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ROE Outlook for 2002

Pipelines and Gas & Electric Utilities

Overview

Fall is the time of year when most regulated pipeline and gas & electric utilities have their return on equity (ROE) set in accordance with various formulas established by the companies' respective regulators. Notwithstanding a move towards deregulation and performance-based regulation, the allowed ROE continues to be used to determine the net income that a number of the companies can earn. **We believe that allowed ROEs in 2002 will be approximately equal to the levels allowed for 2001.** In light of the low levels of allowed ROEs calculated by the various formulas, and the changing nature of the risk associated with the operations of these companies, a number of utility and pipeline companies continue to pursue modifications to their ROE formulas and/or incentive regulation. Both endeavours are motivated by the objective of allowing the companies to earn higher ROEs that more appropriately compensate for the risk associated with their operations.

Highlights

- A number of pipeline and gas utilities will have their ROEs set in November in accordance with either the National Energy Board's multi-pipeline ROE formula or similar formulas applied by the relevant regulator.
- While the forecast for the 2002 10-year Government of Canada bond yield, as determined by the various formulas, has declined from that applied to establish the allowed ROEs for 2001, the return to a normal yield curve from an inverted yield curve has resulted in a forecast for the 30-year Government of Canada bond yield that is approximately equal to that applied last year. The net impact is a forecast of allowed ROEs that is approximately equal to those allowed in 2001.
- Companies with the greatest earnings sensitivity to changes in the 2002 allowed ROEs are **Fortis** (FTS - $44.45 – 3 (NEUTRAL)), **TransCanada PipeLines** (TRP - $20.20 – 2 (OUTPERFORM)) and **TransAlta*** (TA - $22.04 – 3 (NEUTRAL).

* Within the past 36 months, RBC Dominion Securities Inc. has undertaken an underwriting liability or has provided advice for a fee with respect to the securities of this company.

