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Sent via email/eFile

FEI CPCN FOR INLAND GAS UPGRADE PROJECT
EXHIBIT A-4

Doug Slater
Director, Regulatory Affairs
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8
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gas.regulatory.affairs@fortisbc.com

Re: FortisBC Energy Inc. – Certificate of Public Convenience and Necessity Application for the Inland Gas Upgrade Project – Project No. 1598988 – Information Request No. 1

Dear Mr. Slater:

Further to your December 17, 2018 application of the above noted matter, enclosed please find British Columbia Utilities Commission Information Request No. 1. Please file your responses by Thursday, March 28, 2019.

Sincerely,

Original Signed by:

Patrick Wruck
Commission Secretary

/aci
Enclosure

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FortisBC Energy Inc.
Application for a Certificate of Public Convenience and Necessity
for the Inland Gas Upgrade Project

INFORMATION REQUEST NO. 1 TO FEI

Table of Contents **Page no.**

A. APPLICATION

1.0 **Reference: CPCN FOR IGU PROJECT**
Exhibit B-1 (Application), Section 1.1.1, p. 1; Appendix A
Useful Life of Transmission Laterals

On page 1 of the Application for a Certificate of Public Convenience and Necessity (CPCN) for the Inland Gas Upgrade (IGU) Project (Application), FortisBC Energy Inc. (FEI) states the following:

> The IGU Project is needed to mitigate the potential for rupture failure due to corrosion on 29 transmission pipeline laterals on FEI's system that were constructed between 1957 and 1998, have a nominal pipe size (NPS) 6 or greater, operate as transmission pipelines and are not capable of being in-line inspected (referred to in this Application as the 29 Transmission Laterals).

In Appendix A to the Application, FEI provides the year that each Transmission Lateral was constructed.

1.1 For each of the 29 Transmission Laterals, please provide the remaining useful life as of 2019. Please explain all inputs and assumptions used in determining the remaining useful life of each Transmission Lateral.

2.0 **Reference: CPCN FOR IGU PROJECT**
Exhibit B-1, Sections 1.1.1, 4.5.4, pp. 2, 47, Table 4-10
Combining 29 Laterals Under a Single CPCN

On page 2 of the Application, FEI states:

> The IGU [Inland Gas Upgrade] Project will construct assets or retrofit existing assets to implement cost-effective integrity management solutions for each lateral. Specifically, the IGU Project will:
>
> 1. Retrofit 11 laterals to provide in-line inspection (ILI) capability…;
> 2. Construct pressure regulating stations on 14 laterals to reduce the maximum operating pressure and resulting operating stress to below 30 percent of the specified minimum yield strength (SMYS) of the pipe…; and
> 3. Replace 4 laterals with new pipe designed to operate at a stress below 30 percent of the SMYS of the pipe…

Table 4-10 on page 47 of the Application shows that the present value (PV) of incremental revenue requirements for the 29 Transmission Laterals ranges from $2.2 million (Prince George 3 Lateral; Northwood Pulp Lateral/Loop) to $102.3 million (Fording Lateral).

2.1 Please discuss FEI's rationale for combining all 29 laterals under a single CPCN application.

2.2 Please discuss whether FEI considered grouping the laterals into smaller CPCN applications or separately applying for CPCNs for some of the Transmission Laterals due to the forecast project cost of some of the laterals, such as the Fording Lateral, or due to project risks/complexities.

2.2.1 If yes, please explain the grouping options considered and why FEI determined that it would not be more reasonable to apply for separate CPCNs for some of the Transmission Laterals.

2.2.2 If no, please explain why not, including any potential drawbacks to this approach.

2.3 If the British Columbia Utilities Commission (BCUC) did not approve a CPCN for all 29 Transmission Laterals (i.e. did not provide approval of all 29 Transmission Laterals under a single CPCN), please explain the implications for the IGU Project (e.g. cost, timing, scope) and how FEI would adjust its approach to the upgrades.

3.0 Reference: PROJECT JUSTIFICATION
Exhibit B-1, Section 1.2.2, p. 5; Exhibit A2-1
Risk Analysis and Evaluation

On page 5 of the Application, FEI states:

> FEI has a comprehensive Integrity Management Program (IMP) as required by the BC Oil and Gas Commission (BC OGC)…
>
> …As corrosion is the leading cause of transmission pipeline failures in British Columbia, the Project is proposing several alternatives to the status quo that will provide for continued safe and reliable long-term operation of the 29 Transmission Laterals. The Project, completed proactively over a reasonable planning horizon and in consideration of the feasibility and benefits of alternative integrity management strategies, demonstrates FEI's commitment to continual improvement within its integrity management program, and is an appropriate response to the potential for rupture failure due to corrosion.

Section 1.5.4 of the BC OGC Compliance Assurance Protocol, provided as Exhibit A2-1, states:[1]

[1] BC Oil & Gas Commission Compliance Assurance Protocol – Integrity Management Program for Pipelines, April 2018, Version 1.9

> The permit holder shall prioritize the pipelines/segments in order of risk level and shall implement an effective process for identifying and evaluating the available risk reduction options (CSA Z662 – Clause N.10) to prevent, manage, and mitigate risks where the chosen threshold of risk is exceeded.

3.1 Please describe any assessments to prioritize the 29 Transmission Laterals in order of risk level and provide the result of these assessments.

3.2 Please explain FEI's method for estimating the probability of transmission pipeline failure due to external corrosion and the severity of resulting consequences (i.e. leak and rupture).

3.3 Please define the levels of acceptable risk, thresholds for risk analysis refinement and risk reduction.

3.4 Please identify any lateral where an accepted level of risk is exceeded.

3.5 Please describe any assessments on the effectiveness of the IGU projects in reducing risk to an acceptable level.

3.6 Please discuss how risk assessment results were used to determine an appropriate timeline for implementing the IGU projects.

3.7 Please confirm, or explain otherwise, that the IGU projects are scheduled in order of risk level.

3.7.1 If not, please discuss whether there are any other factors such as permitting that impacts project order.

3.7.2 If not, please explain whether there are increased project or safety risks if the laterals are not prioritized.

3.8 Please discuss whether FEI considered expediting or delaying the project timeline.

3.8.1 If alternative project timelines were considered, please elaborate on the impacts to overall safety and project cost.

4.0 **Reference: PROJECT JUSTIFICATION**
Exhibit B-1, Section 1.2.2, p. 5
Limitations of Modified External Corrosion Direct Assessment (ECDA)

On page 5 of the Application, FEI states:

> FEI has identified limitations of Modified ECDA given the occurrence of the process of CP [cathodic protection] shielding on its pipeline system. Modified ECDA will not detect sites that may be experiencing active corrosion where CP shielding occurs. As such, FEI believes that the status quo is no longer acceptable over the long term.

4.1 Please describe any assessments to evaluate the probability of active corrosion due to CP shielding on each of the 29 Transmission Laterals and provide the result of these assessments.

4.1.1 Please explain what data set was used to evaluate the probability of active corrosion due to CP shielding on each of the 29 Transmission Laterals, and the accuracy range of that data.

4.2 For each of the 29 Transmission Laterals, please identify any control digs (i.e. digs where there has been no indication of potential corrosion from the above-ground surveys).

4.2.1 Please discuss whether results of these control digs confirmed active corrosion, and if so, please discuss any assessments to evaluate the extent and rate of corrosion.

