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May 13, 2021

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)

Project No. 1599152

Application for a Certificate of Public Convenience and Necessity for the Okanagan Capacity Upgrade Project (Application)

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

On November 16, 2020, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-97-21 setting out the 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 (email only): Commission Secretary
Registered Parties

54. Exhibit B-4, CEC 1.5.2

> 5.2 Please confirm or otherwise explain that the peak demand load forecast being relied upon in this application has been approved by the Commission, and please identify in what proceeding this peak demand load forecast was approved.
>
> **Response:**
>
> Not confirmed. FEI has not used the 2019 peak demand forecast in any other approved capacity related applications However, as explained in Section 3.3.1 of the Updated Application, the peak day demand forecast methodology that FEI used to assess the need for the OCU Project is consistent with the methodology FEI has used in its previous long-term gas resource plans (LTGRP) filed with and accepted by the BCUC. Based on this accepted methodology, and since the 2017 LTGRP, FEI has developed its most recent peak demand load forecast, which indicates that increases in population and the increase in gas use by all types of customers will lead to a shortfall in ITS capacity by the 2023/2024 winter peak demand period. If this situation is not addressed through the proposed OCU Project, capacity shortfalls and the resulting curtailment of customers will become increasingly likely and widespread.

54.1 Please provide a comparison of the 2019 peak demand forecast and that provided in the 2017 LTGRP.

54.1.1 Please provide rationales for any differences in the results.

Response:

Please refer to the response to BCUC IR1 4.1.2 where FEI provided a comparison of the two forecasts.

54.2 Please discuss how the peak demand forecast is accounting for trends in electrification.

Response:

FEI acknowledges there are provincial and municipal policies that promote the use of electricity instead of natural gas as a means to reduce emissions; however, FEI believes these existing policies are reflected in its forecast in the Updated Application. For instance, any recent trends relating to fuel switching by FEI's customers from natural gas to electricity for space and water heating, along with other factors, are captured in FEI's historical data used to inform its long-term load forecasts. FEI continues to experience growth in both natural gas customers and demand and expects this to continue in the future (please also refer to the responses to BCUC IR1 5.7 and CEC IR1 7.1 and 7.2). While the CleanBC Plan sets out a framework for electrification in some sectors, such as through light-duty EV sales targets, it also provides direction on building energy efficiency improvements and sets a minimum percentage

requirement for renewable gas content within the natural gas system. FortisBC Inc. is expecting growth in the electricity requirements related to light-duty EV charging in the future (in light of the Zero-Emission Vehicle Act sales targets) but is not anticipating any other 'trends in electrification' at this time.

54.3 Has FEI incorporated the Province's electrification plans? If so, please describe for each element of the Province's plan how FEI has dealt with this in its forecasts.

Response:

Please refer to the response to CEC IR2 54.2.

55. Reference: Exhibit B-4, CEC 1.5.3 and Exhibit B-2, BCUC 1.1.2 and CEC 1.7.2

5.3 Please provide quantification of the impact of COVID-19 on FEI's load relative to its 2020 load forecast and January 2021 load forecast.

Response:

Please refer to the response to BCUC IR1 1.2.

1.2 Please provide a detailed discussion of the work FEI is undertaking with respect to estimating the impact of the COVID-19 pandemic upon peak demand forecasting, including any timelines for such work.

Response:

FEI still has insufficient data to quantify any potential impact of the COVID-19 pandemic on peak demand forecasts. As discussed in Section 3.3.1.2 of Updated Application, FEI bases its customer forecast method on forecasts from the Conference Board of Canada (CBOC) and the BC Statistics 20-year household formation (HHF) forecast. FEI has not received updates to these forecasts since the beginning of the pandemic. FEI has also continued to attach customers in 2020 at rates comparable to 2019 which suggests that, so far, the pandemic has not materially affected current growth rates. FEI will review and incorporate updated forecasts from the CBOC and BC Statistics when they are received and apply these updates to the forecasts prepared later in 2021.

