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November 13, 2009
File No.: 240148.00642

VIA EMAIL & COURIER

British Columbia Utilities Commission
6th floor, 900 Howe Street
Box 250
Vancouver, B.C. V6Z 2N3

Attention: Erica M. Hamilton
Commission Secretary

Dear Sirs/Mesdames:

Re: Terasen Gas Inc., Terasen Gas (Vancouver Island) Inc. and Terasen Gas (Whistler) Inc. (the "Terasen Utilities")
Return on Equity and Capital Structure Application

Enclosed is the electronic copy of the Reply Submission on behalf of the Terasen Utilities in the above application.

The requisite 20 hard copies of the Reply Submission will follow by courier.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

Original signed by C.B. Johnson

C.B. Johnson, Q.C.

CBJ/vde

Encl.

cc: Registered Intervenors

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BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF THE *UTILITIES COMMISSION ACT* (the "Act")
R.S.B.C. 1996, Chapter 473

and

IN THE MATTER OF AN APPLICATION
BY TERASEN GAS INC., TERASEN GAS (VANCOUVER ISLAND) INC. and
TERASEN GAS (WHISTLER) INC.
RELATING TO RETURN ON EQUITY AND CAPITAL STRUCTURE

REPLY SUBMISSIONS OF
TERASEN GAS INC.,
TERASEN GAS (VANCOUVER ISLAND) INC. and
TERASEN GAS (WHISTLER) INC.

November 13, 2009

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IN THE MATTER OF AN APPLICATION
BY TERASEN GAS INC., TERASEN GAS (VANCOUVER ISLAND) INC. and TERASEN GAS (WHISTLER) INC.
RELATING TO RETURN ON EQUITY AND CAPITAL STRUCTURE

REPLY SUBMISSIONS OF TERASEN GAS INC., TERASEN GAS (VANCOUVER ISLAND) INC. AND TERASEN GAS (WHISTLER) INC.

These Reply Submissions of the Terasen Utilities address issues raised by British Columbia Old Age Pensioners' Organization and others ("BCOAPO"), Commercial Energy Consumers Association of British Columbia ("CEC"), Industrial Customer Group ("ICG") and Joint Industry Electricity Steering Committee ("JIESC") (in these Reply Submissions referred to as the "Intervenors") in their submissions, generally in the same order as in the October 20 Submissions of the Terasen Utilities (the "Initial Submissions"). Abbreviations used in the Initial Submissions are also used in these Reply Submissions.

A. INTRODUCTION AND COMMISSION MANDATE

1. As an introductory matter, the Terasen Utilities note that no intervenor disputes that the change to the return on equity of the Terasen Utilities should be effective July 1, 2009.

2. The Terasen Utilities also note that while the submissions of the JIESC and other Intervenors disagree with the submissions of the Terasen Utilities respecting the fair return for TGI, none of the Intervenors takes issue with the return on equity of TGI being used as the Benchmark ROE for the determination of the return on equity of TGVI and TGW, and none of the Intervenors takes issue with the company specific risk premiums for TGVI and TGW that the Commission has previously determined to be appropriate, which are 70 basis points and 50 basis points, respectively.

3. At paragraph 137 of the Initial Submissions the Terasen Utilities referred to page 8 of the 2006 Decision where the Commission Panel had said:

> "The Commission Panel does not accept that the reference by Martland J. to a "balancing of interests" to mean that the exercise of determining a fair return is an exercise of balancing the customers' interests in low rates, assuming no detrimental effects on the quality of service, with the shareholders' interest in a fair return. In coming to a conclusion of a fair return, the Commission does not consider the rate impacts of the revenue required to yield the fair return. Once the decision is made as to what is a fair return, the Commission has a duty to approve rates that will provide a reasonable opportunity to earn a fair return on invested capital."

4. In its Submission at page 2 ICG refers to the same passage from the judgment of Martland, J. [incorrectly stated to be MacIntyre, J. by ICG] from the Supreme Court of Canada judgment in *B.C. Electric Railway Co. Ltd. v. Public Utilities Commission of B.C. et al*[1], but ICG does not refer to conclusions of the Commission Panel quoted above.

5. The *Utilities Commission Act* does not prescribe that the Commission is to establish a return on equity, and does not prescribe how an appropriate return on equity is to be determined. Section 59 of the Act provides that rates are not to be "unjust" or "unreasonable". In the *B.C. Electric Railway* case at page 848 Mr. Justice Locke said:

> "The Commission is directed by s. 16(1)(a) to consider all matters which it deems proper as affecting the rate but that consideration is to be given in the light of the fact that the obligation to approve rates which will give a fair and reasonable return is absolute." [emphasis added]

6. The *B.C. Electric Railway* case was considered by the B.C. Court of Appeal in *Hemlock Valley Electrical Services Ltd. v. BCUC*.[2] At page 21 in that judgment, Mr. Justice Cumming, for the Court and referring to the *Utilities Commission Act*, said:

> "If, as posited by Martland, J., a public utility is providing an adequate and efficient service, the statute is clear: a rate is unjust or unreasonable if it fails to yield a just and reasonable return on rate base."

Those two cases make it clear that the obligation to allow a utility to earn a fair and reasonable return is absolute. The Terasen Utilities submit that the quotation above from page 8 of the 2006 Decision correctly sets out that the Commission has a duty to approve rates that will provide a reasonable opportunity to earn a fair return on invested capital.

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[1] [1960] S.C.R. 837

[2] (1992), 66 B.C.L.R. (2d) 1

7. ICG refers to section 59 of the *Utilities Commission Act* suggesting it requires the Commission to consider the rates from a customer perspective, and referring to subsection 59(5)(a) which states that a rate is "unjust" or "unreasonable" if the rate is "more than a fair and reasonable charge for service of the nature and quality provided by the utility". That subsection does not refer to "customer perspective", nor does it refer to "utility perspective". The subsection allows for consideration of the value of the service provided by the utility, but does not diminish the obligation to set rates that will allow the utility the opportunity to earn a fair return. In any event, ICG has not presented evidence in this proceeding that in any manner suggests that the rates incorporating the relief sought by the Terasen Utilities will result in rates that are more than a fair and reasonable charge for the service provided by the Terasen Utilities.

8. At page 5 ICG says that in setting rates part of the consideration must include the economic impact of the rate for the service on customers. BCOAPO starts its submission by noting the increase in delivery margin and rates that will result from the Commission granting the relief sought in the Application, and then saying that the Terasen Utilities will provide the exact same service quality and reliability as it does today. These submissions are in essence an argument that rates should never increase if the service quality and reliability does not change, which is not credible. While Intervenors may not want rates to increase as the result of changes in return on equity, during the period since the mid-1990s when returns on equity were decreasing Intervenors were not making representations to the Commission calling for the Commission to take into account the economic impact on customers when determining utility ROE. These submissions of ICG are also entirely inconsistent with other submissions of Intervenors that argue that the competitive position of TGI has improved due to the decrease in gas commodity prices.

9. The *Kwikwetlem* case, to which ICG refers at page 5, relates to the Commission's jurisdiction in granting certificates of public convenience and necessity, and the role of the Commission in considering the Crown's duty to consult in respect of aboriginal rights. That case does not relate to the rate-setting role of the Commission. Neither the quotation from the judgment on page 5, nor the judgment generally, provides guidance in respect of the mandate of the Commission to provide utilities with the opportunity to earn a fair return.

10. At page 4 BCOAPO quotes an extract from the Terasen Inc. 2008 Annual Report which speaks of producing balanced business results. CEC at the top of page 12 says that Terasen

demonstrates that its business risk explanation is tailored for its audience, saying that "Terasen in its annual report speaks of continued strong financial and investment results, stability, growth and excellence for the future". In the third paragraph on that page CEC submits "that a full reading of the annual report identifies a number of the business risks in virtually the same way as is done in the ROE application". The fact is, the Management Discussion and Analysis section of the 2008 Annual Report[3] discusses the business risks that are described in the Application. At page 27, under the heading of "Competitiveness", the following is set out:

> "Prior to 2000, natural gas consistently enjoyed a substantial competitive advantage when compared with alternative sources of energy in British Columbia. However, because electricity prices in British Columbia continue to be set based on the historical average cost (primarily hydro-electric dams) of production, rather than based on marked forces, they have remained artificially low compared to market-priced electricity. As a result, the price of electricity for residential customers in British Columbia is now only marginally higher than for natural gas. There is no assurance that natural gas will continue to maintain a competitive price advantage in the future.
>
> If natural gas pricing becomes uncompetitive with electricity prices or the price of other forms of energy, the Company's ability to add new customers could be impaired, and existing customers could reduce their consumption of natural gas or eliminate its usage altogether as furnaces, water heaters and other appliances are replaced. This may result in higher rates and, in an extreme case, could ultimately lead to an inability to fully recover the Company's cost of service in rates charged to customers.
>
> In 2008 the Government of British Columbia introduced changes to energy policy including greenhouse gas emission reduction targets and a consumption tax on carbon-based fuels that impact the competitiveness of natural gas versus non-carbon based energy sources or alternate energy sources. It did not, however, introduce carbon tax on imported electricity generated through the combustion of carbon-based fuels. The future impact of these changes in energy policy may have a material impact on the competitiveness of natural gas relative to other energy sources."

B. BUSINESS RISK

11. The submissions of CEC are the most lengthy respecting business risk, with the result that this Section of these Reply Submissions refers more to the CEC submissions than those of other Intervenors. In responding to submissions of CEC, submissions of other Intervenors are also addressed.

12. CEC says at page 4 "The key judgment the Commission must make is whether or not the changes to business risk are sufficient enough to warrant the increase in return on equity

[3] The 2008 Annual Report was filed in response to BCUC IR 39.1 and the MD&A is also filed in response to BCUC IR 84.7, both part of Exhibit B-3

asked for by Terasen". That is not correct. The request of the Terasen Utilities for an increase in return on equity is not related solely to an increase in business risk. The Application demonstrates that for the return on equity of the Terasen Utilities to be fair, it must be increased whatever the Commission may decide respecting business risks. The Application also demonstrates that the AAM that has been used to determine ROE in recent years has produced inadequate returns. The Terasen Utilities submit that the Commission has to consider all the evidence before it; not just evidence on business risk, when it determines the fair return for TGI.

13. BCOAPO says at paragraph 8 "The future is unpredictable, now more than ever". BCOAPO at paragraph 42 says "BCOAPO accepts that there is some uncertainty facing Terasen in the long run, but that uncertainty does not necessarily equal risk". The first line on page 11 of the CEC Submission is: "The CEC submits that the business risk is ultimately about the long term profitability and sustainability of the business". The Terasen Utilities agree that most of the business risk faced by the Terasen Utilities is about the long-term profitability and sustainability of the business, and the Terasen Utilities further submit that it is the uncertainty about the future profitability and sustainability of the business that is the risk. Uncertainty does equal risk. As set out in the quotation from page 17 of the 2006 Decision at paragraph 23 of the Initial Submissions, business risk stems from uncertainty.

14. The Terasen Utilities submit that the Commission must act on the evidence before it in assessing business risk and establishing the fair return and capital structure for TGI, the Commission cannot wait for all uncertainty to be resolved, or every risk to be analyzed and categorized endlessly, as some of the submissions of the Intervenors suggest, before taking into account changes in business risk.

15. CEC at page 58 says "In fact a risk does not become a potential business risk unless and until it cannot be successfully mitigated". A test such as this formulated by CEC would acknowledge that a "risk" exists, but would characterize that risk as something other than a "business risk". Further, this test would say that unless all elements of the risk can be defined with specificity (e.g. the exact manner in which government policies will affect the Terasen Utilities is known) a business risk does not exist since it would not be possible to determine if the risk could be mitigated until the full parameters and applicability of the risk were known. This view of how risks should be characterized permeates the whole of the CEC Submission, and is reflected in submissions of other Intervenors. As page 17 of 2006 Decision recognizes, business risk stems from uncertainty; the exact nature and full dimensions of the business risk

may not be known, and the party facing the business risk (in this case the Terasen Utilities) may not be able to determine the extent to which, if any, the risk can be mitigated; but that does not mean it is not a business risk.

16. In paragraph 12 BCOAPO refers to the description of business risk in paragraph 21 of the Initial Submissions and then says “In BCOAPO’s view, the very nature of a regulated utility with captive customers is such that this commission will ensure that the cost of Terasen’s investments, along with all other prudently incurred costs will be recovered in the long term”, and at the top of page 6 says that any risk is borne by ratepayers. In making those submissions BCOAPO fails to understand that customers of the Terasen Utilities are not captive; customers can leave the natural gas system, and may do so because of cost comparisons, because of non-cost preferences (such as perceptions of how “green” the energy source may be), because of government regulations or policy measures, or because of other reasons or combination of reasons. BCOAPO also fails to understand that this Commission cannot ensure recovery of investments. Regulatory commissions cannot force natural gas customers to consume and cannot force customers to stay on the natural gas system, particularly when government policies and legislation are promoting “clean” electricity and discouraging GHG emissions. Governments can pass legislation, and customers can make energy choices; this Commission cannot “ensure that the cost of Terasen’s investments will be recovered in the long-term”. As Mr. Jespersen indicated when he was a witness, no one is required to use natural gas for street lighting.

