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February 7, 2014

Via Email
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 Energy Inc. (FEI or the Company)

**Application for a Certificate of Public Convenience and Necessity (CPCN) for
the Huntingdon Station Bypass (the Application)**

**Response to the Commercial Energy Consumers Association of British
Columbia (CEC) Information Request (IR) No. 2**

On October 25, 2013, FEI filed the Application as referenced above. In accordance with Commission Order G-11-14 setting out the Amended Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to CEC IR No. 2.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

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

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1 **1. Reference: Exhibit B-1, Page 16**

27 FEI retained experts to conduct a risk assessment on all transmission assets as well as a
28 specific risk assessment of the Huntingdon Station that evaluates the Probability of Failure
29 (PoF), the Consequence of Failure (CoF), and risks to the customers and the Company.

3 1.1 How frequently does FEI retain experts to conduct risk assessments on all
4 transmission assets?

5
6 **Response:**

7 FEI uses the principles of risk assessment during the development and implementation of the
8 Integrity Management Program, and employs risk assessments within selected activities.

9 Risk assessments encompassing all transmission assets, such as those submitted in support of
10 the Application, are performed on an as-needed rather than a scheduled basis.

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1 2. **Reference: Exhibit B-5, CEC 1.31.1**

3

4 **Response:**

5 Please refer to the response to BCUC IR 1.9.2 for the details on the calculations for the O&M
6 costs. The O&M costs from the base year (2013) are escalated at a rate of 2%.

7

8 2.1 Please provide FEI's rationale for escalating costs at 2% per year.

9

10 **Response:**

11 In order to provide an estimation of the impact on customer's rates and the incremental cost of
12 service impact, it is necessary to express the costs in nominal dollars by escalating the current
13 costs by a forecast level of inflation. A 2% escalation factor for this CPCN Project is appropriate
14 to forecast the nominal costs used to determine the incremental cost of service for future years
15 and is aligned with BC CPI forecasts for 2014-2018.

16

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1 **3. Reference: Exhibit B-4, BCPSO 1.1.5 and Exhibit B-5, CEC 1. 7.5**

10 **Response:**

11 This response addresses both BCPSO IR 1.1.4 and 1.1.5.

12 FEI does not know the design criteria back in 1956 when the Huntingdon Station was
13 constructed and commissioned and specifically the reasons for not incorporating full station
14 redundancy (i.e. bypass). FEI assumes the Huntingdon Station's design met the standards,
15 code and operational requirements applicable at the time.

16 Much has changed since the 1950s, including the increased number of customers served by
17 this single supply source and the age of the facility. FEI has long been aware that the

20 **Response:**

21 The FEI Integrity Management Program (IMP) typically follows a "hazard management"
22 approach for risk, with various activities being implemented for hazard control and risk
23 reduction. The identified hazards within the FEI IMP include: Third Party Damage, Natural
24 Hazards (e.g. water crossings, soil movement, seismic), Pipe Condition (e.g. corrosion and
25 cathodic protection monitoring), Material Defects & Equipment Failures, and Human-Related
26 Factors (e.g. construction and operations practices).

27 Risk assessments consider both the likelihood and consequences of potential failure incidents.
28 Although the Huntingdon bypass is not primarily intended to mitigate likelihood of failure due to
29 the above hazards, it has been assessed as significantly reducing the potential consequences
30 in the event of station failure or shut down. Please refer to further discussion in the Application,
31 Section 3.4.2.

3.1 While considering that the Huntingdon Station was constructed in 1956, please
generally discuss whether or not the Bypass as a standalone unit will be more,
less or equally capable of withstanding all identified hazards?

Response:

As discussed in section 4.1 of the Application, the bypass to be constructed needs to meet
current FEI Station Design standards and Seismic Design Requirements, which have evolved
since the time that the Huntingdon Station was first constructed. Thus, in comparison to the
Huntingdon Station, the new Huntingdon Station Bypass as a standalone facility would be more
capable to withstand all identified hazards outlined in the FEI Integrity Management Program.

Requirements and practices have continuously improved over time to mitigate risks and hazards
through design, construction, inspection and monitoring activities. FEI believes that there are
no additional costs for the improvement as the improved design, construction, inspection, and
monitoring activities are now common industry requirements and practices.

Please also refer to the response to BCUC IR 1.3.1.

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3.1.1 If it will be less or equally capable, please explain why this is so and
also explain why increasing the ability of the Bypass to withstand
hazards is not a project objective.

5

6

7

8

Response:

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Please refer to the response to CEC IR 2.3.1.

