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December 12, 2016

Our File No.: 05497-0244

# **BY EMAIL**

British Columbia Utilities Commission 6<sup>th</sup> Floor, 900 Howe Street Vancouver, BC V6Z 2N3

**Attention:** Laurel Ross,

**Acting Commission Secretary and Director** 

Dear Sirs/Mesdames:

Re: FortisBC Inc. Application for a Certificate of Public

Convenience and Necessity for the Replacement of the

**Corra Linn Dam Spillway Gates** 

Please find enclosed the Reply Submission of FortisBC Inc. dated December 12, 2016 with respect to the above-noted matter.

Yours truly,

FARRIS, VAUGHAN, WILLS & MURPHY LLP

Per:

Erica C. Miller

& Miller

ECM/ Enclosure

c.c.: Registered Interveners FortisBC Inc.

# **BRITISH COLUMBIA UTILITIES COMMISSION**

IN THE MATTER OF the *Utilities Commission Act*, R.S.B.C. 1996, Chapter 473 (the "*Act*")

and

An Application by FortisBC Inc.

for a Certificate of Public Convenience and Necessity for Replacement of the Corra Linn

Dam Spillway Gates

**REPLY SUBMISSIONS OF** 

FORTISBC INC.

**December 12, 2016** 

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**PART One: OVERVIEW** 

1. On November 14, 2016, FortisBC Inc. (FBC or the Company) filed its final written submission (the FBC Submission) pursuant to Order G-107-16 of the British Columbia Utilities Commission (BCUC or the

**Commission**), setting out the Regulatory Timetable in this proceeding.

2. Subsequent to the Company filing the FBC Submission, the following Interveners filed final

written submissions with the Commission:

a. on November 28, 2016, the British Columbia Old Age Pensioners' Organization,

Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant

Resource and Advisory Centre (BCOAPO) filed its final written submission (the BCOAPO

Submission); and

b. on November 28, 2016, the Commercial Energy Consumers Association of British

Columbia (CEC), filed its final written submission (the CEC Submission).

3. While Mr. Norman Gabana filed a Request to Intervene in this proceeding on August 2, 2016 and

participated in the Information Request (IR) process, Mr. Gabana did not file a final written submission.

4. FBC provides this submission (the Reply Submission) in reply to the BCOAPO Submission and the

CEC Submission.

5. Unless otherwise specified, capitalized terms used in this Reply Submission are as defined in the

FBC Submission.

PART Two: INTERVENOR RESPONSE TO THE APPLICATION

6. In their respective final written submissions, BCOAPO and CEC have indicated their support for

the Project and the Application. Other than a few revisions proposed to FBC's Reporting Requirements

(which are addressed in more detail later in this Reply Submission), BCOAPO and CEC have each

recommended that the Commission approve the Application as filed. BCOAPO and CEC have each

acknowledged that:

See Ex C3-1, Request to Intervene and Ex. C3-2, Gabana IR No. 1.

- a. a CPCN is required for the Project;<sup>2</sup>
- b. FBC has provided adequate justification of need for the Project;<sup>3</sup>
- c. the evaluation criteria selected and used to assess the identified alternatives were reasonable;<sup>4</sup>
- d. the selected alternative (Alternative 4, Gate Replacement) was appropriately selected by FBC using the evaluation criteria. Additionally, CEC noted the following in supporting the selection of Alternative 4 (Gate Replacement) over Alternative 3 (Gate Refurbishment) for the Project:

[36] ... it is necessary and reasonable to consider the financial impact over the long-term, and that the long term financial analysis clearly supports Alternative [4] over Alternative [3].<sup>6</sup> The CEC submits that FBC has used the correct methodology for evaluation.