17. At page 11 BCOAPO refers to BCUC 1.40.1 in which Terasen lists risks in order of significance, starting with regulatory risk. In the context of this proceeding regulatory risk is significant; remedying the inadequate return on equity of the Terasen Utilities, increasing the equity component of the capital structure of TGI to 40 percent as requested in the Application, and recognizing the increased business risks of the Terasen Utilities, are all within the exclusive purview of this Commission. In the longer-term, the recovery of the return on, and of, the investment in utility infrastructure assets is something that the Commission cannot ensure.

18. BCOAPO at paragraph 43 says “Terasen’s largest risk remains weather forecast variations which are mitigated by RSAM; a risk that has not changed since 2005”. JIESC at pages 26 and 27 also refers to the RSAM. The RSAM was addressed in paragraphs 44 to 46 of the Initial Submissions. As submitted at the end of paragraph 46, neither facet of the RSAM

should be taken into account when determining return on equity, and certainly the RSAM should not be taken into account in considering the long-term business risks of TGI.

19. At page 27 JIESC says that Terasen's submission that the business risks evidence of Dr. Booth is almost entirely limited to short-term considerations is misleading because the Initial Submissions truncated a sentence that said "I have focused on TGI's short run risks and its ability to earn its allowed ROE since there seems to be little long run risk". As the sentence states, Dr. Booth focused on the short-term business risks of TGI, and as can be seen from an examination of his evidence it primarily discusses short-term considerations. The choice of words by Dr. Booth is also informative; he says there "seems" to be little long term risk, implying the lack of thorough consideration.[4] Similarly, at page 4, line 21, of his written evidence Dr. Booth says that he "relegates" a discussion of TGI's business risk to Appendix H, indicating it is of lesser importance to Dr. Booth.[5] As can be seen from the charts on pages 16 and 17 of the JIESC Submission, Dr. Booth focuses on movements in the market price of common equity of utilities (other than the Terasen Utilities, which are not publicly traded) as his measure of business risk. Further, in his return on equity analysis Dr. Booth's sole measure of risk is "beta" which relates to the co-variance of a particular security's prices with the market, which has nothing to do with the long-term business risks facing the Terasen Utilities.

20. ICG says at page 2 that Terasen fails to acknowledge how its own actions contribute to the risk for which Terasen seeks financial compensation, and at page 6 that Terasen's efforts to increase efficiency, reduce costs, and enhance performance must be considered when setting rates. The Figures at pages 21 to 23 of Tab 1 of the Application show that the delivery margin of TGI has been "flat" since 2004. Incentive earnings to TGI under the PBR that has been in place have averaged approximately $6.8 million per year over that period, with the incentive earnings being achieved by TGI through out-performing agreed target levels. Customers and TGI share in the out-performance under the PBR rate settlement.[6]

21. In the last paragraph on page 7 ICG says that Terasen even argues that the expiry of PBR settlement increases its business risks (referring to paragraph 47 of the Initial Submissions). That paragraph of the Initial Submissions noted that in the 2006 Decision the

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[4] Shorter Oxford English Dictionary: "seem": Appear outwardly or superficially (but not in reality). Also, give the impression or sensation of being, be perceived as

[5] Shorter Oxford English Dictionary: "relegate": Banish or dismiss to some unimportant or obscure place; consign to a usually inferior place or position

[6] The response to BCUC information request 91.1 in Exhibit B-6, page 5, sets out the incentive earnings

Commission Panel had said that it viewed PBR as a mechanism to reduce the risks of TGI. In the same paragraph ICG says that Terasen has the ability to initiative [sic] a renewal of a PBR settlement agreement, while in the preceding paragraph ICG suggests that TGI should be proposing a new PBR settlement that aligns customer and Terasen interests. The fact is that PBR requires both the utility and representatives of customer groups to be willing participants in such a process, and without willing participation by customer groups there is no purpose served by proposing a PBR arrangement.

22. In the third paragraph in section 1.6 on page 11 CEC states that "Terasen agrees that business risk can be mitigated or eliminated if strategies and actions can be taken to counter it …", referring to a number of documents in footnote 31. The documents referenced discuss proactive steps that the Terasen Utilities are taking to address risks they face, and say that actions being taken are intended to reduce or mitigate business risks. The documents do not say that the business risks can be eliminated if strategies or actions are taken, and CEC's submission that Terasen agrees that business risk can be eliminated is incorrect.

23. In a number of places in their submissions Intervenors suggest that TGI must be taking steps to mitigate risk before the Commission grants the relief sought in this Application. Examples are at BCOAPO paragraph 34, ICG page 2 first bullet, and ICG page 6 where it refers to the passage in the 2006 Decision which says that TGI has a responsibility to undertake cost-effective actions that will mitigate risk. At page 9 CEC notes in the third paragraph that Terasen has proposed solutions to deal with the perceived threats, including pursuing alternative energy solutions as a business itself, saying that Terasen is doing this to try to keep natural gas as part of the solution. Almost all of page 57 of the CEC Submission is taken up with a list of strategies that TGI has for dealing with declining use per account and declining throughput. In referring to the response to CEC information request 1.19.1, at pages 28 and 29 of its Submission CEC summarizes actions of TGI to mitigate the risks it is facing:

> "Terasen has outlined the things it has done to mitigate these; (1) (Climate Change) meetings, papers, EEC, AES (2) (Electricity Competition) Terasen has introduced or intervened in; flat delivery rates, cost of gas management, choice unbundling, BCH Rate Design, BCH LTAP, Main Extension Test, EEC - (3)(High Density and Lower Construction Capture) Terasen has adopted new technologies, lowered barriers to attach MET, introduced suite piping and thermal meters (4) (Alternative Energy Solutions) Terasen is pursuing NGV, LNG and BioGas (5) (Fuel Switching) Terasen manages commodity costs. In conclusion Terasen follows a multifaceted approach to recover investment over the long term."

The Terasen Utilities submit that the evidence demonstrates that they are taking actions to mitigate the business risks they are facing, while pointing out that many of these actions are "works in progress" with no assurance of success.

24. At page 6 ICG refers to the judgment of Bastarache J. in the *ATCO Gas and Pipelines Ltd*. case. That case dealt with proceeds from the disposal of assets that had previously been used as utility assets, but at the time of disposal were no longer required for utility service. The judgment of the Supreme Court of Canada in the *ATCO Gas* case has nothing to do with the setting of rates, and does not detract from the Commission's obligation to set rates based on a fair return to the regulated utility.

25. In a number of places in their submissions Intervenors also suggest that TGI should undertake further analyses, or gather further information, or prepare further plans, before the Commission addresses the increased business risk of the Terasen Utilities. At page 58 CEC goes so far as to recommend "that the Commission put the majority of the Terasen business risk over to the next ROE hearing". Further analyses, or plans, or gathering further information will not change the fact that there has been an increase in business risk for the Terasen Utilities. It is submitted that the Commission must make decisions on the basis of the evidence before it in this proceeding, and must make its determinations relating to the relief requested in this Application.

26. At page 18 CEC "submits that Terasen can find solutions which will mitigate or eliminate its business risk", and "The CEC submits that there is sufficient uncertainty at this time that it would be premature to draw any conclusions with respect to business risk". CEC does not identify solutions; it just submits there must be some. CEC fails to comprehend the concept of risk; an important factor in risk is uncertainty. The government policies and legislation that are discussed in the evidence did not exist in 2005; but they exist today, and as CEC indicates, these policies and legislation create uncertainty. That uncertainty represents a significant increase in the business risks of the Terasen Utilities.

27. The CEC response to the business risks facing the Terasen Utilities is to argue that the Terasen Utilities should not seek to increase throughput [or presumably not seek to limit the reduction in throughput] since to do so would be in conflict with the government's policy objectives.

> "The CEC submits that pursuit of market share and increased throughput will lead to an inability to meet the government's GHG targets and a consequent action which will potentially increase Terasen's business risk."[7]

This submission of CEC highlights the business risk associated with provincial government policies that are facing the Terasen Utilities; the maintenance and growth of their business may be contrary to the policy objectives of the provincial government. The achievement of government policy objectives may require decreased throughput, with attendant risks of recovery of a return on, and of, investments in utility infrastructure.

28. The second last paragraph on page 19 of the CEC Submission states:

> "The CEC submits that Terasen has not adequately examined or presented a plausible scenario in which it would become necessary to accept a potential inability to recover investment in capital. The CEC submits that the evidence suggests that there could be a feasible path for Terasen to cooperate with the government's GHG agenda and achieve a preservation of the natural gas business and its competitive position relative to electricity."

CEC does not say there is a feasible path (only that there "could" be a path), and does not identify what that path might be. The Terasen Utilities submit that submissions such as this should be seen for what they are, and that is an attempt to distract the Commission from addressing the evidence before it. The evidence establishes, as CEC acknowledges in its submissions, that government policies and legislation have created uncertainty and will have long-term impacts on the natural gas distribution business of the Terasen Utilities.

GOVERNMENT POLICIES AND LEGISLATION

29. None of the Intervenors argue that the Terasen Utilities will not be affected by the government policies and legislation that have come into existence since the 2005 hearing. To the contrary, there are many statements in the Intervenors' submissions that acknowledge that recent government policies and legislation will affect the long-term business prospects of the Terasen Utilities.

[7] CEC Submission, page 45, first paragraph

30. In the second last paragraph on page 17 CEC says "If the GHG targets are to be met then throughput will have to decrease". At the second paragraph on page 19 CEC says:

> "In the longer run Terasen may be faced with a requirement to contribute towards an 80% reduction in GHG emissions by 2050. This will require a further 34% reduction beyond converting everyone to high efficiency homes."

31. That future identified in that submission of CEC is similar to the "Technology Roadmap" report discussed in paragraphs 74 to 76 of the Initial Submissions; potential scenarios such as this create uncertainty for the long-term natural gas business in British Columbia.

32. CEC in its last paragraph on page 15 says "The evidence is that government does not want policy incentive use of energy which would increase GHGs", and then quotes from the response to CEC information request 1.23.1:

> "targets were announced and enacted into law. The GHG targets have changed customers and competitor's behavior and attitudes towards natural gas, which will likely have long term consequences to Terasen Utilities natural gas business."

Below that quotation CEC says, in the third paragraph on page 16:

> "The CEC submits that Terasen will not receive government policy accommodation for enhanced throughput of natural gas in BC, which would increase BC's contribution to climate change issues."

And also says in the fourth paragraph on that page:

> "The CEC submits that the Terasen business risk issue will not be clearly resolved until the full implications of the government's response to Terasen's potential positive contribution to reducing GHGs are understood."

33. In the first paragraph of Section 2.1.8 of the CEC Submission (page 20) CEC states:

> "There is little question that Terasen will be affected by the government policy affecting public buildings and institutions, whereby they are being mandated to become GHG neutral."

34. At paragraphs 13 and 14 BCOAPO suggests that the following paragraph is hyperbole and not useful.

> "Government policy that discourages consumers from using natural gas will have the effect of reducing throughput volumes on the TGI system and reducing the attachment of new customers. The recovery of fixed costs from a smaller customer base, and on lower throughput, leads to rate pressure for the remaining customers. Left unmitigated and unchecked, these effects can lead to loss of existing natural gas customers and a potential "downward spiral" in which the risk of non-recovery of invested capital increases and assets potentially become stranded."

While BCOAPO may suggest the contents of that paragraph are hyperbole, BCOAPO fails to dispute any specific part of the paragraph. The Terasen Utilities submit that the contents of the paragraph are a reasonable representation of the potential effect of provincial government policies. In contrast to its submission in this proceeding, in other proceedings before this Commission BCOAPO has argued against the use of natural gas for space heating and has said that its seems inevitable that climate change policies, carbon pricing and the public drive for clean renewable energy will impact Terasen's operations (see the quotations from BCOAPO submissions quoted in paragraphs 59 and 62 of the Initial Submissions).

