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August 30, 2022

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC
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)
~ Project No. 1599350**

Supplemental Information

FBC writes further to the British Columbia Utilities Commission (BCUC) letter dated August 3, 2022 (Exhibit A-2) in the above-noted proceeding. In Exhibit A-2, the BCUC requested the following supplemental information:

1. Background on operating context and a discussion on how FBC plans to accommodate the expected RS 38 load within FBC's system operation and energy and capacity planning;
2. Details related to the 'Mid-C Price Cap', including the nomination process and implementation of the Mid-C Price Cap for each of the RS 38 Customers under various market price scenarios;
3. A list of attendees in each of FBC's LCIR Customer Engagement sessions listed in Table 6-1 of the Application and a breakdown of the attendees by category (e.g., RS 30/31 Customers, potential new Customers, intervener group, other);
4. The profile of potential RS 38 Customers, including business needs, energy and capacity requirements, and geographical location;
5. List and quantify all upfront and ongoing costs borne by RS 38 Customers to receive service under RS 38;
6. Supporting models and calculations in excel format to support the economic justification and ratepayer impact discussed under Section 3.3 of the Application;

7. Scenario analysis of ratepayer impact to other FBC Customers at various levels of uptake from existing RS 30/31 Customers switching to RS 38 versus attracting new Customers;
8. Further details on the criteria, order of interruption among RS 38 Customers, and communication plan to interrupt service; and
9. Justification for the proposed initial uptake limit of 50 megawatts and the proposed Hourly Service Adder of \$0.01/kilowatt-hour, including any alternative proposals considered and supporting analysis and calculations.

FBC has organized this Supplemental Information on the following pages under headings that mirror the bullet points above, preceded by a brief introduction.

Introduction

The Application for a Large Commercial Interruptible Rate (LCIR) was filed in light of a number of drivers as described in the Application, section 2.

While interest has been expressed by a number of existing and potential Customers in the concept of interruptible service, FBC does not at this time have any firm commitment to participation in the rate that would allow for a specific description of the type, load, or location of Customers (as sought by some of the supplemental requests). One of the key elements of the rate is the collaborative and Customer-specific treatment of requests that may qualify for service under the rate, which will see FBC Engineering and Operations work closely with the Customer to design a system and protocol that meets the needs of both the Customer and FBC and provides adequate protection for the electrical system.

Actual LCIR Customer and ratepayer impact is also highly dependent on the size of the LCIR load, and any interruptions that do occur, as well as the level of Mid-C market prices, the level of any Mid-C Price Cap, and the ability of FBC to economically resource the load at times when the market price exceeds the price cap nominated by the Customer. The actual impact of the LCIR is further dependent on the ability of FBC to infill interruptible load with new load served under existing rates. There are many moving parts to consider, which lends support for the initial 50 MW program offering as discussed in the response to question 8 below.

FBC wishes to be as responsive as possible to the Panel's requests but notes that out of necessity in the above context, some responses deal with a hypothetical range of scenarios or with what are expected to be typical costs and operational considerations rather than actual costs that have occurred.

1. Background on operating context and a discussion on how FBC plans to accommodate the expected RS 38 load within FBC's system operation and energy and capacity planning.

The RS38 load will be managed operationally using FBC's existing processes to ensure that FBC has adequate capacity to meet the forecasted load. Current conditions on the FBC system as well as short term load forecasts are monitored on a real-time and constant basis. If any of the forecasts identify an issue with capacity on the system that could impact an RS 38 Customer, communication would occur as discussed in the response to panel question 7 later in this document.

With regard to energy and capacity planning, FBC expects 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. However, FBC is not planning to include consideration of the energy and capacity in its medium to longer term resource planning process as the intent is to acquire the energy and capacity on a short-term basis and flow through the market cost to the LCIR Customer.

2. Details related to the ‘Mid-C Price Cap’, including the nomination process and implementation of the Mid-C Price Cap for each of the RS 38 Customers under various market price scenarios.

The Mid-C Price Cap (Cap) is a feature of the LCIR that forms one part of the calculation of the Energy Charge portion of the rate. The Cap may be unique to each Customer, given the nomination process outlined below. The intent of the Cap is to prevent the Customer from being exposed to very high Mid-C prices above which it may either be uneconomic for the Customer to operate, or which simply reflects the amount of risk that the Customer is willing to accept. The Cap also provides protection for FBC and for other Customers of FBC by limiting exposure to a situation where an LCIR Customer defaults after power required to meet load has already been acquired by FBC.