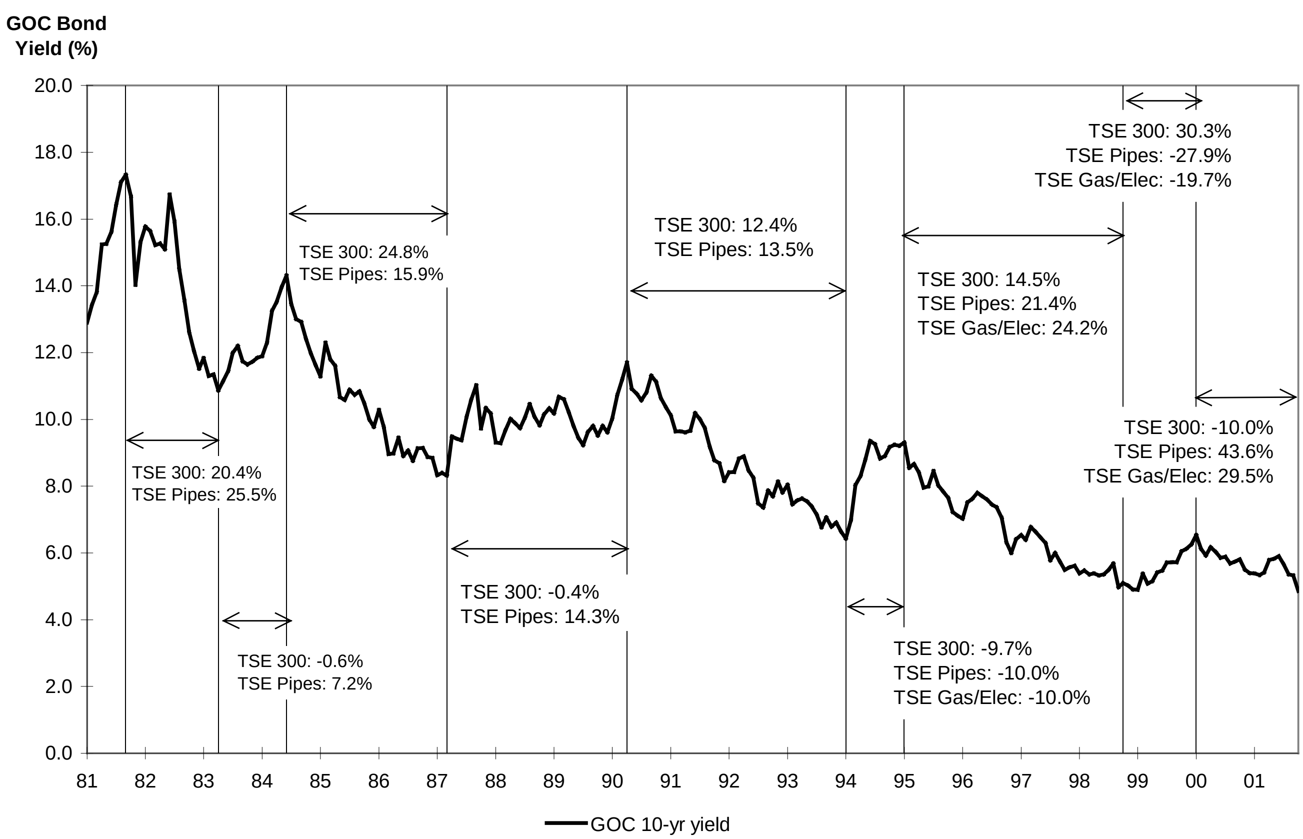
Background

Since 1995, a number of Canadian energy infrastructure companies have had their returns on common equity set by formula. The formulas tied the annual ROE to a forecast of the 30-year Government of Canada bond yield. In 1995, this forecast was 9.25%, to which a risk premium was added. Today, with a significant decline in yields since 1995, the resulting ROEs are much lower than in 1995.

Notwithstanding the relationship between many companies' allowed ROEs (i.e. earnings levels) and the level of interest rates, the share prices of pipeline and gas & electric utilities negatively correlate with the level of interest rates. Higher interest rates generally lead to lower share prices as the stream of future dividends is discounted at higher rates.

Exhibit 1 illustrates the relative total return performance of the pipelines and gas & electric utilities sub-indices versus the TSE 300 Composite Index since 1981 during periods of increasing and decreasing interest rates. We believe there is an inverse relationship between interest rates and the share prices of the energy infrastructure stocks. Further, the relationship is most pronounced when the 10-year Government of Canada bond yield is below 7%, when these companies become fixed-income surrogates.

Exhibit 1: GOC 10-Year Bond Yield and Annualized Total Return of TSE 300, Pipelines and Gas & Electric Utilities



Source: RBC Capital Markets Trend & Cycle, Bloomberg

RBC Capital Markets

For the pipeline index, the average annualized total return during periods of declining interest rates was 24.0%, compared to an average annualized return of -4.1% during periods of rising interest rates. Although there are fewer observations for the gas & electric index, the effect is the same with an average annualized total return during periods of declining interest rates of 26.9% compared to -14.9% during periods of rising interest rates.

ROE Formulas

The Importance of the Consensus Forecast

Most regulators in Canada, including the National Energy Board (NEB), the British Columbia Utilities Commission (BCUC), the Ontario Energy Board (OEB), Quebec's Régie de l'énergie (the Régie), the Alberta Energy and Utilities Board (AEUB) for the previously regulated power generation, and the Board of Commissioners of Public Utilities of Newfoundland have devised formulas to set the annual ROE. With the exception of the formulas implemented by Newfoundland's Board of Commissioners of Public Utilities and the AEUB, each formula utilizes a forecast of the 10-year Government of Canada bond yield published in the Consensus Forecast by Consensus Economics, London[1].

In simplified terms, these formulas add a basis point spread to the average 10-year forecast yield published in the Consensus Forecast to establish an estimate of the 30-year Government of Canada bond yield. The formulas calculate the applied spread between the 10-year and the 30-year Government of Canada bond yields using actual averages over relatively short time periods around the time when the ROE is set[2]. The annual ROE is then adjusted by the year-over-year change in the forecast of the long-term Government of Canada bond multiplied by an adjustment factor.

