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September 4, 2019

British Columbia Public Interest Advocacy Centre
Suite 803 470 Granville Street
Vancouver, B.C.
V6C 1V5

Attention: Ms. Leigha Worth, Executive Director

Dear Ms. Worth:

Re: FortisBC Energy Inc. (FEI)

Project No. 1598988

Application for a Certificate of Public Convenience and Necessity for the Inland Gas Upgrade Project (the Application)

Response to the British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre *et al.* (BCOAPO) Information Request (IR) No. 3

On December 17, 2018, FEI filed the Application referenced above. In accordance with British Columbia Utilities Commission Order G-153-19 setting out a further Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCOAPO IR No. 3.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Doug Slater

Attachments

cc (email only): Commission Secretary
Registered Parties

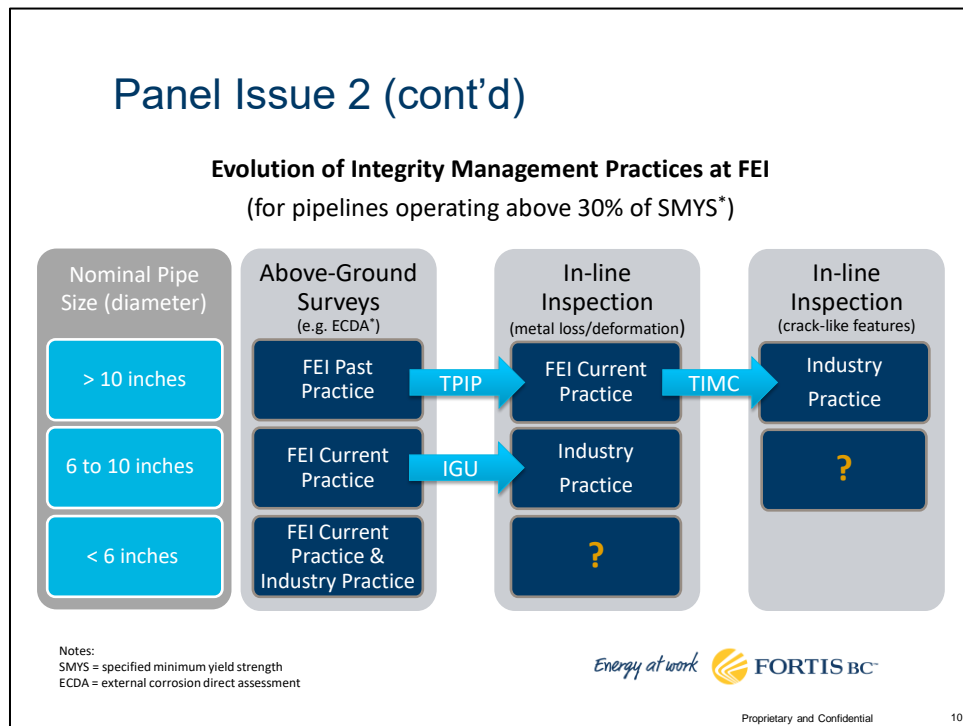
FortisBC Energy Inc. (FEI or the Company) Application for a Certificate of Public Convenience and Necessity (CPCN) for the Inland Gas Upgrade (IGU) Project (the Application)	Submission Date: September 4, 2019
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1 **1.0 Reference: General and Exhibit B-12, BCOAPO IR 2.4.1**

2 1.1 When did FEI initially determine or become aware that there was a potential
 3 rupture problem on the subject pipelines due to undetectable external corrosion?
 4

5 **Response:**

6 During the workshop on July 10, 2019, FEI presented the following slide¹ which depicts the
 7 evolution of its integrity management practices over time, consistent with industry practice and
 8 supported by enhancements in technology. FEI explained in the workshop and in Section
 9 3.4.4.2 of the Application, that the Transmission Pipeline Integrity Project (TPIP) was approved
 10 by the BCUC, and undertaken over a five-year period in the early 2000's, to retrofit its larger
 11 diameter pipelines in the Coastal Transmission System to be capable of inline
 12 inspection. Further, FEI explained that the TPIP project is essentially the same project as the
 13 IGU, except that the TPIP applied to FEI's larger diameter pipelines.