35. The Submission of BCOAPO appears to overlook the positions that the same organization has taken in other proceedings, some of which were quoted in the Initial Submissions. For example:

> "As a natural gas utility, they are in an admittedly more difficult position here in British Columbia than they would in many other jurisdictions, both in North America and internationally, because they are fighting to survive in a jurisdiction where they aren't the clean generation option. That does not, however, justify overlooking the simple truth: we have cleaner options more in line with planetary imperatives and the public's desire to take positive action to reduce their carbon footprint."[8]

36. At page 9 ICG disagrees (without referring to any evidence) that fuel switching has diminished demand for natural gas, saying that the government's position on fuel switching remains unsettled, and quoting part of a response by Mr. Jespersen. The complete response indicates that BC Hydro, which acts as an agent of the provincial government, no longer encourages the use of natural gas for space heating:

> "There is, I would suggest, an abundance of confusion on what the province's position is on that topic. But what we do know, that they are the sole shareholder of B.C. Hydro. We do know that B.C. Hydro previously did incent consumers to avoid electricity load, particularly as it related to space and water heating. And that that is no longer the case following the Energy Policy announcements and the environmental plans that were put forward by the province."[9]

37. It is obvious that ICG did not consider the reference in the Throne Speech to Burrard Thermal (in the Opening Statement of Mr. Jespersen and quoted in paragraph 51 of the Initial Submissions) when making its submission that fuel switching has not diminished the demand for natural gas. The Throne Speech has been followed by Direction No. 2 to this Commission

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[8] BCOAPO, Final Argument in BC Hydro 2008 LTAP, dated April 27, 2009, page 8, as set out at Application, Exhibit B-1, Tab 1, page 6, and quoted in paragraph 55 of the Initial Submissions

[9] Tr 2, page 90, ll. 15 - 24

that requires the Commission to exercise its powers and perform its duties in accordance with the criterion that BC Hydro must plan to rely on Burrard Thermal for no more than "0 gigawatt hours of firm energy per year". Direction No. 2 reflects policy objectives of the provincial government, and is an example of the uncertainty associated with the implementation of these policy objectives; the "0 gigawatt hours" is in contrast to BC Hydro's proposal to reduce its reliance on Burrard Thermal to 3,000 gigawatt hours for planning purposes and Commission's decision to decline to endorse that proposal.[10] The reduced role of Burrard Thermal, and uncertainty respecting its long-term role as a BC Hydro resource, creates more uncertainty for TGI.

38. At page 20, line 4, JIESC says that the risk argument hit an absurdity when two Fortis subsidiaries are arguing that a shift from natural gas to electricity would increase their risk profile, referring to page 7 of the Submission of FortisBC. While JIESC's argument may sound good, it is without merit. The fact is, the provincial government policies can adversely affect both TGI and FortisBC. First, there is uncertainty for both utilities created by lack of knowledge of the long-term impact of the policies, and the implementation processes (e.g. Direction No. 2 respecting Burrard Thermal) that may not be well-considered. Second, to the extent that the provincial policies cause space heating load to move from natural gas to electricity, TGI will lose customers and throughput, while FortisBC will be required to source new electric supply at higher cost to meet a peak winter load. Policies that are not well-considered can adversely affect, and create uncertainty for, many participants in the energy market.

39. In the second last paragraph on page 14 CEC says that neither Terasen nor its customers have specific GHG emission targets, and goes on to state: "However, Terasen's customers are subject to the carbon tax and will experience increased price pressure, which they will have to compare to their alternatives". In the next paragraph CEC says:

> "The CEC submits that Terasen's and its customer's issues for continued competitiveness will revolve around the degree to which GHG reductions are achieved through (l) loss of customers to alternatives (2) displacement of customer demand with alternative supply (3) increased efficiency of use (4) increased sourcing of biogas."

That submission is a short summary of potential impacts of government policies and legislation on the Terasen Utilities. Achievement of government policy objectives will lead to loss of

[10] Page 115 of the Commission's July 27, 2009 Decision on BC Hydro's Application for Approval of the 2008 Long Term Acquisition Plan

customers and/or reduced throughput. This is an increase in the business risks of the Terasen Utilities.

40. BCOAPO states at paragraph 16 that in a question Commissioner Harle correctly identified that the 2007 Energy Plan has emphasis on the development or furtherance of a robust oil and gas industry in B.C. While the Energy Policy does refer to development of the oil and gas industry, the provincial government policies relating to the consumption of natural gas in the province do not display the same encouragement. As Mr. Jespersen said in his response:

> "We find the references very strong towards resource development and the infrastructure required to support that resource development. On the other end of the spectrum when you move to the consumption side of the equation, we see the focus of energy policy being very electric-centric."[11]

41. BCOAPO refers at page 6 of its Submission to provincial government initiatives such as the Gateway Project and the Northern energy corridor, which lead to its position that provincial government policies have not materially increased Terasen's business risk. The Terasen Utilities do not understand how projects such as the Gateway Project and the Northern energy corridor could be considered as factors that affect the business risks of the Terasen Utilities.

FACTORS AFFECTING GAS USE

42. Cost competition between electricity and natural gas will affect the use of natural gas. In the fourth paragraph on page 33 of its Submission the CEC states:

> "The CEC submits that Terasen's points with respect to the potential for change to its competitive position are valid and should be considered by the Commission."

43. CEC acknowledges that TGI is not cost competitive in low usage (multi-family) dwellings. At page 38:

> "The Commission should allow for the fact that Terasen is likely correct with regard to the low usage end of BC Hydro rate designs that Terasen may not be fully competitive against electricity for these markets."

44. A large portion of the CEC Submission relates to factors affecting electricity prices and the relative cost to consumers of electricity and natural gas. There are similar comparisons in the submissions of other Intervenors. At a high level, the CEC submissions can be fairly

[11] Tr 3, page 274, ll. 13 - 18

characterized as a comparison of long-run marginal costs of electricity and the price of natural that includes a spot or near-term natural gas commodity price.[12]

45. The Figures included at pages 21 to 23 of Tab 1 of the Application set out the residential annual natural gas and electricity costs in the TGI service area. Those figures show that at the current time the annual cost of natural gas for a residential customer is less than the cost of electricity. Those Figures also show that as recently as July 2008 there was virtually no difference between those costs, and that natural gas costs were much lower in the 1990s. This is information that the Terasen Utilities included in the Application. Another view of cost information is in the graph from page 8 of the BC Hydro Service Plan, August 2009 Update (Exhibit B-16) reproduced at page 9 of the Initial Submissions. That graph displays the relative change in BC Hydro and Terasen Gas rates since 1996; and graphically shows that over the period since 1996 the relative cost of natural gas service to consumers has increased significantly more than the cost of electric service.[13]

46. At lines 31 and 32 on page 23 JIESC says that the BC Hydro Tier 2 rate will be triggered in most residential water heating uses. That is not correct. BC Hydro's Tier 2 Rate is not the trigger for most residential water heating requirements. Water heating is typically a baseload load; consumers will tend to use the same amount of hot water all year around. The trigger that may cause them to be over the threshold into the Tier 2 rate structure is the seasonal heating load. In smaller units (condominiums and apartments) which are heated with electricity the space heating requirements more than likely will not come from Tier 2. This is consistent with many responses to information requests (CEC 1.20.4, 1.29.1, 1.29.2, 1.30.2, 1.30.3; and BCUC 1.22.1, 1.31.4). It is also consistent with the BC Hydro Service Plan which states that 70 percent of the residential sector will pay the same or less under the RIB rate structure.[14]

47. At page 24 CEC lists what it refers to as “potential well known impacts on BC Hydro electric rates” which should be assessed by Terasen. At page 32 CEC says “The competitive position of natural gas versus electricity should be viewed based on the long-term rates forecast for electricity prices from the BC Hydro LTAP”. That statement is inconsistent with the introduction of the list on page 24 in which CEC has included six or seven items not in the LTAP

[12] At page 35 CEC says “The long run marginal cost of new electric supply is at a minimum a relevant comparator for determining competitive advantage”

[13] The Natural Gas line (commodity) and the Terasen Gas excl. Commodity must be added together for the relative change in the delivered natural gas cost

[14] See paragraph 71 of the Initial Submissions

forecast. The idea that the review of the competitive position should be based on the LTAP rate forecast is also inconsistent with the suggestion that Terasen should be assessing other items that CEC has listed on page 24.

48. Future electricity prices are uncertain due to the extent of, and cost of, resource additions and other factors, but what is known is that BC Hydro does have major, historic low-cost, hydro-electric resources, as discussed at paragraph 29 of the Initial Submissions, and due to the size of those resources, relatively low electric prices will continue long into the future.

49. On the other side of the cost comparison between the cost of natural gas and electricity to consumers is the commodity price of natural gas. It appears to be common ground between the Terasen Utilities and Intervenors that natural gas commodity prices are volatile. At page 28 JIESC quotes from page 4 of the written evidence of Dr. Booth, where at lines 17 to 19 he said: "if anything the drop in the price of natural gas may have marginally decreased TGI's risk. However, I do not regard this as material since natural gas prices are volatile …". At paragraph 21 BCOAPO also acknowledges this fact where it says "While the volatility of natural gas commodity prices means that the forward curve cannot be taken as gospel, ". CEC confirms the volatility of gas commodity pricing when it says at page 39 that "Terasen has provided the comparative differences in its competitive position from July 2 2008 which changes dramatically to May 11 2009 to July 2009". [emphasis added]

50. The volatility of natural gas commodity prices can not only increase the cost of natural gas to consumers to or above the cost of electricity, it can also result in the loss of existing natural gas customers. As stated by CEC at page 55:

> "The commodity markets will continue in the future to have significant price spike responses to events which affect the supply and demand balance. The CEC submits that these will, as in the past, cause certain customers to make changes and shed their requirements for natural gas. The CEC submits that once the habits are changed in response to the spike a good portion of the customers will not return to take Terasen service."

51. Natural gas commodity prices are addressed in paragraphs 77 through 80 of the Initial Submissions. As set out in paragraph 80, the forecast future natural gas commodity prices are not significantly different than the $7.00 Cdn/GJ price referenced as a future price at the time of the 2005 hearing.

52. In addition to annual bill costs, capital costs must be considered in cost comparisons between natural gas and electricity. Electricity is required in virtually every residential and

commercial building, so electricity will be connected, but a gas connection is not necessary. Developers incur higher capital cost for the installation of natural gas, so this will only occur if the purchaser desires natural gas and is prepared to pay for the higher cost. This subject was dealt with in paragraphs 26 to 28 of the Initial Submissions. CEC acknowledged that consumers are considering alternative sources of energy, and developers are affected by capital cost considerations, when at page 42, referring to Terasen market research, it said:

> "Terasen has found that about 1/3 of those surveyed are looking to replace their natural gas heating with an alternative. The survey has shown that this is not a top of mind issue. The conclusion is that it remains likely that builders and developers are influential in making decisions on heating systems and are going to be influenced by the costs of installation."

53. Government regulations can increase capital costs, as noted at page 44 by CEC:

> "Terasen has found that the code changes for home heating applications have doubled costs. This is likely due to a minimum efficiency requirement, vent sharing not being allowed and further venting requirements.
>
> Terasen offers that water heaters have not had any significant changes in performance since 2004. The best approach to water heaters is to reduce stand by losses. Terasen elaborates that the life expectancy has not changed in the past number of years."

54. The submissions of Intervenors regarding natural gas being supplanted as an energy source for hearing purposes in the TGI service areas are largely limited to cost comparisons between natural gas and electricity. CEC says at page 34 "Ultimately the business risk is really about the customer bill cost for obtaining the heating the customer requires". The Terasen Utilities submit that the customer bill cost is only one factor to be considered in the evaluation of business risk; public perception and government regulation are important factors in the energy choice that cannot be ignored. The Terasen Utilities further submit that these factors will play increasingly more important roles in the future.

55. The importance of public perception, and the importance of the views of individuals and organizations on climate change issues and their impact on natural gas consumption, is not mentioned by BCOAPO in its submissions. The Submission of BCOAPO does not even acknowledge that it is an organization that represents a portion of the public in proceedings before this Commission in which it seeks to influence the use of natural gas for space heating. The quotation from the April 2009 Final Argument in the BC Hydro LTAP proceeding that is included in paragraph 59 of the Initial Submissions is a very good example of public opposition to natural gas for space heating. That opposition is not based on cost considerations; it is based on perceptions regarding GHG emissions.

56. Government regulation is not limited to increasing costs (such as the venting requirements referenced above); government regulations can also mandate results. Again, focusing on cost considerations as the Intervenors have done in their submissions, fails to take into account legislative requirements. Consumers in North America purchase automobiles with catalytic converters not because of cost comparisons, but because of government regulation directed at concerns over air emissions; coal was supplanted as a heating source in the United Kingdom, not because of cost considerations, but because of government regulation directed at concerns over air quality.

57. The submissions of the Intervenors would have the Commission believe that if the annual cost of natural gas to the consumer is less than the annual cost of electricity then the Terasen Utilities do not have an increase in business risk from 2005. The Terasen Utilities submit that by focusing on cost comparisons the Intervenors' submissions fail to take into account the uncertainty and business risks associated with non-cost factors such as public perception and changes in behaviour that are required by government regulation. There can be no doubt that the mantras of provincial government energy policy are the promotion of "clean" forms of energy, such as "clean electricity", and the reduction in GHG emissions.

58. Another factor to consider in the business risks of the Terasen Utilities is that of alternative energy sources. At page 29 CEC said:

> "Terasen submits that Alternative Energy Solutions (AES) are becoming cost competitive and that a key strength is that they are popular with public perception. Terasen notes that the AES against which Terasen competes are geothermal, solar thermal, biomass, waste heat recovery." [referring to the response to CEC IR 1.12.2]

59. Government policies that encourage the consumption of energy from alternative sources over consumption of energy from fossil fuels will adversely affect the Terasen Utilities, and increase business risk.