Risk Premiums

Typically, the formulas utilized by the Canadian regulators result in equity risk premiums that are inversely related to the level of interest rates. As interest rates decline, the equity risk premiums implied by the formula increase. This is due to the fact that as the forecast of the long GOC bond yield changes, the allowed ROE changes by an adjustment factor of less than one. The smaller the adjustment factor, the larger the implied equity risk premium as interest rates fall. In the case of the NEB multi-pipeline ROE formula, as the long-bond yield drops, the ROE only declines by 0.75 times the change. In the case of BCUC and the Board of Commissioners of Newfoundland, as the long-bond yield declines, the ROE changes by a factor of 0.80 times. However, both the BCUC and the Board of Commissioners of Newfoundland have interest rate ranges within which there is no change to the ROE. Further, for estimates of the yield on the 30-year GOC below 6.00%, the BCUC utilizes an adjustment factor of 1.0 times.

The following example illustrates that while the NEB multi-pipeline ROE declined from 12.25% in 1995 to the estimated forecast for 2002 of 9.65%, the implied equity risk premium increased from 300 basis points to 387 basis points.

1. Most formulas rely on the November issue of the *Consensus Forecast*. The Ontario Energy Board generally utilizes the August issue of *the Consensus Forecast* to set the ROE for Consumers Gas due to its September 30 year-end. The Régie also utilizes the August issue of the *Consensus Forecast* in its formula. However, for the 2001/02 regulatory year, the ROE for Consumers Gas is based on the September issue of the *Consensus Forecast* due to the late filing of the application.
2. Each formula calculates the spread differently. We do not view any bias one way or the other across the various methods and have not specifically reported on the details of these calculations.

Exhibit 2: Change in the NEB Multi-Pipeline Risk Premium

Multi-pipeline 1995 allowed ROE	12.25%
1995 forecast 30-year GOC yield	9.25%
1995 implied equity risk premium	**3.00%**
2002 forecast 30-year GOC yield	5.78%
Change between 1995 and 2002 forecast bond yield	-3.47%
Multiply difference by .75X	-2.60%
Add change to 1995 allowed ROE of 12.25% to arrive at 2002 allowed ROE	9.65%
2002 implied equity risk premium	**3.87%**
Increase in the implied equity risk premium from 1995 to 2002	**0.87%**

Source: RBC Capital Markets, NEB

Normalization of Yield Curve

Based on the October issue of Consensus Economics Survey, the forecast of the 10-year Government of Canada bond for 2002 has declined by 65 basis points when compared to the 2001 forecast. However, the impact of this decline has been mostly negated by the normalization of the yield curve. When we published our ROE Outlook for 2001, the Canadian yield curve was inverted as the spread between the 10- and the 30-year Government of Canada bond yields was approximately -10 to -15 basis points. Over the past 12 months, the yield curve has returned to normal and the average spread between the 10- and the 30-year Government of Canada bond yields in October was approximately 48 basis points. The offsetting impact of the decline in the interest rate forecast and the normalization of the yield curve results in a 2002 multi-pipeline ROE forecast of 9.65% compared to the NEB's allowed return of 9.61% in 2001.

2002 Forecast Allowed ROEs

The majority of formula-based ROEs are set in November. Applying the formulas to the October Consensus Forecast of the 10-year GOC yield results in a good indication of the level of 2002 allowed ROEs for regulated companies.

