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September 25, 2015

<u>Via Email</u> Original via Mail

Commercial Energy Consumers Association of British Columbia c/o Owen Bird Law Corporation P.O. Box 49130 Three Bentall Centre 2900 – 595 Burrard Street Vancouver, BC V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

#### Re: FortisBC Inc. (FBC)

Application for a Certificate of Public Convenience and Necessity (CPCN) for the Kootenay Operations Centre (the Application)

Response to the Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1

On July 9, 2015, FBC filed the Application referenced above. In accordance with Commission Order G-124-15 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to CEC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

#### Original signed by: Ilva Bevacqua

*For:* Diane Roy

Attachments

cc: Commission Secretary Registered Parties (e-mail only)



#### 1 **1** Reference: Exhibit B-1, Page 27

This Application affects the Castlegar District Office only with respect to the yard space limitations. The Castlegar District Office has age and condition issues and is nearing end-of-life but the facility condition and requirements can be addressed in the future. This Application provides a general description of the condition and function of the Castlegar District Office for context and background.

#### 2

- 3
- 1.1 What are the age and condition issues that affect the Castlegar District Office?

#### 4 5 **Response:**

6 The Castlegar District Office was originally constructed in 1962 and is 53 years old. The 7 building systems are nearing end of life, as identified in the report from Iredale Group 8 Architecture included as Appendix C to the Application. As demonstrated in the graph below, 9 the majority of building systems such as structural system and concrete, exterior building 10 envelope systems, roof system, air distribution, ventilation, plumbing, electrical and finishes are 11 nearing end-of-life. A plan for the replacement of this site is required beyond 2020.



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Page 2

			-						
<u>Legend</u> :									
Building component is within its exp	ected life	cycle							
building component has exceeded it:	s expected	l life cycle							
	1962	1970	1980	1989	2002	2012	2022	Expected	Years in
	Built			Reno	Report	Report		Life	Service
Structural System & Concrete									
Typical Steel Frame Structure								70	50
Interior 5" Reinforces Concrete Slab								45	50
Original Exterior Concrete								30	50
Renovation Exterior Concrete		Î						30	23
Exterior Building Envelope systems						-			
Metal Cladding								40	50
Brick Cladding								70	50
Dbl Paned Aluminum windows		1						25	23
Exterior Insulated Man Doors								30	23
Exterior Overhead Shop Doors								30	23
	1								
Roof System	1	1	1	-					-
Metal Roof & Elashings	-		1					10	50
Metal Easting & Soffits								40	50
		1		1				40	50
Cailing System				-	_	_			
T. Par								20	72
Painted Dowall	-	-		-				15	23
		-		-				15	25
The (shower)		-		-				15	23
vinyi		÷						15	23
Office Container		-		-	_	-			-
							6.0		
Fixed Willwork		-		-		-		30	23
Office Fumiture			ų.					15	23
Washroom Fixtures		4	8	4			100	30-40	23
- Constant - Constant				_		_			
Floor Coverings			_	_					
Carpet	-	-	-					8-10	6
Resilient Flooring	-	-						20	6
Entrance Floor Tile		_		-				45	23
				_					
Wall Coverings				_					
Office - Drywall & Vinyl		-		_				15	23
Shop - Painted Wood & Vinyl							19405	15	23
		1							
Site Work									
Fencing and Retaining								35	50
New Bollards		1			1			30	23
Asphalt								30-35	23



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Mechanical & Electrical Systems:							_		
	1962	1970	1980	1989	2002	2012	2022	Expected	Yearsin
-503 22 20492 02	Built			Reno	Report	Report	-	Life	Service
Heating Systems			_						
Unit Heater (Truck Bay)			_					18-20	4-5
Electric Duct Heater (Office)	_	_	_					>30	8-10
Electric Fan Force Heater (Vestibule)							1	>20	8-10
Air Distribution Systems									
Air Handler (Mezz)								18-20	50
In-Line Fan (Mezz)							1	18-20	2-3
Exhaust Ventilation Systems									
Exhuast fan (U/A Washroom)		_	_	-				10	Unknown
Controls And Instrumentation									
Heat trace controls							1	>20	4
Other HVAC Systems And Equipment									
Air Source Heat Pump		_				1	1	18-20	3
Plumbing									
Plumbing Fixtures	Ĵ					-		>30	50
Domestic Water Distribution								>30	50
Domestic Water Heaters		_					-	10	8-10
Electrical									
Electrical Service And Distribution								>30	50
Branch Wiring		1	-					>20	50
Lighting									
Interior Lighting								>30	50
Exterior Lighting			-		_			>30	50
Low Tension		1							
Radio System								>20	15
Telephone Systems								>20	40
Server/Computer Systems								5-7	8-10
Security Systems						-	2	>20	8
Electrical Emergency									
Emergency Light Systems								10	8-10
Exit Light Systems								>20	8-10
Emergency Power & Generation Syste	ems						1	20-25	10
Other Electrical Systems			_						
Heating Cables								>10	5
Motorized Gate and Scanner								>10	8
Other			_		_		_		
Fire Protection								10	Unknown
						-		1	



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1.2 Why did FBC decide not to include any upgrades at Castlegar District Office in this application?

### 5 **Response:**

6 Please refer to the response to BCUC IR 1.8.1 regarding FBC's plans to evaluate alternatives to 7 accommodate the functions and staff from the Castlegar District Office at a later date. FBC did 8 consider addressing the RBD trucks' heated storage limitations identified within the Primary 9 Application in Section 4.6. However, it was determined that any upgrade to the existing 10 structures at the Castlegar District Office would increase the building footprint and further 11 congest and limit the yard storage and space. Additionally, any Castlegar District Office 12 upgrade to accommodate the RBD truck requirements would require a significant capital 13 investment that would provide benefit for only a limited period as the Castlegar District Office is 14 expected to require replacement, as discussed in the response to BCUC IR 1.8.1.

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  18 1.3 When does FBC consider that the facility condition and requirements will be addressed?
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- 21 Response:
- 22 Please refer to the response to BCUC IR 1.8.1.
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- 261.4Please provide a general estimate of the costs that would be necessary to27upgrade the Castlegar District Office.
- 29 **Response:**

Please refer to the response to BCUC IR 1.8.1 regarding FBC's plans to evaluate alternatives to accommodate the functions and staff from the Castlegar District Office at a later date. FBC has not fully evaluated the scope of this future project and requirements cannot be confirmed at this time. However, assuming replacement of the Castlegar District Office onsite, Appendix C – Castlegar Life Cycle Report produced in 2012, includes a cost estimate for only building construction of \$2,263,193 provided in 2012\$. The cost estimate does not include any temporary relocation costs associated with continuation of operations during construction.



