EB-2024-0063
Cost of Capital and Other Matters
J5.3
October 16, 2024

AMPCO/IGUA Response to Undertaking J5.3

Reference

EB-2024-0063 Oral Hearing, October 2, 2024 transcript, p. 161

Undertaking

[Dr.] Cleary to Update his ROE calculation with Data to September 30th.

Response

Please see attached.

Updated Base ROE Estimates, ROE formula Base Parameters and DLTDR Estimate

October 11, 2024

1. Base ROE Estimate for OEB Formula

CAPM Estimates:

My CAPM cost of equity (Ke) estimate as of September 30th would be **5.87%** as calculated in the table below, 0.18% below my CAPM estimate of 6.05% as of June 5, 2024. This is due to the decline in my risk-free rate (RF) estimate from 3.30% to 3.1267% (or 3.13%) as of Sept. 27/24[1], since long-term Government of Canada bond yields fell to 3.13% by the end of September. I use the same estimates for my other CAPM inputs: beta (0.45), MRP (5.0%), and, for financial flexibility (0.5%).

Estimate	RF (%)	MRP (%)	Beta	Spread Adjust. (%)	Financial Flex. (%)	Ke (%)
June 5, 2024 CAPM Best Estimate	3.30	5.0	0.45	-0.001	0.50	**6.05**
Sept. 30, 2024 CAPM Best Estimate	3.13 (30-year Government of Canada yield as of Sept. 27/24)	5.0 (unchanged)	0.45 (unchanged)	-0.001 (unchanged)	0.50 (unchanged)	**5.87**

DCF Estimates:

My DCF estimates as of June 5th relied upon 2023 annual data for Canadian utilities, which is still the most recent annual data available. As a result, my DCF estimate remains **unchanged at 7.4%**.

[1] See Attachment 1.

This is based on my single-stage DDM best estimate of 6.91%, and my H-Model Ke estimate of 6.88% (both before flotation costs), which I weight equally to give me a final DCF estimate of 6.9%, or **7.4%** after adding 0.5% for financial flexibility.

Bond Yield plus Risk Premium (BYPRP) Estimates:

My September 30th BYPRP estimate for Ke declines to **7.60%** from 7.70%, as can be seen in the table below. This is due to a 0.10% decline in the utility yield used in the following formula (i.e., from 4.7% to **4.6%**), while I maintain the company risk premium adder of 2.5% that I used in June:

Ke = Company's Bond Yield + Company Risk Premium

The first step in applying the BYPRP approach is to obtain an estimate of the cost of long-term yields on a typical Canadian utility. As of June 5, 2024 the yield on long-term A-rated Canadian utility bonds was 4.68% according to the Bloomberg data, which was close to the average yield of 4.78% on bonds outstanding for five Canadian operating utilities as of June 6, 2024 (the mid-point yield on Hydro One's bonds was 4.73% at this time). Based on this market-based evidence, I determined that 4.7% was a reasonable starting point for my BYPRP estimate.

As of September 27, 2024 the yield on long-term A-rated Canadian utility bonds was 4.5143%[2] (or **4.51%)**, which was close to the average yield of **4.70%** on bonds outstanding for five Canadian operating utilities as of October 3, 2024 (the mid-point yield on Hydro One's bonds was 4.61% at this time)[3]. Based on this market-based evidence, I determine that **4.6%** is a reasonable starting point for my updated BYPRP estimate.

[2] See Attachment 1.
[3] See Attachment 2.

Estimate	Company Bond Yield (%)	Company Risk Premium (%)	Financial Flex. (%)	Ke (%)
June 5, 2024 BYPRP Best Estimate	4.70	2.50	0.50	**7.70**
Sept. 30, 2024 BYPRP Best Estimate	4.60 (Utility bond yield estimate as of Sept. 27/24)	2.50 (unchanged)	0.50 (unchanged)	**7.60**

Final Ke (Base ROE) Estimate:

Based on an equal weighting of the three approaches discussed above, I determined the following best estimates for allowed Ontario utility ROEs in June and as of September 30th, respectively:

June 5, 2024: Base ROE = Ke = (1/3)(6.05) + (1/3)(7.4) + (1/3)(7.7) = **7.05%**

Sept. 30, 2024: Base ROE = Ke = (1/3)(5.87) + (1/3)(7.4) + (1/3)(7.6) = **6.95%**

Therefore, my Base ROE recommendation would decrease slightly from 7.05% in June, to **6.95%** as of September 30th, due to a decline in my CAPM and BYPRP estimates, which both declined slightly due to a slight decrease in both government and utility bond yields since June.