Additionally, as described in FEI's peak demand forecasting methodology explained in Section 3.3.1 of the Updated Application, FEI dampens the effect of any one year's variation through a process of averaging the results of the previous three years. Therefore, FEI expects that UPC_{peak} will not materially increase or decrease in response to the pandemic. Any change in the new peak demand forecast would be largely due to changes in the customer account forecast driven by CBOC and HHF growth rates that have not yet been received.

7.2 Please provide FEI's customer account history (number of accounts) for the last 10 years by rate class.

Response:

The following table shows FEI's customer totals by rate schedule for the communities served by the ITS for years from 2010 to 2019.

Rate Schedule	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	159,237	160,574	158,496	161,510	163,966	166,843	169,459	172,588	176,579	180,210
2	15,605	15,809	15,210	15,582	15,868	16,092	16,254	16,404	16,613	16,787
3	533	533	526	472	471	460	466	511	628	695
4	10	10	10	1	9	10	1	4	2	2
5	18	16	16	15	15	14	15	15	18	18
6	1	1	1	-	-	-	-	-	-	-
22	7	7	7	5	5	6	7	6	6	6
23	160	164	164	186	188	202	209	210	202	204
25	48	46	46	45	48	52	53	54	51	51
27	11	11	10	12	11	11	10	11	11	11
Total	175,630	177,171	174,496	177,827	180,571	183,680	186,474	189,803	194,110	197,974

55.1 Did FEI's 2019 peak demand forecast incorporate 2019 information, or was it primarily based on 2018 information, or earlier? Please explain.

Response:

FEI's 2019 peak demand forecast was based on account numbers, growth rates, and consumption information that were available in the first half of 2019, and the resulting hydraulic analysis is based on models built from that information in the second half of 2019. The forecast includes actual customer accounts as of December 31, 2018. The customer UPC_{peak} is based on customer consumption for the two years January 1, 2017 to December 31, 2018 and averaged with UPC_{peak} results of previous years as described in Section 3.3.1 of the Updated Application which included customer consumption as far back as January 1, 2015.

56. Reference: Exhibit B-4, CEC 1.13.1 and BCUC 1.22.5

Table 4-3: Evaluation Criteria Weighting

Evaluation Criteria - Category	Weight (Overall)	Evaluation Criteria - Specific	Weight (Within Category)
Asset Management Capability	40%	System Capacity Increase	50%
		Operational Flexibility	50%
Project Execution and Lifecycle Operation	30%	Environmental, Public, and Indigenous Impacts	45%
		Schedule Risk	55%
Financial	30%	Rate Impact	100%

13.1 Are these Evaluation Criteria the identical or very similar to the Evaluation Criteria that FEI uses in other CPCNs?

13.1.1 If not, why not?

13.1.2 If not, what other criteria may be considered that was not considered in this instance, or what criteria was included that might not be otherwise? Please explain.

Response:

As discussed in response to BCSEA IR1 13.1, evaluation criteria and weightings for any project are selected based on the individual and unique requirements of a specific project. Please refer to the responses to BCUC IR1 22.5 and 22.6 for further information on how FEI determined the evaluation criteria and associated weightings for the OCU Project.

Response:

The evaluation criteria and associated weightings were developed by an internal team of FEI subject matter experts, including representatives from the Asset Management, Engineering, Project Management, Regulatory Affairs, Community and Indigenous Relations, Environmental Management, and Property Services departments.

All parties considered which evaluation criteria were the most important from their perspective, using a template of proposed evaluation criteria to record their input. A workshop was then held to incorporate input from experts in each individual group to determine a set of evaluation criteria and associated weightings for the OCU Project. This provided the basis for the evaluation criteria and weightings selected. Evaluation criteria were further refined as the Project progressed and the Project team's understanding of the specific needs of the Project improved.

22.6 Please discuss whether FEI applies the criterion and associated weighting shown in the preamble to its other capacity upgrade projects.