4.3 Please explain to whom the status quo is no longer acceptable.

B. PROJECT NEED AND JUSTIFICATION

5.0 **Reference: PROJECT DESCRIPTION**
Exhibit B-1, Section 3.2, p. 16, Footnote 7
Geographical Location of the 29 Transmission Laterals

In footnote 7 on page 16 of the Application, FEI states the following:

> In addition to the 29 Transmission Laterals within the scope of the Project, FEI has one additional transmission lateral of NPS 6 or greater within its system (part of its Coastal Transmission System) operating at a stress of above 30 percent SMYS that does not already have ILI capability. This lateral is planned to be addressed through a separate project.

5.1 Please explain why the additional transmission lateral described in the above preamble is planned to be addressed through a separate project.

5.1.1 As part of the above response, please describe the aforementioned separate project, including when such a project is planned to be undertaken, and the scope and anticipated cost of the project.

6.0 **Reference: INTEGRITY MANAGEMENT PROGRAM**
Exhibit B-1, Sections 3.4.4.2, 5.1, pp. 24, 48–49;
FEI Annual Review for 2019 Delivery Rates, Exhibit B-2, Section 12.4.1.1, pp. 127–132;
Exhibit B-3, BCUC IR 21
Transmission Integrity Management Capabilities (TIMC) Project

On page 24 of the Application, FEI states the following:

> Although not part of this Project, FEI is currently developing its strategy for adopting crack-detection capabilities through ILI. This work is proceeding as part of the Transmission Integrity Management Capabilities (TIMC) project…FEI notes at this time that EMAT technology suitable for FEI's natural gas system is not yet available and/or commercialized for smaller diameter pipelines (e.g. less than NPS 12) and its development timeline is unknown. However, FEI's ILI retrofits will also be able to facilitate EMAT tool adoption if and when it is deemed necessary.

In response to BCUC IR 21.4 in the FEI Annual Review for 2019 Delivery Rates proceeding (2019 Annual Review), FEI stated the following:

> FEI anticipates filing a long-term vision for adopting crack-detection capabilities within its in-line inspection program within the TIMC CPCN application. Given the complexities and timeline associated with developing Class 3 cost estimates in accordance with the BCUC 2015 CPCN Application Guidelines, it is possible that FEI, in its mid-2020 submission, may not apply for the full extent of anticipated system modifications that may eventually be warranted…
>
> …The pipelines requiring modification and details such as priority and detailed integrity management solutions are yet-to-be determined through the CPCN development process. Given this, any estimated capital cost is highly uncertain at this time. For business planning purposes, FEI is currently projecting expenditures associated with the TIMC project of $50 million in 2022, and $250 million in each of 2023, 2024, and 2025…

6.1 Please explain in detail how FEI's proposed IGU Project ties in, overlaps, or is otherwise correlated with its "long-term vision for adopting crack-detection capabilities within its in-line inspection program", as described in response to BCUC IR 21.4 in the 2019 Annual Review.

In Table 5-1 on pages 48–49 of the Application, it shows that FEI's preferred alternative for 11 of the 29 Transmission Laterals is ILI.

6.2 Please discuss whether the TIMC project and FEI's overall vision for adopting crack-detection capabilities within its in-line inspection program were factors in FEI's decision-making when determining what alternative should be proposed for each Transmission Lateral.

6.3 Please discuss any potential challenges which FEI may face regarding: (i) resources; (ii) project timeline; (iii) financing; or (iv) other challenges if the Application is approved, given FEI's planned filing of the TIMC project CPCN in mid-2020 and in consideration of the significant size and scope of both projects.

6.4 If the Application is not approved as applied for, what would the implications be, if any, on the TIMC project? Please discuss.

FEI provided the following table regarding the forecast TIMC project development costs on page 129 of the application in the 2019 Annual Review:

Table 12-1: CPCN Development Costs ($000s)

Line No.	Phase	2018	2019	2020	Total
1	Phase 1	$ 5,680	$ 5,710	$ 230	$ 11,620
2	Phase 2	-	19,000	11,000	30,000
3					
4	**Total**	**$ 5,680**	**$ 24,710**	**$ 11,230**	**$ 41,620**

In response to BCUC IR 21.7 in the 2019 Annual Review, FEI stated the following:

> In the case of Phase 1, FEI had not yet determined whether it would proceed with this work at the time of filing of the FEI Annual Review for 2018 Rates application. Shortly following the completion of the evidentiary update phase of that application, FEI received a direction from the BC Oil and Gas Commission to develop a quantitative risk assessment for its entire transmission pipeline system. As such, it was necessary to begin work on this initiative prior to filing of the Annual Review for 2019 Rates Application. Consequently, FEI is now seeking deferral approval for the costs to date, and the remaining costs to complete Phase 1.

6.5 Please provide (or provide the details of) the BC OGC direction described in the above preamble.

6.6 Please describe the quantitative risk assessment developed by FEI in detail.

6.7 Please explain if the quantitative risk assessment directed by the BC OGC relates to the Application as well as to the TIMC project.

6.7.1 If yes, please explain in detail how the direction by the BC OGC impacted both the Application and the planned TIMC project.

6.7.2 If no, please explain why not.

6.8 Please explain if there has been any overlap in costs and resources between the work performed for the development of the Application and the work being performed for the Phase 1 and/or Phase 2 development of the TIMC project.

6.8.1 If yes, please explain how these costs and resources have been shared/allocated between the two projects and if there is any risk that certain costs have been incorrectly allocated to the TIMC project development costs instead of the Transmission Laterals project or vice versa.

7.0 **Reference: PROJECT DESCRIPTION**
Exhibit B-1, Sections 3.4, 4.2.5, pp. 20, 31;
2019 Annual Review, Exhibit B-2, Appendix C4, p. 10; Exhibit B-3, BCUC IR 21.9
Integrity Management Program

On page 20 of the Application, FEI states that it has a comprehensive IMP as required by the BC OGC.

On page 10 of Appendix C4 to the application in the 2019 Annual Review, FEI stated that it "needs to continue to enhance its Integrity Management Program to manage aging infrastructure, meet the CSA Z662-15 standard, and adopt industry practices deemed appropriate to FEI's system."

In response to BCUC IR 21.9 in the 2019 Annual Review, FEI stated the following:

> The particular enhancements that are discussed [in Appendix C4], which pertain to the time period covered by Table C4-4 (i.e. 2014-2018), are unchanged from those that were discussed in response to BCUC IR 1.9.11 in the FEI Annual Review for 2017 Delivery Rates proceeding. At that time, FEI stated that the changes to its in-line inspection activity that were resulting in higher costs were as follows:
>
> …
>
> - FEI increased the number of transmission pipelines subject to in-line inspection. As an example, FEI performed initial baseline in-line inspections for a number of pipeline segments in the Lower Mainland. In addition to the in-line inspection costs, capital expenditures were incurred for retrofits to enable the loading/unloading and passage of the tools…
>
> …FEI is currently forecasting three pipeline segments for crack-detection in-line inspection in 2019, pending the results of front-end engineering design currently in progress to evaluate the timing and feasibility. It is not currently confirmed that the system modifications to manage tool speed within these pipelines, to accommodate tool length impacts on ILI operations, and to provide the capability to reduce the operating pressure of these pipelines for extended time periods without impacting customers will be feasible to implement in time to allow 2019 inspections to be carried out.

