



LETTER L-53-13

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VIA EMAIL

September 16, 2013

Ms. Diane Roy
Director, Regulatory Affairs
FortisBC Energy Inc.,
FortisBC Energy (Vancouver Island) Inc. and
FortisBC Energy (Whistler) Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8

Mr. Dennis Swanson
Director, Regulatory Affairs
FortisBC Inc.
Suite 100-1975 Springfield Road
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Ms. Janet P. Kennedy
Vice President, Regulatory Affairs & Gas Supply
Pacific Northern Gas Ltd.
Suite 950-1185 West Georgia Street
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Mr. Ian Wigington
Director Regulatory
Corix Multi-Utility Services Inc.
Suite 1160-1188 West Georgia Street
Vancouver, BC V6E 4A2

Dear Ms. Roy, Ms. Kennedy, Mr. Swanson and Mr. Wigington:

**Re: Implementation of the Automatic Adjustment Mechanism Formula
for the Benchmark Return on Common Equity**

Pursuant to the British Columbia Utilities Commission (Commission) Decision dated May 10, 2013, regarding the Generic Cost of Capital proceeding – Stage 1 and Order G-75-13, the Commission has determined that the Automatic Adjustment Mechanism (AAM) formula will be re-established in the form of a two-variable model that considers changes to utility bond spreads and the long-term Canada bond yield.

This AAM will determine the Benchmark Return on Equity (ROE) on an annual basis commencing in the 2014 calendar year, subject to the formula being triggered if the actual Canada bond yield of 3.8 percent is met or exceeded. If triggered, the AAM will operate until December 31, 2015.

Following a written consultation process, the Commission's findings are attached as Appendix A regarding the input data for the formula and its implementation process.

Yours truly,

Erica Hamilton

EC/dg
Attachments

cc: Ms. Janet Fraser
Chief Regulatory Officer
British Columbia Hydro and Power Authority

Ms. Tannis Braithwaite
Acting Executive Director
Barrister & Solicitor
BCPSO *et al.*

Mr. Brian Wallace
Bull Housser Tupper LLP
Counsel for AMPC

Mr. Chris Weafer
Counsel for the Commercial Energy Consumers of BC

BCUC regulated utilities

Registered Parties
BCUC GCOC Proceeding - Stage 1

Implementation of the Automatic Adjustment Mechanism and the Return on Equity for the Benchmark Utility for 2014 and 2015

Commission Order G-75-13 determined that an Automatic Adjustment Mechanism (AAM) formula for annually setting the Return on Equity (ROE) of the benchmark utility between ROE proceedings is adopted commencing January 1, 2014. This letter addresses the implementation of the AAM formula.

FortisBC Utilities (FBCU)¹ and Dr. Laurence D. Booth, on behalf of the ratepayer group B.C. Utility Customers,² responded to the Commission's invitation letter dated June 27, 2013 (included in Attachment) to make submissions regarding the input data and trigger related to the implementation of the AAM formula. The Commission finds that the two parties generally agreed on the various points raised in the June 27, 2013 letter except for two issues: namely, (A) the BaseUtilBondSpread and (B) the AAMTrigger.

(A) Base UtilBondSpread

BaseUtilBondSpread stands for the base value of the utility bond spread which measures credit risk. Its counterpart in the two-variable model is the Base Long Canada Bond Forecast (Base LCBF), which measures the risk free rate. The Generic Cost of Capital (GCOC) Decision Stage 1 has determined that Base LCBF is 3.8 percent. The BaseUtilBondSpread was left to be determined at a later date.

In the GCOC Stage 1 proceeding, Dr. Booth had estimated the BaseUtilBondSpread value to be between 1.77 to 1.86 percent when he proposed the two-variable formula. These values were based on Generic A-rated corporate bond. In the current process, Dr. Booth recommends using the average October 2012 monthly spread based on the A-rated utility bond from the Bloomberg series, which is 1.45 percent. Dr. Booth believes the October 2012 data from Bloomberg and Cansim are appropriate because the October series is part of the August-November 2012 data that captured the evidentiary basis for the 2012 GCOC hearing and its use is consistent with the Ontario Energy Board AAM.

Concentric views that the use of the Generic bond spread of 1.77 percent to 1.86 percent does not align with utility-specific bond spread. It further disagrees with Dr. Booth's proposed use of 1.45 percent because 3.8 percent has already been established from the GCOC Stage 1 proceeding as the lowest long Canada bond interest rate and is set as the Base LCBF. To date, the 3.8 percent Base LCBF has not been met. Concentric therefore infers that 1.45 percent is an abnormally high utility bond spread because it came from a period of abnormally low government bond yields. Concentric recommends that:

- 1) The BaseUtilBondSpread should be established at the time the AAM is triggered and should be at the average of the daily spreads between the Canadian Utility A-rated bond (Bloomberg Index C29530Y) and the 30-year Long Canada bond yield (Cansim V39056). If the AAM is triggered in October 2013, the daily spreads should be calculated for the month of October 2013.

