

Sarah Walsh Director, Regulatory Affairs

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May 23, 2024

Residential Consumer Intervener Association c/o Midgard Consulting Inc. Suite 828 – 1130 W Pender Street Vancouver, B.C. V6E 4A4

Attention: Peter Helland, Director

Dear Peter Helland:

Re: FortisBC Inc. (FBC)

Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application)

Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1

On February 29, FBC filed the Application referenced above. In accordance with the amended regulatory timetable established in British Columbia Utilities Commission Order G-100-24 for the review of the Application, FBC respectfully submits the attached response to RCIA 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:

Sarah Walsh

Attachments

cc (email only): Commission Secretary Registered Interveners FORTIS BC^{**}

1	CHAPTER 1	: Executive Summary and Approval Sought
2	1.0 Refe	rence Exhibit B-1, Pages 5
3		Section 1.1.5 – Project Description
4	Forti	sBC Inc. states:
5 6 7 8 9 10		"After consultation with the surrounding residents and considerations related to environmental impacts and constructability, FBC determined that the Highway 3B Option was the preferred site. The Highway 3B Option is nearest the highway and adjacent to a large industrial customer. The new transmission line alignment will be an overhead design running parallel to the northeast side of the property, and the distribution lines will run underground within the property."
11 12 13 14	1.1 Response:	Has FBC received any requests from surrounding residents to bury any portion of the transmission cables leading to and entering the proposed substation?
15 16 17	Yes, FBC re Grieve Road in its system	ceived requests from the surrounding residents for all new overhead lines on 2064 to be installed underground. FBC does not have any underground transmission lines and is not considering undergrounding the transmission lines for the Project.
18 19		
20 21 22 23 24	1.2 <u>Response:</u>	Who would fund the additional cost of undergrounding transmission cables compared to FBC's proposed overhead transmission lines?
25 26	Any addition Project and v	al cost of undergrounding transmission cables would increase the overall cost of the would be borne by all FBC ratepayers.
27		

FortisBC Inc. (FBC or the Company) Submission Date: Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application) May 23, 2024 FORTIS BC^{*} Response to the Residential Consumer Intervener Association (RCIA) Information Request

(IR) No. 1

1	CHAPTER 4:	Description and Evaluation of Alternatives
2	2.0 Refere	nce Exhibit B-1, Pages 25-26
3		Section 4.2 – Description of Alternatives
4	Fortis	C Inc. states:
5		"The following four alternatives were identified and considered for the Project:
6 7	•	Alternative 1: Status Quo. Under this alternative, FBC would continue to operate and maintain the existing FRU and HER substations.
8 9 10 11	•	Alternative 2: Replace both the FRU and HER Substations at Existing Locations. Under this alternative, FBC would replace the equipment at the FRU and HER substations with functionally equivalent equipment meeting current design standards.
12 13 14 15	•	Alternative 3: Replace the FRU and HER Substations with a New Substation on Either the Existing FRU Site or the Existing HER Site. Under this alternative FBC would replace the FRU and HER substations with one new substation wit two similarly sized transformers on either the existing FRU or HER substation sites
16 17 18 19	•	Alternative 4: Replace the FRU and HER Substations with a New Substation on a New Property. Under this alternative, FBC would replace the FRU and HEI substations with a single substation with a two-transformer configuration on a new property close to the load centre."
20	Fortis	C Inc. also states:
21 22 23 24 25		"If the status quo were maintained, FBC would continue to operate and maintai the existing FRU and HER substations. The status quo is not a feasible alternative because it does not meet the Project objectives. The status quo does not addres the high probability of failure due to the age and condition of the FRU and HEF equipment, nor does it address the reliability risks."
26 27 28	2.1	Has FBC considered an alternative approach to defer the project for a specified time (e.g., 5 years) and continue to operate and maintain all the FRU or HEF substations, or both?
29 30 31		2.1.1 What would be the costs and benefits associated with this alternative compared to Alternative 1?
32	Response:	
33	The Project c	nnot be deferred any longer. Please refer to the responses to BCUC IR1 1.1 an

34 1.2.

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4	2.2	Has FB	C considered an alternative of upgrading another substation or substations
5		from wh	nich to provide energy to RFU and HER customers?
6		2.2.1	If not, please explain why not?
_			
7		2.2.2	If yes, please provide details.
8			
-	_		

9 **Response:**

- 10 The only substation that the FRU load can be transferred to is Beaver Park (BEP). Please refer
- 11 to the response to BCUC IR1 7.1 for an explanation of why it would not be practical for FBC to
- 12 expand the BEP substation to serve the entire FRU load.

