



Scott A. Thomson
Vice President, Regulatory Affairs and
Chief Financial Officer

16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604) 592-7784
Fax: (604) 576-7074
Email: scott.thomson@terasengas.com
www.terasengas.com

Regulatory Affairs Correspondence
Email: regulatory.affairs@terasengas.com

November 9, 2007

British Columbia Utilities Commission
6th Floor, 900 Howe Street
Vancouver, B.C. V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

**Re: Terasen Gas Inc. ("TGI") and Terasen Gas (Vancouver Island) Inc. ("TGVI")
Application for System Extension & Customer Connection Changes Review
(the "Application") Project No. 3698472
Reply Argument Submission**

In accordance with the British Columbia Utilities Commission Order No. G-90-07 setting out the Regulatory Timetable for the Application, TGI and TGVI respectfully submit the attached Reply Argument Submission.

If there are any questions regarding the attached, please contact Mr. Tom Loski, Director, Regulatory Affairs at (604) 592-7464.

Yours very truly,

**TERASEN GAS INC. and
TERASEN GAS (VANCOUVER ISLAND) INC.**

Original signed by: Tom Loski

For: Scott A. Thomson

cc (e-mail only): Registered Parties

Attachment

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 Terasen Gas Inc. and Terasen Gas (Vancouver Island) Inc. for a
Review of its System Extension and Connection Policies**

REPLY SUBMISSION OF

TERASEN GAS INC.

AND

TERASEN GAS (VANCOUVER ISLAND) INC.

November 9, 2007

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**REPLY SUBMISSION OF
TERASEN GAS INC. and
TERASEN GAS (VANCOUVER ISLAND) INC.**

A. INTRODUCTION

1. On July 31, 2007 Terasen Gas Inc. (“TGI”) and Terasen Gas (Vancouver Island) Inc. (“TGVI”) (collectively the “Companies”) applied to the British Columbia Utilities Commission (“BCUC” or the “Commission”) for changes to the System Extension and Connection policies of each company. On October 26, 2007, the Companies filed their Submission with the Commission. On November 2, 2007 the Companies received intervenor submissions from British Columbia Hydro and Power Authority (“BC Hydro”) and the British Columbia Old Age Pensioners Organization (“BCOAPO”). This Submission is the Companies’ reply to the submissions of BC Hydro and BCOAPO.

2. The Companies have considered the submissions of BC Hydro and BCOAPO, and submit that the changes to the System Extension and Connection policies sought in the Application should be approved. The proposed changes will send appropriate market signals to developers and customers when making a decision to attach to the natural gas system. The proposed changes will protect the interests of existing customers by ensuring that the new customers attaching are economic customers while at the same time reducing the barriers for new customers in a way that more closely matches what new customers pay with the costs they impose on the gas system. As such the proposed changes will help to reduce barriers to customers wishing to connect to the natural gas system and will help to provide an overall benefit to both existing and new customers that they would otherwise not receive. Finally, the proposed changes support the policy actions set out in the 2007 Provincial Energy Plan, in particular in meeting the goals of electricity self sufficiency and reduced greenhouse gas emissions.

I. Main Extension Test Changes

3. As noted in paragraph 2 of the Companies submission¹, “each Company requests approval to manage the overall Profitability Index (“PI”) of its new MX projects on an annual aggregate basis”. Neither BC Hydro nor BCOAPO opposed this request. BCOAPO also

¹ TGI/TGVI October 26, 2007 Submission Paragraph 2

stated that the proposal to continue the use of the MX methodology for customers attaching to new mains makes sense.

4. The Companies requested “to use an aggregate PI of 1.10 as the target which all main extensions completed within a one year period must in aggregate achieve”², and “to use a PI of 0.80 as the threshold for passing individual main extensions”. BC Hydro did not oppose these requested changes. BCOAPO had a few concerns which are addressed below.