[37] The CEC submits that even in the event that the long term financial impact did not support Alternative 4, that the rate impact differential between Alternative 3 and Alternative 4 is small (.08%) and would be outweighed by the Technical advantages of replacement over refurbishment. Given that the Technical Analysis also supports Alternative 4, which minimizes project risks and provides the most reliable flow control the CEC submits that the choice between the two proffered alternatives is straightforward based on the existing evidence.<sup>7</sup>

e. FBC is taking reasonable measures to assess both the suitability of using the ECI contracting model for the Project, and the suitability of using HMI as the contractor for the Project.<sup>8</sup>

<sup>&</sup>lt;sup>2</sup> BCOAPO Submission, para. 7 and CEC Submission, para. 5.

BCOAPO Submission, para. 14 and CEC Submission, para. 17.

<sup>&</sup>lt;sup>4</sup> BCOAPO Submission, para. 26 and CEC Submission, para. 21.

<sup>&</sup>lt;sup>5</sup> BCOAPO Submission, para. 26 and CEC Submission, paras. 36-37.

While the CEC Submission states in paragraph 36 that the analysis supports "Alternative 3 over Alternative 4", this appears to be a typographical error, and FBC has treated it as such in the above quote. In the rest of the CEC Submission, CEC confirms that it accepts Alternative 4 as its preferred option over Alternative 3. For example, see paragraph 47 of the CEC Submission.

CEC Submission, paras. 36-37.

<sup>&</sup>lt;sup>8</sup> BCOAPO Submission, para. 35 and CEC Submission, paras. 72 and 86.

#### PART Three: CLARIFICATIONS

7. FBC agrees with the submissions of BCOAPO and CEC in the BCOAPO Submission and the CEC Submission, respectively, other than with respect to certain of the proposed revisions to FBC's Reporting Requirements, as is discussed below. However, for completeness, there are a few clarifications that FBC wishes to make with respect to certain points raised in the BCOAPO Submission and the CEC Submission. These clarifications are set out in this section.

#### A. THE ECI MODEL

8. At paragraph 50 of the CEC Submission, CEC states the following in describing the advantages of using the ECI contracting model for the Project:

FBC states that in a tendered model, actual project costs more often than not exceed the budget, primarily due to scope changes and a poor understanding of constructability by the estimator.<sup>9</sup>

- 9. While CEC has accurately referenced this passage from FBC's response to CEC IR 2.24.1, the Company wishes to provide clarification regarding the context of this statement. In this IR response, FBC described the historical development of the ECI model in the United Kingdom, including the challenges with the alternative tendered model that the ECI model was developed to overcome. This challenge is particularly pronounced for one-of-a kind projects and where the site conditions pose unique challenges, such as for the Project (where there will be challenges with accessing the Project site, and with the specialized nature of the type of lifting required for the spillway gates). As is set out in more detail in the Final Submission, the Company reiterates that a major advantage of the ECI model over the tendered model for the Project is the early involvement of a knowledgeable contractor, which improves the accuracy of budgeting and minimizes the risk of later scope, schedule and cost changes.
- 10. While the Company submits that improved accuracy in budgeting was both a driver for development of the ECI model and an advantage in its use, in its IR response the Company was not making a general statement that in all circumstances, "more often than not", project costs exceed budget with the use of the tendered model.

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CEC Submission, para. 50 (citing Exhibit B-11, CEC 2.24.1).

<sup>&</sup>lt;sup>10</sup> Ex. B-3, BCUC IR 1.2.3 at p.9 and Ex. B-5, CEC IR 1.13.3 at p. 30.

