

Utility Risk and Financing

**Professor Laurence Booth
CIT Chair in Structured Finance
Rotman School of Management**

BOOTH CAMPUS APRIL 2008



COMPARISON BETWEEN ALLOWED EQUITY RISK PREMIUMS
 FOR CANADIAN AND U.S. UTILITIES

Year	Canadian Utilities			U.S. Utilities		
	Allowed ROE ^{1/}	Average Long Canada Yield	Equity Risk Premium	Allowed ROE	Average Long Treasury Yield	Equity Risk Premium
1990	13.66	10.69	2.97	12.69	8.61	4.08
1991	13.58	9.72	3.86	12.51	8.14	4.37
1992	12.99	8.68	4.31	12.06	7.67	4.39
1993	12.19	7.86	4.33	11.37	6.59	4.78
1994	11.54	8.69	2.85	11.34	7.39	3.95
1995	12.13	8.41	3.72	11.51	6.85	4.66
1996	11.36	7.75	3.61	11.29	6.73	4.56
1997	10.88	6.66	4.22	11.34	6.58	4.76
1998	10.20	5.59	4.61	11.59	5.54	6.05
1999	9.52	5.72	3.80	10.74	5.91	4.83
2000	9.78	5.71	4.07	11.41	5.88	5.53
2001	9.67	5.77	3.90	11.04	5.50	5.54
2002	9.59	5.67	3.92	11.10	5.41	5.69
2003	9.70	5.31	4.39	10.98	5.03	5.95
2004	9.56	5.11	4.45	10.73	5.08	5.65
2005	9.48	4.38	5.10	10.50	4.52	5.98
2006	9.07	4.33	4.74	10.39	4.93	5.46
2007q2	8.57	4.26	4.31	10.30	4.90	5.40
Means:						
1990-1993	13.10	9.24	3.87	12.16	7.75	4.41
1994-1998	11.22	7.42	3.80	11.41	6.62	4.80
1999-2007q2	9.44	5.14	4.30	10.80	5.24	5.56

1/ 2007 ROE represents results for the entire year.

Note: For U.S. Treasury yields, 30-year maturities used through January 2002; theoretical 30-year yield from February 2002 to January 2005; 30-year maturities February 2002 forward.

Sources: Regulatory Research Associates; www.snl.com; Various Canadian Regulatory Decisions; Bank of Canada; Federal Reserve; U.S. Treasury.

Source Ms. McShane OPG testimony 2008

Canadian vs US Utility ROEs

- ◆ **Canadian utility risk premiums increasing**
 - Adjustment mechanisms: 75% of change in LTC
 - Declining interest rates mean increasing risk premiums
- ◆ **Canadian ROEs/ risk premiums lower than in the US**
 - Regulatory lag in US: far fewer rate hearings and few automatic adjustment mechanisms
 - Risk premiums automatically increase
 - New awards still higher (0.50-10.0%)
- ◆ **Is this a concern:**
 - CGA
 - Increasing company evidence references the “gap”



End Result

- ◆ Rates have to be “fair and reasonable”
 - Just because US utilities have “such and such” there is no reason why Canadian utilities have to follow suit
 - Can utilities access credit on reasonable terms?

- ◆ *What are Canadian utility bond ratings: debt financing*
- ◆ *What are Canadian utility market to book ratios: equity financing*