On page 31 of the Application, FEI states: "The ILI alternative requires retrofitting an existing pipeline to accommodate its inspection by removing any obstructions that may impede the clear passage of the ILI tool."

7.1 Please explain if, during FEI's 2014-2019 Performance Based Ratemaking (PBR) Plan Term, FEI has incurred sustainment capital expenditures as part of its annual formula capital spending on any transmission laterals to either (1) retrofit the lateral(s) to provide ILI capability; (2)

construct pressure regulating stations; or (3) replace the lateral(s) with new pipe.

7.1.1 If yes, please provide the following information for each applicable lateral:

- The year the capital expenditures were occurred;
- The amount of the capital expenditures; and
- The type of work that was performed (i.e. ILI, PRS [Pressure Regulating Station], PLR [Pipeline Replacement], other).

7.1.2 If FEI has incurred sustainment capital expenditures as part of its annual formula capital spending on certain transmission laterals, why did FEI include the spending on these activities within the PBR Plan formula capital spending as opposed to filing for CPCN approval?

7.2 If the activities and associated capital expenditures described in response to BCUC IR 21.9 in the 2019 Annual Review (as provided in the above preamble) are not related to the types of activities and capital expenditures proposed in the Application, please clarify the difference.

8.0 **Reference: POTENTIAL FAILURE BY RUPTURE**
Exhibit B-1, Section 3.3.2, p. 18
Evidence of External Corrosion on FEI's System

On page 18 of the Application, FEI states:

> FEI has experienced CP shielding on its pipeline system. Specifically, 72 of 90 integrity digs conducted on FEI's in-line inspected transmission pipelines in 2017 showed evidence of active corrosion on cathodically protected pipe. This means that the CP current designed to prevent corrosion is being prevented in these cases from reaching the steel surface of the pipeline.

8.1 Please provide a list of integrity digs conducted by FEI on transmission pipelines from 2000 through 2018 and the location of each integrity dig. Please identify any dig with corrosion and provide an assessment of the extent and rate of corrosion.

8.1.1 Please provide a root-cause analysis of the corrosion at each integrity dig where corrosion was identified on FEI's transmission system.

8.1.2 For each integrity dig with identified corrosion, please provide costs to repair pipe, recondition or replace all or portions of the pipeline.

8.1.3 Please discuss any statistical treatment of corrosion history on FEI's transmission system and provide results of data analysis.

8.1.4 Please describe any studies to determine the probability of corrosion failure or the rate at which corrosion is proceeding on FEI's pipeline system and provide study results.

8.2 For each transmission pipeline of FEI's system, please provide a general description of the pipeline including the dimensions and material characteristics of the pipe, age, type of coating (pipe and joint), leak history, location of the pipeline as related to population density and whether the pipeline is equipped for in-line inspection.

8.3 Please describe any assessments to evaluate CP coverage at sites where corrosion was identified and provide the results of these assessments.

8.3.1 On each occasion when CP was insufficient (CP system operating below NACE SP0169 criteria), please describe the CP issue and how it was resolved.

8.4 Please describe any assessments to evaluate soil conditions at sites where corrosion was identified, including soil type, pH, water content, and soil movement and provide the results of these assessments.

8.4.1 What steps has FEI taken or could it take to modify soil conditions so as to reduce corrosion rates at the locations where corrosion has occurred?

8.5 Please describe any assessments to evaluate coating degradation or disbondment at the sites where corrosion was identified, including identification of any contributing factors such as excessive operating temperature, pipe movement, ground movement or excessive CP current, and provide the results of these assessments.

8.5.1 For each occasion where coating degradation or disbondment was a concern, please describe how it was resolved.

9.0 **Reference: PROJECT JUSTIFICATION**
Exhibit B-1, Sections 1.2.3, 3.4.3, pp. 6, 22
Integrity Management Program

On page 22 of the Application, FEI states:

> Section 10.3 of CSA Z662-15 specifies that the integrity management program must include procedures to monitor for conditions that can lead to failures, to eliminate or mitigate such conditions, and to manage integrity data.
>
> The BC OGC's expectations for transmission pipeline performance are defined in the Oil and Gas Commission Activities Act (OGAA) requirement to prevent all releases of product from operating pipelines. Section 37 (1) (a) of the OGAA states, "A permit holder, an authorization holder and a person carrying out an oil and gas activity must prevent spillage."

On page 6 of the Application, FEI states:

> The PRS alternative involves the construction of a pressure regulating station to lower the maximum operating pressure of the lateral to below 30% SMYS. When operating at these reduced stress levels, it is generally accepted that pipeline failures due to pressure-dependent hazards (e.g. corrosion) will have the potential to leak rather than rupture, significantly reducing the potential consequences of failure…
>
> …The PLR alternative involves replacing the existing pipeline with a new pipeline including accommodations for future ILI capability with limited retrofits. This option allows for the corrosion-related rupture potential to be mitigated by designing the pipe with an operating stress of less than 30 percent SMYS. When operating at reduced stress levels, it is generally accepted that pipeline failures due to pressure-dependent hazards such as corrosion will have the potential to leak rather than rupture, significantly reducing the potential consequences of failure.

9.1 Please discuss whether the CSA Z662 requirement to monitor for external corrosion that can lead to a pipeline failure, and to eliminate or mitigate external corrosion, is adequately addressed by: (i) the PRS alternative; and (ii) the PLR alternative.

9.2 Please discuss whether reducing operating pressure to below 30 percent SMYS is an appropriate, long-term response to FEI's obligations under OGAA.

9.3 Please describe the regulatory requirements for corrosion monitoring, CP surveillance and leak detection on a gas pipeline operating at a pressure below 30 percent SMYS and on a gas pipeline operating at a pressure above 30 percent SMYS.

10.0 **Reference: EMERGENCE OF ILI**
Exhibit B-1, Section 3.4.4.2, pp. 23-24
Evolution of Integrity Management Technology and Activities

On page 24, FEI states

> FEI is currently developing its strategy for adopting crack-detection capabilities through ILI. This work is proceeding as part of the Transmission Integrity Management Capabilities (TIMC) project, as described in FEI's Annual Review for 2019 Delivery Rates Application and responses to information requests. A quantitative risk assessment is currently underway for determining particular pipelines that will require modifications in order to accommodate EMAT tools.

10.1 Please confirm, or otherwise explain, whether retrofitting for ILI would facilitate future adoption of EMAT tools.

10.1.1 Please explain what additional work, if any, would be required before implementation of EMAT tools.

10.2 Please confirm, or otherwise explain, whether the PLR alternative would facilitate future adoption of EMAT tools.

10.2.1 Please explain what additional work, if any, would be required before implementation of EMAT tools.

11.0 **Reference: EMERGENCE OF ILI**
Exhibit B-1, Section 3.4.4, pp. 22-23
Coastal Transmission System Retrofitted with ILI

On page 23 of the Application, FEI references its Coastal Transmission System mainline pipelines which have been retrofitted with ILI capability. FEI states: "FEI expanded its ILI program during this period through a five-year program to retrofit its Coastal Transmission System mainline pipelines for ILI. This retrofit program and other supporting integrity management activities were referred to as the Transmission Pipeline Integrity Program (TPIP)."

