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October 26, 2022

British Columbia Utilities Commission Suite 410, 900 Howe Street Vancouver, B.C. V6Z 2N3

Attention: Ms. Sara Hardgrave, Acting Commission Secretary

Dear Ms. Hardgrave:

Re: FortisBC Inc. (FBC)

Application for Approval of a Large Commercial Interruptible Rate (Application) Response to the British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1

On July 6, 2022, FBC filed the Application referenced above. In accordance with the regulatory timetable established in BCUC Order G-226-22 for the review of the Application, FBC respectfully submits the attached response to BCUC IR No. 1.

For convenience and efficiency, if FBC has provided an internet address for referenced reports instead of attaching the documents to its IR responses, FBC intends for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 1

1	Table	e of Con	ntents Page No.
2	Α.	RATIO	ONALE FOR NEW INTERRUPTIBLE RATES 1
3	В.	LARG	BE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN
4	C.	CLEA	N MARKET ADDER
5	D.	TRAN	ISMISSION CHARGES44
6	E.	ECON	OMIC JUSTIFICATION62
7	F.	IMPLI	EMENTATION74
8 9	G.	CONT	RACT FOR INTERRUPTIBLE SERVICE97
10	Α.	RATIO	ONALE FOR NEW INTERRUPTIBLE RATES
11	1.0	Refer	ence: RATIONALE FOR NEW INTERRUPTIBLE RATES
12			Exhibit B-1 (Application), Section 2.1, p. 3
13			Customer Capacity Requests
14		On pa	ge 3 of the Application, FortisBC Inc. (FBC) states:
15 16 17 18 19			Since October 2017, FBC has received numerous large capacity requests for data centres (e.g., cryptocurrency mining), cannabis production, new municipal projects, large customer developments, and forestry-related load throughout the FBC service territory. These requests have ranged from 1 Megawatt (MW) to 100 MW. []
20 21 22 23 24 25		1.1	Please provide further details regarding each of the "numerous large capacity requests" received by FBC since October 2017 in a table format, including the number of requests, each request's industry, size (MW), and whether these requests are from existing Rate Schedule (RS) 30 or RS 31 customers or new prospective FBC customers.
26	<u>Resp</u>	onse:	
27 28	The for reque	ollowing	tables represent the best information available to FBC and may not include some were made prior to FBC tracking the requests in a more formal fashion. Requests

have been included regardless of their current implementation status (e.g. discontinued, inprogress, complete).

In total, FBC has received approximately 1900 MW in load requests from large commercial and
 industrial customers over the past five years.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 2

Table 1: Load Request Details

Request	Request Received	Industry	Requested Load	Existing or New Customer	Anticipated Rate Schedule	Region ¹
1	2017	Horticulture	10-50 MW	New	RS 31	Okanagan
2	2017	Horticulture	1-5 MW	New	RS 30	Okanagan
3	2018	Crypto / Data Centre	50+ MW	New	RS 31	Boundary
4	2018	Renewable Gas	10-50 MW	New	RS 31	West Kootenay
5	2018	Horticulture	5-10 MW	New	RS 30	Boundary
6	2018	Horticulture	1-5 MW	New	RS 31	Similkameen
7	2018	Horticulture	1-5 MW	New	RS 30	Okanagan
8	2019	Horticulture	5-10 MW	New	RS 30	Okanagan
9	2019	Horticulture	5-10 MW	New	RS 31	Okanagan
10	2019	Horticulture	1-5 MW	Existing	RS 30	Kootenay
11	2019	Horticulture	1-5 MW	New	RS 30	Similkameen
12	2019	Horticulture	1-5 MW	New	RS 30	West Kootenay
13	2020	Crypto / Data Centre	10-50 MW	New	RS 31	West Kootenay
14	2021	Renewable Gas	50+ MW	New	RS 31	West Kootenay
15	2021	Crypto / Data Centre	50+ MW	New	RS 31	TBD
16	2021	Crypto / Data Centre	50+ MW	Existing	RS 31	TBD
17	2021	Crypto / Data Centre	50+ MW	Existing	RS 31	Okanagan
18	2021	Crypto / Data Centre	10-50 MW	New	RS 31	TBD
19	2021	Other	5-10 MW	New	RS 31	Okanagan
20	2021	Crypto / Data Centre	5-10 MW	New	RS 31	West Kootenay
21	2021	Other	5-10 MW	Existing	RS 31	West Kootenay
22	2021	Solar	5-10 MW	New	RS 31	Okanagan
23	2021	Crypto / Data Centre	1-5 MW	New	RS 30	West Kootenay
24	2021	Horticulture	1-5 MW	New	RS 30	Okanagan
25	2022	Crypto / Data Centre	50+ MW	New	RS 31	TBD
26	2022	Crypto / Data Centre	50+ MW	New	RS 31	Okanagan

¹ TBD means To be determined – Customer request was not location specific.

FORTIS BC^{**}

FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 3

Request	Request Received	Industry	Requested Load	Existing or New Customer	Anticipated Rate Schedule	Region ¹
27	2022	Crypto / Data Centre	50+ MW	New	RS 31	Similkameen
28	2022	Crypto / Data Centre	50+ MW	New	RS 31	Okanagan
29	2022	Crypto / Data Centre	50+ MW	New	RS 31	Okanagan
30	2022	Crypto / Data Centre	50+ MW	New	RS 31	Similkameen
31	2022	Crypto / Data Centre	50+ MW	New	RS 31	Similkameen
32	2022	Crypto / Data Centre	50+ MW	New	RS 31	Boundary
33	2022	Crypto / Data Centre	10-50 MW	Existing	RS 31	Similkameen
34	2022	Crypto / Data Centre	10-50 MW	New	RS 31	Okanagan Valley
35	2022	Crypto / Data Centre	10-50 MW	Existing	RS 31	TBD
36	2022	Mining	10-50 MW	New	RS 31	West Kootenay
37	2022	Crypto / Data Centre	1-5 MW	New	RS 30	TBD
38	2022	EV Charging	1-5 MW	Existing	RS 30	Okanagan
39	2022	Crypto / Data Centre	1-5 MW	Existing	RS 30	Okanagan
40	2022	Crypto / Data Centre	1-5 MW	Existing	RS 30	TBD
41	2022	Crypto / Data Centre	1-5 MW	Existing	RS 30	Okanagan
42	2022	Solar	1-5 MW	New	RS 30	Similkameen

1

 Table 2: Summary of Load Requests by Category

Category	Metric	# of Requests	Requested Load (MW)
Request Received	2017	2	20
	2018	5	80
	2019	5	20
	2020	1	10
	2021	11	600
	2022	18	1160
Industry	Crypto / Data Centre	23	1550
	EV Charging	1	5
	Horticulture	11	50



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 4

Category	Metric	# of Requests	Requested Load (MW)
	Mining	1	10
	Other	2	10
	Renewable Gas	2	270
	Solar	2	5
Requested Load	1-5 MW	14	40
	5-10 MW	7	40
	10-50 MW	8	150
	50+ MW	13	1670
Existing or New Customer	Existing	10	190
	New	32	1710
Anticipated Rate Schedule	RS 30	15	50
	RS 31	27	1850
Region	Boundary	3	120
	Kootenay	1	5
	Okanagan	16	540
	Similkameen	7	340
	TBD	7	600
	West Kootenay	8	300



1	2.0 Ref	erence:	RATIONALE FOR NEW INTERRUPTIBLE RATES
2 3			Exhibit B-1, Section 2.2, p. 4; Exhibit B-2 (Supplemental Information), p. 3
4			Increase System Load Factor
5	On	page 4 of	the Application, FBC states:
6 7		Interru syster	uptible service will lead to an increase in the load factor on the overall FBC n in two ways:
8		1. By	adding new non-firm load that would otherwise be unable to connect; and
9 10		2. By fir	v customer request, converting some or all of their existing firm load to non- m and thereby allowing additional firm load to connect to the FBC system.
11 12 13		Each cost c situati	of these scenarios would potentially provide incremental revenue without the f additional infrastructure that would otherwise be needed to support it. This on provides rate mitigation for all customers.
14	On	page 3 of	the Supplemental Information, FBC states:
15 16 17 18 19 20 21		With r energ with F planni longe capac Comn	egard to energy and capacity planning, FBC expects to include the expected y and capacity costs associated with RS 38, as well as revenue associated RS 38, in its ongoing revenue requirement forecasts. However, FBC is not ing to include consideration of the energy and capacity in its medium to r term resource planning process as the intent is to acquire the energy and ity on a short-term basis and flow through the market cost to the LCIR [Large hercial Interruptible Rate] Customer.
22 23 24 25	2.1	Pleas assoc three	e provide FBC's expected energy costs, capacity costs, and revenue iated with RS 38 to be included in revenue requirement forecasts for the next years. Please explain all assumptions.
26	<u>Response</u>	<u>:</u>	
27 28 29	At this poir and therefor forecasts.	nt in time, ore has no	FBC has not made assumptions about the expected take-up rate for RS 38 ot included any forecast for costs and revenue in the revenue requirement
30 31			
32 33 34 35	2.2	Pleas its res etc.).	e explain how FBC will account for load associated with RS 38 when planning sources (e.g. in its Annual Electric Contracting Plan, making nominations,



Please explain why there are no impacts associated with RS 38 that are

considered in FBC's medium to longer term resource planning process.

1 Response:

2 FBC does not expect to include RS 38 load in the electric supply planning process as FBC expects 3 to purchase the supply to meet LCIR load on a day-ahead basis. However, FBC reserves the right 4 to manage RS 38 load such that short term power rather than day ahead power may be purchased 5 from time to time. However, as the RS 38 rate is based on day-ahead power, purchasing power 6 on any other basis than day-ahead creates risk of a mismatch between the price paid by FBC and 7 the RS 38 revenue received. An example of where it would make sense to purchase on a short-8 term basis is if a block of negative priced power were to become available. In this case, there is 9 little to no risk since the Mid-C price component of the RS 38 rate will not go below \$0.00/MWh 10 as explained in Section 3.2.1.2, Energy Charge. 11 12 13

15 16

14

17 <u>Response:</u>

2.2.1

There are no impacts to FBC's medium to longer term resource planning process as this is a market based interruptible rate. As such, it is appropriate that market supply or other short-term resources provide the required power and therefore no further resource planning process is required. In addition, since it is an interruptible rate, there is no need to plan for additional system capacity.

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- 25

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26 2.3 Please discuss how FBC's resources could be used to the benefit of other 27 customers if the energy is not used to serve RS 38 customers during periods of 28 higher Mid-C prices (e.g. the use of cheaper embedded cost power to supply other 29 customers, buying less volume of expensive market energy in its resource stack, 30 take advantage of high market energy prices by selling resources on the market, 31 etc.).

33 **Response:**

FBC expects to optimize the power supply portfolio considering the RS 38 load. FBC may choose to use FBC resources to meet the RS 38 load if that is the best option or FBC may choose to purchase market energy to meet the RS 38 load. When the latter occurs, the FBC energy resources remain available to meet load at a later time. On a capacity basis, additional surplus capacity sales might be possible, or if all FBC capacity is being used to meet load, then the portion of market costs used to meet RS 38 loads will be recovered from the RS 38 Customer rather than



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 7

from all customers as would otherwise be the case. This also has the potential to result in 1 2 significant savings to all non-RS 38 Customers.

- 5 6 2.4 Please explain how FBC intends to replace the existing firm load of RS 30 and RS 7 31 customers that would be converted to non-firm load under RS 38. If the strategy 8 varies depending on how much load has been transferred from RS 30 and RS 31 9 to RS 38, please elaborate.
- 10

3 4

11 **Response:**

12 Where a Customer has moved some or all of its load currently served on a firm basis to RS 38. 13 capacity on the system can be made available to either an existing Customer that wishes to 14 increase its load, or for a new Customer to connect where capacity constraints may have been a 15 limiting factor. Load requests that cannot be accommodated currently are not always specific to 16 location, so FBC can provide information to prospective Customers about the locations on the 17 system where capacity is available. If by "strategy", the question is inquiring as to whether FBC 18 will proactively seek out Customers to infill available capacity, this has not been contemplated 19 and therefore the amount of load transferred will not affect FBC's approach to meeting new load 20 requests. FBC is receiving ample interest from prospective large commercial customers such 21 that seeking out new load is not expected to be necessary.

- 22
- 23

24

25 26

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- 2.4.1 Please explain how much existing firm load of RS 30 and RS 31 customers, respectively, in aggregate, represents in megavolt-amperes (MVA) and in megawatts (MW), respectively.
- 28

29 Response:

30 The sum of the average monthly peak load recorded in the billing system for RS 30 and RS 31

31 Customers for 2021 was approximately 88 MVA. FBC has sourced this information from billing

32 records which only record MVA values.



1 3.0 Reference: RATIONALE FOR NEW INTERRUPTIBLE RATES

2 3

4

5

Exhibit B-1, Section 2.3, p. 4, Section 3.1, p. 8, Section 3.2, p. 9, Section 4.2, p. 15

Cost Savings and Bridge to Firm Rates

- On page 4 of the Application FBC states:
- 6 However, interruptible rates may provide an interim step that allows customers to 7 connect to the utility system in the short term, with the goal of taking firm service 8 in the future once required upgrades have been completed. This opportunity for 9 interruptible service reflects the avoidance of the long lead time due to the 10 necessary capital planning and construction activities required to add significant 11 capacity to the existing FBC system.
- 12 On page 8 of the Application, FBC states: "All costs associated with interconnection of 13 load that will be taken under the LCIR are the responsibility of the customer."
- 14 On page 9 of the Application, FBC states that it acknowledges that in situations where a 15 customer has one point of interconnection (POI) with FBC but has its total load split and 16 separately metered downstream of the POI such that a portion is served under the LCIR, 17 and a portion is served under another rate schedule, there will be some work associated 18 with additional meter reading and billing elements.
- On page 15 of the Application, FBC states: "[...] participating customers may have to make
 a significant capital investment in order to install the facilities required to meet the rate
 requirements."
- 3.1 Please discuss all incremental requirements (such as capital investment, interconnection requirements, upgrades) and their associated costs in the event that an RS 38 customer decides to transition to receive firm service in the future to (i) the RS 38 customer and (ii) to FBC.

27 **Response:**

26

28 In order for a Customer that is taking service on a non-firm, interruptible basis pursuant to RS 38 29 to transition to service under either RS 30 or RS 31, the infrastructure serving the Customer would 30 need to be sufficient to meet the N-1 planning criteria. Such a Customer would be in the same 31 situation as any existing or new Customer that was adding a large commercial load to the FBC 32 system except that direct interconnection and metering facilities would already be in place. Any 33 capital investment already made by the Customer (with the exception of costs related to splitting 34 load between firm and non-firm service) would be required to interconnect regardless of the nature 35 of the service requested. The Customer would be required to follow the Interconnection Request 36 process, commission a System Impact and Facilities study, and fund any required system 37 reinforcement. The key point here is that any large commercial customer, whether new or existing, would face similar costs to take firm service if connecting a similar load in substantially 38 39 similar circumstances.



1 2		
3 4 5 6 7 8	3.2 Response:	Please discuss any impact on existing capital investment and assets in the event that an RS 38 customer decides to transition to receive firm service (i) for the RS 38 customer and (ii) for FBC.
9	Please refer t	o the response to BCUC IR1 3.1.
10 11		
12 13 14 15 16 17	3.3	Please compare the upgrades and investments required by new customers to receive interruptible service under RS 38 versus those required in order to receive firm service under RS 30 and RS 31 and highlight any differences and quantify the estimated differences in cost.
18	Response:	
19 20 21 22	RS 38 Custor those require without addition interruptible n	ners are not required to make investments for upgrades or infrastructure other than d for the interconnection and communication with FBC. The ability to take service onal investment normally required to meet the N-1 criterion is a basic reason for the pature of the rate.
23 24 25	A Customer infrastructure be maintained	requesting firm service under RS 30 or RS 31 would be required to fund any additions or upgrades necessary to ensure that service under the N-1 criterion could d.
26 27 28 29	As discussed there may be because the in not normally b	in the response to the Supplemental Information request (Exhibit B-2) question 4, incremental costs for a Customer that would normally take service under RS 30 nfrastructure required to facilitate communication and remote interconnection would be present.
30 31	The cost of in for firm servic	frastructure additions or reinforcement for connecting a large commercial Customer e, where such work is required, will vary widely with the situation.
32 33		
34 35 36 37 38	3.4	Please provide a table laying out the breakdown of items involved in the required up-front capital investments and ongoing maintenance and inspection costs (including, but not limited to, any interconnection costs; capital investment; required system additions and/or reinforcement consistent with a new customer



connecting and taking service under RS 30 and RS 31; any costs associated with
additional metering and associated hardware for which the customer is
responsible; and any ongoing costs related to the inspection and maintenance of
the incremental facilities) for (i) a prospective customer to RS 38; (ii) an existing
RS 30 customer taking service under RS 38; and (iii) an existing RS 31 customer
taking service under RS 38. Please include a discussion and quantification of each
item within the breakdown.

8

9 Response:

10 The up-front capital, ongoing maintenance, and inspection costs will vary depending on the size 11 and location of the Customer's request.

Requirements specific to prospective and existing RS 30 and RS 31 Customers undertaking RS
38 service are summarized below:

- 14 (i) Prospective RS 30 and RS 31 taking RS 38 service
- For both RS 30 and RS 31, Customers will be required to install all necessary equipment
 (i.e., communications, relays, disconnecting equipment, etc.) to facilitate remote
 interruption by FBC.
- RS 31 Customers will also be required to build a customer-owned substation and transmission line extension to their location. The equipment described above would be included in the customer-owned substation.
- All costs associated with taking load under the LCIR are the responsibility of the Customer including up-front capital, inspection, and maintenance costs.
- 23 (ii) RS 30 existing taking RS 38 service
- There would likely be incremental costs for existing RS 30 Customers switching to the RS 38 rate as there is not typically a requirement for RS 30 Customers to install all necessary equipment to facilitate remote interruption by FBC. This equipment would be installed downstream of the primary meter and would be the responsibility of the Customer to inspect and maintain.
- All costs associated with taking load under the LCIR are the responsibility of the Customer
 including up-front capital, inspection, and maintenance costs.
- 31 (iii) RS 31 existing taking RS 38 service

 There would likely be low incremental costs for existing RS 31 Customers switching to the RS 38 rate as there is already a requirement to install all necessary equipment to facilitate remote interruption. Upgrades to this equipment may be required as determined by FBC.
 This equipment resides in the customer-owned substation and is the responsibility of the Customer to inspect and maintain.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 11

- All costs associated with taking load under the LCIR are the responsibility of the Customer including up-front capital, inspection, and maintenance costs.
- 3.5 Please confirm that FBC will not incur any costs as described in response to the preceding IR.
 - 3.5.1 If not confirmed, please provide a breakdown of all required costs, and explain how these costs will be recovered. If the cost will be recovered under RS 38 in full or in part, please elaborate on which rate component(s) these costs are being recovered under and by how much.
- **Response:**
- 14 Confirmed.

- 183.6Please discuss any costs to FBC to maintain RS 38 if no customer takes up RS 3819and include a brief description and estimate of each cost.

Response:

If the LCIR is approved for addition to the FBC Electric Tariff, but no Customers elect to take service under the rate, FBC does not anticipate that any costs will be incurred to maintain RS 38. FBC has a number of rate schedules available that have no current participants and no costs are associated with continuing to offer the rates as options.

- 293.7Please discuss how FBC plans to ensure customers are fully informed of the30required capital investment and associated costs given their specific31characteristics (i.e. location, industry) such that they would be able to make an32informed decision on whether to uptake RS 38 or not.

Response:

Customers cannot interconnect to the FBC system without following the established Industrial Interconnection process, which includes a requirement for system studies and the completion of an estimate of interconnection costs. Work required on the customer side of the interconnection is the responsibility of the Customer and it would also be standard practice for a Customer to



develop estimates for this portion of the work. FBC does not believe that a Customer can
 interconnect without being fully informed about the cost of doing so.

- 5
 6 3.8 Please provide the anticipated timing of the system upgrades required to accommodate "firm service in the future once required upgrades have been completed" and explain whether these anticipated upgrades are included in FBC's most recent capital plan and long-term resource plan.
- 103.8.1If it is not possible to provide the anticipated timing of these system11upgrades, please discuss the condition under which these upgrades12would be required.

14 <u>Response:</u>

The system upgrades noted in the preamble are those specific to the Customer request. Depending on the size and location of a Customer's request, additional system upgrades that have not been identified in FBC's most recent capital plan and long-term resource plan may be required. These upgrades may drive the need for reconductoring lines or upgrading substations to increase capacity and accommodate the new request. These system upgrade projects can take several years to complete from the planning stage to the final in-service date.

21



3

1 4.0 Reference: RATIONALE FOR NEW INTERRUPTIBLE RATES

Exhibit B-1, Section 1.3, p. 2

Approval Request

4 On page 2 of the Application FBC states:

5 FBC seeks an order approving, on a permanent basis, the LCIR as shown in RS 6 38 - Large Commercial Interruptible Service contained in Appendix A of this 7 Application, to be effective at least 30 days from the date of the order.

- 8 4.1 Please provide reasoning or justification as to why FBC seeks approval for the 9 LCIR "to be effective at least 30 days from the date of the order." Please also 10 include a discussion on timing regarding the in-service date of RS 38 from an 11 operational perspective, communication lead time with prospective customers, and 12 administrative and implementation requirements.
- 13

14 **Response:**

While it will likely take longer than 30 days to get any Customer operational under the rate, FBC does not want the rate to be effective as of the date of a final BCUC order approving the rate since there will be internal activities required to prepare process prior to the rate becoming effective. FBC will require some time to familiarize staff involved with administering the service and those responsible for key accounts with the new service offering.

and those responsible for key accounts with the new service offering.

FBC expects that for any new Customer wishing to take service under RS 38 there may be a significant lead time required from an operational point of view in some circumstances. The required lead time will be highly dependent on what equipment may have to be installed to facilitate a Customer taking service under RS 38. This will be more complex if the Customer desires only a portion of their load to be on RS 38 as this will likely require equipment to be installed on the Customer's premises that can be operated by the utility.