The nomination process for the Cap follows the process set out in the Electricity Service Contract for Interruptible Service. This standard form of agreement has been attached to this document as Attachment 1. Clause 6 of the agreement is as follows:

6. Rate Payable. The Rate to be paid by the Customer for Electricity Service pursuant to this Contract shall be according to Rate Schedule 38 (as amended from time to time), commencing from the date as determined in clause 5. 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. If the Customer fails to nominate a Mid-C Price Cap for any month during the term of this Contract, the Mid-C Price Cap then most recently having been nominated by the Customer shall continue to apply for that month. The Mid-C Price Cap for the month during which the date as determined in clause 5 occurs shall be \$ XXX /MWh [insert amount].

The table below illustrates some possible examples of an hourly energy charge as calculated under the draft RS 38 tariff. Various levels of the Mid-C price are shown in column c. The total hourly Energy Price is shown in column f, under the assumption that the concept of a Clean Market Adder (CMA) is accepted as part of the Long-Term Electric Resource Plan and that FBC subsequently negotiates a power purchase agreement that includes a \$2/MWh clean premium.¹

¹ The 2\$/MWh amount is discussed in the FBC Long Term Electric Resource Plan, section 2.5.7. https://docs.bcuc.com/Documents/Proceedings/2021/DOC_63911_B-1-FBC-LTERP-and-LongTerm-DSM-Plan.pdf.

Table 1: RS 38 Hourly Energy Charge Examples

| | a | b | c | d | e | f=b* (c+d+e) |
|----|-----------------------|---------------|----------------------------|--------------------|-------------|-------------------------------|
| | Default Customer Rate | 1 + Loss Rate | Mid-C Price (\$/kWh \$CDN) | \$0.0100/kWh Adder | CMA(\$/kWh) | Hourly Energy Charge (\$/kWh) |
| 1 | RS 30 | 1.0426 | 0.010 | 0.0100 | 0.002 | 0.02294 |
| 2 | RS 30 | 1.0426 | 0.020 | 0.0100 | 0.002 | 0.03336 |
| 3 | RS 30 | 1.0426 | 0.030 | 0.0100 | 0.002 | 0.04379 |
| 4 | RS 30 | 1.0426 | 0.040 | 0.0100 | 0.002 | 0.05422 |
| 5 | RS 30 | 1.0426 | 0.050 | 0.0100 | 0.002 | 0.06464 |
| 6 | RS 30 | 1.0426 | 0.060 | 0.0100 | 0.002 | 0.07507 |
| 7 | RS 30 | 1.0426 | 0.070 | 0.0100 | 0.002 | 0.08549 |
| 8 | RS 30 | 1.0426 | 0.080 | 0.0100 | 0.002 | 0.09592 |
| 9 | RS 30 | 1.0426 | 0.090 | 0.0100 | 0.002 | 0.10635 |
| 10 | RS 30 | 1.0426 | 0.100 | 0.0100 | 0.002 | 0.11677 |
| 11 | RS 30 | 1.0426 | 0.110 | 0.0100 | 0.002 | 0.12720 |
| 12 | RS 31 | 1.0286 | 0.010 | 0.0100 | 0.002 | 0.02263 |
| 13 | RS 31 | 1.0286 | 0.020 | 0.0100 | 0.002 | 0.03292 |
| 14 | RS 31 | 1.0286 | 0.030 | 0.0100 | 0.002 | 0.04320 |
| 15 | RS 31 | 1.0286 | 0.040 | 0.0100 | 0.002 | 0.05349 |
| 16 | RS 31 | 1.0286 | 0.050 | 0.0100 | 0.002 | 0.06377 |
| 17 | RS 31 | 1.0286 | 0.060 | 0.0100 | 0.002 | 0.07406 |
| 18 | RS 31 | 1.0286 | 0.070 | 0.0100 | 0.002 | 0.08435 |
| 19 | RS 31 | 1.0286 | 0.080 | 0.0100 | 0.002 | 0.09463 |
| 20 | RS 31 | 1.0286 | 0.090 | 0.0100 | 0.002 | 0.10492 |
| 21 | RS 31 | 1.0286 | 0.100 | 0.0100 | 0.002 | 0.11520 |
| 22 | RS 31 | 1.0286 | 0.110 | 0.0100 | 0.002 | 0.12549 |

The calculation of the Energy Charge under RS 38 provides that in any hour that the Mid-C price is below the Cap, the Mid-C price will be used. Item (i) in the *Energy Charge* section and item (e) in the *Reasons For Interruption* section combine to mean that if the Mid-C price rises above the Cap, FBC may, but is not bound to, interrupt/curtail² the Customer.