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- 1 Additionally, this solution would not address the site limitation and congestion of the Castlegar
- 2 District Office identified in the Primary Application in Section 4.6.



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#### 1 2 Reference: Exhibit B-1, Page 31

The Condition Report further evaluates conformance to BC Building Code. The Warehouse building was constructed prior to the existing code and is grandfathered from compliance with the current code. If substantially changed or added onto, features which would have to be brought up to code include means of egress, fire suppression, fire separation, structural lateral loading, handicap accessibility and building envelope energy performance.

The Generation Administration Office building was renovated in 1986 and is subject to the 1980 BC Building Code. The Generation Administration Office code review identified handicap accessibility, egress structural lateral loading and fire suppression concerns.<sup>11</sup> In consideration of safety and the Company's responsibility to maintain a safe work environment, FBC has implemented temporary measures to address the life safety systems of the building such as installing fire panel notification and annunciation, correcting door egress and adding exit signs. These measures only address immediate building safety concerns and are intended to be interim until resolved through a long-term solution.

- 2.1 Please confirm that the temporary measures result in a safe environment for all employees or visitors.
- 4 5

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#### 6 **Response:**

- 7 Yes, the temporary measures that were implemented have improved the safety of the buildings 8 by addressing immediate building safety concerns.
- 9
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2.2 Are there currently any employees requiring handicap accessibility that have been, or are being impacted by the current situation?

#### 14 15 Response:

- 16 There are currently no employees requiring handicap accessibility at the Generation site.
- 17
- 18

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- 2.2.1 If yes, please explain how they are or have been impacted and what measures have been implemented to ensure they are not disadvantaged.
- 22 23



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## 1 <u>Response:</u>

2 Please refer to the response to CEC IR 1.2.2.



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#### 1 3 Reference: Exhibit B-1, Page 31

FBC has also identified environmental and health issues with the buildings. Ongoing water penetration into the buildings due to failed building envelope components will lead to mould growth, and will present a future health risk. A number of areas contain undisturbed asbestos, lead-based paint and ozone-depleting substances. Disturbance of these hazards through destructive testing or remediation of indoor air quality issues like mould has the potential to impact the health of FBC's employees working at the site. Any removal of these hazards is required to comply with strict regulations to protect the health and wellness of the employees that work in the space and the contractors that remove the hazards.

- 2
- 3 4
- 3.1 Please provide further discussion of the ozone depleting substances and whether or not these represent health hazards.
- 5

## 6 **Response:**

7 The ozone depleting substance identified at the Generation Facilities is a refrigerant used in 8 three different mechanical units. Ozone depleting substances pose an environmental risk and 9 their disposal and phase out is regulated. The refrigerant contained within the mechanical units 10 is not a health hazard.

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143.2Please confirm that FBC is confident that there is currently no mold growth15representing a hazard to employees.

#### 17 <u>Response:</u>

FBC completed an Indoor Air Quality (IAQ) test in late 2012 to understand the air quality conditions of the Generation Facilities. The report findings concluded that there was no evidence of mould contamination at that time. FBC has undertaken an on-going visual evaluation of the ceiling for increased water staining in the interior space, which has not been demonstrated to date.

Because the ceiling is known to contain asbestos, FBC has not performed destructive testing to
allow access to the underside of the floor/roof deck. FBC continues to monitor the situation for
signs of mould growth.

26 27		
28 29	3.3	Is FBC able to manage the environment so that mold growth does not occur?



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# **Response:**

- No, without significant capital investment to replace the building façade, FBC is not able to
   manage the environment so that mould growth does not occur.

- 3.4 Please confirm or otherwise explain that the asbestos and lead based paint do not represent an immediate health hazard, unless disturbed.
- 11 Response:
- 12 Confirmed.



#### 1 4 Reference: Exhibit B-1, Page 38

FBC has two meeting rooms identified in the FBC service territory that can be set up for EOC purposes if required. In the Kootenay region, FBC has several lower level emergencies per year where an Area Command Centre (ACC) or lower level EOC is activated.<sup>14</sup> There is a meeting room in the Generation Administration Office that can be used to manage smaller scale generation plant emergencies if required, and a similar meeting room in the Springfield facility which can be set up to manage other emergencies if required.

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- 4.1 Please provide a brief discussion of what constitutes lower level emergencies versus higher level emergencies.
- 5

### 6 **Response:**

Definitions related to levels of emergency for transmission, distribution and generation are
 provided in the FBC Emergency Response Plans.

9 Emergencies classified as Level One or Two generally involve limited corporate impact and/or 10 media interest (such as events that do not threaten public safety). In general, Level One 11 emergencies are capable of being successfully concluded with normal transmission/distribution 12 resourcing levels, such as three or four field operations crews, and do not involve customer 13 outages greater than 24 hours in duration. In the case of a generation dam event, a Level One 14 emergency could result from an abnormal operating condition that requires monitoring but does 15 not pose any immediate danger to employees or the public.

16 Emergencies classified as Level Three result in a more substantial corporate and/or customer 17 impact and require a more comprehensive response. This may include response by large 18 numbers of field operations resources to widespread customer outages which could take up to 19 two weeks to restore (for a transmission/distribution event) or represent a significant generation 20 plant or dam risk such as a dam breach. These higher level emergencies require significant 21 support from other FBC departments such as Operations Support, Corporate Communications, 22 or Engineering; require complex response by first responders such as the fire department, 23 police, and other utilities; threaten public safety; or result in a significant impact to customers.

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- 26 27
- 4.2 Are new facilities necessary only for higher level emergencies? Please explain.



## 2 Response:

3 No. FBC's response to lower level emergencies typically results in the activation of an Area

4 Command Centre (ACC), which is necessary to coordinate the response between multiple field

5 operations crews and Corporate Communications. The facility described in this Application

6 would provide a dedicated meeting room that would be used for both activation of an EOC or an

7 ACC in response to any lower level or higher level emergency in the Kootenay region.



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#### 1 5 Reference: Exhibit B-1, Page 39

An example of a dedicated and fully-functioning EOC located in the FortisBC Energy Inc. Surrey Operations Centre is shown in Figure 4-3 below.



Figure 4-3: An example of a dedicated EOC

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5.1 Does an EOC require specialized equipment, or is it more a matter of having adequate facilities and communications equipment at the ready? Please explain.