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11. Also with respect to the ECI model, and more specifically with respect to the benefits of the risk allocation that occurs between the Company and the ECI Contractor, at paragraph 63 of the CEC

Submission, CEC states the following:

... the sharing of risk has the theoretical advantage of incenting the utility to manage and control the risks that are assigned to it, and has the added benefit that it does not pay a premium for a transfer of those risks even if they do not materialize. The CEC notes that the utility model that transfers such costs to the ratepayer under either

scenario slightly diminishes the benefits of this risk assumption to the ratepayer. 11

12. In the ECI model, both the Company and the ECI Contractor are incented to allocate identified

risks amongst themselves, to the party that is in the best position to control and manage each risk. FBC

notes that the allocation of risks results in a minimization of costs for *all* parties, not just with respect to

the risks allocated to the Company. A further benefit of the ECI model is that the Company does not pay

a premium to transfer risks to the contractor that it can manage and control itself. This is unlike in a

design-build contract, where the Company would pay a premium for the assigned risks to the

contractor, whether or not those risks actually arise. 12

13. The Company disagrees with CEC's characterization of the above benefits as merely

"theoretical", and submits that they are expected to arise because of the risk allocation process that is

inherent to the ECI model. To the extent the CEC is suggesting in any way that FBC will not act

appropriately, with a view to the best interests of its customers (including minimizing costs for its

customers), the Company strongly disagrees.

14. Finally, at paragraphs 77 and 80 of the CEC Submission, CEC says the following with respect to

the process of selecting an ECI Contractor:

[77] The CEC submits that given HMI's existing involvement in the project and the development of the CPCN application it is important that there is assured objectivity and

appropriate competition in the selection of the contractor.

...

[80] The CEC recognizes that HMI has specialized expertise but notes that there are

other contractors with adequate expertise to perform the contractors role and might potentially have served in the role that HMI has already participated in. The CEC submits

that it is important that FBC ensure appropriate objectivity in the selection of the

<sup>11</sup> CEC Submission, para. 63.

<sup>&</sup>lt;sup>12</sup> Ex. B-11, CEC IR 2.28.1, p. 13.

contractor given the current advantage of HMI and the lack of competition in its original engagement.<sup>13</sup>

- 15. FBC agrees with CEC that it is important that appropriate objectivity be used in the selection of the ECI Contractor, and submits that its proposed process achieves this result. While the CEC has emphasized the importance of objectivity, it is important to note that the CEC has not suggested in the CEC Submission that the safeguards proposed by the Company (which are discussed below) are not sufficient to ensure the selection of an appropriate ECI Contractor.
- 16. The CEC notes that HMI was initially selected by the Company (to develop a construction cost estimate and assist with the Application) without a tender process. FBC submits that this will not have an impact on the objectivity of the ultimate selection of the ECI Contractor. The Company considered a number of relevant and important factors in selecting HMI. These factors are set out at paragraph 103 of the FBC Submission, and include that:
  - a. HMI is recognized as an industry leader in spillway gate rehabilitation projects in Canada;
  - HMI has recently completed projects of similar scope as the Project within BC, and is currently engaged by BC Hydro through to 2026 for their spillway gate rehabilitation program;
  - c. HMI has extensive knowledge of the ECI model through its involvement with BC Hydro using this model since 2010; and
  - d. HMI has the required in-house capabilities for engineering (design and inspection), fabrication, installation and commissioning.<sup>14</sup>
- 17. Additionally, the Company evaluated the competitiveness of HMI, by assessing the reasonableness of HMI's price to complete its initial work, including using its recent experience with other engineering firms as a benchmark against which to assess HMI's price. This included ensuring that HMI's hourly rate, as well as its proposed total price, was comparable to other engineering firms within

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<sup>13</sup> CEC Submission, paras. 77 and 80.

See paragraph 103 of the FBC Submission.

British Columbia for similar type work.<sup>15</sup> The Company's assessment and selection of HMI for this initial work was well-informed and appropriate in all the circumstances.

