PROGRAM

Exhibit B-1, Section 3, p. 4; Exhibit A2-1, 2010 Monitoring and Evaluation Report on FortisBC Inc. Net Metering Program (FBC 2010 Net Metering Report), p. 5

Net Metering program update

On page 4 of the Application, FBC states that "As of March 31, 2016, FBC had 86 customers enrolled in the Program, 22 of which are served on Commercial rate schedules with the balance served on a Residential Rate."

In the FBC 2010 Net Metering Report, FBC presents Table 3.0 on page 5 summarizing the installations that have been connected under the Net Metering (NM) tariff.

2.1 Please provide the total number of NM customers, total capacity installed (incremental and cumulative), total energy (kWh) generated, and net-excess generation (kWh) sold to FBC for each year since the inception of the program to date.

Response:

Available information is contained in the table below. The Company cannot provide information on total energy generated as it does not have visibility of any activity behind the customer meter. With respect to the NEG sold to FBC, since the Company accumulates NEG for customers as a dollar amount on the account, the exact kWh's are not available. Instead, the annual total of payments to the three customers are listed.

Year	Total NM Customers	Total Installed Capacity (kW)		NEG Sold to FBC (\$)
		Incremental	Cumulative	
2010	4	34	34	0
2011	12	98.5	132.5	0
2012	16	43	175.5	0
2013	20	16	191.5	4,345
2014	43	99	290.5	8,830
2015	83	227	517.5	16,926
2016 (Apr)	86	17	534.5	34,402



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 4

2.2 Please provide the number of NM customer in each rate class as of June 1, 2016.

2 3 4

1

Response:

5 As of June 1, 2016, a total of 97 customers have been successfully enrolled in the Net Metering

6 Program. The current rates and class of these customers are in the table below.

# Customers	Class	Rate
15	GS	GS20
2	GS	GS21
1	IR	IR60
75	RS	RS01
1	RS	RS02
2	RS	RS03
1	RS	T2ARB (TOU)
Total 97		

8

7

9

11

12

2.3 Please comment on how FBC envisions the NM program to be in 5 years' time (2021) in terms of i) number of customers enrolled, and ii) total energy generated under the program.

131415

Response:

- 16 Customer participation has been trending upwards over the last few years. FBC assumes that 17 this trend will continue, and that the prospect of unused annual net excess generation, while 18 minor on an individual customer basis, may grow in the aggregate.
- 19 If the average growth rate between 2010 and 2015 were applied out to 2021, the number of customers would increase to about 3100. Given that the average capacity of installed systems is 6.5 kW, the total could reach approximately 20,150 kW of installed generation.
- At 1,100 kWh for each installed kW this would provide annual generation of approximately 22 GWh.

24

25



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 5

2.4 If the NM program is expected to grow, please comment on how demand and supply from NM customers fit into the resource plan. In particular, how does NM demand and supply affect FBC's supply portfolio and system load shaping?

Response:

- As part of the 2016 Long Term Electric Resource Plan (LTERP), FBC has developed alternative load scenarios which include the impacts of various load drivers. These load drivers include the potential for increased Distributed Generation (DG) resulting from NM customers. While DG can be thought of as a load demand driver (reducing load) or a source of supply, FBC has treated it as a load driver within the portfolio analysis of the LTERP. The portfolio analysis to be completed within the LTERP will determine the potential impacts on FBC's supply portfolio and system load shaping.
- However, FBC anticipates that the LTERP analysis will indicate only minimal capacity benefits to FBC. This is because the NM program is mainly solar and therefore the contribution to the Company's peak load hours in the winter will be quite small.

19 2.5 Please comment on the merits of conducting another report on FBC's NM program to date.

Response:

The Company does not believe that a further report on its Net Metering Program will yield any information that will be additive to the information being provided in this process. The Program has shown consistent growth in participation since its inception which FBC believes is an indicator of customer interest and the workability of the technical requirements. The Company can provide the Commission with participation rates upon request or at periodic intervals however FBC believes that a complete evaluation report is not necessary at this time.



12

13 14

15

16

17

18

19

20 21

22

23

24

25

26

27

28

29

30

31

32 33

34

35

36

37

FortisBC Inc. (FBC or the Company)	
Net Metering (NM) Program Tariff Update Application (the Application)	

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

Page 6

Submission Date: July 6, 2016

В. PROGRAM INTENT

2	3.0	Reference:	CLARIFICATION OF PROGRAM INTENT
3			British Columbia Hydro and Power Authority (BC Hydro) Application
4			to Amend Rate Schedule 1289 – Net Metering Service and Cancel
5			Tariff Supplement No. 63 - Net Metering Interconnection Agreement
6			Order G-57-12 with Reasons for Decision dated May 14, 2012 (BC
7			Hydro 2012 RS 1289 Reasons for Decision), pp. 20, 21;
8			BC Hydro Amendment to RS 1289 Net Metering Service, Order G-
9			104-14 and Decision dated July 25, 2014, pp. 2-5, 10, 23
10			Legislative and evaluation framework
11		The BC Hydr	o 2012 RS 1289 Reasons for Decision states on pages 20 and 21:

The BC Hydro 2012 RS 1289 Reasons for Decision states on pages 20 and 21:

In order for the Net Metering program to contribute in a more meaningful way to help BC Hydro meet its obligations, there should be clear objectives for the program that focus on economic effectiveness and efficiency. To that end, there are no clear program objectives that the Panel can use in its evaluation of the proposed changes. The Panel considers it to be important to clearly define success in order to evaluate progress and make necessary changes. Even in the absence of clear goals and targets, the Panel is of the view that unnecessary economic and other barriers to investment in small-scale clean [distributed generation (DG)] should be mitigated, provided that to do so does not incur a substantial cost on the utility or unnecessarily shift costs to other ratepayers. [emphasis added]

Commission Decision and Order G-104-14 on BC Hydro RS 1289 Net Metering (BC Hydro 2014 RS 1289 Decision) describes the legislative and regulatory context on pages 2 to 5 and adopts Order G-57-12's evaluation framework on page 10. On page 23 it states "The Panel considers that an ongoing focus by BC Hydro to identify and mitigate market barriers to small-scale DG is consistent with commitments made by BC Hydro in its 2013 [Integrated Resource Plan]."

3.1 When FBC files its next long-term resource plan will it include an updated Distributed Generation (DG) strategy and long-run marginal cost (LRMC) estimate?

Response:

In its 2016 LTERP, FBC plans to include the development of alternative load scenarios which include DG as well as other potential future load drivers. The portfolio analysis within the LTERP will discuss which resource options might be needed to meet these alternate load scenarios. The LTERP will also discuss, at a high level, some considerations for transmission



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 7

Information Request (IR) No. 1

and distribution system planning should there be increased levels of DG and other load drivers in the future. While NM and DG is not currently at material levels for FBC, the LTERP will explore scenarios which consider increased levels of DG in the long term planning horizon. Therefore, at this time, FBC does not plan to include a specific DG strategy in the LTERP but instead will explore DG scenarios. An outcome of the portfolio analysis will also be LRMC values associated with the alternative portfolios.

7 8

1

2

3 4

5

6

9

10

3.2 Please describe FBC's objectives for the NM program, and how these objectives align with FBC's broader DG strategy.

11 12 13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

Response:

The FBC Net Metering Program Tariff Update Application that is currently before the Commission is limited in scope and apart from a clarification on the interpretation of billing methodology language, only seeks changes to the treatment of Net Excess Generation (NEG) during a Billing Period and with regard to any annual payout of accumulated NEG. The program as it is currently structured was approved by Commission Order G-92-09, and the Company is not seeking to change its practice or program elements that have previously been examined and approved as part of the previous regulatory process except as described in the Application.

FBC has not therefore suggested any changes in the objectives that were included in the 2009 Application. These are repeated below:

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. The Net Metering Program should consider the requirements of FortisBC, the customers who choose to take part, and the remaining ratepayers who do not.

From the perspective of the customer who seeks to enroll, the Net Metering Program should:

- contain an application process that is easy to complete and understand;
- not contain undue barriers to interconnection with FortisBC; and
- provide financial compensation for generation.

32 33

34

FortisBC requires that a Net Metering Program:



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 8

• introduce no risk to the safety of its employees, customers or the general public;

- · is not administratively burdensome or costly;
- does not compromise the quality of service to FortisBC customers; and
- does not introduce unreasonable costs to either FortisBC or its customers.

It is the overriding intent of the program that customers gain the ability to offset their own consumption with a clean and renewable resource. It is not the intent of the program to provide a means for larger scale Independent Power Producers ("IPP") to bring their output to the market.

FBC consideration of DG resources in its planning process is as described in the response to BCUC IR 1.3.1; however, the Company does not have an articulated "broader DG strategy" outside of that planning process.

3.2.1 If FBC's NM objectives do not focus on promoting economic effectiveness and efficiency, please explain why.

Response:

The NM objectives as described in the response to BCUC IR 1.3.2 above are, from a customer perspective, focused on the ease of use and customer decision to generate power for one's own needs, and from the Company's perspective, primarily focused on safety, administration and customer impact.

Although the NM Program objectives were put forward in 2009 and have not been updated since, it is unlikely that economic efficiency or effectiveness would be included. The technologies involved in Net Metering are not economic at this time, and the Company does not foresee that the widespread implementation of these installations will be an economic resource for some time. Should these technologies become a consideration in the Company's planning process, then DG will receive proper attention in that venue. The NM Program itself remains an offering driven by customer initiative and largely undertaken by those customers for reasons other than economics.