Consider a situation where the Cap for a Transmission-connected Customer (that is eligible for service under RS 31) is set at \$70 (\$Cdn equivalent) per MWh. Up to the Mid-C price contained in line 18 of Table 1, the hourly Energy Price would be calculated using the Mid-C price. If the Mid-C price rises to the level in line 19 (\$80/ MWh), the hourly Energy Price would be based on the Cap, or at the discretion of FBC, the Customer's service may be interrupted.

² FBC considers an interruption to be a complete cessation of delivery, while a curtailment may involve only a partial reduction in service for those Customers for which this is possible. For the balance of this document use of the word interruption is intended to cover both situations.

3. A list of attendees in each of FBC’s LCIR Customer Engagement sessions listed in Table 6-1 of the Application and a breakdown of the attendees by category (e.g., RS 30/31 Customers, potential new Customers, intervener group, other); The profile of potential RS 38 Customers, including business needs, energy and capacity requirements, and geographical location.

Please refer to Table 2 below for detail on the Customers and organizations that participated in the engagement sessions listed in Table 6-1 of the Application. Note that the number of organizations below will not match the counts in Table 6-1 as some organizations had multiple participants. Also, in preparing this submission, FBC discovered that the original attendee count for the first two sessions inadvertently included two FBC employees and should be adjusted downward by that amount. Engagement did not include an assessment of the potential energy or capacity requirements specifically of the participants in the engagement sessions, nor how each would operate under the rate. FBC also notes that on page 16 of the Application, the Customer counts were stated as 36 for RS 30, and 31 for RS 31. The RS 31 Customer count is actually four. All four of these transmission-connected Customers (the rate class most likely to take interruptible service) attended the engagement sessions.

Table 2: Public Engagement Participants

| Date | Session | Organization | Interest | Industry | Location |
|-----------------|------------------------------|-------------------------------------|----------------------|------------------|------------------|
| July 6, 2021 | LCIR Engagement Session 1 #1 | UBC Okanagan | Current Customer | Education | Okanagan |
| | | Rackforce Networks | Current Customer | Technology | Okanagan |
| | | City of Kelowna | Prospective Customer | Government | Okanagan |
| | | The Valens Company | Current Customer | Cannabis | Okanagan |
| | | BCUC | Regulator | n/a | British Columbia |
| | | Mercer Celgar | Current Customer | Pulp & Paper | Kootenays |
| | | Atco Lumber | Current Customer | Forestry | Kootenays |
| | | DMG Blockchain | Current Customer | Technology | Boundary |
| | | BC Sustainable Energy Assn | Intervenor Group | Intervenor Group | British Columbia |
| | | JH Huscroft | Current Customer | Forestry | Kootenays |
| July 7, 2021 | LCIR Engagement Session 1 #2 | Weyerhaeuser | Current Customer | Forestry | Okanagan |
| | | Canfor | Current Customer | Forestry | Okanagan |
| | | Rencorp | Prospective Customer | Technology | Kootenays |
| | | Roxul | Current Customer | Manufacturing | Boundary |
| | | Iris Energy | Prospective Customer | Technology | Kootenays |
| | | BCUC | Regulator | n/a | British Columbia |
| | | Porcupine Wood Products | Current Customer | Forestry | Kootenays |
| | | Lassonde Inc | Current Customer | Food Services | Okanagan |
| August 25, 2021 | LCIR Engagement Session 2 #1 | Rencorp | Prospective Customer | Technology | Kootenays |
| | | Iris Energy | Prospective Customer | Technology | Kootenays |
| | | Lassonde Inc | Current Customer | Food Services | Okanagan |
| | | Mercer Celgar | Current Customer | Pulp & Paper | Kootenays |
| | | Regional District Kootenay Boundary | Government | Government | Kootenays |
| | | Atco Lumber | Current Customer | Forestry | Kootenays |
| | | Weyerhaeuser | Current Customer | Forestry | Okanagan |