 FortisBC Inc. (FBC or the Company)
 Submission Date:

 Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application)
 Submission Date:

FORTIS BC^{**}

Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1

1	3.0	Refere	ence	Exhibit B-1, Pages 30 & 31
2 3				Section 4.3.3 – Alternative 3: Replace the FRU and HER Substations with a New Substation on Either the Existing FRU or HER Sites
4				Section 4.3.3.2 – New Substation at HER Location Not Practical
5		Fortis	BC Inc	. states:
6 7 8 9 10			"Unde new si HER s would replac	r this alternative, FBC would replace the FRU and HER substations with one ubstation with two similarly sized transformers on either the existing FRU or substation sites. This new two-transformer substation (New FRU Substation) meet both Project objectives and is a more cost-effective solution than ing two separate substations."
11		Fortis	BC Inc	. also states:
12 13 14 15 16			"While a new substa surrou is loca	the HER substation site near Park Siding is large enough to accommodate two- transformer substation, FBC rejected this option due to the HER ation's distance from the load centre. The load density of Fruitvale and the nding area is provided in Figure 4-2 below and shows that the load centre ted within the Village of Fruitvale."
17		Fortis	BC Inc	. also states:
18 19 20			"Reloc HER s HER s	ating the New FRU Substation further from the load centre to the existing site would require a complete rebuild of the line infrastructure between the site and the load centre (Village of Fruitvale).
21				
22 23			This v costs	vork would significantly increase the Project costs (estimated to increase by as much as \$10 million)."
24 25 26 27 28		3.1	Please associ compa new se	e provide a detailed breakdown of the estimated \$10 million increase in costs ated with constructing a new substation at the HER location (Alternative 3) ared to the proposed project (replacing the FRU and HER substations with a ubstation on a new property).
29	<u>Respo</u>	nse:		
30	Please	refer to	o the re	sponse to BCUC IR1 5.6.

FortisBC Inc. (FBC or the Company) Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application)



Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1

Page 5

1	CHAP	TER 5:	Projec	t Description
2	4.0	Refere	ence	Exhibit B-1, Pages 52-53
3				Section 5.4 – Project Engineering and Design
4		Fortis	BC Inc.	states:
5 6 7 8 9			"FBC CPCN validat in orde sched	plans to start engineering and detailed design immediately upon receiving approval. Activities will encompass all required engineering calculations, ions, specifications, and drawings. FBC will organize engineering activities er of priority, in relation to the fabrication and procurement lead times and ule date for each component to be on the work site.
10				
11 12 13			"Engin engine be rev	eering will be completed either by FBC or by an FBC pre-qualified external eering firm. Each engineering package completed by external resources will iewed and accepted by FBC."
14 15 16 17 18	Resp	4.1 onse:	To wh practic such a	nat extent has FBC incorporated current industry standards and best ses into the preliminary design of the proposed solution, considering factors as configuration options like the ring bus?
10	Plass	o rofor t	n tha ra	sponse to BCLIC IR1 7 4
13	r iedsi			
20				

FortisBC Inc. (FBC or the Company) Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application) Response to the Residential Consumer Intervener Association (RCIA) Information Request Page 6

(IR) No. 1

5.0 Reference Exhibit B-1, Pages 53 Section 5.5 – Project Schedule FortisBC Inc. states: "Engineering and procurement for the Project will begin immediately upon BCUC approval. FBC has standard equipment specifications for equipment relevant to the Project scope, which reduces risk for ordering long-lead material." 5.1 How does FBC assess and manage supplier relationships to minimize procurement risks and ensure timely delivery of materials and equipment? **Response:** FBC has developed multi-year contracts with major equipment suppliers. This multi-year approach allows FBC to build relationships with its suppliers and secure procurement timeslots for future projects. 5.2 Please discuss any contingency plans in place to address potential procurement delays or challenges that may arise during the project execution phase.

20 **Response:**

FORTIS BC^{**}

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21 Multi-year supplier contracts have allowed FBC to secure timeslots for major material purchases.

22 During execution, material purchase orders are continually monitored to confirm delivery

23 timelines. In the event of a delay, other procurement options are explored to maintain the project schedule.