In the alternative, if the Commission wants to set a hard-coded base at the inception of the formula, then Concentric recommends:

¹ FBCU comprises FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc., FortisBC Energy (Whistler) Inc., and FortisBC Inc.

² B.C. Utility Customers is made up of the Association of Major Power Customers, the B.C. Pensioners' and Seniors' Organization, and the Commercial Energy Consumers.

- 2) The Commission should use 1.342 percent as base. The figure is the result of a regression analysis of 10 years of daily utility bond spreads when the 30-year Government of Canada bond yield is 3.8 percent.

Commission's Findings

The Commission agrees with FBCU that it is not appropriate to set the BaseUtilBondSpread using data from a period of abnormal interest rates. The October 2012 time period proposed by Dr. Booth can be considered a period of abnormal interest rates as the Commission established during the GCOC Stage 1 proceeding a floor of 3.8 percent for LCBF, which significantly exceeded the LCBF at that time. Therefore, the Commission rejects the 1.45 percent as BaseUtilBondSpread.

The Commission understands that there are merits to Concentric's view that the base utility bond spread should be tied to the associated Government of Canada bond yields used to establish the trigger, Concentric's proposal to set the Base UtilBondSpread "at a level consistent with the utility bond spread at the time when the formula is triggered" will likely return a zero value to the second variable. This will go against the intent of the re-establishment of the AAM, which is to allow the Benchmark ROE to be exposed to credit risk in its annual update.

Accordingly, the Commission considers that the base value must be set before the trigger, or in the words of Concentric, must be hard-coded. Concentric's proposed 1.342 percent, because it reflects the actual spreads (when the LCB yield is 3.8 percent), is considered to be reasonable by the Commission to be used as the BaseUtilBondSpread.

(B) AAM Trigger

The GCOC Decision has determined that *when* the long Canada bond yield meets or exceeds 3.8 percent, the formula will be triggered. Parties were invited to make submissions on *how* 3.8 percent should be measured.

Concentric submits that the 3.8 percent threshold should be directly tied to the calculation of the average yield of the 30-year Canada Bond (30CB). Concentric views that the 30CB should be calculated by taking the average of the daily 30-year bond yields for the month in which the AAM is being formulated, i.e., if October data is used to determine the formula inputs, the same data should be used to arrive at the average for the 30CB. In Concentric's view, even if the 3.8 percent was exceeded in prior months, i.e., prior to October if October data is determined to be used, the AAM would not be considered to have been triggered unless the average actual of October meets or exceeds 3.8 percent.

Dr. Booth submits that if the forecast long Canada bond yield exceeds 3.8 percent, then the AAM should be used. Dr. Booth indicates that he has in mind the one year forecast of the LCBF.

In Reply, Concentric reiterated that the trigger for the formula should be based on "actual" and an average instead of a onetime occurrence.

Commission Findings

The Commission finds that Concentric is correct in pointing out that the Commission has indicated that the trigger should be based upon the actual GOC bond yield and not the one year ahead 30-year LCBF. However, the Commission finds Concentric's proposal of "average actual" unnecessarily restrictive in "meeting or

exceeding 3.8%” as contemplated in the GCOC Decision Stage 1. If Concentric’s proposal of “average actual” is adopted, the LCBF will always exceed the BaseLCBF. In the Commission’s view, this upward bias is not the intent of the AAM formula.

The Commission considers that once the LCB yield meets 3.8 percent this indicates that the period of abnormally low government bond yields has passed. Therefore, the Commission finds that if the actual GOC bond yield in October 2013, even in a single occurrence, meets or exceeds 3.8 percent, then the AAM is considered triggered and will be operative until the end of 2015, as contemplated in the GCOC Stage 1 Decision. As October is considered the month where the AAM is formulated, any actual GOC bond yield reaching or exceeding 3.8 percent after October 2013, if the AAM is not triggered by then, will not trigger the AAM for the 2014 ROE. However, GOC bond yield meeting or exceeding the 3.8 percent subsequent to October 2013 will trigger the AAM for the 2015 ROE.

