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September 15, 2016

British Columbia Utilities Commission
Sixth Floor
900 Howe Street
Vancouver, B.C. V6Z 2N3

Attention: Ms. Laurel Ross, Acting Commission Secretary and Director

Dear Ms. Ross:

Re: FortisBC Inc. (FBC)

Project No. 3698883

Application for the a Certificate of Public Convenience and Necessity for Replacement of the Corra Linn Dam Spillway Gates (the Application)

Response to the British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

On June 29, 2016, FBC filed the Application referenced above. In accordance with Commission Order G-107-16 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCUC IR No. 1.

FBC has redacted certain details in the attached responses because they contain financial information and contingency details that are based on certain identified Project risks. The public disclosure of this financial information could inform contract bidders and could result in higher bids and higher costs than may otherwise be achieved. FBC has filed the confidential version with the Commission and registered parties who have signed and filed Undertakings of Confidentiality.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

Table of Contents

Page No.

A. SERVICES AND BENEFITS DERIVED FROM THE CORRA LINN DAM

1.0 Reference: APPLICATION

Exhibit B-1, p. 10; FortisBC Inc.-2012-13 Revenue Requirements and Review of Integrated System Plan (ISP) proceeding: Exhibit B-1-2, 2012 Long Term Resource Plan, p. 45

Canal Plant Agreement

On page 10 of the Application FortisBC Inc. (FortisBC) states:

- that when the Corra Linn dam was commissioned in 1932, it had three 16 megawatt units;
- the purpose of the Corra Linn dam is to generate electrical energy from the portion of the Kootenay River flows allocated to FortisBC, and to regulate the level of the Kootenay Lake reservoir; and
- in 1976, BC Hydro commissioned the 580 megawatt Kootenay Canal Generating Station which benefits from the head and flood discharge capacity provided by the Corra Linn dam.

FortisBC stated that under the Canal Plant Agreement, BC Hydro determines the output of the Entitlement Parties' plants and takes all the power actually generated by the plants into its system. In exchange, the Entitlement Parties are contractually entitled to their respective "entitlements" of capacity and energy from BC Hydro.[1]

The benefits FortisBC and its ratepayers derive from the operation of the Corra Linn facilities it is not clearly delineated in the Application.

1.1 What is the current generating capacity of the Corra Linn generating station for which the Corra Linn dam provides head?

Response:

As explained in the following series of responses, the benefits to FBC and its ratepayers derived from the Corra Linn Dam are substantial. However, the requirement for the Project is not related to the generating capacity of the Corra Linn Dam. The need for the Project is driven by requirements to meet BC Dam Safety Regulation (BCDSR) and Canadian Dam Association Dam Safety Guidelines (CDSG) and to minimize the risks to public and employee safety. As described in Section 1.3.2 of the Application, the Corra Linn Dam was reclassified from a "Very High" consequence to an "Extreme" consequence classification. This reclassification changed the magnitude of the "design flood" and "design earthquake" which are used to define the

[1] FortisBC Inc., 2012-13 Revenue Requirements and Review of ISP proceeding, Exhibit B-1-2, 2012 Long Term Resource Plan p. 45.

severity of hazards that the Corra Linn Dam is recommended to be able to withstand. The existing Corra Linn Dam spillway gates do not have the strength to withstand the recommended design earthquake for a dam with an "Extreme" classification, so they do not meet the requirements of either the BCDSR or CDSG.

The current generating capacity of the Corra Linn generating station is 49.45 MW.

1.2 In the past three financial years, what have been the annual revenue and/or avoided costs attributed to the operation of the Corra Linn facilities? Please provide a breakdown by source and state any assumptions made in calculating the values.

Response:

Please refer to the response to BCUC IR 1.1.1. FBC defines the avoided costs arising from the operation of the Corra Linn facilities as the increase to FBC's power purchase expense that would occur if the plant was not available to generate power. The entitlements received under the Canal Plant Agreement for the Corra Linn facilities provide approximately 10% of FBC's annual energy requirements and 7% of FBC's peak demand. If these entitlements were not available, FBC would need to purchase equivalent amounts of energy and capacity from an alternate firm resource, which currently would be FBC's Power Purchase Agreement with BC Hydro (BC Hydro PPA).

Table 1 below shows the entitlements received from the Corra Linn plant over the past three years, and the avoided costs (valued at the Tranche 1 rate for energy under the BC Hydro PPA) associated with these entitlements.

Table 1

Corra Linn Plant	2013	2014	2015
Entitlement Energy (MWh)	279,328	349,468	348,435
Average Entitlement Capacity (MW)	34.4	42.5	42.7
BCH PPA Tranche 1 Energy Rate ($/MWh)	$ 38.96	$ 41.74	$ 44.54
BCH PPA Capacity Rate ($/MW/Month)	$ 6,646.81	$ 7,120.74	$ 7,598.74
Avoided Cost of the Energy ($ millions)	$ 10.884	$ 14.587	$ 15.520
Avoided Cost of the Capacity ($ millions)	$ 2.744	$ 3.632	$ 3.894
Total Avoided Cost ($ millions)	$ 13.627	$ 18.219	$ 19.413

As shown in Table 1 above, the cost of purchasing replacement energy and capacity for the Corra Linn plant would have been $13.6 million in 2013, $18.2 million in 2014, and $19.4 million in 2015. The replacement cost in 2013 was lower than usual due to an outage of the Corra Linn Unit 2, which resulted in reduced entitlements due to the unit being unavailable for the second half of 2013.

1.2.1 Does FortisBC forecast the value of these benefits to materially change in the future? If yes, please explain providing the forecast value or value range.

Response:

Please refer to the response to BCUC IR 1.1.1. FBC anticipates that the value of the avoided power purchase expense discussed in the response to BCUC IR 1.1.2 would increase annually based on increases to the cost of the BC Hydro PPA, which increases based on BC Hydro's general rate increases. Assuming a constant 3% nominal rate increase, the replacement cost could reach over $33 million in the final year of the BC Hydro PPA, which expires on September 30, 2033. This value may be conservative, as FBC may not have sufficient BC Hydro Tranche 1 energy available. FBC's access to Tranche 1 energy under the BC Hydro PPA (at a rate of $46.99/MWh as of April 1, 2016) is limited to 1,041 GWh. Above 1,041 GWh and up to the maximum of 1,752 GWh, the cost for the energy increases to $129.70/MWh, as per BC Hydro RS3808.[2] Accordingly, if FBC exceeds the available BC Hydro Tranche 1 energy, the avoided power purchase expense would be even higher.

1.2.2 For any benefits directly received from British Columbia Hydro and Power Authority (BC Hydro), for how long is BC Hydro contractually obliged to provide these benefits to FortisBC?

Response:

Please refer to the response to BCUC IR 1.1.1. The Canal Plant Agreement, and its associated benefits, will expire on December 31, 2030.

[2] The Tranche 2 energy does not increase with the general BC Hydro rate increases, but will change if BC Hydro uses a new long run marginal cost for rate making purposes, as accepted by the Commission.