11.1 Please discuss whether there were any material cost overruns in the TPIP.

11.1.1 If so, please explain the reason for any cost overrun and the variance to budget.

11.2 Please discuss whether there were any significant delays in the TPIP schedule.

11.2.1 If so, please explain the reason for any delay and impact to overall project schedule.

11.3 Please elaborate on any lessons learned through FEI's experience managing the TPIP.

11.3.1 Please explain how these lessons learned influenced FEI's cost estimates and schedules for the IGU project.

11.4 Please discuss whether FEI has experienced any operational challenges with running ILI tools in retrofitted pipelines.

11.5 What is the typical cost for performing an ILI on a pipeline?

11.6 What are FEI's criteria for selecting the frequency of ILI inspection?

C. DESCRIPTION AND EVALUATION OF ALTERNATIVES

12.0 **Reference: ALTERNATIVES DESCRIPTION**
Exhibit B-1, Section 4.2.1, p. 29
Status Quo: Modified ECDA Alternative

On page 29 of the Application, FEI states:

> Within its integrity Management Program – Pipelines (IMP-P), FEI's internal standard titled the 'IMP-P': Time-Dependent Threat Management of Non-Piggable Pipelines" (Appendices H-1 and H-2) contains modified version of the ANSI/NACE ECDA standard practice and is referred to as Modified ECDA…The primary difference between FEI's Modified ECDA and the ANSI/NACE ECDA is with respect to the determination of the required number of excavations. ECDA requires control digs where there has been no indication of potential corrosion from the above-ground surveys and requires supplementary digs where the information obtained from indirect inspections does not align with the results from direct examinations. FEI's Modified ECDA approach, instead, is less prescriptive and allows for variation in the number of digs performed based on FEI's assessment of the value of the dig.

12.1 Please provide the year that FEI implemented Modified ECDA.

12.2 Please explain FEI's rationale for developing an internal standard ECDA (Modified ECDA).

12.2.1 Please confirm, or explain otherwise, whether it is common industry practice to use a modified version of the ANSI/NACE standard.

12.3 Please discuss whether FEI's use of Modified ECDA on its pipeline system complies with the applicable legislation and standards such as CSA Z662, as well as industry best management practice.

12.4 Please discuss whether FEI has participated in the Oil and Gas Commission's compliance assurance process for integrity management programs.

12.4.1 If so, please discuss any findings for compliance and good practices along with supporting evidence, areas where additional information may be required, opportunities for improvement and observed non-compliances with respect to the use of Modified ECDA.

12.4.2 If applicable, please discuss any corrective action FEI has taken or could take to address any identified non-compliance findings with respect to the use of Modified ECDA.

12.5 Please discuss FEI's method for assessing the "value of the dig."

12.5.1 What is the typical cost of an integrity dig?

12.5.2 What are FEI's criteria for selecting dig location and the number of digs?

12.6 Please provide in table format the number of integrity digs for each of the 29 Transmission Laterals that would have been prescribed under the ANSI/NACE ECDA standard.

12.6.1 What percentage of the integrity digs prescribed under the ANSI/NACE ECDA standard are control digs?

12.7 Please provide in table format the number of integrity digs for each of the 29 Transmission Laterals using the FEI Modified ECDA.

13.0 **Reference: ALTERNATIVES EVALUATION METHODOLOGY**
Exhibit B-1, Sections 4.1, 4.5.4, pp. 27-28, 46-47, Table 4-10
PRS Alternative

On page 27 of the Application, FEI states: "Where PRS was viable, it was chosen as the preferred alternative for all laterals except for one because it met the objective of the Project at the lowest cost and rate impact, and with limited ground disturbance and public impacts."

Table 4-10 on page 47 of the Application provides the PV of incremental revenue requirements over a 66-year analysis period for the 29 Transmission Laterals.

Table 4-10 also shows that PRS was selected as the preferred alternative for 14 of the laterals.

13.1 Please confirm, or explain otherwise, that all of the Transmission Laterals where PRS is selected as the preferred alternative will reach the end of their useful life before the end of the 66-year analysis period.

13.2 Please explain if each of the 14 Transmission Laterals selected for the PRS alternative will require replacement during the 66-year analysis period.

13.2.1 If yes, please explain why the cost to replace the pipeline has not been included in the PV of incremental revenue requirement financial analysis for each of the laterals.

13.2.2 If no, please explain why replacement will not be necessary.

13.3 If the replacement cost of the pipeline at the end of 14 Transmission Laterals' useful life was factored into the financial analysis, would PRS still be the preferred alternative for each of the applicable laterals? Please explain and provide all supporting calculations and assumptions.

14.0 **Reference: ALTERNATIVES DESCRIPTION**
Exhibit B-1, Sections 4.2.4, 4.4.3, pp. 30, 39
PRS Alternative

On page 30 of the Application, FEI states: "PRS is not feasible for all laterals. Laterals determined to have insufficient capacity to meet the forecasted demand of current and future customers when pressure is regulated to below 30% SMYS are not suitable for PRS."

On page 39 of the Application, FEI states: "Laterals where a PRS would impact existing firm customers or interruptible customer operations or prevent new additions of new customers to the lateral were not considered candidates for the PRS alternative."

14.1 Please describe the methodology and assumptions that FEI uses to calculate the required design peak demand and design capacity for the laterals.

14.2 For each of the 29 laterals, please provide the capacity at current operating pressure and at an operating pressure equivalent to 30 percent SMYS.

14.3 For each of the 29 laterals, please provide graphs of pipeline capacity (at current and reduced pressure) and the historical and the 20 year forecasted peak demand of: (i) firm customers; (ii) interruptible customers; and (iii) new customers.

14.4 For each of the 29 laterals, please quantify the impact that PRS would have on firm customers, interruptible customers and new customers.

15.0 **Reference: ALTERNATIVES THAT WERE SCREENED OUT**
Exhibit B-1, Section 4.4.4.2, pp. 42, 43
Hydrostatic Testing Program (HSTP)

On page 42 of the Application, FEI states:

> Because HSTP requires the line to be shut-down, consideration of this alternative was limited to laterals with redundant looping or laterals with practical means of supporting downstream customers. Therefore, the HSTP alternative was considered in greater detail for five laterals that were most practical to implement and that were capable of being supplemented with LNG during the hydrostatic testing, or laterals that were able to be taken out of service without interruption to customers.

15.1 Please discuss whether hydrostatic testing in conjunction with ECDA is an appropriate, long-term response to FEI's obligations under OGAA.

15.2 Please discuss any assessments on the use of compressed natural gas (CNG) as a means of supporting downstream customers during line shut-down and provide assessment results.

15.3 Please discuss whether FEI has any experience with CNG transport by road (virtual pipeline).

15.3.1 If so, please provide an assessment of the results.

15.4 Please discuss whether CNG is a cost-effective option of supporting customers during line shut-down due to hydrostatic testing.

15.4.1 If not, why not.

15.5 Please discuss whether hydrostatic testing reduces the risk of pipeline failure.

15.5.1 If so, would the risk be reduced to an acceptable level?

16.0 **Reference: ALTERNATIVES EVALUATION METHODOLOGY**
Exhibit B-1, Sections 4.1, 4.5.4, pp. 28, 46-47, Table 4-10
In-line Inspection (ILI) Alternative

On page 28 of the Application, FEI states: "Where PRS was not viable, ILI was selected for longer laterals due to a lower cost and rate impact, and better proactive asset management capability. For longer laterals, PLR had a much higher capital Project cost and resulted in a higher rate impact when compared to ILI for the same lateral."