| Date | Session | Organization | Interest | Industry | Location |
|-------------------|-----------------------------------|----------------------------|----------------------|------------------|------------------|
| | | Structurlam | Current Customer | Manufacturing | Okanagan |
| | | DMG Blockchain | Current Customer | Technology | Boundary |
| August 26, 2021 | LCIR Engagement Session 2 #2 | Mercer Celgar | Current Customer | Pulp & Paper | Kootenays |
| | | BC Sustainable Energy Assn | Intervenor Group | Intervenor Group | British Columbia |
| | | Iris Energy | Prospective Customer | Technology | Kootenays |
| | | DMG Blockchain | Current Customer | Technology | Boundary |
| | | Whitewater Ski Resort | Current Customer | Recreation | Kootenays |
| February 22, 2022 | Final Rate Presentation Session 1 | Canfor | Current Customer | Forestry | Okanagan |
| | | Atco Lumber | Current Customer | Forestry | Kootenays |
| | | Lassonde Inc | Current Customer | Food Services | Okanagan |
| | | City of Kelowna | Prospective Customer | Government | Okanagan |
| | | BC Sustainable Energy Assn | Intervenor Group | Intervenor Group | British Columbia |
| | | Porcupine Wood Products | Current Customer | Forestry | Kootenays |
| | | Mercer Celgar | Current Customer | Pulp & Paper | Kootenays |
| | | Iris Energy | Prospective Customer | Technology | Kootenays |
| February 23, 2022 | Final Rate Presentation Session 2 | Rencorp | Prospective Customer | Technology | Kootenays |
| | | DMG Blockchain | Current Customer | Technology | Boundary |

4. List and quantify all upfront and ongoing costs borne by RS 38 Customers to receive service under RS 38.

There are two distinct types of Customers that could be served under RS 38: those that are existing Customers served under RS 30/31 that transition some or all of their load to the interruptible service; and those Customers that are new to FBC and sign up for RS 38 service from the start. Existing RS 31 Customers served at a transmission voltage would already have all of the infrastructure in place to meet existing load, and if any additional load requires additions or reinforcement of existing facilities, these additions will receive the same treatment as they would for an increase in load under an existing firm rate schedule. Similarly, for a completely new RS 38 Customer, required system additions and/or reinforcement would be treated in a manner consistent with a new Customer connecting and taking service under RS 30/31

The new consideration with regard to potential RS 38 costs relates to incremental costs for taking interruptible service rather than on default RS 30/31 rates. Incremental upfront and ongoing costs that are specific to RS 38 are related to Protection and Control, Communication, and any facilities required to enable the automatic or manually FBC initiated disconnection and reconnection of the Customer load from the FBC system. For an RS 31-eligible Customer, these facilities would be installed regardless of whether or not the Customer chooses interruptible service, so there are no expected incremental costs. For a Customer that would normally take primary service under RS 30, an FBC-controlled means of disconnection would be required. Depending on the type of disconnection required, costs would range from approximately \$10,000 to \$100,000.

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.

Ongoing costs related to the inspection and maintenance of the incremental facilities are not expected to be material. Once connected, the costs of resourcing, administering, and billing for interruptible service are covered by the charges contained in the RS 38 rate schedule.

5. Supporting models and calculations in excel format to support the economic justification and ratepayer impact discussed under Section 3.3 of the Application.

The Excel model showing the calculation of the example provided in Section 3.3 of the Application has been included in this filing as Attachment 2.

In the same section of the Application, an alternate scenario is discussed where an existing Customer with a 10 MVA load has a desire to expand, but the FBC system cannot accommodate the request on a firm basis under current planning criteria. If the Customer chose to either convert its entire load or add only the additional 10 MVA as non-firm, FBC's view is that a benefit would likely accrue to FBC ratepayers in the first scenario and would certainly accrue in the second.

This scenario does not lend itself to a numerical example, but FBC offers the following expanded explanation.

In the case where a 10 MVA RS 31 Customer converts the existing 10 MVA to RS 38 and adds an additional 10 MVA of RS 38 load, FBC would end up with 20 MVA of interruptible load and available capacity to add 10 MVA of new load under RS 31. In this case FBC ratepayers would benefit unless no new load is added and RS 38 revenue is lower than RS 31 revenue would have been. FBC therefore concludes that a benefit would "likely" result.