26 FBC expects that from a power supply or administrative point of view a much shorter time frame

is required and 30 days should be sufficient time to work out the administrative requirements as

- 28 well as to arrange for power supply.
- 29



1	В.	LARG	E COM	MERCIAL INDUSTRIAL RATE – RATE DESIGN
2	5.0	Refere	ence:	LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN
3				Exhibit B-1, Section 3.1, p. 7
4				Rate Design Elements – Key Features
5		On pag	ge 7 of	the Application, FBC states:
6 7 8 9 10			Not all This is inform that an custon	of the key aspects relevant to the LCIR will appear in the RS 38 tariff pages. because the interruptible rate program leverages existing processes and ation contained in pre-existing standards and business practice documents re available on the FBC website and that will be discussed with potential ners in advance of and during the application process. []
11 12 13 14	_	5.1	Please docum provide	e provide a copy of all pre-existing standards and business practice ients that are available on the FBC website that are applicable to RS 38 and e a reference to the source of those documents.
15	Respo	onse:		
16 17 18 19	Deper Interco existin below.	nding on onnectic ng stand	n the siz on Requ lards ar	e and voltage level of the request, Customers will either need to follow the uest process or the New Connect process. The links to the various pre- nd business practice documents related to these processes are provided
20	•	Interco	onnectio	on Request Process:
21 22 23		0	The fo transm greate	Ilowing link is to the FBC webpage which provides the information for all ission voltage customers and distribution voltage customers requiring r than 5,000 KW: Industrial electricity interconnection (fortisbc.com)
24 25		0	Additic links a	nal Transmission and interconnection resources on the webpage with their re as follows:
26			-	Interconnection request form
27			•	Facility connection flowchart
28			•	Facility connection requirements
29	•	New C	connect	Process:
30 31 32 33		0	The fo connect <u>https://</u> electric	llowing link is to the FBC webpage which provides the information for all new ction distribution voltage customers requiring less than 5,000 kW: www.fortisbc.com/services/electricity-services/request-or-change-your-city-service
34 35		0	The wo	ebpage provides information and the following additional links to forms and ces as follows:
36			•	online request form
37			•	service request form.

		FortisBC Inc. (FBC or the Company) Submission Date: Application for Approval of a Large Commercial Interruptible Rate (Application) October 26, 2022				
FOr	AT 15 BC	Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1				
1		-	electrical design process here.			
2		•	FortisBC's Electric Tariff			
3		-	Specification for installation of underground conduit system	<u>15</u>		
4		-	Service and Metering Guide			
5						
6						
7						
8		5.1.1	Please list what other rate schedules to which the referen	ced documents		
9 10			above are also applicable.			
11	Response:					
12	The applica	bility of the	e Interconnection Request process is dependent on circu	mstance rather		
13	than rate s	chedule.	As noted on the Industrial Electricity Interconnection port	ion of the FBC		
14	website, ² th	ese are cir	cumstances such as those that:			
15	• requ	iire a conne	ected load of 5,000 kW or more;			
16	• have	e one or mo	ore large pieces of equipment in your facility at or over 2,00	10 hp;		
17 18	 build to F 	d, own, ope ortisBC's tr	erate and maintain an electrical substation and transmission ansmission system; and	line connected		
19	• requ	iire a uniqu	e or specialized distribution system connection.			
20 21 22	While it is c large comm class other	onceivable lercial, FBC than Large	that some form of service under the fourth bullet above could has not encountered a situation where the documents apperts commercial.	ld be other than blied to any rate		
23 24						
25 26 27 28		5.1.2	Please explain how these documents are applicable to the the rate schedules listed above.	ooth RS 38 and		
29	Response:					
30 31 32	As noted in circumstand 31, and RS	the respon the that are 38 Custom	nse to BCUC IR1 5.1.1, the documents are applicable to a e inclusive of the types of industrial interconnections that ty ners.	several specific /pify RS 30, RS		

² <u>https://www.fortisbc.com/services/commercial-industrial-services/industrial-electricity-interconnection</u>

FORTIS BC^{*}

1 6.0 Reference: LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN

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Exhibit B-1, Section 6, p. 21, Appendix C - Consultation Materials, "LCIR Consultation Q&A July - Final"

Cost Recovery

5 On page 21 of the Application, FBC states that it considers "the LCIR rate design and 6 associated terms and conditions will: ... (iii) make a contribution to fixed costs."

On page 3 of the "LCIR Consultation Q&A July - Final" document in Appendix C to the
Application, FBC states, "as a market-based rate the LCIR does not rely on the historical
costs embedded in the [cost of service allocation] COSA except for the elements of
transmission service referenced in the LCIR rate."

6.1 Please discuss all components of the LCIR which rely on the historical costs
embedded in the COSA, including a brief description and how such components
rely on the COSA.

15 **Response:**

16 The referenced statement refers to the System Loss Rate (Rate Schedule 109) that is a 17 component of the LCIR Energy Charge. Loss compensation is required for all transactions 18 involving firm and non-firm point-to-point transmission service. The current RS 109 assesses 19 power losses as follows:

- Transmission Connected Service 2.86 percent; and
- Distribution Connected Service 4.26 percent.

The rates for RS 109 were revised and received BCUC approval as part of the 2017 Cost of Service Analysis and Rate Design Application.

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6.2 Please explain in detail, with reference to each component of the proposed rate
(e.g. Customer Charge and each component of the Energy Charge) how the LCIR
rate design will "provide benefits to all ratepayers by setting pricing that is sufficient
to cover any additional power purchases required to service the non-firm load."
Please support your response with reference to FBC's most recent COSA, if
applicable.

34 **Response:**

35 The referenced passage (Application, page 21, lines 15-16) is not a reference to individual rate

- 36 components or to the most recent FBC COSA. Rather, it refers to the fact that the rate, by design,
- 37 recovers from participating Customers an amount that is higher than the prevailing current market



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 17

price. And, since FBC will only rely on alternative recourses when they are lower than market,
 the same holds true when the market is not the resource used.

3 It follows that since the exchange rate-adjusted Mid-C price is the base of the rate, to which is 4 added loss compensation, the Hourly Service Adder, and potentially the Clean Market Adder, 5 revenue over and above the Mid-C price will be available to contribute to the recovery of costs 6 related to existing fixed assets to the benefit of other customers.

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- 9
- 106.3Please explain how the LCIR rate design will "make a contribution to fixed costs"11and elaborate on the conditions under which a contribution to fixed costs would12and would not occur, respectively.
- 13

14 **Response:**

Please refer to the response to BCUC IR1 6.2. As explained in that response, the LCIR will necessarily make a contribution to fixed assets on an individual customer basis. However, in the case where FBC is unable to attract firm load to infill existing load that has transitioned to RS 38, this contribution may fall short of that formerly provided by either RS 30 or RS 31 resulting in a net negative contribution.



3

1 7.0 Reference: LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN

Exhibit B-1, Section 3.2, pp. 8, 10; Exhibit B-2, p. 7

Customer charge

- 4 On page 8 of the Application, FBC states:
- 5 The Customer Charge for an Interruptible Customer is proposed to be the same 6 as contained in the rate schedule the customer would normally be eligible for. FBC 7 does not believe that for an Interruptible Customer the costs associated with 8 customer service functions such as billing or meter reading would be much 9 different, if different at all, than for other Large Commercial customers.
- Further on page 10, FBC states, "[t]he customer may nominate the Mid-C Price Cap monthly by providing FBC with the maximum Mid-C price it is willing to pay by the 20th day of the preceding month."
- 13 On page 7 of the Supplemental Information, FBC states:
- In all cases, if an LCIR Customer chooses a more complicated billing arrangement
 (for example, to facilitate a split of load between interruptible and firm service),
 there may be costs associated with additional metering and associated hardware
 for which the Customer is responsible.
- 187.1Please explain and quantify the costs of all resources required by FBC to19implement RS 38 (such as administration costs to manage a more complicated20billing arrangements for some RS 38 customers and costs to manage a customer-21specific monthly Mid-C Price Cap nomination).

23 Response:

As noted in the reference from page 8 of the Application, FBC does not believe that producing a bill for any configuration of RS 38 service or receiving the monthly nomination from participating Customers will result in any additional costs. Large Customer billing is performed by a dedicated group of employees that deal with a variety or complex billing as part of their regular work, and similarly, administration of the price cap is a relatively uncomplicated matter that will be managed by the Power Supply group as part of routine duties. Given this fact, the existing Customer Charges to which the Customer would normally be subject adequately recover these costs.

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- 347.2Please explain how the proposed Customer Charge, which is the same as the
customer charge contained in the rate schedule that the customer would normally
be eligible for under RS 30 and RS 31 as applicable, adequately recovers the costs
quantified above.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 19

- If these costs are not recovered under the Customer Charge, please 1 7.2.1 2
 - specify how these costs will be recovered.

- Please refer to the response to BCUC IR1 7.1. 5
- 6



8.0 Reference: LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN 2 Exhibit B-1, Section 3.2, p. 10; Exhibit B-2, Table 1, p. 4; RS 109 – Transmission Losses ³

3 4

Energy Charge: System Losses

5 On page 10 of the Application, FBC states that System losses are as per RS 109.

6 On page 4 of the Supplemental Information, in Table 1: RS 38 Hourly Energy Charge 7 Examples, FBC shows a "1 + Loss Rate" in column b of 1.0426 for RS 30 customers and 8 1.0286 for RS 31 customers.

- 98.1Please reconcile the system losses calculated for RS 30 and RS 31 customers in10Table 1: RS 38 Hourly Energy Charge Examples with the transmission loss rate11per RS 109 for large commercial customers.
- 12
- 13 **Response:**

14 FBC has been unable to locate a Compliance filing to Order G-40-19 dated June 26, 2019 as

15 specified in the footnote to this question, but has located a filing of this description dated April 26,

16 2019 as well as an RS 109 specific filing dated June 18, 2019. This response relies on RS 109

- 17 as it appears in the approved tariff.
- 18 It is unclear to FBC that the loss rates stated in the Application and Supplemental Information
- 19 filing require reconciliation with RS 109.
- 20 Page 10 of the Application notes that the System losses are as per RS 109.

21 Losses in Table 1 of the Supplemental Information are 4.26 percent for distribution connected

22 Customers (RS 30) and 2.86 percent for transmission connected Customers (RS 31) as shown

23 in the snip below.

12 RS 31 1.0286 0.010 0.0100	0.002	0.02263

24

25 The RS 109 loss rates from the FBC Electric Tariff are as per the excerpt below.

RATE SCHEDULE 109 - TRANSMISSION LOSSES

APPLICABLE:	All transactions under Rate Schedules 100 losses as follows:	and 101 will incur real power
	Wholesale Service - Transmission	2.86%
	Wholesale Service - Primary	4.26%
	Large Commercial Service - Transmission	2.86%

³ Compliance filing to Order G-40-19 dated June 26, 2019, FBC Electric Tariff.



1	9.0	Reference:	LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN
2			Exhibit B-1 Section 3.1 n.8 Section 3.2 nn. 10-12; Exhibit B-2 n
2 3			10
4			Energy Charge: Mid-C Price Cap
5 6 7 8		On page 8 o Hours where C Price Cap schedule, FB	f the Application, referring to "Reasons for Interruption", FBC states, "[f]or FBC reasonably expects that the Energy Charge will be based on the Mid- as described in part i) of the Energy Charge portion of the RS 38 rate C may interrupt the Customer."
9		On page 10 c	f the Application, FBC states:
10 11 12 13		[…] Ir nomin Agree such ł	h Hours in which the applicable Mid-C Price exceeds the cap, if any, ated by the Interruptible Customer pursuant to the applicable Service ment, expressed in \$/MWh (the "Mid-C Price Cap") for the month in which Hour occurs, a value equal to the Mid-C Price Cap will be used;
14		[]	
15		With r	egard to the cap on the Mid-C price that factors into the Energy Charge for
16		a part	cular customer, the Mid-C Price Cap would be nominated by the Customer
17		based	on its specific risk tolerance and operational needs. This is a departure from
18		the fir	hal discussions held with customers and intervener groups during public
19		engag	ement, where the cap was originally going to be a set number, common to
20 21		all cus	ticipants, but was dismissed due to what EBC saw as a high administrative
21		by pai	n at the time. However, upon further review, FBC now views a customer-
23		specif	ic cap as manageable and offering the most flexibility for customers to tailor
24		the LC	CIR to their specific needs. The customer may nominate the Mid-C Price Cap
25		month	ly by providing FBC with the maximum Mid-C price it is willing to pay by the
26		20th d	lay of the preceding month.
27		On page 12	of the Application, FBC states reasons why service may be interrupted,
28		including "[f]o	r Hours where FortisBC [FBC] reasonably expects that the Energy Charge
29		will be based	on the Mid-C Price Cap as described in part i) of the Energy Charge portion

- will be based on the Mid-C Price Cap as described in part i) of the Energy Charge portion
 of this rate schedule, FortisBC may interrupt the Customer." Further, on page 12, FBC
 states that it "will optimize its overall system resources and as a result, even if the market
 price is above the Mid-C Price Cap, FBC may elect to maintain supply to the LCIR
 customer at an Energy Charge that reflects the Mid-C Price Cap."
- 34 On page 10 of the Supplemental Information, FBC states:
- 35It is unlikely that whether or not FBC would interrupt the Customer would be an all36or nothing proposition as modeled, and more likely the results would fall in between37the "no" and "yes" figures for a given load and a given Cap choice. [...]



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9.1 Please explain how monthly nominated Mid-C Price Caps will be accepted or rejected by FBC. As part of the response, please discuss how FBC determines if a nominated Mid-C Price Cap is reasonable and the process for if a nominated Mid-C Price Cap is deemed unreasonable.

6 **Response:**

FBC intends to work with the Customers to arrive at a mutually agreeable Mid-C Price Cap that
will meet the objectives of both the Customer and the utility. As a result of this process, FBC does
not believe that occurrences of disagreement resulting in FBC deeming a proposed price cap to
be unreasonable will be common. From FBC's perspective, evaluation of a particular price cap
will be guided by the following points:

- How the customer-selected price cap compares to charges under the current rate
 schedule that the Customer would otherwise be eligible for and what additional credit
 concerns may exist;
- How the selected price cap compares to other RS 38 Customers' price caps. If there are many Customers and they all select a different cap, some consolidation will be required.
 FBC expects that 3 or at most 4 price points will be available for FBC to nominate power purchases; and
- The size of the Customer. Power is typically traded in 5 MW blocks. While some variance
 is acceptable, four 1 MW RS 38 Customers, all wanting a different price cap, is not
 reasonable and some compromises would be required.

Ultimately, if the Customer and FBC cannot come to an agreement, the Mid-C Price Cap may
 need to be set by the BCUC, which is a process similar to the final determination of the Stand-By
 Demand Limit that is required under RS 37, Stand-by Service.

25 26 27 28 9.2 Please confirm that in a given month, the Mid-C Price Cap nominated by each 29 customer could differ, for example, one RS 38 customer could nominate a \$35 30 USD Mid-C Price Cap and another RS 38 customer could nominate a \$50 USD 31 Mid-C Price Cap. If not confirmed, please explain. 32 9.2.1 If confirmed, please also confirm, or explain otherwise, that for any given Mid-C market price, customers with a Mid-C Price Cap lower than the 33 34 current market price could face service interruption or receive service 35 priced at the Mid-C Price Cap, while customers with a Mid-C Price Cap

at the market price, all else being equal.

above the current Mid-C market price will receive service uninterrupted

37 38



- 2 Confirmed in both cases.
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 9.2.1.1 Please explain how the customer-specific nomination process ensures fairness amongst different RS 38 customers, given some customers will be receiving energy at the Mid-C Price Cap while others are paying the current Mid-C market price.

11 Response:

FBC considers that the principle of fairness is satisfied by providing all RS 38 Customers the opportunity to set a maximum price for energy that reflects their individual circumstances including economic factors and level of risk tolerance.

15 In the relatively rare event that FBC elects to maintain service even though the Customer A-16 selected price cap is below the market price, Customer A was taking a very large risk that power 17 would not be available to them at that price point. Customer B, who selected a higher price cap 18 that was above the market price, would be taking much less risk of interruption due to lack of 19 supply.

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239.3Please confirm, or explain otherwise, in the scenario where the Mid-C Price24exceeds the cap and "a value equal to the Mid-C Price Cap will be used", FBC is25providing the customer with power at a rate that is lower than the current Mid-C26price.

28 **Response:**

FBC confirms that as stated in the preamble, even if the market price is above the Mid-C Price
Cap, FBC may elect to maintain supply to the LCIR Customer at an Energy Charge that reflects
the Mid-C Price Cap.

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9.3.1 If confirmed, please explain how FBC will recover the cost difference. As part of the response, please discuss any impact to other FBC customers arising from potential cross-subsidisation.



The case where FBC maintains service to a Customer when the Mid-C price exceeds that Customer's nominated Mid-C Price Cap occurs only where FBC has alternate resources available that it can use to supply the Customer and those resources are priced below the Customer's Mid-C Price Cap. In this case, since FBC is still basing the Energy Charge on the Mid-C Price Cap, there is no cost difference to be recovered and no potential for cross subsidization.

A practical example of where this could occur is towards the end of the Canal Plant Agreement
(CPA) summer storage season on July 31st. If FBC anticipates that it will have a surplus of energy
in storage that will have to be spilled⁴ but at the same time has surplus capacity, then
operationally, it is very likely that FBC will not buy the power from the market to meet RS 38 load
but will use as much stored energy as possible as it would otherwise be lost.

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9.4 Please explain in detail how "FBC will optimize its overall system resources" and
be able to maintain supply to the RS 38 customer at an Energy Charge that reflects
the Mid-C Price Cap.

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19 Response:

Please refer to the response to BCUC IR1 9.3.1 for an example of an operational situation where the best decision is to store cheap energy in the hope it can be sold to a RS 38 Customer at a later time. In general, anytime FBC has surplus capacity resources, it may be possible to use stored energy to meet RS 38 load. FBC's contracts and operations are complex and if this is advantageous or not will all depend on the exact details of the situation at the time.

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27		
28	9.4.1	Please provide (i) the average cost of FBC's system resources and (ii)
29		FBC's incremental power supply cost and explain the value of the Mid-C
30		Price Cap at which power supplied at the Mid-C Price Cap using FBC
31		system resources would result in cost under-recovery and cross-
32		subsidization from other ratepayers to RS 38 customers.
33		

⁴ Note that no actual spill takes place. It is a virtual spill under the terms of the CPA. In effect, FBC gives the energy to BC Hydro at no cost. This situation may arise in any year in which May to June energy is very low priced. In this circumstance, FBC will attempt to over buy energy to cover the possibility that July loads may be over plan plus obtain cheap energy to meet future RS 38 load. If the energy turns out not to be needed, then it is spilled at no or very minimal loss. If this energy can instead be sold to a RS 38 Customer, it is potentially a large gain for all other Customers.



The average cost of FBC's system resources is not relevant to determine how RS 38 Customers will be supplied. Rather, it is FBC's incremental cost that must be considered. However, actual power supply operations are complex and FBC incremental cost can vary substantially from day to day.

6 There is no value of the Mid-C Price Cap at which power supplied at the Mid-C Price Cap using 7 FBC system resources would result in cost under-recovery and cross-subsidization from other 8 ratepayers to RS 38 Customers. If the Mid-C Price Cap is set at a level where supplying power 9 from system resources (or any resource that was the lower cost at the time) resulted in under-10 recovery, then the Customer would be interrupted.

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- Please explain the factors which have contributed to the change in FBC's view
 regarding a customer-specific cap from being "a high administrative burden at the
 time" of the public engagement sessions to the view that a customer-specific cap
 is "manageable."
- 18

19 Response:

The FBC change in view in regard to customer-specific caps being "manageable" came about as a result of conversations with Powerex under the CEPSA agreement as to how this could be managed.

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9.6 Please discuss any communication and assistance FBC intends to provide to
 prospective RS 38 customers with the monthly nomination process for a Mid-C
 Price Cap, if required.

30 **Response:**

Potential RS 38 Customers either are, or will be, large commercial Customers with a FBC Key Account Manager and direct contact with the System Control Centre. FBC has committed to provide prospective Customers with historical outage information for particular locations, as well as information regarding historical and forecast Mid-C price levels. The Mid-C Price Cap ultimately nominated by the Customer will presumably include these considerations as well as business particulars and priorities that are specific to the individual Customer.

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9.7 Please clarify whether FBC proposes to be able to interrupt a customer for hours where the Day-Ahead Mid-C Index is equivalent to the customer-nominated Mid-C Price Cap. If yes, please explain whether this is specified in the draft RS 38 tariff.

5 6 <u>Response:</u>

7 As stated in the Application under Section 3.2.1.2, FBC will cap the charges at the Mid-C Price

8 Cap. Therefore, interruption will only occur if the market price was above the Mid-C Price Cap. If

9 the market price is equal to the Mid-C Price Cap, no interruption is expected. This is consistent

10 with the draft RS 38 tariff.



1 10.0 Reference: LARGE COMMERCIAL INDUSTRIAL RATE – RATE DESIGN

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Exhibit B-1, Section 3.2, p. 9; Appendix C – Consultation Materials, "LCIR Consultation Q&A Aug – Final", "LCIR Feb 2022 Final"; Exhibit B-2, pp. 8––9

4 5

Energy Charge: Mid-C Price Cap – Sample

6 On page 9 of the Application, FBC explains that the energy charge is based on actual 7 energy flows in the On-peak and Off-peak hours multiplied by the On-peak and Off-peak 8 day ahead index prices, the Intercontinental Exchange (ICE) Day Ahead Mid-Columbia 9 Peak Index and the Day Ahead Mid-Columbia Off-Peak Index, respectively.

- 10 On page 2 of the "LCIR Consultation Q&A Aug Final" document in Appendix C to the 11 Application, FBC states: "No, the \$75/MWh price (which is a placeholder at the current 12 time) was derived from the RS 31 rate at the prescribed minimum load factor."
- On page 8 of the "LCIR Feb 2022 Final" document in Appendix C to the Application, FBC
 states, "Energy Rate will be based on the Mid-C rate, capped at \$75 CDN."
- 15 On pages 8 and 9 of the Supplemental Information, FBC provides two tables:
- Table 3-1 is produced from hourly Mid-C pricing for the month of March 2022
 consistent with the month used in the example in Section 3.3 of the Application (reproduced in part below).
- Table 3-2 is produced from hourly Mid-C pricing for the month of July 2022 where
 hourly pricing tended to be higher than in March.

Table 3-1: March 2022 Results									
	Load Switched to RS 38 (kVA)	Mid-C Price Cap (USD)	Interrupted?	Hours of Interruption	RS 38 Revenue (\$)	RS 31 Revenue (\$)	Monthly RS 38 Margin (\$)	Monthly RS 31 Margin (\$)	Margin Variance (\$)
	5,000	50	No	0	199,309	254,466	42,742	97,908	55,166
	5,000	40	No	0	199,309	254,466	42,742	97,908	55,166
	5,000	35	No	0	199,309	254,466	42,742	97,908	55,166

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10.1 Please provide the historical average monthly Day Ahead Mid-Columbia Peak Index and Day Ahead Mid-Columbia Off-Peak Index prices for the past three years.