60. At pages 24 and 25 JIESC says "Alternate energy is encompassed in increased conservation or declining use per customer. There is nothing on the record in this proceeding to suggest it will impact TGI's ability to earn its return." That submission of JIESC ignores the potential for an alternate energy source to replace the use of natural gas, and ignores the potential for an alternate energy source to be the choice for a building rather than natural gas. Consider this scenario: a residential house that has had space heating and water heating by natural gas for the past 50 years is demolished and a new residential house is constructed, but

its primary heating source is geo-thermal with electric back-up. The loss of the natural gas customer at this location is not "encompassed in increased conservation or declining use per customer".

61. As set out in paragraph 37 of the Initial Submissions, TGI is affected by reduced customer additions and declining use per customer. CEC concedes that government policies will adversely affect the ability of the Terasen Utilities to add customers, when it says at page 20 "The CEC submits that these policies as mandated will stem the potential for Terasen to add new customers in the future …".

62. In its Submission CEC makes a number of statements about TGI's ability to attach new customers in the future:

> "The CEC submits that the government's GHG policy makes the question of Terasen's competitiveness in the new construction markets somewhat moot and thus the CEC urges the Commission to stay focused on the competitive advantage in retaining the core market."[15]
>
> "Terasen notes that the market profiles for its customers are changing. Single family dwelling units are currently about 80% of Terasen's existing customer base. However, multi-family dwellings are increasing to about 66% of all future addition. Given that Terasen has a much lower capture rate in this market there are business implications for the load growth."[16]
>
> "The CEC submits that it would not make sense to try to capture all future MFD as natural gas customers because the implications for meeting the Province's GHG targets could become more difficult."[17]

63. Paragraphs 37 through 39 of the Initial Submissions point out that TGI has experienced, and will continue to experience, lower customer additions, particularly due to an increase in the proportion of multi-family dwellings, and the low capture rate for multi-family dwellings. The Terasen Utilities submit that there is nothing in the submissions of the Intervenors that disputes this fact, and CEC acknowledges that provincial policies will make customer additions even more difficult for the Terasen Utilities.

64. With respect to declining throughput, at paragraph 32 BCOAPO says this is not a new risk. JIESC at page 24 says "This is not new and has been raised by Terasen in previous ROE proceedings". Paragraph 33 of the Initial Submissions identified that the use of gas per account

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[15] CEC Submission, page 35, first paragraph

[16] CEC Submission, page 29, second paragraph

[17] CEC Submission, page 54, fourth paragraph

of TGI continues to decline, and acknowledged this as a risk factor identified in the 2005 Application, which continues to occur.

65. At lines 21 and 22 on page 25 JIESC says that BC Hydro is also experiencing conservation [i.e. declining use per account], inferring that this will increase BC Hydro's rates. It is true that BC Hydro is experiencing conservation, but the JIESC argument ignores that conservation by BC Hydro customers decreases the need for new generation and transmission resources, and thereby reduces the quantity of higher priced resources required. In contrast, for the Terasen Utilities, reduced throughput only increases the per GJ delivery margin, since gas commodity supply costs are already market based and because those gas supply costs are a pass-through charge to customers. For the Terasen Utilities conservation and declining use per account does not affect the commodity price of natural gas, it only causes an increase in the per unit delivery margin. In contrast, for BC Hydro conservation and declining use per account tempers the cost of electricity, both through decreasing the need for resource acquisition and decreasing the need for incremental transmission.

66. CEC has a section on declining throughput starting at page 50. CEC says most of decline is due to decrease in industrial throughput, but CEC does not dispute that there is declining use per account in the residential market. At page 51 CEC refers to declining use per account for residential customers and says that at "the current rate of decline Terasen might be at about half the throughput in 50 years". CEC then goes on to say that if customer growth continues at current levels Terasen may have over 1.2 million customers. These statements and others by CEC highlight the increased uncertainty that the Terasen Utilities face. At page 51 CEC suggests continued growth in number of customers, but as noted above, elsewhere CEC appears to concede that government policies mean fewer customer additions. Further, CEC also acknowledges competition from alternate energy suppliers. As noted at paragraphs 30 and 31 above, CEC submits that if GHG targets are to be met then throughput will have to decrease, perhaps dramatically. The government policies discourage GHG emissions. The long-term ramifications of those policies on throughput, use per account, and customer additions on the systems of the Terasen Utilities are very uncertain.

67. In the last paragraph on page 51 and the first paragraph on page 52 CEC says:

> "So long as Terasen maintains the customer base then there would be little likelihood of any kind of business risk involving an inability to earn a return on capital and recover capital invested.
>
> This situation would not quite fit with the Province's GHG targets but is at least directionally getting toward the right place."

68. The first quoted paragraph above says that while the Terasen Utilities are experiencing declining use per account, and decreased customer additions, and even though CEC acknowledges that government policies will affect both throughput and the attraction of new customers, in some manner that is not described the Terasen Utilities will maintain their customer base. This view of life fails to recognize that the "customer base" is not static and is not captive to the Terasen Utilities. Housing stock is replaced over time, and heating equipment is replaced over time. Single family homes are replaced by multi-family dwellings, of which electricity currently receives the overwhelming heating market share, and respecting which government policies may decrease natural gas' market share. If a single family home is replaced by a similar dwelling, or an existing furnace or water heater is replaced, a capital investment decision has to be made by the consumer (or developer). That decision will be influenced by government policies and public perception; the decision may not be made on the basis on the annual energy bill, but on the basis of non-cost considerations such as how "green" the energy source is perceived to be.

69. The second paragraph from the CEC Submission quoted in paragraph 67 above appears to be saying that even the maintenance of the customer base of the Terasen Utilities "would not quite fit" with the objectives of government policies. This statement dramatically highlights the uncertainty and business risks arising from provincial government policy objectives that affect the Terasen Utilities.

70. CEC and other Intervenors suggest that if TGI customers reduce their consumption through efficiency then the Terasen Utilities will be more competitive and benefit. At page 25 CEC says that "Terasen needs to adjust its view of competitive position to one based on the relative bill cost for providing heat". BCOAPO expresses a similar view at paragraph 33, as does ICG at page 8.

71. The Terasen Utilities submit this reasoning is flawed. The most specific example of the "efficiency is Terasen's salvation" argument is at page 43 of the CEC Submission which says:

> "The logic of the efficiency improvement from 95 GJ/yr to 51 GJ/yr for a natural gas price made up of $7/GJ commodity cost and $5/GJ delivery cost for a total of $12/GJ cost, if the whole system were to be improved to the high efficiency 51 GJ/yr level and the delivery costs were to increase by 49%, would be a bill reduction from about $1140 per year to $737 per year."

The source of the 51 GJ/year is the response to CEC information request 21.6.[18] The "51 GJ" (50.7 GJ in the response) is an estimate of the annual consumption of natural gas from a new high efficient home with above average insulation and a high efficiency furnace. [emphasis added] The "49%" increase in delivery costs is footnoted on page 43 of CEC's Submission as being from the response to CEC information request 22.2. The 49% increase in delivery costs relates to a 33% reduction in GHG emissions, which equates to a 33% reduction in consumption of natural gas. While the reduction in commodity cost appear to have been calculated properly, the reduction in consumption in the quotation above is not 33%, but rather is 46%. A 46% reduction in consumption would result in an 86% increase in delivery margin (not the 49% in the quotation).

The arithmetic in the quotation is flawed, but more important than the arithmetic is an incorrect assumption that is implicit in this "efficiency argument". The example in the quotation assumes that current consumers of natural gas remain consumers of natural gas but at lower consumption levels. The natural gas distribution system has fixed costs which must be recovered from customers. If throughput declines but customers remain on the system the delivery margin increases. But if customers leave the system the fixed costs must be recovered from the remaining customers, whether or not their throughput has changed.

Efficiencies of the magnitude used in the CEC submission are not accomplished through the replacement of a furnace; efficiencies of that magnitude relate to construction of a new highly efficient house, or a major refit with significant expenditures on energy efficiency. If a new house is constructed to replace an existing structure, or a major refit is undertaken, the energy efficiency rating of the new or refitted house will apply whether it is heated with electricity, or natural gas, or an alternate energy source. The new or refitted house may use an alternate energy source or electricity because of consumer choice, or may be required by regulation to limit or eliminate GHG emissions (for example, as discussed by Mr. Jespersen and referenced

[18] Exhibit B-4, page 69

at paragraph 63 of the Initial Submissions, the City of Vancouver is contemplating as a condition of a permit for renovations a GHG reduction requirement).

Alternatively, the house consuming 95 GJ a year, and other similar houses next to it, may be knocked down and replaced with a multi-family dwelling that is heated by electricity; and since the units in the multi-family dwelling are relatively small their heating requirements are met within BC Hydro's Tier 1 rate.

If, instead of assuming that GHG emission reductions are achieved by all customers remaining on the system and reducing their consumption, it is assumed that a portion of customers leave the system, the arithmetic in the example can change significantly.

72. The Terasen Utilities do not dispute that customers can reduce their consumption through efficiency and can thereby achieve annual energy bill savings. The Terasen Utilities do dispute that such action on the part of consumers will significantly reduce the business risks of the Terasen Utilities.

TGI AS AN ALTERNATE ENERGY SUPPLIER

73. At page 9 CEC notes in the third paragraph that Terasen has proposed solutions to deal with the perceived threats, including pursuing alternative energy solutions as a business itself, saying that Terasen is doing this to try to keep natural gas as part of the solution. CEC also notes that Terasen submits that the new alternative energy solutions will mitigate the risk to a degree, if approved; and if Terasen is successful some shared costs can be allocated to the new alternative energy business, offsetting loss of throughput (referring to transcript pages 128 to 133).

74. CEC at page 30 says that it is encouraged to see Terasen looking to mitigate its strategic position by competing for the new markets with alternative energy solutions, and at pages 30 and 31 CEC suggests that the potential entry of Terasen into the area of alternative energy solutions should be seen as a positive contribution to managing business risk. The concept of a "piped energy utility" was discussed in paragraph 86 of the Initial Submissions. If pursuit of alternative energy solutions within the utility is approved, and if they are successful, they will only result in the sharing of some overhead costs. TGI has a rate base of approximately $2.5 billion; the mitigation of business risk associated with alternative energy solutions, if any, would be minor.

FIRST NATIONS RISKS

75. At pages 9 and 10 ICG submits that a duty to consult exists for utilities in every jurisdiction, and that there is nothing unique about British Columbia that increases Terasen's business risks. BCOAPO at pages 8 and 9 says "Aboriginal rights and title are a dynamic process that will continue to evolve for the foreseeable future" and "Notwithstanding this uncertainty in the law, BCOAPO maintains that it has little impact on Terasen's business risk and competitive position". At pages 25 and 26 JIESC says First Nations risks are minimal.

76. The Terasen Utilities disagree with the suggestions that the risks are similar across Canada and disagree that the risks are minimal. There may be a duty to consult in other Canadian jurisdictions, but as discussed in paragraphs 81 and 82 of the Initial Submissions, there are few treaties in B.C. and overlapping territorial and aboriginal title claims. The primary issue in respect of First Nations risks is the increase in these risks since 2005, and none of the Intervenors suggested that there has been no increase in this risk in the past five years. BC Hydro and BCTC are also faced with business risks associated with aboriginal title and rights claims, but that supports the position of the Terasen Utilities that the business risk has increased since 2005.

CONCLUSIONS RESPECTING BUSINESS RISK

77. Energy policies and legislation that have been introduced since 2005 have profound implications for the Terasen Utilities. The full ramifications of the energy policy initiatives of the provincial government are not known today, but it is without doubt that uncertainty about the long-term prospects of the natural gas distribution business in B.C. has increased, and with that increase in uncertainty the business risks of the Terasen Utilities have increased. The business risks of the Terasen Utilities have also increased as a result of the greater role of the rights of First Nations in the utility business in British Columbia.

C. CAPITAL STRUCTURE

78. In the Initial Submissions capital structure issues are addressed commencing at paragraph 91. Those submissions are not repeated in this Section.

79. At page 1, lines 23 and 24, JIESC says that it "believes that all of the resources TGI requires, including capital, must be obtained at the lowest possible cost", and at page 28, lines 9 to 11, says "Terasen's customers have a right to expect capital structure will be efficient and the

equity component will be as small as possible". In the 2006 Decision the Commission Panel at page 8 addressed a similar argument from JIESC:

> "As for the JIESC's lowest cost argument, the Commission Panel shares the view of the NEB, which recognized that "lowest possible" was not the appropriate test when it stated, at page 25 of its RH-2-94 Decision on generic cost of capital:
>
> > "Contrary to what some parties advocated during the hearing, the Board is of the view that it is not appropriate to over-leverage a pipeline in order to identify the minimum acceptable deemed common equity ratio possible".

80. The Terasen Utilities submit that "lowest cost" or "as small as possible" is not the correct test, and JIESC's submission should not be accepted by the Commission. The Commission should determine a capital structure for TGI that appropriately reflects the business and financial risks of the company, and which is in line with its North American peers.

81. In dealing with TGI's request for an increased equity component, JIESC, at page 4, line 16, says there is some irony in the fact that one of the causes of the deterioration of the Terasen metrics is reduced income taxes, and at line 19 says "Terasen shareholders should not be able to use a past or future benefit to them to increase their returns further". JIESC should be aware that in respect of TGI and other regulated utilities in Canada, the benefit of a reduction in the income tax flows through to customers in the calculation of rates.[19] Further, increasing the equity component does not increase the returns on the equity invested, rather it requires the investment of greater equity.