1.3 In the past three financial years, what has the annual operating costs of the Corra Linn facilities been?

Response:

The annual operating costs of the Corra Linn facility for the past three financial years (2013-2015) are presented in Table 1 below:

Table 1: Annual Operating Costs of the Corra Linn Facility 2013-2015 ($000s)

		2013	2014	2015
1	Routine Maintenance	277	349	306
2	Routine Inspections	-	115	124
3	Non Routine Maintenance	56	78	360
	TOTAL	**333**	**542**	**790**

Non Routine Maintenance projects are projects that occur on a greater than 24 month basis and cost in excess of $10,000. As such, Non Routine Maintenance costs vary from year to year, as shown in the table. The 2015 column in Table 1 above includes a single expense item of $0.265 million for a major generating unit inspection on Corra Linn Unit 3. With respect to Routine Maintenance and Routine Inspections, the 2013 costs were low due to an extended labour dispute during that year, which resulted in a reduction to the maintenance done for the Corra Linn facility. Future costs for routine maintenance and inspections are expected to be of similar magnitude to those experienced in 2014 and 2015.

It is not expected that future facility O&M costs (which are dominated by O&M activity on the generating units themselves) will be materially impacted by the Project.

1.3.1 Are the operating costs in anyway recovered from BC Hydro? If yes, please explain the nature of nature of the arrangement.

Response:

FBC does not recover any operating costs from BC Hydro.

1.4 Given that BC Hydro benefits from the head and flood discharge capacity provided by the Corra Linn dam, has FortisBC considered asking BC Hydro for a contribution to the cost replacing the spillway gates? Please explain why or why not and provide any relevant sections of the agreements between FortisBC and BC Hydro.

Response:

Please refer to the response to BCUC IR 1.1.1. Under the Canal Plant Agreement, FBC is responsible for operating and maintaining its own facilities. Specifically, Section 2.5 of the Canal Plant Agreement, dated November 15, 2011, states:

> Nothing in the Agreement affects a party's ownership of its Plant(s), transmission system and related assets, its right to upgrade its assets or its responsibility to ensure the operation of its assets remains consistent with its Legal Obligations and Good Utility Practice.

As a result of this provision and FBC's obligations to operate and maintain the Corra Linn Dam, FBC did not ask BC Hydro to contribute to the Project.

B. CONTRACTING METHOD

2.0 Reference: APPLICATION

Exhibit B-1, p. 45

Contractor selection

On page 45 of the Application, FortisBC states that:

- it is evaluating the merits of a contractor alliance agreement which would make the contractor a member of the collaborative Project team and centralize responsibility for design and construction under one contract;
- under the alliance agreement, the Project achieves competitive market rates by tendering various construction and supply agreements; and
- alternatively, it may select a contractor based on a more traditional tender process.

2.1 What projects of comparable nature has FortisBC completed and what was the contracting method and budgeted and actual cost of each?

Response:

FBC has executed similar work both at its plants and at third party plants.

The Upper Bonnington Spillway Gate Replacement project was completed between 2010 and 2013. For that project, FBC tendered all fabrication and concrete work, at a cost of $1.649 million compared to the budget of $1.689 million, representing a cost reduction of 2.4 percent.

In addition, FBC has recently performed spillway gate rehabilitations at two facilities owned by third parties. These rehabilitation projects involved refurbishing the spillway gate to the original design and typically included prepping and painting, repairing damaged structural components and replacing roller bearings. The rehabilitation projects did not involve increasing the strength beyond the original design as is required for the Corra Linn Project. Both projects were executed using a combination of FBC and contractor resources. Where contractors were utilized, the contracts were initially tendered and then sole sourced based on performance. Final costs of the two projects were four percent higher and one percent higher than budget respectively.

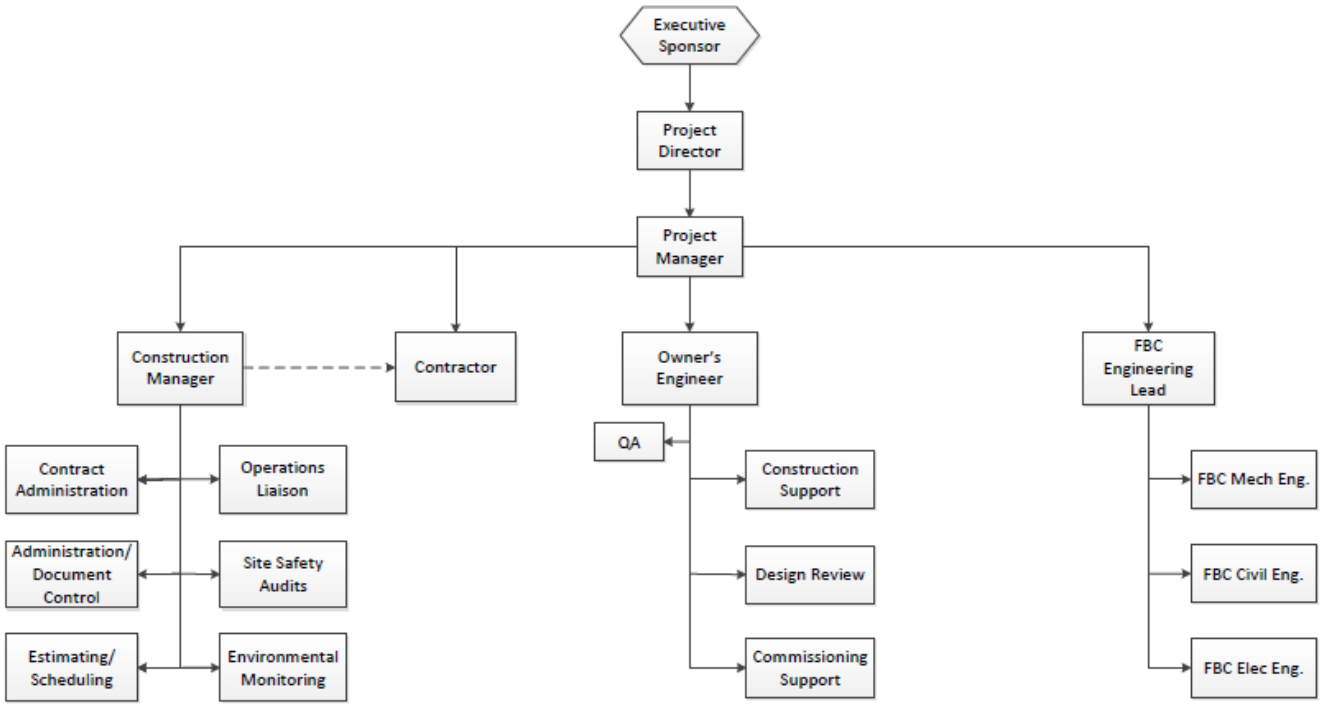
2.2 Please provide names of the Project Manager and Executive Sponsor for the Project. If the roles have not yet been assigned, when does FortisBC expect to assign them?

Response:

Darren McElhinney, Operations Manager, Generation will be the Project Manager and Doyle Sam, Executive Vice President, Operations and Engineering will be the Executive Sponsor for the Project. In addition, FBC has recently assigned Rob Dunsmore as Project Director to provide Project oversight on decision making at key stages of the Project, assist in resolving major issues and conflicts should they arise, and provide oversight on cost controls and contingency management.

This role is reflected in the updated Organizational Chart provided in Figure 1 below.

Figure 1: Organizational Chart



2.2.1 Do the Project Manager and Executive Sponsor have experience managing similar projects? If yes, please provide details, specifically

noting any projects were a contractor alliance was formed with the main contractor.