5. BCOAPO expresses concern that uneconomic customers will be attached if the individual PI threshold is set at 0.80 but also notes that the “proposal to set an annual aggregate threshold for the PI of 1.1 also mitigates this concern”.³

6. BCOAPO suggests that “an alternative worthy of consideration would be to require a customer contribution sufficient to raise the PI to 1.0” as this would “decrease the cross-subsidization by customers served by a project that had a $PI \geq 1.0$ ”.⁴ The Companies note that the minimum PI threshold for individual main extensions is currently 1.0, and while the implied minimum aggregate PI is 1.0 the aggregate PI is much greater⁵. While it may not have been the intention, the suggestion made by BCOAPO would result in a higher contribution requirement for new customers than what would occur under the proposal to collect contributions to bring the project PI to 0.8. With this in mind, the only way to achieve an aggregate PI of 1.1 would be for many or most of the new customers on a main extension which has a PI above 1.1 to receive a payment or credit to connect to the system. This would be administratively impractical and would only serve to add confusion to customers already facing difficulty understanding the current policy. The Companies proposal to require an individual threshold PI of 0.80 will move the aggregate PI closer to 1.1 than the current level. The Companies’ proposed change will still result in new customers in aggregate paying more than the costs they add to the system, which will benefit existing customers but without requiring those new customers to contribute an amount that deters them from connecting to the system or results in them unduly subsidizing existing customers. The Companies submit that the suggestion of BCOAPO should not be accepted by the Commission.

² TGI/TGVI October 26, 2007 Submission Paragraph 2

³ BCOAPO Submission, page 1, third paragraph

⁴ BCOAPO Submission, page 2, second paragraph

⁵ TGI/TGVI October 26, 2007 Submission Paragraph 11

7. BCOAPO also suggests that if the PI of 1.1 is set based upon a forecast sample population, and that this would introduce “the potential for sampling error”. In the Application and in responses to information requests a sample population was used to demonstrate the aggregate PI of customers attaching to the system over a recent period of time. Due to the significant work that is involved in using the entire population of main extensions, the Companies propose to use only a sample of the main extensions completed to review in order to determine if the aggregate PI is above 1.1⁶. The Companies will use actual capital costs of the main extension, not forecast costs, when calculating the aggregate PI. The results of the review would inform the capital cost inputs for the following year, as supported by BCOAPO, as well as lead to recalibrating the threshold PI for individual main extensions going forward. The Companies are in the planning stages to make modifications to the information systems will also enable the Companies to use the entire population of main extensions in a given year to determine the aggregate PI without significant manual involvement. However, at the present time, the Companies believe that a sample population will provide the best compromise between the costs associated with the administrative burden related to the amount of work involved and the accuracy of the result.

8. The Companies seek to “Remove the requirement for a minimum customer contribution by eliminating the Service Line Installation Fee (“SLIF”) from the main extension test”⁷. BCOAPO supports this change and notes that the effect on rate base will be small. BC Hydro did not make any comment on the removal of the SLIF from the MX test evaluation, however, BC Hydro did submit that the SLIF not be eliminated from the connection fees as discussed in Section II of this submission.

9. The Companies request to “Discontinue the application of the Service Line Cost Allowance (“SLCA”) in the MX test”⁸. BCOAPO supports this change. BC Hydro did not oppose this change.

10. The Companies proposed to include a transmission system improvement (“SI”) charge in the MX test⁹. BC Hydro did not oppose this request. BCOAPO supports the inclusion of a transmission SI charge in the main extension test and agrees that “both negative and positive

⁶ TGI/TGVI October 26, 2007 Submission Paragraph 13

⁷ TGI/TGVI October 26, 2007 Submission Paragraph 2

⁸ TGI/TGVI October 26, 2007 Submission Paragraph 2

⁹ TGI/TGVI October 26, 2007 Submission Paragraph 50

impacts on the transmission system may be visited upon existing distribution customers”¹⁰. BCOAPO also takes the position that the methodology for determining a transmission SI charge requires “testing and regulatory approval prior to implementation”¹¹. The Companies accept that the methodology for the calculation of the transmission SI should be subject to Commission review. However, the Companies submit that the current practice whereby the annual updating of parameters within the MX test, using approved methodology, is not required to be reviewed by the BCUC should be continued in order to avoid additional regulatory burden. Upon the Commission decision with respect to this Application, the Companies plan to submit for Commission review, the methodology for the transmission SI charge, with proposed implementation of the new transmission SI charges at the same time as the implementation of changes from this Application.

II. Connection Fees and Charges

11. The Companies have requested to eliminate the “requirement for a minimum contribution by eliminating the SLIF of \$215”¹². BCOAPO supports this change. BC Hydro has a few concerns which are addressed below.

12. BC Hydro submits that the SLIF should not be eliminated. In paragraph 25 of the October 26 Submission the Companies said:

... as new customers are already fully contributing to the cost of the service line through the determination of the SLCA (and the contribution of costs above the SLCA), or through an MX Test, the SLIF becomes at worst a cost barrier, and at least an over contribution by a new customer.