22.6.1 If not, please provide the Asset Management Capability Alternative Evaluation criterion and associated weighting FEI used in other capacity upgrade projects.

Response:

FEI has not had any recent major projects that were capacity driven. Other recent major projects have been driven either by integrity concerns, third-party work, or resiliency.
As such, for each major project, FEI defines the key drivers and impacts of a project and, comparing it to representative past projects that FEI has undertaken, identifies the evaluation criteria to further assess feasible project alternatives. FEI deliberately limits the number of criteria for a given project to ensure that the key drivers to decision making are not diluted by less applicable criteria.

56.1 Does FEI ever use external expertise to assist in establishing Evaluation Criteria Weighting? Please explain.

56.1.1 If yes, why did FEI not use external expertise in this instance?

Response:

FEI incorporates input provided by external experts in establishing evaluation criteria weighting, but FEI conducts the decision making and final selection and weighting. As the owner and operator of the asset(s) constructed or modified during a project, FEI must take ownership of the alternatives selection process and ensure a project is evaluated appropriately to meet the project objectives.

56.2 Please provide the template of proposed evaluation criteria.

Response:

Below is the current model of FEI's evaluation criteria template, which illustrates the various evaluation categories and examples of specific criteria within those categories. As the key drivers and differentiators are identified for a specific project, the corresponding criteria are adapted as appropriate for use in that evaluation.

Evaluation Criteria - Category	Weight (Overall)	Evaluation Criteria - Specific	Weight (Within Category)
Asset Management Criteria		Resiliency Impact	
		Reliability Impact	
		Integrity Impact	
		System Capacity Impact	
		Operational Flexibility Impact	
External Impact Criteria		Environmental and Archaeological Impact	
		Indigenous Impacts	
		Public Impacts	
		Health and Safety Impacts	
		Socio-Economic Impacts	
Financial Criteria		Rate Impacts	
		PV of Annual Revenue Requirement	
Technical Criteria		Engineering Complexity	
		Constructability	
		Operability	
		Adjacent Infrastructure Impacts	
		Natural Hazards	
		System Interfacing	

1
2

57. Reference: Exhibit B-4, CEC 1.16.1 and 1.35.2

16.1 For each Alternative, please identify and provide quantification for any costs included in the Financial criterion that are related to managing the Project on a short timeline, or that could have been reduced by having a longer timeline for implementation (for instance, overtime costs, higher pricing for shorter delivery times etc.).

Response:

Additional costs associated with completing each Alternative on FEI's required timeline were included within the Class 4 cost estimates. FEI anticipates all of these costs would also be incurred if the durations were lengthened. Any efficiencies or savings would be negligible and are included within the accuracy range of the estimate.

For example, to shorten project execution, FEI increased the crew make-up and size to meet the timelines by completing multiple spreads concurrently instead of applying overtime during construction. Any extension in timelines would incur similar labour costs, but incur them over a longer construction window.

35.2 Please elaborate on the possible causes of the potential uplift in prices.

Response:

Based on the microeconomic principle of supply and demand, a shortage of qualified and/or competent contractors causes a market risk. The potential uplift in prices arises because many pipeline construction companies that are suitable to build the OCU Project may be actively working on other long-term pipeline projects and hence not have the capacity and/or availability to construct the OCU project. Consequently, there is a risk to FEI that there may not be enough qualified and/or competent contractors and labour and equipment resources available to construct the Project. For example, fewer proponents may choose to compete in an RFP process, reducing competition, and a lack of labour resources could lead to increased salaries. As well, contractors may incur higher costs to subcontract aspects of work they would ordinarily self-perform. Finally, a lack of equipment may require purchasing additional equipment at a higher cost to meet a target completion date. The net result is there is a likelihood that a constrained market could cause an uplift in prices. Please also refer to the response to BCUC IR1 29.1.

57.1 Are the crews made up of internal or external employees?

57.1.1 If internal, please explain how FEI is able to increase crew make-up and size from a standard without imposing extra costs at some point down the road or in another project.