In the case where the Customer simply adds an additional 10 MVA of interruptible service and maintains the existing 10 MVA on RS 31, FBC has lost no existing load and revenue, and the entire new load would result in incremental revenue even without the addition of another Customer.

6. Scenario analysis of ratepayer impact to other FBC customers at various levels of uptake from existing RS 30/31 customers switching to RS 38 versus attracting new customers.

Quantifying ratepayer impact from RS 38 is extremely difficult due to the number of variables involved. For example, the impact would vary with:

- Whether the RS 38 load was entirely new, or was load that had previously been served under RS 30 or RS 31 (with the original rate itself bearing on the impact);
- The magnitude and profile of the load;
- Whether or not new RS 30 or RS 31 load is added when RS 31 load transfers to RS 38;
- The level of the Mid-C market;

- The level of the Mid-C Price Cap;
- Whether or not the Customer’s service is actually interrupted.

FBC has developed a number of scenarios that are set out in the tables below to demonstrate possible impacts given the following assumptions:

- 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.
- 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.
- The amount of RS 31 load switched to RS 38: 5,000, 10,000, 20,000, and 50,000 kVA. For simplicity, power factor is assumed to be unity.
- Varying levels of a Mid-C Price Cap nominated by the Customer: \$50, \$40, and \$35 USD.
- Whether or not FBC opts to interrupt the Customer despite the relative level of the hourly Mid-C price and the nominated Cap. In this exercise, interruptions occur in either no hours or 100 percent of the hours where the Mid-C price exceeds the Cap as indicated in the third column of the table.
- RS 38 revenue shown is the total revenue from the LCIR, without the Customer Charge or the Clean Market Adder. RS 31 revenue shown is the amount the Customer would have been billed for service in all hours of the month.
- For the case where existing RS 31 load switches to RS 38, ratepayer impact for the month is portrayed as the margin variance (rate revenue less power purchased at Mid-C) between RS 31 and RS 38 assuming that FBC is unable to attract any new firm load (the worst-case scenario). Rate mitigation due to completely new RS 38 load is equal to the RS 38 Margin.

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 |
| 5,000 | 50 | Yes | 0 | 199,309 | 254,466 | 42,742 | 97,908 | 55,166 |
| 5,000 | 40 | Yes | 16 | 194,284 | 254,466 | 41,802 | 97,908 | 56,105 |
| 5,000 | 35 | Yes | 312 | 108,361 | 254,466 | 24,613 | 97,908 | 73,295 |
| 10,000 | 50 | No | 0 | 398,618 | 508,932 | 85,483 | 195,815 | 110,332 |
| 10,000 | 40 | No | 0 | 398,618 | 508,932 | 85,483 | 195,815 | 110,332 |
| 10,000 | 35 | No | 0 | 398,618 | 508,932 | 85,483 | 195,815 | 110,332 |
| 10,000 | 50 | Yes | 0 | 398,618 | 508,932 | 85,483 | 195,815 | 110,332 |
| 10,000 | 40 | Yes | 16 | 388,567 | 508,932 | 83,604 | 195,815 | 112,211 |
| 10,000 | 35 | Yes | 312 | 216,721 | 508,932 | 49,226 | 195,815 | 146,589 |
| 20,000 | 40 | No | 0 | 797,237 | 1,017,864 | 170,967 | 391,630 | 220,663 |



| 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 (\$) |
|------------------------------|-----------------------|--------------|-----------------------|--------------------|--------------------|---------------------------|---------------------------|----------------------|
| 20,000 | 35 | No | 0 | 797,237 | 1,017,864 | 170,967 | 391,630 | 220,663 |
| 20,000 | 50 | Yes | 0 | 797,237 | 1,017,864 | 170,967 | 391,630 | 220,663 |
| 20,000 | 40 | Yes | 16 | 777,135 | 1,017,864 | 167,208 | 391,630 | 224,422 |
| 20,000 | 35 | Yes | 312 | 433,443 | 1,017,864 | 98,452 | 391,630 | 293,178 |
| 50,000 | 50 | No | 0 | 1,993,091 | 2,544,660 | 427,417 | 979,075 | 551,658 |
| 50,000 | 40 | No | 0 | 1,993,091 | 2,544,660 | 427,417 | 979,075 | 551,658 |
| 50,000 | 35 | No | 0 | 1,993,091 | 2,544,660 | 427,417 | 979,075 | 551,658 |
| 50,000 | 50 | Yes | 0 | 1,993,091 | 2,544,660 | 427,417 | 979,075 | 551,658 |
| 50,000 | 40 | Yes | 16 | 1,942,837 | 2,544,660 | 418,020 | 979,075 | 561,055 |
| 50,000 | 35 | Yes | 312 | 1,083,606 | 2,544,660 | 246,129 | 979,075 | 732,946 |