24

FortisBC Inc. (FBC or the Company) Submission Date: Application for a Certificate of Public Convenience and Necessity for Approval of the May 23, 2024 Fruitvale Substation Project (Application) Response to the Residential Consumer Intervener Association (RCIA) Information Request

(IR) No. 1

Page 7

1 CHAPTER 6: Project Costs, Financial Analysis, Accounting Treatment And Rate Impact

2	6.0	Reference	Exhibit B-1, Pages 61
_			
3			Section 6.3 – Financial Evaluation
4		FortisBC In	c. states:
5		"Inc	remental O&M: FBC expects that ongoing maintenance spending will be
6		redu	ced by eliminating the O&M expenditures associated the existing HER and
7		FRU	substations, which will be decommissioned and replaced with the New FRU
8		Subs	station. The incremental Project O&M in 2027 (i.e., when all assets enter rate
9		base) is estimated to be a savings of \$13.444 thousand in as-spent dollars, relating
10		to su	bstation equipment, plus annual inflation as discussed below. Over a 12-year
11		O&N	I window (based on switch and transformer maintenance that occurs every 12
12		year	s), the average incremental O&M savings is approximately \$5.842 thousand
13		per y	vear."
14		6.1 Wha	t factors were considered in determining whether maintaining one substation
15		vers	us two would result in optimal O&M cost savings, and what are the associated

- 16 management trade-offs?
- 17

FORTIS BC^{**}

18 Response:

19 FBC considered the (i) quantity, (ii) cost, and (iii) frequency of O&M activities when determining 20 whether maintaining one substation versus the two existing sites would result in optimal O&M 21 cost savings.

- 22 FBC identified the following associated management benefits of maintaining one substation 23 instead of the two existing substations:
- 24 Consolidating to one site location will reduce the number of station inspections and • 25 thermal scanning executed each year.
- 26 Optimizing to two transformers with on-load tap changers located at the same location, • 27 rather than four power transformers (FRU T1 and HER T1 A, B, and C) and three regulators (HER A, B, and C) across two locations will reduce the oil sampling costs and 28 29 power transformer maintenance costs.
- 30 Optimizing to a dual transformer substation at a single location will mitigate the costs • 31 associated with the installation of the mobile transformer and will improve asset 32 maintainability.



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CHAPTER 8: Consultation and Engagement

2	7.0 Refe	rence Exhibit B-1, Page 70
3 4		Section 8.1.2 – FBC Incorporated Stakeholder Feedback Gathered Through Consultation Period 1
5 6		Appendix F-8 – Presentation – Fruitvale: Understanding Electromagnetic Fields (EMF), Slide 15
7	Forti	sBC Inc. states on page 70:
8 9 10 11 12 13 14 15		"From 2019 to 2022, FBC received valuable feedback from stakeholders about their interests in the Project. After the Village of Fruitvale voted against selling the Mazzocchi Location, the feedback collected to date was used to guide FBC's subsequent property search and, ultimately, the decision to build at the Grieve Location. Table 8-2 provides a summary of stakeholder feedback gathered through Consultation Period 1. The most common higher areas of concern were electromagnetic fields, parking, proximity to community infrastructure, and visual/station aesthetics."
16	Forti	sBC Inc. states in Appendix F-8:
17 18		"WHO: despite extensive research, there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.
19		
20		Health Canada: EMF levels decrease rapidly the further you are from the source.
21 22 23 24	7.1	Please share any findings from studies conducted by FBC on the potential impact of the proposed substation's EMF emissions on the health and well-being of nearby residents, along with their methodologies.
25	<u>Response:</u>	
26	Please refer	to the response to Lenardon IR1 29.
27 28		
29 30 31 32 33	7.2	What measures or mitigation strategies does FBC plan to implement to ensure that EMF exposure remains within the recommended safety limits set by health authorities such as the World Health Organization and Health Canada?



1 Response:

- 2 The EMF levels for this Project will be significantly below the ICNIRP guidelines so FBC will not
- 3 be implementing any mitigation strategies. Please refer to the response to Lenardon IR1 29.
- 4
- 5

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- 7.3 How does FBC plan to address and alleviate the concerns expressed by local residents regarding EMF exposure from the proposed substation, considering that some residents have raised doubts despite reassurances from health authorities?
- 9 10

11 Response:

- 12 FBC provides information from Health Canada and the World Health Organization for general
- information on EMF; however, FBC will also work with residents individually to address specific
 concerns regarding EMF exposure from the New FRU Substation.
- 15 Additionally, FBC has modeled five scenarios to show the EMF levels for the New FRU Substation
- 16 power lines in response to Lenardon IR1 29, which can be provided to residents in response to
- 17 EMF questions specific to the Grieve Location.