Response:

The Project Manager, Mr. Darren McElhinney, has been the Operations Manager, Generation for the past 5 years responsible for the overall budget and operational activities of the 5 hydro plants that FBC operates on the Kootenay River. Mr. McElhinney has previous project management experience with FBC managing projects of different scope but with similar complexities primarily on the Company's Transmission & Distribution side of the business.

The Project Director, Mr. Rob Dunsmore, has 28 years of Project and Operations and Maintenance experience with FBC in a number of roles prior to his current role which include Project Director, Waneta Expansion; Manager, Transmission and Distribution Projects; Manager, Generation; and Manager, Upgrade and Life Extension Program.

The Executive Sponsor, Mr. Doyle Sam, has experience with projects that utilized a similar contracting arrangement.

2.3 Please provide further detail on the nature of the alliance agreement being considered.

Response:

FBC would like to clarify that the alliance terminology used in the Application was meant in a general sense to describe the relationship with the contractor. A more accurate characterization of the contracting model being contemplated by FBC with HMI is an Early Contractor Involvement (ECI) model, not an alliance model or solely one of the traditional project delivery methods such as Design Build Tender. The ECI model seeks to balance risk, price and control of a project. In its strictest sense it is a hybrid of both a Design Build project delivery method (where the contractor is selected at the early stages of a project as a collaborative partner) and an Open Book pricing system. FBC reiterates that a contract has not been established with HMI and their involvement to date has been limited to assistance in the preparation of the Class 3 estimate for the Project.

Each of the traditional project delivery methods has advantages and disadvantages and is widely used in Canada. The ECI model, however, has evolved as a useful project delivery method for projects with unique characteristics and is therefore well-suited for one of a kind projects and where the site conditions pose unique challenges (such as the type of lifting required and access to the Project site in this case) that are best addressed by a knowledgeable contractor at the early stages. In the ECI model, because of the collaborative nature, there is

less likelihood for an adversarial relationship, resulting in an efficient and lower overall cost solution.

Advantages of an ECI model

The main advantages of implementing an ECI model for the Corra Linn Project include:

- The Company can select a specialized design/construction firm at the early stages of the project development process based on qualifications, experience and reputation, thereby leveraging the contractor's experience and knowledge at the onset of the Project. Once selected, the contractor provides preconstruction services, such as finalizing scope, evaluating alternatives and finalizing the schedule, concurrently with the design and planning services.

- The design and planning services are performed collaboratively with input from the entire project delivery team to establish a target price for the Project.

- Provides the Company an opportunity to review and test all assumptions as to design, cost, risk and schedule at an early stage.

- Under the Open Book pricing system the contractor must operate in an open, transparent and collaborative manner with FBC's team.

- It includes an understanding that FBC will have the ability to exercise an option for the construction of the Project. That is, the Design Build Phase is only agreed to when both parties agree with the target price and risk allocation determined in the Open Book Phase.

- Because of the collaborative development of cost and the equitable allocation of risks, savings are shared and effectively both parties participate in any gains/losses eliminating the need for a penalty/incentive mechanism.

- Because of the collaborative nature of the model there is less room for dispute; therefore communications between the parties are improved and there is less risk of contractual disputes and Change Orders.

Ultimately the responsibility for construction is done under a single bonded lump sum contract, which produces a more manageable contract, increases certainty of the Project costs and reduces risk for both parties.

Phases and Activities

There are two distinct phases in the ECI model. One is called the Open Book Phase (OBP) and the other the Design Build Phase (DBP). Each phase has five different main activities: Project Management, Engineering and Schedule, Procurement/Fabrication/Delivery, Construction and

Commissioning/Start-up. There are some overlaps in the Procurement/Fabrication/Delivery activity. Further information is provided below on the Open Book Phase.

Open Book Phase (OBP)

Key elements of the OBP include:

- Development of the OBP scope, budget and schedule, matrix allocation of responsibilities, and the project team charter parts of the Agreement;
- Definition of the OBP deliverables which become part of the DBP Agreement. This includes:
    - A detailed cost estimate, which will be the DBP contract price and includes all direct cost, contractor overhead cost and profit;
    - complete technical specifications, drawings and work procedures; and
    - a risk register and contingencies to be included in the contractor cost;
- Undertaking procurement activities including short listing of suppliers, issuing and evaluating tenders and selecting subcontractors; and
- Performing a full constructability review leveraging on the contractor's knowledge and experience in the planning and development of the project.

Essentially in the OBP the project scope, deliverables, costs and risks are jointly developed in a collaborative and transparent manner between the contractor and owner. This process involves completing sufficient engineering and technical specifications to enable the tendering of material and labour contracts to ensure a competitive market price.

Under the ECI model, approximately 70% of the estimated total contractor cost would be for subcontracted works and materials procurement and would be competitively tendered. The selection of successful tenders will be made jointly by FBC and the contractor, in comparison to a traditional design build contract where FBC would have no input into the method of selection of subcontractors or the type of procurement delivery. To assist FBC in validating the portion of the total contract price not competitively tendered such as detailed design, project management and support (currently estimated to be 30% of the total contractor cost), FBC will engage a third-party Owner's Engineer to provide engineering services such as review of the engineering design and work packages, construction support and to assist FBC in evaluating, validating and confirming that the negotiated contractor's Project costs are reasonable. The Owner's Engineer will form part of the FBC team.

The validation of the Project cost related to the subcontracted works and materials procurement (approximately 70% of the estimated Total Contractor Costs) is done through competitive

tendering during the Open Book Phase where FBC and the contractor jointly develop and agree on work packages and a short list of qualified suppliers. Work packages are prepared and issued for bids from qualified suppliers after the constructability review and detailed design, site reviews, bills of materials and specifications are completed. The bids received are then jointly evaluated by the two parties, considering cost, delivery and technical parameters, with the owner having final acceptance. With the Open Book process, effectively, the market price for the construction cost for each scope item in the Project is established at the onset of the Project.

For the validation of the Project cost related to the main construction contract (approximately 30% of the Total Contractor Costs), the parties agree on the deliverables, schedule, key performance guarantees, design guarantees and organizational chart required for Project execution. For each activity, the contractor will supply the current market rates for labour, estimated labour productivity, site conditions, loadings and any relevant details of sufficient detail for the owner to review. The parties then agree on a total price to perform the services for each activity during project implementation. In effect, by using the Open Book Process, the owner has the ability to verify and validate independently the contractor's line item price per activity to determine if it is the fair market value prior to entering into a contract agreement.

At the end of the OBP the parties agree on a lump sum fixed price and a Project Implementation Plan for the DBP. The fixed price agreed to means the contractor effectively holds all of the Project's construction risks assigned to the contractor during the OBP.

Risk Identification, Valuation and Allocation

In the ECI model both parties identify and value the Project risks. The risks are then allocated to the party best able to manage and control a particular risk. This risk quantification is transparent and the risk is built into the contract contingency; and if the risk does not manifest, then the associated contingency cost is not incurred and is not charged to FBC. This is unlike a fixed price contracting method, where the contractor will typically build risk costs into the contract price and the company will pay for those costs regardless of whether the risk costs manifest or not. The Risk Register included as Confidential Appendix H to the Application is FBC and HMI's estimate of preliminary known risk, however during the OBP, and once detailed design and construction plans are completed, Project risks are further identified, estimated and then allocated which will form a component of the design build fixed price contract.