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 9

3.2.2 Please explain how FBC's NM program aligns with existing government policy, such as the *Clean Energy Act*, BC Energy Plan, and any other policy in relation to NM.

Response:

Section 1 of the original FBC 2009 Net Metering Application contains a discussion of how the Net Metering Program supports existing government policy. The current Application does not seek the approval of a Net Metering program, it seeks amendments to an existing Program that was approved by the Commission within the context of government policy at the time. The updated Application provides a number of changes, including the billing methodology clarification and kWh bank and though the changes are minor in impact they are to the benefit of most customers and can be viewed as bolstering the support for government policy objectives. To the extent that the rate for compensation for annual NEG is less than the retail rate currently applied to NEG during a billing period may be viewed as a reduction in the program benefit, the Company stresses that with perfect information and in accordance with current Program rules, there would be no annual NEG. Any incidental annual NEG that results from the inability to forecast annual consumption with 100% accuracy will be small in amount (if present at all) and the reduction in value will reflect only the difference between the retail and proposed price.



FortisBC Inc. (FBC or the Company) Submission Date: Net Metering (NM) Program Tariff Update Application (the Application) July 6, 2016 Response to British Columbia Utilities Commission (BCUC or the Commission) Page 10

Information Request (IR) No. 1

4.0 Reference: **CLARIFICATION OF PROGRAM INTENT** 1 2 Exhibit B-1, Section 4, p. 5; BC Hydro 2012 RS 1289 Reasons for 3 Decision, pp. 44-45 2009 intent of the NM program 4 5 FBC states on page 5 of the Application: "The Program was designed with the intent that 6 a customer's generation should be sized to meet no more than its electricity 7 consumption." 8 The BC Hydro 2012 RS 1289 Reasons for Decision states on pages 44 to 45: "In the 9 Panel's view, the original policy driver was to support a clean energy goal, and the 10 Commission stated that support was conditional that it did not incur any substantial cost 11 on the utility or impose any inordinate barrier to ratepayers seeking to net meter ... the Panel's principle concern is that customers will potentially "slip through the cracks" 12 13 between BC Hydro's Net Metering and the [Standard Offer Program (SOP)]." 14 4.1 Please explain how the FBC NM program design restriction that "a customer's 15 generation should be sized to meet no more than its electricity consumption" (i) 16 aligns with the broader objective of the FBC NM program, and (ii) supports 17 existing government policy.

19 Response:

- 20 It is the broad objective of the program that customers gain the ability to offset their own 21 consumption with a clean and renewable resource, which in the opinion of FBC supports 22 existing government policy.
- 23 The Net Metering Program Update Application seeks approval to change the treatment of NEG,
- 24 but does not change this broad objective of the program. The design parameter that a
- 25 customer's generation should be sized to meet no more than its electricity consumption
- 26 continues to support this objective.
- 27 Providing customers with the opportunity to offset their own consumption with clean, renewable
- 28 energy directly supports government policy actions related to promoting the use of clean,
- 29 renewable resources contained in the 2007 BC Energy Plan and the Clean Energy Act.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Dogo 11

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

Page 11

ı	5.0 Refe	rence: CLARIFICATION OF PROGRAM INTENT
2		Exhibit B-1, Sections 4.3-4.4, pp. 7-8, Appendix C, sheet 46
3		Changes to RS 95 to clarify intent
4 5 6	the F	age 7 of the Application, FBC quotes the evidence from the regulatory process for EBC 2009 Net Metering Application (2009 Application) that "It is the overriding intented program that customers gain the ability to offset their own consumption."
7 8	•	page 8 of the Application, FBC proposes the following updated definition of Net red System:
9 10		Net Metered System – A facility for the production of electric energy that:
11 12 13 14		 e) is intended only to offset part or all of the customer-Generator's requirements for electricity on an annual basis. The program is not intended for customers who generate electricity in excess of their annual requirements.
15 16 17 18	5.1 Response:	Please elaborate on how the "requirement for electricity on an annual basis" is determined.
19 20 21 22	service, a re	nere the Net Metered System is to be interconnected with an existing electrical view of past billing history is used as a baseline for probable future consumption. If er anticipates a change in annual consumption due to changes in connected or usage, it is also considered in the review.
23 24		Metered System is to be interconnected with a new service, the electrician working at is asked to provide an estimate of future consumption.
25 26		
27 28 29 30 31 32	5.2 Response:	Please explain how FBC has determined that calculating consumption requirement on an annual basis is the appropriate measurement for "own consumption."
33		to the response to BCUC IR 1.5.3.
JJ	1 10030 10101	to the response to book in 1.5.5.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 12

Information Request (IR) No. 1

1 2

3

4 5.3 P 5 1c 6 a 7 c 8 2

Please discuss whether FBC considers that offsetting a customer's peak day load, seasonal load, or any other own consumption historically experienced or anticipated by the customer rather than the consumption on an "annual basis" is considered consistent with the intent of the NM program as established in the 2009 Application.

9

Response:

- 11 The overriding intent of the Program as described in the 2009 Application was that customers
- 12 gain the ability to offset their own consumption with a clean and renewable resource. At the
- 13 time, consumption was always intended to refer to energy usage over time, and not some other
- 14 measure.
- 15 FBC believes that energy consumption, and not some other measure such as peak day load is
- 16 most easily understood by customers and that there is no compelling reason to use another
- 17 such measure.
- 18 The annual reconciliation of Net Excess Generation allows customers the benefit of using net-
- 19 excess generation during seasons in which generation is higher than consumption to offset
- 20 consumption in periods where the opposite occurs. The Company does not see how a
- 21 seasonal measure would allow for the same customer advantage.

22 FBC considers that the fact that virtually all Net Metering Programs it has reviewed are

- 23 structured in a similar manner is another indication that annual net excess generation
- reconciliation is a logical approach.

2526

2728

29

30

31

In Appendix C of the Application on sheet 46, special condition 4 in the RS 95 tariff reads "The Contract Period for Service under this schedule shall be one (1) year and thereafter shall be renewed for successive one-year periods..."

5.4 Please explain FBC's NM program contract renewal criteria.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 13

Information Request (IR) No. 1

Response:

2 FBC does not have NM program contract renewal criteria. The language in the Tariff indicates 3 that service to the customer under the Net Metering Program is initiated with a minimum one-4 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. 5

6

1

7 8

9 10 5.5 Please elaborate on FBC's current application process and screening for its NM program applicants.

11 12

Response:

- 13 FBC customers that wish to take part in the Net Metering Program are required to complete the 14 Application for Net Metering form that is found on the Company's website.
- 15 Once the completed form is submitted an FBC Regional Engineer will contact the customer to 16 discuss the Application and work with the customer on the details of the installation and will 17 ensure compliance with the provisions of the Program and Tariff.

18 19

20

21 22

5.5.1 Please explain whether the eligibility to the NM program would differ as a result of the implementation of the proposed changes in the Application. If yes, please explain how.

23 24 25

Response:

- 26 The changes proposed in the Application will have no effect on the eligibility to the NM Program 27 as it currently exists.
- 28 The FBC Net Metering Program Tariff Update Application that is currently before the 29 Commission is limited in scope and apart from a clarification on the interpretation of billing 30 methodology language, only seeks changes to the treatment of Net Excess Generation (NEG) 31 during a Billing Period and with regard to any annual payout of accumulated NEG.

32

33



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 14

5.6 Please explain what action FBC would take, if any, if existing customer's energy consumption drastically decreased to become a consistently net excess generating customer.

3 4 5

1

2

Response:

- 6 Given the characteristics of the net metering systems currently connected to the FBC system
- 7 (with most customers having net consumption that exceeds net generation) the Company
- 8 believes it unlikely that a properly sized NM system will subsequently produce net excess
- 9 generation (NEG) in a quantity that would become a concern.
- 10 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
- 12 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.
- 14 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
- 17 month.
- 18 The Company considers that with the changes contained in the current Application, specifically
- 19 the use of the kWh Bank and the annual unused NEG compensation rate based on a proxy for
- 20 avoided power purchase costs, the potential for wider customer impact would be mitigated.

21

22

232425

5.7 Please explain whether any FBC customers have been unable to renew their NM contract with FBC after the one year contract period expires. If yes, please explain the circumstance(s).

262728

Response:

No FBC customer has been unable to renew their NM contract with FBC after the first year of program participation.

31

29

30

32



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 15

5.8 Please compare the NM contractual duration and contractual termination clauses for NM programs for BC Hydro and in other jurisdictions with those defined in FBC's existing NM program tariff.

3 4 5

10

11

12

13

14

15

16

1

2

Response:

- The Company has reviewed the Net Metering Programs of those utilities included in the comparison in Appendix D. In most cases, Net Metering Agreements are not publicly available and net metering programs do not have a separate tariff schedule as with FBC and BC Hydro.
- 9 The Company was able to locate information for SaskPower as follows,
 - The net metering agreement is a two-year agreement from the date of execution. It is also renewable in two-year increments unless either party gives written notice of its intention to terminate the agreement. Either SaskPower or the net metering customer may terminate the net metering agreement upon thirty days written notice to the other party. Upon termination of the net metering agreement, the customer is responsible for disconnecting their generating system from the electrical grid.
 - Also, New Brunswick Power states,
- The agreement can be cancelled with 30-days notice to NB Power. However, if you cancel within 24-months and wish to participate at a later date, there will be additional set-up costs for net metering.
- 20 This does not speak to an initial term.
- 21 To be clear, FBC is not seeking to revisit the Contract Period as originally approved by the
- 22 BCUC for its Program. The original approval included a commitment of a minimum of 1-year.
- 23 FBC believes that prior to completing the work necessary to administer the interconnection of a
- 24 customer's net metered system, none of which is recovered from the customer, a commitment
- of one year remains justified and reasonable.