57.1.2 If the referenced crews are external, is it fair to say that the short timeline impacted 'market risk'? Please explain why or why not.

57.1.2.1 If yes, please provide quantification of the impact on market risk.

Response:

The construction crews referenced above will be external resources.

The short timeline associated with the construction timeframe of the OCU Project does not have an impact on the market risk. The short timeline refers to an optimized schedule developed by modifying the construction resources allocation (crew sizes and quantity) to meet the Project's target completion date. The market risk is an external risk caused by economic effects that are unrelated to, and not correlated with, the construction resource allocation and sizing. The driver for the resource allocation and optimization is the target date established by FEI, which in this case is prior to the winter peak of 2023/24. The market risk, on the other hand, is due to qualified and/or competent contractors and/or equipment being consumed on other large long-term pipeline projects and hence not having the capacity and/or availability to participate in the OCU Project's RFP process.

58. Reference: Exhibit B-4, CEC 1.17.1

17.1 The CEC notes that Schedule Risk accounts for 16.5% of the total assessment, and encompasses risk associated with meeting the scheduled in-service date. Would this risk have been mitigated if the project were undertaken sooner? Please explain why or why not.

Response:

FEI acknowledges that there could have been some reduction in Project Execution Risk for Alternative 3 associated with increased flexibility in the schedule. However, as discussed in the response to CEC IR1 10.2, FEI considers that it has filed the Updated Application at the appropriate time after maximally utilizing existing system capacity and comprehensively examining of all potential alternatives to address the Project need.

Regardless, Alternatives 1 and 2 carry a high degree of schedule risk regardless of the timing of the project start due to the potential for cycles of hydrotest failures and associated repairs which would take an unknown length of time. The VER PEN 323 pipeline is necessary to maintain supply to the Kelowna region. There is only a short window of time within the year when demand on the system is low enough that adequate capacity can be maintained without this pipeline in operation. This means that if FEI selected Alternative 1 or 2, there would be a limited construction window during which hydrotesting could take place, after which the pipeline would be required to be operational for the colder portion of the year. Should multiple cycles of hydrotesting failure occur, the VER PEN 323 pipeline may not be operational when required, resulting in a capacity shortfall in the Kelowna area even before the winter of 2023/2024.

58.1 Recognizing that no additional direct costs are expected to be incurred as a result of the limited flexibility in the schedule, would FEI have had a lower contingency cost if there was less schedule risk? Please explain.

58.1.1 If yes, please quantify.

Response:

FEI confirms that if there is less schedule risk, there can be a corresponding reduction in project costs and associated contingency because cost and schedule are closely linked. The methodology used to compute the impact on cost and schedule is described in Confidential Appendix C-2. If the overall schedule risk was reduced, the Project would most likely be completed at a lower probability of underrun on the schedule outcome distribution curve; effectively, a shorter duration would be achieved as shown in Table 5 in Confidential Appendix C-2. That reduction in schedule translates into a lower Project cost and a lower contingency. While the preceding describes the general relationship, FEI is unable to quantify the reduction in contingency with any certainty.

59. Reference: Exhibit B-4, CEC 1.22.1.1

> 22.1 Please explain how FEI determined the evaluation considerations.
>
> 22.1.1 Did FEI make the determinations internally, or were third parties involved in the decision-making?
>
> **Response:**
>
> All decision making regarding evaluation considerations was done by FEI internally. FEI determined evaluation considerations in a similar manner to its determination of appropriate evaluation criteria and weightings to select a preferred option. A team of FEI internal subject matter experts provided their input; this formed the basis of Table 5-2 which was further refined based on meetings between stakeholders. Please refer to the response to BCUC IR1 22.5 for a list of the parties involved in this process.

59.1 Please confirm that there are external companies or individuals with expertise in this area.

Response:

FEI confirms there are external companies or individuals with expertise to support the alternative evaluations. While FEI incorporates input provided by external experts in establishing evaluation criteria weighting, FEI's internal subject matter experts have the appropriate knowledge, skills, and experience for developing the evaluation criteria and weighting to select a preferred option.