- 18. Further, HMI's engagement to complete the initial work on the Project does not directly impact the Company's selection of the ECI Contractor for the Project. FBC has no contractual obligation to select HMI for this role, as is acknowledged by CEC.<sup>16</sup> Instead, the Company has engaged Bramcon to consider a variety of factors to assess HMI's suitability to act as the ECI Contractor for the Project. These considerations are set out in more detail at paragraph 105 of FBC's Submission. CEC has acknowledged that Bramcon has acceptable qualifications,<sup>17</sup> is "sufficiently objective and qualified to assist with contractor selection",<sup>18</sup> that it has "the necessary expertise to provide an objective determination and that Bramcon's decision may be reasonably relied upon".<sup>19</sup> The Company agrees.
- 19. As is set out in more detail at paragraph 107 of the FBC Submission, in the event that the evaluation by FBC and Bramcon does not support the engagement of HMI as the ECI Contractor, the Company retains the ability to select an alternative ECI Contractor through an RFP Process. As CEC has acknowledged, HMI does not have any specialized equipment or processes that would limit other firms from bidding on such an RFP.<sup>20</sup> Accordingly, the Company submits that objectivity is assured through the above ECI Contractor selection process, as is acknowledged by CEC.<sup>21</sup>

### B. PROJECT CONTINGENCY

20. With respect to the Project Contingency included in the cost estimate for the Project, at paragraph 41 of the BCOAPO Submission, BCOAPO states that "It does not appear that BC sought HMI's advice as to the appropriateness of the 15% [total Project contingency] and there is no indication as to why this was not done – given HMI's past experience in estimating project contingencies".<sup>22</sup>

Ex. B-10, BCOAPO IR 2.17.1 at p. 6. See also Ex. B-5, CEC IR 1.4.2 and 1.4.2.1 at p. 9-10

<sup>&</sup>lt;sup>16</sup> CEC Submission, para. 81.

<sup>&</sup>lt;sup>17</sup> CEC Submission, para. 68.

<sup>&</sup>lt;sup>18</sup> CEC Submission, para. 86. In paragraph 86 of the CEC Submission, CEC states that Bramcon is sufficiently objective and qualified "to make an appropriate *determination* with respect to the contractor selection". FBC wishes to clarify that Bramcon will not be making a *determination* with respect to the ECI Contractor, but will rather will be analysing and advising FBC on HMI's suitability. FBC will consider Bramcon's recommendation in making the ultimate decision in this respect (see paragraphs 105-106 of FBC Submission).

<sup>&</sup>lt;sup>19</sup> CEC Submission, para. 70.

<sup>&</sup>lt;sup>20</sup> CEC Submission, para. 81.

<sup>&</sup>lt;sup>21</sup> CEC Submission, para. 86.

<sup>&</sup>lt;sup>22</sup> BCOAPO Submission, para. 41.

- 21. To clarify, HMI was engaged to assist in the preparation of the cost estimates generally for the Project. Given HMI's past experience in estimating construction contingencies, HMI and FBC worked together to develop a risk register for the known construction risks, a portion of which was included in the Total Project Contingency.<sup>23</sup>
- 22. With respect to the unknown risks (another portion of the 15% Total Project Contingency), FBC did not specifically seek HMI's input into quantifying this amount. The contingency for unknown risks is an amount held by FBC to account for possible scope changes or unknown future events, and FBC relied on AACE technical publications and industry guidance in determining the appropriate amount.
- 23. Not withstanding the estimated Total Project Contingency, as with all projects, FBC will undertake to implement the Project at the lowest reasonable cost, for the benefit of its customers.

### PART Four: REPORTING REQUIREMENTS

24. As was noted above, BCOAPO and CEC have proposed some revisions to the Reporting Requirements for the Project. These proposed revisions are addressed in this section of the Reply Submission.

# C. REPORT BY OWNERS' ENGINEER

- 25. As was set out in paragraph 121 of the FBC Submission, the Company has no concerns with filing a letter from the Owner's Engineer with the Commission. BCOAPO has indicated that it supports the Company being directed to file such a letter.<sup>24</sup>
- 26. At paragraph 116 of the CEC Submission, the CEC states that:

[116] ... However, the CEC notes it is [sic] above concern that the departure from the tender process could potentially result in costs being embedded in the Project costs that might otherwise be lower in a competitive forum even if they are not imprudent or beyond fair market value. Since the ECI model is not well-tested in Canada and is new to FBC, the CEC believes that a statement to the effect that the company would not likely have received better value from going to tender would be an appropriate addition to the owner engineer's letter. The CEC submits that such a statement can provide confidence that the ECI model is effective and does not result in an increase of costs above a tendering process.

