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September 2, 2010

Regulatory Affairs Correspondence
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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. ("Terasen Gas")
Application for Approval of Biomethane Service Offering and Supporting
Business Model, for the Approval of the Salmon Arm Biomethane Project and
for the Approval of the Catalyst Biomethane Project (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 June 8, 2010, Terasen Gas filed the Application as referenced above. On August 23, 2010, the BCOAPO issued BCOAPO IR No. 2. In accordance with Commission Order No. G-109-10 setting out the Regulatory Timetable for the review of the Application, Terasen Gas respectfully submits the attached response to BCOAPO IR No. 2, one day in advance of the deadline.

If you have any questions or require further information related to this Application, please do not hesitate to contact the undersigned.

Yours very truly,

TERASEN GAS INC.

Original signed:

Tom A. Loski

Attachment

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



Terasen Gas Inc. ("TGI", "Terasen Gas" or the "Company") Application for Approval of Biomethane Service Offering and Supporting Business Model, for the Approval of the Salmon Arm Biomethane Project and for the Approval of the Catalyst Biomethane Project (the "Application")	Submission Date: September 2, 2010
Response to British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2	Page 1

1.0 Reference: Exhibit B-1, Section 1.1, page 1 and BCOAPO IR 1.1.2

1.1 Please describe TGI's views as to what, specifically, would constitute "imprudently incurred costs" for which the shareholder would be at risk. Please include when such imprudence should be detected and what types of evidence available to intervenors and the Commission should be required to support a finding of imprudence.

Response:

The legal test on a prudence review is well established. The Ontario Court of Appeal in *Enbridge Gas Distribution Inc. v. Ontario (Energy Board)*, [2006] O.J. No. 1355 (C.A.), described the prudence test as follows:

Ultimately, the test for whether costs were reasonable is whether cost were reasonable under the circumstances that were known to, or ought to have been known to, TGI at the time they were incurred. TGI does not believe that it can meaningfully predict the kind of costs that it might incur that would be imprudent as the determination is fact specific and the analysis must be performed after the fact.

As public utilities like TGI seek cost recovery in the context of a revenue requirements application, and the utility is only entitled to recover prudently incurred costs in rates, this is when issues of prudence arise. Those parties challenging the presumption of prudence have all of the known facts at their disposal including, for example, the actual cost of the project relative to budgeted cost. If the presumption is rebutted, the utility (in this case TGI) would have to demonstrate that the costs were reasonably incurred in light of the facts known at the time the costs were incurred.



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

2.0 Reference: Exhibit B-1, Section 1.1, page 3 and BCOAPO IR 1.2.2

- 2.1 Please provide a comparison of the operating costs of measuring and regulating, odourizing, and monitoring the quality of gas currently received into TGI's system with the comparable costs associated with the proposed Biomethane supply. Please provide a per-unit cost comparison for each.

Response:

First it should be noted that TGI believes it has conservatively estimated the operational costs included for these activities as they relate to the Biomethane projects contained in the Application and that the majority of these costs are for materials (odourant for example) that need to be refilled or replaced on a periodic basis. In the case of odourant, which is injected into the gas stream at a specified rate per volume of gas, TGI expects the operating costs to be the same for Biomethane as it is for gas currently received.

For other equipment such as regulators and meters, operating costs are expected to be limited to the periodic examination of equipment for proper functioning at the same frequency and quality control standards as similar equipment located throughout our system. While there may be a slightly higher cost per GJ for these periodic activities for Biomethane projects compared with gas currently received due to economies of scale (the number of GJ these costs are spread over), TGI expects these differences to be very small since these incremental costs themselves are expected to be minimal.

For perspective on these operating costs, TGI points out that for the Catalyst Biomethane project (which at this time is expected to be fairly representative of future projects) total operating (and maintenance) costs are conservatively estimated at \$33,000 annually, which translates to a per GJ cost range of between \$0.39 and \$0.27 per GJ (based on a potential range of Biomethane delivery of between 84,000 and 120,000 GJ). At a high level, this can be compared to the total O&M costs for the Measurement Activity (as defined in the Activity View Code of Accounts approved in Commission Order No. G-153-07) as forecast for 2010 of \$6.291 million, which converts to a per GJ cost of approximately \$0.31 based on total throughput.

TGI is committed to working with suppliers to optimize the amount of Biomethane that can be delivered into the system from each project in order to maximize supply and optimize operating costs.



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Response to British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2	Page 3

3.0 Reference: Exhibit B-1, Section 4.3, pp 29-30, Appendix C-1, NREL Report, page 6, and BCOAPO IR 1.4.1

- 3.1 In a room occupied by 20 people, 19 of whom have zero net worth and the 20th having a net worth of \$20M, would TGI characterize the "typical" occupant as having a net worth of \$1M?