14

15 As technology and industry practice evolved since that time, inline inspection became an
 16 integrity management alternative for FEI's smaller diameter transmission pressure lines in order
 17 to mitigate the hazards caused by external corrosion. As such, the need for a project to mitigate

¹ Exhibit B-16, Slide 10



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1 the potential for rupture failure due to corrosion was identified in August 2015 as discussed in
2 the response to CEC IR 1.3.6. Preliminary work undertaken at that time focused on a review of
3 industry practice and the state of in-line inspection tool evolution, as well as hydraulic analyses
4 to determine whether flow rates in the laterals could be managed to achieve required in-line
5 inspection tool travel speeds.

6
7

8

9 1.2 Please provide the date on which FEI began work on the subject application.

10

11 **Response:**

12 Please refer to the response to BCOAPO IR 3.1.1. FEI began incurring costs for the IGU
13 Project starting in July 2017 when the project team formally started work on project scoping and
14 estimating.

15

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1 **2.0 Reference: Exhibit B-12, BCOAPO IR 2.6.1**

2 2.1 If available, please provide an estimate of the cost of providing a QRA in support
3 of the instant application or provide direction as to where such an estimate can
4 be found in the evidence.

5
6 **Response:**

7 Please refer to the response to BCUC IR 2.36.4 for FEI's order of magnitude estimate for a
8 QRA covering the 29 Transmission Laterals.

9 Neither the results from the first iteration QRA, nor a future iteration QRA specific to the 29
10 Transmission Laterals, is required to support the Application. FEI has already identified the risk
11 of rupture due to undetectable external corrosion as a threat to the 29 Transmission Laterals. In
12 accordance with CSA Z662 and BC OGAA requirements, FEI is obligated to address this threat
13 in a timely way. Quantitative risk assessment results cannot be used to relieve an operator from
14 its legal and regulatory obligations.

15



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1 **3.0 Reference: Exhibit B-10, BCUC IR 2.36.1**

2 The following is excerpted from the referenced response:

3 *JANA's technical opinion is that, given the short project timeline of five years for the IGU*
4 *project, a QRA would not materially impact the timeline or scheduling of these activities.*
5 [Emphasis added.]

6 3.1 In JANA's opinion, had the work been scheduled over a longer period, would a
7 QRA have been of use to the BCUC and intervenors in assessing the instant
8 application? If not, please clarify the relevance of "the short project timeline" that
9 JANA conditions its response upon.

10
11 **Response:**

12 JANA Corporation provides the following response:

13 In JANA's opinion, no. The stated FEI need for conducting the IGU project is to
14 meet the regulatory requirements of managing the identified corrosion threat.
15 The need to address this threat and conduct the project would not be changed by
16 a QRA. "The short project timeline" refers to the potential benefit of a QRA in
17 assisting in the decision process for prioritization of the project sub-components.
18 For a considerably longer timeframe project, e.g. 20 years, there could be benefit
19 in a QRA for assessing prioritization of the project sub-components within the
20 overall decision-making process.

21

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1 **4.0 Reference: Transcript V1 Workshop/Procedural Conference, page 10**

2 The referenced page states:

3 *For now, let's take a look at the risk. Of course, risk is equal to the probability of an*
4 *undesirable event occurring times the consequences of that event if it occurs.*

5 4.1 Can FEI confirm that “the probability of an undesirable event occurring times the
6 consequences of that event if it occurs” is the expected loss associated with the
7 event rather than the “risk”?