59.1.1 Would any of the companies FEI is already working with in this project be capable of contributing to the weighting and evaluation? Please explain and identify those individuals/corporations.

Response:

If required, each of the companies FEI retained to support the OCU Project is capable of contributing to specific portions of the evaluation. FEI incorporates input provided by external expertise to assess feasible Project alternatives. However, FEI has sufficient internal knowledge, experience, and resources to complete the weighting, decision-making, and final selection of a preferred alternative.

The following companies were retained on the Project at the time of evaluating alternatives:

- McElhanney Ltd.
- Golder Associates Ltd.

- Solaris Management Consultants Inc.
- Yohannes Project Services Inc.
- Okanagan Mountain Helicopters Ltd.
- Saluc Group Inc.
- Innovative Pipeline Projects Ltd.
- BBA Engineering Ltd.
- Hemmera Environmental Consulting

60. Reference: Exhibit B-4, CEC 1.22.3.1

> 22.3 Did FEI include financial considerations in establishing the weightings?
>
> 22.3.1 If no, please explain why not.
>
> 22.3.2 If yes, please explain how the financial considerations were included, in what category, and what weight they were given.
>
> **Response:**
>
> FEI implicitly included financial considerations by incorporating all factors of routing a pipeline which typically drive costs in a project.
>
> For example, more complex construction practices would cost more than simpler construction practices. FEI would not undertake a project in an environmentally damaging way, and so working in a more sensitive environmental area would be more costly due to the safeguards and restoration required than a less sensitive area. Thus, if a route option scores well (high number) against the various criteria related to complexity of project execution, it will be less expensive than an option which receives poor (low number) scores against these criteria due to the costs associated with mitigating the challenges associated with ensuring successful execution.
>
> For this reason, FEI determined that including an explicit financial criteria would result in counting cost considerations twice.

60.1 Is it standard practice for FEI to address financial considerations only 'implicitly? Please explain.

Response:

It is common for FEI to address financial considerations only implicitly during the routing process.

FEI did not consider financial considerations as a route evaluation criterion on its own as the impacts on cost are inherent to any challenges associated with a specific criterion. Through the scoring process, any negative impact would naturally increase the Project's cost or delay its schedule, or both.

As the routing process considers multiple variations, using this implicit cost methodology is the most effective way to ensure cost-effective routing. A route selection that minimizes impacts to all criteria without adding extensive length or scope would result in selection of the lowest cost solution.

60.2 Please confirm that financial impacts may or may not vary directly with considerations such as simplicity. For example, there is no guarantee that a simpler solution is less costly than a more complex solution to a given problem.

Response:

While FEI did not complete cost estimates for every possible route alignment and therefore cannot be certain the preferred route is the least cost, the preferred route minimizes the impacts to all evaluation criteria in Table 5-1 of the Updated Application without adding extensive length. As such, FEI considers the OCU Project to be the most cost-effective overall solution.

60.3 Please confirm that cost differentials between solutions cannot be assumed at a given ratio but need to be examined in order to be fully understood.

Response:

Confirmed. Cost differentials between solutions cannot be assumed at a given ratio and need to be examined in order to be fully understood. Negative impacts to different criteria can have significantly different results to the overall cost. By implicitly including the financial considerations within the evaluation scoring, FEI is able to eliminate the potential of double counting the financial impact compared to including an explicit financial criterion within the evaluation criteria.

61. Reference: Exhibit B-4, CEC 1.26.1 and Exhibit B-2, BCUC 1.24.1

> 26.1 Does FEI typically use a delivery method utilizing separate contracts for engineering design, construction management and inspection and construction for large scale projects, or is this a novel methodology?
>
> **Response:**
>
> Please refer to the response to BCUC IR1 24.1.

> 26.1 Does FEI typically use a delivery method utilizing separate contracts for engineering design, construction management and inspection and construction for large scale projects, or is this a novel methodology?
>
> **Response:**
>
> Please refer to the response to BCUC IR1 24.1.