DEBT AND COMMON STOCK QUALITY RATINGS
 OF CANADIAN UTILITIES

Company	Debt Rated	DBRS Bond Rating	Moody's Bond Rating	S&P Bond Rating	CBS Stock Ranking
Altalink L.P.	Senior Secured	A		A-	
CU Inc.	Senior Unsecured	A(high)		A	Very conservative
Enbridge Gas Distribution	Senior Unsecured	A		A-	Very conservative
Enbridge Pipelines	Senior Unsecured	A(high)		A-	Very conservative
ENMAX	Unsecured Debentures (DBRS) Issuer (S&P)	A		A-	
Energenco	Issuer	A			
EPCOR Utilities Inc.	Senior Unsecured	A(low)	Baa2	BBB+	
FortisAlberta Inc.	Senior Unsecured	A(low)	Baa1		Very conservative
FortisBC Inc.	Secured Debentures	BBB(high)	Baa2		Very conservative
Gas Metropolitan	Senior Secured	A		A	
Hamilton Utilities	Senior Unsecured			A	
Hydro One	Senior Unsecured	A(high)	Aa3	A	
Hydro Ottawa Holding Inc.	Senior Unsecured	A (low)		A-	
Maritime Electric	Senior Secured			A-	Very conservative
Newfoundland Power	Senior Secured	A	Baa1	NR ²¹	Very conservative
NOVA Gas Transmission	Senior Unsecured	A	A2	A-	Very conservative
Nova Scotia Power	Senior Unsecured	A(low)	Baa1	BBB	Very conservative
Pacific Northern Gas	Senior Secured	BBB(low)		NR ²¹	Average
Terracon Gas	Senior Secured	A	A2	AA-	Very conservative
	Senior Unsecured	A	A3	A	
Toronto Hydro	Senior Unsecured	A		A-	
TransCanada Pipelines	Senior Secured	A		A	Very conservative
	Senior Unsecured	A	A2	A-	
Union Gas Limited	Senior Unsecured	A		BBB+	Very conservative
Veridian Corp.	Issuer	A			
Westcoast Energy	Senior Unsecured	A(low)		BBB+	Very conservative
Mean		A	A3	A-	Very conservative
Median		A	Baa1	A-	Very conservative

²¹ Withdrawn by company; BBB+ prior to withdrawal.

²² Withdrawn by company; BBB- prior to withdrawal.

Note: Debt ratings are for utility; Stock rankings are for parent.

Source: DBRS Bond Ratings, Moodys.com, Standard & Poor's, The Blue Book of CBS Stock Reports.