Based on the results of the October survey, the 2002 NEB multi-pipeline ROE is calculated at 9.65% in accordance with the following steps:

Exhibit 3: NEB 2002 ROE Calculation

Consensus economic forecast 10-yr bond yield (3 months out)	5.10%
Consensus economic forecast 10-yr bond yield (12 months out)	5.50%
Average	5.30%
Add: average basis point spread between 10-year and 30-year GOC bond for October	0.48%
2002 forecast of the 30-year Government of Canada Bond Yield	5.78%
1995 forecast of the 30-year Government of Canada Bond Yield	9.25%
Difference between 2002 and 1995 forecast	-3.47%
Multiply by .75	-2.60%
1995 ROE of 12.25%.	12.25%
Add to 1995 ROE to arrive at new 2002 forecast ROE	**9.65%**

Source: RBC Capital Markets, Bloomberg, NEB

The NEB multi-pipeline ROE is used in the determination of tolls for all NEB-regulated pipelines, with the exception of companies that have incentive agreements incorporating some type of price cap, revenue cap or alternative incentive rate-making methodology. However, even with price- and revenue-cap incentive agreements, the multi-pipeline ROE is still relevant for new capacity expenditures in some circumstances.

In the following table, we summarize the major aspects of various formulas applied in Canada to the subsidiaries of the publicly traded pipeline and gas & electric utilities covered by RBC Capital Markets.

Exhibit 4: 2002 ROE Forecast and Component Parts of ROE Formulas

Regulator	Companies Impacted	Month that ROE is set	Base ROE	Base Forecast of Long GOC Yield	Adjustment Factor	2001 Allowed ROE	2002 Forecast ROE
NEB	TransCanada Mainline 1.	November	12.25%	9.25%	0.75	9.61%	**9.65%**
	Enbridge Oil Pipeline	November	12.25%	9.25%	0.75	9.61%	**9.65%**
	Foothills	November	12.25%	9.25%	0.75	9.61%	**9.65%**
	Alberta Natural Gas	November	12.25%	9.25%	0.75	9.61%	**9.65%**
	Norman Wells	November	12.25%	9.25%	0.75	9.61%	**9.65%**
	TransQuebec & Maritimes	November	12.25%	9.25%	0.75	9.61%	**9.65%**
Ontario Energy Board	Consumers Gas	August	10.30%	6.79%	0.75	9.54%	**9.66%** 2.
BCUC 3.	BC Gas	November	9.50%	6.00%	0.80 4.	9.25%	**Restricted**
Board of Commissioners of Newfoundland	Newfoundland Power	November	9.25%	5.75%	0.80	9.59%	**9.04%** 5.
AEUB 6.	TransAlta	Sept.,Oct., Nov.	na	na	1.00	10.29%	**10.25%**
	Canadian Utilities	Sept.,Oct., Nov.	na	na	1.00	10.29%	**10.25%**
Régie de l'énergie	Gaz Métropolitain	August	9.64%	5.76%	0.75	9.60%	**9.67%** 7.

1. TransCanada has filed a "Fair Return" application seeking approval of an after-tax weighted average cost of capital (ATWACC) of 7.5%. The ATWACC of 7.5% equates to a rate of return on common equity of 12.5% on deemed common equity of 40%.
2. In light of the low ROE yielded by the formula, Enbridge Consumers Gas has filed an application with the Ontario Energy Utilities Board for an allowed return of 11.43%.
3. The BCUC changed the base returns in its August 26, 1999 decision and the base yield on a long GOC bond was changed from 9.25% to 6.0%.
4. In the BCUC's August 26, 1999 decision, the adjustment factor was altered to apply only to changes in the yield on the long GOC bond when long yields are greater than 6.0%.
5. The Board of Commissioners of Public Utilities of Newfoundland does not use a forecast of the long Government of Canada bond yield in the ROE adjustment formula. The Board establishes the ROE using the actual daily closing yields on long GOC bonds for the last five trading days in October and the first five trading days in November. The ROE only changes if the return on rate base moves outside of a previously approved range.
6. In establishing the ROE to be used for the generation covered by the PPAs, the long bond yield estimate is the average redemption yield on all conventional Canadian government bonds with a maturity of 10 years or more, as published by the Bank of Canada. The average is calculated over the months September, October and November of the year prior to the test year. The risk premium is fixed at 450 basis points.
7. The automatic adjustment formula applies to Gaz Métropolitain 's base rate of return. Under its performance incentive mechanism, Gaz Métropolitain is allowed to earn up to 400 basis points in addition to its base rate of return.