8
9 **Response:**

10 Not confirmed. For example, CSA Z662-19, Annex O, Clause O.2.2.2.1, contains the following
11 sentence:

12 The approach follows from the **basic definition of risk as a product of the**
13 **failure probability and failure consequences.** [emphasis added]

14 This definition is consistent with FEI's understanding and use of the term, and its common
15 application in the pipeline industry. It is possible that other industries may adopt alternate
16 terminology and/or definitions.

17

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1 **5.0 Reference: Transcript V1 Workshop/Procedural Conference, page 14**

2 The referenced page states:

3 *Our professional engineers consider factors such as equipment condition data, industry*
4 *practice, current codes and regulations, and many more to determine both the capital*
5 *and maintenance work that is needed for our system. That is still a valid process, and*
6 *the BC OGC has not indicated otherwise.*

7 5.1 Has there ever been an occasion when the BC OGC has indicated to FEI that
8 FEI's processes or practices were not valid? If so, please elaborate.

9

10 **Response:**

11 The BC OGC's mission is to "*provide British Columbia with regulatory excellence in responsible*
12 *energy resource development by: Protecting public safety, Safeguarding the environment, and*
13 *Respecting those who are affected.*"² Consistent with their mandate to protect the public and the
14 environment, the BC OGC regularly audits and makes recommendations regarding FEI's
15 processes and practices with respect to the integrity management of FEI's gas assets. At no
16 time has the BC OGC indicated that FEI's processes and practices for determining capital and
17 maintenance work are invalid.

18 Please refer to the response to BCUC IR 3.67.1 for written confirmation that the BC OGC is
19 supportive of FEI taking action to address its known integrity concerns and to ensure that it
20 meets its requirements as a permit holder under the *Oil and Gas Activities Act*.

21

² <https://www.bco.gc.ca/about-us>



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1 **6.0 Reference: Transcript V1 Workshop/Procedural Conference, page 27**

2 The referenced page states:

3 *MR. CHERNIKHOWSKY: Okay, so we've seen numerous examples of CP shielding*
4 *occurring on many of our pipelines, and that's also why we say we have reduced*
5 *confidence in our ability to use ECDA to detect external corrosion.*

6 6.1 When FEI has detected CP shielding in the past, what corrective measures has
7 FEI taken?

8
9 **Response:**

10 When FEI detects CP shielding during inspection, the full length of inspected pipe is re-coated
11 to FEI's current standards. If the corrosion is determined to require structural repair beyond re-
12 coating, this is also undertaken.

13

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1 **7.0 Reference: Transcript V1 Workshop/Procedural Conference, pages 40-41**

2 The referenced pages state:

3 *THE CHAIRPERSON: And were you asked to opine on whether or not FEI has done a*
4 *qualitative assessment of the need for the project on the 29 laterals or was that out of*
5 *the scope of your retainer?*

6 *MR. OLIPHANT: We were not asked to specifically assess what qualitative assessment*
7 *they had done.*

8 *THE CHAIRPERSON: Thank you.*

9 *MR. CHERNIKHOWSKY: Just to further clarify that though, JANA was provided with all*
10 *the information relevant in the application, so they were certainly aware of the drivers of*
11 *justification that we had put forth to the panel.*

12 *THE CHAIRPERSON: But they were not asked to opine on that in terms of sufficiency or*
13 *the adequacy of that assessment, correct?*

14 *MR. OLIPHANT: We were not specifically asked to assess on that basis, but as a*
15 *professional engineering firm if we had seen any issues we would have advised Fortis*
16 *on that.*

17 7.1 Please provide the Terms of Reference under which FEI retained JANA in
18 respect of and is applicable to the instant application. Alternatively, please
19 provide direction as to where the requested information can be found in the
20 evidence filed in this proceeding.

21
22 **Response:**

23 FEI does not have a terms of reference for the retainer of JANA Corporation's services related
24 to the Application. JANA Corporation has been retained under a general FortisBC Purchase
25 Order for integrity/risk engineering consulting services on an as and when required basis.