Name	Debt Rating		
Madison Gas & Electric Co.	AA-	AEP Texas Central Co.	BBB
Alabama Power Co.	A	AEP Texas North Co.	BBB
Boston Edison Co.	A+	ALLETE Inc.	BBB+
Central Hudson Gas & Electric Corp.	A	Alliant Energy Corp.	BBB+
Consolidated Edison Co. of New York Inc.	A	Ameren Corp.	BBB
Consolidated Edison Inc.	A	AmerenEnergy Generating Co.	BBB
Florida Power & Light Co.	A	American Electric Power Co. Inc.	BBB
FPL Group Inc.	A	Appalachian Power Co.	BBB
Georgia Power Co.	A	Arizona Public Service Co.	BBB-
Gulf Power Co.	A	Atlantic City Electric Co.	BBB
KeySpan Corp.	A	Baltimore Gas & Electric Co.	BBB+
MidAmerican Energy Co.	A-	CenterPoint Energy Houston Electric LLC	BBB
MidAmerican Energy Holdings Co.	A-	CenterPoint Energy Inc.	BBB
Mississippi Power Co.	A	CenterPoint Energy Resources Corp.	BBB
Orange and Rockland Utilities Inc.	A	Central Illinois Light Co.	BBB-
PacifiCorp	A-	Central Illinois Public Service Co.	BBB-
PPL Electric Utilities Corp.	A-	CILCORP Inc.	BBB-
Public Service Co. of North Carolina Inc.	A-	Cincinnati Gas & Electric Co.	BBB
San Diego Gas & Electric Co.	A	Cisergy Corp.	BBB
Savannah Electric & Power Co.	A	Cleco Corp.	BBB
SCANA Corp.	A-	Cleco Power LLC	BBB
South Carolina Electric & Gas Co.	A-	Cleveland Electric Illuminating Co.	BBB
Southern Co.	A	Columbus Southern Power Co.	BBB
Vectren Corp.	A-	Commonwealth Edison Co.	BBB-
Wisconsin Electric Power Co.	A-	Connecticut Light & Power Co.	BBB
Wisconsin Power & Light Co.	A-	Constellation Energy Group Inc.	BBB+
Wisconsin Public Service Corp.	A+	Delmarva Power & Light Co.	BBB
WPS Resources Corp.	A	Detroit Edison Co.	BBB
Mean	A	Dominion Resources Inc.	BBB
Median	A	DTE Energy Co.	BBB
		Duke Energy Corp.	BBB
		Duquesne Light Co.	BBB
		Edison International	BBB-
		El Paso Electric Co.	BBB-
		Empire District Electric Co.	BBB-
		Energy East Corp.	BBB+
		Energy Arkansas Inc.	BBB
		Energy Corp.	BBB
		Energy Gulf States Inc.	BBB
		Energy Louisiana LLC	BBB
		Energy Mississippi Inc.	BBB
		Exelon Corp.	BBB+
		FirstEnergy Corp.	BBB
		Great Plains Energy Inc.	BBB
		Green Mountain Power Corp.	BBB
		Hawaiian Electric Co. Inc.	BBB+
		IDACORP Inc.	BBB+
		Idaho Power Co.	BBB+
		Illinois Power Co.	BBB-
		Indiana Michigan Power Co.	BBB
		Interstate Power & Light Co.	BBB+
		Jersey Central Power & Light Co.	BBB
		Kansas City Power & Light Co.	BBB
		Kennucky Power Co.	BBB
		Kennucky Utilities Co.	BBB+
		Louisville Gas & Electric Co.	BBB+
		Metropolitan Edison Co.	BBB
		NiSource Inc.	BBB
		Northeast Utilities	BBB
		Northern Indiana Public Service Co.	BBB
		Northern States Power Co.	BBB
		Northern States Power Wisconsin	BBB+
		OGE Energy Corp.	BBB+
		Ohio Edison Co.	BBB
		Ohio Power Co.	BBB
		Otter Tail Corp.	BBB+
		Pacific Gas & Electric Co.	BBB
		PECO Energy Co.	BBB+
		Pennsylvania Electric Co.	BBB
		Pennsylvania Power Co.	BBB
		PEPCO Holdings Inc.	BBB
		Pinnacle West Capital Corp.	BBB-
		PNM Resources Inc.	BBB
		Portland General Electric Co.	BBB+
		Potomac Electric Power Co.	BBB
		PPL Corp.	BBB
		Progress Energy Inc.	BBB
		PSBG Power LLC	BBB
		PSI Energy Inc.	BBB
		Public Service Co. of Colorado	BBB
		Public Service Co. of New Hampshire	BBB
		Public Service Co. of Oklahoma	BBB
		Public Service Electric & Gas Co.	BBB
		Public Service Enterprise Group Inc.	BBB
		Puget Energy Inc.	BBB-
		Puget Sound Energy Inc.	BBB-
		Rochester Gas & Electric Corp.	BBB+
		Sempra Energy	BBB+
		Southern California Edison Co.	BBB
		Southwestern Electric Power Co.	BBB
		Southwestern Public Service Co.	BBB
		Tampa Electric Co.	BBB-
		Toledo Edison Co.	BBB
		Union Electric Co.	BBB
		Union Light Heat & Power Co.	BBB
		Virginia Electric & Power Co.	BBB
		Western Massachusetts Electric Co.	BBB
		Wisconsin Energy Corp.	BBB+
		Xcel Energy Inc.	BBB