82. At page 12, line 21 and page 4, line 16, JIESC indicates that TGI has an "A" rating by Moody's. The Moody's rating actually is "A3". This is an important distinction as the A3 rating is only one notch above BBB+, which is a level at which even Dr. Booth believes TGI should not be.[20]

83. At page 4, line 22, and page 30, line 2, JIESC suggests the issuance of preferred shares would be preferable to more common equity to deal with metrics problems. The Terasen Utilities submit that preferred shares are inefficient, and not the appropriate means of addressing credit rating metrics. In response to Commission Panel information request 2.0, TGI explained why the issue of preferred shares is not suitable as a proxy for common equity.[21] The response is lengthy, and will not be repeated here. The response does point out that rating

[19] See the written evidence of Ms. McShane at page 77, lines 1935 to 1937
[20] See paragraph 120 of the Initial Submissions
[21] Exhibit B-11, page 4

agencies typically accord in the range of 25% - 70% equity treatment to rate reset preferred shares, and “Moody’s typically assigns the lowest equity treatment, in the 25% to 50% range”; which means that Moody’s views these preferred shares more as debt instruments, and therefore the issuance of preferred shares would not address concerns with credit rating metrics. The response also points out that since the dividends on preferred shares are not tax deductible, on a debt equivalent basis, the debt component is an expensive form of debt.

84. At page 4, lines 10 to 12, and page 29, lines 13 to 15, JIESC refers to Union Gas and Enbridge Gas Distribution, suggesting that, based on the evidence of Dr. Booth, TGI is less risky than Union and EGDI. In his evidence Dr. Booth does not state that he considers TGI to be less risky than Union and EGDI. As set out in paragraph 90 of the Initial Submissions, Ms. McShane was asked if TGI has greater lesser or equivalent business risk compared to EGDI, Union Gas and ATCO Gas; her conclusion was that on balance TGI faces somewhat lower short-term revenue risks, but higher competitive risks than the other three LDCs. As shown in Figure 3.2 on page 26 of Tab 1 of the Application, electric prices in the service areas of Union and EGDI are higher than BC Hydro prices. Neither Union nor EGDI are subject to government policies and legislation similar to the energy-related policies of the B.C. provincial government. The Terasen Utilities submit that the risks of TGI are greater than those of both Union and EGDI.

85. JIESC and BCOAPO both refer to the TGI’s debt issuance in February 2009. In paragraph 128 of the Initial Submissions it was acknowledged that TGI has generally been able to access debt capital, although Mr. Dall’Antonia gave evidence that during part of the financial turmoil of the last year TGI was not able to access debt capital on reasonable terms. However, as said in paragraph 116 of the Initial Submissions, the Commission should ensure to the extent it can, that the financial integrity of TGI and the other public utilities it regulates is not reduced to the point where the utility may have difficulty accessing capital markets. It is not appropriate to wait until after credit access issues arise to address those issues. There is no dispute in the evidence of this proceeding that utilities need to be able to access capital markets even under difficult market circumstances. The Terasen Utilities submit that the Commission should increase the equity component of the TGI capital structure to 40 percent, as requested in the Application.

D. RETURN ON EQUITY

86. The submissions of JIESC contain most of the arguments of the Intervenors relating to return on equity, and accordingly this Section of the Reply Submissions of the Terasen Utilities primarily addresses the JIESC submissions.

87. The submissions of JIESC and other Intervenors are notable in that they do not respond to many items addressed in the Initial Submissions of the Terasen Utilities.

88. JIESC has most of two pages of its Submission (pages 5 and 6) dealing with Witness Qualifications. The JIESC strategy appears to be: when the facts do not support your arguments, seek to discredit the qualifications of the witnesses of the other parties. Further, the JIESC fails to even mention the qualifications of Dr. Vander Weide, whose resume in Appendix 1 of his written evidence[22] sets out his education and professional experience, lists numerous publications and his participation in more than 400 regulatory and legal proceedings.

89. At page 47 JIESC submits that the TQM Decision is not as favourable as Terasen suggests. It is correct that in the TQM Decision an ATWACC methodology was adopted, which the Terasen Utilities are not seeking in this Application. However, that is not to say that the TQM Decision is not favourable, or important. The NEB acknowledged that the formula approach (that the NEB had used since 1995) no longer produced a fair return for TQM, and adopted a methodology that translated into an increase, on a combined basis, to TQM's return on equity and equity component of capital structure. The TQM Decision acknowledged that TQM needs to compete for capital in a global market place. JIESC says at lines 17 to 19 that the TQM capital structure was set at the same debt/equity ratio as TransCanada. That is not correct; the NEB did not set a specific capital structure for TQM. JIESC correctly notes that the TQM Decision applies to 2007 and 2008; but that is because those are the years to which the application related. The ROE result for those years was significantly higher than would have resulted from the NEB AAM. As indicated by JIESC, the result of the TQM Decision would have been a 9.7% return on equity if the TQM equity component was 40 percent, but the actual TQM common equity component was 30 percent (as set out in Schedule 4 of Ms. McShane's written evidence), and the return on equity at a 30 percent equity component is in the range of 11.6 to 11.8 percent.[23]

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[22] Exhibit B-1, Tab 4, pages 64 to 78, of 87

[23] Written evidence of Ms. McShane, page 17, lines 457 to 459

90. The JIESC refers in a number of places to the Fortis Inc. purchase of Terasen Inc. in the spring of 2007 at a market to book ratio of 1.7, as does the BCOAPO Submission. The purchase of Terasen Inc. by Fortis Inc. did not cause any change in the shareholding of any of the Terasen Utilities, their shares continue to be owned by Terasen Inc., but are now indirectly owned by Fortis Inc.

91. The Terasen Utilities submit that the appropriate return on equity and capital structure of public utilities regulated by this Commission should be determined on the basis of the stand-alone principle. At page 25 of her written evidence Ms. McShane listed principles that should be respected when establishing both the cost of capital and a reasonable capital structure. Ms. McShane noted that TGI is a stand-alone regulated entity that raises its own debt on the strength of its own business and financial risk profile, and accordingly the application of the stand-alone principle is not an issue.[24] There is no evidence, or position taken, in this proceeding that suggests otherwise. In the application of this principle the current and future circumstances of the utility under consideration should be examined, and the appropriate determinations made. The return on equity and capital structure of a utility should not be affected by the identity of its shareholders, the capital structure of the shareholder, or by the price that may have been paid to acquire a direct or indirect interest in the utility.

92. In the cost of capital hearing that led to the 2006 Decision the Intervenors made submissions respecting the purchase of Terasen Inc. (which then included interests in oil pipelines) by Kinder Morgan Inc. ("KMI") in 2005 at a market to book ratio of 2.7. The acquisition by KMI and submissions of Intervenors in that proceeding are discussed at section 2.4 of the 2006 Decision. At page 12 of the 2006 Decision the Commission Panel summarized submissions of Intervenors:

> "BCOAPO argues that the gas distribution companies were an integral reason that a premium was paid by KMI. This position is based on the expert evidence of Dr. Booth, who testified that because TGI represents 65 percent of the earnings of TI, "part of that 2.7 times clearly reflects the fact that they were happy with Terasen Gas" (BCOAPO Argument, p. 10).
>
> The CEC argues that the KMI purchase at its high valuation is conclusive evidence in and of itself that the existing ROE and debt/equity structure is delivering a more than fair, just and reasonable return to departing shareholders and the new shareholders involved in the purchase (CEC Submission, p. 3).
>
> The JIESC takes the position that when the allowed return equals the investors required return, the market to book ratio will be equal to one. The Intervenor cautions that if the ROE is set too generously, the market to book ratio will rise

[24] Written evidence of Ms. McShane, pages 25 and 26, lines 644 and 645, and lines 658 to 668

> and the customers will pay more than is necessary to attract capital (JIESC Submission, p. 4)."

93. At page 13 of the 2006 Decision the Commission Panel said:

> "There is no evidence before the Commission that any of the premium paid by KMI will be included in either of the Companies' rate bases and recovered from their customers. The Commission's role is to determine a suitable capital structure for the Applicants and return on equity for a benchmark low-risk utility and the KMI/TI transaction is not relevant to the Commission's determination."

94. The submissions by Intervenors in this proceeding are similar to the Intervenor submissions made in 2005. The Terasen Utilities submit that the result should also be similar; with the Commission finding that the Fortis Inc. acquisition of Terasen Inc., at a lesser market to book ratio, is also not relevant to the Commission's determinations.

95. JIESC incorrectly submits at page 13 that Terasen was unable to point to any "strategic factors" that Fortis Inc. received that might justify the premium. The Terasen Utilities, as indirectly acquired companies, may not be in a position to identify all strategic factors considered by Fortis Inc., but Mr. Thomson and Mr. Jespersen did identify factors:

> "The Terasen enterprise that was purchased by Kinder Morgan included a pipeline company that was subsequently sold and a water services business that was subsequently sold, and Fortis acquired three gas distribution utilities, some non-regulated business enterprises, and a holding company. So, Fortis was primarily an electric distribution holding company. They had some generation assets as well as some nonregulated property business, and were dispersed across North America.
>
> Fortis acquired Terasen Gas as a stepping stone to a diversification play, both geographically and into a completely different line of business that they felt was complementary to the electric business that they were in, and as a platform to diversify further into the United States where gas-electric combination utilities are more prevalent. And again I would put to the Commission, in a quest to seek the higher returns available to it through that enterprise.
>
> So there's a lot of different reasons why an acquirer might pay a premium to buy a company, and so I think that the premise of the question is somewhat flawed."[25]

> "Well, I think that Fortis, who has operated and operates across Canada, owns, as I said, electric distribution utilities across the country, has an expectation that it will earn a fair return and receive that through proceedings such as this one. And it has every expectation that the Commission will find and determine a fair return on equity over time.

[25] Mr. Thomson, Tr 2, page 56, l. 15 to page 57, l. 13

> As Mr. Jespersen said, we operate a business with a long-term view, and we invest capital in the ground for 50-60 years at a time. Our current parent had an expectation that over time it would be allowed to earn a fair return."[26]
>
> "Our shareholder was presented with a unique opportunity for an acquisition of the size and magnitude that rarely comes along. And that they placed great value on. And are prepared – were prepared, to pay a premium to ensure that they got, or captured, that opportunity. That premium that was paid is evidenced by opinions and what-not of the analyst community following that transaction, that the price that was paid was fair in comparable terms to what acquisitions of utilities in the North American space were.
>
> So, it was very much of strategic import to Fortis to expand their presence in the utility space within Canada but to expand the scope of their presence and capabilities, competencies, from electric to gas as well, with the long-term view of convergence of ownership in combination utilities, energy utilities in the continent, and to be well-positioned for opportunities that would present themselves in that regard in the future."[27]

96. Ms. McShane also discussed the subject of market-to-book ratios in response to a question from the Chairperson at transcript pages 572 and 573:

> "THE CHAIRPERSON: … My point is, are you aware of any jurisdiction that sets an ROE by working backwards from a target market-to-book?
>
> MS. McSHANE: A: No. I mean, the market-to-book is sort of what falls out of everything, but no, I mean, and no regulator can target a market-to-book, nor should they target a market-to-book.
>
> THE CHAIRPERSON: So if I were to -- you would agree with me, or your point you're making is that a company with a -- a utility with a market-to-book of more than 1.10 times is not necessarily over-earning.
>
> MS. McSHANE: A: No, absolutely not. Why? Do you see -- oh, you –
>
> THE CHAIRPERSON: I was -- okay. I mean, why not?
>
> MS. McSHANE: A: Well, because, I mean, there are lots of reasons that the price would be above book. First of all, you just -- you have a difference between, you know, economic value and GAAP. Second of all, you have the fact that the market price doesn't reflect just what the company is earning today. I mean, it reflects what investors expect the company to earn in theory forever. Obviously, you know, the nearer in time the more weight in the present-value sense those earnings get but, still, I mean, you know, you can at least look out, you know, 10 to 20 years to incorporate investor expectations. You pay a price for managerial talent.
>
> It's not just a question of, you know, the book value of the assets. I mean, it's what value the management of the company can bring to the business.

[26] Mr. Thomson, Tr 2, page 57, l. 17 to page 58, l. 2

[27] Mr. Jespersen, Tr 2, page 61, l. 10 to page 62, l. 3

> So there are all sorts of reasons that the market price is going to exceed the book value, in addition to the fact that, you know, investors don't look at I guess prices on an absolute basis. I mean, they are going to value on a relative basis. And so, you know, it wouldn't -- if the whole market as it is now, I think -- well, the U.S. market still -- I don't have a value for the TSX, but I saw the other day where the S&P 500 is -- I mean it's still trading at two times book. Well, you know, if you have a utility that's trading at 1.2, 1.5 times book, I mean, that doesn't seem to be anything but reasonable, relatively speaking."[28] [29]

97. The Terasen Utilities submit that the acquisition of Terasen Inc. by Fortis Inc. should not affect the determination of the fair return for the Terasen Utilities or the capital structure for TGI. The Terasen Utilities should be regulated on a stand-alone basis, and the price paid for the parent of those utilities is not relevant to the need to meet the fair return standard. Ring-fencing provisions, as discussed at page 11 of the 2006 Decision, are in place which are designed to insulate the Terasen Utilities from affiliates in the corporate family.