- 25 **Response:**
- 26 Please refer to the following table for the average monthly Day Ahead Mid-C Peak Index and Day
- 27 Ahead Mid-C Off-Peak index prices for the past three years.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 28

	Mid-C Average		Mid-	Mid-C Average	
	0	n Peak	C)ff Peak	
	(USI	D/MWh)	(US	SD/MWh)	
Oct-19	\$	33.94	\$	29.89	
Nov-19	\$	36.91	\$	28.46	
Dec-19	\$	35.49	\$	31.43	
Jan-20	\$	24.81	\$	21.00	
Feb-20	\$	17.84	\$	14.37	
Mar-20	\$	24.10	\$	21.16	
Apr-20	\$	18.42	\$	17.70	
May-20	\$	11.58	\$	6.20	
Jun-20	\$	10.37	\$	(1.72)	
Jul-20	\$	19.30	\$	7.08	
Aug-20	\$	37.89	\$	17.21	
Sep-20	\$	39.03	\$	24.00	
Oct-20	\$	33.53	\$	27.79	
Nov-20	\$	26.63	\$	23.07	
Dec-20	\$	30.40	\$	25.65	
Jan-21	\$	23.62	\$	20.92	
Feb-21	\$	51.46	\$	37.37	
Mar-21	\$	27.91	\$	26.05	
Apr-21	\$	39.36	\$	35.05	
May-21	\$	34.27	\$	30.33	
Jun-21	\$	74.60	\$	28.25	
Jul-21	\$	127.41	\$	40.11	
Aug-21	\$	72.27	\$	43.57	
Sep-21	\$	77.20	\$	52.68	
Oct-21	\$	65.61	\$	56.85	
Nov-21	\$	48.90	\$	40.45	
Dec-21	\$	57.97	\$	39.61	
Jan-22	\$	41.60	\$	35.76	
Feb-22	\$	39.69	\$	34.96	
Mar-22	\$	34.09	\$	32.91	
Apr-22	\$	77.77	\$	65.95	
May-22	\$	61.87	\$	51.11	
Jun-22	\$	35.71	\$	6.40	
Jul-22	\$	72.15	\$	33.54	
Aug-22	\$	108.16	\$	67.55	
Sep-22	\$	216.00	\$	91.01	

FORTIS BC^{**}

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FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 29

10.2 Please explain how the revenue (RS 38 Revenue and RS 31 Revenue) and Monthly Margins (Monthly RS 38 Margin and Monthly RS 31 Margin) in Table 3-1 and Table 3-2 in the Supplemental Information were calculated. As part of the response, please provide an Excel spreadsheet containing all inputs (including the Mid-C market price used in an additional column), formulas, and assumptions used.

8 Response:

9 RS 38 Revenue shown in Tables 3-1 and 3-2 is the sum of hourly charges pursuant to calculation

10 of Energy Charges under the proposed LCIR for March and July respectively. These charges

- 11 consider the size of the load, the Day Ahead Mid-C price, and the level of the nominated Mid-C
- 12 Price Cap which determines the number of hours in which service is interrupted if interruptions
- 13 are factored in (as indicated by the third column).
- 14 RS 31 Revenue is calculated according to the RS 31 tariff pages, based on continuous service15 through the month for the total energy consumed and peak demand.
- RS 38 Margin is the difference between total RS 38 revenues and RS 38 power purchase costs
 assuming that power is purchased from the market.
- 18 RS 31 Margin is the difference between total RS 31 revenues and RS 31 power purchase costs 19 assuming that power is purchased under the Power Purchase Agreement (PPA) with BC Hydro.
- 20 Please refer to Attachment 10.2 for the Excel model used to populate Tables 3-1 and 3-2.
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2410.3Please provide Table 3-1 and Table 3-2 if a Mid-C Price Cap of \$75 CAD is used.25As part of the response, please provide an Excel spreadsheet containing the Mid-26C Market Price, the Mid-C Price Cap of \$75 CAD, such that both prices are27denominated in an equivalent currency and any currency exchange rate used as28appropriate.

30 **Response:**

FBC provides the following information in this response. First, upon reviewing the results, it was noticed that the exchange rate used in the July results in the Supplemental Information was not updated from the March results. In the first table below, this has been corrected and this table should replace the version in the Supplemental Information.

The second and third tables below are versions of Tables 3-1 and 3-2 using a Mid-C Price Cap of \$75 CAD as requested in this IR. The Mid-C Price Cap has been converted to \$USD using the following common exchange rates as requested - March \$1 USD = 1.2496 \$CDN, July \$1 USD = 1.2824 \$CDN.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 30

Updated Table 3-2: Original July 2022 Results with Corrected Exchange Rate

Load Switched to RS 38 (kVA)	Mid-C Price Cap (USD)	Interrupted ?	Hours of Interruption	R	RS 38 Revenue RS 31 Revenue		Monthly RS 38 Margin		Monthly RS 31 Margin		Margin Variance		
5,000	50	No	0	\$	302,969	\$	254,466	\$	45,624	\$	77,912	\$	32,288
5,000	40	No	0	\$	302,969	\$	254,466	\$	45,624	\$	77,912	\$	32,288
5,000	35	No	0	\$	302,969	\$	254,466	\$	45,624	\$	77,912	\$	32,288
5,000	50	Yes	336	\$	96,538	\$	254,466	\$	23,084	\$	77,912	\$	54,827
5,000	40	Yes	440	\$	59,720	\$	254,466	\$	16,861	\$	77,912	\$	61,051
5,000	35	Yes	528	\$	32,569	\$	254,466	\$	11,706	\$	77,912	\$	66,206
10,000	50	No	0	\$	605,939	\$	508,932	\$	91,248	\$	155,823	\$	64,575
10,000	40	No	0	\$	605,939	\$	508,932	\$	91,248	\$	155,823	\$	64,575
10,000	35	No	0	\$	605,939	\$	508,932	\$	91,248	\$	155,823	\$	64,575
10,000	50	Yes	336	\$	193,076	\$	508,932	\$	46,168	\$	155,823	\$	109,655
10,000	40	Yes	440	\$	119,441	\$	508,932	\$	33,721	\$	155,823	\$	122,102
10,000	35	Yes	528	\$	65,137	\$	508,932	\$	23,411	\$	155,823	\$	132,412
20,000	50	No	0	\$	1,211,877	\$	1,017,864	\$	182,496	\$	311,646	\$	129,150
20,000	40	No	0	\$	1,211,877	\$	1,017,864	\$	182,496	\$	311,646	\$	129,150
20,000	35	No	0	\$	1,211,877	\$	1,017,864	\$	182,496	\$	311,646	\$	129,150
20,000	50	Yes	336	\$	386,152	\$	1,017,864	\$	92,337	\$	311,646	\$	219,309
20,000	40	Yes	440	\$	238,881	\$	1,017,864	\$	67,442	\$	311,646	\$	244,204
20,000	35	Yes	528	\$	130,275	\$	1,017,864	\$	46,822	\$	311,646	\$	264,824
50,000	50	No	0	\$	3,029,694	\$	2,544,660	\$	456,240	\$	779,116	\$	322,876
50,000	40	No	0	\$	3,029,694	\$	2,544,660	\$	456,240	\$	779,116	\$	322,876
50,000	35	No	0	\$	3,029,694	\$	2,544,660	\$	456,240	\$	779,116	\$	322,876
50,000	50	Yes	336	\$	965,380	\$	2,544,660	\$	230,842	\$	779,116	\$	548,274
50,000	40	Yes	440	\$	597,204	\$	2,544,660	\$	168,605	\$	779,116	\$	610,511
50,000	35	Yes	528	\$	325,687	\$	2,544,660	\$	117,056	\$	779,116	\$	662,060

Table 3-1: March 2022 Results

Load Switched to RS 38 (kVA)	Mid-C Price Cap (USD)	Interrupted ?	Hours of Interruption	RS 38 Revenue	RS 38 Revenue RS 31 Revenue		Monthly RS 31 Margin	Margin Variance
5,000	\$ 60.02	No	0	\$ 199,309	\$ 254,466	\$ 42,742	\$ 97,908	\$ 55,166
5,000	\$ 60.02	Yes	0	\$ 199,309	\$ 254,466	\$ 42,742	\$ 97,908	\$ 55,166
10,000	\$ 60.02	No	0	\$ 398,618	\$ 508,932	\$ 85,483	\$ 195,815	\$ 110,332
10,000	\$ 60.02	Yes	0	\$ 398,618	\$ 508,932	\$ 85,483	\$ 195,815	\$ 110,332
20,000	\$ 60.02	No	0	\$ 797,237	\$ 1,017,864	\$ 170,967	\$ 391,630	\$ 220,663
20,000	\$ 60.02	Yes	0	\$ 797,237	\$ 1,017,864	\$ 170,967	\$ 391,630	\$ 220,663
50,000	\$ 60.02	No	0	\$ 1,993,091	\$ 2,544,660	\$ 427,417	\$ 979,075	\$ 551,658
50,000	\$ 60.02	Yes	0	\$ 1,993,091	\$ 2,544,660	\$ 427,417	\$ 979,075	\$ 551,658

Table 3-2: July 2022 Results

Load Switched to RS 38 (kVA)	Mid-C Price Cap (USD)	Interrupted ?	lours of Interruption		RS 38 Revenue		RS 31 Revenue		Monthly RS 38 Margin		Monthly RS 31 Margin		largin Variance
5,000	\$ 58.48	No	0	\$	302,969	\$	254,466	\$	45,624	\$	77,912	\$	32,288
5,000	\$ 58.48	Yes	320	\$	103,308	\$	254,466	\$	24,072	\$	77,912	\$	53,839
10,000	\$ 58.48	No	0	\$	605,939	\$	508,932	\$	91,248	\$	155,823	\$	64,575
10,000	\$ 58.48	Yes	320	\$	206,617	\$	508,932	\$	48,145	\$	155,823	\$	107,678
20,000	\$ 58.48	No	0	\$	1,211,877	\$	1,017,864	\$	182,496	\$	311,646	\$	129,150
20,000	\$ 58.48	Yes	320	\$	413,233	\$	1,017,864	\$	96,290	\$	311,646	\$	215,356
50,000	\$ 58.48	No	0	\$	3,029,694	\$	2,544,660	\$	456,240	\$	779,116	\$	322,876
50,000	\$ 58.48	Yes	320	\$	1,033,084	\$	2,544,660	\$	240,725	\$	779,116	\$	538,391

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FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 31

- 1 2
- 10.4 Please provide an example in a similar format to Table 3-1 and Table 3-2 that
 demonstrates the break-even Mid-C price for which the average RS 30 and the
 average RS 31 customer would be financially indifferent to receiving service under
 RS 38, with all other assumptions (e.g. load) remaining the same and excluding
 considerations for interconnection costs. Please provide the analysis in an Excel
 spreadsheet containing all input assumptions and calculations.
- 10

11 Response:

- 12 The Mid-C price at which a Customer would be indifferent to taking service on RS 31 or RS 38
- 13 can only be provided for a single hour (or as a single monthly average) and not in the format of
- 14 Tables 3-1 and 3-2 since these tables are produced using hourly on-peak and off-peak pricing. It
- 15 is not reasonable to assume that the Mid-C price will be the same in all hours.
- 16 The response can best be provided using the same format as in the response to Question 5 in
- 17 the Supplemental Information. It can be seen below that for March 2022, an all-hours average of
- the Mid-C price that would produce the same bill under RS 31 and RS 38 would have been \$45.22
- 19 USD while the Mid-C price that would produce the same bill under RS 30 (at an appropriate 4,000
- 20 kVA load) and RS 38 would have been \$48.97 USD. These values will, however, change with
- 21 the exchange rate. Please refer to Attachment 10.4 for the Excel models.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 32

Table 1: RS 31 Break-even USD Mid-C Price.

LCIR Billin	g										
All hours average Mid-C March (USD)							\$	45.22			
Bank of Canada Exchange Rate (March 31, 2022)								1.2496			
All hours average Mid-C March (\$CDN)							\$	56.50			
	Default Customer Rate	1 + Loss Rate	Ave	erage Mid- C Price (\$/kWh \$CDN)	\$0.	0100 /kWh Adder	Ho Ener (\$/	ourly gy Price (kWh)	Load	Hours	LCIR Bill
	RS 31	1.0286	\$	0.05650	\$	0.01000	\$ C).06840	20,000	744	\$ 1,017,864
RS 31 Billi	ng										
Energy Rat	e	0.05655	\$/k	Wh							
Demand Cl	harges										
Power Sup	ply	3.63	\$/k	VA							
Wires		5.19	\$/k	VA							
				Wires	Po	wer Supply	Ener	gy Rate	Load	Hours	RS 31 Bill
			\$	5.19	\$	3.63	\$ C).05655	20,000	744	\$ 1,017,864
					[



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 33

Table 2: RS 30 Break-even USD Mid-C Price.

			1		1		1			1		
LCIR Billing	<u> </u>											
All hours a	verage Mid-	C March (U	SD)				\$	48.97				
Bank of Ca	nada Exchar	nge Rate (M	arch	31, 2022)				1.2496				
All hours a			\$	61.19								
	Default Customer Rate	1 + Loss Rate	Ave (rage Mid- C Price \$/kWh \$CDN)	\$0.0100 Ado) /kWh der	En (Hourly ergy Price \$/kWh)	Load	Hours	I	LCIR Bill
	RS 30	1.0426	\$	0.06119	\$ (0.01000	\$	0.07423	4,000	744	\$	220,902
RS 30 Billin	ng											
Energy Rate	e	0.06076	\$/k\	Wh								
Demand Ch	narges	10.02	\$/k\	VA								
					Demand	Charges	En	ergy Rate	Load	Hours	R	(S 30 Bill
					\$	10.02	\$	0.06076	4,000	744	\$	220,902

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10.4.1 With references to the historical Mid-C market price in the last three years and the response to the preceding IR, please comment on the attractiveness for a customer to receive service under RS 38 compared to RS 30 and/or RS 31.

11 Response:

As can be seen in the response to BCUC IR1 10.3, the attractiveness in simply economic terms varies with the relationship between the Mid-C Price Cap and the level of Mid-C prices. However, FBC is of the view that since the Mid-C price will vary over time, and FBC expects to offer RS 38 as a permanent rate, the decision to implement the rate should not hinge on the state of the market at any given time.

17 It is also important to consider that the option for Customers is not limited to taking service on 18 either RS 30/31 or RS 38. Since a key driver for RS 38 is the ability of a Customer to take service 19 where capacity may not be available for firm service under RS 30/31, the choice facing the 20 Customer may be to take service under RS 38 or not at all.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 34

- 1 FBC is averse to telling a Customer that wishes to take service that it cannot do so under any
- 2 terms, and RS 38 provides an option where none might otherwise exist.



1 C. CLEAN MARKET ADDER

2	11.0	Reference:	RATE FEATURES
3 4 5 6			Exhibit B-1, Section 3.2, pp. 9–11; FBC 2021 Long-Term Electric Resource Plan (FBC 2021 LTERP) and Long-Term Demand-Side Management Plan (FBC 2021 LT DSM Plan) (FBC LTERP 2021 Proceeding), Exhibit B-27, IR 6.3–6.4 ⁵
7			Energy Rate – Clean Market Adder Jurisdiction
8 9 10		On page 9 of t a related requ also be billed.	the Application, FBC states that "depending on whether the BCUC approves lest contained in the Company's LTERP, a Clean Market Adder [CMA] may "
11 12		On page 10 o be adjusted b	f the Application, FBC states that "The CMA is currently \$0.0/kWh and will ased on applicable BCUC determinations."
13		On page 11 o	f the Application, FBC states:
14 15 16 17 18 19 20		[] A contain FBC h BCUC CMA c CMA is then F	description of the CMA and its underlying assumptions and rationale is ned in the LTERP filed with the BCUC. At the date of filing this Application, has not received a decision from the BCUC regarding the LTERP. Once a decision has been received, the LCIR will be updated to either remove the or update the amount of the CMA in accordance with BCUC direction. If the s accepted as part of the LTERP process, but not incorporated in the LCIR, BC could not cover any premium to buy clean power. [Footnote omitted]
21 22		In response to FBC stated:	o Panel IR 6.3 filed as Exhibit B-27 in the FBC LTERP 2021 Proceeding,
23 24 25 26		If the I then F existin section	BCUC accepts the LTERP, including the concept of a Clean Market Adder, BC would negotiate for the inclusion of clean market purchases in a new or g agreement, which would then be subject to BCUC acceptance under n 71 of the UCA.
27		In response to	Panel IR 6.4 under the FBC LTERP 2021 Proceeding, FBC stated:
28 29 30 31 32 33 34		The u betwee under the ne agreea intend but rat	Itimate cost of the Clean Market Adder would be a point of negotiation en FBC and Powerex and submitted to the BCUC for review and acceptance section 71 of the UCA [Utilities Commission Act]. [] FBC recognizes that gotiated value of a Clean Market Adder could vary over time and a mutually able price will depend on market dynamics. [] For clarity, FBC does not to ensure that all market purchases qualify as clean on an operational basis, her only when it is reasonable to do so.

⁵ Retrieved on September 12, 2022 from: <u>https://docs.bcuc.com/Documents/Proceedings/2022/DOC_67356_B-27-FBC-Response-BCUC-Panel-IR2.pdf</u>
FORTIS BC^{**}

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- 11.1 Please confirm that FBC is requesting approval of a CMA of \$0.00/kWh as part of the proposed RS 38 under sections 59–60 of the UCA within this Application.
 - 11.1.1 If confirmed, assuming the final decision regarding the FBC 2021 LTERP accepts the concept of a CMA, please discuss what change(s), if any, would FBC make to the proposed CMA of \$0.00/kWh within this Application.
 - 11.1.2 If not confirmed, please specify FBC's approval sought regarding the CMA within this Application.

10 **Response:**

FBC is not seeking a CMA value of \$0.00/kWh as part of this Application. Once the concept of a CMA is accepted by the BCUC in the LTERP, then a CMA will be calculated and filed with the BCUC after negotiation with Powerex. FBC is seeking, as part of the overall approval of RS 38,

14 the inclusion of the CMA placeholder.

FBC is seeking approval of the provision to include a CMA if accepted as part of the LTERP, with the value to be reflected in the RS 38 Energy Charge at the time the value is known. This may require a separate filing to update the value after the conclusion of the CMA acceptance process as discussed in the response to BCUC IR1 11.2 below.

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20 11.2 Please discuss how FBC proposes to update the CMA for RS 38 in the future. 21 including the update frequency, methodology (such as benchmarking or reference 22 to specific negotiated contracts), BCUC approval/acceptance required, and under 23 which section(s) of the UCA would the BCUC review be conducted. Please 24 elaborate on the sequence of all applicable filings and BCUC 25 acceptance/approvals required.

27 Response:

28 FBC expects that with the acceptance of the CMA within the LTERP process, and approval as 29 part of RS 38 for the inclusion of the CMA as part of the RS 38 Energy Charge, the CMA linkage 30 between the two would be established. The BCUC will have a further ability to review and approve 31 the specifics of the CMA during its review of the power supply agreement between FBC and 32 Powerex pursuant to section 71 of the UCA. Following this, FBC would be required to file an 33 update to the RS 38 tariff sheets specifying the value of the CMA, and at any time the level of the 34 CMA changed as a result of negotiation between FBC and Powerex and the resulting section 71 35 filing.

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FORTIS BC^{**}

FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 37

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11.3 If the concept of the CMA were not accepted in the FBC 2021 LTERP, please confirm whether FBC would source clean energy for RS 38 customers.

4 <u>Response:</u>

5 If the CMA is not accepted in the FBC 2021 LTERP, FBC will not attempt to change its current 6 practice when buying energy from Powerex. The current situation is outlined in Section 6.4 of the 7 CEPSA agreement with Powerex and it states, "...Powerex does not represent or warrant that 8 the energy is generated or derived from any particular source or kind of generation, or has any 9 particular emissions factor attributed to it. Powerex will not intentionally deliver energy generated 10 from coal or other high carbon products to FortisBC in a proportion that is substantially different 11 from the proportion of energy generated from coal or other high carbon products in the overall 12 mix of energy, excluding deliveries of Canadian Entitlement under the Columbia River Treaty, that 13 Powerex delivers to B.C. Hydro." 14 15 16 17 11.3.1 Please discuss any effect a hypothetical rejection of the concept of the 18 CMA in the FBC 2021 LTERP would have on what FBC is proposing 19 regarding the CMA within this Application. 20 21 Response: 22 If the concept of the CMA is rejected in the FBC 2021 LTERP, then the CMA would remain at 23 zero for RS 38 or could subsequently be removed from the rate schedule altogether. 24 25 26 27 11.4 In consideration that FBC's approval sought regarding the CMA within this 28 Application is contingent on the final decision regarding the FBC 2021 LTERP, 29 please explain how the timing of the 2021 LTERP decision issuance could impact

- please explain how the timing of the 2021 LTERP decision issuance could impact the review of this Application, including the regulatory process, timing, and final order issuance.
- 32

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- 33 Response:
- Depending on the timing of the Decisions in the LCIR and LTERP processes FBC anticipates oneof the following scenarios will unfold:
- If the LTERP Decision is issued first and does not include acceptance of the CMA, the RS
 38 tariff page finalized in this process would not include the CMA;



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- If the LTERP Decision is issued first and includes acceptance of the CMA, FBC would still need to file for approval of the CMA value it negotiates. Once both of these have occurred, the RS 38tariff page would be finalized with the CMA value accepted by the BCUC;
- 4 If the Decision is issued in this process prior to a Decision in the LTERP or the subsequent 5 acceptance by the BCUC of the value of the CMA, and the provision for the LTERP related CMA is accepted, then a value of \$0.00 will be included in RS 38 until such time as new 6 7 RS 38 tariff pages are filed; or
- 8 If the Decision is issued in this process prior to a Decision in the LTERP, and the provision 9 for the LTERP related CMA is not accepted, the RS 38 tariff page finalized in this process 10 would not include the CMA.
- 13 14 Please explain whether FBC plans to introduce a CMA to other existing FBC rate 11.5 15 schedules. If yes, please discuss how such a process would occur, how the 16 amount for the CMA will be determined, and for which rate schedule(s). If no, 17 please discuss why not.
- 18 11.5.1 If the process and methodology to establish a CMA for other rate 19 schedules as described above differs from that anticipated for RS 38, 20 please elaborate on why.
- 22 **Response:**
- 23 FBC has no plans to introduce the CMA to other rate schedules at this time.
- 24

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- 27 28
- 11.6 Please explain why "FBC could not cover any premium to buy clean power" if the CMA is accepted as part of the LTERP process, but not incorporated in the LCIR. Specifically, please discuss whether there are other means of cost recovery,
- 29 30
- 31 32
- 33 **Response:**

34 FBC expects that CMA costs will generally be recovered in rates as part of power purchase 35 expense. However, if the LCIR does not incorporate the CMA, then any CMA costs incurred to 36 supply the interruptible load will not be recovered from RS 38 Customers, but from other 37 Customers through the existing rates.

including in FBC's revenue requirements, assuming the energy purchase

agreements containing the CMA is accepted under section 71 of the UCA.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 39

- 1 FBC does not believe this is equitable and it is in that context that FBC stated that if the CMA is
- 2 not incorporated in the LCIR, then FBC could not cover any premium to buy clean power. In other
- 3 words, FBC's existing purchase arrangements under the CEPSA would apply to LCIR RS 38
- 4 Customers.