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 16

1	6.0	Reference:	CLARIFICATION OF PROGRAM INTENT
2			Exhibit B-1, Section 3, p. 3; BC Hydro 2014 RS 1289 Decision, pp. 13,
3			14;
4			BC Hydro Amendment to RS 1289 Net Metering Service, Exhibit B-4,
5			BCUC IR 1.2.1.3, 1.6.3.1, Exhibit B-5, BCPSO IR 1.4.3; BC Hydro
6			website, Comparison of BC Hydro's DG offers
7			50 kW Capacity limit
8		FBC states of	on page 3 of the Application that the program "is limited to capacity of not

more than 50kW."

The BC Hydro 2014 RS 1289 Decision on page 13 approved an increase in BC Hydro's NM capacity cap from 50 kW to 100 kW and states on page 14: "The Panel also reaffirms the 2012 Decision that, in undertaking this future evaluation, BC Hydro should demonstrate that increasing the RS 1289 cap would result in a substantial cost to the utility and its ratepayers, not just that it would result in more exports to the grid."

In the BC Hydro RS 1289 2014 proceeding (Exhibit B-4), BC Hydro estimated the average NM credit for medium and large general service customers in BCUC 1.6.3. BC Hydro also estimated the DG capacity that various customer classes could install while still not exceeding their average annual consumption in BCUC 1.2.1.3:

Customer Class	Average Annual Consumption	Estimated DG Capacity (kW) ¹		
		PV Solar (Assumed	Wind (Assumed 20% Capacity	Hydro (Assumed 40% Capacity
	(kWh)	10% Capacity Factor)	Factor)	Factor)
Residential Service	11,000	13	6	3
Small General Service (SGS)	46,000	53	26	13
Medium General Service (MGS)	200,000	228	114	57

2,055

1,800,000

Large General Service

(LGS)

BC Hydro provides a comparison of its distributed generation offers on its website.¹ In Exhibit B-5 (BCPSO IR 1.4.3) BC Hydro stated: "It is not expected, even with the proposed increase in maximum generator size to 100 kW, that there will be significant increases in the amount of annual net electricity sold to BC Hydro under RS 1289."

1,027

https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/independent-power-producers-calls-for-power/initiatives-in-development/cheat-sheet-hand-out-comparison-of-DG-offers-final.pdf



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 17

6.1 Has FBC received requests for access to the NM rate for customers wishing to install DG in excess of 50 kW? If yes, please describe.

Response:

- To date, three Net Metering applications have been received for systems larger than 25kW and in these cases, the system capacity was below 50kW.
- In the past two years, there has been one expression of interest in a Net Metered system in excess of 50kW at a property where the annual consumption exceeds the probable annual output of such a system.
- There have been periodic inquiries from individuals asking whether they can install generation as an Independent Power Producer (ie, not behind a customer load), but receive the Net Metering rate in compensation for energy delivered to FBC.

6.2 Please explain the rationale for the 50 kW capacity cap. Please include in this explanation whether an increase in the cap could result in a substantial cost to the utility (excluding any connection policy related considerations) and if so please estimate the dollar magnitude of the impact.

Response:

The 50 kW capacity cap has been a feature of the Net Metering Program since its inception. FBC is not proposing to change the cap. In the original Application, FBC noted that the Commission, in Letter L-37-03 to BC Hydro dated July 22, 2003 specified that net metering should be applicable to generation of 50 kW or less. During the original regulatory process, FBC pointed out that the 50 kW cap was further supported by its opinion that an installation beyond this 50 kW power limit (regardless of the operating voltage) could have safety and reliability impacts to the FBC distribution system (refer to the response to BCUC IR 1.2.1 in that proceeding).

An increase in the cap would not likely result in a substantial cost to the utility as the size of the cap is not generally the limiting factor in determining the size of a system that a customer is able to install under the Program and would not likely increase the number of installations by an appreciable amount. The cap will only become a factor for a customer with a load sufficient that annual consumption could require a system larger than 50 kW in order provide sufficient generation to offset that consumption.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 18

3 4

5

6 7

Does FBC consider that the table provided by BC Hydro estimating the DG 6.3 capacity that various customer classes could install while still not exceeding their average annual consumption (BC Hydro RS 1289 2014 proceeding, Exhibit B-4, BCUC 1.2.1.3) would also generally apply to FBC's service area? If not, please explain why and provide an updated table for FBC's service area.

8 9 10

11

Response:

FBC does not have customer classes that correspond precisely to those of BC Hydro with 12 respect to load size. However, the customer types that would be most analogous are 13 residential, with an average load of roughly 12,000 kWh, and commercial, with an average load 14 of roughly 55,000 kWh.²

Both of these average consumption levels are slightly higher than those of the closest categories in the BC Hydro analysis. Adjusting for that, the figures in the BC Hydro table would generally apply for FBC.

18 19

15

16

17

20 21 22

6.3.1 Please estimate the C/kWh credit FBC's customers receive (by customer class) for energy generated that is not in excess of annual consumption.

23 24 25

Response:

27 28

26

FBC cannot complete the requested analysis because it does not have any visibility of the amount of either generation or consumption that occurs behind the customer meter. Only net data is obtainable.

29 30

31

32 33

34

6.3.2 Please explain whether the 50 kW capacity cap could reasonably be increased for FBC (i) residential and (ii) commercial customers. Please exclude concerns that relate to the connection policy.

Derived from data on Schedules 18 and 19 of Exhibit B1-2 in the FBC 2015 Annual Review of 2016 Rates.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 19

1 2 Response:

3 Please refer to the response to BCUC IR 1.6.2.



5

6

7

8 9

10

11

FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 20

Information Request (IR) No. 1

C	NET EXCESS	GENERATION BANKING	MECHANISM
U.	NEI EXCESS	GLINLINA I ION DANKING	MILCHAMON

2	7.0	Reference:	CHANGES TO THE TREATMENT OF NET EXCESS GENERATION
3			Exhibit B-1, section 5.2, p. 10, Appendix A, Appendix C, sheet 45
1			kWh bank

FBC states on page 10 of its Application that "FBC is proposing ... the use of a kWh bank that alternately carries NEG forward to offset consumption in a future billing period, or applies previously accumulated NEG in a billing period when net consumption exceeds net generation." Examples of the operation of a kWh Bank for both a Time-of-Use (TOU) and a non-TOU NM customer are provided in Appendix A to the Application.

7.1 Please specify the proposed effective date of the kWh bank mechanism, and explain how the kWh banking mechanism will be rolled out for existing customers.

12 13 14

Response:

- 15 Billing for the Net Metering Program is currently maintained on a manual basis. The tracking of
- 16 the kWh Bank for each customer will likewise be done manually until such a time that Program
- 17 Participation may justify the implementation of an automated solution. FBC has not assessed at
- 18 what point this may occur. Because of this, the implementation of the kWh bank could be done
- 19 90 days from the approval of the kWh Bank by the Commission.
- 20 Assuming that the Application receives a Commission decision by September of 2016, the likely
- 21 implementation date would either be January 1, 2017 or April 1, 2017.
- 22 In the view of FBC, since most customers do not have NEG in a billing period, and are less
- 23 likely to have NEG over the winter months, the date chosen to begin the kWh Bank tracking will
- 24 not have a significant impact. However, because beginning of the year is already an extremely 25
- busy period for Billing staff FBC suggests that an April 1, 2017 roll-out would be a workable and
- 26 clean cut-off date that would provide ample time to communicate with customers and update
- 27 program material and processes.
- 28 For existing customers, the roll-out of the kWh Bank is a matter of switching over to the new
- 29 methodology with the first billing period after the April date. Existing credit account balances
- 30 can be paid out or carried forward as appropriate.

31 32

33 34

35

7.2 Please explain the pros and cons for the customer and for FBC to offset customer consumption at the end of the billing year (ending on March 31) rather



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 21

Information Request (IR) No. 1

2 3

1

than at the end of the billing period using the kWh accumulated in the kWh Bank, such that Tier 2 consumption for RCR customers would be offset first before Tier 1 consumption on an annual basis.

4 5

6

7

8

9

10

11

12

13

14

15

16

Response:

- As FBC understands the question, the scenario involving offsetting customer consumption at the end of the billing year would require the kWh Bank to accumulate any NEG for annual reconciliation. In the view of FBC, this would require that during the year the customer could only be billed for basic services as the actual consumption and generation activity would also need to be considered on an annual basis. The period for billing and Net Metering Program must be matched. This would also require that threshold in the RCR be annualized. The Company is unclear how this allows Tier 2 consumption to be offset prior to Tier 1 consumption is considered.
- From a Company perspective, the proposal put forward in the Application is straightforward to administer and is consistent with other NM programs. FBC does not see any advantage in adopting an annually reconciled program.

17 18

19 20

21

22

23

24

25

Appendix C on sheet 45 of the Application states that "For eligible Customers receiving Service under a TOU rate schedule, consumption and generation during On-Peak Hours shall be recorded and netted separately from consumption and generation during Off-Peak Hours and held in separate kWh Banks such that any balance in the respective Banks can be applied in subsequent billing periods in either the On-Peak Hours or Off-Peak Hours as appropriate."

26 27

28

29

7.3 Please explain whether FBC is aware of any other jurisdiction with TOU customers enrolled in a NM program. If yes, please explain how Off-Peak Hour and Peak Hour generation and consumption is counted for NM billing purposes for TOU NM customers in other jurisdictions.