Table 4-10 on page 47 of the Application shows that ILI was selected as the preferred alternative for 11 of the Transmission Laterals.

16.1 Please confirm, or explain otherwise, that all of the Transmission Laterals where ILI is selected as the preferred alternative will reach the end of their useful life before the end of the 66-year analysis period.

16.2 Please explain if each of the 11 Transmission Laterals selected for the ILI alternative will require replacement during the 66-year analysis period.

16.2.1 If yes, please explain why the cost to replace the pipeline has not been included in the PV of incremental revenue requirement financial analysis for each of the laterals.

16.2.2 If no, please explain why replacement will not be necessary.

16.3 If the replacement cost of the pipeline at the end of the 11 Transmission Laterals' useful life was factored into the financial analysis, would ILI still be the preferred alternative for each of the applicable laterals? Please explain and provide all supporting calculations and assumptions.

17.0 **Reference: ALTERNATIVES EVALUATION METHODOLOGY**
Exhibit B-1, Section 4.2.5, pp. 30-31
PLR Alternative

On page 31 of the Application, FEI states: "ILI data collection occurs on a recurring cycle (typically 5 to 7 years). For the purposes of this application, including lifecycle cost estimates, FEI has estimated a seven-year re-inspection cycle."

With regard to the PLR alternative, FEI states on page 31 of the Application: "This alternative involves replacing the existing pipeline with a new pipeline constructed to current standards of design (including accommodations for future ILI capability with limited retrofits, e.g., installation of launcher and receiver barrels), material selection, and construction."

17.1 Please confirm, or explain otherwise, that FEI intends to perform ILI data collection on a recurring 5-7 year cycle on the four laterals which have been selected for PLR (once the PLR is completed).

17.1.1 If confirmed, please explain if the costs associated with performing ILI data collection are included in the PV of incremental revenue requirement financial analysis for these laterals.

17.1.1.1 If the costs of performing ILI data collection every 7 years are not included in the financial analysis for the four laterals selected for PLR, please explain why not and, if applicable, please provide the revised PV of incremental revenue requirements with the ILI costs included.

17.1.1.2 If FEI factored in the costs of recurring ILI data collection into the financial analysis of the PLR alternative, would PLR continue to be FEI's preferred alternative for the four applicable laterals? Please discuss.

18.0 **Reference: ALTERNATIVES EVALUATION METHODOLOGY**
Exhibit B-1, Sections 4.3, 4.5.4, pp. 32-37, 47, Table 4-10; Appendix I
Evaluation Criteria and Weighting

FEI provides the weight it assigned to each evaluation criterion in Table 4-1, on page 36 of the Application.

18.1 Please further explain how FEI determined the specific percentage weightings for the three criteria (Integrity and Asset Management Capabilities; Project Execution & Lifecycle Operation; and Financial) and why.

18.1.1 As part of the above response, please explain why Project Execution & Lifecycle Operation was weighted the lowest at 20 percent.

FEI provides weightings for each category within the three evaluation criteria in Tables 4-2 through 4-4 on pages 36-37 of the Application.

18.2 For each of the three evaluation criteria, please explain how FEI developed the categories within each criteria and how it determined the appropriate weighting for each category.

In Table 4-3 on pages 36-37 of the Application, FEI provides the categories within the criterion Project Execution & Lifecycle Operation and the weightings assigned to each category, as follows:

- Environmental – 15%
- Lands & ROW [Right of Way] – 15%
- Consultation and Engagement Complexity – 15%
- Operational Complexity – 25%
- System Capacity & Customer Impacts – 20%
- Project Execution Certainty – 10%

18.3 Please explain how the financial costs associated with each of the above categories in the Project Execution & Lifecycle Operation criterion were taken into account when evaluating each lateral. For instance, were these costs included in the Project Execution & Lifecycle Operation criterion or in the Financial criterion (or both) and why?

Table 4-10 on page 47 of the Application shows the preferred alternative for Elkview Lateral 168 to be PRS, with a PV of incremental revenue requirements amount of $5.9 million compared to a PV of incremental revenue requirements for the second alternative PLR of $5.8 million.

On page 47 of the Application, FEI states that the PRS alternative was selected for the Elkview Lateral even though the PRS and PLR alternatives had comparable net present values. FEI further states that "due to higher capital costs and the larger construction impact associated with a PLR installation in an industrial environment as compared to the PRS, the PRS alternative was selected."

Appendix I shows that the "1st Alternative" for the Elkview Lateral 168 is PLR and the "2nd Alternative" is PRS, with the PLR and PRS alternatives scoring 4.5 and 3.8, respectively.

18.4 Please elaborate on FEI's rationale for selecting PRS as opposed to PLR for the Elkview Lateral.

18.5 Please provide a detailed quantitative and qualitative explanation for how the ILI, PLR and PRS alternatives for the Elkview Lateral were evaluated using the three criteria.

18.5.1 As part of the above response, please provide the ranking of each category within each criterion and how the individual category rankings were then used to determine the overall ranking of each criterion. Please also explain why the ranking was assigned to each category.

18.6 Please further explain FEI's statements on page 47 of the Application regarding higher capital costs for the PLR alternative given the lower PV of incremental revenue requirements for the PLR alternative. As part of this response, please explain all assumptions and calculations.

18.7 Please discuss whether, if FEI were to factor in the future replacement of the pipeline within the 66-year analysis period for the PRS alternative, the capital costs for the PLR alternative would become more favourable than the PRS alternative.

19.0 **Reference: ALTERNATIVES EVALUATION METHODOLOGY**
Exhibit B-1, Section 4.3.1.3, p. 35
Financial

On page 35 of the Application, FEI states that it considered the long term rate impact to FEI's non-bypass customers to financially compare the feasible alternatives.

19.1 Please discuss whether any of FEI's bypass customers will be impacted by the IGU Project.

19.1.1 As part of the above response, please explain if, based on FEI's bypass agreements with existing customers, the proposed work on any of the Transmission Laterals will impact these agreements or will trigger a change to the agreements. Additionally, please explain if potential impacts on FEI's bypass agreements were taken into consideration when determining the preferred alternative for the Transmission Laterals and if so, how such considerations impacted the selection of the preferred alternative.

20.0 **Reference: ANALYSIS OF ALTERNATIVES**
Exhibit B-1, Sections 4.4.5, 4.5.4, Tables 4-9, 4-10, pp. 44, 47; Appendix I
PLR vs PRS Alternative

Table 4-10 on page 47 of the Application provides the following financial comparisons for the Prince George Pulp Lateral 168, Husky Oil Lateral 168 and Cariboo Pulp Lateral 168:

- Prince George Pulp Lateral 168 – ILI = \$14.3 million; PLR = \$7.4 million; PRS = \$3.6 million
- Husky Oil Lateral 168 – ILI = \$16.4 million; PLR = \$5.5 million; PRS = \$3.6 million
- Cariboo Pulp Lateral 168 – PLR = \$5.3 million; PRS = \$6.5 million

Appendix I shows that the preferred alternative for the Prince George Pulp Lateral is PRS and the "2nd Alternative" is ILI, with the PRS, ILI and PLR alternatives scoring 3.8, 3.2 and 3.1, respectively.

20.1 Please explain why ILI was ranked as the second alternative for the Prince George Pulp Lateral over PLR given that the cost of ILI is almost double PLR, and the ILI and PLR have almost identical scores.