6 **Response:** 

An EOC is a specialized space and not designed as a typical meeting location. The design
 requires dedicated facilities that are provisioned with:

- Environmental control systems to maintain comfort and air quality for high occupancy
   and for long durations;
- Backup (UPS and generator) power;
- 12 Audio-visual switching equipment and projectors;
- SCADA system display access;
- Copies of emergency response plans and necessary system documentation;
- Wall-mounted display equipment (projector screens, large monitors, whiteboards);
- Communications equipment (phones, radios, satellite phones, computers and television monitors); and
- High-capacity corporate network, Internet and cablevision connectivity.



Additionally, to ensure a fully functional and immediately available EOC, routine testing is required for the dedicated communication and audio visual equipment to ensure it will be operational when an emergency occurs.

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- 5.2 Does FBC require the same amount of space and resources as that required by FEI, or does the resource requirement vary with the size of the utility? Please explain.
- 10 11

# 12 **Response:**

The size of the utility does not impact the resource requirements for an EOC. The amount of space and resources required for an EOC or ACC activation is determined by the nature and scope of the emergency. The physical size of the EOC in this proposal was determined by an assessment of the space required during historical emergency events. In the event of a very large emergency requiring more space, other space in the same facility would be allocated or other functions such as engineering or mapping would be carried out remotely.

19	Please also refer to the response to CEC IR 1.4.1.
10	

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- .
- 22
- 23 24

5.3 Could FBC share the FEI space and resources? Please explain why or why not.

## 25 **Response**:

No. The Lower Mainland location of the existing FEI (Gas) EOC is too distant from the FBC (Electric) service territory to activate quickly with the appropriate resourcing and to serve as a permanent EOC.



#### 1 6. Reference: Exhibit B-1, Page 40

A flood or inundation event at the Generation Facilities site or restricted access due to an event at the railway crossing could result in an evacuation of staff and relocation of the EOC function. There would be a delay in emergency response as extra time would be required to set up the EOC at an alternate site, including relocation of responders and collection of key information, materials, and equipment from various locations in the Kootenay region.

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6.1 Does FBC have contingency plans as to the alternate sites that could be utilized?

#### 5 **Response:**

6 FBC currently has two designated EOC locations (one in Kelowna and one in South Slocan in 7 the Generation Administration Office), and the closest available EOC location that is unaffected 8 by the emergency event would be selected. If necessary, depending on the extent and duration 9 of the emergency event, a temporary EOC could be set up in an FBC office facility in Castlegar 10 or Trail, in the FEI Surrey Operations EOC, or a third-party facility if no other suitable facility is 11 available.

12 13 14 15 6.1.1 If so, please provide the proposed alternate locations. 16 17 **Response:** 18 Please refer to the responses to CEC IRs 1.6.1 and 1.6.1.2. 19 20 21 22 6.1.2 If so, could the alternate locations be adapted so that they could serve 23 as the permanent location? Please explain why or why not. 24 25 Response: 26 No. The response to CEC IR 1.11.1 describes why centralized, local EOCs are preferred over

27 remote ones. Except as a temporary or emergency arrangement, an EOC in Kelowna is too far
28 removed from events transpiring within the Kootenay Region because its distance would result
29 in increased response time and, depending on the time of the year, could make communications
30 difficult. The two existing EOCs at Kelowna and South Slocan were chosen based on



1	geographical and infrastructural considerations to minimize response time for events occurring
2	in the vicinity of those offices.

- 6.1.3 Do alternate locations have geographic location restrictions, or could they be managed from any distance? Please explain.
- 8

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### 9 Response:

10 Geographic location restrictions for the alternate EOC locations include potential road or air 11 access restrictions related to events such as vehicle or rail accidents, weather, and natural 12 disasters. Further, the alternate EOC location could be considered restricted due to the 13 geographic location of the EOC in relation to the event and the amount of time it would take to 14 travel, access and activate the EOC with the appropriate resourcing.

15 The location in Castlegar was specifically chosen to minimize the chances of access being 16 restricted. This helps ensure that the Company can respond adequately to all emergency 17 events across its service area.

18 While it is possible to manage an emergency from some distance on a temporary basis, as 19 described in the response to CEC IR 1.11.1, FBC recognizes that a centralized EOC located in 20 the service area allows for local operation employees to use the dedicated space for both low 21 and high level emergencies and provides the most timely and effective response.

22 Please also refer to the responses to CEC IRs 1.6.1 and 1.6.1.2.



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#### 1 7 Reference: Exhibit B-1, Page 42

A Quonset hut is currently being used for parking for the RBD trucks (Figure 4-4). These vehicles require electric plugins for their diesel engines as well as covered dry storage to ensure the safety of FBC staff when working on electrical lines. Although the Quonset hut provides some protection from the elements, it does not provide full protection as a secure enclosed garage would. The current RBD model only partially fits in the Quonset hut, and the replacement RBD truck planned for deployment at the Castlegar District Office in 2015 will also extend out of the cover due to its length. These larger RBD trucks have a longer boom which is required to set the longer poles in the ground that are currently being used by FBC. Not all RBD trucks fit in the Quonset hut; large trucks that do not fit under cover in the yard at the Castlegar District Office are covered with tarps every night during cold months so that they are ready for use each day.

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- 7.1 Can Quonset huts be enclosed and secured with doors?
- 5 **Response:**

6 Yes, Quonset huts can be enclosed and secured with doors. However, the Quonset hut in the 7 Castlegar District Office yard is not deep enough to house the RBD truck and replacing it with a 8 new larger sized Quonset hut to house the RBD truck would extend out too far within the yard 9 and would significantly impact yard function which is already congested and space constrained.

10 11 12 13 7.1.1 If yes, please provide the approximate cost of a new Quonset hut that 14 would be enclosed and secure, and would fit the current RBD model. 15 16 Response: 17 A larger sized Quonset hut could not be accommodated by the Castlegar District yard. Please 18 refer to the response to CEC IR 1.7.1. 19 20 21 22 7.1.2 If yes, what is the approximate proportional cost of a Quonset hut that 23 was enclosed and secured relative to a more permanent facility, i.e. 24 50%? 25



### 1 Response:

2 Please refer to the response to CEC IR 1.7.1 and 1.7.1.1.



#### 1 8 Reference: Exhibit B-1, Page 44

#### 4.6.2 Castlegar District Office Nearing End-of-Life Expectancy

FBC engaged Iredale Group Architecture to complete a condition audit of the Castlegar District Office, which is provided as Appendix C. The 2012 report identified that the building (constructed in 1962) is nearing its end-of-life within the next 3 to 5 years. The Company's long term plan is to operate the Castlegar District Office to its end-of-life, after which the KOC site can be considered to accommodate its functions.

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- 8.1 Please discuss the advantages and disadvantages, with approximate costs and/or savings that would accrue, from addressing the Castlegar District Office issues at the present time, rather than operating it until the end of its useful life.