30 31 32

Response:

- 33 The Company can confirm that the opportunity to be enrolled in both a TOU rate and Net 34 Metering rate does exist in some jurisdictions, such as Southern California Edison (SCE) and
- 35 Pacific Gas and Electric (PG&E).
- 36 In the case of both SCE and PG&E the applicable energy rate during on-peak and off-peak 37 periods is used to calculate both charges to customers when a net consumer, and credits to a



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 22

- 1 customer when a net generator over a billing period. Net Surplus Compensation (NSC) may be
- 2 available if a customer produces in excess of their on-site load over the course of a 12-month
- 3 period. NSC is calculated using a market-based rate and is settled annually.
- 4 The FBC proposal to maintain a separate kWh Bank for each time block ensures that TOU
- 5 customers receive the appropriate retail value for the energy when it is withdrawn from the
- 6 bank.
- 7 Information on the SCE and PG&E billing can be found at the links below.
- 8 http://www.pge.com/en/myhome/saveenergymoney/solar/surplus.page
- 9 https://www.sce.com/wps/portal/home/residential/generating-your-own-power/net-energy-
- 10 metering/!ut/p/b1/hc NCoJAFAXgZ2nhMufoQFm7Ec3GQimjbDahYZNgTpqlvX0WbaK uzuX78C9RJCYi
- 11 <u>DK55DKpc1UmxT2L3sawPDbmEbhlUxfcRhiwOcPEMVuwbgG-DMO__oqIV-KNDAfcXxrRFA6igL6Bed-</u>
- 12 8A3ca2oYJy3yCgQd37IctWMwoOJ0hiBijQO8JfhzpEyELIT4eXrMypZYkosp2WZVV-
- 13 <u>rlq1_u6Pp6GGjQ0TaNLpWSR6dtEw6fGXp1qEr9AcjzEyHIXpNemcwOxARgJ/dl4/d5/L2dBISEvZ0FBIS9n</u>
- 14 QSEh/?from=nem#accordionGrp1-2-hash/accordionGrp1-5-hash
- 15 https://www.sce.com/wps/portal/home/residential/generating-your-own-power/net-energy-
- 16 metering/!ut/p/b1/hc_NCoJAFAXgZ2nhMufoQFm7Ec3GQimjbDahYZNgTpglvX0WbaK_uzuX78C9RJCYi
- 17 DK55DKpc1UmxT2L3sawPDbmEbhlUxfcRhiwOcPEMVuwbgG-DMO__oqIV-KNDAfcXxrRFA6igL6Bed-
- 18 8A3ca2oYJy3yCqQd37IctWMwoOJ0hiBijQO8JfhzpEyELIT4eXrMypZYkosp2WZVV-
- 19 rlq1_u6Pp6GGjQ0TaNLpWSR6dtEw6fGXp1qEr9AcjzEyHIXpNemcwOxARgJ/dl4/d5/L2dBISEvZ0FBIS9n
- 20 QSEh/?from=nem#accordionGrp1-2-hash/accordionGrp1-5-hash

23 24

7.4 Please identify the rate schedule under which TOU NM customers are receiving service.

252627

28

29

30

31

32

Response:

FBC has one customer in the Net Metering Program that is taking service under rate schedule 2A. This rate has been closed pursuant to Commission direction in approving the RCR. The customers eligible to begin service using a combination of TOU and net metering are those customers currently taking service under the closed residential TOU rate or one of the available Commercial or Irrigation TOU rates.

33

34



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 23

7.5 Please elaborate on how "energy requirements for electricity on an annual basis" as defined under "Net Metered System" in the proposed tariff is calculated and applied to TOU NM customers.

Response:

Energy requirements for electricity on an annual basis has the same meaning whether a customer is taking service on a TOU or non-TOU rate schedule. It refers to the annual total requirement for energy at the premise without consideration to the time of day or season that the energy is used.

7.6 Please explain the pros and cons for the customer and for FBC by allowing TOU NM customers to offset Off-Peak Hour consumption with Peak Hour generation, and to offset Peak Hour consumption with Off-Peak Hour generation.

Response:

- The primary impetus for TOU rates is to incent customers to shift consumption from peak periods of demand on the utility system to off-peak periods such that the customers of the utility are not exposed to the potential for higher power purchase costs and the need to increase capacity in any portion of the system.
- The practical application of allowing TOU NM customers to offset Off-Peak Hour consumption with Peak Hour generation, and to offset Peak Hour consumption with Off-Peak Hour generation is to create only one kWh Bank to accumulate NEG regardless of the time period, and to allow the banked credits to first offset on-peak consumption in a subsequent billing period prior to using any remaining balance to offset off-peak consumption.
- This would be an advantage to the individual net metering customer as it would provide the maximum value for generation but would conflict with the rationale for having time-based rates as it would erode the incentive inherent in the rate to shift consumption to off-peak periods.



5

6 7

8

9

10

11

12

13

14

15 16

FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Decrease to Driving Columbia Heliting Commission (DOLIC on the Commission)	

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

Page 24

D	NET EXCESS GENERATION VALUATION
υ.	NET EXCESS GENERATION VALUATION

2	8.0	Reference:	CHANGES TO THE TREATMENT OF NET EXCESS GENERATION
3			Exhibit B-1, Section 5, p. 9
4			Rationale for existing approach

FBC states on page 9 of the Application:

In the current Tariff, any NEG is valued at the rates specified in the applicable Rate Schedule and credited to the customer's account as a dollar value that contributes to the overall financial standing of the account. Under the flat rate that was in effect at the time of the 2009 Application, all generation, whether used to serve load or fed back into the FBC system, was to notionally be given the same value within the same customer class (each customer class would have a different valuation).

8.1 Please describe the original rational for crediting customers at the retail rate for any net excess generation for the year.

Response:

- 17 FBC does not consider that the retail rate is used for compensation of net excess generation
- 18 "for the year". This suggests an annual payout such as is being proposed in the current
- 19 Application.
- 20 Currently, NEG is settled, or compensated for, at the end of each billing period. The use of the
- 21 retail rate was originally conceived of as a matter of practicality because with a flat rate, and
- 22 without the use of a kWh Bank, it was the most cost-effective and administratively simple
- 23 method to implement.
- 24 The retail rate does not reflect the value of the intermittent energy to FBC. This is the case with
- 25 a flat rate, and the value is even further distorted when the RCR based rates are used. The
- 26 Company believes that the best solution for both the participating and non-participating
- 27 customers is to use a kWh Bank that allows participants maximum value for the generation that
- 28 is used to offset consumption, and to compensate for unused NEG at an avoided cost rate that
- better reflects the value of the energy and provides mitigation against any impact that the higher
- 30 compensation rate may impose.

31 32

33 34

8.1.1 If FBC still had a flat residential rate, would FBC object to maintaining

35 the status quo? Please explain why/why not.



3

4

5

6

7

8

9

10

FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)

Submission Date: July 6, 2016

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

Page 25

Response:

If the Company still had a flat rate, it would not object to the status quo with regard to the billing methodology interpretation since the point at which net-generation and net-consumption was netted would make no difference to the billed amount. However, the Company believes a kWh bank should still be put into place so that NEG within a billing period gets carried forward to future billing periods to offset consumption within the twelve month period with unused annual NEG paid out at the avoided cost rate. The flat rate would not address the issue of persistent over-generation that would continue to accumulate at a dollar value that is above what the Company could otherwise pay for an equivalent supply.

11 12

13 14

15

16

8.2 Does FBC consider that paying customers the retail rate for annual excess generation (as opposed to an estimate of what the energy is worth) provides simplicity and rate certainty benefits for customers? Please explain for each customer class.

17 18 19

Response:

- FBC does not consider that paying a retail rate for annual excess generation provides more certainty or billing simplicity for customers. The proposed rate is based on a published BC Hydro rate schedule and is no less certain than the retail rates of FBC. It will not vary "as an estimate of what the energy is worth". The Company believes that the proposed billing will be easier for customers to understand than the current methodology.
- Carrying forward a kWh Bank as the Company has proposed will be problematic should any annual balance be compensated at a retail rate. First, it would mean that customers in different rate classes would receive a different value for annual excess generation without any particular rationale.
- Second, for rate schedules that have more than one energy rate, such as the Residential inclining block, the Commercial declining block, the TOU and Irrigation seasonal rates, there would be a question of which of the potentially available rates should be used.
- The Company believes that a single rate should be used for compensation of annual NEG, and that it should be set at a rate that best reflects the value of the energy and supports the principle that non-participating customers should not be required to subsidize the net metering program, no matter how small that subsidization may be.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)

Submission Date: July 6, 2016

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

Page 26

1	9.0	Reference:	CHANGES TO THE TREATMENT OF NET EXCESS GENERATION
2 3			Exhibit B-1, Section 5, p. 11; Exhibit A2-1, p. 12; FBC electric tariff, RS 37;
4			BC Energy Plan, 2007, pp. 10, 39;
5 6 7			FBC Application for a CPCN for the Advanced Metering Infrastructure (AMI) Project, Order C-7-13 and Decision date July 23, 2013, p. 86;
8 9 10			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), pp. 5, 6;
11 12			BC Hydro website, Standing Offer Program Optimization, SOP rules, RS 1289 tariff
13			Alternative options
14 15 16		at the RS 380	of the Application, FBC proposes to purchase annual net excess generation 8 Tranche 1 rate (4.303 ¢/kWh plus a 5% rate rider). FBC Standby service an energy charge based on the Mid-C index. ³
17 18 19 20 21		proposed add an individual of sales should	on page 12 of its FBC 2010 Net Metering Report that " the Company litional language to clarify the treatment of generation that is in excess of customer's own use The Company believes that compensation for these be offered in a manner consistent with that of other small Independent cers (IPPs) in its service area."
22 23 24 25		BC Hydro's N year" and or	e BC Energy Plan states: " BC Hydro will offer the SOP price to those in let Metering Program who have a surplus of generation at the end of the page 39 states "Ensure the procurement of electricity appropriately e value of aggregated intermittent resources" (Policy Action No. 25).
26 27 28 29		considers tha	sions states on page 86 of the FBC AMI Decision (C-7-13): "The Panel at a matching principle should apply. Where the energy saving benefit the long-term, a long-term cost of energy should be used to calculate the benefit."
30 31		The Commiss 14):	sion states on pages 5 and 6 of the FBC 2015/2016 DSM Decision (G-186-
32 33		•	rdro's November 2013 Integrated Resource Plan (IRP) provides a LRMC of (including line losses) of \$85 to \$100 per MWh and LRMC of capacity of

https://www.fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/FortisBCElectricTariff.pdf



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 27

\$50 to \$55 per kW per year (approximately \$13/MWh using BC Hydro's average load factor).