BOOTH CAMPUS APRIL 2008

ESTIMATE OF MARKET VALUE CAPITAL STRUCTURES FOR CANADIAN UTILITIES

Company	Stock Price (Average Monthly High/Low 7/2002-6/2007) (1)	Book Value Per Share Average 2002-2006 (2)	Market/Book Ratio (3) = (1)/(2)	Book Value Permanent Capital Common Equity Ratio 2002-2006 (4)	Market Value Common Equity Ratio (Debt at Par) (5)=[(4)*(3)]/[4]*(3)+(1-(4))]	Market Value Debt Ratio 1.0-Col.(5)
CANADIAN UTILITIES -CL A	33.57	16.52	2.03	37.7%	55.1%	44.9%
EMERA INC	15.53	12.37	1.50	46.1%	56.1%	43.9%
ENBRIDGE INC	29.94	11.04	2.71	34.1%	58.3%	41.7%
FORTIS INC	16.77	10.34	1.62	33.6%	47.7%	52.3%
PNG	18.00	20.62	0.88	46.4%	43.1%	56.9%
TERASEN INC ^{1/}	24.47	13.62	1.80	39.9%	54.4%	45.6%
TRANSCANADA CORP	30.10	14.01	2.15	38.1%	57.0%	43.0%
Mean				39.4%	53.1%	46.9%

^{1/} Terasen price is through November 2005 due to Kinder Morgan acquisition; book value per share is through 2005.

Sources: Standard & Poor's Research Insight

ESTIMATE OF MARKET VALUE CAPITAL STRUCTURES FOR BENCHMARK SAMPLE OF US ELECTRIC AND GAS UTILITIES

Company	Stock Price (Average Daily Closing 7/16-8/16/2007) (1)	Book Value Per Share (Avg. 2005 and 2006) (2)	Market/Book Ratio (3) = (1)/(2)	Book Value Permanent Capital Common Equity Ratio 2006 (4)	Market Value Common Equity Ratio (Debt at Par) (5)=[(4)*(3)]/[4]*(3)+(1-(4))]	Market Value Debt Ratio 1.0-Col.(5)
AGL Resources	38.77	19.99	1.94	49.5%	65.8%	34.2%
Consolidated Edison	45.41	30.38	1.49	48.4%	59.4%	41.6%
FPL	59.01	23.01	2.56	50.9%	72.6%	27.4%
Integrus Energy	50.78	33.95	1.50	53.4%	63.2%	36.8%
New Jersey Resources	48.91	19.20	2.55	65.2%	82.7%	17.3%
Nikor Inc.	41.20	18.00	2.18	63.7%	79.2%	20.8%
Northwest Nat. Gas	44.12	21.63	2.04	53.7%	70.3%	29.7%
NSTAR	32.21	14.59	2.21	39.7%	59.2%	40.8%
Piedmont Natural Gas	34.64	11.81	2.12	51.7%	69.4%	30.6%
Scana	38.11	23.00	1.66	47.2%	58.0%	41.1%
Southern Co.	34.67	14.62	2.35	46.2%	66.0%	33.1%
Vectren	26.45	15.24	1.74	49.3%	62.0%	37.2%
WGL Holdings Inc.	31.65	18.81	1.70	60.4%	72.2%	27.8%
Mean				52.3%	67.8%	32.2%

Sources: Schedule 14 for stock prices and Standard & Poor's Research Insight

BOOTH CAMPUS APRIL 2008



*Median US utility debt rating is
LOWER than in Canada!*

*Market to book ratios are very
similar*

*Canadian utilities have at least
as good access to capital as US
utilities*

*How is this possible given lower
ROEs and also tighter common
equity ratios?*



Regulatory Risk

- ◆ **Regulatory risk: Invariably *reduces* risk**
 - Forward test year
 - Commodity costs
 - Removal of competitive services (water heaters)
 - Deferral accounts
 - Regulatory lag
 - ROE Adjustment mechanism
 - Depreciation rate
- ◆ ***Dynamics of regulation: always go back to the regulator for ex post recovery from ratepayers: EGDI and deposits***



How Much Risk are Canadian Utilities Exposed To?