1	12.0	Refere	ence:	RATE FEATURES
2 3				FBC LTERP 2021 Proceeding, Exhibit B-1, Section 2.5.7, p. 80 ⁶ , Exhibit B-27, IR 6.1–6.2 ⁷
4				Energy Rate – Clean Market Adder Proposal
5		On pa	ge 80 o	f the application for the FBC LTERP 2021 Proceeding, FBC states:
6 7 9 10 11 12 13			A clea electri marke outloo and e resour purcha approx	n market price adder as a proxy for purchasing clean energy is added to the city market price forecast and is based on a forecast from I [a third-party t subscription service providing market analysis and long-term market k for price forecasts]. The Mid-C market price forecast is based on current xpected supply in the Pacific Northwest, which includes coal and gas ces, and therefore a clean market adder is used to represent the cost of asing only clean market power. [] The clean market price adder is kimately \$2 per MWh.
14 15 16 17		12.1	Please have mecha	e provide examples of other rate schedules for North American utilities that a CMA or similar concept approved and summarize the cost recovery anism of the CMA in those jurisdictions.
18	Respo	onse:		
19 20	FBC is sched	s not aw ule.	are of a	mechanism analogous to the CMA that has been accepted as part of a rate
21 22				
23 24 25 26 27	Respo	12.2	Please MWh	e provide a breakdown of the components making up the estimated \$2 per CMA and explain the rationale and basis for all assumptions made.
28	Anv C	MA pre	emium v	/ill be a negotiated number between FBC and Powerex. The rationale and
29 30 31	basis f the CN at this	for the 0 MA will to time.	CMA will be the n	I be market driven pricing. FBC expects that the only component making up narket premium for clean power. FBC is not able to provide further guidance
32				
33				

⁶ Retrieved on September 12, 2022 from: <u>https://docs.bcuc.com/Documents/Proceedings/2021/DOC_63911_B-1-FBC-LTERP-and-LongTerm-DSM-Plan.pdf</u>.

 ⁷ Retrieved on September 12, 2022 from: <u>https://docs.bcuc.com/Documents/Proceedings/2022/DOC_67356_B-27-FBC-Response-BCUC-Panel-IR2.pdf</u>.



1 2 In response to Panel IR 6.1 under the FBC LTERP 2021 Proceeding, FBC stated: 3 At the current time, FBC cannot determine whether the form of such a provision 4 would be a specific amount or a formulaic determination. When FBC files the 5 agreement with Powerex, the BCUC would have the opportunity to review the amount, cost and other aspects of any Clean Market Adder. 6 7 12.3 Given the uncertainties around the CMA, please comment on how it aligns with the 8 Bonbright Principles regarding customer understanding and acceptance, rate 9 stability, and revenue stability. 10 11 Response: 12 For clarity, the referenced "Criteria of a Sound Rate Structure" as characterized by Bonbright⁸ are: 13 1. The related "practical" attributes of simplicity, understanding, public acceptability, and 14 feasibility of application; 15 2. Revenue stability from year to year; and 16 3. Stability of the rates themselves, with a minimum of unexpected changes seriously 17 adverse to existing Customers. 18 FBC does not view the CMA as violating any of these criteria. The CMA would be a value 19 published as part of the RS 38 tariff, that would be updated periodically, but infrequently, which 20 would not impact its nature as a simple structure or inhibit understanding. The RS 38 rate itself 21 is entirely voluntary and likely to only be used by large, sophisticated customers. 22 FBC does not expect that any variation in the amount of revenue that is attributable to the CMA 23 from year to year will be material or problematic in any way to the operation of the utility. 24 Likewise, the magnitude of the CMA, or changes to its level, should not be considered either 25 unexpected or likely to be seriously adverse to customers. 26 27 28 29 12.4 Given that the Mid-C Price Cap is designed to protect customers from price spikes, 30 please discuss whether the Mid-C Price Cap should be set after accounting for the 31 CMA or not. Please explain why or why not. 32

⁸ Principles of Public Utility Rates by James C. Bonbright, first published by the Columbia University Press in 1961.



1 Response:

The view of FBC is that in the event that a Customer seeks to take service under RS 38 prior to the level of the CMA being known, it would not be necessary to wait to set the Mid-C Price Cap. Prior to the CMA being finalized, it will be set at \$0.00/kWh, and Mid-C Price Cap nominations are done monthly. Effectively, this means that there could only be a period of one month where a Customer may be exposed to an unknown CMA level, and in this circumstance FBC could work with the Customer to manage exposure to unwanted price situations.

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- 11 In response to Panel IR 6.2 under the FBC LTERP 2021 Proceeding, FBC stated that 12 "[w]ith regard to the LCIR, the key aspect is that there is a provision to include a Clean 13 Market Adder when and if power purchases made by FBC were to include such a 14 consideration."
- 15 12.5 Please confirm whether FBC has consulted customers regarding price uncertainty
 arising from the CMA. If yes, please provide details of the consultations. If no,
 please explain why not.
- 18

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19 Response:

Discussion of the CMA was included in the customer engagement that preceded the filing of the Application; however, FBC does not view the CMA as representing price uncertainty (since it will be a published component of the Energy Charge) and did not therefore discuss price uncertainty as an aspect of the component. FBC did discuss the need and suggested level of the CMA and uncertainty was not raised as an issue by participants.

25 26 27 28 12.6 Please confirm, or explain otherwise, that the CMA is only applicable to clean market power and is not applicable to non-clean or untagged market power. 29 30 12.6.1 If confirmed, please discuss (i) how FBC proposes to monitor and bill 31 customers for the appropriate mix of clean/non-clean energy that is 32 delivered to them under RS 38 and (ii) how the proposed RS 38 ensures 33 the CMA is only applicable to clean energy. 34 12.6.2 Please quantify any additional administrative costs to FBC regarding this 35 billing process, and explain the methodology and assumptions used for 36 this cost estimate.



1 Response:

- 2 Confirmed, the CMA is only applicable to clean market power and is not applicable to non-clean
- 3 or untagged market power. If clean market power is not available, but FBC purchases market
- 4 power anyway, then FBC expects that the CMA would not apply.
- 5 The Energy Charge under RS 38 is calculated for each hour according to the formula contained 6 in the rate schedule:
- Hourly Energy Charge = (Energy Taken (kW.h) x (1+ loss rate %)) x (applicable Mid-C Price +
 0.0100+ CMA)
- 9 In the event that power delivered to an RS 38 Customer was not from a purchase to which the 10 CMA applies, the CMA charge in the formula above would be zero.
- 11 As part of its existing process, FBC records every market transaction in sufficient detail that FBC
- expects that flagging each transaction as subject to the CMA or not can be accomplished as part of this existing process.
- As part of this process, FBC expects to create a summary of the transactions that apply to each RS 38 Customer, including a record of hours that are subject to the CMA. This is very similar to work that FBC already does and so the additional effort will be minimal. At the end of the month, this information will be passed to FBC's Billing department to create the customer bill.
- FBC acknowledges that, however minimal, there will be incremental work required by FBC to administer RS 38. However, as explained in the Application in Section 3.2.1.2.1, part of the justification for the Hourly Service Adder of \$.01 per kWh is to cover the charges that would result if the power were transmitted under Retail Access. The incremental work required under RS 38 is very similar to that which would be needed under Retail Access and recovered under RS103 – Scheduling, System Control and Dispatch Service.



1 D. TRANSMISSION CHARGES

2	13.0	Refere	ence:	TRANSMISSION CHARGES
3 4				Exhibit B-1, p. 1; Appendix C – Consultation Materials, "LCIR Consultation Q&A July – Final"
5				Acquisition of Power to Serve RS 38 Customers
6		On pa	ge 1 of	the Application, FBC states:
7 8 9			[] TI define Interco	ne LCIR will provide non-firm, interruptible service under a set of certain d circumstances, and be priced in relation to the hourly level of the ontinental Exchange (ICE) Day Ahead Mid-Columbia (Mid-C) Index. []
10 11 12		On pa Applica from to	ge 3 of ation, w o serve	the "LCIR Consultation Q&A July – Final" document in Appendix C to the ith respect to a consultation session question, "Where will the power come the interruptible load?", FBC provides the following response:
13 14 15 16			On an some Author to mee	incremental basis, FBC expects the required power to be purchased in manner—either from BC Hydro [British Columbia Hydro and Power ity] or the market. FBC does not envision acquiring new long term resources et this load.
17 18 19 20 21 22 23		13.1	Please or othe Please marke breake where	e provide a detailed explanation of how FBC proposes to purchase power, erwise supply power, to meet the incremental demand of RS 38 customers. e include a forecasted breakdown of anticipated power purchases from the t, power purchases from BC Hydro, and power sourced otherwise. If such a down is not available, please discuss the circumstances that would dictate FBC would acquire power to serve RS 38 customers.
24	Resp	onse:		
25	FBC a	anticipat	es that	the primary resource for the required power to meet RS 38 Customers will

FBC anticipates that the primary resource for the required power to meet RS 38 Customers will come from the market as day ahead purchases under section 6.7, Target Price Nominations— Energy Blocks, of the CEPSA agreement with Powerex. However, FBC reserves the right to optimize the overall value of its power supply portfolio, which under certain circumstances could result in power coming from other sources such as the BC Hydro PPA or from FBC energy storage combined with surplus capacity.

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13.1.1 If FBC is not planning to directly meet RS 38 customer demand exclusively with market power, please explain the basis for pricing RS 38 in relation to the day ahead Mid-C Index.
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1 Response:

RS 38 is a market-based rate, but not a strict flow-through of market prices at any given time due to the price cap. As described in Section 2.4 of the Application, one of the drivers for RS 38 is to provide an alternative to retail access. It is appropriate that the LCIR Customer be exposed to market rates up to a selected price cap as this matches the situation they would face under retail access. The source of the power FBC uses to supply the LCIR Customer is not a factor in a market-based rate.

- 8 9 10 11 13.1.2 Please provide a detailed 12 the cost of power deliver
 - 13.1.2 Please provide a detailed explanation of any possible instances where the cost of power delivered to RS 38 customers may vary from the day ahead Mid-C Index.
- 13 14

15 Response:

Although FBC cannot guarantee that it has identified all possible instances where the source of
 power (and therefore the cost) delivered to RS 38 Customers may not be from day ahead Mid-C

- 18 Index purchases, FBC anticipates that there are three possible alternate sources of power:
- The BC Hydro Power Purchase Agreement If FBC has room under its nomination to take
 additional PPA power and the risk of the market price being below the PPA rate was close
 to zero, then FBC would consider scheduling the power from the PPA rather than from the
 market;
- FBC resources or long-term commitments. While this is not likely under the current FBC load resource balance, it is still possible that a situation may occur where FBC cannot make effective use of its long-term resources. In the extremely unlikely event that this were to occur, FBC would plan to use its own resources to meet RS 38 load. The chances of this occurring become much higher if FBC obtains significant new resources or long-term contracts; and
- FBC surplus capacity resources combined with surplus energy in storage. If the market
 price of power goes very low, there is no risk to FBC storing as much power as possible
 for later use when market prices are much higher. If FBC cannot make effective use of
 this stored power to meet existing rate schedule load, then FBC would instead seek to use
 it to meet RS 38 load, if possible.
- 34 35

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13.1.2.1 Please confirm, or explain otherwise, that FBC's other ratepayers would bear the risk of any variances between the



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 46

- 1 cost of power delivered to RS 38 customers, and the Mid-C 2 Index.
- 2 3

4 <u>Response:</u>

5 Confirmed; however, as discussed in the response to BCUC IR1 13.1.2, the potential risks and 6 benefits from RS 38 to other FBC ratepayers are not symmetrical. Other ratepayers will benefit 7 where FBC is able to resource power from sources other than the market, at a cost lower than 8 the market or the Customers' Mid-C Price Cap, while charging either the market rate or Mid-C 9 Price Cap rate to RS 38 Customers. However, other ratepayers are protected from the 10 circumstance where the market is high since FBC has the ability to interrupt the RS 38 Customer 11 at any time the market price is above the Mid-C Price Cap.



1	14.0	Reference	e: TRANSMISSION CHARGES
2 3			Exhibit B-1, pp. 5–6; FBC LTERP 2021 Proceeding, Exhibit B-1, pp. 118, 180
4			Retail Access
5 6		On page Direction I	5 of the Application, FBC quotes the following passage from Section 7 of No. 8 to the BCUC:
7 8 9 10		Ex no un tho	cept on application by the [BC Hydro and Power] authority, the commission must t set rates for the authority that would result in the direct or indirect provision of bundled transmission services to retail customers in British Columbia [BC], or to ose who supply such customers.
11 12		On page Indigenou	6 of the Application, FBC provides the following excerpt from the BCUC's s Utilities Regulation Inquiry Final Report:
13 14 15 16		We tra tha pu	• [the BCUC] therefore interpret Direction 8 to preclude the use of BC Hydro's nsmission system to wheel electricity to any customer who will directly consume at electricity in British Columbia whether it is a customer of BC Hydro or another blic utility.
17		Further, o	n page 6 of the Application, FBC states:
18 19 20 21		Sir be sys ha	the power originating from outside of the FBC service area cannot practicably delivered to a load within the FBC service area without the use of the BC Hydro stem, Retail Access is effectively unavailable to FBC customers, despite FBC ving the BCUC-approved rate schedules intended to support the practice.
22		On page 1	18 of the application for the FBC LTERP 2021 Proceeding , FBC stated:
23 24 25		FB [M bo	C access to the market is mainly through its transmission rights on the Teck etals Ltd.]-owned 71 Line, which provides transmission from across the BC/US rder to the FBC system.
26		[.]
27 28 29		FB at aft	C retains access to the wholesale market on Teck's 71 Line for a 20-year period minimum, as discussed in Section 2.4.4, and comparable market access erwards is assumed for the planning period.
30		On page 1	80 of the application for the FBC LTERP 2021 Proceeding, FBC stated:
31 32 33		FB to sys	C is able to import electricity from the Mid-C market via transmission connected the Waneta plant (71 Line) as well as through the BC Hydro transmission stem.
34 35		14.1 Ple col	ease confirm, or explain otherwise, that large commercial customers are nsidered retail customers.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 48

1 2	<u>Response:</u>		
3	Confirmed.		
4 5			
6 7 8	14.2	Please con delivered to	firm, or explain otherwise, that power originating from the US can be a load within the FBC service area via Teck's 71 Line.
9 10 11 12 13		14.2.1 If th a\ Li	confirmed, please explain whether imports via 71 Line require use of e BC Hydro system. Please also explain why retail access is not vailable to FBC's retail customers by importing market power via 71 ne.
14	<u>Response:</u>		
15 16 17 18 19	FBC confirms imports physic not and FBC of Customers ca access to 71	that FBC is cally require loes not pay annot use re _ine transmis	able to import power originating from the US via Teck's 71 Line. These the use of BC Hydro's system but contractually under the CPA they do any BC Hydro wheeling charges to import over 71 Line. However, FBC tail access by importing power over 71 Line since they do not have ssion. 71 Line access is only available to FBC, not its Customers.
20 21			
22 23 24 25 26 27	14.3	Please exp customers system, a c an estimate	lain whether FBC anticipates market power required to serve RS 38 would be wheeled to the FBC system via 71 Line, via BC Hydro's combination of both systems, or otherwise. If possible, please provide ad breakdown.
28	Response:		
29 30 31 32	FBC anticipat FBC system v Line descripto provided as A	es that all ma ria 71 Line. or to item d o ttachment 25	arket power required to serve RS 38 Customers will be wheeled to the FBC has clarified this aspect of RS 38 service by the addition of the 71 of the Reasons for Interruption in the amended RS 38 Rate Schedule 5.1 to BCUC IR1 25.1.
33 34			
35 36 37	14.4	If FBC anti that such p	cipates importing market power for delivery to RS 38 customers, and power may be wheeled over BC Hydro's system, please confirm, or



BC™	FortisBC Inc. (FBC or the Company) Application for Approval of a Large Commercial Interruptible Rate (Application)	Submission Date: October 26, 2022
	Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 49

1 2 3 4	Response:	explain or required	otherv to pa	vise, that FBC (or a third party acting on behalf of FBC) would be y transmission charges to BC Hydro.
5	Please refer to	o the resp	onse	to BCUC IR1 14.3.
6 7				
8 9 10 11 12	14.5	Please p LCIR ma retail cus	orovide ay res stome	e a further explanation of whether the proposed rate structure of the sult in the "indirect provision of unbundled transmission services to rs in BC, or to those who supply such customers".
13	<u>Response:</u>			
14 15 16 17 18 19 20 21 22	The proposed transmission s Customers to as governed k site (which wo Power deliver then delivered	I rate stru services to acquire p by rate sc buld be ur ed to LCI I to the Co	ucture o reta oower heduk nbund R Cus ustom	of the LCIR will not result in the "indirect provision of unbundled il customers in BC" The LCIR does not provide a means for FBC from a third party and to purchase transmission services from FBC es 101 through 109 in order to deliver that power to the customer's led service). There is no unbundled transmission service involved. stomers, regardless of the source, will first be acquired by FBC and er at the rates described in RS 38.
23 24 25 26		14.5.1	Pleas relati scen	se discuss whether FBC considers there is any distinction with ion to the applicability of section 7 of Direction No. 8 in the following arios:
27 28 29 30			(i)	FBC (and/or a third party on behalf of FBC) purchases market power, arranges wheeling services, including services on BC Hydro's transmission system, and delivers the power to a retail customer; and
31 32 33 34 35 36	Response		(ii)	A retail customer in FBC's service territory (and/or a third party acting on behalf of the retail customer) purchases market power and arranges wheeling services, including services on BC Hydro's transmission system for delivery of the power to the retail customer.
50	NESPUIISE.			

FBC considers that there is a distinction with relation to the applicability of section 7 of DirectionNo. 8 in the scenarios provided.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 50

- 1 Scenario (ii) is clearly an example of retail access while scenario (i) describes a common means
- 2 of acquiring and delivering power to end-use customers employed by utilities in the normal course
- 3 business and is not retail access. The most basic distinction is that in scenario (ii) the end-use
- 4 customer has an active role in arranging for commodity supply and the provision of delivery
- 5 services, while in scenario (i) the end-use customer is taking service under a fully bundled tariff
- 6 rate appropriate for its service characteristics. Therefore, section 7 of Direction No. 8 does not
- 7 apply to scenario (i).
- 8



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 51

1 15.0 Reference: TRANSMISSON CHARGES

Exhibit B-1, p. 10; Appendix C – Consultation Materials, "LCIR 2 3 Consultation Q&A July – Final"; Exhibit B-2, p. 11; FBC LTERP 2021 4 Proceeding, Exhibit B-1, p. 118; FBC Electric Tariff ⁹;BC Hydro Open 5 Access Transmission Tariff, Schedule 01; BC Hydro Open Access 6 **Transmission Tariff Business Practice Posting of Transmission** 7 Service Offerings, p. 6; RS 101 – Long-Term and Short-Term Firm 8 Point-to-Point Transmission Service; ¹⁰ RS 102 – Non-Firm Point-to-9 Point Transmission Service;¹¹ RS 103 – Scheduling, System Control 10 and Dispatch Service; ¹² RS 104 – Reactive Supply and Voltage Control From Generation Sources Services ¹³ 11

Calculation of Hourly Service Adder

- 13 On page 10 of the Application, FBC states:
- 14 The Hourly Transmission Charge Adder is intended to acknowledge that power 15 purchased under the Interruptible Rate program requires transmission to the point 16 of delivery with the interruptible customer. It is not set to exactly equate to the 17 charges that would result if the power were transmitted under Retail Access, but 18 will cover the transmission costs, grossed up to provide a moderate additional 19 benefit for non-participating customers. The Hourly Transmission Charge Adder 20 will be subject to any general rate adjustment that flows from future rate setting 21 processes.
- On page 3 of the "LCIR Consultation Q&A July Final" document in Appendix C to the
 Application, with respect to a consultation session question, "Where will the power come
 from to serve the interruptible load?", FBC provides the following response:
- 25 On an incremental basis, FBC expects the required power to be purchased in 26 some manner—either from BC Hydro or the market. FBC does not envision 27 acquiring new long term resources to meet this load.
- 28 On page 11 of the Supplemental Information, FBC states:
- FBC believes that the Hourly Service Adder of \$.01/kilowatt-hour is reasonable given the service that is being provided. At a minimum, the charge should be no less than the \$.00792/kilowatt-hour charge (excluding losses) under FBC's wholesale wheeling tariff if retail access service was available and being taken; however, this service is much more complex and involved than providing service

- ¹¹ Ibid.
- ¹² Ibid.
- ¹³ Ibid.

⁹ Retrieved on September 12, 2022 from: <u>https://fbcdotcomprod.blob.core.windows.net/libraries/docs/default-source/about-us-documents/regulatory-affairs-documents/electric-utility/fortisbcelectrictariff.pdf.</u>

¹⁰ Compliance filing to Order G-374-21 dated December 23, 2021, FBC Electric Tariff.

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FortisBC Inc. (FBC or the Company)	Submission Date:		
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022		
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 52		

under retail access as FBC is responsible for sourcing the power and making all
 arrangements for power to be delivered to the FBC service area. FBC believes
 that the proposed cost is likely less than what the total costs (that is, the costs not
 limited to those associated with FBC) for supply and delivery would be for a retail
 access Customer.

 FBC's Electric Tariff includes RS 101 (Long-Term and Short-Term Firm Point-To-Point Transmission Service) and RS 102 (Non-Firm Point-To-Point Transmission Service). Both
 RS 101 and 102 outline a minimum charge of \$0.002 per kW per Hour, and a maximum
 hourly charge for transmission of \$0.0064 per kW of Reserved Capacity Demand.

- Additionally, both RS 103 (Scheduling, System Control And Dispatch Service) and RS 104
 (Reactive Supply and Voltage Control from Generation Sources Services) include the
 following term:
- 13The Transmission Customer must purchase this Service if taking supply under14Rate Schedules 100, 101, and 102.
- 15 On page 118 of Exhibit B-1 to the FBC LTERP 2021 Proceeding, FBC stated:
- Also, additional US transmission is required to access the Mid-C trading hub, which
 is located along the Columbia River on the border between Washington and
 Oregon.
- 1915.1Please explain whether FBC's "wholesale wheeling tariff" has the same meaning20as FBC's RS 101 or 102, plus the applicable charges in RS 103 and 104.
 - 15.1.1 If yes, please explain any differences in the charge of \$.00792/kilowatthour charge stated by FBC in the Supplemental Information and the charges outlined in RS 101 or 102, plus RS 103 and 104.
- 2415.1.2If yes, please also provide a brief explanation of the circumstances where25the minimum and maximum charges in RS 101 and 102 are applied, and26which level of charges (minimum, maximum or other) FBC assumes in27the \$.00792/kilowatt-hour value.

29 Response:

- FBC generally refers to all of the individual rate schedules from RS 100 RS 109 as the wholesale
 wheeling tariff as these are rates that have been set in order to administer the services described
- 32 in the Open Access Transmission Tariff (Tariff Supplement No. 7).
- 33

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FORTIS BC^{*}

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FortisBC Inc. (FBC or the Company)	Submission Date:		
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022		
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 53		

15.2 Please provide an overview of how the charge of \$.00792/kilowatt-hour charge for the "wholesale wheeling tariff" is calculated, including a breakdown of the costs it is intended to recover.