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. While this estimate is based on BC Hydro's 2008 Clean Power Call, it is reasonable compared to BC Hydro's 2013 LRMC estimate ... The Panel notes FBC's commitment to update the LRMC estimate in the next LTRP. The Panel directs FBC to ... explain how avoided transmission and distribution energy losses are incorporated into DSM cost/benefit tests.

BC Hydro states on its website that it is reviewing the SOP price and is targeting September 2016 for draft recommendations.⁴ BC Hydro's current base SOP price for delivery to the Lower Mainland is 11.156 ¢/kWh.⁵ BC Hydro pays 9.99 ¢/kWh for annual excess generation under RS 1289.⁶

9.1 Please explain whether there are any small IPPs in FBC's service area. If yes, please describe the projects and provide the average price FBC pays to purchase energy from these IPPs.

Response:

FBC currently purchases IPP power based on the lower of the BC Hydro RS3808 tariff schedule or a market based rate. The majority of this power is from industrial generation sources that is not used to either self-generate or to sell to a third party. As such the timing or volume of when FBC will receive this power is not known.

The remaining IPP power is from small hydro resources. There is no obligation to deliver and the volume can vary greatly month to month depending on water availability and if the generator is in service.

The rate that FBC has proposed to pay for any NEG remaining in the kWh Bank at the end of the billing year is consistent with both past and current rates paid for intermittent power delivered into the FBC system.

https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/independent-power-producers-calls-for-power/standing-offer/sop-optimization-process.pdf

⁵ https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/independent-power-producers-calls-for-power/standing-offer/standing-offer-program-rules.pdf, p. 10

https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/integrated-resource-plans/current-plan/schedule-1289-net-metering-service.pdf



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 28

9.2 Please explain whether FBC still believes that "compensation of these sales should be offered in a manner consistent with that of other small Independent Power Producers in its service area."

Response:

Yes. The statement in the 2010 Net Metering and Evaluation Report is consistent with the proposal made in the current Application and nothing has occurred since the filing of the Application that would change this position. With respect to the additional references, FBC does not believe that they have relevance to the deliveries of excess power to FBC from net metering installations, although the Company does contend that the current proposal, "... appropriately recognizes the value of aggregated intermittent resources..." as prescribed to BC Hydro at Page 10 of the BC Energy Plan.

9.3 Once a customer makes an investment in DG, please estimate (by generator type) the typical life of that DG investment.

Response:

The National Renewable Energy Laboratory maintains data on the useful life of various distribution connected technologies. A summary of the data, updated in February is in the table below. The full tables can be found at http://www.nrel.gov/analysis/tech_lcoe_re_cost_est.html

Technology Type	Lifetime (yr)	Lifetime Std. Dev. (yr)
PV <10 kW	33	11
PV 10–100 kW	33	11
PV 100–1,000 kW	33	11
PV 1–10 MW	33	9
Wind <10 kW	14	9
Wind 10–100 kW	19	5
Wind 100-1000 kW	16	0
Wind 1–10 MW	20	7
Biomass Combustion Combined Heat & Power*	28	8
SWH, flat plate & evacuated tube	31	14
SWH, plastic collector	20	10
SVP	25	n/a



FortisBC Inc. (FBC or the Company)
Net Metering (NM) Program Tariff Lindate Application (the Application)

Submission Date: July 6, 2016

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

Page 29

Technology Type	Lifetime (yr)	Lifetime Std. Dev. (yr)
Biomass wood heat*	32	8
Ground Source Heat Pump	38	25

Do FBC distribution connected customers with DG have an option of

selling generation fed into the grid to a party other than FBC? Please

explain and comment on whether FBC's NM customers have similar

options to those available to its customers with DG who take standby

2

1

3

5 6 7

8

9 10

Response:

The only customers with access to transmission wheeling services from FBC are those

service (RS 37).

- 12 customers specified as Eligible Customers for the purposes of the Transmission Services
- 13 contained in the Company's rate schedules 101-109. These are the Company's large industrial
- 14 and wholesale customers only.

9.3.1

- Net Metering customers do not have the same options as the single customer currently utilizing
- 16 stand-by service. Page 25 of the G-67-14 Decision includes the following Commission
- 17 Directive,

18

19

20

21

22

23

24

25

26

27

The Commission Panel determines that the Stand-by Rate will be available to Transmission Customers only. FortisBC is directed to update the language in Rate Schedule 37, Special Provision 1, to clearly indicate that the Tariff is only available to Transmission Customers.

The Panel understands that some of the terms of the rate may very well be appropriate for other Commercial customers; however, this was not the subject of the Application currently before the Commission and was not considered by the Panel. For further clarity, a determination on Stand-by

Rates for Distribution customers is not within the scope of review of this Application. (Bold in original)

28

29



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 30

9.3.2 Does FBC consider that the energy generated from a distribution connected DG customer with DG should generally be considered long-term or short-term in nature? Please explain.

Response:

The Company only includes sources of supply in the long term planning process where there is a long term commitment that the power will be available. Therefore, excess energy from net metering customers is considered short-term in nature as there is no long-term commitment.

9.4 Please estimate the (i) long-term and (ii) short-term value of the energy delivered to the grid by FBC's DG customers, separating out generation energy, losses, ancillary services, generation capacity and network capacity.

Response:

- As stated in the response to BCUC IR1.9.3.2, The Company only includes sources of supply in the long term planning process where there is a long term commitment that the power will be available. Therefore, there is no long term value from net excess generation from net metering customers.
- The short-term generation energy value is the lower of the BC Hydro RS3808 Tranche 1 rate or a market-based price as explained further in BCUC IR1.9.4.2. Due to the uncertain nature of the resource, the only other benefit is losses. The full physical loss benefit is realized only if the energy delivered to the grid is consumed locally. If it must be transported through the system for an extended distance, then a smaller loss benefit would be realized. However, as the Company is proposing no market based price adjustment, it would be inappropriate to recognize a loss related price adjustment.

9.4.1 Does FBC consider that, on an aggregate basis, its NM customer generation can provide generation and network capacity benefits? Please explain.



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 31

Information Request (IR) No. 1

Response:

2 As described in the response to BCUC IR 1.9.3.2, small IPP power provides no certainty of 3 either timing or volume. Therefore the value is limited to the short-term and is not a factor in 4 FBC's longer term planning.

5 6

1

7 8

9

9.4.2 Does FBC consider that the RS 3808 Tranche 1 rate is a proxy for FBC's short-run cost of energy or long-run cost of energy? Please explain.

10 11 12

13

14

15

16

Response:

FBC pays the lower of the RS 3808 Tranche 1 rate or a market-based price to existing IPPs. This is an appropriate proxy for FBC's short-run cost of energy. On a long-term basis, RS 3808 Tranche 1 energy is not expected to be available in sufficient volume to meet all planning requirements. Therefore, it is not an appropriate measure of the long-run cost of energy.

17

18

19

20 21 22 9.5 Does FBC consider that there are other programs better suited to DG customers to sell annual excess energy (for example, BC Hydro's SOP or micro-SOP)? If ves, please explain and comment on whether the price paid under FBC's NM program for annual excess energy should be set at a low level to discourage DG customers from using the NM rate for this purpose.