10

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3.1.2 If it will be more capable, please provide an overview of the factors that
make this so, plus an identification of any additional project costs in the
Bypass project associated with increasing this ability and an overview of
how these additional costs are justified.

14

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Response:

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Please refer to the response to CEC IR 2.3.1.

20

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1 **4. Reference: Exhibit B-5, CEC 1.10.3**

8 10.3 What is the expected remaining life span of the Huntingdon Station?

9

10 **Response:**

11 FEI cannot quantify the remaining life span of the Huntingdon Station. FEI intends to continue
12 to operate and maintain the Huntingdon Station into the foreseeable future. As long as
13 preventative maintenance, corrective maintenance and necessary upgrades and replacements
14 are performed to maintain the safety and integrity of the facility, FEI believes the Huntingdon
15 Station will continue to meet the needs of FEI's customers it is intended to serve.

2

3 4.1 Please confirm that when the Bypass is in place it will be possible to either
4 upgrade or replace, as required, all the critical components of the Huntingdon
5 station.

6

7 **Response:**

8 Confirmed.

9

10

11

12 4.1.1 If confirmed, please also confirm that this ability will virtually
13 permanently eliminate the requirement to ever need a standalone
14 project to replace the entire station, other than in response to some
15 unpredictable catastrophic event that destroyed the station.

16

17 **Response:**

18 Not confirmed. The bypass does not eliminate the possibility of a standalone project to replace
19 the entire Huntingdon Station. For instance, there are physical constraints in the current
20 location that may require a complete replacement of the entire station for significant capacity
21 expansion. An economic evaluation may also warrant the decision for a complete station
22 replacement over equipment upgrades. It is important to note that with the bypass installed, the
23 activities to replace the station, when necessary, would not cause service interruption to
24 customers.

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1 4.1.2 If not confirmed, please describe the factors and/or conditions that
2 would require an entire station replacement, other than in response to
3 some catastrophic event.

4
5 **Response:**

6 Please refer to the response to CEC IR 2.4.1.1.

7

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5. Reference: Exhibit B-1, Cover Page; Exhibit B-5, CEC 1.10.4; Exhibit B-5, CEC 1.21.2; and Exhibit B-2, BCUC 1.20.3

The estimated capital cost for the Project is \$8.0 million (in as-spent dollars).

10.4 What is the current estimated cost of replacing the Huntingdon Station?

Response:

The capital investment to replace the Huntingdon Station for the current capacity is in excess of \$21 million (AACE Class 5 cost estimate).

The assumptions for this high level estimate include the following conditions:

- the current land is sufficient in size to host the new facility;
- the interconnecting piping to the CTS will require minimal replacement;
- no additional connections are required from Spectra;
- there is no additional capacity increases; and
- single point-of-failure piping and components are removed through redundancy.

21.2 Please describe, if any, the functional differences there will be between the Huntingdon Bypass Station and the proposed bypass system.

Response:

There will be no functional differences between the Huntingdon Station and the proposed bypass system. The design capacity of the bypass is 1635 mmscfd. Please also refer to the response to BCUC IR 1.20.3.

and #2 and an upgrade to the Station #2 flow meter. The bypass is for the most part an emergency provision and its design basis is relatively conservative; peak day flow at minimum Spectra pressure. That said, its capacity could be increased as needed by replacing or

5.1 Given that the Bypass will be, for the most part be, an emergency provision with a conservative design, please confirm that there will be no difference between the ability of the Huntingdon Station and Bypass system to provide all required services over time.

Response:

Confirmed as explained below.

FEI has designed the bypass using current industry acceptable design criteria, and the Company expects there will be no functional differences between the Huntingdon Station and the proposed station bypass over time.

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3

4 5.1.1 If not confirmed, please describe the possible differences that could
5 impact customer service.

6

7 **Response:**

8 Please refer to the response to CEC IR 2.5.1.

9

FortisBC Energy Inc. (FEI or the Company) Application for a Certificate of Public Convenience and Necessity for the Huntingdon Station Bypass (the Application)	Submission Date: February 7, 2014
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1 **6. Reference: Exhibit B-1, Page 13; Exhibit B-5, CEC 1.11.3, and Exhibit B-5, CEC**
2 **1.12.1**

23 • Failures of Facility Piping

24 A substantial amount of non-redundant piping within the Huntingdon Station is sub-
25 surface and is not readily accessible for inspection. Corrosion, material imperfections,
26 and weld flaws are primary threats to this asset, with corrosion creating the highest risk.
27 Corrosion is the loss of metal thickness of the pipe wall due to iron oxide formation and
28 the integrity of the piping gradually reduces over time, increasing the risk of piping failure.