#### 7 **Response:**

8 Please refer to the response to BCUC IR 1.8.7.



#### 1 9 Reference: Exhibit B-1, Pages 41 and 45 and Appendix F, Page 2

FBC has identified inefficiencies associated with the location of the Kootenay Station Services group.

The Kootenay Station Services group operates out of the Warfield Complex, which introduces inefficiencies in travel time. As shown in Figure 3-1, the Warfield Complex is not centrally located in relation to the employees' work locations. In general, for daily activities, members of this group are currently dispatched from the Warfield Complex. As a result, personnel routinely have significant travel to mobilize to work locations and trouble calls.

In addition, FBC recognizes there are certain inefficiencies due to the separation of the Generation Major Maintenance electricians located at the Generation Facilities described in Section 3.2.1.3 and the Kootenay Station Services Group located at the Warfield Complex. The groups share similar job functions but due to logistics have historically operated independently. There is some duplication of vehicles, tools, and equipment required for each of these groups to operate independently.

 Centrally locate the Kootenay Station Services group, resulting in operational efficiencies and cost savings;

Warfield Complex to New Proposed Facility 6.04	Average Distance Difference (kilom	eters closer)
	Warfield Complex to New Proposed Facility	6.04
Generation Office to New Proposed Facility 1.75	Generation Office to New Proposed Facility	1.75

		Average Drive Time Difference (minutes saved)
		Warfield Complex to New Proposed Pacifity 10.5 Generation Office to New Proposed Pacifity 4.4
2		
3	9.1	Are there operational efficiencies other than reduced travel time and duplication
4		of resources that would accrue?
5		
6	Response:	
•	<u></u>	
7	Please refer	to the responses to BCUC IRs 1.7.1 and 1.7.5.
8		
9		
10		
11	9.2	Please confirm or otherwise explain that the average drive time difference wou
12		be expected to occur twice daily on average.
13		
14	Response:	

- 15 Yes, the average drive time difference would occur twice per day (travel to and return from site),
- 16 if the work location is in Castlegar or north of Castlegar for the day.



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- 9.3 Is it only the electricians which are operating inefficiently because of the separate locations, or are there others? Please explain. Response: FBC does not agree that the electricians are "operating inefficiently"; however, some further efficiencies can be gained. The primary efficiencies gained from a resourcing perspective are through the common mustering of the Kootenay Station Service Group electrical workers and Generation Major Maintenance electrical workers. These groups currently operate independently but offer similar skillsets and expertise. With a full complement of mechanical trades moving to the KOC, support will also be available to the Kootenay Station Services Group when and if required. Mechanical work is typically contracted out in the Kootenay Station Services Group, but it may be performed in-house when the resources become more available through the relocation to the KOC. 9.3.1 How many electricians or other employee positions are operating inefficiently (such as duplication of tools) because of the separate locations? Please provide a breakdown by employment type. **Response:** Please refer to the response to BCUC IRs 1.7.1 and 1.9.3.
- 299.4Are there any advantages from having Generation Major Maintenance30electricians or others located separately from Kootenay Station Services group31such as built in redundancy? Please explain.
- 33 <u>Response:</u>

There are no disadvantages associated with mustering the Station Services and Generation groups from a common location. The benefits, as described in the Application and noted in the



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1 preamble above, are reduced costs associated with a reduction of vehicles, tools and 2 equipment and travel time required.

- 9.5 Please estimate the dollar value of resultant efficiency of combining the offices for these groups.

# **Response:**

- 10 Please refer to the response to BCUC IR 1.7.1.



#### 1 10 Reference: Exhibit B-1, Page 49

Additionally, these two buildings have been identified as being beyond their end-of-life expectancy as indicated in the Condition Report in Appendix B. The Company believes that further significant capital investment in a building at its end-of-life is generally not good practice

as such investment does not extend the building's life in a cost-effective manner. The costs associated with Alternative 2 are illustrated in the evaluation of the alternatives presented in Section 5.3.2.

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10.1 For how long would the buildings' lives be extended if upgraded?

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# 5 **Response:**

6 Alternative 2 would extend the service life of the buildings by approximately 40 years, as

7 identified on page 1-1 in Appendix B Generation Office and Warehouse Facility Assessment

- 8 and Reports.
- 9



#### 1 11 Reference: Exhibit B-1, Pages 52 and 53

- Provision of a dedicated fully functioning (but not centralized) EOC; and
  - Provide a centralized EOC or mitigate the risks associated with proximity to the flood and inundation zone and the proximity to the rail line;
- 11.1 Please discuss the value and importance of having a 'centralized' EOC.
- 3 4

2

### 5 **Response:**

A centralized EOC enables rapid collaboration and coordination of planning, and simplified decision making. An EOC that is located centrally in the service area can be staffed most quickly by employees with the specific skill sets required in that area to respond to the emergency. It also could enable more timely access to potential emergency locations in the event of a complete loss of communications, in which case communication would be facilitated by road or air transportation travel. Please also refer to the response to ICG IR 1.1.1.



#### 1 12 Reference: Exhibit B-1, Pages 42 and 55

- 4.6.1 The Current Yard is Constrained and is Not Suitable for Certain Vehicles 5
- 6 The yard at the Castlegar District Office has immediate constraints that should be resolved.
- 7 First, the yard cannot adequately house all the vehicles needed to be housed there. Certain
- vehicles are not able to fit within the warehouse area and are therefore not adequately protected 8
- from the elements or kept dry. The overhead bay doors in the warehouse area are too small to 9
- 10 accommodate the RBD trucks. Although the size of the 12 foot high bays was sufficient for older models of RBD trucks, the current models used by FBC are 13.5 feet and require height 11
- 12
- clearance of 14 feet.
- Yard space at the KOC would be allocated for pole and trailer storage to deal with the lack of yard space at the Castlegar District Office. This alternative does not include any changes to either the buildings or the yard at the Castlegar District Office location; the yard at Castlegar District Office will continue to serve as material storage and fleet parking;
- 12.1 Please confirm that the proposal will not address the issue of covered parking and requirements for guided sequential parking and others that occurs at the Castlegar District Office.
- 6

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#### 7 Response:

- 8 The proposed KOC Project does not address the lack of covered and heated parking at the 9 Castlegar District Office.
- 10
- 11
- 12 13

15

12.2 Are there increased maintenance costs or advanced replacement costs that 14 occur as a result of the improper housing for the vehicles?