BC Hydro does not take issue with what is said in that quotation. BC Hydro does not dispute that the SLIF is a cost barrier or results in over-contribution by a new customer.

13. Instead BC Hydro submits that the SLIF should be retained because past and present generations of customers should be treated similarly, saying that it would be in the interests of inter-generational equity to continue the current practice. In other words it is the position of BC Hydro that even if a charge to customers is unwarranted and not supported by an analysis of the costs of the utility, the charge should continue simply because customers in the past have been required to pay that charge.

¹⁰ BCOAPO Submission, page 2, fifth paragraph

¹¹ BCOAPO Submission, page 2, seventh paragraph

¹² TGI/TGVI October 26, 2007 Submission Paragraph 3

14. The Companies submit that changes should be made to utility policies when it becomes apparent that conditions affecting the proper functioning of a policy have changed. Such changes may be the result of pure cost causation principles or when market conditions or government policy indicates a change is warranted. With respect to the SLIF, the Companies submit that there is clear evidence in this proceeding demonstrating that the SLIF should be eliminated; retaining the SLIF will result in new customers paying more than the costs incurred to attach to the system.

15. BC Hydro submits that maintaining the current SLIF treatment “would be in the interests of intergenerational equity”. The National Energy Board (“NEB”) Pipeline Tolls and Tariffs defines intergenerational equity as “Inequity occurring when a generation of customers does not pay, at the expense of another generation, its fair share of the costs incurred by the utility in providing service”. The Companies submit that preserving intergenerational equity does not mean that past and present customers be treated in exactly the same manner. The evidence in this proceeding indicates that new customers being connected to the TGI and TGVI systems are paying more than the costs associated with their addition to the system. In addition, new gas customers are paying current market-based rates for the commodity portion of their rates (which is unlike the situation with electricity in B.C. for which system extension tests deal with the distribution-related costs (and possibly transmission-related costs) but do not consider the cost of the incremental electric supply required for the new load). In the Companies’ submission, retaining the SLIF would preserve an inequity by continuing to require larger than warranted contributions from new customers.

16. BC Hydro also uses the statement that “under the BCUC's guidelines all existing BC Hydro and Terasen customers have paid for their service connection” in support of their position that the SLIF should not be eliminated. This statement misconstrues the facts in at least two ways. First, the SLIF did not become a part of TGI’s tariff until 1997 (Exhibit B-1, page 12). Customers that attached to the system prior to 1997 did not pay a service connection charge (unless their service line exceeded the 20 metre length allowance previously in the tariffs). Second, from its inception the SLIF has only represented a portion of the service line costs. The average service line cost in 1996 (Exhibit B-1, page 12, Table 4.1) was \$659 while the SLIF has been set at \$215. The Companies have demonstrated in the Application and other evidence filed in this proceeding that new customer additions have been well above the economic threshold in the MX Test (i.e., PI well above 1.0) and as such the

SLIF is placing an unwarranted additional financial hurdle for potential customers wishing to connect to the gas system. The Companies submit that the SLIF should be eliminated.

17. Lastly, in its submission, BC Hydro statement that “all existing BC Hydro and Terasen customers have paid for their service connections” also implies that Terasen customers should be treated in a similar manner as BC Hydro customers. The Companies agree that connection policies for electric and natural gas customers should be consistent in that on average new customers should not unduly impact existing customers by paying less than their costs. The proposed discontinuation of the minimum contribution by customers through elimination of the SLIF is consistent with this objective. However, it should be recognised that all consumers are electric customers while the decision to connect to the natural gas system is a choice. As a result, electric connection fees are in fact a “sunk cost” that cannot be avoided while fees to connect to the natural gas system result additional cost hurdles that may result in less efficient choices by customers and developers. The Companies submit that the fact that electric customers are required to pay for service connections does not require that gas customers are similarly treated.

18. The Companies seek approval to “Apply the SLCA only to service lines for in-fill customer attachments (i.e. for those customers not subject to an MX test)”¹³. Neither BC Hydro or BCOAPO opposed this change and BCOAPO supported the removal of the SLCA from the MX test.

19. The Companies seek to “increase the SLCA to \$1535, or \$1750 if the elimination of the SLIF is not approved”¹⁴ neither BC Hydro nor BCOAPO oppose this change.

20. The Companies seek to “increase the SLCA for duplexes to \$3070, or \$3285 if the SLIF is not eliminated”¹⁵ neither BC Hydro nor BCOAPO oppose this change.