29 Currently, there are limited methods of maintaining gas supply if a defect is discovered
30 on a non-redundant section of the piping that requires immediate repair or replacement.
31 The entire Station may have to be shut down in order to repair.

17 The Integrity Management Program (IMP) is a collection of activities and management systems
18 incorporated into FEI's day to day business and operations that are used to ensure the integrity
19 of gas system assets for the entire FEI portfolio. Since the IMP is an integrated program
20 involving FEI's entire transmission and distribution piping systems (including facilities), the
21 Company is unable to provide costs to execute the IMP for one specific asset.

3 12.1 Please advise whether or not FEI has undertaken sample uncovering of sections
4 or components of the Huntingdon facility system to check for corrosion and flaws.

5
6 **Response:**

7 To date, excavations performed on the Huntingdon Station below-grade facility piping have
8 been associated with site construction activities. There are critical sections of below-grade
9 piping which have not been directly inspected.

6 6.1 Please describe how the below grade piping in Huntingdon is being managed
7 within the Integrity Management Program (IMP).

8
9 **Response:**

10 Please refer to the response to BCUC Confidential IR 1.7.3.

11 Primary activities within FEI's Integrity Management Program (IMP) applicable to the below-
12 grade piping in the Huntingdon Station are as follows:

- 13 • security management activities include security risk assessments and mitigation;
- 14 • cathodic protection is applied to buried steel piping and is monitored to mitigate the
- 15 likelihood of significant corrosion growth;
- 16 • pipeline condition monitoring activities assess available data, and prioritize and
- 17 implement inspections of below-grade pipelines and facility piping;

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- maintenance activities encompass below-grade valve inspections to ensure system operability;
- pressure monitoring is performed to assess operating pressures relative to established limits; and
- odorization management ensures that gas odorant levels are maintained at readily detectable levels.

6.2 Please describe how the inspection of below grade piping will change after the Bypass system is operational and if critical sections of below-grade piping will be directly inspected.

Response:

Please refer to the responses to BCUC Confidential IR 1.7.3 and CEC IR 2.6.1.

Following in-service of the bypass, FEI will continue to operate and maintain the existing station piping as well as the new bypass in accordance with its IMP. This includes pipeline condition monitoring. As discussed in the Application (Page 7 Lines 18-23), installation of the Huntingdon Station Bypass will facilitate complete maintenance, and necessary and appropriate repairs or replacements, without the need to shut down the entire station.

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1 **7. Reference: Exhibit B-5, CEC 1.17.2**

14 **Response:**

15 FEI maintains the capability to construct a temporary bypass of portions of its system.
16 However, constructing and installing a temporary bypass will take time (depending on the size
17 and length, it may take days or weeks). In contrast, the proposed permanent bypass will be
18 fully operational for immediate response.

2

3 7.1 Please define the “immediate response” timeframe, i.e. – is the response
4 timeframe going to be sufficiently short so as to not be detectable in the service
5 or will it be some longer period that might cause a temporary service downgrade
6 or a small service interruption?

7

8 **Response:**

9 As outlined in section 3.4.2.1 of the Application, should a complete outage of gas flow from the
10 Huntingdon Station occur, it is estimated that there is less than one hour of line pack during a
11 peak winter day. A factor to consider during an emergency situation at the Huntingdon Station
12 is to activate the bypass to avoid any service interruption.

13 During an emergency situation, the activation of the Huntingdon Station Bypass will occur
14 following an assessment of the situation and activation of the response plan. With the
15 installation of remote operation of the block valves as proposed, the timeframe for FEI's Gas
16 Control group to activate the bypass would be short (i.e. within 5 minutes). Remote operation
17 will allow for safe and timely response to a failure of a component within the Huntingdon Station,
18 and in instances where it would be unsafe for FEI personnel to enter the Huntingdon Station,
19 remote operation will simplify emergency response procedures by allowing the supply source
20 being shut down without endangering lives.

21

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1 **8. Reference: Exhibit B-2, BCUC 1.24.1**

2 In accordance with the AACE definition of contingency as referred to in the response to BCUC
3 IR 1.23.5 the control budget for the capital costs are is \$7.6 million including the contingency
4 (and excluding AFUDC). Inclusion of the contingency in the control budget is consistent with
5 FEI's CPCN projects such as FEI's Kootenay River Crossing (Shoreacres) Upgrade which the
6 Commission approved in order C-9-10 dated November 15, 2010.

7 8.1 Is inclusion of the contingency in control budgets consistent with all of FEI's
8 CPCN projects, or is the Kootenay River Crossing Upgrade an example of where
9 it has been included?