Response:

No, TGI would not characterize the above scenario as the "typical" occupant having a net worth of \$1 million. TGI recognizes that there is an appropriate use of the average or median in various circumstances and has referenced the average and median participation rates of green pricing programs throughout the Application. TGI feels that there is market potential to achieve a similar participation rate to the national average of other green pricing programs of 2.2% given the Company's scientific research indicating a 16% residential and 10% commercial market potential.



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Response to British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2	Page 4

4.0 Reference: Exhibit B-1, Section 5, Appendix D-2 Green Gas Study, and BCOAPO IR 1.5.1

- 4.1 Does TGI agree that Stated Preference value estimates may not accurately reflect the participants' actual valuations due to the "hypothetical bias" inherent in an SP experiment, i.e., the fact that the provision of the good and the payments for it, as described in the survey, are hypothetical and without consequences associated with any individual's responses? If so, how has TGI accounted for this bias in its analysis of the viability of the proposed offering? If not, why not?

Response:

There is commonly a discrepancy between those who express intent to do something and those who actually do. In this study, some respondents may have answered positively simply because they see the program as being beneficial to the environment, but may not follow through on that belief. This issue is addressed in Appendix D – 3, page 11 of the Application.

The estimated take-up rates of 16% for residential and 10% for commercial at a 10% blend of Biomethane reported in the study are the **maximum** market potential for a Biogas offering. They represent a best-case scenario. The program will, however, be viable at a much lower participation rate. The two projects proposed in the Application would currently only serve 2% of eligible residential customers at a 10% blend of Biomethane. As discussed in Section 4, the average participation rate of other green pricing programs is 2.2% and the median is 1.2%. Given these two factors, the Company is confident there is sufficient demand to proceed with the proposed offering.

- 4.2 If it were known to be the case that the participants in the surveys had each overstated their actual valuation by a factor of 2.5, would TGI still consider that the proposal should go ahead? Please explain.

Response:

Please refer to response to BCOAPO IR 2.4.1.



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Response to British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2	Page 5

5.0 Reference: Exhibit B-1, Section 11.2.1, page 119 and BCOAPO IR 1.7.1

5.1 Please confirm that according to standard microeconomic theory, a rational, profit-maximizing firm will not produce in the short run if price is less than average variable cost.

Response:

According to standard neoclassical microeconomic theory, in the short run, a rational profit maximizing firm should not produce at all if, for all levels of output, the total variable cost of producing that output exceeds the total revenue derived from selling it. Subsequently, the firm should not produce at all if, for all levels of output, the average variable cost of producing the output exceeds the price at which it can be sold. Please note that these concepts are not static and may be dependent on the time period considered (increasing production may provide operational efficiencies, for example).

In the case of long-term contracts such as the proposed Biomethane projects, a producer considering ceasing production due to the average variable cost becoming higher than the price they receive for the good they produce would have to also take into account their future revenues foregone as a result of their potential violation of the contractual terms. Such a producer may choose to accept a short term loss in order to ensure a greater gain at a later point in the contract.

5.2 Does TGI's response to the referenced IR indicate that it believes that the negotiated price will exceed short-run average variable cost?

Response:

The Company believes that the questioner intended to reference BCOAPO IR 1.7.2, and will respond in that context.

Terasen Gas expects that the negotiated price for Biomethane or Biogas will exceed short-run average variable cost in all projects, particularly if the definition of average variable cost includes consideration of environmental penalties (real or relative) for alternative methods of dealing with waste Biogas, such as venting.



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Response to British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al ("BCOAPO") Information Request ("IR") No. 2	Page 6

6.0 Reference: BCUC IR 2.3.3.7

6.1 Does TGI propose to build in the same margin for its Biomethane offering that it builds into its current regulated commodity offering?

Response:

Terasen Gas does not build in any margin for our current regulated commodity offering. We neither make nor lose money on the sale of natural gas, we simply pass the cost of that gas along to our customers. In the case of the proposed Biomethane projects, the Company proposes to continue this practice of passing along the cost of Biomethane, specifically the cost of service of producing and/or acquiring Biomethane, to those customers that choose to purchase and consume it.

The Company does propose to earn our regulated rate of return on capital assets invested in Biomethane upgrading facilities, as is the practice with all of our capital investments approved by the Commission. This regulated rate of return will form a portion of the cost of service of producing Biomethane and be imbedded in the Biomethane Energy Recovery Charge or BEREC.