5 Response:

6 FBC provides the following additional information on the Hourly Service Adder, which was termed 7 the "Hourly Transmission Charge Adder" as part of the initial LCIR public engagement. Hourly 8 Transmission Charge Adder was the working term used during public engagement, but it was an 9 oversight that the term remained in Section 3.2.1.2.1 of the Application. From the onset of 10 developing the LCIR, FBC recognized that an incremental charge would be required as part of 11 the rate in consideration of factors such as transmission charges that may occur when power 12 used to supply LCIR Customers was sourced from the market, additional administration, and the 13 inclusion of a broader ratepayer benefit, all while not being set at a level that would discourage 14 participation in the program. The \$0.10 / kWh figure was put forward as a reasonable number in 15 consideration of these factors and was set using FBC's experience and judgement rather than 16 being derived quantitatively. However, during consultation it became evident that terming it the 17 Hourly Transmission Charge Adder placed an unintended emphasis on the Transmission-related 18 factor and prompted inquiries into, and requests for direct comparisons to actual transmission-19 related charges and derivation - a trend continued through this Information Request 20 process. FBC adopted the more generic term, Hourly Service Adder, in recognition that the 21 charge was intended to be a bundled proxy for a number of considerations, but not explicitly based 22 or derived from any specific set of cost references.

As part of the Supplemental Information FBC provided its opinion that at a minimum, the charge should be no less than the charges that would occur under FBC's wholesale wheeling tariff if retail access service was available and being taken. This was expanded upon by the inclusion of the \$.00792/kilowatt-hour charge as a comparator.

With this context as background, FBC provides the derivation of the \$.00792/kilowatt-hour
(\$7.92/MWh) charge below.

% of Load

2.5%

2.5%

10.15

10.15

FBC Rate ScheduleDescriptionUnit Cost (MWh)101Long/Short Term PTP (Monthly Transmission Rate)\$4,570103Scheduling, System Control Dispatch (Monthly Rate)\$182.202104Reactive Supply/Voltage Control (per MW/h)\$0.899

29 FBC's current rate schedules are as follows.

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108

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The following calculation is estimated using the rate schedules detailed above and assumes a flat 10 MW load over the course of the year, although the result is not dependent on the MW level

Operating Reserve - Spinning (per MW/h) \$

Operating Reserve - Supplemental (per MW/h) \$

33 selected.

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FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 54

FBC Rate Schedule	Estimated Annual Cost Based on 10 MW Flat Load	Total Annual Cost		
101	10 MW x 12 months x \$4570 =	\$	548,400	
103	10 MW x 12 months x \$182.202 =	\$	21,864.24	
104	10 MW x 8760 hours x \$0.899 =	\$	78,752.40	
107	10 MW x 8760 hours x \$10.15 x 2.5% =	\$	22,228.50	
108	10 MW x 8760 hours x \$10.15 x 2.5% =	\$	22,228.50	
	Total Annual Cost =	\$	693,474	
Average Cost per MWh	Total Annual Cost (\$693,474)/Total Annual Energy (10MW x 8760 hours) =	\$	7.92	

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15.3 Please provide an explanation of how FBC developed the value of \$.01/kilowatthour for the Hourly Service Adder. Please discuss any alternative options considered, and why these were rejected.

9 Response:

10 The information included on page 11 of the Supplemental Information is the full explanation of the 11 \$.01/kilowatt-hour amount for the Hourly Service Adder. This value was not "developed"; it was 12 set at an increment above the \$.00792/kilowatt-hour charge, considered to be reasonable and to 13 not discourage participation. This level of the Hourly Service Adder was the only one presented, 14 appearing in the initial consultation materials, and no other value was considered.

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15.3.1 Please further explain why FBC considers the charge \$.00792/kilowatt-hour for the "wholesale wheeling tariff" is the minimum charge that should be applicable for the Hourly Service Adder.

of

21 22 Response:

23 The proposed LCIR is a new FBC service for which there is no established basis to set a rate. 24 However, much of the work involved as well as the overall impact to the system is similar to 25 established rates for retail access. Therefore, FBC believes the charges that would be paid by a 26 Customer under retail access provide guidance as to the appropriate minimum level of the Hourly 27 Service Adder in the LCIR charges, but as explained in the response to BCUC IR1 15.2, the 28 provision of transmission service is not the only component.

29

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/ FO	DTIS PC"	Applic	Submission Date: October 26, 2022	
		Response to	D British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 55
1 2 3 4 5 6	<u>Response:</u> Please refer	15.3.2 to the res	Please discuss the basis for the incremental charges ass Hourly Service Adder compared to the charge of \$.0079 for the "wholesale wheeling tariff". ponse to BCUC IR1 15.2.	ociated with the 92/kilowatt-hour
7 8				
9 10 11	15.4	Please to the F	confirm, or explain otherwise, that "arrangements for power BC service area" include the following:	to be delivered
12 13 14 15		(i) (ii)	Transmission service costs to wheel market power from th the BC/US border; and Transmission service costs to wheel market power from the to the FBC system, via 71 Line and/or BC Hydro's transmis	e Mid-C hub to BC/US border sion system.
16 17 18 19 20		15.4.1	If confirmed, please provide a detailed breakdown of wheeling costs associated with the delivery of market p service area. Please include information to show any va costs (where applicable) by season, time of day, and type service (e.g. firm/non-firm, short-term/long-term).	the forecasted ower to FBC's riations in such of transmission
21 22 23 24 25			15.4.1.1 Please discuss whether FBC anticipates any c costs in the next five years. If yes, please discu proposed rates under RS 38 accounts for the changes in costs, and if so, please explain how.	hanges in such iss whether the ese anticipated
26 27 28 29 30 31 32	Response: A portion of t 19 of the BC in Order G- commerciall negotiating public.	his respor CUC's Rule 178-22, as y sensitiv position is	nse is redacted and is being filed on a confidential basis, purses of Practice and Procedure regarding confidential docum is it contains commercially sensitive information. The info e nature and significant harm or prejudice to FBC's is reasonably expected to result if the confidential information.	suant to Section lents as set out ormation is of a competitive or tion was made
33 34 35	Confirmed. F is constant t over 71 Line	For each H o move th from the t	LH the additional charge is and for each LLH the additional charge is and for each LLH the additional charge is power from the Mid-C hub to the BC/US border and for border to the FBC system. FBC does not anticipate that BC	ditional charge all hours \$1.08 Hydro wheeling

37 service due to lack of availability on 71 Line except in those circumstances where FBC is38 maintaining service from other resources as described in the response to BCUC IR1 13.1.2. The

would be used to move power from the border to the FBC system as FBC expects to interrupt

39 71 Line associated wheeling costs are expected to rise by 2 percent per year.

FORTIS BC^{*}

FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 56

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- 15.5 Please discuss whether there are any other direct incremental costs, besides the wheeling charges identified above, associated with the delivery of market power to the FBC service area. If yes, please provide a detailed breakdown of the anticipated costs, and information to illustrate how costs may vary depending upon the circumstances of the purchase of market power.
- 8 9

10 Response:

11 For any power delivered to the Okanagan, there may be an additional 5 percent loss charge 12 deliverable to BC Hydro as both energy and capacity in order to wheel the power from the 13 Kootenays to the Okanagan under the Amended and Restated Wheeling Agreement (ARWA). 14 This loss percentage is not expected to change. This charge only occurs if ARWA wheeling is 15 being used, which most commonly occurs during the day in the Okanagan area. The cost of the 16 5 percent losses (if they occur at all) is variable depending on the FBC resources used to deliver 17 the losses to BC Hydro. This loss return is done on an hourly basis so the resource used to deliver 18 the losses is not fixed for the day. Therefore, the cost of the losses is related to the FBC hourly 19 incremental cost, which on average is expected to be much less than the Mid-C day ahead index 20 price.

This makes it hard to calculate a representative cost for these losses since for any hour it is not known if they will even occur or if they do, what the appropriate FBC incremental cost is for that hour. However, assuming they occur and the incremental cost is approximately at the PPA rate of about \$50 per MWh, then the cost of 5 percent losses is \$2.50/MWh.

25 FBC is not aware of any other direct incremental costs.

- 26 27 28 29 15.5.1 Please discuss whether FBC anticipates any changes in such costs in 30 the next five years. If yes, please discuss whether the proposed rates under RS 38 accounts for these anticipated changes in costs, and if so, 31 32 please explain how. 33 34 **Response:** 35 FBC does not anticipate a change in the ARWA loss rate of 5 percent. As noted in the response 36 to BCUC IR1 15.5, FBC does not anticipate any other direct incremental costs. 37 38
- 39

			FortisBC Inc. (FBC or the Company)	Submission Date:						
FORTIS BC [*]		Applica	October 26, 2022							
-		Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1 Page 5								
1 2 3 4		15.5.2	Please describe any other activities associated with the delivery or market power to the FBC service area where FBC may not incur direct costs.							
5	Response:									
6	The only oth	er costs ar	e administrative in nature as described in the response to	BCUC IR1 7.1.						
7 8										
9 10 11 12 13 14	15.6	Based u of the to FBC ser provide a	pon the responses to the Irs 15.4.1 and 15.5, please prov tal anticipated costs associated with the delivery of mark vice area for RS 38 customers. If a point estimate is not p a cost range, with a description of supporting assumptions	ide an estimate et power to the possible, please s.						
15	<u>Response:</u>									
16 17 18 19 20 21	A portion of t 19 of the BC in Order G- commercially negotiating public.	his respons CUC's Rule 178-22, as y sensitive position is	se is redacted and is being filed on a confidential basis, purs s of Practice and Procedure regarding confidential docum it contains commercially sensitive information. The info e nature and significant harm or prejudice to FBC's reasonably expected to result if the confidential informa	suant to Section nents as set out rmation is of a competitive or tion was made						
22 23 24	As described in the responses to BCUC IR1 15.4.1 and 15.5, the costs for transmission are potentially quite variable depending on the time of day and the location of the LCIR Customer on the FBC system.									
25 26 27 28 29	Using the ic Customer wi where ARW These numb of the Teck 7	lentified co here no AR A wheeling ers will gro 71 Line whe	ests, the range of costs is per MWh during off-per WA wheeling is required up to per MWh during on- g is required and the assumed cost of ARWA losses is \$ w by about \$.02 per MWh per year based on the expected eeling cost.	eak hours for a peak hours and .2.50 per MWh. increased costs						
30 31										
32 33 34 35 36 37		15.6.1	Please explain the rationale for any variance between so the incremental charges associated with the Hourly compared to the charges under FBC's wholesale whe \$.01/kilowatt-hour minus \$.00792/kilowatt-hour = \$.00 hour).	such costs, and Service Adder eeling tariff (i.e. 0208/ kilowatt-						
38			15.6.1.1 Please discuss the relative risks of u	nder-recovering						

transmission costs from RS 38 customers versus over-



		FortisBC Inc. (FBC or the Company) Submission Date						
FO	R11SBC [™]	Response to British Columbia Litilities Commission (BCLIC) Information Request (IR) No. 1	Page 58					
		Response to British Columbia Officies Commission (BCCC) Information Request (IR) No. 1	i age 50					
1 2 3		recovering transmission costs. Please include a the potential drivers that may result in under-r recovery of transmission costs from RS 38 cus	n explanation of ecovery or over- tomers.					
4 5 7 8 9		15.6.1.2 Please discuss the parties (e.g. RS 38 custom extension its other non-RS 38 ratepayers, tran provider) which could be financially impact variance explained above. For each impacte explain whether a net benefit or a net cost woo party.	ers, FBC and by smission service ed by the cost id party, please ild accrue to the					
11	Response:							
12	Please refer	to the response to BCUC IR1 15.2.						
13 14								
15 16 17 18 19 20	15.7	If FBC is contemplating purchasing power from BC Hydro to customers, please discuss whether there are any incremental of with delivery of power to the FBC system. To the extent such co from those outlined above, please provide a breakdown of such of	o serve RS 38 osts associated sts are different osts.					
21	Response:							
22 23	If FBC purch There are no	nases power from BC Hydro, it would be under the PPA between FBC additional costs to deliver the power to the FBC service area.	and BC Hydro.					
24 25								
26 27 28 29 30	Response	15.7.1 Please discuss how such costs (if any) are factored int of the Hourly Service Adder.	the calculation					
00								
31	Please refer	to the responses to BCUC IR1 15.2 and 15.7.						
32 33								
34 35 36 37 38	15.8	Please provide further support, including a cost comparison, fo "FBC believes that the proposed cost [of the Hourly Service Ado than what the total costs (that is, the costs not limited to those FBC) for supply and delivery would be for a retail access custome	the statement: ler] is likely less associated with er."					

-		ſ		FortisBC Inc. (FBC or the Company)	Submission Date:						
	FORTIS BO	C	Applica	October 26, 2022							
			Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1								
	1 2 3 4 5 <u>Respon</u>	se:	15.8.1	Assuming this statement is correct, please discuss wheth ratepayers would be subsidizing costs associated w delivery to RS 38 customers.	her FBC's other ith supply and						
	6 Please r	efer	to the resp	ponse to BCUC IR1 15.2.							
	7										
	7										
	8										
	9 10 S	Saha	dulo 01 of	the BC Hydro Open Access Transmission Tariff (OATT) a	tatas:						
	10 0	Sche		the BC Hydro Open Access Transmission Tahin (OATT) s	lales.						
	11 12 13 14	The Reserved Capacity Charge for the Long-Term Firm Service Rate will be up to a maximum price as set out below except where the POD is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00) []									
	15 16 17 18	The posted prices for Short-Term Firm and Non-Firm Service will be less than or equal to a maximum price (\$/MWh) as set out below, except where the POD [point of delivery] is a point of interconnection between the Transmission System and the transmission system of FortisBC Inc., in which case the rate shall be zero (\$0.00). ¹⁴									
	19 F 20 C	Page Offer	6 of the ings states	BC Hydro OATT Business Practice Posting of Transmetrics:	nission Service						
	21 22 23 24 25		BC Hyd 99) the eliminat "license is only c	ro and FortisBC have adopted (as directed pursuant to BC harmonization of transmission wheeling rates. Such es rate "pancaking" between the two utility service are plate" approach whereby a transmission service rate custo charged for wheeling by the utility within whose service are	JC Order G-12- harmonization as by using a omer within B.C. a the customer						
	26 27		BC Hvd	ed. <u>A transmission customer will need to demonstrate to B</u>	<u>C Hydro, with a</u>						
	28		[point o	of interconnect] is associated with an equivalent PTP	[point to point]						
	29		reservat	tion to a FortisBC TSR POD located in FortisBC's services	vice territory to						
	30		receive	\$0 rate per BC Hydro OATT Schedule 01. Ancillary S	Services will be						
	31		charged	by each utility independently based on the reserved ca	pacity for these						
	32		reservat	tions. ¹⁵ [<i>Emphasis added</i>]							

¹⁴ Retrieved on September 12, 2022 from: <u>https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tariff-filings/electric-tariff/00-bch-oatt.pdf</u>, p. 386.

¹⁵ Posting of Transmission Service Business Practice, p. 6, Note to Table 2: Pricing for BC Hydro's Transmission Paths. Available at: <u>https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/suppliers/transmissionscheduling/business_practices/2016%20October%20-%20Posting%20of%20Transmission%20Service.pdf.</u>

FORTIS BC^{**}

- 15.9 In instances where the delivery of market power to RS 38 customers by FBC requires transmission services on BC Hydro's system, please explain whether the rate of \$0.00 for Long-Term Firm Service, Short-Term Firm and Non-Firm Service outlined in Schedule 01 of the OATT would be applicable.
- 5

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6 7 15.9.1 Please discuss whether the Hourly Service Adder accounts for the rate harmonization provision in the OATT.

8 **Response:**

9 For clarity, LCIR Customers are not purchasing either market power or transmission services. 10 LCIR Customers are paying for service with energy priced in reference to the Mid-C price, with 11 an Hourly Service Adder that is set in consideration of, but not exactly the same as, the use of 12 transmission service. LCIR Customers remain solely end-use customers of FBC and are not 13 being provided with retail access. FBC is not delivering market power to LCIR Customers. 14 Rather, FBC is supplying LCIR Customers with power that FBC purchases to supply customer 15 load, that may or may not be from the market.

16 The harmonization clauses in the OATT of BC Hydro and FBC do not apply to situations where 17 FBC is using the BC Hydro system to transmit power that will be used to serve FBC's Customers 18 within FBCs service area. In any event, FBC does not anticipate using BC Hydro OATT services 19 to supply LCIR load.

- 20
- 21
- 22

15.10 Please explain whether the rate of \$0.00 would be applicable in a hypothetical scenario where a large commercial customer purchased market power and arranged point-to-point transmission services on BC Hydro and FBC's systems.
Please provide a discussion of the difference in overall costs between this scenario and the scenario in IR 15.7.

28

29 **Response:**

Were retail access currently permitted, the \$0.00 rate would apply where a Large Commercial Customer served at transmission voltage purchased market power and wheeled the power through the service areas of both FBC and BC Hydro. The Customer would pay only for transmission service from the utility within which service area it is located and both utilities' ancillary service charges would apply as well. However, at this time, the \$0.00 rate would not be available since retail access itself is prohibited.

The scenario in BCUC IR1 15.7 (in which FBC is contemplating purchasing power from BC Hydro to serve RS 38 Customers) does not involve retail access and does not therefore involve any charges related to wheeling power. From a Customer perspective, the cost difference would be attributable to the difference in the total wheeling costs pursuant to the mix of services required under FBC rate schedules 101 to 109, and the fixed per-kWh charges contained in RS 38. There



- 1 may also be a difference in costs between the Mid-C rate the Customer would pay under retail
- 2 access and the possibility that under the LCIR the Customer would be paying for Energy Charges

3 calculated using the Mid-C Price Cap.

- 4 5 6 7 15.11 Please confirm, or explain otherwise, that there are no rate harmonization 8 provisions between FBC and Teck with respect to transmission on 71 Line. 9 10 Response: 11 Confirmed. FBC's transmission access to Teck's 71 Line is a negotiated agreement. The concept 12 of rate harmonization does not apply in the context of 71 Line since there is no balance of benefits 13 whereby Teck could potentially receive a reciprocal benefit if using FBC transmission. Teck is
- 14 part of the Canal Plant Agreement and therefore enjoys direct access to BC Hydro transmission
- 15 without needing to make use of the FBC transmission system.



1	Е.	ECONOMIC	JUSTIFICATION							
2	16.0	Reference:	ECONOMIC JUSTIFICATION							
3			Exhibit B-1, Section 3.2, p. 9, Section 3.3, p. 13; Exhibit B-2, p. 7							
4			Economic Justification – Example							
5 6 7 8		On page 9 o energy flows day ahead i Peak Index a	On page 9 of the Application, FBC explains that the energy charge is based on actual energy flows in the On-peak and Off-peak hours multiplied by the On-peak and Off-peak day ahead index prices, the Intercontinental Exchange (ICE) Day Ahead Mid-Columbia Peak Index and the Day Ahead Mid-Columbia Off-Peak Index, respectively.							
9 10 11		In section 3. offering the average all-l	3 on page 13 of the Application, FBC provides an example to illustrate how LCIR can be leveraged into a rate benefit for all FBC customers using an hour Mid-C price for March 2022 and states:							
12 13 14		[…] I the a in the	f, for example, the customer chose to either convert its entire load, or add only dditional 10 MVA as non-firm, a benefit would likely accrue to FBC customers e first scenario and would certainly accrue in the second.							
15 16		On page 7 of the Supplemental Information, FBC offers an expanded explanation referencing the example provided in Section 3.3 of the Application and states:								
17 18 19		[] F is lov bene	BC ratepayers would benefit unless no new load is added and RS 38 revenue wer than RS 31 revenue would have been. FBC therefore concludes that a fit would "likely" result.							
20 21 22 23 24 25 26		16.1 Pleas to us value Colu of the Off-F	se recalculate the example provided on page 13 of the Application if FBC were e, instead of the "average all-hour Mid-C price for March 2022", (i) the lowest es of the ICE Day Ahead Mid-Columbia Peak Index and Day Ahead Mid- mbia Off-Peak Index that occurred in March 2022 and (ii) the highest values e ICE Day Ahead Mid-Columbia Peak Index and Day Ahead Mid-Columbia Peak Index that occurred in March 2022.							
27	Respo	onse:								
28	The lo	west and high	nest price for an on-peak hour in March of 2022 was \$30.09 and \$51.07 CDN							

respectively. The lowest and highest price for an off-peak hour in March of 2022 was \$28.80 and
\$48.72 CDN respectively. The requested analysis for these four prices is below.