FortisBC Inc. (FBC or the Company) Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application)	Submission Date: May 23, 2024
Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1	Page 10

1	8.0	Referer	nce E	xhibit B-1, Pages 70-71 & 77		
2 3			S T	ection 8.1.2 – FBC Incorporated Stakeholder Feedback Gathered hrough Consultation Period 1		
4 5			S T	ection 8.1.5 – FBC Incorporated Stakeholder Interests Gained hrough Consultation for the Grieve Location		
6		FortisB	C Inc. st	ates in Table 8-2:		
7 8		ľ	'There w becomes	as concern over increased noise from the transformers once the Project operational."		
9	FortisBC Inc. also states in Table 8-3:					
10 11 12 13		• "	'FBC's s ONAN/O an even l decibel ra	tandard transformers are designed to a 69/71/72 dBA decibel rating for NAF/ONAN. However, the transformers for this Project are designed to ower rating. The transformers will be designed to a guaranteed 65/67/68 ating for ONAN/ONAF/ONAN21.		
14		•	FBC will	ensure that Project working hours adhere to local bylaws."		
15 16 17 18	<u>Respo</u>	8.1 	Has a ne Hearns s	bise measurement study been conducted for the existing Fruitvale or ubstations, and if not, what is the reason for this?		
19 20	A nois substa	e meas tions has	urement s not bee	study at neighboring properties to the existing Fruitvale or Hearns n conducted because FBC has not received any noise complaints.		
21 22						
23 24 25		8.2 I	Does FB substatio	C have plans to conduct a noise measurement study for the new Fruitvale n post-construction, and if not, what are the reasons behind this decision?		
26 27 28	Respo	ense:	8.2.1	What would be the cost and benefit of conducting such a study?		
29 30 31 32 33	FBC ha levels study t The co	as condu and to m to mitigat ost of the uction.	cted a no nodel the te noise, e study	bise measurement study for the Grieve Location to achieve baseline noise impact of the station. FBC will implement the recommendations of the including a minimum 2.7-meter-high concrete fence around the station. was \$10,500, with additional costs of \$8,000 for measurements post-		

FortisBC Inc. (FBC or the Company) Application for a Certificate of Public Convenience and Necessity for Approval of the Fruitvale Substation Project (Application)



Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 1

1	Apper	ndix F -	- Stakeh	older Consultation and Engagement
2	9.0	Refere	ence	Exhibit B-1, .pdf Page 176
3				Appendix F-6 – BVCC Existing Infrastructure Questions And
4				Response
5		Fortis	BC Inc.	states:
6 7 8			"As de equipm substat	scribed in the recent FBC 2023 Annual Review this project is driven by nent condition issues and aging infrastructure at the Fruitvale and Hearns tions. This project is not driven by load growth."
9		Fortis	BC Inc.	also states:
10 11 12			"For the gross e compo	e reference case load forecast, the Company is forecasting an increase in energy load from 3,544 GWh in 2016 to 4,334 GWh by 2035, an average und annual growth rate of 1.1 percent.
13				
14 15			The ref to 885	erence case winter peak demand forecast increases from 731 MW in 2016 MW in 2035, growing at a compound annual growth rate of 1.0 percent." ¹
16		9.1	Has FE	C accounted for any load growth for this proposed Fruitvale substation?
17 18 19			9.1.1	If so, what are the factors that may determine load growth for the proposed Fruitvale substation?
20	<u>Respo</u>	onse:		
21 22 23 24 25	Yes, F historic party f annual with FE	BC has cal data orecast growth BC's mo	accoun (i.e., gr s of the rate co ost recer	ted for load growth. This load growth considers load drivers inherent in the owth in residential, commercial and other rate class load), as well as third economic drivers of load growth for the FBC service area. The average nsidered was approximately 1 percent per year on average, which is in line ntly accepted Long Term Electric Resource Plan.
26 27 28 29	As des growth new la (20 M\	scribed due to rge load /A) will	in the re fuel sw ds. Howe be suffic	esponse to BCUC IR1 3.1, this load growth factor does not consider load itching from other forms of heating, electric vehicles, or unknown potential ever, FBC considers that the proposed capacity for the New FRU Substation cient to accommodate these loads as they materialize.
30				

¹ FortisBC Inc. 2016 Long-term Electric Resource Plan and Long-term Demand Side Management Plan, Exhibit B-1, Section 1.3, p. ES-3, I. 27 to p. ES-4, I. 5. <u>Link</u>.



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9.2 In its latest long-term electric resource plan, FBC projected a 1.1 percent growth in energy and a 1.0 percent growth in winter peak load. Are these estimates suitable for Fruitvale's demand, and if not, what factors contribute to this?

6 **Response:**

7 Please refer to the response to RCIA IR1 9.1.