Table 3-2: July 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 | 296,199 | 254,466 | 45,436 | 79,739 | 34,303 |
| 5,000 | 40 | No | 0 | 296,199 | 254,466 | 45,436 | 79,739 | 34,303 |
| 5,000 | 35 | No | 0 | 296,199 | 254,466 | 45,436 | 79,739 | 34,303 |
| 5,000 | 50 | Yes | 336 | 94,606 | 254,466 | 23,030 | 79,739 | 56,708 |
| 5,000 | 40 | Yes | 440 | 58,593 | 254,466 | 16,829 | 79,739 | 62,910 |
| 5,000 | 35 | Yes | 528 | 32,020 | 254,466 | 11,690 | 79,739 | 68,049 |
| 10,000 | 50 | No | 0 | 592,398 | 508,932 | 90,871 | 159,478 | 68,606 |
| 10,000 | 40 | No | 0 | 592,398 | 508,932 | 90,871 | 159,478 | 68,606 |
| 10,000 | 35 | No | 0 | 592,398 | 508,932 | 90,871 | 159,478 | 68,606 |
| 10,000 | 50 | Yes | 336 | 189,211 | 508,932 | 46,061 | 159,478 | 113,417 |
| 10,000 | 40 | Yes | 440 | 117,186 | 508,932 | 33,658 | 159,478 | 125,820 |
| 10,000 | 35 | Yes | 528 | 64,040 | 508,932 | 23,381 | 159,478 | 136,097 |
| 20,000 | 50 | No | 0 | 1,184,796 | 1,017,864 | 181,743 | 318,956 | 137,213 |
| 20,000 | 40 | No | 0 | 1,184,796 | 1,017,864 | 181,743 | 318,956 | 137,213 |
| 20,000 | 35 | Yes | 0 | 1,184,796 | 1,017,864 | 181,743 | 318,956 | 137,213 |
| 20,000 | 50 | Yes | 336 | 378,422 | 1,017,864 | 92,122 | 318,956 | 226,834 |
| 20,000 | 40 | Yes | 440 | 234,371 | 1,017,864 | 67,317 | 318,956 | 251,639 |
| 20,000 | 35 | No | 528 | 128,079 | 1,017,864 | 46,761 | 318,956 | 272,194 |
| 50,000 | 50 | No | 0 | 2,961,990 | 2,544,660 | 454,357 | 797,389 | 343,032 |
| 50,000 | 40 | No | 0 | 2,961,990 | 2,544,660 | 454,357 | 797,389 | 343,032 |
| 50,000 | 35 | Yes | 0 | 2,961,990 | 2,544,660 | 454,357 | 797,389 | 343,032 |
| 50,000 | 50 | Yes | 336 | 946,056 | 2,544,660 | 230,305 | 797,389 | 567,084 |
| 50,000 | 40 | Yes | 440 | 585,928 | 2,544,660 | 168,292 | 797,389 | 629,098 |
| 50,000 | 35 | No | 528 | 320,198 | 2,544,660 | 116,903 | 797,389 | 680,486 |

It is unlikely that whether or not FBC would interrupt the Customer would be an all or nothing proposition as modeled, and more likely the results would fall in between the “no” and “yes” figures for a given load and a given Cap choice. However, what is evidenced by the tables is that new RS 38 load from completely new Customers is positive for ratepayers, and the benefits to other ratepayers of RS 31 load that switches to RS 38 are dependent on the ability of FBC to add additional Customers where firm capacity has become available.

7. Further details on the criteria, order of interruption among RS 38 Customers, and communication plan to interrupt service.

In the proposed LCIR tariff sheets, FBC outlines five reasons for which Customers could be interrupted under RS38. Further details on these criteria are offered below.