The remaining inputs to the AAM formula are not contentious and their descriptions are as follows:

$$ROE_t = 8.75\% + 0.50 \times (LCBF_t - 3.80\%) + 0.50 \times (UtilBondSpread_t - 1.342\%)$$

Where:

LCBF is the average of ${}_{10}CBF_{3,t}$ and ${}_{10}CBF_{12,t}$ and average yield spread between ${}_{30}CB$ and ${}_{10}CB$

${}_{10}CBF_{3,t}$ 3- month forecast of 10-year Canada Bond Forecast	Use the same period as in the pre-2010 AAM. The 10-year Canada Bond Yield at the end of February, 2014 according to <i>Consensus Forecast</i> published in November 2013 from Consensus Economics Inc.
${}_{10}CBF_{12,t}$ 12-month forecast of 10-year Canada Bond Forecast	Use the same period as in the pre-2010 AAM. The 10-year Canada Bond Yield at the end of November, 2014 according to <i>Consensus Forecast</i> published in November 2013 from Consensus Economics Inc.
BaseUtilBondSpread Base A-rated Utility Bond Yield Spread	1.342% based on Concentric’s recommendation.
UtilBondSpread _t A-rated Utility Bond Yield Spread over 30 year GOC yield	Difference between average yield of 30 year A-rated Utility bond index Bloomberg Series C29530Y and average yield of 30 year Government of Canada bonds Cansim Series V39056 published by the Bank of Canada, for all trading days in October, 2013.
${}_{30}CB$	Average yields of 30-year bonds as reported by the Bank of Canada for all trading days in October, 2013 (Cansim Series V39056).
${}_{10}CB$	Average yields of 10-year bonds as reported by the Bank of Canada for all trading days in October, 2013 (Cansim Series V39055).
AAM trigger	The AAM formula will be triggered if, in the month of October 2013, a daily yield of ${}_{30}CB$ reaches or exceeds 3.80 percent.
ROE _t	Allowed ROE rounded to two decimal places.

Next Steps

As FBCU have indicated that they have permission to provide the data from Bloomberg, for the purpose of the AAM implementation, FEI is requested to:

- collect and compile the data from *Consensus Forecast*, Bloomberg Series C29530Y and Cansim series V39055 and V39056 for the relevant time periods described in this Letter; and
- communicate the data to Commission staff for the purpose of determining if the AAM is triggered and determining the AAMROE

The Commission will notify all parties of the results once the data is collected, processed and verified.



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Log No. 39204

VIA EMAIL

June 27, 2013

To: All Registered Parties
(GCOC proceeding –Stage 1)

Re: British Columbia Utilities Commission
Generic Cost of Capital Proceeding
Stage 1 Decision dated May 10, 2013
Automatic Adjustment Mechanism
Requests for Written Submissions

The Commission in its Decision on Generic Cost of Capital (GCOC) Proceeding – Stage 1 (Decision) issued on May 10, 2013, determined that the Automatic Adjustment Mechanism (AAM) will be re-instituted for annually setting the Return on Equity (ROE) of the benchmark utility. The use of an AAM will commence in the 2014 calendar year and will operate until December 31, 2015, subject to the condition that an actual long Canada bond yield of 3.8 percent is met or exceeded. (Decision, pp. 90-91)

The formula to be used, and the basic method to determine the changes in long Canada bond forecast and the changes in utility bond spread, is as follows:

$$ROE_t = \text{Base ROE (8.75\%)} + 0.50 \times (\text{LCBF}_t - \text{Base LCBF}) + 0.50 \times (\text{UtilBondSpread}_t - \text{BaseUtilBondSpread})$$

Where:

LCBF_t = is the Long Canada Bond Forecast for the test year, with a floor of 3.8 percent;

Base LCBF = 3.8 percent;

UtilBondSpread_t = is the average spread of 30 year A-rated Canadian Utility bond yields over 30 year Government of Canada bond yields;

BaseUtilBondSpread = to be determined.

The LCBF is calculated as follows:

$$\text{LCBF}_t = \left[\frac{{}_{10}\text{CBF}_{3,t} + {}_{10}\text{CBF}_{12,t}}{2} \right] + \left[\frac{\sum_i ({}_{30}\text{CB}_{i,t} - {}_{10}\text{CB}_{i,t})}{I} \right]$$

Where:

- ${}_{10}\text{CBF}_{3,t}$ is the 3 month forecast of the 10 year Government of Canada bond yield as published in *Consensus Forecasts* for [a designated month].

- ${}_{10}CBF_{12,t}$ is the 12 month forecast of the 10 year Government of Canada bond yield as published in *Consensus Forecasts* [a designated month].
- ${}_{30}CB_{i,t}$ is the benchmark bond yield rate for the 30 year Government of Canada bond at the close of day i of [a designated month], as published by the Bank of Canada.
- ${}_{10}CB_{i,t}$ is the benchmark bond yield rate for the 10 year Government of Canada bond at the close of day i of [a designated month], as published by the Bank of Canada.
- I is the number of business days for which the Government of Canada and A-rated Utility bond yield rates are published in [the designated month].