24 25 26

27

28

29

30

31

32

33

34

35

23

Response:

The NM program is not the correct program to set the rate to buy power that is in excess of that required to offset a customers own use, and it was not designed or approved for this purpose. For the generation of power for sale to the utility—in other words, IPP power, the Company continues to follow the historical practice of purchasing IPP power based on the lower of the BC Hydro PPA rate or a market based rate. This reflects the inherent uncertainty of when or if small IPP power will be received and correctly compares it to other short-term resource options that are available to the Company. To the extent that incidental unused net excess generation received under the NM Program is similar in the nature of its uncertain delivery, it should attract a similar rate.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 32

1 2 3 4 9.6 Please explain in table form the advantages/disadvantages of using the following 5 values as a proxy for the value of annual net excess generation delivered to the grid by FBC's DG customers. In all cases please provide a C/kWh estimate of the 6 7 amount that would be paid and whether they represent delivered energy values 8 (i.e. include transmission and distribution line losses). 9 Zero 10 Status quo 11 FBC proposal (BC Hydro RS 3808 Tranche 1) FBC LRMC used for the 2015/2016 DSM Application (excluding capacity) 12 BC Hydro RS 1289 (Net Metering) price for annual excess generation 13 14 Retail energy rate, using for residential customers the following sub-15 options: 16 FBC RCR (RS 1) Tier 1 17 o FBC RCR (RS 1) Tier 2 18 FBC Exempt Residential Service (RS 3)

Response:

19 20

21

22

2324

25

26 27

28

29 30

31

32

33

34

- The Company has provided the requested values in the table below. With regard to the pros and cons of each item, FBC notes the following facts that generally apply.
 - There is no difference to the Company regardless of which rate is applied to the incidental NEG delivered over an annual basis. Any variances resulting from differing the rate used would settle 100% to the account of customers.
 - In the view of the Company, as the primary objective of the Program is for customers to be able to offset personal consumption and not to sell power to FBC, the most appropriate rate would be zero. However, since the Company does provide compensation to other parties for unscheduled deliveries into the FBC system at an avoided cost based rate, fairness dictates that this amount should be offered to Program participants.
 - Aside from the zero and avoided-cost rate, the other rates are essentially arbitrary and the pros and cons of each are delineated only by magnitude.
 - As the compensation rate increases, the amount paid to customers with a balance in the kWh Bank at the end of the annual period would be higher. This can be considered a



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 33

- benefit (pro) to those customers but a con to other FBC customers who are responsible for the cost.
 - The Company has indicated whether or not each rate is considered *delivered* in light of the purpose for which it was originally designed, however, in the context of a NM compensation rate it is simply a value that is chosen for that purpose and in the opinion of FBC the distinction is not relevant.

Rate	Amount ¢/kWh	Delivered?
Zero	0	N/A
Status quo	The status quo is not relevant for a single rate paid at the end of the year for annual net excess generation remaining in a kWh Bank.	
FBC proposal (BC Hydro RS 3808 Tranche 1)	4.52	No
FBC 2015/2016 DSM LRMC	11.2	Yes
BC Hydro RS 1289	9.9	Yes
FBC RCR (RS 1) Tier 1	9.845	Yes
FBC RCR (RS 1) Tier 2	15.198	Yes
FBC Exempt Residential Service (RS 3)	11.433	Yes



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016

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

Page 34

E. BILLING CALCULATION METHODOLOGY

2	10.0	Reference:	CHANGES TO BILL CALCULATION METHDOLOGY
3 4 5			Exhibit B-1, Sections 1, 6.1, pp. 1, 13, Appendix B, pp. 1–3, Appendix C, sheet 44; FortisBC Inc. 2009 Net Metering Tariff Application dated April 17, 2009 (FBC 2009 Application), p. 9
6			Billing methodology
7		On page 9 of	the FBC 2009 Application, FBC states that:
8		The b	oill for each billing period under the Net Metering Tariff will be calculated as:
9 10			Bill = Customer Charge + (Energy Rate x Net Consumption $(kWh)^*$) + and Rate x Billing Demand (kVA))
11 12 13 14	electricity supplied by FortisBC to the Customer-Generator during the billiperiod and the electricity received from the Customer-Generator during the said		icity supplied by FortisBC to the Customer-Generator during the billing d and the electricity received from the Customer-Generator during the same
15 16		The Rate Schedule 95 tariff contained in Appendix C to the Application provides the following definition for Net Consumption:	
17 18 19		Electi	Consumption - Net Consumption occurs at any point in time where the ricity required to serve the Customer-Generator's load exceeds that being rated by the Customer-Generator's Net Metered System.
20 21 22 23 24	On page 13 of the Application, FBC explains that the net kWh produced or received the customer can be treated in two distinct ways, depending on the interpretation of existing tariff language. FBC's preferred solution is that "the threshold in the RCR applied to the net consumption or generation after the two registered are themselv netted."		
25 26 27 28	RCR, it is possible to treat the net kWh produced or received by the customer in distinct ways" FBC further illustrates the billing calculation under the flat rate a		
29 30 31 32 33		unde: Appe	e confirm, or otherwise explain, that the methodology to calculate the bill a flat rate as illustrated under example i and example ii on page 1 of and another modern and the another calculated by netting the registers before multiplying the energy rate.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 35

If confirmed, please explain why the RCR has an impact on the

interpretation of the tariff to read whether the volumes are netted before

or after the applicable rate is applied to calculate the bill.

Response:

2 Confirmed.

5

1

3 4

6

7 8

9

Response:

10.1.1

The cited examples provided in Appendix B were presented as they were for ease of understanding of the net consumption recorded at the meter. In practice, and reflected on the bills of net metering customers prior to the introduction of the RCR, the net generation and net consumption recorded at the meter were treated separately and appeared as separate line items on the customer bill. To illustrate, the example i in Appendix B is re-formatted below with

the monetary calculation to better represent pre-RCR billing practice:

	kWh	Rate (cents/kWh)	Charges
Total kWh received by customer during the billing period	4,000	11.433	\$457.32
Total kWh delivered to FBC during the billing period	1,200	(11.433)	(\$137.20)
Total energy Billing			\$320.12

17

25

26

27

28

29

30

- In effect, the delivered and received portions of the bill were treated separately, although under a flat rate it made no difference to the amount of the bill.
- When the RCR was introduced, the billing practice of dealing with the received and delivered energy as separate line items was continued.
- The billing formula from page 9 of the FBC 2009 Application and cited in the reference for this information request is not contained in the Tariff and would not be valid with a tiered rate.
- 24 The RS95 does however contain the following language with respect to billing:
 - 2. If the eligible Customer-Generator is a net consumer of energy in any billing period, the eligible Customer generator will be billed in accordance with the Customer-Generator's applicable rate schedule.
 - 3. If in any billing period, the eligible Customer-Generator is a net generator of energy, the Net Excess Generation shall be valued at the rates specified in the applicable Rate Schedule and credited to the Customers account.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 36

1 Given the tariff language, FBC is of the opinion that it is correct to apply the billing parameters,

- 2 including the threshold and the tiered rates from the applicable rate schedule to the net-
- 3 consumption and net-generation in the manner that it has been since introduction of the RCR.
- 4 The Company has filed this Application in part, to address this interpretation issue and is
- 5 supporting the interpretation that favours most customers and is consistent with BC Hydro
- 6 practice. It does not believe however, that it has erred in the interpretation that it has taken to
- 7 date and that is generally consistent with its billing practice prior to the introduction of the RCR.

8

9

10 11

10.2 Please explain BC Hydro's current net metering billing practice.

12 13

Response:

- BC Hydro's net metering billing practice is best explained by the aid that it has included on its
- website and included below. The sheet can be found at the following link:
- 16 https://www.bchydro.com/content/dam/BCHydro/customer-
- 17 portal/documents/corporate/regulatory-planning-documents/integrated-resource-plans/current-
- 18 plan/net-metering-info-sheet.pdf

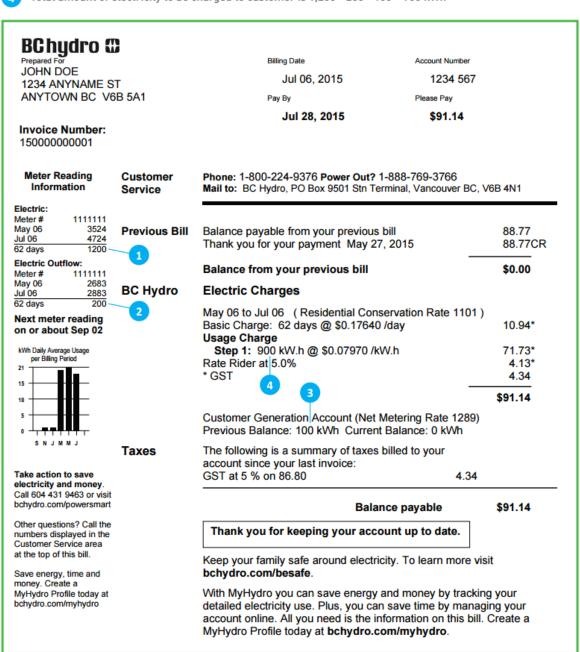


FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 37

What you can expect on your bill

As a net metering customer, your smart meter runs in two directions: it measures how much electricity is flowing into your home from the grid (inflow), and how much electricity is flowing to the grid (outflow).

- 1 Electricity inflow is 1,200 kWh
- 2 Electricity outlflow is 200 kWh
- 3 Previous balance of generation is 100 kWh
- 4 Total amount of electricity to be charged to customer is 1,200 200 100 = 900 kWh





FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 38

10.3 Please explain in detail the billing calculation methodology and total amount billed for NM customers under the RCR under i) the existing billing methodology, ii) application of threshold after netting the registers, and iii) application of threshold prior to netting the registers, by showing the calculation of the total amount billed to the customer in a format similar to that presented on page 2 of Appendix B of the application for the following scenarios under each methodology. Please also provide a functional excel spreadsheet containing the calculations.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
Register 1: Total kWh received by customer during the billing period	2000	2000	2000	2000	1200	1200	1200
Register 2: Total kWh delivered to FBC during the billing period	100	1000	1800	4000	100	1800	4000

Response:

- 15 The calculation is shown below and a working spreadsheet is provided in Attachment 10.3.
- Note that requested items i) and iii) are the same. Item iii) is the current billing interpretation.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application) Submission Date: July 6, 2016 Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