1. *Reason 1: To maintain service to Customers taking service under one of FBC's firm rate schedules*

Interruptions related to this criterion may be in response to either planned or unplanned events. Planned events may result from Engineering studies which indicate that load on a portion of the system must be reduced in order to perform work on the system. Communication would likely occur through notification by the Key Account Manager with as much notice as possible. Unplanned interruption may occur in response to an unexpected condition or event; it is unlikely in this case that prior notice will be possible.

2. *Reason 2: To avoid any 3rd Party charges that may be levied against FBC related to Imbalance Energy or Imbalance Wheeling*

As described in the Application, Section 3.2.3, Imbalance Energy is the flow of power from the BC Hydro system to the FBC system that is inadvertent (in other words, instances when FBC effectively has insufficient supply to meet its load). Under the Imbalance Agreement with BC Hydro, FBC can face significant charges related to imbalance per hour.

Interruptions due to this criterion will always be unplanned, and notice is likely to be minimal or absent. Interruptions of this type are managed by the Power Supply group and initiated by the System Control Centre (SCC). Communication related to these interruptions will, where communication is possible, be through the established SCC-primary Customer contact as spelled out in the related agreements between FBC and the Customer.

3. *Reason 3: To maintain the stability, reliability, or integrity of the FBC or Western 4 Interconnected electrical systems*

These situations are similar to the unplanned events under criterion 1 but may not be isolated to one geographic location. They will be unplanned and carry little or no notice.

4. *Reason 4: Lack of available transmission*

A lack of available transmission into the FBC system that would potentially cut FBC's imports from the market, a lack of internal wheeling to remote load centres, or having market imports cut due to transmission issues outside of the FBC service territory, are scenarios that could arise under this criterion. As per the RS 38 Rate Schedule, notice and communication would vary depending on the nature of the interruption.

5. Reason 5: For Hours where FortisBC reasonably expects that the Energy Charge will be based on the Mid-C Price Cap

Interruptions due to Mid-C pricing would occur with notice in accordance with industry standard day-ahead scheduling timelines.

Communication regarding interruptions that occur in response to system conditions would require that operating orders be in place with Customers, and the designated person responsible would be contacted by the SCC as soon as reasonably possible. However, given the nature of the issue, that communication may occur after the Customer is interrupted.

In addition, where it is possible to provide viable notice in advance of the interruption, Key Account Managers or a designate will be in communication with the Customer to provide as much information regarding the outage as possible.

FBC believes that any requirement to choose between Customers when faced with a need to interrupt service will be rare. With regard to the order of interruption, the location, size of load and nature of contingency will heavily influence operational decisions of how best to curtail RS 38 load to manage the system. FBC fully expects that the best course of action will be evident in each circumstance. For example, as it is likely that LCIR Customers will not all be concentrated in one location, and there may be no more than one LCIR Customer in a given location, if the problem giving rise to curtailment occurs in / affects only that location, it is clear who will need to be curtailed. Depending on the design of specific Customer systems, it may also be possible to partially curtail load rather than interrupt a Customer's entire load. FBC intends to track the number, location, and nature of interruptions, including the aspect of whether, in relation to any given interruption, there was any discretion possible on FBC's part (in relation to which Customer or how much of its load to curtail) given the specifics of the occurrence. If, contrary to FBC's expectation, there proved to be a need for the exercise of discretion regarding order, extent or duration of interruption, FBC anticipates developing more specific criteria tailored to the kind of circumstances where the need to make choices had by that point been found to arise.

8. Justification for the proposed initial uptake limit of 50 megawatts and the proposed Hourly Service Adder of \$0.01/kilowatt-hour, including any alternative proposals considered and supporting analysis and calculations.

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 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.

The initial uptake limit is required for the reasons set out below, and a cap of 50 MW is a reasonable level for this new service. FBC must balance the access to the rate with the need to manage it successfully, given that Customers may be making long-term investment decisions that favour not introducing the rate as a pilot program. FBC expects that there will be operational learnings (see the response to question 7, for example) that will need to be incorporated into the program before it can be expanded to a larger volume. In addition, there

remains uncertainty in FBC's energy and capacity needs for its existing Customers and therefore, what room may be available on FBC's market import capabilities. There is a limit of how much cost-effective market power can be imported on any given hour and FBC's existing needs currently take full advantage of the available import capability from time to time.

FBC is confident that 50 MW will not pose a material risk, given the incremental benefits available for other ratepayers, but operational experience combined with increased certainty on the load forecast should be obtained before FBC makes any higher amount available.