Source: RBC Capital Markets, Company reports

Assessing the Formulas

With respect to setting ROEs, we believe using a formula is preferable to the regulator subjectively decreeing the ROE, and we prefer some formulas to others.

In general, the smaller the adjustment factor (recall that the annual change in the ROE reflects the annual change in the forecast GOC bond yield times an adjustment factor), the more attractive the formula. Adjustment factors reflect the theory that the equity risk premium is inversely related to the level of interest rates. We believe this theory to be true.

We also prefer formulas that incorporate a forecast of the long-term GOC yield as opposed to basing the allowed ROE on an average of actual yields observed in the market. In the current environment of declining interest rates, most forecasts tend to be closer to the long-term average of interest rates and, therefore, are higher than current observed yields. As a result, formulas that use forecasts tend to produce allowed ROEs that are higher than those based on an average of actual yields. For example, in the case of the formula applied by the Board of Commissioners of Public Utilities of Newfoundland, using the spot rate results in the lowest forecast allowed ROE for 2002 among Canadian pipelines and gas & electric utilities.

The table below summarizes the ROEs generated through the application of the various formulas across different interest rate scenarios. Clearly, the formula utilized by the Board of Commissioners of Public Utilities of Newfoundland to set Fortis' ROE is the least attractive. The ROEs implied by the application of this formula are consistently the lowest across various interest rate levels. The formula that consistently results in the highest ROE is that used by the AEUB to determine the returns for the generating units covered by the Power Purchase Arrangements.

Exhibit 5: Allowed ROEs

Forecast Yield on Long Government of Canada Bond	**5.50%**	**6.00%**	**6.50%**	**7.00%**	**7.50%**	**8.00%**	**8.50%**	**9.00%**	**9.50%**
Regulator:									
National Energy Board	9.44%	9.81%	10.19%	10.56%	10.94%	11.31%	11.69%	12.06%	12.44%
Ontario Energy Board - Enbridge Consumers Gas	9.33%	9.71%	10.08%	10.46%	10.83%	11.21%	11.58%	11.96%	12.33%
Board of Commissioners of Newfoundland (1)	9.05%	9.45%	9.85%	10.25%	10.65%	11.05%	11.45%	11.85%	12.25%
Alberta Energy and Utilities Board - Power Purchase Arrangements (2)	10.00%	10.50%	11.00%	11.50%	12.00%	12.50%	13.00%	13.50%	14.00%
Risk Premiums:									
National Energy Board	3.94%	3.81%	3.69%	3.56%	3.44%	3.31%	3.19%	3.06%	2.94%
Ontario Energy Board - Enbridge Consumers Gas	3.83%	3.71%	3.58%	3.46%	3.33%	3.21%	3.08%	2.96%	2.83%
Board of Commissioners of Newfoundland	3.55%	3.45%	3.35%	3.25%	3.15%	3.05%	2.95%	2.85%	2.75%
Alberta Energy and Utilities Board - Power Purchase Arrangements	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%

(1) The ROEs utilized by the Board of Commissioners of Newfoundland are actual ROEs as opposed to forecast ROEs. We believe that the application of actual ROEs increases the variability of year-to-year ROEs as forecast ROEs tend to revert towards the historical mean.

(2) The Alberta Energy and Utilities Board utilizes an average of the actual yields on all conventional Canadian government bonds of 10 years or more for the months of September, October and November of the preceding test year in determining the allowed ROEs for the generation units covered by the PPAs.

Source: RBC Capital Markets, Company reports

2002 EPS Sensitivity to ROE Changes

With the forecast yield on 30-year GOC bonds at about 5.78%, we expect to see allowable ROEs in the range of 9.25% to 10.30% and have reflected such returns in our models and earnings estimates for the Canadian pipelines and gas & electric companies that we cover. However, there remains some uncertainty in the capital markets and the forecast long GOC yield that is ultimately applied to establish the ROEs could change considerably from the October forecast of 5.78%. In addition, certain companies are pursuing changes to the formulas applied by their regulators. As such, there remains uncertainty regarding the range of allowable ROEs for 2002.