10 **Response:**

11 Inclusion of the contingency in control budgets is consistent with FEI's practice in all CPCN
12 projects. In recent projects, for presentation purposes, FEI has identified the contingency as a
13 single separate line item in the project cost estimate rather than embedding the contingency
14 within various components of the project cost estimate.

15
16

17 8.2 If inclusion of the contingency in control budgets is not always undertaken,
18 please explain why it has been undertaken in this instance and not elsewhere.

19 **Response:**

20 Please refer to the response to CEC IR 2.8.1.

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1 **9. Reference: Exhibits B-5, CEC 1.26.1; and Exhibit B-2, BCUC 1.24.2**

7 **Response:**

8 In the event that there is a material change to the cost estimate (as compared to the current
9 control budget) as the Project proceeds, FEI will notify and provide updated information to the
10 Commission.

30 **Response:**

31 The expected accuracy range of the capital cost estimate is \$9.9 million (\$7.6 million +30%) to
32 \$6.1 million (\$7.6 million -20%).

4 9.1 Please explain why there is a significantly higher upper bound range (30%) than
5 a lowerbound range (20%).

7 **Response:**

8 FEI's practice is to express projected accuracy ranges with higher upper bounds than lower
9 bounds because there is more risk of increasing project costs than there are opportunities to
10 reduce costs. This is consistent with AACE recommended practices and is illustrated
11 graphically in AACE Recommended Practice No. 18R-97: Cost Estimate Classification System
12 – As Applied in Engineering, Procurement, and Construction for the Process Industries. The
13 mid-range of a Class 3 estimate at a 25% maturity level is bound by an expected accuracy
14 range of +40% / -25%.

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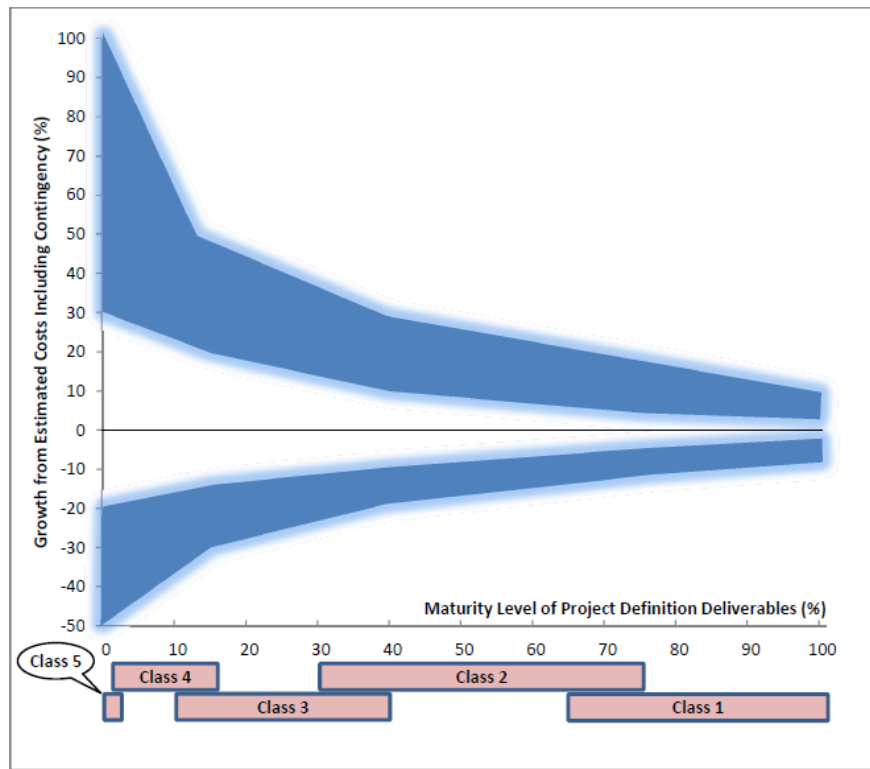


Figure 1 – Example of the Variability in Accuracy Ranges for a Process Industry Estimate

9.2 Would FEI agree that the discrepancy would be indicative of a relatively conservative estimate having been presented to the Commission?

Response:

FEI does not agree that the higher upper bound is indicative that the estimate presented in the Application is conservative. Please refer to the response to CEC IR 2.9.1.

9.2.1 If no, please explain why not.

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1 **Response:**

2 FEI endeavours to present the best possible cost estimate based on the current available
3 information and within the parameters of the completion of project definition and level of effort
4 set out in the AACE Recommended Practice No. 17R-97 for a Class 3 estimate. Please also
5 refer to the response to BCUC IR 2.9.2.

6
7

8

9 9.3 Does FEI typically provide conservative estimates to the Commission?