Summary

In summary, FBC believes that this is an appropriate contracting model to consider for the Corra Linn Project because of the one of a kind nature of the Project, the construction complexities related to the type of lifting required and the difficult site access. Selecting a qualified and experienced contractor at the early stages allows FBC to leverage the contractor's experience and knowledge at the onset, thereby reducing the cost uncertainty for a complex Project.

2.3.1 Approximately what portion of the total contract amount would be competitively tendered to subcontractors?

Response:

Please refer to the response to BCUC IR 1.2.3.

2.3.2 What are the contemplated bases of payment (units of work completed, day rates, etc.) for the portion of the contract not tendered to subcontractors? If there are multiple bases of payment, provide the approximate proportion of each.

Response:

Please refer to the response to BCUC IR 1.2.3. The bases of payment will be based on negotiated terms between the contractor and FBC.

2.3.3 What is the contemplated basis for contractor profit? What if any, cost or schedule penalty/incentive mechanisms are being considered?

Response:

As noted in the response to BCUC IR 1.2.3, FBC has not finalized the contract model for this Project.

In the event that the ECI model is selected, the contractor's profit will be transparent to FBC and will be based on a mutually agreed upon negotiated percentage. In comparison, in a traditional design build contract the contractor's profit is not transparent but is incorporated into the contract price.

2.3.4 Does FortisBC agree that for contractor alliance agreements the normal cost control balance between owner and contractor that exist in non-regulated setting does not exist in the regulated setting were prudent costs are assumed to be passed on to ratepayers? If not, please explain.

Response:

Please refer to the response to BCUC IR 1.2.3. As noted in that response, FBC is not contemplating a contractor alliance agreement but an ECI agreement.

FBC does not agree that in the case of an ECI agreement, the normal cost control balance between an owner and a contractor that exists in a non-regulated setting does not also exist in the regulated setting. FBC is of the view that the cost balance provided by an ECI agreement could be advantageous to a regulated utility just as it is in a non-regulated setting.

As described in BCUC 1.2.3, prior to agreeing on the cost for an activity to be performed by the contractor, all relevant information with sufficient detail must be provided to the owner during the OBP to enable the owner to conduct an evaluation of the cost estimate for each activity. Controls are therefore in place to validate the contractor costs that are not competitively tendered. Further, the Commission has the ability to oversee the progress of the Project and has tools available to examine costs incurred after the fact. The Company will be filing regular progress reports with the Commission so that the Commission can remain apprised of the progress of the Project.

2.3.5 How would FortisBC control costs on the portion of the project expenses not tendered to subcontractors?

Response:

Please refer to the response to BCUC IR 1.2.3.

2.3.6 Is FortisBC planning on getting a qualified independent third party to review the cost estimate? If yes, when would this review be completed and would FortisBC be agreeable to file the review with the Commission as a compliance filing?

Response:

As noted in the response to BCUC IR 1.2.3 and in Section 5.5.2 of the Application, if an ECI model was selected, FBC intends to engage a third party Owner's Engineer to provide engineering services such as review of the engineering design and packages, construction support. They would assist FBC in validating the portion of the total contract price not competitively tendered, such as detailed design, project management and support. Under the ECI model, as discussed in the response to BCUC IR 1.2.3, cost estimates and the allocation of risks are developed collaboratively; therefore the updated cost estimate is developed by both the Owner who will be assisted by the Owner's Engineer and the contactor through negotiations. An independent third party cost estimate review document will not be developed.

2.3.7 If the Project were to proceed with a contractor alliance, would FortisBC be agreeable to some sort of cost recover cap on the Project or other mechanism (possibly mirroring its PBR cost control incentives) that would further align its financial interests with ratepayers? If yes, please describe the nature of the mechanism(s) FortisBC would be agreeable to.

Response:

No, regardless of the contract model selected for the Project, FBC would not be amenable to some sort of cost recovery cap on the Project. While FBC will use all reasonable efforts to ensure that Project costs are minimized, the Company considers that all costs prudently incurred in carrying out the Project are recoverable from ratepayers.

FBC believes that periodic reporting of costs as incurred or anticipated to be incurred throughout the Project is sufficient to address higher than projected costs, should they materialize. To that end, should the Commission provide direction to do so, and as indicated in the Draft Order included as Appendix P-2 of the Application, FBC will file progress reports with the Commission on the Project. The progress reports will provide details of the risks that the Project is experiencing, the mitigation measures available to address the risks, the actions that FBC proposes to take to deal with the risks and the likely impact on the Project schedule and cost.

2.4 Please confirm that if FortisBC were to tender the main construction contract, it would be a fixed price contract. If, not please describe the nature of the tendered contract being contemplated.

Response:

Confirmed, if FBC were to tender the main construction contract, FBC anticipates that it would be a design build fixed price contract.

2.5 For the scenario where the main construction contract is tendered, what is FortisBC's assessment of the competitive state of contractors qualified to perform the work? Approximately, how many qualified bidders would FortisBC expect to bid?

Response:

The Project would require very specialized work involving seismic rehabilitation of spillway structures and heavy mechanical equipment such as spillway gates and hoists. FBC's assessment concluded that only a small number of contractors have the knowledge, expertise and demonstrated experience to perform the work.

As was BC Hydro's conclusion in 2009[3], FBC believes there are only three or four proven gate integrator suppliers in Canada who would qualify to perform the work, and might potentially bid on the work.

2.6 If FortisBC tenders the main construction contract, please describe the process that will be undertaken to review the tender documents.

Response:

The review process would include a comprehensive evaluation of each bidder's proposal by FBC procurement services, engineering, project management, and the Owner's Engineer, based on the technical and commercial criteria described in the Instructions portion of the Request for Tender or Request for Proposal documents. Each criterion has a weighing factor

[3] http://www.bcuc.com/Documents/Proceedings/2010/DOC_24269_B-1_BCHydro-Stave-Falls-Spillway-Gates-Replacement-Project-Application.pdf page 3-17.

which is scored to determine the overall rating of each proposal. The proposal with the highest score would be awarded the contract.

2.6.1 Would the process involve review and sign-off by a qualified third party?

Response:

Please refer to the response to BCUC IRs 1.2.3 and 1.2.3.6.

2.6.2 When would FortisBC expect to complete the review process?

Response:

If FBC were to tender the main construction contract, the review process is expected to be completed in Q3, 2017 when the contract is awarded, as outlined in Appendix G to the Application. However, as noted in the response to BCUC IR 1.2.3.6, FBC is unable to provide an estimated time frame for completion of the cost estimate review until a contract model is finalized.

2.7 Are the cost estimates provided in the application based on an alliance agreement or a traditional tender process?

Response:

Please refer to the response to BCUC IR 1.2.3. The costs estimated in the Application qualify as an AACE Class 3 estimate and is not expected to change based on the model chosen. FBC notes that the final Project cost is expected to be within the accuracy range of the Class 3 estimate as defined by AACE.

2.7.1 Would FortisBC expect the cost estimate to change if the other contracting method was assumed in developing the cost estimate? If yes, please provide a summary cost estimate (in the same format as Table 6-1 in the Application) for the other contracting method and describe the source(s) of the expected difference(s).

Response:

Please refer to the response to BCUC IR 1.2.7.