#### 16 Response:

17 Yes, there are increased maintenance costs that can occur as a result of improper housing of 18 vehicles. FBC has specialized vehicle and equipment requirements to support continued safe and reliable operation of the electric system. As a specific example, the aerial trucks with 19 20 annual dielectrically tested fiberglass booms (referred to as Aerial and RBD trucks in Section 21 3.2.4 of the Primary Application) should be kept in a garage to mitigate their exposure to Ultra 22 Violet (UV) light and the elements. Without proper storage, their maintenance costs increase 23 because the finish of the fiberglass booms can deteriorate and needs to be cleaned and 24 polished frequently to maintain dielectric ratings. Moreover, these trucks should be kept in a 25 heated area to reduce the possibility of moisture condensing on the inside of the fiberglass 26 booms which poses a significant safety risk to crews if not mitigated. The aerial boom is tested



by crews before certain work procedures are started to ensure the safety of the crews and thepublic.

Additionally, due to heavy snowfall, FBC has experienced collapse of equipment trailers that carry important equipment like standby generators. The Company's preference is to store these units under covered parking to prevent damage to the trailer and equipment.

- 6
- 7
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12.2.1 If yes, please provide an annual estimate of these costs.

10

## 11 Response:

As noted in the response to CEC IR 1.12.2, the maintenance costs of a RBD truck may increase if it is not properly stored in a garage because the finish of the fiberglass boom deteriorates faster and needs to be tested, cleaned and polished frequently to maintain its dielectric rating. On average, for an appropriately stored aerial truck with dielectrically fiberglass boom, FBC would expect to refinish the fiberglass boom every 10 years. Improper storage can accelerate this maintenance process. Listed below are the costs for each maintenance task that would be performed more frequently as a result of improper storage.

- Clean and polish of a fiberglass boom: \$400 per truck
  - Refinish of a fiberglass boom: \$1800-\$2200 per truck

These costs do not include the increased down time of the truck and its lack of availability for the crew's use during maintenance, which would involve further expense.

23



#### 1 13 Reference: Exhibit B-1, Page 57

various assets would be reduced. Appendix F details the distances and estimated drive times from Warfield and the proposed Kootenay Operations Centre to the assets that the Kootenay Station Services group would be dispatched to for emergency response, operations, maintenance work and/or capital work. As detailed in Appendix F, the proposed Kootenay Operations Centre would result in savings of approximately 850 kilometres, or 17.5 hours of driving time, based on just one round trip to each station from the proposed facility as compared to travel from the existing Warfield location.

- 13.1 Please provide an estimate of the annual cost savings including fuel, employee time and maintenance costs and any other savings that would arise from the reduced driving time.
- 6

2 3

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#### 7 Response:

8 Please refer to the response to BCUC IR 1.7.1.



#### 1 14 Reference: Exhibit B-1, Pages 57 and 58

The forecasted operating costs are summarized in Table 5-1 below. Operating costs of \$295 thousand are offset somewhat by Generation recoveries and increased Generation travel time. In total, the forecast net operating costs of \$175 thousand are offset by the expected O&M savings of approximately \$200 thousand provided in Table 5-2 below, resulting in net incremental O&M savings of \$25 thousand.

Table 5-1:	Proposed Pr	oject – Alternative	5 – KOC	Operating	Costs
------------	-------------	---------------------	---------	-----------	-------

	2015
	Estimated
	Annual O&M
	Cost and
	Savings
Item Description	(\$000)
KOC Operating Costs	\$295
Net Generation Recoveries	-\$150
Increased Generation Travel	\$30
Total	\$175

Table 5-2: Proposed Project – Alternative 5 – Kootenay Station Services Gross O&M Savings<sup>15</sup>

Item Description	2015 Estimated Annual Savings (000's)
Travel Time C&M	\$144
Premium Saving on Call Out Staff	\$11
Tool Crib Savings	\$10
Fleet Vehicle Savings	\$25
Warfield Janitorial Cleaning Reduction	\$10
Total	\$200

2

3 4 14.1 Please provide a breakdown of the KOC operating costs by activity.

#### 5 **Response:**

- 6 The KOC operating costs by activity were provided as part of the Confidential Appendix G-2-3 in
- 7 the Excel Model under Tab KOC O&M and are repeated below for reference.



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	<u>Est</u>	imated
		<u>Cost</u>
Activity	<u>\$</u>	<u>5000's</u>
Insurance	\$	3.7
Facilities Water		4.0
Facilities - Natural Gas Consumption		12.1
Facilities - Carpet & Upholstery		2.0
Facilties External Building Maintenance		7.7
Facilities - Interior Systems		66.2
Facilities - Roads & Grounds Maintenance		56.4
Facilties - Landscpaing		29.8
Utility/Central System Mtce: Electrical, Mechanical		9.7
Facilities - Garbage		2.2
Facilities - Janitorial		41.8
Facilities - Recycle		1.2
Facilities - Security		47.6
Facilities - Sewer		2.8
Facilities - Fire & Life Safety		7.3
Total	\$	294.5

14.2 Please provide or elaborate on the Net Generation Recoveries figure, and provide a breakdown by source if applicable.

## **Response:**

9 Please refer to the response to BCOAPO IR 1.5.1.

14.3 Please discuss the Increased Generation Travel costs of \$30 thousand.

## **Response:**

16 Travel time from the proposed KOC site to the FBC-owned dams is greater than from the 17 existing South Slocan Generation Site to FBC-owned dams. The Increased Generation Travel 18 cost of \$30,000 reflects the increase in Major Maintenance employees' time associated with that 19 increased travel.



- 1 2
- 3 4

- 14.4 Will there be savings on maintenance or reductions in future costs for improvements as a result of having newer facilities? Please explain why or why not.
- 6 7

#### 8 Response:

9 FBC does not expect savings on maintenance or future costs reductions from improvements as 10 a result of newer facilities. Table 5-2 presents the savings that have been identified and are 11 quantifiable. Please also refer to the response to BCUC IR 1.7.5 for comments regarding 12 benefits that are not quantifiable.

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- 14

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- 20 **Response:**
- 21 Please refer to the response to CEC IR 1.14.4.

been considered.

14.4.1

- 22
- 23
- 24
- 25
- 26 27
- 14.5 Will FBC adjust its O&M requirements under PBR so that ratepayers are not paying for the capital costs associated with the project, and not receiving the full operational benefits? Please explain.

If yes, please provide an estimate of the maintenance or other forecast

savings that have not been accounted for, or explain how they have

- 28 29 Response:
- 30 Please refer to the response to BCUC IR 1.10.8.