10

11 **Response:**

12 Please refer to the response to CEC IR 2.9.2.1.

13

14

15

16 9.3.1 Please explain why or why not.

17

18 **Response:**

19 FEI is always endeavouring to present the best possible cost estimate as explained in the
20 response to BCUC IR 2.9.2.1 in order to assist timely approval of projects that FEI deems
21 critical to ensure safe and reliable service to its customers.

22

23

24

25 9.3.2 If so, please explain why or why not.

26

27 **Response:**

28 Please refer to the response to CEC IR 2.9.1.

29

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9.4 Please confirm that FEI will only consider a revised estimated project total cost figure which is greater than \$9.9 million or less than \$6.1 million to be a “material change” in the cost estimate.

Response:

Not confirmed. FEI considers a revised estimated project capital cost figure which is greater than \$9.9 million or less than \$6.1 million to be the accuracy range in the capital cost estimate.

To clarify, as discussed in the response to BCUC IR 1.24.1, the control budget for this Project is approximately \$8.2 million, excluding AFUDC, representing a forecast of \$7.6 million of capital costs and \$0.6 million of development costs.

The Commission in a recent CPCN project (estimated capital cost for that project of \$6.7 million, not including AFUDC) has stated that a “material change” could be for any component or the whole control budget with a variance of ten percent or more. (See Order C-2-14.) If requested, FEI can follow a similar approach.

9.4.1 If not confirmed, please provide the upper and lower dollar amounts that must be exceeded for there to be a “material change” in the cost estimate.

Response:

Please refer to the response to CEC IR 2.9.4.

9.5 After the detailed engineering is finalized and the corresponding revised project cost estimate is available, what will be the expected accuracy range for that estimate?

Response:

FEI does not plan to update the cost estimate after detailed engineering is complete. Rather, if requested, FEI can provide updates at the points when the major materials are purchased and when the construction contract is awarded. The expected accuracy range will be governed by the maturity level of the project deliverables, which notably include the procurement of materials

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1 and construction services as well as the property agreements, archaeological impact
2 assessment, and permits. The expected accuracy range will be narrowed over the project
3 lifecycle.

4
5
6
7 9.6 Is FEI prepared to otherwise provide the Commission with the updated project
8 estimated cost when it is available?

9
10 **Response:**

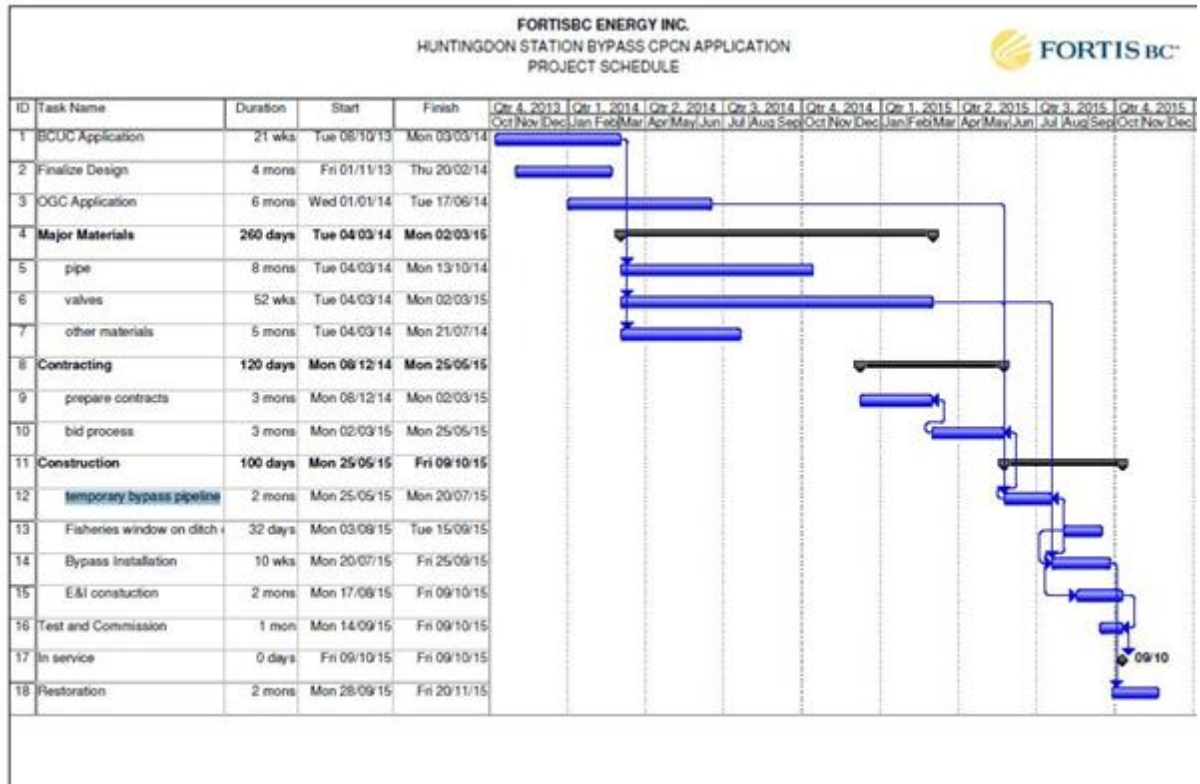
11 FEI is prepared to provide the Commission with an updated project cost estimate if required by
12 the Commission.