> 24.1 Please discuss whether FEI has used the selected project delivery method for other projects of this scale and scope.
>
> **Response:**
>
> FEI has successfully used a design-bid-build (DBB) project delivery method that utilized separate contracts for engineering design, construction management and inspection, and construction on the Inland Gas Upgrades (IGU), and a similar design-bid-build approach that utilized separate contracts for EPCM (Engineering, Procurement and Construction Management) and construction on two other projects, the Lower Mainland Intermediate Pressure System Upgrade (LMIPSU), and the Coastal Transmission System (CTS). These three gas line projects are of similar scale and share similar characteristics but the specific scope of each project is unique and was required to address a particular need.

61.1 What actions, if any, does FEI undertake to evaluate its project delivery methodologies after the fact? Please explain.

Response:

As part of FEI's phase gate system, a review is conducted prior to commencing project execution to evaluate and review the adequacy of the project delivery method (PDM), among other aspects of the project. In addition, during project closeout, a lessons-learned exercise is often completed to review the project, including adequacy of the PDM, to capture learnings for application to future projects. FEI plans to conduct such a review during close-out of the OCU Project.

61.1.1 If FEI does undertake to make such an analysis, please provide any lessons learned from the IGU, LMIPSU or CTS projects.

Response:

The IGU Project is not yet complete and therefore a formal lessons learned review has not been conducted; however, the project is progressing well compared to the forecast cost and schedule. With respect to the LMIPSU Project, the PDM was not identified as requiring improvement following a project completion review. FEI did not conduct a formal lessons learned review for the CTS Project, however that project was completed on time and budget and there were no concerns with the PDM.

Please also refer to the response to CEC IR1 26.2 which provides various PDMs considered by FEI and the evaluation criteria FEI used to select the PDM.

61.1.2 Will FEI review its project delivery techniques following this project? Please explain.

61.1.2.1 If yes, will this review be available to the Commission? Please explain.

Response:

Please refer to the response to CEC IR2 61.1. FEI would also expect to provide commentary on the project delivery techniques in the final report on the Project to the BCUC.

62. Reference: Exhibit B-4, CEC 1.26.2 and 1.26.5

26.2 What project delivery alternatives did FEI consider, and why were they rejected?

Response:

FEI engaged with Ernst and Young Canada (EY), a multi-disciplinary professional services firm offering consulting services that include, among other things, procurement advice on selecting project delivery method (PDM). FEI selected the PDM by utilizing the in-house Project Delivery Method Selection Framework developed in collaboration with EY. This framework provides a detailed and structured approach for selecting PDMs for FEI's capital projects such as OCU. The Framework is also applied to assess the suitability of Design-Bid-Build when compared to non-standard delivery methods, as was done for OCU, or to re-assess and select a PDM should a project constraint change during the planning phase.

FEI considered following PDMs as part of the evaluation process:

- Design-Bid-Build (DBB)
- Design-Build (DB)
- Construction Manager - At Risk (CM-AR)
- Construction Manager - Agency (CM-A)
- Integrated Project Delivery (IPD)
- Progressive Design-Build (PDB)

The methodology to choose a PDM is based on selecting a method that best addresses the unique characteristics of a project. The various methods are ranked, rather than one being selected over others which are rejected over another, using the procurement objectives, such as timeliness/schedule certainty, cost certainty and risk allocation, to meet as evaluation criteria. The use of procurement objectives allows for a consistent and un-biased comparison of the options, whilst articulating the reasoning for the scoring of each method.

A DBB PDM was selected for the OCU Project primarily because the Project schedule allows for sufficient time to complete the design to 100 percent prior to tendering for the construction contract and achieve schedule and cost certainty.

26.5 If FEI had more time available to complete the Project, would FEI have selected a different methodology? Please explain why or why not.

Response:

FEI would not choose a different PDM if there was additional time available. The DBBPDM is typically the most competitive and commonly used method for pipeline projects.