FortisBC Inc. (FBC or the Company) Application for Approval of a Large Commercial Interruptible Rate (Application)	Submission Date: October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 63

LCIR Billing	- Minimum	On-Peak P	<u>rice</u>									
Minimum N	Mid-C March	n (USD)					\$	24.08				
Bank of Ca	nada Exchar	nge Rate (M	arch 31,	2022)				1.2496				
Minimum N	Mid-C March	n (\$CDN)					\$	30.09				
		,,										
	Default Customer Rate		Average Mid- C Price (\$/kWh \$CDN)		\$0.0100 /kWh Adder		Hourly Energy Price (\$/kWh)		Load	Hours		LCIR Bill
	RS 31	1.0286	\$ 0.	03009	\$	0.01000	\$	0.04124	20,000	744	\$	613,606
RS 31 Billin	g											
	4											
Energy Rate	e	0.05655	\$/kWh									
Demand Ch	narges		.,									
Power Supr	olv	3.63	Ś/kVA									
Wires	.,	5 19	\$/kVA								-	
TTH C5		5.15	<i>φ</i> / κτ/ τ									
			Wi	res	Pov	ver Supply	En	ergy Rate	Load	Hours		RS 31 Bill
			\$	5.19	\$	3.63	\$	0.05655	20,000	744	\$	1,017,864
Bill Saving											\$	404,258
Additional Load Required to				res	Pov	ver Supply	En	ergy Rate	Load	Hours		RS 31 Bill
Generate	Approximat	elv \$404k	\$	5.19	\$	3.63	\$	0.05655	7,943	744	\$	404,258
							-					,



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 64

LCIR Billing	- Maximum	On-Peak P	rice						ĺ		
Maximum	Mid-C Marc	h (USD)					\$	40.87			
Bank of Ca	nada Exchar	nge Rate (M	arch 3	31, 2022)				1.2496			
Maximum	Mid-C Marc	h (\$CDN)					\$	51.07			
	Default Customer Rate	1 + Loss Rate	Aver C (\$/kV	age Mid- Price Vh \$CDN)	\$0.(0100 /kWh Adder	En (Hourly ergy Price \$/kWh)	Load	Hours	LCIR Bill
	RS 31	1.0286	\$	0.05107	\$	0.01000	\$	0.06282	20,000	744	\$ 934,729
RS 31 Billin	g										
Energy Rate	2	0.05655	\$/kW	/h							
Demand Ch	arges										
Power Supp	bly	3.63	\$/kV/	4							
Wires		5.19	\$/kV/	4							
			١	Nires	Ро	ver Supply	En	ergy Rate	Load	Hours	RS 31 Bill
			\$	5.19	\$	3.63	\$	0.05655	20,000	744	\$ 1,017,864
Bill Saving											\$ 83,135
Addition	al Load Rec	luired to	\	Nires	Ρον	ver Supply	En	ergy Rate	Load	Hours	 RS 31 Bill
Generate	Approxima	tely \$83k	\$	5.19	\$	3.63	\$	0.05655	1,634	744	\$ 83,159



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 65

LCIR Billing	- Minimum	Off-Peak P	rice								
Minimum N	Aid-C March	n (USD)					\$	23.05			
Bank of Ca	nada Exchar	nge Rate (M	arch 3	1, 2022)				1.2496			
Minimum Mid-C March (\$CDN)							\$	28.80			
	Default Customer Rate	1 + Loss Rate	Avera C (\$/kW	ge Mid- Price h \$CDN)	\$0.0	0100 /kWh Adder	En	Hourly ergy Price (\$/kWh)	Load	Hours	LCIR Bill
	RS 31	1.0286	\$	0.02880	\$	0.01000	\$	0.03991	20,000	744	\$ 593,906
RS 31 Billin	g										
Energy Rate	5	0.05655	\$/kWł	ı							
Demand Ch	narges										
Power Supp	oly	3.63	\$/kVA								
Wires		5.19	\$/kVA								
			W	/ires	Pov	ver Supply	En	ergy Rate	Load	Hours	RS 31 Bill
			\$	5.19	\$	3.63	\$	0.05655	20,000	744	\$ 1,017,864
Bill Saving											\$ 423,958
Addition	al Load Rec	uired to	W	/ires	Pov	ver Supply	En	ergy Rate	Load	Hours	RS 31 Bill
Generate	Approximat	tely \$424k	\$	5.19	\$	3.63	\$	0.05655	8,330	744	\$ 423,958



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 66

					1			
LCIK BIIIIng	- waximum	ОП-Реак Р	rice					
Maximum	Mid-C Marcl	h (USD)			\$ 38.99			
Bank of Ca	nada Exchar	nge Rate (M	arch 31, 2022)		1.2496			
Maximum Mid-C March (\$CDN)					\$ 48.72			
	Default Customer Rate	1 + Loss Rate	Average Mid- C Price (\$/kWh \$CDN)	\$0.0100 /kWh Adder	Hourly Energy Price (\$/kWh)	Load	Hours	LCIR Bill
	RS 31	1.0286	\$ 0.04872	\$ 0.01000	\$ 0.06040	20,000	744	\$ 898,772
<u>RS 31 Billin</u>	g							
Energy Rat	e	0.05655	\$/kWh					
Demand Ch	narges							
Power Sup	ply	3.63	\$/kVA					
Wires		5.19	\$/kVA					
			Wires	Power Supply	Energy Rate	Load	Hours	RS 31 Bill
			\$ 5.19	\$ 3.63	\$ 0.05655	20,000	744	\$ 1,017,864
Bill Saving								\$ 119,092
Additior	al Load Req	uired to	Wires	Power Supply	Energy Rate	Load	Hours	RS 31 Bill
Generate	Approximat	ely \$119k	\$ 5.19	\$ 3.63	\$ 0.05655	2,340	744	\$ 119,092

 16.1.1 Please confirm, or explain otherwise, that the "average all-hour Mid-C price for March 2022" is the monthly average.

Response:

- 9 Confirmed.
- 12
 13 16.1.2 Please explain why the proposed RS 38 uses ICE Day Ahead Mid14 Columbia Peak Index and Day Ahead Mid-Columbia Off-Peak Index
 15 instead of an average all-hour Mid-C price.
 16



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 67

1 Response:

Using the ICE Day Ahead Mid-C Peak Index and Day Ahead Mid-C Off-Peak Index instead of an average all-hour Mid-C price more closely mirrors how FBC would procure supply for this customer class, which would be by purchasing standard Peak or Off-Peak blocks. In theory if a Customer is a flat load, the pricing should work out to be equal under both methods, but, for example, if a Customer is taking more supply during Peak hours than Off-Peak hours, it could end up paying less than the cost of supply to FBC if FBC was to charge an average all-hours Mid-

8 C price.



1	17.0	Refere	ence:	ECONOMIC JUSTIFICATION			
2				Exhibit B-2, p. 7			
3				Ratepayer Impact			
4		On pag	ge 7 of	the Supplemental Information, FBC states:			
5 6			Quanti of varia	fying ratepayer impact from RS 38 is extremely difficult due to the number ables involved. For example, the impact would vary with:			
7 8 9			• W be im	hether the RS 38 load was entirely new, or was load that had previously een served under RS 30 or RS 31 (with the original rate itself bearing on the spact);			
10			• Tł	ne magnitude and profile of the load;			
11 12			• W to	hether or not new RS 30 or RS 31 load is added when RS 31 load transfers RS 38; []			
13 14 15 16 17 18 19	Respo	17.1 D nse :	Please Supple when transfe <u>31</u> load	confirm, or explain otherwise, that the statement on page 7 of the emental Information, "Whether or not new RS 30 or RS 31 load is added RS 31 load transfers to RS 38" should include reference to RS 30 load ers: "Whether or not new RS 30 or RS 31 load is added when RS 30 <u>or RS</u> d transfers to RS 38."			
20	Confir	med.					
21 22							
23 24 25 26 27 28 29 30		17.2	Please as RS both R events revenu please	discuss the circumstances under which RS 38 revenue would be the same 30 and RS 31 revenue, respectively, assuming the load is the same under S. As part of the response, please discuss, directionally, which factors or would need to change for revenue under RS 38 to be greater or less than he under RS 30 and RS 31, respectively. If there are any specific thresholds, specify.			
31	Respo	onse:					
32 33 34 35 36 37 38	The factors influencing the relative level of RS 30/31 revenue and RS 38 revenue in a given month are highly variable and include customer load, the currency exchange rate, the hourly Mid-C price and the Mid-C Price Cap. Due to the independent movement of these variables in RS 38, it is not possible to define a single set of circumstances that would result in RS 30/31 revenue being the same as revenue under RS 38, even for the same load. Equal revenue under the firm and non-firm rates is highly improbable and certainly not predictable or the result of a single set of circumstances.						



	FortisBC Inc. (FBC or the Company)	Submission Date:
тм	Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
	Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 69

Moreover, overall revenue, whether on an individual or aggregate customer basis is not a useful 1 2 measure by which to gauge the success of the LCIR, or to evaluate the impact to other customers. 3 This assessment must also consider the cost side of the equation, including the cost of marginal 4 resources required to meet incremental load. Marginal resources will be required to meet new 5 load, whether that power is delivered pursuant to RS 30/31 at embedded cost rates, or under RS 6 38 where load is resourced and billed at a rate at least equal to the cost of the power. In the view 7 of FBC, while it is natural to compare the revenues received under firm and non-firm rates, such 8 a comparison disadvantages RS 38 since the resources required to meet the load in each case 9 may be the same, but only RS 38 recovers revenue based directly on the cost of the resources 10 involved and with the added ability to not serve the load should it become uneconomic to do so. 11 12

12		
13		
14	17.2.1 Please confirm, or explain otherwise, if the revenue gain/loss of RS	38
15	relative to RS 30 and RS 31 is linearly correlated with the size of the le	oad
16	being transferred or any other factors or events identified in response	e to
17	the IR above.	
18		
19	Response:	
20	Confirmed. However, the revenue variance between RS 38 and RS 30/31 is also influenced	l by
21	the level of the Mid-C Price Cap which may influence the number of hours served for the RS	38
22	Customer which will in turn impact revenue. A RS 31 Customer will continue to be served in	ו all
23	hours.	

24 Please also refer to the response to BCUC IR1 17.2.



1	18.0	Refer	ence:	ECONOMIC JUSTIFICATION
2				Exhibit B-1, Section 4.1, pp. 14–15
3				Load Retention
4		On pa	ges 14	and 15 of the Application, FBC states:
5 6 7 9 10 11			From primal load t existir makin does r by no be bot	the perspective of FBC (and by extension, non-participating customers), the ry risk associated with the LCIR stems from the uncertainty of attracting new o the system when an existing Large Commercial customer leaves an rg rate for all or some of its load in favour of interruptible service, thereby g additional system capacity available. In the case where additional load not result, FBC would be exposed to a drop in revenue that may not be offset longer having to plan for the firm load for the customer. Any shortfall would one by other customers.
13			[]	
14 15 16			In ado That is jurisdi	lition, there is also a load retention aspect to offering the LCIR at this time. s, without some means of remaining competitive with the rates found in other ctions, FBC is at risk of losing some load that is able to relocate.
17			[]	
18 19 20 21 22			FBC I interru the ris MVA o is con	has mitigated against the risk associated with existing firm load becoming aptible in two ways. First, by including a price cap, FBC has mitigated against associated with extremely high market prices, and second, an initial 50 cap on participation will serve to manage the program to a level where FBC fident that additional load can be interconnected.
23 24 25 26 27		18.1	Please maxin are be assun	e discuss the factors and/or scenarios that FBC would anticipate the num potential gain for FBC implementing RS 38, assuming RS 38 customers eing supplied at the Mid-C market price. Please specify and explain any options.
28	Resp	onse:		
29 30	The solution	cenario	that wo	ould most likely result in the maximum benefit is the addition of new RS 38

stomer that is completely new to FBC. All of the revenue from this 30 load from the addition of a Cu 31 Customer would be incremental. If the Customer is being supplied at the Mid-C market price 32 exclusively, the incremental revenue would result from the Hourly Service Adder and any margin 33 that FBC could achieve by supplying the load from alternate resources priced less than the Mid-34 C market price in any hour. Maximum potential gain could also be achieved by increasing RS 35 30/31 load as a result of attracting an infill Customer to take up the capacity made available by an existing Customer moving its load to RS 38. In this case, the size of the benefit would depend 36 37 on whether or not the new RS 38 Customer provided more or less margin (rate revenue over associated costs) than it did on RS 30/31, combined with the new RS 30/31 margin. 38



Given the number of moving parts that must be considered, it is difficult to generalize about any 1 2 given scenario.

- 3
- 4
- 5
- 6
- Please discuss the factors and/or scenarios that FBC would anticipate the 18.2 7 maximum drop in revenue that FBC would be exposed to in offering RS 38, 8 assuming RS 38 customers are being supplied at the Mid-C market price. Please 9 specify and explain any assumptions.
- 10

11 **Response:**

12 The revenue collected by FBC from RS 38 Customers is unaffected by the resource that FBC 13 relies upon at a given time to supply the RS 38 load. RS 38 Customers are billed according to 14 the rates included in the RS 38 tariff in all cases. The potential drop in revenue as compared with 15 RS 30/31 varies with the size of the load and the Mid-C price.

16 The source of supply will affect the margin that FBC is able to generate from the sale of power to 17 the Customer at the Mid-C based rate, and serving the load from Mid-C purchases will provide 18 the lowest margin and least benefit to other Customers.

- 19
- 20
- 21 22 18.2.1 In the event that FBC supplies energy to all RS 38 customers at the lower 23 Mid-C Price Cap rather than the current Mid-C market price, please 24 explain whether the expected drop in revenue would be greater than that 25 quantified in response to the IR above. If yes, please explain and quantify 26 the magnitude of the expected revenue loss with reference to the 27 assumed Mid-C Price Cap, current Mid-C market price, and FBC's 28 embedded cost of power as applicable. If no, why not?
- 29 30 Response:

31 The preceding response did not include a quantification and as explained in the response to 32 BCUC IR1 18.2, the resource used to supply the RS 38 load has no impact on customer revenue. 33 The drop in revenue associated with an Energy Charge based on the Mid-C Price Cap rather than 34 the Day-ahead Mid-C price would be the product of the difference in these two amounts and the 35 customer load. However, the benefit to other Customers is dependent on the resource used to 36 supply the load, which may not be the Mid-C market.

37

38


FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 72

Please discuss any loss of load due to relocations which FBC has experienced 18.3 historically or recently with its commercial customers.

3 4 **Response:**

5 FBC has not experienced relocation of RS 31 load. FBC cannot confirm that RS 30 load has or 6 has not relocated since these Customers are more numerous and not tracked as closely, and, 7 since some have multiple locations in different jurisdictions, load can be relocated by shutting 8 down and consolidating in the least cost jurisdiction. FBC has had RS 30 Customers shut down 9 in recent years. FBC has had discussions with prospective Customers that indicate that options 10 regarding energy service is a key consideration in choosing a location.

- 11
- 12

- 13
- 14 15

16

Please elaborate on how "FBC is at risk of losing some load that is able to relocate" 18.4 and provide supporting documentation.

17 **Response:**

18 This conclusion is based on discussions with Customers and is not documented. While FBC is 19 not contending that this risk is widespread, it does exist and may increase for certain types of 20 technology-based load such as cryptocurrency mining and data centres; additional customer

- 21 options can improve the attractiveness of FBC as an option.
- 22
- 23
- 24

25 Please elaborate on the "rates found in other jurisdictions" that FBC wishes to 18.5 26 remain competitive against and provide a summary of FBC's findings regarding 27 the rate offerings in those other jurisdictions.

28 29 **Response:**

30 Any jurisdiction that has rate options that appear more appealing than those available at FBC 31 constitutes a disadvantage for FBC when loads are first investigating potential locations. For 32 example, the default industrial rates at BC Hydro are generally lower than at FBC, and BC Hydro 33 also has in place discounted Industrial electrification rates that are intended to help existing and 34 new industrial Customers connect to BC Hydro with a discount of 20 percent for the first five years 35 and an additional 2 years of slightly lower discounts. These rates were put in place pursuant to 36 Order in Council No. 657/2020 and FBC has no ability to similarly discount its rates.

37

38



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 73

118.5.1Please discuss whether the rate offerings in other jurisdictions was a
consideration to FBC's RS 38 proposal. If yes, please elaborate on how
FBC's RS 38 proposal includes these considerations (such as in the
pricing, rate structure, etc.).5

6 **Response:**

- 7 The competitive rate offerings in other jurisdictions are a contributing factor in FBC's desire to
- 8 offer customer choice and provide a means to connecting to FBC where it might not otherwise be
- 9 possible, but the other jurisdictions did not influence the specific structure or terms of the rate for
- 10 which FBC has applied. FBC looked at the issues it was trying to address, as outlined in the
- 11 Section 2 of the Application, and sought to address them through a rate design process.



1 F. IMPLEMENTATION

2	19.0	Reference:	IMPLEMENTATION
3			Exhibit B-2, pp. 11–12; BC Hydro Transmission Service Market
4 5			Reference-Priced Rates Application, Order G-256-20 dated October 14, 2020 ¹⁶
6			Permanent Offering versus Pilot Program
7		On pages 1	1 and 12 of the Supplemental Information, FBC states:
8		[]	FBC must balance the access to the rate with the need to manage it
9		SUCC	essfully, given that Customers may be making long-term investment decisions
10		that	favour not introducing the rate as a pilot program. FBC expects that there will
11		be o	perational learnings (see the response to question 7, for example) that will
12		need	I to be incorporated into the program before it can be expanded to a larger
13		volur	me. In addition, there remains uncertainty in FBC's energy and capacity needs
14		for it	s existing Customers and therefore, what room may be available on FBC's
15		mark	(et import capabilities. […]
16		By Order C	G-256-20 dated October 14, 2020, the BCUC approved the BC Hydro
17		Incremental	Energy Rate (IER), RS 1893 as a pilot program effective from January 1, 2020
18		to March 31	, 2024.
19		19.1 Plea	se discuss the pros and cons of introducing RS 38 as a permanent offering as
20		оррс	used to a pilot program with a fixed term. In the response, please address
21		cons	iderations, such as the need for refinement from operational learnings,
22		unde	erstanding of customer preference and behaviours, availability of information
23		on a	inticipated incremental costs and benefits, resulting ratepayer impact, and
24		certa	ainty of rate availability for RS 38 customers.
25			

26 Response:

27 FBC believes that all of the considerations listed in this question are important to managing any 28 revisions to the rate and assessing the success that the rate has had in accomplishing its intent 29 to add load and provide customer choice while providing a benefit to both participants and non-30 participants. However, the most important consideration (the "pro") in favour of offering the rate 31 on a permanent basis remains the fact that a Customer that desires to take service on RS 38 may 32 be required, in the case of transmission-fed Customers, to make alterations in the design of the 33 Customer facility to accommodate an interruptible form of service, and primary-fed Customers 34 (on RS 30) may also have to add the necessary equipment to enable FBC-controlled interruptions. 35 These additions will have a cost and FBC does not believe that it would be fair, or attractive, for 36 the Customer to make such investment without the knowledge that the rate is intended to be a

¹⁶ Retrieved on September 14, 2022 from: <u>https://docs.bcuc.com/Documents/Other/2020/DOC_59455_G-256-20-BCH-TSMRPR-IER-FinalOrder-Reasons.pdf</u>.



permanent offering. The "con" that exists with a permanent offering would be the persistence of a rate that may not achieve its goal and results in a sustained revenue decrease, but if this occurs, FBC believes it could be addressed through a review of the rate design once experience has been gained. As stated in the Application and Supplemental Information, given the interest in connecting to the FBC system, FBC considers this risk to be minimal.

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 19.2 Please discuss over what period of time (in months or years) a new customer
 10 would require in order to sufficiently recover any significant capital investment if
 11 they were to be serviced under RS 38.
 - 19.2.1 If FBC were to offer a pilot program for the time period identified in the preceding IR, please discuss whether it addresses concerns regarding capital investments. As part of the response, please discuss any other considerations or options that would help to mitigate concerns for customers related to making capital investment decision for RS 38 service.
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19 Response:

20 As discussed in the Supplemental Information, FBC anticipates that capital costs may range from 21 \$10 thousand to \$100 thousand in order to facilitate an FBC-controlled means of disconnection. 22 The amount of time required to recover these costs would be entirely dependent on the relative 23 pricing of RS 38 and RS 30/31 energy and the load involved. Assuming for example, that a 24 Customer is taking service under the conditions described in the response to Supplemental 25 Information, Question 5, the recovery of these funds would be guite guick, perhaps a single billing 26 period. If the Mid-C market prices were higher, it may be that the costs may not be recovered 27 until such a time as the market prices fell to below a level that would result in bills lower than 28 under the firm rates. FBC has proposed a permanent rate in consideration of customer exposure 29 to capital costs as these may not be Customers that are already connected and able to take 30 service under an underlying rate (as with BC Hydro's RS 1893).

However, FBC would still offer the rate were the BCUC to approve it on a pilot basis as long as the cap on total enrollment were maintained and the pilot period was sufficient in length (i.e., 3 to 5 years) to allow for market variation and operational learnings to be experienced.

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 19.3 If applicable, please provide any other utilities or rate schedules in the Canadian market, such as the BC Hydro IER referenced above, that FBC referred to when determining to propose this rate as a permanent offering.
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FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 76

1 Response:

- 2 FBC determined through internal discussions and discussions during the engagement process
- 3 that it preferred to offer the rate on a permanent basis. FBC did not rely on the rates of other
- 4 jurisdictions in making this determination.



1	20.0	Refere	ence:	IMPLEMENTATION
2 3				Exhibit B-1, Section 4.2, p. 15, Appendix C – Consultation Materials, "LCIR Consultation Q&A Aug – Final"; Exhibit B-2, pp. 11–12
4				50 MW Limit
5 6 7 8		On pa serve be inte progra	ge 15 o to mana erconneo im to a to	f the Application, FBC states: "an initial 50 MVA cap on participation will ge the program to a level where FBC is confident that additional load can cted." FBC further states, "FBC also proposes to limit initial uptake in the otal of 50 MW of connected interruptible load."
9		On pa	ge 11 of	the Supplemental Information, FBC states:
10 11 12 13			[] it is there n giving need to	likely that LCIR Customers will not all be concentrated in one location, and hay be no more than one LCIR Customer in a given location, if the problem rise to curtailment occurs in / affects only that location, it is clear who will be curtailed.
14		On pa	ge 12 of	the Supplemental Information, FBC states:
15 16 17 18			FBC is benefit increas any hig	confident that 50 MW will not pose a material risk, given the incremental s available for other ratepayers, but operational experience combined with sed certainty on the load forecast should be obtained before FBC makes ther amount available.
19 20		20.1	Please	reconcile whether the initial cap is proposed to be 50 MVA or 50 MW.
21	Respo	onse:		
22 23 24	FBC a held ir progra	n MW te m cap,	es for th erms, wh any prog	e inconsistency in the documentation. Operationally, most discussions are ile large commercial billing is expressed in MVA. For the purposes of the gram related documentation will use the billing-related MVA units.
25 26				
27 28 29 30 31 32 33	Respo	onse:	20.1.1	Please explain whether a cap with reference to MVA or MW is more appropriate, including considerations, such as ease of monitoring, administrative practicality, system management and consistency with FBC's system balancing practice.
34 35	As dis is exp	cussed ressed i	in the re n MVA,	sponse to BCUC IR1 20.1, customer-facing communication, such as billing, so it is appropriate to communicate potential load restrictions to Customers

36 in these terms. As a practical matter, the program cap is intended to limit total participation to a

37 manageable number, and it is unlikely that a Customer requirement will be so exacting that the

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- 1 difference between 50 MVA and 50 MW at power factors typical at that load level will have any 2 impact to enrollment. Power markets are conducted in MW terms and this will not change 3 regardless of the units used in customer communication.
- 4
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- 7 20.2 Subject to the response to the preceding IR, please discuss how the 50 MW or 50 8 MVA limit was determined. Please include discussion of any other limits that were 9 considered and how the 50 MW/MVA limit was decided to be the most appropriate 10 option in FBC's view.
- 11

12 Response:

13 The 50 MVA level was chosen based on the operational experience and judgement of the FBC 14 Power Supply group as a number that both provides for a reasonable load addition and will 15 provide useful experience with the program.

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- 19 20.3 Please explain if the proposed 50 MW/MVA limit for RS 38 would be supported by 20 planned system upgrades by FBC. If yes, please discuss the details of those 21 upgrades (i.e. costs, timing, ratepayer impact). If no, with reference to FBC's 22 current load resource balance (capacity), please discuss how the 50 MW capacity 23 to serve RS 38 will be supported by FBC's existing system.
- 24

25 **Response:**

26 The proposed 50 MVA program limit can be accommodated on a non-firm basis by the existing 27 system. Part of the rationale for the LCIR is that load that would otherwise require such system 28 upgrade to be served on a firm basis can be connected.

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- 32 In the "LCIR Consultation Q&A Aug – Final" document in Appendix C to the Application, 33 FBC states:
- 34 LCIR Applications will generally be processed on a first-come, first served basis. 35 However, it reserves the right to consider and weigh, when making an approval 36 decision, the potential system and overall customer benefits of, as well as
- 37 provincial energy objectives associated with, competing LCIR proposals.