BOOTH CAMPUS APRIL 2008



Utility Risk 1

EARNED ROE vs ALLOWED

	TCPL		Foothills		TCPL BC (ANG)		TQM	
	Allowed	Actual	Allowed	Actual	Allowed	Actual	Allowed	Actual
1990	13.25	13.34	14.25	14.25	13.25	13.25	13.75	14.87
1991	13.5	13.65	14.25	14.25	13.38	13.38	13.75	13.94
1992	13.25	13.43	13.83	13.83	13.43	13.43	13.75	13.97
1993	12.25	12.31	11.73	11.73	12.08	12.08	12.25	12.5
1994	11.25	11.16	11.5	11.5	12	12	12.25	12.55
1995	12.25	12.56	12.25	12.25	12.25	12.25	12.25	12.65
1996	11.25	11.83	11.25	11.25	11.25	11.25	11.25	11.83
1997	10.67	11.15	10.67	10.67	10.67	10.67	10.67	10.94
1998	10.21	10.63	10.21	10.21	10.21	10.21	10.21	10.32
1999	9.58	9.64	9.58	9.58	9.58	9.58	9.58	9.94
2000	9.9	9.99	9.9	9.9	9.9	9.9	9.9	9.96
2001	9.61	10.01	9.61	9.61	9.61	6.86	9.61	10.21
2002	9.53	9.95	9.53	9.53	9.53	9.53	9.53	9.8
2003	9.79	10.18	9.79	9.79	9.79	8.21	9.79	10.21
2004	9.56	10.18	9.56	9.56	9.56	8.51	9.56	9.84
2005	9.46	9.66	9.46	9.46	9.46	9.46	9.46	9.82
Average	10.96	11.23	11.09	11.09	11.00	10.66	11.10	11.46
ovrearn		0.27		0.00		-0.34		0.36