13 Please refer to the response to CEC IR 2.9.5 for the possible timing of such report.

14

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1 **10. Reference: Exhibit B-1, Appendix D**



2

3 10.1 Please explain why a “temporary Bypass pipeline” must be constructed prior to
4 the permanent Bypass structure.

5

6 **Response:**

7 Please refer to the responses to BCUC Confidential IR 1.1.2 and BCUC IR 1.6.1. The gas
8 procedure will be finalized prior to the installation of the bypass.

9

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11. Reference: Exhibit B-1, Page 36; Exhibit B-1, Appendix E

5.6 OTHER APPLICATIONS AND APPROVALS

5.6.1 BC Oil and Gas Commission (OGC) Application

The construction and operation of the Project are governed by the Oil and Gas Activities Act and subject to the OGC regulation. The Project requires a Pipeline Application. FEI plans to file the Pipeline Application in January 2014. A Pipeline Application is a significant process with considerable technical scrutiny on the Project by the OGC. Public and First Nations Consultation, ROW acquisition, archaeological requirements, design reviews, environmental permits/approvals for work in and around fish bearing streams are all components of the Pipeline Application. Each component must receive OGC approval prior to the start of construction, a significant regulatory process in addition to the CPCN approval by the BCUC. A Pipeline Application can take up to one year for approval. However, since the proposed bypass is relatively simple and short, the current schedule assumes a six month approval period.

FEI will update the Commission when the OGC approves the Pipeline Application in its compliance filings if required.

Project: Huntingdon Station Bypass CPCN Application
Risk Analysis and Contingency Calculation
May 13, 2013

No.	Risk Description	Relative Risk		Mitigation	Impacts	Comment	Expected Value		
		Prob	Conseq				Probability	Consequence	Contingency
1	Market conditions - high bids	3	4	12	Communication with known contractors to ensure sufficient bidders are interested and available	near commodity purchases - control values and construction contract	50%	250,000	125,000
2	Contaminated groundwater	2	5	10	water sampling	construction contract, environmental monitoring	20%	250,000	62,500
3	Late delivery of electricty	3	3	9	early order of material - have specification ready for immediate purchase on project approval or consider placing order prior to project approval	schedule delay may cost another year of escalation on construction contract, additional work for project team	50%	100,000	50,000
4	Late delivery of pipe	2	4	8			25%	100,000	25,000
5	Large amount of groundwater	2	4	8	water sampling, known issue addressed in contract	construction contract, environmental monitoring	20%	140,000	28,000
6	Delayed start due to OGC	2	4	8	Start application as early as possible	schedule delay may cost another year of escalation on construction contract	25%	100,000	25,000
7	Species at risk - increased permits and monitoring	2	5	10	environmental studies of area	delay during construction	25%	150,000	37,500
8	Late delivery of valves - Babbies window	3	2	6	early order of material	construction contract, environmental monitoring	50%	150,000	75,000
9	Small amount of groundwater	1	1	1	water sampling	construction contract, environmental monitoring	80%	25,000	20,000
10	Significant chance find	1	1	1	Archaeological Impact Assessment	construction contract, environmental monitoring	10%	400,000	40,000
11	work in proximity to gas line	2	2	4	construction practices - hydrovac and inspection	delay during construction	25%	200,000	50,000
12	right of way acquisition costs, potential expropriation, temporary workspace costs	2	2	4	Continued communication with property owners	property costs	25%	87,500	21,750
13	archaeology - chance find	2	2	4	Archaeological Impact Assessment	construction contract, environmental monitoring	25%	200,000	50,000
14	HR - Project team member leaves	3	1	3	Depth of resources at Fortis and design consultant	stakeholder management, design, construction contract	50%	25,000	12,500
15	Contractor non performance	1	3	3	Careful working in contract, bonding	construction contract	10%	150,000	15,000
16	Contaminated soils (asbestos...)	1	3	3	Soil testing	construction contract	10%	150,000	15,000
17	work in proximity to power lines - damage	1	2	2	Proper construction methodology around power poles	stakeholder management, design, construction contract	10%	25,000	2,500
18	US regulatory interference	1	2	2	Nearest neighbour has been communicated with				-
19	High bids for contract	1	2	2	Communication with known contractors to ensure sufficient bidders are interested and available	construction contract			-
20	Contractor insolvency	1	2	2	Prequalification of bidders, bonding	construction contract			-
21	Changes to Spectra station - gates	1	2	2	Ongoing communication with Spectra	stakeholder management, design, construction contract			-
22	Risk increases monitoring requirements	2	1	2					-
23	work in proximity to Kinder Morgan	1	1	1	Permit to be obtained from Kinder Morgan				-
24	Bird nesting window	1	1	1		No tree removal required			-
							Total		721,750