2. Base ROE Estimate for OEB Formula

As provided in Section 3.10 of my evidence, my final recommendation with respect to Issue #10 can be summarized as maintaining the existing ERP formula methodology, but making the following modifications:

1. Update the base ROE to 7.05% as of June 5th, or **6.95%** as of September 30th.

2. Update the base LCBF factor to the September 30, 2024 actual yield on 30-year Canada bonds (I used the current yield of 3.30% as a placeholder in the revised equation as of June 5th, but this would be updated to **3.13%** as of September 30th).

3. Update the base UtilBondSpread value to the actual September 30, 2024 value (I used the June 5th spread of **1.38%** as a placeholder in the revised equation, which would be updated to **1.39%** as of September 30th (i.e., 4.5143% A-rated utility yield minus 3.1267% long-term Government of Canada bond yield = 1.3876%, or 1.39%)).

4. LCBF should be estimated as the actual yield on 30-year Canada bonds as of September 30th in the year preceding the test year.

5. UtilBondSpread should be estimated as the actual spread on A-rated utility bond yields as of September 30th in the year preceding the test year.

6. Change the existing adjustment factors for LCBF and UtilBondSpread from 0.5 to 0.75.

These recommendations result in the modified versions of the current OEB formula presented below (with 3.30% and 1.38% serving as placeholders for the base LCBF and UtilBond Spread variables as of June 5th, which are updated to **3.13% and 1.39%** as of September 30th):

June 5, 2024:

$$ROE_t = 7.05\% + 0.75 \times (LCBF_t - 3.30\%) + 0.75 \times (UtilBondSpread_t - 1.38\%)$$

Sept. 30, 2024:

$$ROE_t = 6.95\% + 0.75 \times (LCBF_t - 3.13\%) + 0.75 \times (UtilBondSpread_t - 1.39\%)$$

3. Deemed Long-Term Debt Rate (DLTDR)

As discussed in Section 3.6 of my evidence, the OEB currently sets the DLTDR equal to the LCBF obtained from Consensus forecasts plus the average Canadian A-rated utility yield spread, which is estimated as the average from the September preceding the test year. The LCBF is estimated by using the average of the 3-month and 12-month 10-year Government of Canada bond yield forecasts, and adding to this forecast the average of the actual observed spreads between 10-year and 30-year Government of Canada bond yields for each business day in the month of the Consensus Forecasts that are used (usually September).

As discussed in Section 3.7 of my evidence, I recommend that the LCBF should be estimated **based on the actual September 30th long-term government bond yield** (which was 3.13% as of September 30th), and **the actual A-rated utility yield spread** as of September 30th (which was 1.38% as of September 30, 2024). Therefore, my recommended DLTDR as of September 30, 2024 would be:

DLTDR = LCBF + UtilSpread = 3.1267 + 1.3876 = 4.514 or **4.51%**

4. Deemed Short-Term Debt Rate (DSTDR)

I do not have access to the required data to provide the DSTDR estimate, but since I recommended following the approach recommended by LEI, my estimate should be the same as the one provided by LEI.

Date	Index A-Utility Yield	Index 30-year GOC	A-Utility Spread
Date	A-Utility Yield	Gov't Yield	Spread
9/27/2024	4.5143	3.1267	1.3876
10/1/2024	4.5002	3.1137	1.3865

Description	S&P	Fitch	DBRS	Moody's	Maturity Date	Seniority	Bid Yield	Ask Yield	Mid-Point	CUSIP	Type
Fortis Alberta Inc	A-		A(low)	Baa1u	Oct-52	SNR Unsec	4.683	4.605	4.644	34957ZAQ7	Bullet
Fortis BC Inc			A(low)	Baa1	Jul-47	SNR Unsec	4.848	4.79	4.819	34957UAC9	Bullet
CU Inc		A	A(high)		Nov-50	SNR Unsec	4.695	4.619	4.657	12657ZAU7	Bullet
Enbridge Gas Inc	A-		A		Nov-50	SNR Unsec	4.774	4.728	4.751	29290ZAK6	Bullet
Hydro One Inc	A		A(high)	A3	Dec-51	SNR Unsec	4.649	4.578	4.6135	44810ZBE9	Bullet
As of Oct 03, 2024						**Average**	4.7298	4.664	4.6969		