Appendix I shows that the preferred alternative for the Husky Oil Lateral is PRS and the "2nd Alternative" is PLR, with the PRS, PLR and ILI alternatives scoring 3.8, 3.5 and 3.2, respectively.

20.2 Please compare and contrast the Husky Oil Lateral and the Cariboo Pulp Lateral and explain why the PLR alternative is less costly than PRS for the Cariboo Pulp Lateral but not for the Husky Oil Lateral. Please explain all assumptions used when developing the financial analysis for the PLR and PRS alternatives for each lateral.

21.0 **Reference: ANALYSIS OF ALTERNATIVES**
Exhibit B-1, Appendix K, Tables K-44, K-45, pp. 83-84
Kamloops 1 Lateral & Loop 168

On pages 83-84 of Appendix K to the Application, it states that PLR is the preferred alternative for the Kamloops Lateral & Loop.

Tables K-44 and K-45 in Appendix K provide the following information on the existing Kamloops Lateral/Loop segments:

Table K-44: Existing KA1 LTL 168 Segments

From KP	To KP	Diameter	Predominant Year of Construction
0+000	0+001	NPS 6 Valve Station	2012
0+001	3+044	NPS 6	1965
3+044	3+058	NPS 8 MLVA	2009
3+058	3+570	NPS 8	1971

Table K-45: Existing KA1 LOP 168 Segments

From KP	To KP	Diameter	Predominant Year of Construction
0+000	0+008	NPS 6 Valve Station	2012
0+008	3+045	NPS 6	1979
3+045	3+050	NPS 6 MLVA	2009

21.1 Please confirm, or explain otherwise, that based on the above tables, certain existing segments of the Kamloops 1 Lateral & Loop were constructed within the past 10 years.

21.1.1 Please discuss whether the relatively young age of these pipeline segments was taken into consideration when selecting PLR as the preferred alternative.

21.2 Please explain how the undepreciated portions of the existing assets will be accounted for, with the supporting journal entries.

22.0 **Reference: ANALYSIS OF ALTERNATIVES**
Exhibit B-1, Sections 4.4.5, 4.5.5, Tables 4-9, 4-10, pp. 44, 47; Appendix I
Kelowna 1 Loop 219

Table 4-9 on page 44 of the Application shows a high level cost for the ILI alternative of $8.3 million and a high level cost for the PLR alternative of $8.2 million for the Kelowna 1 Loop 219.

Table 4-10 on page 47 of the Application shows that further financial analysis was performed on the ILI and PRS alternatives only for the Kelowna 1 Loop 219.

Appendix I to the Application shows that the preferred alternative for the Kelowna 1 Loop 219 is PRS and the "2nd Alternative" is PLR, with the PRS, PLR and ILR alternatives scoring 3.9, 3.8 and 3.1, respectively.

On page 29 of Appendix A to the Application, it states that the year of construction of the Kelowna 1 Loop is 1976.

22.1 Please explain why further financial analysis was not performed for the PLR alternative given the comparability of high level costs between ILI and PLR and the fact that PLR was ranked as the second alternative for the Kelowna 1 Loop 219.

22.2 Please explain whether the age of the Kelowna Loop and the potential need for replacement in the medium term was taken into account when selecting the PRS alternative.

D. PROJECT DESCRIPTION

23.0 Reference: PROJECT COST ESTIMATE DETAILS
Exhibit B-1, Section 5.3, pp. 68, 72
Contingency and Management Reserve

FEI states the following on page 68 of the Application:

> Ultimately, the risk analysis, as supplemented by the reports from Bramcon and Validation Estimating, were used to establish a contingency percentage at the P50 confidence level. FEI also set a management reserve of 11 percent based on the current understanding of the Project's risk profile and to account for possible scope changes or unknown future events which cannot be anticipated and which were not quantified in the risk register. The Project budget with the management reserve approximates a P70 confidence level.

23.1 Please provide examples of other projects where FEI included a management reserve in addition to the contingency. For each identified project, please describe the project and provide the management reserve and contingency applied to the project.

23.1.1 For each of the identified projects provided in the above response, please provide the total actual capital cost of the project compared to the approved budget and explain the cause(s) of any projects which exceeded the approved capital budget (inclusive of contingency and management reserve).

FEI further states on page 72 of the Application:

> For a project that is executed over multiple years, however, there are certain risks that can occur but are relatively unknown and have a low likelihood of occurrence but the occurrence of which could have high consequences. To account for these risks, typically called system risks, and based on the analysis conducted by Validation Estimating, the addition of a management reserve of 11 percent (totalling 28 percent together with contingency) is considered prudent.

23.2 Please explain in detail how FEI developed the 11 percent management reserve, including the risks specific to FEI and the IGU Project, and the potential cost implications, which were considered when developing the management reserve.

24.0 Reference: PROJECT RISK
Exhibit B-1, Section 5.3, pp. 68-72
Ranking of Transmission Laterals

24.1 Please provide a table ranking the 29 Transmission Laterals from highest risk to lowest risk based on the following risk areas and provide a detailed explanation for the ranking assigned to each lateral within each risk area:

- Overall risk;
- Project cost;
- Project scope and timeline;
- Consultation requirements;
- Environmental impacts;
- ROW requirements;
- Permitting; and
- Other.

E. PROJECT COSTS, ACCOUNTING TREATMENT AND RATE IMPACT

25.0 **Reference:** **ACCOUNTING TREATMENT**
Exhibit B-1, Section 6.3.3, pp. 86-87
Application and Preliminary Stage Development Costs

On pages 86-87 of the Application, FEI seeks approval of deferral account treatment for the IGU Project's Application and Preliminary Stage Development costs and proposes to transfer the balance in this deferral account to rate base on January 1, 2020 and commence amortization over a three-year period.

Table 6-5 on page 87 of the Application shows the total before tax offset costs to be $1.348 million.

25.1 Please provide a breakdown and detailed description of the preliminary stage development costs (before tax offset) of $0.950 million.

25.2 Please explain why FEI is requesting a three-year amortization period for the Application and Preliminary Stage Development Costs deferral account.

25.2.1 As part of the above response, please explain other alternative amortization periods considered by FEI and why these alternatives were considered less appropriate than the proposed three years.

F. ENVIRONMENT AND ARCHAEOLOGY

26.0 **Reference:** **ENVIRONMENT AND ARCHAEOLOGY**
Exhibit B-1, pp. 92-97
Consultation Strategies by Lateral's Impact Potential

On pages 91 to 92 of the Application, FEI states:

> Locations where there is a medium to high potential for encountering soil or groundwater contamination within the Project area may impact Project construction, cost, and timelines. These areas of potential are called Areas of Potential Environmental Concern (APECs) and are summarized in the Environmental Overview Assessment (Appendix O) and in Table 7-1. Forty seven medium or high risk APECs are present along 21 of the 29 Transmission Laterals.
>
> …
>
> FEI will undertake further assessment of medium and high risk APECs during the detailed engineering phase of the Project to minimize the risk of these APECs on the Project costs and timelines.

26.1 Please summarize the assumptions that FEI has made regarding risks to project costs and timelines, with respect to medium and high risk APECs.