III. Energy Efficiency and Conservation

21. The Companies “seek approval to implement energy usage and efficiency allowances in the main extension test and the SLCA to encourage gas fired space and water heating, high efficient gas fired space and water heating, and high efficiency gas fired space and water

¹³ TGI/TGVI October 26, 2007 Submission Paragraph 3

¹⁴ TGI/TGVI October 26, 2007 Submission Paragraph 3

¹⁵ TGI/TGVI October 26, 2007 Submission Paragraph 3

heating in Leadership in Energy Environmental Design (“LEED”) buildings”¹⁶. BC Hydro and BCOAPO have a number of comments which are addressed below.

22. The Companies agree with BCOAPO that the inclusion of energy efficiency credits within the MX test may reduce the transparency of the test by making the test more complex, however, as the Companies noted in response to BCUC IR 1 Question 19.2¹⁷, it is important to send appropriate market signals by as many different channels as possible in order to achieve energy efficiency objectives. By including an energy efficiency credit within the MX test, customers immediately receive a price signal and as such the potential economic benefit of the efficiency improvement becomes visible. Further, as a majority of MX tests are already positive, implementing an efficiency credit will not change the outcome of these tests and as a result with respect to those main extensions there will be no cost to the energy efficiency credit. The only time the energy efficiency credit will provide a direct benefit to a new customer is when the MX Test for that main extension would not otherwise meet the minimum individual threshold. Although this energy efficiency credit will have minimal effect on current customers, its use will send a significant signal to the market that reducing energy usage is important and encouraged. The Companies submit that the energy efficiency incentives should be part of both the Companies system extension and connection policies and also as part of conservation and demand side management programs.

23. BC Hydro states that “implementing incentives to encourage the use of natural gas for space or water heating would be at best premature and potentially contrary to government policy”¹⁸. The Energy Plan “sets out a strategy for reducing green house gas emissions”¹⁹, Policy Action # 2 states “Ensure a coordinated approach to conservation and efficiency is actively pursued in British Columbia”²⁰ and Policy Action #4 states “Explore with B.C. Utilities new rate structures that encourage energy efficiency and conservation”²¹. The Companies therefore submit that implementing incentives to encourage the use of natural gas for space and water heating would not be premature, the proposed incentives meet the goals of Policy Actions #2 and 4 and the incentives would immediately result in lower GHG emissions in

¹⁶ TGI/TGVI October 26, 2007 Submission Paragraph 4

¹⁷ Exhibit B-3 Question 19.2

¹⁸ BC Hydro Submission Page 2 last paragraph

¹⁹ BC Energy Plan – Message from the Premier Page 1

²⁰ BC Energy Plan – Energy Conservation and Efficiency Policies Page 3

²¹ BC Energy Plan – Energy Conservation and Efficiency Policies Page 3

British Columbia and in the Pacific Northwest. The Companies submit that the suggestion made by BC Hydro that the incentives are premature should not be accepted.

24. Lastly the energy efficient credits proposed by the Companies are in line with the 1996 System Extension Guidelines, which state “In addition, the Commission recommends that the Utilities come forward with options for connection fees that send an appropriate signal about the net social costs of less efficient energy use”. The Companies submit that the suggestions made by BC Hydro that the incentives are premature should not be accepted and that the Companies proposal for energy efficiency credits be approved.

IV. Energy Policy

25. Both BCOAPO and BC Hydro addressed the effect of energy policy and whether or not these issues should be considered within the scope of the Companies Application. The Companies submit the Energy Plan is relevant and that the proposals for energy efficiency credits and encouragement to use natural gas for space and water heating address the policies in the Energy Plan and should be approved. The Companies address the specific submissions of BC Hydro and BCOAPO in the following paragraphs.

26. BCOAPO disagrees with the Companies’ submission that burning natural gas for space and water heating is less carbon intensive than using electricity for the same purpose. BCOAPO states “There has been no determination by the Commission that Terasen’s foundational assumption is correct...”²². However, in the October 26, 2007 Reasons for Decision on BC Hydro’s 2007 Rate Design Application (Order No. G-130-07), at page 191, the Commission states “The Commission Panel agrees with Terasen that the use of natural gas (as opposed to electricity) for space and water heating in B.C. will make additional energy available to displace coal or gas-fired generation at the margin in the Pacific Northwest”. Given that gas or coal fired electrical generation is produced at a lower efficiency than the efficiency of gas fired space and water heating equipment, it is reasonable to conclude that the use of gas for space and water heating on the margin will result in lower greenhouse gas production than if electricity is used for the same purpose.