2.8 If there are any areas where the lack of definition of scope complicates tendering the main construction contract, please detail the areas of uncertainty, describe FortisBC's effort to date to define the scope in these areas and explain what would be required to fully define the scope in these areas.

Response:

FBC does not foresee any areas where a lack of definition in scope would complicate tendering the main construction contract. The scope of works was prepared in accordance with the AACE International Recommended Practice No. 69R-12 Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Hydropower Industry. As noted in Section 3.2.3 of the Application, the only uncertainty with the Project scope is with regard to the condition of the embedded parts. To mitigate the uncertainty with the scope for the embedded parts a line item is included in the Risk Register (Confidential Appendix H of the Application) and the corresponding contingency amount was included in the capital cost estimate. The inspection of a similar facility was an additional measure completed to mitigate this risk.

2.8.1 If scope definition is an issue for tendering, could these concerns be mitigated by including a payment based on unit quantities (such as cubic meters of cement) in areas of undefined scope?

Response:

Please refer to the response to BCUC IR 1.2.8.

2.8.2 Are any of the embedded parts currently assumed to not need refurbishment or replacement that may upon detailed inspection? If yes, please describe the parts and comment on the possible inclusion of an option in a tendered contract dependent on the outcome of detailed inspections.

Response:

Please refer to the response to BCUC IR 1.2.8.

2.9 When does FortisBC plan on making a decision on the contracting method?

Response:

FBC anticipates that it will make a decision about which contracting method the Project will proceed with by the end of Q1 2017.

C. COST ESTIMATE AND CONTINGENCY

3.0 Reference: APPLICATION

Exhibit B-1, p. 59, Table 6-1

Capital Cost estimate

3.1 Please confirm that the cost estimate provided in Table 6-1 is a median (P50) cost estimate. If not, please explain the likelihood assumptions that were made in developing the estimate.

Response:

Not confirmed. The cost estimate provided in Table 6-1 is not a median (P50) cost estimate. Consistent with the Commission CPCN Guidelines for project cost estimates[4], it was developed to meet the requirements of an AACE Class 3 level of project definition and design (Low -10% to -20% and High +10% to 30%). As explained in Section 6.3.1.2 of the Application, the Monte Carlo method was not used to derive the contingency because limited reliable historical database information was available and hence a probabilistic cost estimate was not developed.

The likelihood assumptions that were made for each of the risk items identified are shown in the Risk Register, Confidential Appendix H.

3.2 What portion of the $7.328 million project contingency is attributable to unknown risks?

Response:

The $7.328 million (as-spent) Project Contingency shown in Table 6-1 of the Application is comprised of the following:

Portions of Table 1 are redacted as it contains financial information and contingency details that are based on certain identified Project risks. The public disclosure of this financial information could inform contract bidders, and could result in higher bids and higher total costs than may otherwise be achieved. A confidential version of Table 1 is being filed with the Commission.

[4] Section 5 of Appendix A attached to Order G-20-15 "2015 Certificate of Public Convenience and Necessity Application Guidelines".

Table 1

	2015$ ($ millions)	As-Spent $ ($ millions)	Reference
FBC Owner's Known Risk	[redacted]	[redacted]	Exhibits B-1-1 Confidential Appendix H Risk Register – Sum of Owner's Project Contingency
Project Unknown Risk	[redacted]	[redacted]	See BCUC IR 1.3.2.1
TOTAL Project Contingency	**$ 6.846**	**$ 7.328**	

3.2.1 On what basis was the unknown risk contingency estimated?

Response:

Unknown risks are those risks and resulting costs which cannot be predicted in advance and cannot be identified through the risk management process. Since the risk is unknown, a response and/or mitigation cannot be estimated in advance. Therefore, there is no basis under which the unknown risks can be quantified; however, FBC provides the following details on how the Project Contingency and resulting unknown risk contingency was determined.

FBC determined a reasonable and appropriate total Project Contingency amount of 15% based on the complexity and scale of the Project, the effort that has gone into engineering, design and project development by both FBC and HMI, and published technical references. As stated in Section 6.3.1.2 of the Application, there is no AACE standard that outlines the "correct" or "appropriate" level of contingency to include in a project. Further the 15% Project Contingency selected by FBC is comparable to values suggested in the industry references provided in footnotes 55 and 56, page 61 of the Application.

The Project Contingency is comprised of the owner's known risks under an ECI model and the unknown risks for the Project (see Section 6.3.1.2, page 61, line 11 to 16, and also footnote 51 of the Application). The Project Contingency amount (i.e. $7.328 million as shown in Table 6-1 of the Application) is 15% of the sum of the Total Contractor Costs and Owner's Costs. The unknown risk contingency is, therefore, the difference between the total Project Contingency and the owner's known risk.

3.2.2 Does FortisBC have any reason to believe that the existing scope definition may not be adequate to complete the Project? If yes, what

areas of scope may be inadequate? Please explain why they may be inadequate and why it is prudent to proceed without further defining the scope.

Response:

FBC confirms that the existing scope definition is adequate to complete the Project.

3.2.3 Is it FortisBC's intention to approve/release the unknown risk contingency with the initial Project budget approval? If yes, please explain why FortisBC believes it appropriate to do so instead of withholding the unknown risk contingency as a management reserve?

Response:

The total estimated capital costs for the Project includes contingency amounts to account for both known and unknown risks that may materialize during the Project. The Project budget will be the sum of the Project cost estimate plus both known and unknown contingencies and the Commission's approval is being sought for the Project with a budget of $62.694 million. During Project execution the Project Manager will have authority to release the Project cost estimate plus the known contingency amounts but the contingency amounts for unknown risks will require approval from the Project Director if they materialize over the course of the Project.

3.3 What, if any, are the potential cost savings (including contingency) that could be obtained by extending the schedule beyond the proposed December 2020 in service date? If there are potential cost savings, please discuss the practical implications of extending the in service date.

Response:

There would not be any cost savings as a result of extending the schedule beyond the proposed December 2020 in service date. In contrast, costs would increase due to, but not limited to, the following:

- Increased site maintenance cost;
- Additional contractor and sub-contractor mobilization and demobilization cost;

- Increased training cost for new employees due to likely higher turnover experienced by an intermittent project;
- Suppliers and fabricators would have to piecemeal the work, reducing efficiencies;
- Loss of productivity gain on sequential on-site works; and
- More years of indexation costs for resourcing/material/insurance/etc.

Furthermore, FBC believes the Project schedule as provided as Appendix G to the Application has been optimized and accounts for the expected volume of work and all of the known site, operational, and environmental constraints such that an extension or reduction in schedule could result in an increase to the total Project cost.

D. ALTERNATIVES ANALYSIS

4.0 Reference: APPLICATION

Exhibit B-1, pp. 26–48

Identified alternatives

On pages 26 through 28 of the Application, FortisBC states:

- it identified and considered four alternatives for the Project: Alternative 1, Do Nothing; Alternative 2, Deferral; Alternative 3, Gate Refurbishment; and Alternative 4, Gate Replacement;
- it deemed Alternative 1 and 2 not to be feasible;
- Alternative 3 would extend the expected life of the existing gate by approximately 11-25 years, therefore replacement of the spillway gates would need to be considered within the next 15 years; and
- that Alternative 4 is preferred over Alternative 3 as it offers a lower long term cost and has a lower implementation risk.