<sup>&</sup>lt;sup>23</sup> Ex. B-1, FBC's Application, pp. 56-57 and 60-61.

<sup>&</sup>lt;sup>24</sup> BCOAPO Submission at para. 52.

- 27. While the Company acknowledges that the ECI model has not been widely used in Canada to date, it is not correct to say that it is not "well-tested", particularly as it has been adopted in Canada for several large products in the gas, oil and hydro industry over the last 5 to 10 years.<sup>25</sup>
- 28. The Company confirms that it has already committed to having the Owner's Engineer provide the Commission with confirmation that the Owner's Engineer has reviewed:
  - a. the contractor's Project costs and finds them to be fair market value;
  - b. the scope/work package documents associated with the contractor's Project costs and finds them to be consistent with industry best practice in general and consistent with the objective of minimizing the overall project cost; and
  - c. the design documents and finds them to be consistent with industry best practice in general and consistent with the objective of minimizing the overall cost from change orders.<sup>26</sup>
- 29. With respect to CEC's proposed addition to the letter from the Owner's Engineer, it is FBC's understanding that the Owner's Engineer could not provide a general statement that the Company would not have likely received better value from going to tender, as there will not be actual tender data from which to make this comparison. Instead, the Company expects that the Owner's Engineer would be able to confirm the following, which support the conclusion that the OBP provided appropriate value:
  - a. the costs were developed through open-book pricing;
  - b. the Owner's Engineer independently verified and validated the OBP outputs;
  - c. the engineering and labor rates used are reasonable;
  - d. competitive tendering was used for the materials and sub-contractor procurement where appropriate;
  - e. the ECI Contractor's margin on profit and overheads were benchmarked; and
  - f. FBC retained the option to terminate the OBP phase at any time.

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<sup>&</sup>lt;sup>25</sup> Ex. B-11, CEC IR 2.24.1, p. 6.

Ex. B-9, BCUC IR 2.10.8, p. 11.

#### D. PERIODIC REPORTING

30. As was set out in paragraphs 122 and 123 of the FBC Submission, the Company is supportive of providing the Commission with either quarterly or semi-annual progress reports for the Project. The Company is also agreeable to providing the Commission with reports of any material changes to the schedule (i.e. greater than 6 months) or costs (i.e. greater than 10% of the Total Project Capital Cost), within 30 days of identification of the material changes.

31. The CEC submits that this reporting by FBC is sufficient,<sup>27</sup> and the BCOAPO does not take issue with a move to semi-annual reporting.<sup>28</sup> However, the BCOAPO proposes that a material change reports be submitted whenever cost variances are expected to increase by more than \$2 million over the Project costs baseline.<sup>29</sup>

32. The Company notes that BCOAPO did not ask any IRs with respect to its newly proposed threshold, despite having the opportunity to do so, and that as a result there is not any evidence on the record on this issue. In any event, the Company submits that the proposed threshold of \$2 million represents too low of a variance to trigger a special reporting requirement, given the total size of the Project. The report is only intended to record significant scope or cost changes relative to the Project, and is being provided by the Company over and above the quarterly or semi-annual progress reports and a final report. Instead, the Company submits that the Commission should use the threshold proposed by the Company in its response to BCUC IR 1.8.1 (i.e. a schedule change of greater than 6 months or a cost change greater than 10% of the Total Project Capital Cost).