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

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (Email only): Registered Interveners

Attachment 1

CONTRACT FOR INTERRUPTIBLE SERVICE



ELECTRICITY SERVICE CONTRACT for Interruptible Service

Customer No: [insert ACCNT No]

This Electricity Service Contract (the “**Contract**”), made [insert date] between [insert Customer’s name] (the “**Customer**”) and FortisBC Inc. (“**FortisBC**”),

WITNESSES THAT, for and in consideration of the mutual covenants and agreements contained herein, the parties agree as follows:

1. Definitions. Initially-capitalized terms not specifically defined in this Contract shall have the meanings respectively given to them in FortisBC’s filed Electric Tariff.
2. Supply of Electricity Service. FortisBC agrees to supply, and the Customer agrees to take and pay for, Electricity Service to the Customer’s premises located at [insert service address], British Columbia.
3. Point of Delivery. The Point of Delivery of Electricity shall be [insert description, such as: the line side of the Customer’s disconnect switch located in the Customer’s main complex (Verify this with Designers)]. FortisBC’s responsibility for supply of Electricity shall cease at the Point of Delivery.
4. Type of Electricity Service. The type of Electricity Service to be supplied by FortisBC to the Customer shall be nominally [insert description, such as: 600/347 volt, three phase 4 wire 60 hertz service (Verify this with Designers)]. The Contract Demand is [XXX kVA (Verify this with Designers)]. The Customer shall not exceed the Demand limit of XXX kVA, unless otherwise agreed in writing. **ELECTRICITY SERVICE PURSUANT TO THIS CONTRACT IS SUBJECT TO SUSPENSIONS IN ACCORDANCE WITH THE TERMS AND CONDITIONS SET OUT IN RATE SCHEDULE 38.**
5. Commencement of Electricity Service. Electricity Service pursuant to this Contract shall be deemed to commence on [insert date], or the date when Electricity is first taken by the Customer under this Contract, whichever is the earlier. In the event that Electricity is not available to the Customer on the date described in the preceding sentence, Electricity Service pursuant to this Contract shall then be deemed to commence on the day that it is made available. 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.
6. Rate Payable. The Rate to be paid by the Customer for Electricity Service pursuant to this Contract shall be according to Rate Schedule 38 (as amended from time to time), commencing from the date as determined in clause 5. 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. If the Customer fails to nominate a Mid-C Price Cap for any month during the term of this Contract, the Mid-C Price Cap then most recently having been nominated by the Customer shall continue to apply for that month. The Mid-C Price Cap for the month during which the date as determined in clause 5 occurs shall be \$ XXX /MWh [insert amount].
7. Revenue Guarantee and Security Deposit. 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.
8. Customer Contribution. *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).
*The sum of \$ [insert amount] has been paid in full by the Customer.
9. Application of FortisBC’s Electric Tariff. THE TERMS AND CONDITIONS OF FORTISBC’S ELECTRIC TARIFF HAVE BEEN FILED WITH AND APPROVED BY THE BRITISH COLUMBIA UTILITIES COMMISSION, AND FORM PART OF THIS CONTRACT AND BY THIS REFERENCE ARE INCORPORATED HEREIN. SUCH TERMS AND CONDITIONS (INCLUDING, WITHOUT LIMITATION, RATE SCHEDULE 38) MAY BE AMENDED

FROM TIME TO TIME SUBJECT TO APPROVAL BY THE BRITISH COLUMBIA UTILITIES COMMISSION, AND THE CUSTOMER SHALL BE SUBJECT TO ANY SUCH AMENDMENTS AND THE TERMS AND CONDITIONS AS SO AMENDED SHALL BECOME PART OF THIS CONTRACT.

- 10. Entire Contract. This Contract replaces any and all previous contracts between the Customer and FortisBC for interruptible Electricity Service pursuant to Rate Schedule 38.
- 11. Customer's Billing Address. The Customer's ADDRESS for purposes of billing and notification shall be: [\[insert billing address\]](#).
- 12. Special Provisions.

FortisBC Inc.

Per: _____

Name: _____

Title: _____

Customer

Per: _____

Name: _____

Title: _____

Attachment 2

SUPPORTING MODELS AND CALCULATIONS

REFER TO LIVE SPREADSHEET MODEL

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)