On page 95 of the Application, with respect to terrestrial resources, FEI states:

> Best management practices and mitigation measures to minimize and avoid potential negative effects of the Project on terrestrial resources are described in Section 6 of the EOA [Environmental Overview Assessment] report, including:
>
> - Apply best practices for managing invasive plants;

- Adhere to general wildlife measures;
- Minimize vegetation removal; and
- Adhering to bird timing windows.

FEI will follow the best management practices and mitigation measures applicable to the Project Upgrades during construction.

Sections 7.2.1.5 and 7.2.1.6 of the Application summarize aquatic resources and species at risk, respectively.

26.2 Please confirm that for aquatic resources and species at risk, FEI will follow the best management practices and mitigation measures applicable to the IGU Project Upgrades during construction, as described in Section 6 of the EOA report.

26.3 Please discuss if FEI considers that the best management practices and mitigation measures described in Section 6 of the EOA report are sufficient to ensure that any concerns regarding terrestrial resources, aquatic resources and species at risk are sufficiently addressed.

26.3.1 Please describe any other actions that may be required, and what assumptions FEI has made regarding costs and timelines for such actions.

On page 96 of the Application, Table 7-2 shows the expected environmental permits by lateral for the preferred engineering options.

26.4 Please identify any permits where FEI considers there may be a particularly challenging approval process. Please explain what actions FEI plans to mitigate any potential issues.

26.5 Please discuss whether FEI considers that the extent or complexity of permits required for any of the 29 Transmission Laterals poses a potential risk to the expected timelines or project construction costs.

26.5.1 Please summarize the assumptions made by FEI in this regard.

26.5.2 Please discuss if FEI believes that time required for permitting will affect the sequencing of the works on the 29 Transmission Laterals.

G. CONSULTATION

27.0 **Reference: CONSULTATION**
Exhibit B-1, Table 8-1, pp. 105, 106
Consultation Strategies by Lateral's Impact Potential

On page 105 of the Application, Table 8-1 classifies each lateral into three tiers of "impact potential": high, moderate and low. On page 106, FEI describes the consultation strategies by tier.

27.1 Please provide specific examples of the additional actions that FEI has undertaken in its consultation activities to date with respect to the laterals classified as high impact potential, compared to laterals classified as moderate or low impact potential.

27.2 Please explain what actions FEI has taken or plans to take, in order to follow up with stakeholders and rights holders in the laterals with high impact potential where there was no initial response for FEI's notification letters. Please explain if this differs from the approach in the lower impact laterals.

27.3 For the laterals with high impact potential, please confirm if community information sessions are planned in each instance.

27.3.1 Please provide estimated timelines, as applicable.

28.0 **Reference: CONSULTATION**
Exhibit B-1, pp. 76, 108
Landowners

On page 76 of the Application, FEI states:

> The Project will require fee-simple land acquisition, expanded ROW, temporary construction working space and access rights (Land Rights). FEI will develop a land management plan to assess the required properties and prioritize the acquisitions based on risk and impacts to the schedule. In order to reduce the potential uncertainty associated with securing Land Rights, FEI will enter into an early Option to Purchase Agreement with affected landowners beginning in March 2019 based on the land management plan. Upon granting of the CPCN, FEI will complete the acquisition of Land Rights with all affected landowners.

On page 108, FEI states:

> Notification letters were mailed to directly impacted landowners on June 15, 2018. A sample of the letter can be found in Appendix Q-3. The letters provided information about the Project, the regulatory process and how to contact FEI with any questions or concerns.
>
> …
>
> FEI also provided advanced notification to landowners along FEI's rights of way, informing them about upcoming preliminary Project environmental and survey work. The landowners were notified by phone call or letter, and no concerns were raised. FEI will continue to provide advanced notification of work throughout the duration of the Project.

28.1 Where fee simple purchases are expected, please confirm if all potentially affected landowners have provided response or feedback to FEI's initial consultation.

28.2 Please provide a summary of the risks or issues to be resolved with respect to fee-simple land acquisition.

28.2.1 Where applicable, please outline how FEI intends to address these issues with landowners.

29.0 **Reference: CONSULTATION**
Exhibit B-1, Appendix I
Expropriation

On page 2 of Appendix I, FEI makes reference to "potential for expropriation".

29.1 Under what circumstances, if any, does FEI consider there could be the potential for expropriation?

30.0 **Reference: CONSULTATION**
Exhibit B-1, p. 108
Shuswap National Golf Course

On page 108 of the Application, FEI states:

> FEI also engaged with the Shuswap National Golf Course, formally the Canoe Creek Golf Course, on July 25, 2018 to discuss the Project details and impacts. The general manager advised FEI that the golf course is awaiting budget approvals to build a new course entrance on a road, which runs parallel to the Project's projected construction route for the Salmon Arm Lateral (SA3 LTL 168), a 0.8 kilometre pipeline requiring replacement. The Shuswap National Golf Course management team is interested in completing construction of the new entrance and FEI pipeline replacement in the same timeframe. FEI is committed to keeping the management group at the golf course engaged with Project details and timelines as construction nears.

30.1 Please discuss if FEI identifies any risks or issues with respect to co-ordinating construction at the Shuswap National Golf Course and the FEI pipeline replacement.

31.0 **Reference: CONSULTATION**
Exhibit B-1, pp. 27, 109; Appendix Q-2
Industrial Customer Consultation

On page 109 of the Application, in section 8.2.4.2, FEI outlines its industrial customer consultation to date. FEI states that the impacts upon industrial customers include minor traffic delays on construction routes and the potential for restricted access to peak demand gas use.

On page 27 of the Application, FEI states:

> The installation of a PRS was not viable for some laterals due to capacity limitations, which would cause the PRS to impact existing firm customers or interruptible customer operations or prevent new additions of new customers to the lateral.

Appendix Q-2 contains the industrial customers' notification letter.

31.1 Please confirm, or explain otherwise, that the letters sent to industrial customers did not provide information regarding potential impacts such as minor traffic delays on construction routes and the restricted access to peak demand gas use.

31.1.1 If confirmed, please outline how industrial customers have been made aware of these potential impacts.

31.2 Please confirm if there are any potentially affected industrial customers that have not provided a response or feedback to FEI's initial consultation.

31.3 Please provide a summary of the feedback received by industrial customers to date.

31.4 Please discuss if FEI has, or plans to have, discussions with industrial customers regarding the potential for aligning works on the project with periods of industrial customers' scheduled maintenance.

32.0 **Reference: CONSULTATION**
Exhibit B-1, pp. 103, 104, 110-120
Municipal and Regional Government Consultation

On pages 103 and 104 of the Application, FEI lists the municipal and regional governments potentially affected by the Project.

In Table 8-2 of the Application (pages 110 to 119), FEI provides a summary of local government consultation.

32.1 For the municipalities or regions listed in pages 103 and 104 of the Application where there is no documented consultation in Table 8-2, please provide a summary of FEI's consultation to date, the level and nature of feedback received and future planned consultation activities.

32.1.1 For these municipalities or regions, please discuss whether any are potentially impacted by the "high impact" tier of laterals.

32.1.1.1 If yes, please explain why FEI has not documented any consultations.

32.1.2 Please discuss if FEI has identified any risks or potential issues to be resolved with respect to the interests of these municipal and regional governments.

32.2 Please provide an updated version of Table 8-2 that documents any "next steps" or "follow up" activities that have been fulfilled since the filing of the Application.