4.1 What is the expected working life of the new gates as contemplated in Alternative 4?

Response:

The recommendation by the United States Army Corps of Engineers (USACE) publications ETL 1110-2-584 Design of Hydraulic Steel Structures (Jul. 2014) and EM 11100-2-8159 Life Cycle Design and Performance (Oct. 1997) is for an expected working life of a new gate of 100 years.

4.2 For Alternative 3, please explain why the replacement of the gates would need to be considered within the next 15 years? What criteria would be applied to determine the need to replace the refurbished gates?

Response:

FBC does not believe the gates' life can be reliably extended beyond 15 years because of the age and condition of the gates. Based on the current condition assessment of the spillway gates, FBC is uncertain as to the extent of the refurbishment required to eliminate all failure modes. As noted in Section 4.3.1.3 of the Application and in the response to BCOAPO IR 1.7.1,

there is also the potential for latent defects to remain following refurbishment and further degradation of the gate structural members from fatigue.

FBC sought an opinion from HMI on the potential life extension of the spillway gates following refurbishment and they estimated that with adequate refurbishment it is conceivable that the life of the gates could be extended by 25 years. Even if FBC can extend the life of the spillway gates beyond 15 to 25 years, the extent of refurbishment required could not be confirmed, and therefore FBC believes the risk to employee and public safety would remain.

Refurbishment of the spillway gates would still require replacement within approximately the next 15 years. FBC believes the technical and financial criteria for justification of the replacement of the Corra Linn spillway gates has already been met and is included within the Application. As described in the response to BCUC IR 1.4.2.2 and in Section 4.3.2 of the Application, it is more cost effective to replace the spillway gates now as opposed to later.

4.2.1 Are there any fundamental limits to extending the life of the existing gates through continued maintenance?

Response:

Please refer to the response to BCUC IR 1.4.2.

4.2.2 If the life of the existing gates can be substantially extended beyond 15 years, please discuss the future cost differences, if any, between continuing to maintain the existing gates and Alterative 4.

Response:

Please refer to the response to BCUC IR 1.4.2. To provide a range, FBC calculated the net present value of the existing gates should they be extended by 25 years as part of Alternative 3: Gate Refurbishment. As noted in FBC's Application (Exhibit B-1, Section 4.3.2, pg. 37, Ln. 13-16), the net present value of the incremental revenue requirement over 70 years if refurbished gates are to be replaced by 2045 is $94.897 million, and is still approximately $10 million more expensive than Alternative 4: Gate Replacement, which has a net present value of approximately $85.018 million.

4.3 What are the expected remaining working lives of the Corra Linn dam structure and generating facilities?

Response:

FBC is unable to provide a detailed assessment of the expected remaining service life of the Corra Linn Dam structure due to the non-linear rate of deterioration of concrete and the multitude of physical and chemical processes acting simultaneously on the surface. In addition, FBC is not aware of any defined standards used to calculate the remaining service life of a dam structure as a whole. FBC considers the Corra Linn Dam to be generally in good condition, as summarized in the Corra Linn Hydroelectric Project Dam Safety Review, (Confidential Appendix B, page 4) which found:

> The concrete is generally in good condition, largely because of remedial work that was done in the 1990s.; and
>
> There are no indications of excessive seepage emerging at the downstream toe of the dam.

FBC considers it reasonable to estimate that the Dam structure will, with ongoing maintenance, have a remaining service life well in excess of 40 years.

The Corra Linn Dam generating facilities (generators and turbines) have been subject to a life extension program that started in 1999 and was completed in 2012. Based on an industry accepted average service life of 40 years for generators and turbines, FBC believes that the generating facilities (generators and turbines) at the Corra Linn Dam have an approximate remaining service life of 23 to 36 years.

4.3.1 Are any major maintenance or capital projects expected during this time? If yes, please describe providing the approximate timing and expected cost.

Response:

There is no major maintenance planned for the Corra Linn Spillway gates. Major maintenance (O&M) planned during this time is for the generating units only and includes scheduled major inspection for generating Units 1 and 2 in 2022 and 2023.

At this time, FBC plans to undertake the following capital work (in excess of $0.5 million) at the Corra Linn plant within the next 5 years (2016-2020):

Project Title	Forecast Year (Approx.)	Cost Estimate (Approx.)
Annex Building Concrete Wall Rehabilitation	2017/2018	$620k
Tailrace Wall and Airwash Roof Concrete Rehabilitation	2020	$675k

Only the Annex Building Concrete Wall Rehabilitation project anticipated for 2017 and 2018 falls within the current PBR term, and will be included in the formulaic capital expenditures envelope.

4.4 Have the design requirements changed since the original design of the Corra Linn dam that would impact the required number of gates?

Response:

No, the present day flood design requirement, as described in the BC Dam Safety Regulation and Canadian Dam Association Dam Safety Guidelines has not changed the number of gates required from the original design. The present day flood passage requirement is the Probable Maximum Flood (PMF). The Dam Safety Review (Confidential Appendix B, page 15) confirms that 14 spillway gates can pass the PMF.

4.4.1 Please discuss the feasibility of replacing some gates and de-commissioning others as an alternative. What if any, would the potential cost savings be from such an approach?

Response:

Please refer to the response to BCUC IR 1.4.4. FBC requires all 14 of the spillway gates to safely pass the design flood of the Probable Maximum Flood (PMF). FBC does not consider replacing some spillway gates and de-commissioning others as a feasible alternative. As noted in the Preliminary Engineering Report (Confidential Appendix F of the Application), the Corra Linn Dam spillway gates do not have the strength required to withstand the recommended design earthquake for a dam with a consequence classification of "Extreme", meaning that even if the gates are left closed or "de-commissioned" they will have to be refurbished or replaced to withstand the hydrostatic loads.

4.5 What would be the approximate cost to fully replace the spillway section of the Corra Linn dam with a modern design?

Response:

The cost to fully replace the spillway section of the Corra Linn Dam with a modern design was not contemplated and as such was not investigated. However, any design variation to the spillway section of the Corra Linn Dam, such as reducing the number of gates, or eliminating the gates and rebuilding the spillway to allow for overtopping is likely to be significantly more costly than the alternatives examined in Section 4.2 of the Application.

4.6 Has FortisBC submitted a safety hazard correction plan for the spillway upgrade to the provincial dam safety officer? If yes, what is the expected completion date stated in the plan.

Response:

FBC has not submitted a safety hazard correction plan for the spillway upgrade to the provincial Dam Safety Officer. However, the Company has been in contact with the provincial Dam Safety Officer to determine the required authorizations and timelines required for work authorizations and they have advised that Authorizations would be granted under 'Section 12 - Authorization, change approval or order for alteration or improvement to or replacement of dam' of the BC Dam Safety Regulation. FBC is required to submit a Project description within at least 30 days prior to the proposed Project start date.

4.7 Has FortisBC received any orders from the provincial dam safety officer relating to the Corra Linn spillway upgrade? If yes, please provide a copy of the order.

Response:

FBC has not received any orders from the provincial Dam Safety Officer relating to the Project.

E. ENVIRONMENTAL AND SOCIAL IMPACTS

5.0 Reference: APPLICATION

Exhibit B-1, pp. 48, 54 and 66; Appendix O

Clearing of Project access and staging areas

On pages 66, 48 and 54 of the Application, FortisBC states:

- that it has identified 12 First Nations that have an interest in the Corra Linn area and that it does not believe any will be impacted by the Project;
- a new gravel road may be required to provide construction access; and
- the Project includes vegetative clearing for the access and laydown areas.