The $UtilBondSpread_t$ is the average spread of 30 year A-rated Canadian Utility bond yields over 30 year Government of Canada bond yields over all the business days in a designated month preceding the implementation dates and is calculated as:

$$UtilBondSpread_t = \frac{\sum_i ({}_{30}UtilBonds_{i,t} - {}_{30}CB_{i,t})}{I}$$

Where

- ${}_{30}UtilBonds_{i,t}$ is the average 30 year A-rated Canadian Utility bond yield rate, from an agreed source, for business day i of a designated month preceding the implementation date.
- ${}_{30}CB_{i,t}$ is the benchmark bond yield for 30 year Government of Canada bond at the close of day i of a designated month preceding the implementation date, as published by the Bank of Canada.
- I is the number of business days for which Government of Canada and A-rated Utility bond yields are published in a designated month preceding the implementation date.

In the Decision, the Commission noted that the potential for downward bias exists in this two-variable AAM. Therefore, the Commission directed that any change in ROE resulting from the AAM formula be subject to an actual long Canada bond yield of 3.8 percent being met or exceeded. The Commission also noted that the potential for downward bias will continue if attention is not paid to setting appropriate base rates for the formula and notified parties who participated in the GCOC proceeding – Stage 1 that it will be seeking submissions with respect to determining appropriate base levels and developing an effective methodology for deriving the inputs to the formula. (Decision, p. 91)

By this letter, the Commission is inviting all parties to make submissions on the AAM for the benchmark ROE. The Commission is not seeking further comments on the merits of the implementation of the AAM but specifically on each element of the inputs to the formula.

The regulatory timetable for written submissions is as follows:

ACTION	DATE (2013)
Written submissions from all Parties	Friday, July 12
Reply Submissions to all Submissions	Monday, July 29
Oral Submissions for clarifications, if required	to be determined

In order to assist parties in their written submissions, Attachment A to this letter lists each of the elements in the AAM formula. The Commission seeks submissions for the elements in the shaded boxes.

Please do not hesitate to contact Commission Secretary at commission.secretary@bcuc.com or Commission staff Ms. Eileen Cheng at eileen.cheng@bcuc.com for further information.

Yours truly,

Erica Hamilton

EC/dg
Attachment

Automatic Adjustment Formula for the Benchmark ROE
for 2014 and 2015 if the Risk Free Rate Meets or Exceeds 3.8 Percent

Element	Value	Written Submissions Sought by BCUC
Risk free rate	3.8%	3.8% as floor
Market risk premium	6.4%	
Beta of benchmark utility	0.6	
Subtotal of Capital Asset Pricing Model	7.64%	
Results from DCF Model	8.9%	
Average of CAPM and DCF	8.25%	
Allowance for financing Flexibility	0.5%	
Total	8.75%	The allowed benchmark ROE at 8.75 percent is used as base for the formula.
Base LCBF	3.8%	This is the corresponding base for the Base ROE.
${}_{10}CBF_{3,t}$	To be calculated	<ul style="list-style-type: none"> Should data from the <i>Consensus Forecasts</i> be used? If not, where should the forecast information be sourced? Should the month of October, similar to the old BCUC AAM formula, be used? If not, which month's data should be used?
${}_{10}CBF_{12}$	To be calculated	<ul style="list-style-type: none"> Should data from the <i>Consensus Forecasts</i> be used? If not, where should the forecast information be sourced? Should the month of October, similar to the old BCUC AAM formula, be used? If not, which month's data should be used?
BaseUtilBondSpread	To be determined	<ul style="list-style-type: none"> Should the value be based on data submitted by the expert witness Dr. Laurence Booth in his evidentiary filing or his Response to Information Requests (e.g., Exhibit C6-12, p. 100; Exhibit C6-15, BCUC IR 44.4)? If not, what should the preferred base value and why?

Element	Value	Written Submissions Sought by BCUC
UtilBondSpread _t	To be determined	<ul style="list-style-type: none"> Should the source of information be Bloomberg L.P. [Series C29530Y] as used by the Ontario Energy Board? If not, what other indexes should be used as an alternative? Why? Which month's index should be used? Should FEI provide the information (e.g., Bloomberg data) for the designated month for the purpose of applying the formula?
₃₀ CB	To be calculated	<ul style="list-style-type: none"> Should the statistics as published by the Bank of Canada (Cansim Series V39056) be used? If not, which alternative source of information is preferred and why? Should the month of October be used? If not, which month's data should be used?
₁₀ CB	To be calculated	<ul style="list-style-type: none"> Should the statistics as published by the Bank of Canada (Cansim Series V39055) be used? If not, which alternative source of information is preferred and why? Should the month of October be used? If not, which month's data should be used?
AAM trigger	Decision whether or not to trigger the implementation of the AAM effective January 1, 2014	<ul style="list-style-type: none"> Should the 3.8 percent threshold be based on the same calculation (data source and time period) as the factor '₃₀CB' in the AAM formula? If not, what other source and time period should be used to make that decision, and why?
ROE _t	To be calculated	<ul style="list-style-type: none"> Should the calculation of ROE be rounded to two decimal places as described in Letter L-43-01?