98. At page 2, line 19, JIESC says the equity risk premium test is the most appropriate test for determining a fair ROE. At page 33 JIESC quotes from Dr. Booth's description of the theory of the CAPM, which is the form of the equity risk premium test primarily used by Dr. Booth. At line 24 on that page JIESC says that "During the course of its argument, Terasen tried to discount the CAPM as overly theoretical". While it is fair to say that the submissions of the Terasen Utilities discounted the CAPM and argued that the Commission should put little weight on its results, those submissions were not strictly based on it being overly theoretical. Dr. Booth acknowledged that there has been 40 years' worth of empirical tests and there is still no resolution of the validity of the model.[30] Dr. Booth says at page 53, line 7, of his written evidence that there are known estimation problems with the CAPM[31], and Ms. McShane discusses problems with the CAPM in her Appendix B.

99. The major shortcoming of the CAPM in the context of determining the fair return for a regulated utility is not that the CAPM is theoretical, but that the model was never intended to measure the fair return on the investment in utility infrastructure. As discussed in paragraphs 146 to 148 of the Initial Submissions, the model is a tool to be used in portfolio management; it is intended to measure how the investment in an asset affects the overall riskiness of a portfolio

[28] Tr 4, page 572, l. 3 to page 573, l. 20

[29] See also the response to JIESC information request 46 e), at page 123 of Exhibit B - 5

[30] Paragraph 295 of the Initial Submissions

[31] Further discussed in the response to Terasen IR 29.1 in Exhibit C11-7

of investments.[32] JIESC has not taken issue with, or attempted to refute, those submissions of the Terasen Utilities.

100. Dr. Booth's own evidence casts doubt on the application of the CAPM in a regulatory proceeding such as this. At page 1 of Appendix H of his written evidence Dr. Booth discusses the regulatory framework and business risk. Dr. Booth recognizes that it is the return on equity of the public utility that is determined by regulatory commissions when he says at line 12 of that page that "the firm's accounting return on equity (ROE) captures the business, financial and regulatory risk, which together I term income risk", and at line 16: "The regulator can only directly affect the shareholder's income risk, since by definition investment risk is determined in the capital market. The bulk of the risk faced by investors in Canadian utility share is actually investment risk beyond the control of the regulator." The "investment risk" that Dr. Booth says is beyond the control of the regulator is the "non-diversifiable" risk, which is the only risk for which investors should be compensated under the CAPM theory. The "income risk" which can be affected by the actions of the regulator is the short-term and long-term business risks of the regulated utility.

101. Dr. Booth's classic CAPM model leaves the Commission in a conundrum. He says that the Commission has no control over investment risk, but the CAPM that he uses also says that investment risk is the only risk for which there should be compensation, and therefore the only risk that should be taken into account in the determination of the fair return of a utility. The only solution to this conundrum is to put no weight on Dr. Booth's CAPM evidence.

102. At page 2 JIESC submits: "there is a reason that "risk adjusted equity market premium" is the lowest of Ms. McShane's tests. There is only so far that one can push what the market risk premium is and there is a limit to how one can reasonably compare riskiness of utilities to the market. By comparison DCF and comparable earnings are black boxes with numerous judgements and are much less constrained by the facts." This submission just reinforces the arguments respecting the limitations of CAPM and equity risk premium approaches that assume there is a linear relationship between risk (measured by a single "risk" factor) and return. The assumption is not supported by the empirical evidence. The evidence of both Ms. McShane and Dr. Vander Weide shows that the actual returns on utility securities have been higher than

[32] At page 33, line 27, JIESC refers to a study of U.S. CFOs in support of the use of CAPM. There is nothing in the evidence that indicates how the CFOs made use of CAPM, but it is safe to assume that they were not using it to estimate the fair return for regulated utilities

the CAPM/risk adjusted equity market premium model would have predicted.[33] Ms. McShane's historic utility risk premium test, which JIESC does not refer to, and which looks at actual returns and risk premiums for utilities, supports the conclusion that the market returns for utilities have been higher than the model predicts. Dr. Vander Weide's analysis of historic market utility returns reaches that conclusion explicitly.

103. The other market cost of equity approaches (DCF and DCF-based risk premium) are not constrained by the simplistic linear risk/return assumption underpinning the CAPM (or risk adjusted equity market premium model). Those other approaches look directly at comparable utility expected returns from the perspective of what investors do expect or require from utility investments, as opposed to the "what investors should require" under the restrictive assumptions of the CAPM.

104. The Terasen Utilities take issue with the characterization of the DCF and comparable earnings tests as "black boxes". The criteria used by Ms. McShane for selection of companies of comparable risk are objective and explicit; the criteria focus on characteristics to ensure comparability. The way the returns are measured in both the DCF and comparable earnings approaches are transparent, and the tests, in contrast to the CAPM, are compatible with meeting the comparable returns requirement.

AUTOMATIC ADJUSTMENT MECHANISM

105. At page 2 JIESC submits, without referring to any specific evidence, that the evidence in this proceeding confirms that the AAM continues to yield results that generate a fair return. BCOAPO has two pages of its Submission (pages 13 and 14) that are under an AAM heading, but those submissions do not diminish the submissions of the Terasen Utilities commencing at paragraph 153 regarding the inadequate returns that result from the use of the current AAM.

106. The central shortcoming of the current AAM is that it is based on the assumption that the fair return on equity for a regulated utility tracks only the yield on long-term Canada bonds. The evidence establishes that is not so. This shortcoming was demonstrated earlier in 2009 when the return on equity allowed under the AAM, if based on the then current monthly edition of

[33] At Tr 3, page 377, ll. 9 to 15 Dr. Vander Weide said: "… the fact that utility returns are higher than those on the TSX market index, together or in combination, suggests that either -- suggests one of two things. Either the CAPM does not predict the relationship between risk and return in the marketplace, or it suggests that the betas of utilities are much closer to one than has been assumed by the formula [referring to the AAM].

Consensus Forecasts, would have decreased to below 8 percent; at a time when the required returns on the common equity and the corporate debt of utilities in Canada were increasing. The Terasen Utilities submit that the evidence establishes that the fair return on equity cannot be determined by the current AAM.

107. Paragraphs 163 through 167 of the Initial Submissions discuss the evidence of Ms. McShane and Dr. Vander Weide respecting the shortcomings of the current AAM. The submissions of Intervenors do not specifically take issue with any of those submissions.

108. Paragraph 168 of the Initial Submissions refers to evidence of Dr. Booth in response to BCUC information request 1.1 and the data in Exhibit B-19. Taken together, that evidence supports the return on equity requested for TGI in this Application, and indicates that allowed returns on equity should not have decreased as they have since the mid 1990s. None of the Intervenor's submissions take issue with the analysis in paragraph 168.

DISCOUNTED CASH FLOW APPROACH

109. At page 38, line 5, JIESC quotes from Dr. Booth in criticism of Ms. McShane, in which Dr. Booth says that the Canadian equity market has rebounded from its March 2009 low, this has driven the dividend yield down to 3.09% or a drop of 1.10%, and if Ms. McShane's analysis is correct her fair ROE estimates should now be lower by a similar amount. In making that submission JIESC ignores the direct evidence of Ms. McShane at transcript page 460 where she said:

> "Dr. Booth would be correct if I had built my market return estimates on the basis of the increase in the dividend yields and the decline in the stock prices for the market as a whole, but I didn't. My estimates of the market return were premised on a long-term perspective of the equity market, compared to anticipated long-term Canada Bond yields. So I didn't increase my estimate of the market return due to the decline in stock prices, so there's logically no reason that I would decrease it at this point in time."

110. Starting at line 21 JIESC refers to the DCF analysis of Dr. Booth respecting U.S. utilities in his Appendix C, quoting from page 77 of his written evidence. The shortcomings of that analysis were discussed extensively at pages 100 and 101 of the Initial Submissions. The Submission of JIESC ignores that discussion, and does not attempt to address the obvious unreasonableness of an analysis that indicates that the required return of investors in utility equity was less than the yield on bonds of those utilities.

111. At pages 39 and 40 JIESC discusses the DCF evidence of Ms. McShane, and submits that the DCF results suffer from the possibility of upward bias. Suggestions of forecast bias were addressed at pages 66 to 69 of the Initial Submissions. Ms. McShane makes use of *Value Line* forecasts as well as I/B/E/S. The Easton and Sommers paper to which JIESC refers, relates to "analysts'" estimates, but not *Value Line* forecasts (as noted at paragraph 197 of the Initial Submissions, and not refuted by JIESC).

112. In the paragraph at line 14 of page 40 JIESC refers to the evidence of Dr. Vander Weide and says that he conceded that analyst growth forecasts do not include the impact of write-offs and extraordinary items; and by using these estimates Dr. Vander Weide and Ms. McShane are explicitly assuming that firms [sic] never expect firms to write off any investments or incur any extraordinary items. That paragraph is a misinterpretation of the evidence. What Dr. Vander Weide was talking about (transcript Volume 3, page 369) is why the studies that have purported to show upward bias have statistical errors. It was the evidence of Dr. Vander Weide that analysts forecast normalized earnings (that is, they do not include one time write-offs). Since accounting requirements only allow companies to record write-offs, and not write-ups, when the studies compare forecasts to actuals, unless the actuals are adjusted for unexpected one time write-offs, the incorrect conclusion will be reached that analysts' forecasts are optimistic.

113. At line 20 on page 40 JIESC submits that dividend yields for the January to March 2009 period are biased upwards and the use of them by Ms. McShane results in an overstatement of the investors' required return. In the response to BCUC information request 65.3.1 (page 174 of Exhibit B-3) Ms. McShane updated her results and concluded "Based on the most recent data, the estimated "bare-bones" return on equity derived from the constant growth DCF model is virtually identical to the 11.0% estimated by Ms. McShane at the time her evidence was filed". This submission of JIESC fails to take into account all the evidence in the proceeding.

EQUITY RISK PREMIUM APPROACH

114. As stated at paragraph 202 of the Initial Submissions, equity risk premium tests are intended to be forward-looking; to estimate investors' future equity return requirements. Because equity risk premium tests are forward-looking, historic risk premium data need to be evaluated in light of prevailing economic and capital market conditions. Equity risk premium tests that estimate the required return of investors in utility common equity can be direct tests, or indirect tests (such as CAPM and risk adjusted equity risk premium tests in which a market risk premium is estimated, then adjusted for relative risk).

115. The submissions of JIESC respecting the equity risk premium evidence of Ms. McShane and Dr. Vander Weide are selective, in that those submissions do not deal with all the tests of those witnesses.

1. Market Risk Premium

116. At page 32, line 19, and at page 2, line 11, JIESC says that Dr. Booth currently estimates the market risk premium at 5 percent. That is not quite correct. At page 52, line 7, of his written evidence Dr. Booth says that he "would therefore place the "margin of error" in my estimate at 0.50%". This was clarified in cross-examination where at page 626 of the transcript Dr. Booth agreed with the characterization of his evidence as being "… so I'll sort of take the mid-point and call mine 5.5".[34] This more correct interpretation of Dr. Booth's market risk premium is consistent with what JIESC says at page 36, lines 20 and 21 where it says that Dr. Booth has a final adjustment of 50 basis points for "margin of error" (not 0.25 as set out at page 2, line 14).

117. As submitted at paragraph 244 of the Initial Submissions, Dr. Booth's estimate of a market risk premium of 5 percent or 5.5 percent does not reasonably reflect a forward-looking equity market risk premium that is consistent with the forecast long Canada bond yields of 4.25 percent to 5.25 percent.

118. The Initial Submissions contain a lengthy discussion (paragraphs 234 to 244) of the reasonableness of Ms. McShane's estimate of the forward-looking market risk premium of 6.75 percent when the near-term and longer-term forecasts of long Canada bond yields are in the range of 4.25 percent to 5.25 percent. The Initial Submissions address the suggestion at page 50 of Dr. Booth's written evidence that Ms. McShane's estimate results from a mismatching of inflationary environments and that her procedures may over estimate the market risk premium. The response of JIESC to those submissions on behalf of the Terasen Utilities consists of nothing more than a repetition of the quotation from page 50 of Dr. Booth's evidence (page 35, line 25 to page 36, line 18) followed by a submission that for "these reasons" [referring to the quoted evidence of Dr. Booth] the market risk premium of Dr. Booth should be accepted. JIESC fails to respond to the analysis of the relationship between the market risk premium and the inflationary environment discussed in the Initial Submissions, and fails to provide any factual evidentiary support for the view of Dr. Booth that there is a mismatching of inflationary environments and a possible over estimating of the market risk premium by Ms. McShane.

[34] Tr 5, page 626, ll. 1 - 12

119. The Terasen Utilities submit that Ms. McShane's market risk premium estimate of 6.75 percent should be accepted by the Commission.