FEI states the following on page 120 of the Application:

> During FEI's initial consultation with the City of Kamloops had raised concerns about the pipeline replacement for KA1 LTL 168 that traverses Kenna Cartwright Park, a regularly used Municipal park in Kamloops. Requests by the City of Kamloops include:
>
> - **Public Consultation:** The City of Kamloops has requested public engagement and awareness about the Project.
>   - FEI is committed to transparent public consultation.
>   - In addition to notification letters, stakeholder meetings and paid advertisements, FEI proposed an open house session for Kamloops residents prior to submission of the CPCN Application. Through engagement with the municipality, the City of Kamloops determined that it would be more effective to hold a public consultation session once more detailed information about the construction plans and schedule were known. FEI committed to follow up with the City of Kamloops to collaborate on rescheduling the session.
> - **Legacies:** The City of Kamloops requests proper restoration efforts with the addition of park benches and a gazebo. The City of Kamloops also wishes to be actively involved during the restoration phase.
>   - FEI's objective is to create these legacies as a part of the restoration commitment, and maintain open communication with the City of Kamloops during the restoration phase.

On page 117 of the Application, FEI states the following:

> The City requested an in-camera meeting held in August to discuss the additional ROW widening needed. This will require City Council approval for additional land requirement. FEI briefly spoke about the public information session scheduled for August 28, 2018. This was to confirm if there were any outstanding concerns or requests from the City. No concerns were raised from the City about the public information

session at this time.

32.3 Please confirm, or explain otherwise, that the Kamloops public information session has now taken place.

32.3.1 If confirmed, please provide a summary of the feedback from the session, and next steps.

32.4 Please describe whether the City of Kamloops has formally or informally set out any "conditions" that it will require being met, for example with respect to FEI's restoration efforts, in order to grant approval for FEI's additional land requirement.

32.4.1 Please discuss if FEI identifies any issues to be resolved in order to receive approval for FEI's additional land requirement with the City of Kamloops.

On page 120 of the Application, FEI states:

> The City of Kimberley also expressed concern regarding the North Star Rails to Trails corridor, a 25-kilometre nature trail that connects the City of Kimberley to the City of Cranbrook. The City requested that the trail remain open during construction. FEI is aware of the concern, and will continue to work with the City of Kimberley through future meetings closer to the construction period.

32.5 Please discuss if FEI's expectation is that the North Star Rails to Trails will be able to remain open during construction.

32.5.1 Please discuss any issues that may affect the trail remaining open during construction.

33.0 **Reference: CONSULTATION**
Exhibit B-1, pp. 98, 122, 123, 127, 129
Consultation with Indigenous Communities

On pages 122 to 123, FEI states:

> FEI has been engaging early with Indigenous communities that may potentially be affected by the Project to:
>
> - Provide information about the Project;
> - Describe any potential impacts from the Project;
> - Understand the interests of Indigenous communities in the area and how they may be affected by the proposed work; and
> - Provide opportunities to give input on the Project.
>
> Engagement was initiated by notification letters followed by face-to-face meetings as requested by the respective community… One purpose of FEI's early engagement is to better understand the nature of interests of Indigenous communities in the area of each of the 29 Transmission Laterals. The impacts of the Project vary by site depending on the proposed work on each lateral.

Table 8-3 on page 123 of the Application provides a list of potentially affected Indigenous Community by lateral.

Table 8-4 on page 127 of the Application provides a summary of FEI's consultation with Indigenous

Communities.

33.1 Please provide an updated version of Table 8-4 that documents any “next steps” or “follow up” activities that have been fulfilled since the filing of the Application.

33.1.1 Please summarize the main issues that FEI has presented to Indigenous communities in meetings to date.

33.1.2 Please provide any evidence to indicate whether the Indigenous communities consulted with are satisfied with FEI’s consultation to date and proposed next steps.

33.2 Please discuss if the initial notification letters [Appendix R-2] were tailored to describe the nature of the specific potential impacts by site. If not, please explain.

33.2.1 Please explain whether FEI considers that all potentially affected Indigenous communities have been made sufficiently aware of the potential impacts of the IGU Project.

33.3 Please explain how FEI’s approach to consultation with Indigenous Communities has differed depending on whether a community is located near a lateral with high impact potential or low impact potential.

33.4 For the Indigenous Communities identified in Table 8-3 that are not listed in Table 8-4, please summarize, whether these communities have: a) provided a response to FEI’s notification letter indicating no further information/ consultation is required; b) not responded to FEI’s notification letter; or c) other. Please provide any relevant supporting details.

33.4.1 Please discuss whether FEI has undertaken, or plans to undertake any follow-up communication, including meetings, with these Indigenous Communities. Please provide a summary of activities with dates as applicable.

33.4.2 Please provide an assessment of any potential risks or issues to be resolved with these Communities as more detailed project information becomes available.

33.5 Please provide FEI’s position on whether its early consultation activities have been successful in understanding the nature of interests of Indigenous communities in the area of each of the 29 Transmission Laterals.

On page 98 of the Application, FEI states

> The AOA [Archaeology Overview Assessment] concluded that the majority of the expected Project footprint is considered to have low archaeological potential due to the amount of previous disturbance. AIA has been recommended for ground disturbance activities in areas identified as moderate or high potential through the AOA process. Where the AOA identified potential for deeply buried cultural deposits, construction monitoring will be applied. Potential for deeply buried cultural deposits is present at specific sites along 13 of the laterals.

On page 99, FEI states:

> Notifications letters were sent out to Indigenous communities prior to the onset of the AOA preliminary field reconnaissance program. Notification letters outlined the intended fieldwork, included a request for participation in the field program, and opportunities to provide information or comments. Archaeological field crews consisted of one qualified archaeologist and at least one indigenous community member.

On page 129 of the Application, FEI states:

> Some concerns such as those related to sensitive areas require additional, site specific information that is not available at this early Project stage. FEI will continue to engage with those communities that have requested additional information with follow up meetings as the Project design becomes more certain.

33.6 Please describe the level of response to the notification letters regarding the AOA preliminary field reconnaissance program.

33.6.1 Please summarize any comments received with respect to the program.

33.6.2 Please discuss whether there was any follow-up communication where no response to the letter was received.

33.7 Please explain whether all Indigenous Communities that may be affected by the potential for deeply buried cultural deposits have been informed about this potential.

33.7.1 Please summarize any issues or concerns raised by Indigenous Communities in this regard.

33.8 Please provide an estimate of when site specific information related to sensitive areas is likely to be available.

33.9 Please discuss whether FEI considers that there are any notable risks or issues that will require resolution with respect to sensitive areas as the project develops.

33.9.1 Please clarify if FEI will provide information pertaining to sensitive areas (when available) to all potentially affected communities, regardless of whether further information has been explicitly requested at this stage.

H. PROVINCIAL GOVERNMENT ENERGY OBJECTIVES AND LONG TERM RESOURCE PLAN

34.0 **Reference: PROVINCIAL GOVERNMENT ENERGY OBJECTIVES**
Exhibit B-1, p. 131
BC Energy Objectives

On page 131 of the Application, FEI states:

> the Project will support the following British Columbia energy objective found in section 2(k) of the CEA:
>
> > to encourage economic development and the creation and retention of jobs

34.1 Please discuss if FEI considers the Project to be in conflict with any of BC's energy objectives.

34.1.1 Please describe any actions that FEI has taken or intends to take to mitigate any such issues.