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FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 79

20.4 Please explain how the 50 MW limit would be allocated among interested customers. Please include discussion of (i) details of how FBC will implement the "first-come, first served" allocation; (ii) any restrictions on number of customers by location; (iii) any preference for one large customer or several smaller customers; and (iv) any risk considerations for diversifying customers across industries (i.e. cryptocurrency, forestry, cannabis).

8 Response:

9 As noted in the LCIR Consultation Q&A, FBC foresees that the primary approach to connecting 10 RS 38 Customers will be on a first-come, first served basis. This is consistent with the 11 interconnection of Customers generally where there may be limited local system capacity and 12 multiple applications. Priority will be given to existing Customers that have requested additional 13 capacity and where FBC has been unable to meet the request on a firm basis. After this first 14 consideration, applications will be dated as they are submitted, and as long as the applicant meets 15 the commitments outlined in the Industrial Electricity Interconnection process the application 16 remains active and available capacity will remain allocated to the Customer. The exception to 17 this process will be for the initial 60-day period following approval of the RS 38 tariff, and where 18 there are multiple applicants. In this case, the applications received during this period will be 19 prioritized according to a lottery. This is consistent with the approach used in the OATT for the 20 reservation of firm point-to-point service following initial tariff approval. FBC recognizes that the 21 non-firm OATT approach relying on bid prices may be a viable alternative however this approach 22 has not been explored further at this time.

Restrictions for a given geographic location will be assessed in light of available capacity and FBC does not anticipate that it would be necessary to restrict the number of Customers as long as the total amount of available non-firm capacity is not exceeded. FBC also does not have a preference for the number of Customers that are connected under the program limit. While from an operational perspective, FBC would prefer a diversification of load by industry and location, it does anticipate that as a practical matter it will not be possible to dictate that such diversification occurs.

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- 20.4.1 Please discuss how the allocation process above ensures fairness among all interested RS 38 customers.
- 36 **Response:**

37 As discussed in the response to BCUC IR1 20.4, available system capacity is reduced with every

38 interconnection and constitutes a de facto 'first come-first served' approach for connecting load.

- 39 This consistency with interconnection generally, and the lottery system intended for any initial
- 40 surge of interest, is considered by FBC to be a fair approach to allocating interruptible capacity.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 80

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20.5 Please discuss the "the potential system and overall customer benefits of, as well as provincial energy objectives associated with, competing LCIR proposals" that FBC might consider when making an approval decision outside of the noted firstcome, first served basis processing of applications.

9 **Response:**

10 The "LCIR Consultation Q&A Aug – Final" response, which was written in the summer of 2021,

11 represented what FBC considered to be a workable means of allocating access to interruptible

12 service at the time. Further discussions on the practicality of choosing one Customer over another

13 on these factors led FBC to adopt the approach described in the response to BCUC IR1 20.4,

14 which does not attempt to weigh potentially subjective factors.

However, FBC recognizes that in the evolving energy landscape it is currently in, certain potential uses of electricity directly related to British Columbia meeting greenhouse gas targets may be recognized as priority loads. To the extent that RS 38 service could potentially support these efforts, it may be necessary for FBC to consider priority for such applications in consultation with the BCUC.

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- 23 20.6 Please explain why "there may be no more than one LCIR Customer in a given 24 location." As part of the response, please define what a "location" pertains to and 25 explain how FBC will select a potential RS 38 customer (e.g. first come first serve 26 basis).
- 27

28 **Response:**

FBC does not understand this question as the language referenced in the question does not appear in the preamble and FBC has reviewed the portion of Appendix C, Large Commercial Interruptible Rate (LCIR) Consultation Q&A Consultation Session #2: August 25 & 26, 2021, and

32 could not locate the quoted passage. FBC is not limiting LCIR Customers by location.



1 21.0 Reference: IMPLEMENTATION

Exhibit B-1, Section 3.3, p. 13

Customer Costs

On page 13 of the Application, FBC states: "The customer served on the LCIR will only be
served when it funds any interconnection costs, and when the energy charges under the
rate exceed FBC's incremental power supply costs."

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21.1 Please explain how the condition in which "the energy charges under the rate exceed FBC's incremental power supply costs" will be monitored and implemented.

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11 **Response:**

FBC intends to arrange for the required supply on a day-ahead basis. If it cannot be obtained atthe required price, FBC will be aware of that.

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- Please explain whether the reference to FBC's incremental power supply cost from
 the above preamble is included in the draft RS 38 tariff, and if so, please explain
 where they are included in the draft.
- 2021.2.1If not included, please provide an updated draft RS 38 tariff, if needed. If21FBC does not see the need to include this condition in the RS 38 tariff,22please explain why not
- 23

24 **Response:**

The referenced statement regarding incremental power supply costs is a simplified expression of the impact of the Mid-C Price Cap nominated by the Customer and part (e) of the Reasons For Interruption:

- For Hours where FortisBC reasonably expects that the Energy Charge will be
 based on the Mid-C Price Cap as described in part i) of the Energy Charge portion
- 30 of this rate schedule, FortisBC may interrupt the Customer.

The effect of this clause is that when the Mid-C price is above the Mid-C Price Cap, FBC has the option to interrupt the Customer and will not serve the load unless the energy charges exceed the cost of serving the load.



1	22.0	Refere	ence:	IMPLEMENTATION
2 3 4				Exhibit B-1, Appendix A- Interruptible RS 38, Original Page R-38.3; Appendix C – Consultation Materials, "LCIR Consultation Q&A Aug – Final"
5				Forecasting
6 7		On Ori Applica	iginal F ation, Fl	Page R-38.3 of Appendix A – Proposed Rate Schedule 38 within the BC states:
8 9 10 11 12			By Jan hourly Sched to be c as reas	uary 31 of each year, the Interruptible Customer will provide to FortisBC an anticipated load forecast for the premise being served under this Rate ule for the following five years. Anticipated changes to this load forecast are ommunicated by the Interruptible Customer to FortisBC with as much notice sonably possible.
13 14		On paœ Applica	ge 2 of ation, Fl	f "LCIR Consultation Q&A Aug – Final" document in Appendix C to the BC states:
15 16 17 18 19			[] Th calend advand contac accour	he amount of notice FBC requires varies depending on the scheduling ar in the wholesale power markets but is typically between 2 and 5 days in ce. Any customer considering changing their purchase schedule should t FBC to coordinate any such change to ensure the change is taken into an prior to FBC submitting the FBC nomination for that day.
20 21 22 23 24		22.1	Please forecas freque of deta	e explain all reporting requirements by RS 38 customers regarding load st and purchase schedule, including the level of detail required, reporting ncy, and the rationale for these reporting requirements at the requested level il and frequency.
25	<u>Respo</u>	onse:		
~~				

FBC assumes that this question is asking about nomination requirements, rather than reporting requirements, since there are no reporting requirements for RS 38 Customers.

By January 31 of each year, as detailed in the response to BCUC IR1 25.1, the RS 38 Customer will provide to FBC an hourly anticipated load forecast for the premise being served under this rate schedule for the following five years. This will help FBC to include the expected energy and capacity costs associated with RS 38, as well as revenue associated with RS 38, in its ongoing revenue requirement forecasts.

Next, for each month, FBC would require the RS 38 Customer to nominate its Mid-C Price Cap,
by providing FBC with the maximum Mid-C price it is willing to pay by the 20th day of the preceding
month. This will allow FBC to have the price threshold it requires to coordinate purchases on
behalf of the Customer over the course of the next month. By providing a monthly nomination,
the Customer can adjust its Mid-C Price Cap in response to its own business requirements as
well as market conditions. A monthly price cap would be relatively easy for FBC to administer



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 83

- 1 when dealing with multiple Customers, whereas a daily or hourly Price Cap would be much more
- 2 burdensome.



1	23.0	Refere	ence:	IMPLEMENTATION
2 3				Exhibit B-1, Section 3.1, p. 8, Appendix A – Interruptible RS 38, Original Page R-38.4
4				Transition Between Firm and Non-Firm Service
5		On pa	ge 8 of t	he Application, FBC states:
6 7			Subject	t to certain conditions, the Customer may transition between firm service LCIR. These conditions are set out in the rate schedule.
8		On Or	iginal Pa	age R-38.4 of Appendix A, FBC states:
9 10 11 12 13			The Internation of the International Control	erruptible Customer may request to transition or return to firm service under Rate Schedule 30 or 31 by making an application through the existing 3C Industrial Electricity Interconnection process. Making such an application ot guaranty that firm service in the amount requested will be available at the d location.
14 15 16 17 18	Resp	23.1	Please RS 38 order f	discuss the process and conditions that need to be met by FBC and the customer (e.g. availability of firm capacity, revenue considerations, etc.) in or the transitions between firm service and the LCIR to occur.
19	FBC i	interpret	s the q	uestion to be with regard to an existing RS 38 Customer that wishes to
20	transi	tion to fi	rm servi	ce under RS 30/31.

An application by an RS 38 Customer to take service under a firm rate schedule follows exactly the same industrial electricity interconnection process as would be required of a Customer that is completely new to FBC. This process is fully documented at the following link, <u>https://www.fortisbc.com/services/commercial-industrial-services/industrial-electricity-</u>

<u>interconnection</u> which includes a process flowchart and Facility Connection Requirements
 document. Through this process, available capacity is determined as well as any infrastructure
 upgrades that would be required in order to connect the load, and the cost to the Customer related
 to any of those upgrades.

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23.2 Please discuss any limitations on how frequently a customer can transition between firm service and the LCIR.

35 **Response:**

36 Special Condition 1 of RS 38 states:



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 85

1 Service under this Schedule is available for a minimum of 12 Months after 2 commencement of Service.

3 Once RS 38 is selected, a Customer must remain on RS 38 for 12 months, after which it could

4 make application to return to firm service following the process discussed in the response to

5 BCUC IR1 23.1.



1 24.0 Reference: IMPLEMENTATION

Exhibit B-1, Section 5, p. 19; Exhibit B-2, pp. 10-11

Notification of Interruption

On page 19 of the Application, FBC cites "notification provisions" for interruptions as one
of "the subjects receiving the most discussion" in customer engagement sessions.
However, on pages 10 and 11 of the Supplemental Information, FBC outlines "five reasons
for which Customers could be interrupted under RS38." The first three reasons are noted
to not be likely to have advance notice, while the fourth would "vary depending on the
nature of the interruption," and the fifth would "occur with notice in accordance with
industry standard day-ahead scheduling timeline."

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- 24.1 Please explain how FBC plans to meet customer demand for notification of interruptions as expressed in the customer engagement sessions.
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15 **Response:**

16 The customer sentiment expressed during the customer engagement sessions was that 17 notification prior to interruption would be a desirable feature of an interruptible rate. FBC initially had communicated that such notification would not feature in the LCIR at all. As a result of the 18 19 consultation, FBC included in the RS 38 rate schedule that it would endeavor to provide notice, 20 where practicable: the customer concerns were heard and resulted in a commitment on the part 21 of FBC to endeavor to provide notification where practicable as described in the Supplemental 22 Information. This is the extent of the commitment that FBC has made and to the extent that 23 customer demand for notification of interruptions as expressed in the customer engagement 24 sessions is interpreted as a firm requirement of some Customers, FBC has been clear that such 25 a requirement cannot and will not be met.

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- 2924.2Please discuss how FBC has, and will, take steps to communicate expectations30for being on RS 38 to prospective customers regarding notifications and31interruptions.
- 33 Response:

All prospective RS 38 Customers will engage in detailed discussions about the nature of the interruptible service with both Key Accounts personnel and Engineering likely in advance of even submitting the required application. FBC does not envision that these elements of the LCIR will not be clearly understood by Customers.

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24.3 Please discuss FBC's decision process to determine how much load FBC would interrupt a customer once FBC has determined to interrupt a customer under RS 38 and provide supporting documentation as appropriate (e.g. a Decision matrix).

6 **Response:**

Prospective Customers will be provided information on the historical outage frequency related to system events at the location they are exploring, under the understanding that such information is not an assurance of future interruptions at a given location. Historical Mid-C pricing is available to aid a Customer in nominating a Mid-C Price Cap that can also affect the frequency of interruption. Each Customer that signs up for RS 38 will require a Joint Operating Order that will outline expectations to both parties on communications during both normal and emergency conditions.

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- 24.3.1 Please discuss how the decision process explained above ensures fairness amongst different RS 38 customers, given some RS 38 customers will be receiving their requested energy requirements under RS 38 without interruption while others will be interrupted.
- 20 21

22 Response:

23 With regard to fairness, FBC intends to track the number, location, and nature of interruptions, 24 including the aspect of whether, in relation to any given interruption, there was any discretion 25 possible on FBC's part (in relation to which Customer or how much of its load to curtail) given the 26 specifics of the occurrence. If, contrary to FBC's expectation, there proved to be a need for the 27 exercise of discretion regarding order, extent, or duration of interruption, FBC anticipates 28 developing more specific criteria tailored to the kind of circumstances where the need to make choices had by that point been found to arise. Fairness concerns only arise where a system 29 30 contingency emerges and there is more than one RS 38 Customer that could be impacted. Since 31 such contingencies can be specific to a certain location on the system, this will not always be the 32 case. Interruptions related to Mid-C prices will vary between Customers based on their individual 33 nomination and do not raise fairness concerns. RS 38 is an optional program, and Customers 34 willingly sign up for the service with the expectation that service will be interrupted; however, FBC 35 views the principle of fairness as underpinning that all Customers in similar circumstances should 36 be treated in a similar and consistent manner.

Once FBC has determined to interrupt a Customer under RS 38, the decision process for how much load to interrupt will largely be driven by how the Customer's system is configured. For example, if the Customer has only one main entrance circuit breaker then there will be no option and their entire load will be disconnected. If they have more than one breaker, then FBC will



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 88

- 1 select the one with least amount of load connected unless otherwise agreed to in the Joint
- 2 Operating Order.



1	25.0	Reference:	IMPLEMENTATION
2			Exhibit B-1, Section 5, p. 20
3			Load Maintenance
4		On page 20	of the Application, FBC states:
5		The	LCIR requirement for customers to maintain an 80 percent load factor is an
6		impe	ediment for some facilities in terms of participating in the rate; however, it is an
7		impo	ortant element of the LCIR. [] FBC expects to generally plan to obtain supply
8		on a	block basis and this needs to be matched by the corresponding load. FBC will
9		clos	ely monitor this over the initial implementation period to determine if the 80
10		perc	ent required load factor is sufficient or if it must be increased to ensure that
11		the j	power purchased for the LCIR customer is consumed by the LCIR customer.
12		FBC	may be willing to consider waiving the 80 percent requirement if warranted by
13		indiv	vidual customer circumstances and/or if LCIR customers are prepared to
14		com	pensate FBC for losses associated with power purchased for, but not
15		cons	sumed by, LCIR customers[.]
16		25.1 Plea	ise explain the steps FBC will take to mitigate an RS 38 customer's failure to
17			t the OO percent lead factor requirement, and any potential concerning (a)

- 17 meet the 80 percent load factor requirement, and any potential consequence(s)
 18 and impact on the customer if an 80 percent load factor is not maintained (e.g. penalty, disconnection).
- 20

21 Response:

In preparing the response to this information request and given the level of interest both in the
 load factor requirement and in the aspects of the LCIR that serve to limit the exposure of other
 Customers to risk, FBC has concluded that a revision to add clarity to the RS 38 tariff, in particular

- 25 Special Provision (SP) #3, is required.
- 26 SP #3 currently reads,

By January 31 of each year, the Interruptible Customer will provide to FortisBC an
hourly anticipated load forecast for the premise being served under this Rate
Schedule for the following five years. Anticipated changes to this load forecast are
to be communicated by the Interruptible Customer to FortisBC with as much notice
as reasonably possible.

FBC is proposing to revise SP #3 such that both an RS 38 Customer and FBC have a clear
 understanding of the requirement to communicate load changes, the obligation to actually
 consume the load that is nominated, and the potential implications of failing to do so.

35 A revised SP #3 would read,

- 36 Prior to taking service under this Schedule, and thereafter by January 31 of each
- 37 year, the Interruptible Customer will provide to FortisBC an hourly anticipated load
- 38 forecast for the premise being served under this Rate Schedule for the following



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five years. The forecast must be the same number for any one day or days, consistent with the scheduling of the Mid-C on- and off-peak hours for that day or days. Anticipated changes to this load forecast are to be communicated by the Interruptible Customer to FortisBC within the timeframes provided by FortisBC.

5 If the Interruptible Customer's actual hourly consumption is greater than that 6 customer's forecast load for that hour, FortisBC will make a reasonable effort to 7 serve the load but is under no obligation to do so. The customer may be asked to 8 reduce load and failure to do so may result in interruption due to lack of supply. 9 Energy Taken, for the purposes of billing in the Energy Charge section of this rate 10 schedule, shall be based on actual consumption. The rate charged by FBC will not 11 be impacted by increased consumption.

12 Where the Interruptible Customer's hourly consumption is less than that 13 customer's forecast load for that hour and this is not due to a FortisBC curtailment 14 of the Customer, Energy Taken, for the purposes of billing in the Energy Charge 15 section of this rate schedule, shall be based on the customer forecast load for that 16 hour. However, in recognition that power has been delivered to the FortisBC 17 system and not consumed by the Customer, the Customer will receive a credit equal to the amount of energy it did not consume, grossed up for losses, multiplied 18 19 by a rate equal to the lower of the BC Hydro RS 3808 Tranche One Energy rate 20 and the Mid-C market-based rate being charged for that hour.

In light of this revision, SP #4, which states the requirement for a minimum 80 percent load factor, can be removed from the rate schedule, since the intent of this clause was to protect FBC and other ratepayers from the financial impact of FBC purchasing an amount of power that is not then consumed by the Customer. FBC believes that the revised SP #3 accomplishes this objective and is a more direct expression of this intent. However, if effective use of the Customer's allocation under the program cap is not being made, FBC reserves the right to review the allocation.

The impact of this revision does not result in a take-or-pay provision due to the credit provided to the Customer for energy it did not consume.

- A revised version of RS 38 is provided in Attachment 25.1.
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- 25.2 Please discuss the rationale for the 80 percent load factor requirement and the impact to FBC if this requirement is not met, such as consideration for FBC's system management and cost of service. Please explain and quantify any potential financial impact.
- 36 37



1 Response:

2 As described in the response to BCUC IR1 25.1, FBC is removing the requirement for 80 percent 3 load factor. The intent of the 80 percent load factor was to help ensure that the customer load 4 was consistent and that the Customer consumed the forecast load while still allowing a certain 5 amount of daily variation. A mismatch between power purchased by FBC to supply the LCIR 6 Customer and the power actually consumed has the potential to result in significant costs. For 7 example, if FBC is buying power at \$70 per MWh that is not consumed by the LCIR Customer, it 8 must be stored. As such its value to FBC is the incremental cost of energy. Assuming energy can 9 be purchased at approximately \$50 per MWh (roughly the BC Hydro PPA rate), the cost is \$20 10 per MWh. If this variance continues every day for an entire year over all hours, the potential cost 11 is \$20 * 8760 hours = \$175,200 for a single MW. The actual cost is highly variable depending on 12 the difference between the forecast and the actual load as well as the difference between the 13 price FBC pays and the incremental cost of energy. However, the potential for even small load 14 variances to add up over time to material costs is significant.

15 If FBC is meeting the LCIR load by purchasing from the day ahead market based on the index

16 price, FBC must purchase in flat blocks that follow the on peak and off-peak timelines. There is no flexibility on this point and therefore the LCIR Customer must also match this requirement in

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18 their load forecast to FBC.

19 Based on this, FBC determined that rather than requiring 80 percent load factor, which could still 20 result in significant costs, a better approach is to deal with the hourly variances directly. This 21 ensures that FBC will never pay more than the BC Hydro PPA rate for stored energy as a result 22 of LCIR load being less than plan.

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- 25.3 Please confirm, or explain otherwise, whether FBC considered any alternative load factor requirements for RS 38 customers. If confirmed, please elaborate on the options considered and why those other alternatives were not chosen.
- 29 30

Response:

31 No, FBC did not actively consider any other load factor requirements. Please refer to the response 32 to BCUC IR1 25.2 for further discussion of the relationship between market price and the load 33 factor. FBC believes that the load factor to ensure FBC can meet its costs for LCIR Customers 34 will change depending on the situation. Potential LCIR Customers that cannot consistently meet 35 a very high load factor will likely not be successful on the LCIR rate.



1	26.0	Refer	ence:	IMPLEMENTATION
2				Exhibit B-1, Section 4.2, pp. 15–16
3				BCUC Reporting
4		On pa	ges 15 t	o 16 of the Application, FBC states
5 6			FBC p LCIR-r	roposes to provide to the BCUC, on an annual basis, a summary of any elated activity. The summary would include information such as:
7			• Ap	plications for RS 38 service that are under review;
8			• kW	h sales and revenue provided under the LCIR;
9 10			• A c and	comparison of revenues under the LCIR to foregone revenue under RS 31 d RS 30;
11			• Ave	erage revenues from LCIR billing;
12 13			• An cus	analysis of Power Supply alternatives used to supply interruptible stomers; and
14 15			 Info cus 	ormation on the reason for, frequency and duration of interruptions for LCIR stomers.
16 17		As par or mai	rt of the i intain int	eview, FBC will provide a recommendation regarding the options to expand erruptible service beyond the initial 50 MVA offering.
18 19 20		26.1	Please those i in the t	outline FBC's internal performance metrics for RS 38 and explain how nternal metrics tie into the summary of any LCIR-related activity as outlined pullet points above.
21 22 23 24			26.1.1	In addition to the reporting items listed in the preamble, please discuss whether FBC requires any additional information to inform any required amendment or changes to RS 38.
25	<u>Resp</u>	onse:		

26 The bullet points included in the potential reporting elements were included only as a list of those 27 elements that FBC considered would be of interest to the BCUC but were not intended to be 28 reflective of any FBC internal performance metrics for RS 38. FBC has not developed internal 29 performance metrics for RS 38 to date. FBC has indicated that it will be required, after some 30 experience with the rate, to make a determination on whether or not the initial program offering of 31 50 MVA should be expanded. However, this will be done after experience with the rate has 32 revealed any issues that may exist with this form of interruptible service and not in comparison to 33 a predetermined set of criteria.

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- 26.2 In addition to the proposed scope of the annual report, please discuss whether FBC would be amendable to reporting on the following:
 - Estimates of the costs and benefits of RS 38 on an overall ratepayer basis;
 - Estimate of participant benefit based on the unit cost reduction of incremental electricity;
 - Estimate of incremental energy sales and revenue;
 - Assessment of whether risk mitigation measures (such as the initial program cap) were sufficient to protect non-participants from harm;
 - Tracking of number of existing and new RS 38 customers and RS 30 and RS 31 customers that used the rate and volumes of use;
- Assessment of customer use of the rate and determination of customer load response to Mid-C prices;
- Assessment of any implementation issues such as customer interconnection, service interruption, customer communication, and billing of incremental energy;
 - Assessment of customer satisfaction regarding the rate;
- Review any interruption of customers under non-firm provisions of the rate;
- Examination of whether load shifting by customers occurred and an assessment of the impact;
- Assessment of the usage of RS 38 compared to the usage of RS 30 and RS 31;
 - Assessment of the LCIR impact on RS 30 and RS 31 service options to determine if FBC should offer one or multiple non-firm services;
 - An analysis to examine whether the usage of each participating customer's firm electricity service has changed, and if so, to what degree, as a result of the RS 38 non-firm service over the reporting period;
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- Information about the system marginal values of FBC's resources; and
- 28

• A summary of any customer inquiries and complaints.