FortisBC's letter notifying First Nations of the Project, provided in Appendix O of the Application, does not appear to include a description of potential ground disturbing activities.

5.1 Have any of the notified First Nations provided feedback to FortisBC on the Project? If yes, please describe the nature and content of the feedback.

Response:

The Penticton Indian Band (PIB) contacted FBC and asked three questions. The questions, along with FBC's response, were:

1. Could they have a Project location shape file?
   a. FBC has provided the PIB with the Project location shape file.
2. Does the Project entail any activities that will disturb the land?
   a. At the time of response, FortisBC did not foresee any land disturbances. Since then FBC has determined that there will be a small amount of ground disturbance required to develop the access road and laydown area, although the exact location is yet to be determined. Consequently, all First Nations that have interest in the area will be notified of the ground disturbance when the location has been finalized.
3. Are there any opportunities to participate in the Project?
   a. FBC responded by reaffirming its commitment to building effective Aboriginal relationships and to promoting economic opportunities and benefits for Aboriginal communities as part of its capital project investments. FBC also responded that it is currently the intention to engage a prime contractor for the entire Project

scope, but FBC would work with the contractor to support Aboriginal participation in the Project.

5.2 Please confirm that FortisBC has not specifically notified the 12 identified First Nations of the potential for ground disturbance during the Project.

Response:

FBC confirms that it has not previously notified all 12 First Nations of the potential ground disturbance. At this time FBC has not finalized the site access route nor staging areas and as such the area being disturbed is not known. Once the access route and staging areas are determined, FBC plans to notify all 12 identified First Nations about the ground disturbance.

5.3 Does FortisBC have a policy that considers the notification of potentially impacted First Nations of ground disturbances? If yes, what is the policy?

Response:

FBC does not have a written policy to notify potentially impacted First Nations of ground disturbances; however, FBC does follow a set of best practices that includes engagement with First Nations for civil works projects.

5.4 Have the areas to be cleared for the laydown area and gravel road been previously disturbed?

Response:

The proposed gravel road will be constructed on a previously disturbed area. The proposed laydown area will be constructed on both areas that were previously disturbed and areas that were not previously disturbed.

5.5 Does FortisBC plan to notify the 12 identified First Nations of ground disturbances and/or conduct an archeological survey prior to clearing land? If not, please explain why FortisBC considers it prudent to proceed without employing these mitigation strategies?

Response:

Please refer to the response to BCUC IR 1.5.2. FBC confirms that it will notify all identified First Nations as well as conduct an archeological study for any ground disturbance required by the Project.

F. FINANCIAL MODEL

6.0 Reference: APPLICATION

Exhibit B-1, p. 63

Revenue Requirement impact

On page 63 of the Application, FortisBC states that the impact to customer rates in 2022 (when all assets have been entered into rate base) is an increase of approximately 1.49 percent over the 2016 approved revenue requirement.

However, Table 6-5 on page 63 of the Application shows FortisBC's phased inclusion into its rate base for each of the years between 2019 and 2021.

6.1 Please clarify whether there will be any rate impact in each of the years between 2019 and 2021 when portions of the Project will be brought into rate base.

Response:

FBC clarifies that the phased inclusion of the Project into rate base is between years 2020 and 2022, not between years 2019 and 2021 as stated in the question above. In the Application, FBC's statement regarding the rate impact in 2022 reflects the fact that all assets of the Project will have been entered into rate base by then.

Table 6-5 of the Application (Exhibit B-1, Section 6.4, pg. 63), reproduced below, shows that the construction of the Project is to be completed in phases between 2019 and 2021 (column 1) while the appropriate assets are to be entered into rate base on January 1 of the following year (column 4) as is the approved regulatory treatment.

Year of Construction Complete	Work to be completed	Estimate amount of capital (As-spent)	Date transfer to Opening Balance of Plant-in-Service (i.e. entered into rate base)
2019	7 gates in-service	$ 27.897 million	January 1, 2020
2020	7 gates in-service	$ 27.907 million	January 1, 2021
2021	Demobilization Work	$ 0.802 million	January 1, 2022
	TOTAL	**$ 56.599 million**	

In addition to the impact of assets entering rate base on the dates identified above, FBC also anticipates a slight reduction to the revenue requirement in 2018 and 2019 deriving mainly from the capital cost allowance related to the Project during construction prior to assets entering rate base.

The table below shows the rate impact of each year from 2018 to 2022 when compared to the 2016 Approved Revenue Requirement and the incremental impact on an annual basis.

	2018	2019	2020	2021	2022
% Increase to 2016 Approved Revenue Requirement (G-202-15)	(0.08)%	(0.25)%	0.77%	1.45%	1.49%
Incremental % Increase (Year-over-Year)	(0.08)%	(0.18)%	1.03%	0.67%	0.03%

6.2 If approved, please explain what impact this Project will have on FortisBC's current PBR plan. How does FortisBC propose to present the financial impact of this Project in its 2019 Annual Review for the current PBR plan?

Response:

The Project has no impact on FBC's PBR Plan. The capital expenditures for the Project are excluded from formula-based capital under the PBR Plan because they exceed the PBR materiality threshold of $20 million set by Order G-120-15. As confirmed in the response to CEC IR 1.3.1, the Project has no impact on either the capital or the O&M formula amounts under the PBR Plan.

FBC will include in its revenue requirements the impacts of CPCN projects, once approved. FBC anticipates a slight reduction to 2018 and 2019 revenue requirements deriving mainly from the capital cost allowance related to the Project, which will be included in forecast income taxes for the 2018 and 2019 test years. As shown in Table 6-5 of the Application, Project costs will enter rate base beginning on January 1, 2020 (after the term of the PBR).

7.0 Reference: APPLICATION

Exhibit B-1, p. 62, Appendix K

Financial assumptions

7.1 Please provide the assumptions for each of following financial parameters contained in Appendix K of the Application and provide a short description of its reasonableness and /or any additional references:

a) Property tax rate (Schedule 2);

b) Return on equity (Schedule 5);

c) Cost of debt (Schedule 3);

d) Cash working capital (Schedule 5).

Response:

Please refer to the table below for the assumptions and references used for each of the financial parameters contained in Confidential Appendix K of the Application:

	Financial parameters	Assumptions	References/Notes
a)	Property tax rate (Schedule 2)	• Based on 2015 property tax rate on Corra Linn of 2.9549% • Annual escalation at BC CPI	
b)	Return on equity (Schedule 5)	• Approved ROE Rate @ 9.15% • Approved Equity Portion @ 40.00%	• Return on equity = Rate Base x ROE Rate x Equity Portion
c)	Cost of debt (Schedule 3)	• Long Term Debt Rate @ 5.35% • Long Term Debt Ratio @ 53.20% • Short Term Debt Rate @ 2.65% • Short Term Debt Ratio @ 6.80%	• Based on 2016 FBC Return on Capital, G-202-15 December 16, 2015, Schedule 26 • Cost of debt = Rate Base x (LTD Rate x LTD % + STD Rate x STD %)
d)	Cash working capital (Schedule 5)	• 0.105% of Closing Gross Plant-in-Service annually (Exhibit B-1-1, Confidential Appendix K, Schedule 7, Line 37)	• Rate of 0.105% estimated based on 2016 FBC Net Cash Working Capital of $2,009 thousand (G-202-15, December 16, 2015, Schedule 11) and 2016 FBC Total Plant-in-Service, Closing Balance of $1,919,423 thousand (G-202-15, December 16, 2015, Schedule 6.1)

Schedule 6 of Appendix K shows capital spending in each year between 2017 to 2021.