62.1 Please provide any ranking summaries/tables that FEI used in selecting the Project Delivery methodology.

Response:

The preliminary summary and ranking table using the FEI internal Project Delivery Method Selection Framework using the weighted scores is as follows:

	DBB	DB	CM-AR	CM-A	IPD	PDB
Timeliness	9	9	15	6	3	12
Cost Certainty	3	5	4	3	2	4
Flexibility	3	1	4	4	5	3
Risk Allocation	6	4	8	6	6	8
Contractor Incentive	2	3	4	3	3	4
Total Weighted Score	23	22	35	22	19	31
Rank	3rd	4th	1st	4th	6th	2nd
Total Unweighted Score	14	14	21	15	14	19

This table was prepared in the planning phase when the OCU Project was schedule-driven (i.e., had a completion schedule constraint). As indicated in the table above, given that constraint, CM-AR was the preferred PDM based on a qualitative evaluation process.

As the Project development activities advanced and mitigation measures were developed to address the short-term capacity constraints (as discussed in Section 4.2 of the Updated Application), the schedule constraint was removed and the project deadline extended by one year, thereby eliminating the need for a phased construction approach.

The one year extension correspondingly reduced the weight of the timeliness objective, and increased the weight of the cost certainty objective. Essentially, the potential timeliness/schedule certainty offered by using either a CM-AR or PDB PDM was no longer needed to meet the Project's objective. Consequently, FEI chose to proceed with a DBB PDM, which provides better cost competitiveness as discussed in the response to CEC IR1 26.5.

62.2 Is it correct to say that the selected alternative is likely the most cost-effective, regardless of the time/schedule constraints?

62.2.1 If no, please explain why not.

Response:

FEI agrees that the selected DBB PDM alternative is typically the most cost-effective option when a project is not schedule constrained and a competitive process can be used to select the lowest bidder.

63. Reference: Exhibit B-1-2, page 87-88 and Exhibit B-4, CEC 1.33.2 and 1.33.3

> **5.10.4 Risk Analysis**
>
> FEI engaged Yohannes Project Consulting Inc. (YPCI), a company specializing in risk management, to conduct a qualitative risk analysis to identify all of the risks associated with the Project. YPCI conducted multiple workshops with the Project team to develop a risk register for the Project to identify risks that could likely occur.

33.2 If it was not Yohannes Project Consulting Inc., please explain why not.

Response:

Yohannes Project Consulting Inc (YPCI) is a company that specializes in risk management and it was retained to assist in risk identification and to conduct a qualitative risk analysis of the Project risks. YPCI does not have relevant experience in cost estimating or scheduling.

33.3 What process did FEI undertake to select Yohannes Project Consulting Inc. to conduct the qualitative risk analysis?

Response:

YPCI is an industry recognized expert firm on risk management processes. FEI invited YPCI to submit a written proposal to develop a Project Risk Management Framework. On completion of the framework, FEI invited YPCI to submit proposals for risk management services for the OCU Project. FEI reviewed the proposal for quality, confirmed YPCI's experience through references and evaluated the cost basis. Once confirmed, YPCI was retained through a standard services agreement.

63.1 Are there other companies that are capable of undertaking the qualitative risk analysis?

63.1.1 If yes, please provide the names.

63.1.2 If yes, why did FEI invite PPCI to submit a written proposal rather than create an RFP?

Response:

There are other companies capable of undertaking a qualitative risk analysis. For example, FEI has contracted with YPCI, Bramcon Project Consultants Ltd, Worley Parsons, and Stantec to conduct qualitative risk analysis work on other FEI projects.

YPCI is a recognized industry expert, has completed the qualitative risk analysis for a number of other FEI projects, fully understands the scope of work, and offers services at market rates aligned to those of similar consultants in BC. For these reasons, along with cost savings associated with not having to develop, issue, and review an RFP, FEI invited YPCI to submit a written proposal rather than issuing an RFP.