B-1 Appendix E

11.1 Please advise if FEI will be submitting, or has submitted, the required OGC application in January 2014.

Response:

FEI has not submitted a complete OGC application. The OGC is currently reviewing its application processes and has requested that FEI submit a project summary and construction

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1 plan in order for the OGC to determine the type of application that is required for the Project.
2 The project summary and construction plan were submitted to the OGC on January 30, 2014 as
3 requested.

4
5
6
7 11.2 Given that the FEI has identified that project start could be delayed because
8 approval under the OGC Act has not been obtained and OGC approvals can take
9 up to one year to obtain, please describe any special measures FEI is
10 undertaking to insure that approval will be obtained as planned, i.e. –within a 6
11 month timeframe?

12
13 **Response:**

14 FEI is in the process of preparing and submitting a complete application meeting all of the
15 requirements of the OGC in order to minimize processing time. Additionally, FEI has submitted
16 a project summary and construction plan as explained in the response to CEC IR 2.11.1, is in
17 discussions with the OGC regarding the Project, and will continue to actively communicate
18 through the development and processing of the application. In order to mitigate the risk that the
19 processing duration is longer than estimated, FEI will endeavor to submit the OGC application
20 at the earliest possible date.

21
22
23
24 11.3 If the OGC approval is not obtained within the planned 6 month timeframe, how
25 much of a time delay can the project timetable tolerate before the project must be
26 delayed to another year?

27
28 **Response:**

29 The OGC approval is required prior to the start of construction. The fisheries window is the
30 major constraint to the Project construction window and is from August 15 to September 15,
31 2015. Therefore, the approval of the application is required by August 15, 2015 in order to
32 prevent a one year delay. Should the full year duration be required by OGC, an OGC
33 application date of August 15, 2014 is necessary.

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1 **12. Reference: Exhibit B-1, Page 43**

32 **7.3 SOCIO-ECONOMIC ASSESSMENT**

33 The economic impact of the Project to the regional area where the Project is to be constructed
34 is expected to be limited. The construction contract and the major materials will likely be
35 procured from out-of-province sources since these resources are not readily available in B.C.

2

3 12.1 Please advise if the FEI purchasing policy gives any preference to regional,
4 provincial or Canadian businesses, e.g. access to the tenders, pricing tolerance,
5 etc.

6

7 **Response:**

8 The FEI procurement policy is to ensure that all purchases of materials, equipment and services
9 are performed in an ethical manner in accordance with prudent business practices for best
10 value (focusing on quality, price, reliability, service, support, delivery, training and continuous
11 improvement), irrespective of where the supplier is located.

12

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1 **13. Reference: Exhibit B-1, Page 42**

20 FEI's internal environmental standards. An Environmental Management Plan specific to the
21 Project will be developed by the successful contractor(s) prior to commencement of the Project.
22 Environmental monitoring will be undertaken during all sensitive aspects of the work program
23 and the designated environmental monitor will have "stop work authority" in the event that works
24 underway have the potential to impact the natural environment.

3 13.1 Please if the project might also be monitored by either a provincial or federal
4 agency that also has the authority to "stop work".

5
6 **Response:**

7 The Project is subject to all applicable Federal and Provincial legislation, and as such could be
8 inspected by a federal or provincial "officer" (i.e. OGC Officer, Conservation Officer, Fisheries
9 Officer, etc.) who may have "stop work" authority pursuant to applicable legislation.

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14. Reference: Exhibit B-4, BCPSO 1.1.5; Exhibit B-4, BCPSO 1.1.3; Exhibit B-5, CEC 1.21.1; Exhibit B-5, CEC 1.21.3.2

Response:

This response addresses both BCPSO IR 1.1.4 and 1.1.5.