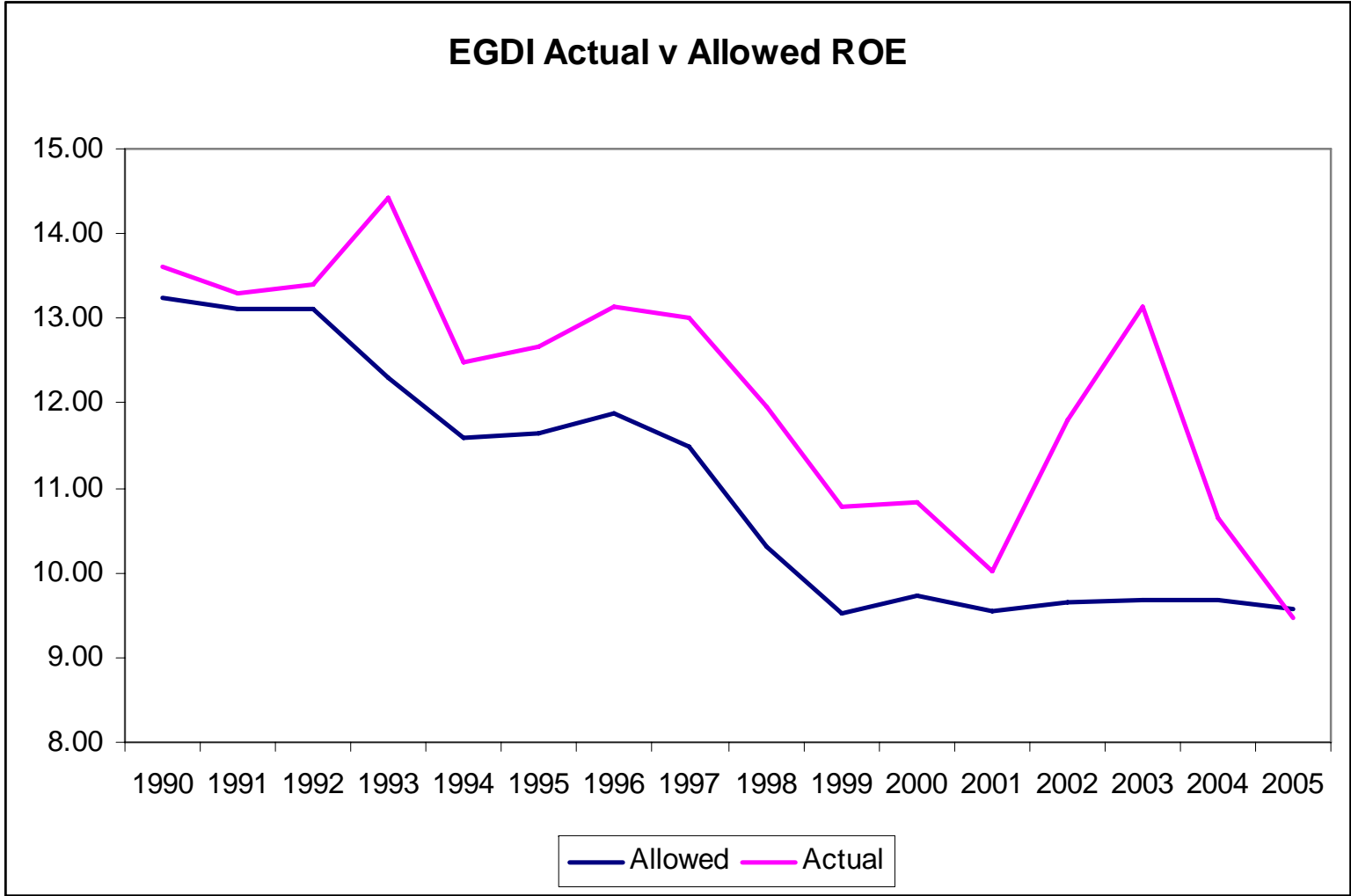
Utility Risk 2

	EGDI		UNION		Terasen	
	Allowed	Actual	Allowed	Actual	Allowed	Actual
1990	13.25	13.60	13.50	13.40		
1991	13.13	13.29	13.50	12.50		
1992	13.13	13.40	13.00	13.70	12.25	9.06
1993	12.30	14.43	12.50	14.30	na	11.91
1994	11.60	12.49	11.75	12.14	10.65	9.73
1995	11.65	12.66	11.75	12.12	12.00	12.03
1996	11.88	13.14	11.75	12.52	11.00	11.80
1997	11.50	13.00	11.00	12.26	10.25	11.27
1998	10.30	11.97	10.44	11.14	10.00	9.41
1999	9.51	10.77	9.61	10.10	9.25	10.70
2000	9.73	10.83	9.95	10.11	9.50	10.75
2001	9.54	10.03	9.95	11.45	9.25	9.38
2002	9.66	11.81	9.95	12.36	9.13	10.03
2003	9.69	13.14	9.95	12.08	9.42	10.23
2004	9.69	10.66	9.62	10.45	9.15	9.46
2005	9.57	9.46				
Over	11.01	12.17	11.21	12.04	10.15	10.44
		1.16		0.83		0.29