In light of the above, we have undertaken a sensitivity analysis that looks at the earnings per share exposure in 2002 of those companies that are regulated under a cost-of-service methodology and have not yet had their ROE finalized for 2002.

The companies with the largest exposure to allowed returns are Fortis, TransCanada and TransAlta. Fortis has a $0.05 EPS sensitivity to a 25-basis-point change in the allowed ROE, representing 1.52% of our forecast EPS for 2002. TransCanada has a $0.02 EPS sensitivity to a 25-basis-point change in the multi-pipeline ROE, which represents 1.1% of our forecast EPS for 2002. TransAlta has a $0.01 per share earnings sensitivity to a 25-basis-point change in the allowed ROE of its regulated operations, representing 0.91% of our forecast EPS for the company.

The following table sets out the affected ratebase, the equity component of ratebase and the earnings-per-share impact of a 25-basis-point change in allowed ROE.

Exhibit 6: 2002 Estimated Earnings Sensitivities to a Change in Allowed ROE

Company	Estimated Ratebase Impacted by Change ($ millions)		Deemed Equity %	Deemed Equity ($ millions)	Earnings Impact 25 bp Change ($ millions)	EPS Impact	As a percentage of 2002 EPS
TransCanada							
Mainline	$9,045.4	(1)	30.00%	$2,713.6	$6.78	$0.01	
ANG	195.4		30.00%	58.6	0.15	0.00	
TQM	459.7		30.00%	137.9	0.34	0.00	
Foothills Sask	330.2		30.00%	99.1	0.25	0.00	
Foothills B.C.	123.2		30.00%	37.0	0.09	0.00	
Foothills Alta	360.0		30.00%	108.0	0.27	0.00	
Total	$10,513.9		30.00%	$3,154.2	$7.89	**$0.02**	**1.10%**
Enbridge							
Mainline	$241.5	(2)	41.00%	$99.0	0.25	$0.00	
Norman Wells	164.0		55.00%	90.2	0.23	0.00	
Consumers Gas	3,053.4		35.00%	1068.7	2.67	0.02	
Total	$3,458.9		36.37%	$1,257.9	$3.14	**$0.02**	**0.73%**
TransAlta							
PPAs	$1,986.6		45.00%	$894.0	$2.23	**$0.01**	**0.91%**
Canadian Utilities							
PPAs	$711.9		45.00%	$320.4	$0.80	$0.01	
Electric Transmission (3)	na		na	na	na	na	
Electric Distribution	648.0		38.00%	246.2	0.62	0.01	
ATCO Gas North and ATCO Pipelines North (4)	na		na	na	na	na	
ATCO Gas South and ATCO Pipelines South	$586.4		37.00%	217.0	0.54	0.01	
	$1,946.3		40.26%	$783.6	$1.96	**$0.03**	**0.79%**
ATCO							
ROE exposure through 51.9% interest in Canadian Utilities (see above)						**$0.03**	**0.78%**
BC Gas							
==================== **RESTRICTED** ====================							
Fortis							
Newfoundland Power	$626.9	(5)	45.00%	$282.1	$0.71	**$0.05**	**1.52%**

Notes:

(1) TransCanada has filed a "Fair Return" application seeking approval of an after-tax weighted average cost of capital (ATWACC) of 7.5%. The ATWACC of 7.5% equates to a rate of return on common equity of 12.5% on deemed common equity of 40%.

(2) Includes rate base for Line 9 and non-routine adjustment (except SEP II).

(3) Canadian Utilities has filed a negotiated settlement for its Electric Transmission system with the AEUB.

(4) ATCO Gas North and ATCO Pipelines North has a negotiated settlement with its customers and does not have ROE exposure.

(5) Instead of rate base, Newfoundland Power's invested capital is used to determine the impact of a change in allowed ROE on Fortis' EPS.