31 The Project is forecast to enter rate base January 1, 2018 and as such, only two years of the 32 PBR term will remain. To the extent that O&M benefits are realized during the PBR term, these 33 benefits will be returned to customers through the sharing mechanism. To the extent that any 34 benefits from this Project represent permanent O&M savings, these savings will be embedded in the rates of customers in the period beyond the PBR term. 35



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### 8 Response:

9 In order to estimate the annual savings that will arise from the energy efficiency of the proposed 10 KOC building, FBC would need to engage an external consultant to complete an Energy Model 11 Simulation for the buildings. This process is costly and extensive as it requires a comparison of 12 the current buildings and proposed KOC building assembly, and would be required only if 13 Leadership in Energy and Environmental Design (LEED) status was required for the building. 14 The KOC is not a LEED Project and as such, FBC has not included Energy Modeling as a 15 requirement or within the Alternative 5 cost estimate. FBC is confident that the new facility will 16 have improved energy efficiencies over the current facilities given that the current building code 17 and regulations have increased thermal and energy performance requirements over previous 18 editions, coupled with the advance in building science and construction techniques.



Page 31

#### 1 15 Reference: Exhibit B-1, Page 60

Table 5-3:	Summary	of Selection	Criteria /	Analysis o	f Alternatives	and the	Proposed	Project
Table 0.0.	Junnary	or belebuon	officine /		- raterinau res	and the	rioposed	riojeoi

	Alternative 1 Do Nothing	Alternative 2 Renovate Existing Buildings	Atternative 3 Replace Existing Building on Existing Sites	Alternative 4 Lease a Facility	Preferred Option 6 Kootenay Operations Centre at Central Location
Addresses immediate Problems – Generation Facilities End-of-Life	$\ge$	$\checkmark$	$\checkmark$	Not applicable	$\checkmark$
Addresses immediate Problems – Generation Faoilities Functional Challenges	$\times$	$\times$	$\checkmark$	Not applicable	$\checkmark$
Addresses immediate Problems – Central and Dedicated EOC	$\succ$	$\succ$	Partial <sup>17</sup>	Not applicable	$\checkmark$
Addresses Immediate Problems – Castlegar Yard Storage	$\ge$	$\succ$	$\times$	Not applicable	$\checkmark$
Improve Kootenay Station Services Operational Efficiency	$\ge$	$\succ$	$\times$	Not applicable	$\checkmark$
Considers the Long Term Requirements for the Aging Castlegar Facility	$\ge$	$\succ$	$\times$	Not applicable	$\checkmark$
Safe and Efficient Working Environment	$\ge$	$\checkmark$	$\checkmark$	Not applicable	$\checkmark$
Provide Building Capacity for Current and Future Requirements	$\ge$	$\checkmark$	$\checkmark$	Not applicable	$\checkmark$
Provides a Building In the Service Territory in a Suitable Area	$\ge$	$\succ$	$\succ$	Not applicable	$\checkmark$
Provides Energy Efficiency Which Allows for Cost Effective Operations	$\ge$	$\ge$	$\checkmark$	Not applicable	$\checkmark$
Full Life Cycle of Accet	$\ge$	$\checkmark$	$\times$	Not applicable	$\checkmark$

Alternative 5 is the only option which addresses all of the non-financial considerations.

2 3

4

5

- Why did FBC not include redressing of the Castlegar District Office issues such 15.1 as the lack of covered parking for oversized vehicles as part of the Selection Criteria?
- 6
- 7 **Response:**
- 8 Please refer to the response to CEC IR 1.1.2.

9

- 11



1 15.2 Please indicate on the above chart whether any of the alternatives could meet 2 the Castlegar District Office issues such as the lack of covered parking for the 3 time being or in the future.

### 5 **Response:**

- 6 At this time, none of the alternatives could address the lack of covered parking at the Castlegar
- 7 District Office. However, the KOC could potentially provide a solution for the Castlegar District
- 8 Office requirements in the future. Please refer to the response to CEC IR 1.1.2.

9



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#### 1 16 Reference: Exhibit B-1, Page 62

#### Table 5-5: Summary of Capital Costs of Alternatives (\$ millions)

	Alternative 2	Alternative 3	Alternative 5
2015\$ <sup>19</sup>	\$22.210	\$26.483	\$18.896
As-Spent	\$22.985	\$27.373	\$19.077
AFUDC	1.504	2.074	1.128
Demolition / Removal <sup>20</sup>	0.139	0.572	0.446
Total	\$24.628	\$30.019	\$20.651

#### Table 5-6: Summary of Financial Analysis of Alternatives (\$ millions unless otherwise stated)

	Alternative 2	Alternative 3	Alternative 5
As-Spent Capital Costs	\$24.628	\$30.019	\$20.651
2018 / 2019 Rate Base	2019: \$23.764	2019: \$29.660	2018: \$20.459
Incremental Property Taxes - 2015\$	\$0.290	\$0.310	\$0.419
Gross Incremental O&M Expense - 2015\$	\$0.151	\$0.137	\$(0.025)
PV of Incremental Revenue Requirement	\$39.366	\$45.930	\$33.912
DCF - NPV	\$(0.681)	(0.570)	\$(0.060)
2018 / 2019 Rate Increase (%)	0.9%	0.9%	0.7%

2

3 4 16.1 Please update the above costs to incorporate the transition of the Castlegar District Office and yard at the present time.

# 5

## 6 **Response:**

7 Please refer to the response to BCUC IR 1.8.7.



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#### 1 17 Reference: Exhibit B-1, Page 62

The Commission also noted in its Reasons for Decision on FBC's 2012-2013 Capital Expenditure Plan that it is important to "strike a balance between safety, reliability, quality of service, and achieving reasonable customer rates.<sup>n21</sup> FBC has delayed the replacement of the Castlegar District Office in an attempt to balance the customer rate impact associated with the Project while still ensuring the Company is able to provide safe and reliable service. This balance will be achieved with the construction of the KOC as proposed to address the urgent issues at the Generation Administration Office and Warehouse and the SCC, while continuing the operation of the existing Castlegar District Office through to its end-of-life expectancy (2020). The deferral of the capital costs associated with the replacement of the Castlegar District Office would allow the accompanying rate impact to be shifted into the future, thus mitigating the rate impact to customers in the first few years.

17.1 Please provide a ballpark estimate of the capital costs that would be associated
 with incorporating the replacement of the Castlegar District Office into the current
 proposal.