FEI does not know the design criteria back in 1956 when the Huntingdon Station was constructed and commissioned and specifically the reasons for not incorporating full station redundancy (i.e. bypass). FEI assumes the Huntingdon Station's design met the standards, code and operational requirements applicable at the time.

Much has changed since the 1950s, including the increased number of customers served by this single supply source and the age of the facility. FEI has long been aware that the

1.3 Please provide the current net book value of the assets associated with the Huntingdon Station as of December 2013.

Response:

As of December 31, 2013, the net book value of the FEI Huntingdon Station was \$5,742,695.

21.1 Please describe, if any, the technology improvements that will be installed, as compared to technology currently utilized in the Huntingdon Station.

Response:

There will be no technology improvements at the Huntingdon Station. There is currently remote operation capability at the Huntingdon Station to control flow between stations. The new bypass will use the same technology to implement the ability for remote operation of the bypass.

Response:

No new technology will be utilized as the design does not necessitate the need for new technology and FEI's preference is to use standardized, established designs.

14.1 Please provide a high level overview of the upgrades that have been implemented at the Huntingdon station since it was commissioned in 1956.

Response:

As presented in the response to CEC IR 1.8.1, FEI acquired the Huntingdon Station from its predecessor in 1988. Since then, a number of upgrades have been completed. A high-level summary of the major upgrades is presented below:

- In 2013, FEI replaced the odourant system. For details, please refer to the response to BCPSO IR 2.1.1;

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- In 2011, FEI replaced the instrument air compressor building and system. The building was also designed such that the equipment was located above the flood level;
- In 2008, FEI (then Terasen Gas) upgraded the fire suppression system in the control building;
- In 2003, FEI (then BC Gas) upgraded the Huntingdon Station outlet piping. For details, please refer to the response to BCUC IR 1.1.1.2;
- In 2003, FEI (then BC Gas) replaced the Station #2 piping and equipment;
- In 2002, FEI (then BC Gas) replaced the Station #1 piping and equipment;
- In 1994, FEI (then BC Gas) replaced the Stations #1 and #2 outlet piping. For details, please refer to the response to BCUC IR 1.1.1.2;
- In 1993, FEI (then BC Gas) replaced the bulk odorant storage tanks; and
- In 1992, the control building was rebuilt.

To be complete, FEI notes that in 1992, a pipeline facility was constructed to interconnect with Northwest Pipeline and Spectra to enable export and import of natural gas. The interconnection is owned by FortisBC Huntingdon Inc. In 2013, the Spectra portion of the interconnection was sold to FEI and approved by the Commission.

- 14.2 Stated as a percentage of the station's December 2013 net book value, please provide an estimate of the value of all technical and other upgrades that have been implemented at the Huntingdon Station since it was commissioned.

Response:

Please refer to the response to BCPSO IR 1.1.2.

The Huntingdon Station was part of the 1988 BC Hydro acquisition by FEI (formerly BC Gas Inc.), which did not include detailed plant account records of the Huntingdon Station. Therefore, FEI cannot provide an estimate of the value of all technical and other upgrades that have been implemented at the Huntingdon Station since it was first commissioned in 1956.

Since 1988, the gross plant value as of December 31, 2013 at the Huntingdon Station is \$8,472,148 or 148% of the net book value as of December 31, 2013.

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14.3 Please confirm that all aspects of the Huntingdon station currently meet industry technical standards and no required equipment or other upgrades are currently outstanding.

Response:
Confirmed.

14.3.1 If not confirmed, please discuss the outstanding required upgrades and if and how these outstanding upgrades might impact the bypass structure in the future.

Response:
Please refer to the response to CEC IR 2.14.3.

14.4 Please confirm that the bypass design includes all equipment and other upgrades that FEI foresees being incorporated into industry standards within the next 5 years.

Response:
Confirmed based on FEI's understanding of the current industry standards and trends.

14.4.1 If not confirmed, please explain why these upgrades are not part of the project.

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- 1 **Response:**
- 2 Please refer to the response to CEC IR 2.14.4.
- 3

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1 **15. Reference: Exhibit B-2, BCUC 1.20.3**

24 the foreseeable future through prudent design. If required and necessary in the future, the
25 Huntingdon Station and the bypass are expandable. The increase in capacity to the Huntingdon
26 station can be accomplished through the addition of a fourth control valve run on Stations #1
27 and #2 and an upgrade to the Station #2 flow meter. The bypass is for the most part an

3 15.1 Please describe the features and their costs, if any, included in the bypass
4 design that will facilitate the capacity of the bypass to be increased in the future.

5
6 **Response:**

7 Please refer to the response to BCPSO IR 2.2.1.

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