2. Relative Risk

120. At page 35, line 9, JIESC says that Ms. McShane uses a "beta factor" of 0.65 to 0.70. At page 37, line 7, JIESC says that Ms. McShane adjusts the raw beta towards the equity market beta of 1 arriving at an adjusted beta of .65 - .70. Neither of those statements is correct. Ms. McShane uses a relative risk adjustment of 0.65 to 0.70, but as discussed in the Section of the Initial Submissions commencing at paragraph 245 it is not correct to say that Ms. McShane's adjustment is a "beta". Further, as discussed below, Ms. McShane did not adjust "toward the equity market beta of 1".

121. At line 3 of page 35 JIESC quotes Dr. Booth as saying that it is illogical to weight them [betas for regulated firms] with the market beta of 1.0 "since there is no expectation that their risk is increasing to that of the average firm". The relative risk adjustment that Ms. McShane used of 0.65 - 0.70 is not based on the premise that the utility risk will rise to that of an average risk firm. It is based on the relative standard deviations of utility returns compared to the returns of other sectors of the market composite[35], the empirical evidence generally that the actual returns of low beta stocks have been higher than the theoretical CAPM would predict[36], the empirical evidence specific to Canadian utilities that the actual returns have historically been higher than the "raw" regression betas would predict[37] and the published betas, which incorporate the adjustment toward the market mean of 1.0, and which investors and analysts are likely to rely on when forming their return expectations[38]. The evidence of Dr. Vander Weide on the actual returns of Canadian utilities supports the conclusion that the relative risk of utilities is higher than implied by a beta of 0.50, and is approximately equal to the risk of the market as a whole[39]. In the quotation from the transcript in paragraph 259 of the Initial Submissions Dr. Vander Weide observes that "… either we are grossly underestimating the beta when we assign it a beta of .5, or that the capital asset pricing model doesn't predict the relationship between risk and return in the Canadian marketplace".

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[35] Written evidence of Ms. McShane, pages 52 and 53
[36] Written evidence of Ms. McShane, pages 55 and 56
[37] Written evidence of Ms. McShane, pages 54 and 55
[38] Written evidence of Ms. McShane, page 57
[39] Written evidence of Dr. Vander Weide, page 23, line 14 to page 24, line 2.

122. As JIESC notes, Dr. Booth uses a beta of 0.50[40] as the sole means of adjusting for the relative risk of TGI, or utilities in general. The fundamental problems with the use of beta are that the evidence from the market does not support a conclusion that the utility investors' required return is measured by a beta of 0.5 such as that used by Dr. Booth; and that beta, which is a measure of the co-variance of a particular security's prices with the market, has nothing to do with the fair return for investments in utility infrastructure assets.

123. The JIESC Submission attempts to explain the relative risk adjustment of Dr. Booth in three passages. At page 32, line 24, JIESC says that Dr. Booth adjusts the market return downward to account for the relatively lower risk of Terasen, and then refers to Dr. Booth's written evidence without explaining it. In a short section starting at line 21 on page 34 JIESC says that Dr. Booth acknowledges that the calculation of beta or relative riskiness is the most controversial part of the calculation, and quotes from page 41 of Dr. Booth's written evidence where he says that it is his judgement that the average level of betas of regulated firms is about 0.45 – 0.55. At page 36, line 23, JIESC refers to the beta statistics in Dr. Booth's evidence and, in effect, acknowledges that the recent betas in Dr. Booth's material do not support his use of a beta of 0.50. As discussed at paragraphs 255 to 258 of the Initial Submissions, there is nothing in the evidence to support Dr. Booth's relative risk adjustment of 0.50, and there is nothing in the JIESC Submission to support that adjustment; Dr. Booth simply picks a number and calls it beta.

124. The Terasen Utilities submit that the Commission should accept Ms. McShane's conclusion that the relative risk of TGI is in the range of 0.65 to 0.70.

3. Dr. Booth's Two-Factor Model

125. At page 34, lines 7 to 10, JIESC seeks to bolster, as did Dr. Booth, Dr. Booth's two-factor model by suggesting that Ms. McShane supports it. This was addressed in the direct examination of Ms. McShane:

> "MR. JOHNSON[41]: Q: At page 54 of Dr. Booth's evidence, he again refers to you and this is at lines 13 to 15 on page 54 where he's referring to, I believe, his two factor model.
>
> MR. JOHNSON: Q: And he says of note -- this is at line 14:
>
> "Of note is that Ms. McShane's evidence also supports its use."

[40] JIESC Submission, page 2, lines 13 and 14

[41] The transcript incorrectly identifies the person asking the question as "Mr. Fulton"

> Which I read as being use of Dr. Booth's model. Do you support the use of Dr. Booth's model?
>
> MS. McSHANE: A: No. While I have a two-factor model, and interestingly enough it appears on page 54 of my evidence as well, it's not the same model. I use the model to demonstrate that the beta adjustment understates the utility return. My model is different than his model in, I mean, the -- at the end of the day, the point is I don't support the use of his model."[42]

126. At page 34 JIESC quotes from page 27 of the TQM Decision to support the use of Dr. Booth's two-factor, but does not include all of the last sentence of the quotation. The complete last sentence of the quotation is:

> "The Board is of the view that a two factor model offers a more intuitive approach to address the issue of interest rate sensitivity, but such a model is not sufficiently tested to be relied on in this proceeding." [emphasis added]

127. Dr. Booth's two-factor model was discussed commencing at paragraph 300 of the Initial Submissions. The Terasen Utilities submit that the Commission should place no weight on the results of that model.

EVIDENCE OF DR. VANDER WEIDE

128. In Section 7.7 of its Submission the JIESC addresses the evidence of Dr. Vander Weide, saying that his evidence "is based largely on experience with US Utilities, similar to Canadian utilities…". Dr. Vander Weide did consider U.S. utilities in some of his tests, but also conducted analyses that only used Canadian data.

129. On page 44, line 3, JIESC says that Dr. Vander Weide only looked at Canadian and U.S. comparative risk in a manner that would show Canadian and U.S. banks to be of similar risk. That submission does not refer to, but relates to, a portion of the cross-examination of Dr. Vander Weide in transcript volume 3, commencing at page 306, excerpts from which are below:

> "MR. VANDER WEIDE: A: Well, I'm not an expert on U.S. banks and I am an expert on utilities. I don't believe there's any relationship whatsoever between the regulation of Canadian and U.S. banks, or any information one can obtain from that specific industry and apply it to the utility industry. However, I would note that just from my general knowledge, the U.S. banks tended to invest in a wider range of products than the Canadian banks. They tended to employ greater leverage. And they tended to combine to a greater extent traditional banking operations and securities operations."[43]

[42] Tr 4, page 455, l.17 – page 456, l. 11

[43] Tr 3, page 307, ll. 1 - 12

> "MR. VANDER WEIDE: A: With regard to the statement about regulation, my understanding of your question is you're referring to the word "regulation" in general. I'm referring to regulation under similar cost-based regulatory mechanisms and fair rate of return principles. That's quite different than regulation in general. And so, I was indicating that cost-based regulation doesn't apply to banks, nor do fair rate of return principles apply to banks, because my third principle is not just that they're regulated similarly. My third principle is that the U.S. electric and natural gas utilities have similar cost base regulatory structures, and fair rate of return principles, as Canadian utilities."[44]

130. In its discussion of Dr. Vander Weide's evidence the JIESC only refers to his ex post risk premium method, which is only one of three return on equity methods used by Dr. Vander Weide, and one of his six tests of the validity of AAM. Even if there were problems in that one test of Dr. Vander Weide, which there are not, Dr. Vander Weide's other five tests overwhelmingly support the conclusion that the AAM does not produce a fair return to investors in Canadian utilities. The JIESC does not comment on, and does not provide any evidence that refutes, Dr. Vander Weide's conclusions based on his other five tests.

131. At page 44 the JIESC suggests that Dr. Vander Weide over estimates utility returns because he measures the required equity risk premium on Canadian utility stocks by comparing the experienced return on two Canadian utility stock indices to the yield on long Canada bonds. It is appropriate to compare returns on Canadian utility stocks to the yield on long Canada bonds, rather than to the return on long Canada bonds, because the equity risk premium methodology measures the risk premium relative to the risk-free rate of interest. The yield on long Canada bonds is the best measure of the risk-free rate of interest since investors can earn the yield without risk if they hold the bond to maturity, whereas the return on the bonds is highly uncertain because it includes capital gains and losses.[45] The submissions of JIESC comparing the returns on Canadian utility stocks to the returns on long Canada bonds are misleading since the return on long Canada bonds is not risk free. It should be noted that there is an error at line 17 on page 44 of the JIESC Submission, the underlined word should be "return", not "yield".

132. In still referring to Dr. Vander Weide's ex post risk premium method at lines 2 and 3 on page 45, JIESC says that 7.3% is what "Dr. Vander Weide would have you adopt as an appropriate risk premium for a low risk utility". That is an incorrect statement. As set out in the tables on pages 13 and 31 of his written evidence, and at lines 4 to 6 on page 14 and lines 11 to

[44] Tr 3, page 308, ll. 10 - 23

[45] The question from Mr. Wallace, and the response from Dr. Vander Weide, in cross-examination relating to this point is at paragraph 223 of the Initial Submissions

13 on page 31, it is the evidence of Dr. Vander Weide that "investors [in the companies in his utility indices] require an equity return that is at least 5.5 percentage points above the interest rate on long-term Canada bonds". Dr. Vander Weide estimated a 5.5 percent equity risk premium for utility stocks from his experienced risk premium studies, not 7.3 percent as suggested by JIESC. JIESC also fails to recognize that Dr. Vander Weide's recommendation of an 11 percent return on equity for TGI is based on the results of all his cost of equity studies, not only on his ex post risk premium method.

133. At lines 18 to 20 on page 44 JIESC says that in periods of falling interest rates bond yields will be less than bond returns. That is generally correct, but does nothing to impair the evidence of Dr. Vander Weide; it only demonstrates that the equity risk premium is not a constant number, but varies with prevailing interest rates. As Dr. Vander Weide said at page 14 of his written evidence:

> "Since the expected 3.69 percent yield [the forecast from *Consensus Forecasts* at the time his evidence was prepared] on long Canada bonds is significantly less than the 7.6 percent average yield on long Canada bonds over the period of my ex post risk premium studies, the current required equity risk premium should be significantly higher than the average 5.5 percent equity risk premium I obtain from my ex post risk premium studies."[46]

134. At page 45, lines 5 to 10, JIESC says that the evidence of Dr. Vander Weide shows a strong relationship between return on utilities and return on bonds. That relationship is further evidence that the AAM that has been used by this Commission and other regulators is flawed, since the AAM makes use of forecast bond yields, not forecast bond returns. As discussed above, using bond yields (or the equivalent which Ms. McShane has used of bond income returns) correctly reflects the risk free rate. The relationship to which the JIESC refers is not a relationship between bond yields and the required return on utilities, which is the more meaningful relationship.

135. In testing the Commission's AAM Dr. Vander Weide found "that the forward-looking required equity risk premium increases by more than 50 basis points when the yield to maturity on long-term government bonds declines by 100 basis points"[47] and "I find that when the yield to maturity on long-term government bonds increases by 100 basis points, the allowed equity risk premium tends to decrease by approximately 55 basis points; and when the yield to maturity on long-term government bonds decreases by 100 basis points, the allowed equity risk

[46] Exhibit B-1, Tab 4, page 14, lines 11 to 16

[47] Written evidence of Dr. Vander Weide at page 20, lines 10 to 13

premium tends to increase by approximately 55 basis points".[48] In utility return terms, the utility return tends to decrease by approximately 45 basis points when the yield to maturity on long term government bonds decreases by 100 basis points. Ms. McShane's analysis also showed significantly less correlation between government bond yields and utility returns on both a DCF-based risk premium and allowed return basis than the correlation cited by JIESC; see Ms. McShane's written evidence, page 9, lines 221 to 228, for allowed returns and page 58, line 1444 to page 59, line 1473, for DCF-based risk premiums and returns.

COMPARABLE EARNINGS APPROACH

136. At page 5 of its Submission CEC, in discussing the linkage between "fair return" and "risks", says "The key is to find a comparable return from a business of similar risk". The Terasen Utilities agree that the Commission should be considering comparable returns from businesses of similar risk. The comparable earnings approach is the only return on equity method used by any of the expert witnesses in this proceeding that examines what returns on equity are being earned by businesses of similar risk.