## E. PROPOSED ADDITIONAL REPORTING REQUIREMENTS

33. At paragraph 53 of the BCOAPO Submission, the BCOAPO submits that the Company be directed to report on the following with respect to the Project:

a. The submission (in confidence if required), after the completion of the Open Book Process, of a finalized Risk Register that sets out the risks assigned to the contractor vs. the owner.

<sup>28</sup> BCOAPO Submission, para. 51.

<sup>&</sup>lt;sup>27</sup> CEC Submission, para. 116.

<sup>&</sup>lt;sup>29</sup> BCOAPO Submission, para. 51.

- b. Notification to the BCUC once FBC has determined the access route and staging area locations, along with subsequent confirmation that it has notified the identified First Nations and indication of any issues that are raised by the First Nations and how they are being addressed and mitigated.
- c. An assessment, within six months of the completion of the Project, as to the effectiveness of the ECI contracting model along with any recommendation as to how the model could be improved if applied to future projects.<sup>30</sup>
- 34. With respect to the first request, the Company does not have any concerns with the Commission directing the Company to file the finalized version of the Risk Register. To avoid multiple types of reports being submitted to the Commission, FBC proposes that it include the finalized version of the Risk Registrar with one of its quarterly or semi-annual progress updates to the Commission.
- 35. With respect to the second request, as is set out in paragraph 142 of the FBC Submission, the Company has not yet finalized the location of the temporary works of the Project, including an access road and a staging area. These temporary works have the potential to cause ground disturbance, and the Company indicated that it will notify the twelve First Nations identified as having an interest in the area of the Corra Linn Dam with the details of any disturbance, once the location of the temporary works have been finalized.<sup>31</sup>
- 36. The BCOAPO submits at paragraph 47 of the BCOAPO Submission that the Commission should direct FBC to confirm once it has notified the identified First Nations, and to subsequently report any issues that are raised by the First Nations, as well as how they are being addressed and mitigated. The Company does not have any concerns with the Commission making a direction that FBC provide this information; however, it again proposes that any update(s) be included in the Company's quarterly or semi-annual progress reports to the Commission at the appropriate time.
- 37. Finally, with respect to the BCOAPO's request that the Commission order the Company file an assessment of the effectiveness of the ECI contracting model, FBC is not supportive of the Commission making such a directive. The ultimate "effectiveness" of the ECI contracting model will be evident through the success of the Project including the final schedule and budget, which will be apparent from

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BCOAPO Submission, para. 53.

FBC Submission, para. 142.

the Company's final report on the Project. The Company submits that a further report on the ECI model specifically will not provide any additional benefit. The Company submits that the Commission should not direct it to provide this additional reporting requirement.

### PART Five: UPDATE ON CONTRACTING METHOD

- 38. Commission Staff have requested that the Company include in this Reply Submission an update on FBC's decision regarding the contracting method for the Project and choice of contractor, which the Company has done in this section.
- 39. As was set out in paragraphs 96 through 101 of the FBC Submission, the Company engaged Bramcon to assist in the determination of the preferred contracting method for the Project. Bramcon concluded that the early involvement of a qualified contractor to work collaboratively with FBC was essential for successful implementation of the Project and would best meet the Project's objectives and lead to a successful outcome. Bramcon concluded the ECI model should be used for the Project and made this recommendation to the Company. This conclusion was based on Bramcon's assessments of Project scope, contract package optimization and that FBC would have to retain third-party construction management personnel based on the complexity of the Project.
- 40. FBC reviewed and accepted Bramcon's recommendations to proceed with the ECI contracting model.
- 41. Following FBC's acceptance of the ECI model, Bramcon was engaged to assist with assessing the selection of an ECI Contractor. Bramcon provided an opinion on the suitability of HMI as the ECI Contractor, based on the following criteria:
  - a. capabilities in the design and construction of spillway gates;
  - b. success on recent rehabilitation projects in BC;
  - c. experience with the ECI process;
  - d. financial capacity to provide a bond for the Total Construction Cost; and