		S	cenario :			Scenario 2		Scenario 3		Scenario 4			Scenario 5			Scenario 6		;	Scenario 7			
	Rate	Ĭ		Value	Ì		Value	Value		Value		Value	Value		Value	Ĭ		Value			Value	
	(\$/kWh)		kWh	(\$)		kWh	(\$)		kWh	(\$)		kWh	(\$)		kWh	(\$)		kWh	(\$)		kWh	(\$)
Register 1: Total kWh received by customer during the billing period.		2,000			2,000			2,000			2,000			1,200			1,200			1,200		
Register 2: Total kWh delivered to FBC during the billing period.		100			1,000			1,800			4,000			100			1,800			4,000		
Net Consumption		1,900			1,000			200			-2,000			1,100			-600			-2,800		
Tier 1	0.09845		1,600	157.52		1,000	98.45		200	19.69		-1,600	-157.52		1,100	108.30		-600	-59.07		-1,600	-157.5
Tier 2	0.15198		300	45.59		· · · · ·	0.00			0.00		-400	-60.79			0.00			0.00		-1,200	-182.3
Total energy billing to customer				203.11			98.45			19.69			-218.31			108.30			-59.07			-339.9
	Rate		kWh	Value		kWh	Value		kWh	Value		kWh	Value		kWh	Value		kWh	Value		kWh	Value
	(\$/kWh)			(\$)			(\$)			(\$)			(\$)			(\$)			(\$)	\longrightarrow		(\$)
Register 1: Total kWh received by customer during the billing period.		2,000			0.000																	
adming the simily period.		_,			2,000			2,000			2,000			1,200			1,200			1,200		
Tier 1	0.09845	_,	1,600	157.52	2,000	1,600	157.52	2,000	1,600	157.52	2,000	1,600	157.52	1,200	1,200	118.14	1,200	1,200	118.14	1,200	1,200	118.1
	0.09845 0.15198	_,,,,,	1,600 400	157.52 60.79	2,000	1,600 400	157.52 60.79	2,000	1,600 400	157.52 60.79	2,000	1,600 400	157.52 60.79	1,200	1,200	118.14	1,200	1,200	118.14	1,200	1,200	118.1
Tier 1		-,	,		2,000	,		2,000			2,000	,		1,200	1,200	_	1,200	1,200		1,200	1,200	_
Tier 1 Tier 2		100	,	60.79	1,000	,	60.79	1,800		60.79	4,000	,	60.79	1,200	1,200	0.00	1,200	1,200	0.00	4,000	1,200	0.0
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the			,	60.79	·	,	60.79			60.79		400	60.79		1,200	0.00		1,200	0.00		1,200	0.0
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the billing period. Tier 1	0.15198		400	60.79 218.31	·	400	60.79 218.31		400	60.79 218.31		400	60.79		,	0.00			0.00		,	0.0 118.1
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the billing period. Tier 1 Tier 2	0.15198		400	60.79 218.31 -9.85	·	400	60.79 218.31 -98.45		1,600	60.79 218.31 -157.52		1,600	60.79 218.31		,	0.00 118.14 -9.85		1,600	0.00 118.14 -157.52		1,600	0.0 118.1
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the billing period.	0.15198		400	60.79 218.31 -9.85 0.00	·	400	60.79 218.31 -98.45 0.00		1,600	60.79 218.31 -157.52 -30.40		1,600	60.79 218.31 -157.52 -364.75		,	0.00 118.14 -9.85 0.00		1,600	0.00 118.14 -157.52 -30.40		1,600	-157.5 -364.7
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the billing period. Tier 1 Tier 2 Subtotal	0.15198		400	60.79 218.31 -9.85 0.00 -9.85	·	400	-98.45 0.00 -98.45		1,600	60.79 218.31 -157.52 -30.40 -187.92		1,600	60.79 218.31 -157.52 -364.75 -522.27		,	0.00 118.14 -9.85 0.00 -9.85		1,600	0.00 118.14 -157.52 -30.40 -187.92		1,600	-157.5 -364.7 -522.2
Tier 1 Tier 2 Subtotal Register 2: Total kWh delivered to FBC during the billing period. Tier 1 Tier 2 Subtotal Total energy billing to customer	0.15198		400	-9.85 0.00 -9.85 208.47	·	400	-98.45 0.00 -98.45 119.86		1,600	-157.52 -30.40 -187.92 30.40		1,600	-157.52 -364.75 -522.27 -303.96		,	-9.85 0.00 -9.85 108.30		1,600	-157.52 -30.40 -187.92 -69.78		1,600	-157.5 -364.7 -522.2



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 40

10.3.1 Please explain whether the existing billing methodology explained above is consistent with the "Net Consumption" definition for billing purposes explained in the 2009 application as referenced above. If it is not consistent, please explain why not.

Response:

Both the existing billing methodology interpretation and the proposed interpretation are consistent with the definition. The definition of Net Consumption cited from the 2009 Application is specific to the billing calculation formula that precedes it which generally describes how billing would be accomplished, but the *Energy Rate x Net Consumption* portion is only descriptive of the basic approach. Even at the time of the 2009 Application the formula could not be directly applied to irrigation rates or the Commercial rate that features a declining block structure.

10.4 Please explain whether it is a feasible methodology to calculate the bill for RCR NM customers with a net consumption within the billing period based on volumes before netting the two meters. The bill would be calculated based on the customer's total consumption in accordance with their retail rate schedules, netted with a bill credit for the offset energy (Tier 2 before Tier 1 energy) at the price of the energy paid by the customer to FBC under the retail rate. An illustrative example is presented below based on the format of the example provided on page 2 of Appendix B of the Application:

		kWh	Rate	Value (\$)
Register 1: Total kWh received by customer during the billing	2000			
period	kWh			
Tier 1		1600	9.845¢ per kWh	157.52
Tier 2		400	15.198¢ per	60.79
Tier 2		400	kWh	60.79
Subtotal				218.31
Register 2: Total kWh delivered to FBC during the billing	1800			
period	kWh			
Tier 1		1400	9.845¢ per kWh	137.83
Tier 2		400 ⁷	15.198¢ per	60.79
TICL Z		400	kWh	00.79
Subtotal				198.62
Total amount billed to customer				19.69

Step 1: Register 2 kWh credited at Tier 2 rate is the kWh billed at Tier 2 under register 1 (eg. 2000kWh – 1600kW threshold = 400 kWh)Step 2: Register 2 kWh credited at Tier 1 rate is the kWh balance not credited at Tier 2 (eg. 1800kWh – 400kWh = 1400 kWh)



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 41

Response:

2 The scenario described in the question is feasible.

6 10.4

10.4.1 Please compare the total amount billed in the illustrative example above with the total amount billed calculated for Scenario 3 in response to IR 10.3.

Response:

BCUC IR 1.10.3 Parts i) and iii) - Application of Th	reshold Pri	or to Net	ting Regis	ters (whi	ich is also	the Exist	ing Billin	g Interpre	etation)	
		10.4.1			10.	3 Scenari	o 3	Addit	nario	
	Rate (\$/kWh)		kWh	Value (\$)		kWh	Value (\$)		kWh	Value (\$)
Register 1: Total kWh received by customer during the billing period.		2,000			2,000			2,000		
Tier 1	0.09845		1,600	157.52		1,600	157.52		1,600	157.52
Tier 2	0.15198		400	60.79		400	60.79		400	60.79
Subtotal				218.31			218.31			218.31
Register 2: Total kWh delivered to FBC during the billing period.		1,800			1,800			2,500		
Tier 1	0.09845		1,400	-137.83		1,600	-157.52		2,100	-206.75
Tier 2	0.15198		400	-60.79		200	-30.40		400	-60.79
Subtotal				-198.62			-187.92			-267.54
Total energy billing to customer				19.69			30.40			-49.23

The comparison is shown above. The scenario from Question 10.4 would produce a lower bill than using the current billing methodology as the customer receives credit for more kWh at the Tier 2 rate. However, as shown in the additional example (Scenario 3) provided, capping the Tier 2 credit at the amount of kWh billed at the Tier 2 rate in Step 1 would disadvantage a customer with increased net generation.

10.5 Please explain in what circumstance would i) application of threshold prior to netting the registers (not preferred by FBC) and ii) FBC's existing billing method be more favourable to a NM customer than the FBC preferred billing method. Please demonstrate with a numerical example.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application) Submission Date: July 6, 2016

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

Page 42

1 Response:

- 2 To be clear, the i) application of threshold prior to netting the registers (not preferred by FBC)
- 3 and ii) FBC's existing billing method are the same. FBC's existing billing practice is to net the
- 4 registers after applying the threshold to both the received and delivered registers of the meter.
- 5 The impact can be seen by reviewing the live spreadsheet in Attachment 10.3, provided in
- 6 response to BCUC IR 1.10.3.
- 7 Where neither the net-generation nor the net-consumption exceed the threshold in a billing
- 8 period there is no impact to the customer.
- 9 FBC's preferred method will be to the advantage of the customer when net-consumption is
- 10 greater than the net-generation during a billing period.
- 11 FBC's preferred method will be to the disadvantage of the customer when net-consumption is
- 12 lower than the net-generation during a billing period.

13 14

15 16

17

18 19

20

21

22

23

On page 9 of the Application, FBC states that "NEG [during the billing period] for residential customers is now compensated at the Tier 1 rate up to the threshold of 1,600 kWh over 2 months and at the Tier 2 Rate for amounts over 1,600 kWh over 2 months"

10.6 Please identify the clause(s) in the FBC Electric Tariff justifying the application of the RCR threshold of 1,600kWh for generation (in addition to for residential consumption), and explain whether the application of the RCR threshold for generation was contemplated at the time the RCR was approved by the Commission.

2425

26

Response:

- 27 FBC assumes the question is referring to net generation and net consumption.
- 28 Clause 3 of the Billing Calculation section of RS95 states,
- If in any billing period, the eligible Customer-Generator is a net generator of energy, the
 Net Excess Generation shall be valued at the rates specified in the applicable Rate
 Schedule and credited to the Customers account.
- The threshold contained in RS01 forms part of the applicable Rate Schedule under which customers are taking service under the RCR.



