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December 10, 2010

British Columbia Public Interest Advocacy Centre
Suite 209 – 1090 West Pender Street
Vancouver, BC
V6E 2N7

Attention: Mr. James L. Quail, Executive Director

Dear Mr. Quail:

Re: Terasen Gas Inc. - Fort Nelson Service Area (TG Fort Nelson) 2011 Revenue Requirements Application for Changes to the Revenue Stabilization Adjustment Mechanism ("RSAM") Rate Rider and Delivery Rates effective January 1, 2011 (the "Application")

Response to the British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2

On September 8, 2010, TG Fort Nelson filed the Application as referenced above. On November 19, 2010, TG Fort Nelson filed an Evidentiary Update. In accordance with the British Columbia Utilities Commission Letter No. L-98-10 setting out the Amended Regulatory Timetable, TG Fort Nelson respectfully submits the attached response to BCOAPO IR No. 2 on the Evidentiary Update.

If there are any questions regarding the attached, please contact the undersigned.

Yours very truly,

TERASEN GAS INC.

Original signed:

Diane Roy

Attachment

cc (e-mail only): Erica Hamilton, Commission Secretary
Registered Parties

Reference: **Exhibit B-1, Section 7.3.2.8, page 38, Table 7-3, Cost Estimates, and Exhibit B-5, Appendix A, page 19 and Appendix B, page 20**

Preamble: The Class 3 mean estimates for the HDD Crossing (Peak to Peak) and for the IP Bridge Crossing alternatives in the Evidentiary Update both were significantly greater than the Class 4 mean estimates for these two alternatives in the initial pre-filed evidence at B-1 (increases of 149% and 16% respectively.)

1.1 Is it typically the case that Class 3 mean estimates exceed Class 4 mean estimates or is it equally likely that the Class 3 mean estimates may be less than the corresponding Class 4 mean estimates?

Response:

TGFN would normally expect the mean of the Class 3 estimate to fall within the accuracy range of the Class 4 estimate, which is defined as -30% to +50%. However, there is always the risk of an extraordinary influence on the cost estimate. Such was the case with the HDD crossing where the sub-surface conditions were determined to not be favourable. In developing the original Class 4 HDD cost estimate, information from another third party-proposed HDD crossing of the Muskwa River located in the vicinity of this crossing was used and the subsurface conditions at that site were considered representative to this crossing for this level of cost estimate.

1.2 Is it fair to compare the Class 3 estimated costs of one or two alternatives with the Class 4 estimated costs of other alternatives in the instance where Class 3 estimates are unavailable for the latter?

Response:

Although the Class 3 estimates are not directly comparable to the Class 4 estimates in terms of level of accuracy, one of the earlier steps in the Project alternative evaluation process as recommended in the Commission's CPCN Guidelines is to compare all alternatives using the Class 4 estimate level of accuracy, before proceeding to develop any Class 3 estimates for the preferred alternative. This ensures that the alternatives are reviewed on a comparable and fair basis. The following describes the Project alternative selection process followed by the Terasen Utilities.

The Terasen Utilities' normal Project alternative selection and evaluation process is as follows:

- A range of alternatives is identified,
- A first level screening process is done without cost estimates and some alternatives may be discarded for a variety of reasons; for example, based on judgment, they may be deemed to be not cost competitive or technically feasible,
- Several alternatives are selected that are deemed to be technically feasible at this stage,
- These alternatives are subject to a second level screening process using Class 4 cost estimate and other non-financial screening factors,
- One alternative is selected as the preferred alternative and a Class 3 estimate is prepared for that alternative, and
- If the Class 3 estimate for the preferred alternative is deemed reasonable relative to the Class 4 estimates of the other technically feasible alternatives, then this alternative becomes the recommended alterative and is presented for approval

There is always a risk that the Class 3 estimate for the preferred alternative is not considered reasonable relative to the Class 4 estimates of the other alternatives. This is the case for the Muskwa River HDD and is a risk for all HDD options. A class 4 HDD estimate is normally based on assumed sub-surface conditions and not on more accurate information obtained by geotechnical and geophysical surveys, whereas the Class 3 estimate is based on this more accurate information.