#### 7 Response:

- 8 Please refer to the response to BCUC IR 1.8.7.
- 9

2

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- 10
- 11
- 17.2 Please provide an estimate of the capital cost that will arise as a result of the
  replacement of the Castlegar District Office in the future and the approximate
  time that this might be planned.
- 15

#### 16 Response:

- 17 Please refer to the response to BCUC IR 1.8.7.
- 18
- 19
- 20
- 17.3 Please provide an estimate of the incremental rate impact that would occur if the
   Castlegar District Office replacement were incorporated into the current proposal
   and incorporate separately the rate impact of the cost of the Castlegar District
   Office replacement now and the offsetting forgone future replacement.
- 25

## 26 **Response:**

- 27 Please refer to the response to BCUC IR 1.8.7.
- 28



#### 18 Reference: Exhibit B-1, Pages 64 and 65

In 2014, FBC purchased a site located in the Ootischenia area of Castlegar that was appropriate in light of these factors. The total acquisition cost was approximately \$800K including legal and conveyancing fees. The site is a 10-acre parcel which is flat and rectangular in shape. It is zoned P1 – Public and Institutional, which permits Utility use. The site is brownfield (the previous structure was demolished in 2003) and has good road and highway access.

FBC is in the final process of preparing the land for temporary storage of poles, construction materials, and pole trailers. Permanent storage improvements to the land are included as part of the KOC Project requirements as discussed in Section 4.6.1. Permanent storage is conditional on the Ootischenia site development, as the City of Castlegar has an option to repurchase the property if FBC does not construct a building of at least 16,000 square feet on it.

- 3 18.1 What is the time frame by which FBC must construct a building of at least 16,000
   4 square feet after which the option to purchase would come into effect if not
   5 constructed?
- 6

2

### 7 <u>Response:</u>

- 8 This response is being filed confidentially under separate cover as it contains commercially 9 sensitive information.
- 10
- 11
- 12
- 13 18.2 Does the City of Castlegar's option to repurchase the land expire, or is it just conditional?
- 15
- 16 **Response:**
- 17 Please refer to the response to CEC IR 1.18.1.
- 18
- 19
- . .
- 20
- 18.3 Would FBC likely be able to sell the Oottischenia site to the City of Castlegar orothers if the project did not proceed?
- 23

#### 24 Response:

25 Please refer to the response to CEC IR 1.18.1.

	_			
FORTIS BC <sup>*</sup>		Applicati	FortisBC Inc. (FBC or the Company) on for a Certificate of Public Convenience and Necessity (CPCN) for the Kootenay Operations Centre (the Application)	Submission Date: September 25, 2015
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1 2				
3 4 5 6	Response:	18.3.1	If no, why not?	
7	Please refer	to the resp	ponse to CEC IR 1.18.1.	
8 9				
10 11 12 13 14	Response:	18.3.2	If yes, what selling price would FBC expect to obtai Please explain.	n from the sale?
15	Please refer	to the resp	ponse to CEC IR 1.18.1.	
16 17				
18 19 20 21 22	_	18.3.3	If yes, please confirm and explain where that the cost oversus selling the site has been incorporated into the Alternatives.	of utilizing the site total cost of the
23	<u>Response:</u>			
24 25	The cost of land disposa	utilizing the I costs hav	e site has been incorporated into the total cost of Alterr ve not been considered in the Alternative 5 cost.	ative 5, and thus
26 27 28	Alternatives develop the response to	2 and 3 c site, the p CEC IR 1.	to not involve or necessitate the acquisition of any lan property would be sold back to the City of Castlegar as 18.1.	d. If FBC did not described in the
29 30				
31 32			18.3.3.1 If not confirmed, please explain why not.	



# 2 Response:

3 Please refer to the response to CEC IR 1.18.3.3.



#### 1 19 Reference: Exhibit B-1, Page 66

#### 6.4 OPERATIONS CENTRE DESIGN

The design of the Kootenay Operations Centre addresses office space, material and tool storage, fleet and yard storage requirements. To ensure adequate quality and pricing of the completed facility, FBC has engaged a consultant team to complete schematic design and working drawings of the proposed building which are used to support the AACE Class 3 cost estimates developed for the Project. The completed design identifies the component configurations, material specification and material performance, and ensures maximum efficiencies and performance. The design also incorporates green initiatives such as energy efficiencies, natural light and low-emitting materials.

2 3

19.1 What are the estimated incremental capital costs of the green initiatives?

4

#### 5 Response:

6 BC implemented the energy efficiency requirements and regulation for the 2012 BC Building 7 Code in late 2013. As these new requirements are significantly stricter than those in the former 8 building code, FBC's planned green initiatives such as energy efficiencies and natural light are 9 now mandated. FBC will meet BC Building Code requirements around building envelope, 10 mechanical and electrical system efficiencies. FBC uses finishes to incorporate low-VOC-11 emitting products to improve indoor air quality. The use of these finishes has not resulted in increased Project costs as they have become common in the market place and accordingly 12 13 lower in cost. As a result of the BC Building Code changes discussed above, the "incremental capital costs of the green initiatives" that are currently required in construction of the building are 14 15 no longer incremental to the Project.

- 16
- 17
- 18
- 1919.2Please quantify the estimated operational efficiencies that will be achieved as a20result of the green initiatives.
- 21
- 22 Response:
- 23 Please refer to the response to CEC IR 1.14.6.
- 24



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Page 39

#### 1 20 Reference: Exhibit B-1, Page 66 and Appendix D-3-4

#### 6.4.1 Building Space Program

The KOC consists of a total site area of 437,834 square feet (approximately 10 acres) with a useable site area of 388,443 square feet. The KOC will have a combined office and material district storage building, consisting of 23,294 gross square feet of office and 6,796 gross square feet of material district stores. The office will support both the office and field staff functions, and the material district stores will support material and tool requirements for the field. In a separate building, the wash bay provides a means to clean the Company's vehicles and covered parking is available to ensure protection of trailer vehicles. In total, KOC features will include the following:

- A one-story combined office and material district stores building of approximately 30,090 feet;
- A fleet washbay building of approximately 1,890 square feet;
- Yard storage, laydown, receiving and circulation area of approximately 157,136 square feet;
- · Drive aisles and fleet circulation of approximately 62,292 square feet;
- Parking stalls of approximately 40,982 square feet; and
- Other (septic field, utility hook-up space, waste management, fencing setbacks, site, circulation, concrete apron for outside employee space) of approximately 145,444 square feet.