FortisBC Inc. (FBC or the Company)	Submission Date:
Net Metering (NM) Program Tariff Update Application (the Application)	July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 43

1 It is doubtful that the application of the RCR threshold was expressly considered when the RCR was approved by the Commission any more than the impact of the RCR on the Net Metering

Program was considered generally.

4 5

3

6

7 8 9

10

11

12

FBC states on page 1 of its Application that "FBC is seeking Commission confirmation of the Company's approach to the billing calculation... This requires no changes to the Tariff or program documentation..."

10.7 Please explain why FBC considers no changes to the tariff or program documentation is required to clarify the interpretation of "Net Consumption" for billing purpose.

131415

Response:

- 16 Net Consumption is not defined for billing purposes in either the tariff or program
- documentation, nor do they contain an exact billing example that covers all rates and situations.
- 18 Once FBC receives confirmation from the Commission that one of the two tariff interpretations is
- 19 to be used going forward the Company will adopt the practice and neither would be in conflict
- 20 with the existing wording.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 44

Reference: CHANGES TO BILL CALCULATION METHODOLOGY 1 11.0 2 Exhibit B-1, p. 2; FortisBC Inc. Electric Tariff⁸, section 11.6; BC Hydro Electric Tariff, section 5.8 3 Billing methodology 4 5 FBC states on page 2 of the Application that "the billing practice in use for Net Metering since the residential Conservation Rate (RCR) was implemented will be updated." 6 7 Please explain whether FBC has received any complaints with regards to billing 11.1 8 for NM customers. If yes, please describe the content of the complaint(s) and the 9 resolution to each complaint, if any. 10

11 Response:

12 FBC is aware of complaints about the billing of Net Metering that have all been related to the 13 billing methodology discussed in the Application.

FBC has also received complaints related to the existing billing methodology that treats netgeneration and net-consumption individually prior to netting the meter registers that record this activity. These customers argue that the Company instead should treat billing in the manner that has been indicated as the preferred methodology described in the Application Appendix B. A complaint was directed to the Commission in 2014 however the Company is not aware that the customer pursued the complaint or how the Commission may have resolved it. Another such complaint was resolved after a single billing period by refunding the customer the amount of the difference between the two approaches as a matter of customer satisfaction however FBC has not indicated that either interpretation is necessarily correct and has sought a Commission decision on this point through the current Application. A third such compliant was received after the current Application was filed and will not be resolved until after the Commission has made a determination in the matter.

26

14

15 16

17

18

19

20

21

22

23

24

25

27 28

29

30

11.2 Please specify the proposed effective date of the billing practice update, and elaborate on the timing and applicability of the billing update to existing NM customers.

31 32 33

34

Response:

Please refer to the responses to BCUC IRs 1.1.2 and 1.7.1.

https://www.fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/FortisBCElectricTariff.pdf



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 45

If the Commission accepts the billing method proposed by FBC, and that the

accepted billing method differs from the existing methodology used by the utility

in computing past customer bills, please explain whether FBC opposes to

applying the billing methodology retrospectively to all customers since the

1 2

3 4

5

6 7

8

9 10

Response:

11.3

- 11
- The Company does not believe that it would be appropriate to apply the preferred methodology 12 retroactively. FBC believes that both the interpretation of the tariff that results in the current
- 13 billing practice and the proposed billing methodology are consistent with the tariff and thus no
- 14 error in billing has been made that would justify back-billing.
- 15 Please refer to the response to BCUC IR 1.10.1.1 for further discussion.

inception of the RCR two tier rate.

16 17

18

19 20 21

If the updated billing method results in a lower bill than the existing 11.3.1 billing method when applied retrospectively, please comment on whether FBC would be opposed to reimbursing customers for the difference collected since the implementation date of the RCR two tier rate.

23 24 25

22

Response:

- 26 Please refer to the responses to BCUC IRs 1.11.3 and 1.10.1.1 for an explanation of why FBC 27 does not believe that any retroactive application of the billing methodology should be
- 28 entertained.
- 29 Further to those responses, in the event that the Commission were to find that the current billing
- methodology is not in accordance with the tariff and ordered that the proposed billing 30
- 31 methodology should be applied retroactively, FBC sees no reason why the retroactive
- 32 application would not apply to all customers on a tiered rate, whether the adjustment would 33 result in either a refund or an additional charge. Also, the proposed methodology should also
- 34 then apply on a retroactive basis to customers served on the declining block Commercial rate.

35



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 46

1 2 3

4

5 6

7

Section 11.6 (f) of the FBC Electric Tariff states that:

In every case of over-billing, the Company will refund to the Customer all money incorrectly collected for the duration of the error, subject to the applicable limitation period provided by law. Interest will be paid in accordance with Clause 11.3.

8 9

Section 5.8 subsection 6 of British Columbia Hydro and Power Authority's Tariff ⁹ states:

9 10 In every case of over-billing, BC Hydro will refund to the Customer all money incorrectly collected for the duration of the error, except that, if the date the error first occurred cannot be determined with reasonable certainty, the maximum refund period will be 6 years back from the date the error was discovered...

12 13

14

11

11.4 If the Commission finds that a billing error has occurred, please comment on whether FBC would be opposed to refunding the customers for the amount overbilled for the duration of the error.

15 16 17

Response:

Please refer to the response to BCUC IR 1.11.3.1.

19 20

18

21 22

11.5 Please elaborate on what is the duration of the "limitation period provide by law," and provide a detailed reference to the applicable law in your response.

232425

Response:

- The law referenced here is the Limitation Act of British Columbia ([SBC 2012] Chapter 13). A copy of the Limitation Act can be found at the following link:
- 28 http://www.bclaws.ca/civix/document/id/complete/statreg/12013 01
- The limitation period under the Limitation Act means the period after which a court proceeding must not be brought with respect to a claim. Very generally, the Limitation Act establishes a
- basic limitation period of two years for a claim from day of the discovery of the claim, 10 years
- 32 for enforcement of a civil judgment and six years for debts owed to government. These basic

_

https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tarifffilings/electric-tariff/bchydro-electric-tariff.pdf



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission)	Page 47

1 limitation periods may be suspended or extended under certain circumstances. What limitation

- 2 period is applicable or how the limitation period is applied is a fact driven inquiry.
- 3 There are no specific provisions in the Limitation Act particularly about "over-billing" a customer
- 4 in a service or financial transaction.

Response:

12 Please refer to the response to BCUC IR 1.11.5.

to over-billing.

11.5.1

11.5.2

Hypothetically, suppose there is a limitation in law. For example, if the law provides for a 2 year maximum limitation for over-billing, would it be against the law for a company to offer up to 3 years of over-billing adjustment, if a company in fact made an error for 3 years?

Also, please provide the specific details of this law, if any, with regards

Response:

As explained in the response to BCUC IR 1.11.5, the limitation period under the Limitation Act is generally two years for bringing a claim. Nothing in law prevents the Company from specifying in its tariff a period longer or shorter than the period required under the Limitation Act. However, in the FortisBC Electric Tariff provision regarding refunding of an over-billed amount to a customer, the Company uses the limitation period under the Limitation Period as a reference to allow the Company to appropriately charge a customer the amount owing for services rendered, without undue administrative burden to the utility, while still providing the customers the same right as they have legally if they pursue a court action.

It is also not illegal for the Company to negotiate a period for the refund that is shorter or longer than the limitation period to settle a dispute, if warranted.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 48

11.5.3 Please confirm, or otherwise explain, that BC Hydro does not have a clause on "limitation period provided by law" in BC Hydro's Tariff with regards to resolving over-billing errors.

Response:

FBC notes that in the current pending BC Hydro Rate Design Application, BC Hydro has proposed the following in section 5.7.6 [Back-Billing]:

In every case of over-billing, BC Hydro will refund to the Customer all money incorrectly collected for the duration of the error, except that if the date the error first occurred cannot be determined with reasonable certainty, the maximum refund period will be <u>two years</u> back from the date the error was discovered. Interest will be paid to the Customer at a rate equal to BC Hydro's weighted average cost of debt, calculated for BC Hydro's most recent fiscal year. [Emphasis added]¹⁰

This change, in FBC's view, is to be consistent with the limitation period under the current Limitation Act.

11.5.4 Please comment on whether FBC is opposed to removing the wording "subject to the applicable limitation period provide by law" from the FBC Electric Tariff.

Response:

FBC opposes the removal of the wording "subject to the applicable limitation period provided by law" as suggested by the question. The limitation period provided by the Limitation Act provides a practical duration for remedying an error resulting in over-billing, consistent with a customer's right if the customer decides to pursue a legal action in court. This will encourage customers to review billings and bring any anomaly to the company's attention, within a reasonable time, without undue administrative burden to the Company. Please also see the response to BCUC IR 1.11.5.2.

Moreover, the limitation periods under the Limitation Act tend to reflect the legislature's latest balancing of policy objectives – needing to bring disputes to closure, ensuring that evidence exists on the basis of which to pursue/defend disputes, and allowing involved entities to plan/know when they can safely destroy documents. Two years is what the legislature now generally believes is a reasonable duration. Even apart from the fact that two years is found in

 $^{^{\}rm 10}$ BC Hydro Rate Design Application, Exhibit B-1-1.



FortisBC Inc. (FBC or the Company) Net Metering (NM) Program Tariff Update Application (the Application)	Submission Date: July 6, 2016
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 49

- 1 the Limitation Act and thus has statutory force, the two year period has good policy reasons
- 2 behind it and is practical.