27. BC Hydro states that “it is disingenuous for Terasen to rely on selected portions of the 2007 Energy Plan to support its extension policy proposals” and that “there can be no doubt that the use of natural gas for space or water heating “would produce more GHG emissions

²² BCOAPO Submission, page 3, second paragraph

than the use of net zero emission electricity”²³. BC Hydro also states that “it is unclear in the 2007 Energy Plan whether encouraging the use of natural gas for space and water heating is consistent with government policy”.²⁴ It appears from these statements that BC Hydro has missed the central point of the submission of the Companies respecting energy efficiency and GHG emission reductions. The electrical grid in British Columbia is not an island. British Columbia is not isolated from the remainder of the grid in western North America; the grid is interconnected, and a significant portion of both current and new electrical generation in western North America is from the inefficient combustion of one form of energy - coal or natural gas - to create another form of energy – electricity. For so long as coal or gas fired electrical generation continues to be the marginal source of electrical generation in western North America, the use of gas for space and water heating will “make additional energy available to displace coal or gas-fired generation at the margin in the Pacific Northwest”²⁵. Given that production of electricity by coal and gas fired generation is less efficient than using gas for space and water heating, GHG emissions will be reduced if customers use gas rather than electricity for space and water heating.²⁶ The Companies submit that the proposals filed in support of this application are consistent with government policy.

28. In addition, BC Hydro’s submission is also premised on the assumption that the objective of electrical self sufficiency by 2016 is achieved²⁷. BC Hydro will be relying both demand reductions (through conservation and energy efficiency measures) and new intermittent supply resources provided by independent power producers as well as the development of new large firm capacity additions (i.e. Site C) to meet this aggressive objective. There is significant uncertainty on how this objective will be achieved and at what cost²⁸. If BC Hydro was to meet all future space heating and water heating loads, the corollary of its submissions that space heating for natural gas should not be encouraged, its incremental demand requirements would significantly increase thereby creating new challenges to meeting the electrical self sufficiency and net zero emissions objectives.

29. Page 29 of the Energy Plan states “The Plan is aimed at enhancing the development of conventional [oil and gas] resources and stimulating activity in relatively undeveloped

²³ BC Hydro Submission, page 2, second last paragraph

²⁴ BC Hydro Submission, page 2, fourth paragraph

²⁵ BCUC Order No. G-130-07 Reasons for Decision, page 191

²⁶ Exhibit B-4 TGI TGVI response to BC Hydro IR 1, Question 1.1

²⁷ BC Hydro Submission, page 2, fourth paragraph

²⁸ Exhibit B-4 TGI/TGVI response to BC Hydro IR 1, Question 1.1

areas...”. Page 12 of the Energy Plan states “While BC is a province rich in energy resources such as hydro electricity, natural gas and coal, the use of these resources needs to be balanced through effective use, preserving our environmental standards while upholding our quality of life for generations to come...”, and page 21 of the Energy Plan states “It is important for British Columbians to understand the appropriate use of different forms of energy and utilize the right fuel, for the right activity, at the right time”. Increasing natural gas production will increase GHG emissions regionally, all things being equal. Therefore it is incumbent upon the consumers of natural gas to use gas in the most efficient manner as possible in order to limit the increase in GHG emissions if the Province and the region as a whole are to achieve lower GHG emissions and increase natural gas and oil production. The Companies submit that fewer GHG emissions will result from the use of gas for space and water heating than by shipping the gas outside the province to be used in gas-fired electric generation. The use of gas for space and water heating not only meets objectives of the Energy Plan regarding GHG reductions, and balances the use of gas with environmental standards, but also aids in growth of natural gas production in BC.

B. CONCLUSION

30. The Companies submit that the changes sought in the application should be accepted. The proposed changes will send appropriate market signals to developers and customers when making a decision to attach to the natural gas system. The changes ensure that new customers do not pay more than the cost to attach them to the system and existing customers will not be harmed by the addition of new customers. The Companies submit that the proposals sought in this application, as outlined in its October 26, 2007 submission²⁹ and further discussed in this Reply argument, be approved as filed.

All of which is respectfully submitted.

**TERASEN GAS INC.
TERASEN GAS (VANCOUVER ISLAND) INC. and**

Original signed by: Tom Loski

For: Scott A. Thomson

November 9, 2007

²⁹ TGI/TGVI Final Argument Paragraphs 2,3 and 4