Source: RBC Capital Markets, Company reports

Conclusion and Recommendations

We reiterate our view that the net effect of lower interest rates on pipelines and gas & electric utilities is positive. The negative impact that lower rates have on earnings due to lower allowed rates of return is more than offset by the positive effect that lower interest rates have on the valuations of these stocks.

With respect to the earnings impact of a 25-basis-point decline in the 2001 allowed ROE, Fortis has the largest potential percentage earnings reduction with an EPS sensitivity of $0.05, or 1.52% of forecast earnings per share for each 25-basis-point increase in its allowed ROE. Enbridge and ATCO have the lowest sensitivity to changes in allowed ROEs as the majority of its earnings come from companies with either negotiated agreements in place for the year 2002 or from non-regulated businesses.

With respect to the attractiveness of the various formulas, we view the formula implemented by the AEUB for the Alberta generation units covered by the power purchase arrangements as the most attractive of those used. The NEB's formula appears fair and unbiased in its approach to establishing the annual multi-pipeline ROE. In our assessment, the formula utilized by the Board of Commissioners of Public Utilities in Newfoundland to set Fortis' ROE is the least attractive and penalizes the company relative to its Canadian peer group.

Exhibit 7: Rankings and Recommendations

	Tick	PRICE 7-Nov-01	Earnings per Share[1] 00	01(E)	02(E)	03(E)	P/E Ratio 2001E	2002E	Current Dividend	Current Div.Yield	Dividend Payout (%) 2001E	2002E	1-Year Target	1-Year Exp. Return	Recomm.
PIPELINES (Industry Rank = 3)															
Enbridge*	ENB	$44.90	$2.15	$2.48	$2.74	$2.99	18.1	16.4	$1.40	3.1%	56.5%	51.1%	$48.00	10.0%	3 (NEUTRAL)
TransCanada PipeLines	TRP	$20.20	$1.22	$1.42	$1.51	$1.60	14.2	13.4	$0.90	4.5%	63.4%	59.6%	$22.75	17.1%	2 (OUTPERFORM)
Westcoast Energy*	W	$41.75	$2.36	$2.81	n.a.	n.a.	14.9	n.a.	$1.36	3.3%	48.4%	n.a.	$43.80	8.2%	2 (OUTPERFORM)
Average:							**15.7**	**14.9**		**3.6%**	**56.1%**	**55.3%**			
GAS/ELEC UTILITIES (Industry Rank = 2)															
ATCO Ltd.*	ACO.X	$46.61	$3.76	$4.14	$4.42	$4.65	11.3	10.5	$1.04	2.2%	25.1%	23.5%	$55.00	20.2%	2 (OUTPERFORM)
BC Gas	BCG	$36.10	$2.06		Restricted				$1.32	3.7%				Restricted	
Canadian Utilities	CU	$53.30	$3.62	$3.64	$3.89	$4.05	14.6	13.7	$1.88	3.5%	51.6%	48.3%	$59.50	15.2%	2 (OUTPERFORM)
Emera*	EMA	$17.96	$1.22	$1.16	$1.24	$1.26	15.5	14.5	$0.85	4.7%	73.3%	68.5%	$17.25	0.8%	3 (NEUTRAL)
Fortis	FTS	$44.45	$2.31	$3.17	$3.11	$3.29	14.0	14.3	$1.88	4.2%	59.3%	60.5%	$45.00	5.5%	3 (NEUTRAL)
TransAlta Corp.*	TA	$22.04	$1.08	$1.29	$1.46	$1.63	17.1	15.1	$1.00	4.5%	77.5%	68.5%	$24.00	13.4%	3 (NEUTRAL)
Average:							**14.5**	**13.6**		**3.8%**	**57.4%**	**53.9%**			

[1]Normalized fully diluted earnings per share.

*Within the past 36 months, RBC Dominion Securities has undertaken an underwriting liability or has provided advice for a fee with respect to the securities of this company.

Source: RBC Capital Markets, Company reports