Table 6-5 on page 63 of the Application shows FortisBC's phased inclusion into its rate base for each of the years between 2019 and 2021. However in Schedule 7 of Appendix K, capital additions appear to commence in 2020.

7.2 Please confirm whether Schedule 7 should indicate capital "additions" of $27.897 million in 2019 (as opposed to the "beginning balance" in 2020). If so, please clarify whether any financial schedule should be restated.

Response:

Not confirmed. FBC's approved regulatory treatment is that capital costs associated with the construction of the project will be held in Construction Work-in-Progress (CWIP), attracting AFUDC, until January 1 of the following year after the project has gone into service. For rate making purposes, on January 1, the capital costs associated with the Project will then enter rate base and depreciation expense will start immediately. The first phase (i.e. total of seven gates with estimated as-spent capital of $27.897 million) of the Project is scheduled to be complete in 2019 and, as such, these assets will enter into rate base and begin depreciating on January 1 of 2020, which is shown at the opening/beginning balance in 2020 of Schedule 7 of Confidential Appendix K.

FortisBC evaluated its rate impacts associated with the Project over a 70 year period and states that the period was chosen based on the FortisBC 2014 Depreciation Study by Gannett Fleming for Reservoirs, Dams and Waterways (Account 332.00).

7.3 Please clarify whether the 70 year period over which the Project evaluation was made is equivalent to the expected life of assets in Account 332.00. If not, please explain otherwise.

Response:

Yes, the 70 year period was based on the average of expected service life for assets in account 332.00 (Reservoirs, Dams and Waterways) according to the FortisBC Inc. 2014 Depreciation Study by Gannett Fleming (FortisBC Inc. 2015 Annual Review of 2016 Rates, Exhibit B-1-1, Appendix C, Part IV, Table 1). The assets of the Project will be recorded in account 332.00 once they are placed into service and enter rate base.

In FBC's view it is appropriate to use a 70 year period to evaluate the financial and rate impacts of the Project as these new assets are expected to remain in service for at least 70 years.

Furthermore, FBC did not use the composite remaining life of all assets in account 332.00, which is 54.6 years according to the FortisBC Inc. 2014 Depreciation Study by Gannett Fleming, as it is more applicable to evaluate the financial and rate impacts of the Project on a standalone basis, irrespective of the composite remaining life of all other existing depreciated assets in account 332.00. Additionally, all else being equal, the composite remaining life of the assets in account 332.00 would be expected to change in a future depreciation study once the new assets from the Project are placed in service.

In the 2016 Annual Review application, FortisBC proposed moving away from its current method of charging net salvage to accumulated depreciation at the time assets are removed from service. Instead FortisBC proposed to implement an alternative method of recovering net salvage over the useful lives of its assets starting in 2016. This method was approved in Order G-202-15.

On page 63 of the Application, FortisBC states that abandonment/removal costs related to the 14 existing Corra Linn Spillway gates are charged to accumulated depreciation.

7.4 Please explain whether the proposed accounting treatment is consistent with the previous Annual Review decision. If different, please explain why.

Response:

FBC confirms that the treatment of the removal costs is consistent with the method approved in Order G-202-15 regarding FBC's 2016 Annual Review application.

Order G-202-15 approved the recovery of net salvage estimates (removal costs less salvage proceeds) in depreciation rates prospectively, but did not change the accounting treatment (which is to charge the cost of removal to accumulated depreciation) of the removal costs at the time they are incurred. The difference between the two treatments lies in whether the removal costs are incorporated in depreciation rates after being charged directly to accumulated depreciation after the costs are known (the pre-2016 treatment) or are estimated and collected through depreciation rates during the life of the related asset (the current approved treatment).

G. REPORTING REQUIREMENTS

8.0 Reference: APPLICATION
Exhibit B-1, Appendix P-2
Draft C order

In Appendix P-2 of the Application, FortisBC proposes quarterly progress reports filed within 30 days of the end of each reporting period.

8.1 Please comment on the alternative of filing semi-annual progress reports with the additional requirement to provide, within 30 days of identification, notice to the Commission of expected cost variances resulting from any individual Project difficulties that are expected to result in cost increases greater than $500,000 over the Project cost baseline.

Response:

FBC is supportive of semi-annual progress reports along with the requirement to provide, within 30 days of identification, a material change report that will identify significant delays (i.e. greater than 6 months) or material cost variances. FBC suggests a variance of greater than 10% of the estimated Total Project Capital Cost provided in Table 6-1 in the Application would be reasonable. Reporting of significant delays or material cost variances strikes an appropriate balance between Commissions' oversight of the execution of the Project and the Company's responsibility for the ongoing management of the Project.

8.2 What internal approval does FortisBC require before starting the Project? When is this approval expected?

Response:

The Project was approved by FBC's Board of Directors in July 2016 as a part of the capital approval process. The authority to proceed with a capital project is granted by the approval of the project by the Board of Directors.

8.3 If FortisBC were to tender the main construction contract, would it consider the following preconstruction reporting requirements appropriate:

a) A summary (overall assessment, limits of review, areas of risk, recommendations, etc.) of the independent review of the tender construction drawings and specifications;

b) A bidding process summary (qualified bidders list, bid amounts, bid evaluation summary, selected bid, justification if selected contractor is not lowest price bidder, and other information to allow the Commission to assess the fairness and competitiveness of the contracting process);

c) An updated capital cost baseline (matching FortisBC's internal approved baseline) with the same breakdown provided in Table 6-1 in the Application and explanation and justification of any individual cost variances of $500,000 or greater from the approved Certificate of Public Convenience and Necessity cost total; and

d) A summary description of any significant Project risks that were not identified in the Application, including an assessment of the impact of each risk, the proposed risk mitigation strategy, and to the extent known, the financial and schedule impacts if the risk is realized.

Response:

Under a Design Build Tender, FBC would consider the following preconstruction reporting requirements about the main construction contract to be appropriate. FBC suggests that this information would be best suited for inclusion within a semi-annual report.

a. A summary providing a description of the main construction contract, including a summary of applicable contract award details. If the main construction contract selected is not the lowest price then the applicable details might include a qualified bidders list, bid amounts, bid evaluation summary and selected bid. ;

b. A summary identifying any significant change to the Project risks as a result of contract award, including an assessment of the impact of each risk, the proposed risk mitigation strategy, and to the extent known, the financial and schedule impacts if the risk is realized, and a description of any change to the risk allocation between the Company and its ratepayers and the contractor; and

c. An updated control budget and capital cost forecast with the same breakdown provided in Table 6-1 in the Application and an explanation and justification of any individual cost variances of $500,000 or greater from the approved Certificate of Public Convenience and Necessity cost total.

8.3.1 Does FortisBC have any suggested changes to the above reporting requirements?

Response:

Other than the proposed changes as identified in the response to BCUC IR 1.8.1, FBC does not have any further suggested changes to the reporting requirements at this time.