Ontario utilities are weather normalised

BOOTH CAMPUS APRIL 2008





BOOTH CAMPUS APRIL 2008



*Doesn't The Emergence of
Incentive Regulation Make Them
Riskier?*

BOOTH CAMPUS APRIL 2008

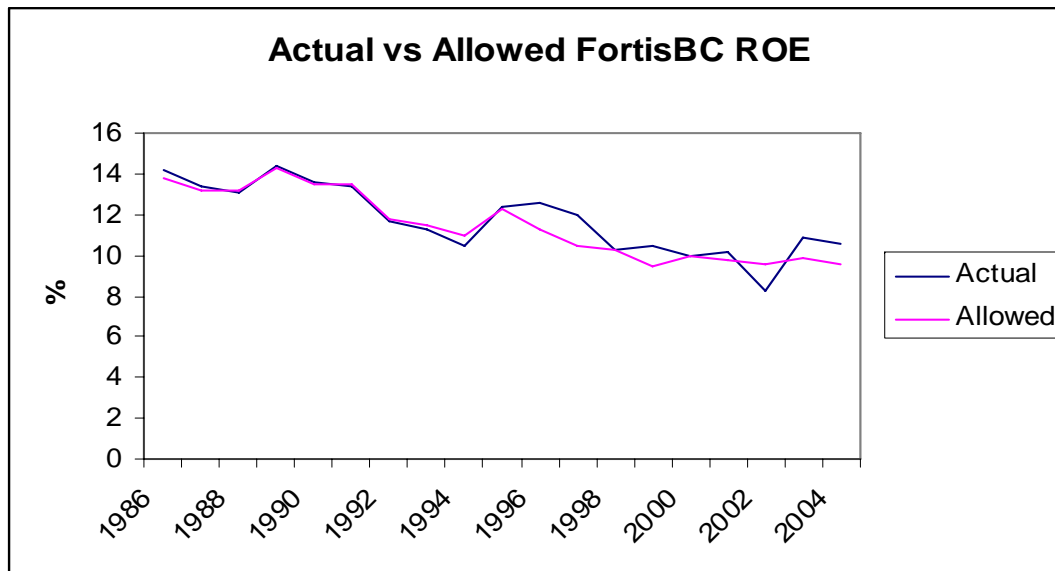


Incentive Rate Making

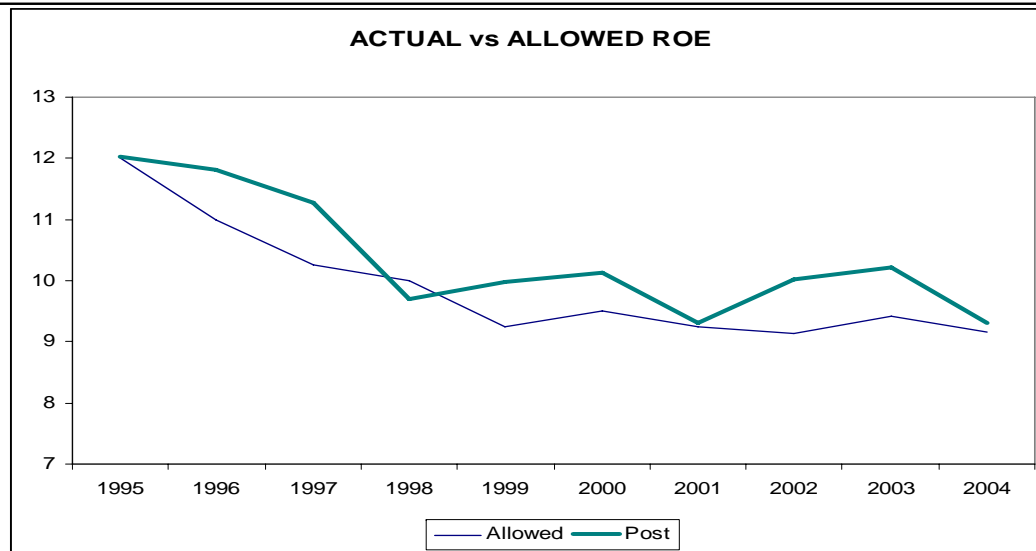
- ◆ **CRTC**
 - Freed up long distance
 - Price cap local service
 - ❖ Inflation – productivity factor
- ◆ **BCUC: performance based regulation PBR**
- ◆ **Regie d’Energie: Gaz Metro**
- ◆ **OEB moving to PBR**

- ◆ **Allows utility to over-earn and pass savings on to ratepayers**
- ◆ **Mainly O&M: what happens when the utility asks for a true up?**