#### Kootenay Operations Centre - Site Area Breakdown

Required Spaces	Area (m2)	Area (ft2)
Setbacks	4599	49498
Office Building Footprint	2795	30090
Wash Bay Building	176	1890
Septic Field	948	10209
Staff Parking	1810	19478
Staff Parking Circulation	2385	25674
Fleet Parking	1211	13037
Covered Parking	787	8467
Fleet Parking Circulation	3402	36618
Yard Storage	385	4143
Laydown Areas	2399	25825
Sidewalk / Builidng Concrete Apron / Patio	908	9776
Site Circulation	5334	57414
Landscape	1591	17121
District Stores Loading / Receiving	1220	13134
Yard Storage Circulation	10594	114034
Concrete Islands / Curbing	132	1426
Total (Site Area 10 Acres +/-)	40676.1	437834

20.1 Please confirm that the KOC and yard proposal will be utilizing virtually all of the 10 acre site.



#### 1 Response:

2 Please refer to the response to BCUC IR 1.8.3.2.

3			
4			
5			
6		20.1.1	If not confirmed, please provide the estimated excess land that is
7			available, and discuss whether or not the extra land could be sold or
8			utilized either now or in the future.
9	_		
10	<u>Response:</u>		
11	Please refer t	o the resp	conse to BCUC IR 1.8.3.2.
12			
13			
14			
15		20.1.2	If confirmed, will the existing site be able to accommodate any future
16			growth that may occur in the future, such as the transition of the
17			Castlegar district office and fleet parking? Please explain.
18			
19	<u>Response:</u>		
20	Please refer t	o the resp	conse to BCUC IR 1.8.3.2.
21			



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#### 1 21 Reference: Exhibit B-1, Page 67 and 79

- 4. Headcount and anticipated future growth provided by FBC business groups:
- Base building service rooms (2,408 useable square feet):
  - Mechanical rooms dictated by mechanical system, equipment size and capacity. A mechanical engineer specified the required area.
  - Electrical room dictated by electrical system, equipment size and capacity. An
    electrical engineer specified the required area. 2012 Canadian Electric Code
    specifies the set clear space required in front of electrical panels.
  - Janitor room FBC standard size.
  - Uninterrupted Power Supply (UPS) the required area based on equipment size specified by an electrical engineer.
  - Local Area Network (LAN) the required area based on rack size and quantity specified by an electrical engineer.
  - Washrooms and shower rooms designed to suit Group D (office) and Group F3 (District Stores) occupancy classifications. The number of toilets and sinks is specified in the 2012 BC Building Code (Section 3.7 Health Requirements). The 2012 BC Building Code (Section 3.8 Building Requirements for Persons with Disabilities) also requires that washrooms in commercial buildings be barrier free, or handicap accessible, and specifies the number, size and layout of barrier free universal toilet rooms, washroom stalls and showers.
  - Water entry room the required area based on functional need specified by a mechanical engineer.
- Office Staff (8,402 useable square feet):
  - Office size Standard office sizes based on standard workstation size plus ancillary furniture.
  - Workstation size FBC standard based on whether employee is fixed or mobile (consistent with new workstation size specified in 2012 Government of Canada Workplace 2.0 Fit-up Standards Section A: General–purpose Office Space).
- Field Office Staff (2,740 useable square feet):
  - Field office size.

Table 7-1: Site Locations and Total Positions Relocating

Current Location	# of Positions Relocating
Generation Facilities	42
Warfield Complex	38
Trail Office Building	4
Total Employee Positions Relocating	84

- 21.1 Please identify the number of employees by the Office Staff or Field Staff type and breakout those typically on site from those typically off site.



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## 1 Response:

- 2 This response is being filed confidentially because it contains information related to the
- 3 Company's assets, including Critical Assets. FBC believes that there is reasonable expectation
- 4 that the release of such information could potentially jeopardize the safety and security of the
- 5 Company's system.



1	22	Reference: Exhibit B-1, Page 68
		<ul> <li>Emergency Operation Centre – an assigned meeting space with dedicated resources and equipment. Sizing of room is based on staffing numbers to support Emergency Operation Organization.</li> </ul>
2 3 4 5		22.1 What are the expected 'staffing numbers' to support the Emergency Operation Centre?
6	<u>Resp</u>	onse:
7 8 9 10	The a the na range can b	ctivation of an Emergency Operations Centre and staffing requirements are determined by ature and scope of the emergency. For lower level emergencies, staffing numbers typically from 6 to 8. During higher level emergencies and exercises, staffing of over 15 members e required, employed as follows:
11 12 13 14 15 16 17	•	Command – 3 (EOC lead, deputy, scribe); Operations cell – 3 (Operations lead, assistant, scribe); Planning cell – 3 (Planning lead, 2 engineering or operational planners); Logistics cell – 2 (Logistics lead, assistant); Public affairs – 3 (Public Affairs lead, Community Relations liaison, Contact Centre liaison); External agency liaison – 2; and Other support personnel from Safety, Environmental, Einance & Administration, Manning
19 20 21	·	& GIS, IT, or Facilities.
22 23 24 25 26	<u>Resp</u>	22.2 Please provide a list of the dedicated resources and equipment that will be required in the Emergency Operation Centre.
27 28	The for fully-f	ollowing is a list of dedicated resources and equipment that would typically be required in a unctional EOC:
29 30 31 32	• • •	Activity tables and task chairs; Large wall-mount monitors for GIS mapping, web view of SCADA, Dispatch tool; Dedicated computers for applications above; Dedicated phones and satellite phones;

• 11x17 printer or plotter;



3

4

7

- Audio-visual equipment including projectors, screens, TV monitors with cablevision, video conferencing equipment, whiteboards, and digital clock display;
- Redundant electrical supply (UPS and generator backup sufficient for all equipment including room lighting and HVAC);
- Wireless network capability;
- 6 High capacity network infrastructure;
  - Cable and/or satellite television connectivity;
- 8 FBC radio equipment;
- 9 HVAC environmental control;
- Hard copies of emergency response plans; and
- Hard copies of system documentation and system maps.
- 12
- 13
- 14
- 15 22.3 What is the estimated cost of the Emergency Operation Centre including the dedicated equipment?
- 17

## 18 Response:

19 FBC estimates the Emergency Operations Centre to cost approximately \$280,000, which 20 includes a cost per sq. ft. to build the space, soft costs for engineering and permits, and costs

21 for dedicated furniture and equipment.



#### 1 23 Reference: Exhibit B-1, Page 84

Moving employees to a new location is a challenging issue from a human resources perspective. The move will be seen by some as favourable and some as negative mainly depending on the impact to their commute distance and time. The average employee commute distance from their home to the KOC will be increased by approximately by 4 kilometres. This analysis was determined by calculating the distance changes between employee postal code regions, their current work site and the address of the proposed KOC site. As the average increase is minimal, FBC does not expect the relocation will lead to any abnormal employee turnover or attrition. FBC will develop a comprehensive plan for communicating to employees the benefits of the new location and progress of the construction, and for helping the affected staff with the relocation.

2 3

23.1 What is the current average employee commute distance?

4

#### 5 **Response:**

6 The current average commute distance for personnel affected by the proposed KOC Project is

7 approximately 20 kilometers. The proposed KOC Project would extend this average commute

- 8 distance by approximately 4 kilometers.
- 9