When the Class 3 estimate is not considered reasonable relative to the Class 4 estimates of the other alternatives, as with the Muskwa River HDD Peak to Peak Option, it is necessary and prudent to go back and review the Class 4 estimates for other alternatives and it may be appropriate to prepare Class 3 cost estimates for one or more of the other alternatives to ensure an appropriate selection is made. TGFN has prepared a Class 3 estimate for the IP Bridge Option and, subject to ensuring other conditions can be met such as securing permission to attach the pipeline to the bridge structure, this alternative may be pursued. Please also see the response to BCOAPO IR 2.1.3.

1.3 The Class 3 mean estimate for TGI's new preferred alternative, the IP Bridge Crossing alternative, exceeds all of the Class 4 mean estimates originally provided except for the HDD Crossing (Peak to Peak) alternative that was preferred originally. Please explain why this alternative is preferred to the less expensive alternatives, i.e., all the other alternatives save the originally preferred alternative.

Response:

It has not yet been determined that the IP Bridge Option will be pursued, although this is TGFN's preferred alternative at this time. Four of the other lower cost options, Open Cut Crossing, Live Line Lowering, Concrete Mats and Rip-Rap Placement (collectively referred to as the "in-stream" options), all involve extensive in-stream works resulting in significant environmental and permitting risks that have not yet been considered to a Class 3 confidence. TGFN has given further consideration to these in-stream alternatives with the following results:

- Given the size of the Muskwa River, it would be very difficult and environmentally disruptive to install a new crossing using the open cut method. TGFN is of the opinion that a Class 3 estimate would be considerably higher than the current estimate. Furthermore, given the environmental disruption and taking into consideration the opinion of TGFN's environmental consultant, TGFN is of the opinion that permits for this option may not be granted unless it could be proven that it was the only technically viable alternative.

- The other in-stream options all involve the added complexity of assessing the condition of the existing crossing pipe and coating. Given the flow rate and turbidity of the river, TGFN does not feel it would be possible to make this assessment to a point where the existing crossing pipe could be considered fit for service for the 60 year study period. Furthermore, these other options all have a potential for damage to the pipe during remediation with no obvious means of post construction inspection.

For these reasons, TGFN currently believes that the IP Bridge Crossing option is the appropriate preferred alternative and will apply for approval to install a new crossing on the Alaska Highway Bridge.

In the event that permission to install a new crossing on the bridge is denied, TGFN will further evaluate the in-stream options in an attempt to find a technically acceptable alternative. At that point TGFN would also give further consideration to an aerial pipeline crossing of the Muskwa River. Preliminary analysis of this option, including a Class 4 cost estimate, indicates that it should be technically feasible but that it is more expensive than the IP Bridge crossing option. Also, there are issues such as aesthetics and impact on river navigation that require further assessment.

1.4 Did TGI obtain updated estimates or Class 3 estimates for the five alternatives that were not preferred by TGI either originally or now? If so, please provide these estimates. If not, why not?

Response:

Altogether, TGFN has reviewed eight options to remediate the integrity of the pipeline crossing of the Muskwa River. Two options are HDD crossings, four options are various in-stream crossings, one option is the IP Bridge Option, and one option is an Aerial Pipeline Option. Based on the information currently available and TGFN's current analysis, the HDD options are not preferred options due to high cost and high risk.

The in-stream options are not preferred options due to high environmental risk and potential for higher costs.

The Aerial Pipeline Option is not preferred due to the high installation and high maintenance costs.

The IP Bridge Option is the preferred option as it is the most economical crossing solution with the least risk of environmental impact.

The HDD Option was the initial preferred crossing for a variety of reasons and therefore this option was examined more closely to develop a Class 3 cost estimate. Unfortunately, the geotechnical exploration revealed extensive gravels that would add significant expense and risk to this crossing option.

The IP Bridge Option was the next preferred crossing alternative and this option was also provided resources to develop a Class 3 cost estimate. This crossing alternative is achievable, is economically viable, and has low risk of environmental impact.

The remaining alternatives have been examined to a Class 4 cost estimate for screening purposes. As TGFN has noted in the responses to BCOAPO IR 2.1.2 and 2.1.3, it does not feel that it is prudent to incur additional expenditures to develop Class 3 estimates for those crossing options that are not currently preferred.

If the IP Bridge Option is not achievable then TGFN will reconsider the remaining crossing options and may investigate any of these remaining options more closely to determine preference, including the development of Class 3 estimates at that time.