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30 **Response:**

FBC has reviewed the additional reporting scope and can confirm that it considers these additional items potentially achievable. However, FBC expects it to be a large amount of additional work to collect and analyze the required data and that this effort and the associated cost has nor been incorporated into the rate. FBC can provide an estimate of the costs related to reporting once the final content of the report is known.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 94

1 2 3 4 26.2.1 Please indicate if, in FBC's view, any of the above items would be

confidential filings. Please explain why.

6

7 <u>Response:</u>

FBC would attempt to file this information without divulging any customer information and would
aggregate data where possible. However, if the LCIR was only in use by a single Customer it

10 would likely be necessary to file the information on a confidential basis in order to protect the

11 privacy of that Customer.

12



1 27.0 **Reference:** IMPLEMENTATION

Exhibit B-1, Section 4.3, pp. 16–18

Bonbright Principles

- 4 On pages 16 to 18 of the Application, FBC assesses each of the eight Bonbright Principles 5 as either "good" or "fair".
- 6 27.1 Please provide an updated analysis of the eight Bonbright Principles under a 7 scenario where (i) RS 30 and RS 31 customers convert to RS 38, with no new 8 load; (ii) no customers convert to or sign up for RS 38; and (iii) all new customers 9 sign up for RS 38 with no change in RS 30 or 31.
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11 Response:

12 FBC's view of the Bonbright Attributes of a Sound Rate Structure is distinct from an assessment 13 of results that may occur given the uptake of the rate. What changes with the uptake of the rate 14 is the impact on the participating and non-participating Customers. From this perspective, FBC 15 is of the view that scenario (ii), where no Customers convert to or sign up for RS 38, remains as 16 detailed in the Application since with no take-up, the potential for the rate as described is 17 unchanged. What can be offered, and what is reflected in the table below, is an assessment of the relative outcome for each Bonbright criterion given scenarios (i) and (iii). The only attributes 18 19 whose assessment varies with uptake are where revenue and cost recovered may be affected -

Criterion	Assessment (i)	Assessment (iii)	Comment
Recovery of the revenue requirement	Fair	Good	If there is no new load as a result of the conversion of existing RS 30/31 load there is the potential (though not a certainty) for an overall margin decrease and, whereas if all RS 38 load results from new Customers incremental contribution to fixed costs is assured. FBC will recover its revenue requirement in any case. The assessment of scenarios (i) and (iii) should therefore be viewed only as relative to each other.
Fair apportionment of costs among Customers	Fair	Good	If there is no new load as a result of the conversion of existing RS 30/31 load some fixed costs may need to be recovered from other Customers. If all RS 38 load is incremental, other Customers are compensated for use of the system and the RS 38 load pays for costs as agreed to when joining the program.
Price signals that encourage efficient use and discourage inefficient use	Good	Good	LCIR Customers will receive direct price signals to which they can respond by controlling load. LCIR Customers will not have access to embedded cost power when the cost of available supply exceeds rates. This aspect of the assessment is unchanged by uptake.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 96

Criterion	Assessment (i)	Assessment (iii)	Comment
Customer understanding and acceptance	Good	Good	Interruptible service is relatively simple in form and has been designed with input from potential Customers in the case of the LCIR. This aspect of the assessment is unchanged by uptake.
Practical and cost-effective to implement	Fair	Fair	From an FBC perspective, there is minimal ongoing cost to administer the rates. Customers may face additional up- front infrastructure costs. This aspect of the assessment is unchanged by uptake.
Rate stability	Fair	Fair	For the LCIR, the structure is set; however, the energy price is subject to fluctuation. This aspect of the assessment is unchanged by uptake.
Revenue stability	Good	Good	The rate is proposed to be permanent and should provide a consistent stream of additional revenue. Should all of the RS 38 load be as a result of the conversion of RS 30/31 Customers, there may be an overall decrease in revenue; however, this does not equate to fluctuations in revenue that would impact the stability of revenue to FBC.
Avoidance of undue discrimination	Good	Good	The rate is available to all Large Commercial Customers on the same basis throughout the service area. Non- participating Customers are insulated from risk by the terms and conditions, such as the initial 50 MVA cap on uptake, and existing security provisions. This aspect of the assessment is unchanged by uptake.



1	G.	CONT	RACT FOR INTERRUPTIBLE SERVICE
2	28.0	Refere	ence: CONTRACT FOR INTERRUPTIBLE SERVICE
3 4			Exhibit B-1, Section 1.1, p. 1, Section 3.2, p. 10, Section 3.3, p. 13; Exhibit B-2, Attachment, "1 – Contract for Interruptible Service"
5			Contract for Interruptible Service
6		On pa	ge 1 of the Application, FBC states:
7 8 9 10			As proposed, eligible customers could choose to take service using this optional interruptible rate for new or existing customers who would otherwise be eligible to receive service under either Rate Schedule (RS) 30 – Large Commercial Service – Primary, or RS 31 – Large Commercial Service – Transmission.
11 12		In Att Interru	achment 1 to the Supplemental Information, FBC provides the Contract for uptible Service (Contract), including the following information:
13			[]
14 15		4.	<u>Type of Electricity Service</u> . [] The Customer shall not exceed the Demand limit of XXX kVA, []
16 17 18 19		5.	<u>Commencement of Electricity Service</u> . [] The term of this Contract shall be for two years, commencing on the date on which Electricity Service is deemed to commence in accordance with this clause 5, and shall continue thereafter until terminated by 6 months' prior notice in writing by either party to the other.
20 21 22 23		6.	<u>Rate Payable</u> . [] The Customer shall, by giving notice to FortisBC both by email (at XXX@fortisbc.com [insert email address]) and by telephone (at XXX [insert telephone number]) by no later than 10 days prior to the beginning of each month during the term of this Contract, nominate the Mid-C Price Cap for that month. []
24 25 26 27 28		7.	<u>Revenue Guarantee and Security Deposit</u> . A revenue guarantee of \$ [insert amount] and a security deposit of \$[insert amount [verify with Collections)] will be required from the Customer pursuant to the Terms and Conditions of FortisBC's filed Electric Tariff before FortisBC provides Electricity Service pursuant to this Contract.
29 30 31 32 33		8.	<u>Customer Contribution</u> . *A Customer contribution will be required with respect to the construction and installation of supply facilities and the Customer agrees to pay, in advance, the sum of \$ [insert amount] (verify with designers)] pursuant to the Terms and Conditions of FortisBC's filed Electric Tariff (including those relating to Extensions).
34			*The sum of \$ [insert amount] has been paid in full by the Customer.
35			[]



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28.1 Please explain how the "the Demand limit of XXX kVA" with respect to the "Type of Electricity Service" clause will be determined for each customer and elaborate on the factors considered.

5 **Response:**

6 Clause 4 contains two terms related to customer demand. The Contract Demand refers to the 7 maximum amount of power that FBC has agreed to supply under normal circumstances pursuant 8 to the rate under which the Customer is receiving service. The Demand Limit represents that 9 amount of power that FBC may be able to supply, but where no obligation exists. The Customer 10 cannot exceed the Demand Limit unless it has received prior permission from FBC. The Demand 11 Limit is set in consultation with FBC Engineering which will determine the maximum amount of 12 load that can be accommodated on either a firm or non-firm basis after conducting a study of the 13 system in the area where the load is to be located. Typical elements of such a study include a 14 power flow analysis, short circuit analysis, and a stability analysis.

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28.2 Please explain how FBC determined that a two-year term for the Contract is appropriate.

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21 Response:

A two-year term is consistent with the existing template for all large commercial service agreements and was therefore included in the RS 38 template as well. However, the final term is subject to discussions between FBC and the Customer. Given that RS 38 provides that "Service under this Schedule is available for a minimum of 12 Months after commencement of Service", it may be that a 12-month duration would be preferable for Customers; this is something that FBC would likely be receptive to.

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31		28.2.1	Please confirm, or explain otherwise, that the two-year term of the
32			Contract refers to the effective term of the Contract, rather than the
33			requirement to remain on RS 38 for two years.
34			
35	Response:		
36	Confirmed.		
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39			



	FortisBC Inc. (FBC or the Company)	Submission Date:
TM	Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
	Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 99

- 28.3 Please explain how the Contract applies to customers who receive service under both RS 30 or 31 and RS 38, simultaneously.
- 4 <u>Response:</u>
- 5 Customers that elect to take interruptible service for only a portion of their load will have separate 6 agreements that govern firm and non-firm load.
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- 10 On page 10 of the Application, FBC states:
- 11 The level of the Mid-C Price Cap nomination made by the customer, even if 12 relatively high, will not impose a risk on FBC that cannot be mitigated by the 13 existing security deposit provisions that will ensure that FBC holds a deposit 14 sufficient to provide payment for an estimate of the total bill for the two highest 15 consecutive months consumption of electricity by the applicable premises.
- 16 28.4 Please explain how the quantity for "revenue guarantee" and "security deposit"
 17 outlined in the "Revenue Guarantee and Security Deposit" clause in the Contract
 18 are determined and explain what these two items are intended to cover.
- 20 **Response:**

The revenue guarantee and security deposit terms in the Contract relate directly to those terms as they exist in the FBC Electric Tariff, sections 4.6 and 2.5 respectively, and the Contract clause is a standard one in commercial supply agreements. The security deposit is for security for

- 24 payment of bills.
- 25 The requirement for a revenue guarantee is described in section 4.6 of the Tariff as follows:

If the provision of Service by FortisBC to a non-residential Customer will require
 construction and installation costs by FortisBC of more than \$5,000 per Customer
 supplied, FortisBC may require each such Customer to provide a revenue
 guarantee deposit, as assurance that FortisBC will receive sufficient revenue to
 recover the installation costs of the facilities

Since a requirement of RS 38 is that the Customer fund all construction and installation costs
 related to the service, the revenue guarantee portion of the clause will not be used. As such, FBC
 intends to remove it from the final version of the Contract to avoid confusion.

34 35	
36 37 28.4.1 38	Please confirm, or explain otherwise, that the "security deposit" outlined in the "Revenue Guarantee and Security Deposit" clause in the Contract



1 2 3 4			is equivalent to the "estimate of the total bill for the two highest consecutive months consumption of electricity by the applicable premises" discussed in the Application.
5	Response:		
6	Confirmed.		
7 8			
9 10 11 12 13		28.4.2	Please discuss over what time period "the two highest consecutive months consumption of electricity" FBC will use to estimate for a deposit and explain why.
14	<u>Response:</u>		
15 16 17 18 19	FBC expects estimating the months rever the Customer prompt a revi	that it w e expectenue assoc 's Mid-C ew of the	ill initially determine the security requirements for RS 38 Customers by d load and ensuring that the deposit on hand will be adequate to cover two tiated with the Customer's load forecast at an Energy Charge reflective of Price Cap. Revisions to either the load forecast or Mid-C Price Cap would adequacy of the deposit.
20			
21 22 23 24	On pa be set	age 13 of rved wher	the Application, FBC states, "[t]he customer served on the LCIR will only n it funds any interconnection costs…"
25 26 27 28	28.5	Please Contribu intercon	explain whether "Customer Contribution" outlined in the "Customer ution" clause in the Contract is inclusive, or in additional to, all nection costs borne by the customer.
29	Response:		
30 31 32 33	The Custome Commercial of the Custome borne by the	er Contrib contracts r Contribu Customer	oution clause in the Electricity Service Contract is common to all Large where a contribution may be required. In the case of RS 38 Customers, ution is comprised of and therefore inclusive of the interconnection costs f.
34 35			
36 37 38	28.6	Please RS 38 c	explain how the "Customer Contribution" amount is determined for each sustomer.



FortisBC Inc. (FBC or the Company)	Submission Date:
Application for Approval of a Large Commercial Interruptible Rate (Application)	October 26, 2022
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 101

2 Response:

Through the Industrial Electricity Interconnection process, FBC and the LCIR Customer work together to finalize interconnection requirements and design for the interconnection. FBC provides the customer contribution amount after the design and estimating process is complete. The interconnection costs are only those directly related to the interconnection and communication with FBC. Costs related to facilities on the customer side of the interconnection are separate and also the responsibility of the Customer.

Attachment 10.2

REFER TO LIVE SPREADSHEET MODELS

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)

Attachment 10.4

REFER TO LIVE SPREADSHEET MODELS

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)

Attachment 25.1

RATE SCHEDULE 38 – INTERRUPTIBLE SERVICE

NATURE OF SERVICE:

Interruptible Service is a non-firm, large commercial rate where customers are subject to service suspensions as described in this Rate Schedule. A Customer taking service under this Rate Schedule is referred to as an Interruptible Customer.

<u>AVAILABILITY</u>: Interruptible Service is available throughout FortisBC's electric service area to Customers whose entire load at one point of interconnection would normally be eligible for service on Rate Schedule 30 – Large Commercial Service – Primary, or Rate Schedule 31 – Large Commercial Service – Transmission, subject to:

- a. a review by FortisBC of each customer request for suitability and technical viability;
- b. written agreement; and
- c. in cases where the Interruptible Customer chooses to have only a portion of its total load served under this Rate Schedule, the portion of the customer's load that is to be served under this Rate Schedule is sufficient in size to itself qualify for service on either Rate Schedule 30 Large Commercial Service Primary, or Rate Schedule 31 Large Commercial Service Transmission.

<u>CHARGES:</u> Each Billing Period, the Customer will be billed the total of the Customer Charge and Energy Charge calculated as described below.

Monthly Rate:

For Customers otherwise eligible for Rate Schedule 30: \$1030.68 per Month

For Customers otherwise eligible for Rate Schedule 31: \$3,366.02 per Month

In cases where the Interruptible Customer chooses to have only a portion of its total load served under this Rate Schedule, and is therefore paying the above charges pursuant to the billing associated with the firm portion of its load, the Customer Charge billed under this Rate Schedule will be zero (\$0.00).

Rate Schedule 38 Energy Charge:

Interruptible Customers taking service on this rate will be billed an Energy Charge in each Billing Period equal to the sum of Hourly Energy Charges determined as follows:

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Original Page R-38.1

RATE SCHEDULE 38 – INTERRUPTIBLE SERVICE (Cont'd)

Rate Schedule 38 Energy Charge (Cont'd):

- (i) For a Peak Hour, the Intercontinental Exchange (ICE) Day Ahead Mid-Columbia Peak Index for the applicable day of flow in \$/MWh; and For an Off-Peak Hour, the Day Ahead Mid-Columbia Off-Peak Index for the applicable day of flow in \$/MWh (in either such case, the "applicable Mid-C Price"). In Hours in which the applicable Mid-C Price is negative, a value of \$0.00/MWh will be used. In Hours in which the applicable Mid-C Price exceeds the cap, if any, nominated by the Interruptible Customer pursuant to the applicable Service Agreement, expressed in \$/MWh (the "Mid-C Price Cap") for the month in which such Hour occurs, a value equal to the Mid-C Price Cap will be used; and
- (ii) System losses as per Rate Schedule 109;
- (iii) Hourly Service Adder of \$0.01000 per kWh; and
- (iv) Clean Market Adder (CMA)*
 - The Hourly Energy charge is calculated as:

(Energy Taken<u>**</u> (kW.h) x (1+ loss rate %)) x (applicable Mid-C Price + 0.0100+ CMA)

- * The CMA is currently \$0.00 per kW.h and will be adjusted based on applicable BCUC determinations.
- ** Energy Taken is equal to actual hourly consumption or as determined by Special Condition 3(b) if applicable.

REASONS FOR INTERRUPTION:

The Suspension of Service for any of the following reasons is an Interruption for the purpose of this Rate Schedule:

- a: To maintain service to Customers taking service under any of FortisBC's other rate schedules that is not designated as non-firm; or
- b: To avoid any 3rd Party charges that may be levied against FortisBC related to Imbalance Energy; or
- c: To maintain the stability, reliability, or integrity of the FortisBC or Western Interconnected electrical systems; or
- d: Lack of available transmission<u>on the FBC System and/or the path</u> that includes 71 Line; or

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Effective Date:

Accepted for Filing:

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Original Page R-38.2

FORTISBC INC. ELECTRIC TARIFF

e: For Hours where FortisBC reasonably expects that the Energy Charge will be based on the Mid-C Price Capas described in part i) of the Energy Charge portion of this rate schedule, FortisBC may interrupt the Customer.

RATE SCHEDULE 38 - INTERRUPTIBLE SERVICE (Cont'd)

NOTICE OF INTERRUPTION:

FortisBC does not guaranty that prior notice of a pending or potential Interruption will be provided in any or all cases. However, FortisBC will endeavor to provide notice, where practicable.

SPECIAL PROVISIONS:

- Service under this Schedule is available for a minimum of 12 Months after commencement of Service.
- The applicable Mid-C Price will be converted to \$CDN using the daily Bank of Canada rate and settled on a monthly basis.
- 3. Prior to taking service under this Schedule, and thereafter by January 31 of each year, the Interruptible Customer will provide to FortisBC an hourly anticipated load forecast for the premise being served under this Rate Schedule for the following five years. The forecast must be the same number for any one day or days, consistent with the scheduling of the Mid-C on- and off-peak hours for that day or days. Anticipated changes to this load forecast are to be communicated by the Interruptible Customer to FortisBC within the timeframes provided by FortisBC.
 - a. If the Interruptible Customer's actual hourly consumption is greater than that customer's forecast load for that hour, FortisBC will make a reasonable effort to serve the load but is under no obligation to do so. The customer may be asked to reduce load and failure to do so may result in interruption due to lack of supply. Energy Taken, for the purposes of billing in the Energy Charge section of this rate schedule, shall be based on actual consumption. The rate charged by FBC will not be impacted by increased consumption.
 - b. Where the Interruptible Customer's hourly consumption is less than that customer's forecast load for that hour, and this is not due to a FortisBC curtailment of the Customer, Energy Taken, for the purposes of billing in the Energy Charge section of this rate schedule, shall be based on the customer forecast load for that hour. However, in recognition that power has been delivered to the FortisBC system and not consumed by the Customer, the Customer will receive a credit equal to the amount of energy it did not consume, grossed up for losses, multiplied by a rate equal to the lower of the BC Hydro RS 3808 Tranche One Energy rate and the Mid-C market-based rate being charged for that hour.

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Effective Date:

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Original Page R-38.3
FORTISBC INC. ELECTRIC TARIFF

> **Deleted:** <#>By January 31 of each year, the Interruptible Customer will provide to FortisBC an hourly anticipated load

Schedule for the following five years. Anticipated changes to this load forecast are to be communicated by the

Interruptible Customer to FortisBC with as much notice as

forecast for the premise being served under this Rate

reasonably possible.¶ 4. The Interruptible Customer is required to maintain a Existing Customers that move any portion of their existing load to this Rate Schedule will Load Factor of 80% in order to receive service under this be deemed to have terminated service under the Customer's current Rate Schedule for Rate Schedule unless otherwise agreed to by FortisBC.¶ that portion. Where a Customer requires firm service for a portion of its load, adequate separation of firm service and service taken under this Rate Schedule must be established Deleted: 6. to facilitate both approved revenue metering and interruption as provided under this rate. Formatted: Justified, Numbered + Level: 1 + Numbering Style: 1, 2, 3, ... + Start at: 1 + Alignment: Left + Aligned at: 0" + Indent at: 0.5" A separate point of delivery for the firm service portion may be required at the sole discretion of FortisBC. In cases where the Interruptible Customer chooses to have only a portion of its total load Deleted: 7. served under this Rate Schedule, the portion of the Customer's load that is not served under this Rate Schedule will be billed pursuant to the rate schedule that would otherwise be applicable to the Customer's total load, regardless of the magnitude of the load that is not served under this rate schedule. RATE SCHEDULE 38 – INTERRUPTIBLE SERVICE (cont'd) SPECIAL PROVISIONS (Cont'd): The Interruptible Customer may request to transition or return to firm service under either Deleted: 8 Rate Schedule 30 or 31 by making an application through the existing FortisBC Industrial Formatted: Justified, Numbered + Level: 1 + Numbering Electricity Interconnection process. Making such an application does not guaranty that Style: 1, 2, 3, ... + Start at: 1 + Alignment: Left + Aligned at: 0" + Indent at: 0.5", Tab stops: 0.5", Left + Not at 0.25" firm service in the amount requested will be available at the desired location. To receive and continue service under this Rate Schedule, the Interruptible Customer will Deleted: 9. install all necessary communication, relay and breaker equipment as may be required on an ongoing basis, subject to FortisBC approval, and will pay for all associated hardware costs. The Customer must maintain all FortisBC-approved equipment at the Customer's location necessary for FortisBC to remotely interrupt the Customer. FortisBC shall not be liable for any loss or damage caused by or resulting from any Deleted: 10. Interruption of service or the non-provision of notice of any pending or potential Interruption. Nothing herein prevents FortisBC from interrupting service for emergency circumstances, 10. Deleted: 11. determined at FortisBC's sole discretion. FortisBC maintains the right to place a cap on the aggregate MW accepted on the Deleted: 12. 11. Interruptible Rate. The cap may be reviewed and revised from time to time. The current cap will be published on the FortisBC website. FortisBC will determine upon Customer Application the amount of interruptible load, if any, Deleted: 13. that can be connected at the requested location. Order No.: Issued By: Diane Roy, Vice President, Regulatory Affairs Effective Date: Accepted for Filina: BCUC Secretary: Original Page R-38.4

Energy provided under this Rate Schedule is non-firm and subject to interruptions that

may be initiated through automatic means, or any other method when required at the sole

discretion of FortisBC, for any of the reasons noted in the Reasons for Interruption or as

set out in paragraph 11 below.

FORTISBC INC. ELECTRIC TARIFF

<u>13.</u>	Interruptible Customers may meet the conditions to become a Registered Entity under the Rules of Procedure for Reliability Standards in British Columbia and, if so would be required to be compliant with applicable Mandatory Reliability Standards. All compliance activities are the sole responsibility of the Interruptible Customer.	Deleted: 14.
<u>14.</u>	_Where FortisBC has made a contribution toward the costs of any Extension or System	Deleted: 15.

- 14. Where FortisBC has made a contribution toward the costs of any Extension or System Upgrade required to provide service to an Existing Customer, and that Customer requests to transition to Interruptible Service, and the total billing revenue collected from the Customer to the time that service is initiated under this Rate Schedule is insufficient to cover that FortisBC contribution, the Customer will be required to repay the FortisBC contribution as follows:
 - a. Repayment Amount = Amount of FortisBC contribution (total revenue received from the Customer + any contribution amount that has been received from any additional Customer(s) connecting to the Extension).

Order No.:

1

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Original Page R-38.5