- e. ability to provide insurance required by FBC.<sup>32</sup>
- 42. Bramcon favourably evaluated HMI with respect to each of these criteria. For criterion (d) Bramcon relied on an internal FBC due diligence review, which consisted of a financial review, a determination of HMI's creditworthiness, a legal review of any pending litigation and a review of previous recent work completed by HMI.
- 43. Bramcon recommended that FBC select HMI as the ECI Contractor for the Project. It also provided guidance on how the Company should engage HMI to best protect its commercial interests and assess competiveness relative to other ECI processes in BC.
- 44. The Company has accepted Bramcon's recommendations and is planning to engage HMI to negotiate key commercial terms in advance of the OBP, as identified by Bramcon. Should FBC not reach agreement with HMI on the key commercial terms, then an RFP will be issued to a larger contractor group.

#### PART Six: CONCLUSION

- 45. For the reasons set out in the FBC Submission, as well as in the BCOAPO Submission, the CEC Submission and this Reply Submission, FBC submits that the Commission should approve the Application and order that, pursuant to sections 45 and 46 of the *Utilities Commission Act*, a Certificate of Public Convenience and Necessity be granted to FortisBC Inc. to construct and operate the Corra Linn Dam Spillway Gate Replacement Project, as applied for in the Application.
- 46. Additionally, FBC submits that the Commission should make the following directives, with respect to reporting:
  - a. FBC shall file with the Commission a letter from the Owner's Engineer within 60 days of the completion of the OBP, stating that:
    - i. the Owner's Engineer has reviewed:
      - 1. the contractor's Project costs and finds them to be fair market value;

-

These criteria were described in the FBC Submission at paragraph 105, as well as at Ex. B9, BCUC IR 2.10.2.

- the scope/work package documents associated with the contractor's Project costs and finds them to be consistent with industry best practice in general and consistent with the objective of minimizing the overall project cost; and
- the design documents and finds them to be consistent with industry best practice in general and consistent with the objective of minimizing the overall cost from change orders, and
- ii. the Owner's Engineer confirms that:
  - 1. the costs were developed through open-book pricing;
  - the Owner's Engineer independently verified and validated the OBP outputs;
  - 3. the engineering and labor rates used are reasonable;
  - competitive tendering was used for the materials and sub-contractor procurement where appropriate;
  - 5. the ECI Contractor's margin on profit and overheads were benchmarked; and
  - 6. FBC retained the option to terminate the OBP phase at any time.
- b. FBC shall file with the Commission a semi-annual progress report on the Project by February 15 (for the period of July 1 to December 31) and by August 15 (for the period between January 1 and June 30) of each year of the Project. The semi-annual report will provide the risks that the Project is experiencing, the options available to address the risks, the actions that FBC is taking to deal with the risks and the likely impact on the Project's schedule and costs. Additionally:
  - i. After the Risk Register for the Project is finalized, FBC shall include the finalized version of the Risk Register in its next semi-annual report;

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ii. After FBC has finalized the location for the temporary works of the Project, FBC

shall report that it has notified the identified First Nations, and discuss any

issues that are raised by the First Nations, as well as how they are being

addressed and mitigated in the applicable semi-annual report(s);

c. FBC shall file with the Commission a material change report within 30 days of identifying

a material change to the Project's schedule (i.e. greater than 6 months) or costs (i.e.

greater than 10% of the Total Project Capital Cost); and

d. FBC shall file with the Commission a final report within six months of the actual

completion of the Project, that provides a complete breakdown of the final costs of the

Project, compares these costs to the cost estimate in the Application, and provides an

Counsel for FortisBC Inc.

explanation and justification of material cost variances.

47. ALL OF WHICH IS RESPECTFULLY SUBMITTED.

| Dated: | December 12, 2016 | [original signed] |
|--------|-------------------|-------------------|
| •      |                   | Erica C. Miller   |