137. At pages 40 and 41 the JIESC says that Dr. Booth does not use a comparable earnings approach for six reasons. As set out at page 55 of the 2006 Decision, and discussed at paragraph 330 of the Initial Submissions, Dr. Booth agrees that four of the six problems he lists respecting the comparable earnings approach also appear in the process of setting rates under regulation. The other two "problems" are sample selection and market power. Sample selection requires examination of the sample and the means by which it is selected; it is not an item that can be considered in the abstract. Ms. McShane's sample of unregulated companies is discussed at paragraph 332 of the Initial Submissions; JIESC has not provided any critique of, or suggested any specific difficulties with, Ms. McShane's sample of unregulated Canadian companies, which is a sample of 27 companies, a number significantly greater than the number of traded public utilities than can be examined in Canada. Ms. McShane also selected a sample of U.S. unregulated companies for corroboration of the results from the Canadian sample. With regard to market power, the question is whether the market to book ratios of the sample of unregulated companies are evidence of market power. Ms. McShane addressed market power in her written evidence at pages F-7 through F-10 where it is shown that the market to book ratios of the sample are similar to or lower than the market to book ratios for the TSX Composite Index and the S&P 500, permitting the inference that the sample is not characterized by market

[48] Written evidence of Dr. Vander Weide at page 21, lines 22 to 28

power. Again, the JIESC does not provide anything specific in its Submission that supports a suggestion that the sample of unregulated companies of Ms. McShane does exert market power.[49]

138. JIESC brings out again its submission that the Comparable Earnings approach has not been used by a regulator in Canada in the last 10 years[50], and then refers in three passages on pages 41, 42 and 43 to the views of the Alberta Board in 2004 [from the number of references to the views of the Alberta Board in the Submission of JIESC one might have thought JIESC was an Alberta organization and this proceeding was taking place in that province]. JIESC refers to the 1994 and 1999 cost of capital Decisions of this Commission at page 43 (neither of which rejected the comparable earnings test for conceptual reasons), but JIESC ignores the 2006 Decision of this Commission which was subsequent to the 2004 Alberta decision from which the JIESC quotes. At page 48 of the 2006 Decision the Commission Panel said "Accordingly, the Commission Panel will seek to give weight to each of the three methods placed before it in determining a suitable return for a benchmark low-risk utility".

139. At page 42, lines 7 and 8, JIESC says that the Alberta Board's view rejecting the comparable earnings test is consistent with the *Northwestern Utilities* case, which is also quoted at page 7 of the JIESC Submission. The *Northwestern Utilities* case was decided in 1929. At page 45 of the 2006 Decision the Commission Panel said "The evidence is that up until the 1960s the principal methodology to determine fair rates of return was CE [comparable earnings] as, according to Dr. Booth, the DCF method and the ERP method which was derived from the CAPM, were developed in the 1960s. By the 1980s all three methodologies were in use in Canada". It is ludicrous to suggest, as does JIESC, that the *Northwestern Utilities* case requires the use of market security based methodologies when those market security based methodologies did not come into existence until more than 30 years after the court decision. Moreover, the excerpt from the *Northwestern Utilities* case quoted by JIESC twice uses the word "enterprise", and referring at the end of the quotation to "attractiveness, stability and certainty equal to that of the company's enterprise". This is a reference to the riskiness of the utility business; it is not a reference to the riskiness of the securities of the utility. It certainly is not a reference to how much the holding of a security affects the risk of a diversified portfolio, which is the objective of the CAPM.

[49] Discussed at pages 108 and 109 of the Initial Submission

[50] BCOAPO makes the same submission at its paragraph 61

140. The Terasen Utilities submit that the comparable earnings approach is the only method in this proceeding that explicitly recognizes that the return on equity determined by the Commission is applied to historic book values, and not to market values of securities. The Terasen Utilities submit that the results of comparable earnings approach should again be given weight in the consideration of the fair return, for the reasons set out in the Section of the Initial Submissions starting at paragraph 325.

CONSIDERATION OF U.S. UTILITIES

141. JIESC says at page 45, line 13 that "TGI argues that Canadian utility allowed returns are lower than US Utility returns". That is not an argument, it is a fact.

142. JIESC then disputes that the AAM has anything to do with the divergence of Canadian and U.S. allowed returns on equity, saying that "All the data shows that risk premiums generally, not just for utilities, for Canada are lower than in the US"[51] and "Equity market risk premiums are lower in Canada by about 100 basis points".[52] As shown in the chart on page 8 of the written evidence of Ms. McShane (also at page 14 of the Application), allowed returns for Canadian utilities exceeded those of U.S. utilities until approximately 1997, and subsequently the allowed returns for Canadian utilities have been lower than their U.S. counterparts. The 100 basis point differential referenced by JIESC is for long-tem historical periods, and the difference is not surprising since historically Canadian interest rates were higher than those in the U.S. However, for the period during which allowed returns for Canadian utilities have been lower than their U.S. counterparts (since 1997) the Canadian equity market risk premium has not been lower than that in the U.S., as can be seen from the last four entries on Ms. McShane's Schedule 9, comparing page 1 to page 2. The 100 basis point differential to which JIESC points is a red herring; it does not relate to the relevant period (since 1997 when allowed returns in Canada have been lower). As discussed at paragraph 349 of the Initial Submissions, during the relevant period there has been an insignificant difference in the cost of equity financing between Canada and the U.S., and long-term bond yields have been very similar in the two countries. There is no logical basis for the divergence of allowed returns between the two countries.

[51] JIESC Submission, page 45, lines 15 and 16
[52] JIESC Submission, page 45, line 24

143. The evidence is that Canadian and U.S. interest rates are similar.[53] There is no reason to conclude that there should be a material difference between the returns allowed utilities in the two countries.

144. In a paragraph commencing at line 19 on page 45 JIESC refers to alleged evidence of Dr. Booth, without providing a reference to the location of that evidence. The Terasen Utilities cannot locate a passage similar to that paragraph in the written evidence of Dr. Booth or in his oral evidence. The evidence in this proceeding is "that allowed returns in the U.S. and Canada were comparable until automatic adjustment formulas tied to government bond yield became the norm (approximately 1997-98) in Canada. With the widespread adoption of automatic adjustment formulas in Canada, a significant gap between the allowed ROEs in the two countries emerged".[54] Ms. McShane also agreed in response to a question from the Chairperson that the allowed returns start to cross over when commissions in Canada started to put almost all their weight on CAPM and ERP.[55]

145. At page 46, line 10, JIESC repeats the passage from the evidence of Dr. Booth that was discussed at paragraph 351 of the Initial Submissions. As discussed in that paragraph, the use of the word "seem" in two sentences of the passage quoted indicated lack of actual knowledge of Dr. Booth respecting U.S. utilities.[56]

146. In the paragraph starting at line 26 on page 46 JIESC says that Ms. McShane's sample of U.S. utilities which are generally A rated is not typical of U.S. utilities because it is "much stronger financially than the typical US utility". Dr. Vander Weide was asked by Mr. Wallace if he would agree that the median bond rating in the U.S. is BBB. He answered:

> "MR. VANDER WEIDE: A: No, I would not. The median bond rating for the natural gas utilities is an A minus, which is A low, and the median bond rating for the electric utilities that are in my proxy group, for example, for my studies, is between an A minus and a BBB plus.
>
> So there's really not much difference in bond ratings between -- certainly there's virtually none between the natural gas utilities on average, and there's very little between the electric utilities on average on bond ratings, and I don't believe there's any difference in equity risk."[57]

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[53] Tr 5, page 620, l. 11 to page 621, l. 15

[54] Written evidence of Ms. McShane, page 8, lines 200 to 203

[55] Tr 4, page 565, ll. 8 - 11

[56] See also the response to Terasen IR 62.1 in Exhibit C11-7, as referenced in paragraph 351

[57] Tr 3, page 358, ll. 9 - 20

147. JIESC refers at pages 46 and 47 to a graph from a Merrill Lynch presentation to NARUC which refers to the relative credit profile of the "Power & Utilities Industry". JIESC says that "TGI would have you believe this relates solely or primarily to unregulated industries", which is a curious submission since the graph was not mentioned in the Initial Submissions of the Terasen Utilities. JIESC suggests that the Commission should conclude that the graph refers to regulated utilities, since the graph was part of a presentation to NARUC; but it being part of such a presentation does not mean that the graph relates solely to utilities; the unregulated power industry is an important supplier of energy to regulated utilities. JIESC is seeking to have the Commission reach a conclusion that is not supported by evidence. The fact is that Dr. Vander Weide discussed the graph when Mr. Wallace referred him to it in cross-examination. At page 361 of the transcript Dr. Vander Weide said:

> " as I read this, this is power and utilities. If this is – if we're including deregulated companies which are frequently in the power business, that could lower the ratings as well. I would look – I wouldn't consider just independent power companies as being representative of the utilities."[58]

Mr. Carmichael also referred to the graph by Mr. Wallace in cross-examination. Mr. Carmichael said at transcript page 413:

> "I think the thing that really has to be looked at here is, who's in the power industry versus who's in the utility category. The power industry in the United States generally is the deregulated competitive power business. And many of the firms that operate in that business are relatively highly leveraged, and have credit ratings that are at best an A-low. Many are in the B category. And I think what this graph really demonstrates is the extent of consolidated utility unbundling that took place between 1998 and 2008, when utilities were broken apart to form a generating company that was operating in a competitive market and a transmission and distribution company that was operating -continuing to operate under regulation. And the percentages seem to work."

Dr. Booth appeared as a witness following Dr. Vander Weide and Mr. Carmichael, but provided no evidence to identify the number of power companies or the number of utilities companies represented in the graph. Both Dr. Booth and JIESC have sought to have the Commission place weight on a graph that has no probative value. Dr. Booth either included a chart in his written evidence respecting which he has no underlying knowledge, or he has the knowledge of the number of power companies and the number of utility companies represented in the graph and chose not to provide that evidence to the Commission.

148. JIESC at page 30, line 11, acknowledges that TGI has weaker credit metrics than U.S. utilities, and then goes on to suggest that bond ratings are more important because they look at

[58] Tr 3, page 361, ll. 1 - 6

the utility's total risk profile. The statement that bond ratings look at the total risk profile is not correct. When rating agencies determine a bond rating they assess risk of loss to the holders of that class of bond, and each class of security the rating agencies review is assessed relative to that loss probability. In determining a bond rating, the rating agencies are not assessing the risk profile from an equity perspective. This was discussed by Mr. Dall'Antonia:

> "The bond rating agencies look at risk of loss to a bond holder. They don't judge the fair return to an equity holder. When they look at the ratings they look at a number of factors, financial metrics being one of the primary factors. They do look at the regulatory support environment as one of the factors, and weaker financial metrics may be offset to the extent of stronger regulatory environment. But again, that is with respect to probability of loss to a bond holder, not again the fair return to an equity holder."[59]

Dr. Vander Weide also addressed this subject:

> "MR. WALLACE: Q: Okay. Have you looked at the bond ratings of Canadian utilities?
>
> MR. VANDER WEIDE: A: I have seen the bond ratings of Canadian utilities. However, my study has to do with the required return on equity, and the required return on equity depends on the risk of investing in the equities. Bond ratings do not reflect the risk of investing in the equity. They reflect only the risk of default on the bond. As I suggested earlier, if you invest in a bond and hold it to maturity, you're going to get that return. So, there is not a lot of risk compared to the risk of investing in a stock."[60]

149. The underlying tenet of JIESC and Dr. Booth is that U.S. utilities are more risky, but the evidence does not support such a conclusion, as discussed in the section of the Initial Submissions commencing at paragraph 339. Further, Dr. Booth's sole measurement of risk is beta, and the argument that U.S. utilities are more risky than Canadian utilities is inconsistent with Dr. Booth's evidence that the betas for U.S. utilities are approximately the same as the betas for Canadian utilities.[61]

150. The Commission has before it evidence of allowed returns of U.S. utilities, and also evidence of the expected returns of investors in U.S. utilities. The Terasen Utilities submit that this evidence supports the recommendations of Ms. McShane and Dr. Vander Weide respecting the fair return on equity and should be considered and given weight by the Commission in its determinations.

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[59] Tr 3, page 231, ll. 7 - 17

[60] Tr 3, page 356, l. 19 – page 357, l. 4

[61] In the written evidence of Dr. Booth, Appendix G, page 5, line 27 he says the most recent beta estimates for U.S. utilities is in the range of 0.3 to 0.7, which similar to what Dr. Booth considers the betas to be for Canadian utilities, see also Schedule 8 of Appendix G

E. CONCLUSION

151. As set out in paragraph 1 of the Initial Submissions, this is a very important application for the Terasen Utilities.

152. The Terasen Utilities are facing increased business risks. Government energy-related policies and legislation have increased business risks. Government policies favour the use of "clean" electricity and discourage GHG emissions, and contribute to the perception that the use of natural gas may be undesirable. The investments by the Terasen Utilities in gas distribution facilities and other utility infrastructure are recovered over a long period. There is increased uncertainty respecting the long-term recovery of, and on, these investments in the natural gas distribution business.

153. The Terasen Utilities submit that the Commission should conclude that a 40 percent common equity component is appropriate for Terasen Gas Inc. for rate-making purposes. The 40 percent common equity component is recommended by each of the expert witnesses called by the Terasen Utilities.

154. The witnesses for the Terasen Utilities presented evidence on three approaches for the determination of the return on equity for a regulated utility. The Terasen Utilities submit this evidence should be accepted, and that 11 percent should be determined to be the fair return for TGI and as the Benchmark ROE.

All of which is respectfully submitted.

Original signed by C.B. Johnson
C.B. Johnson Q.C.

Original signed by T.A. Ahmed
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November 13, 2009