Fortis
BC



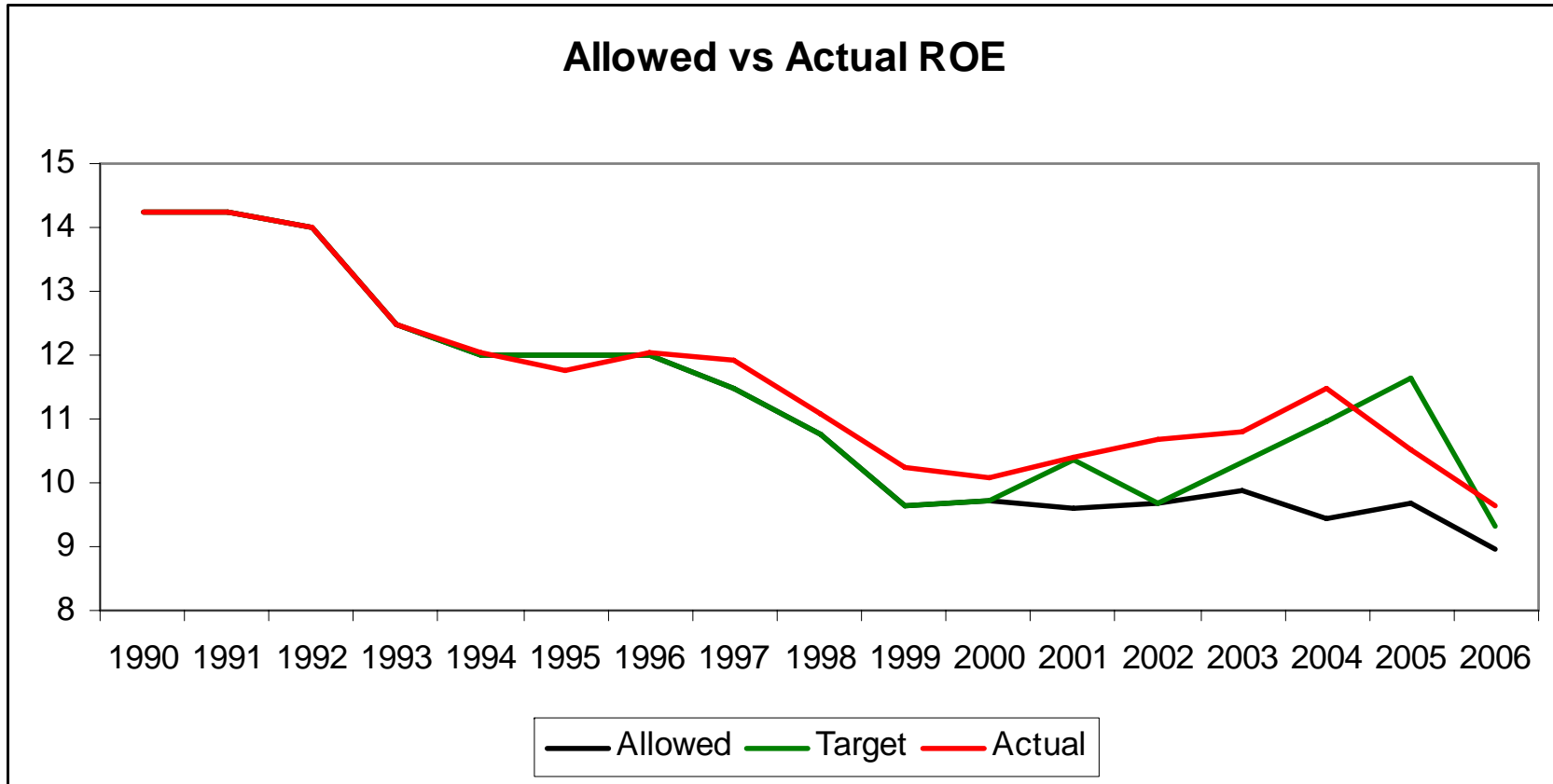
Terasen
Gas

BCUC Incentive Regulation

BOOTH CAMPUS APRIL 2008



Regie: Gaz Metro



BOOTH CAMPUS APRIL 2008



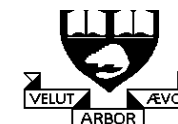
*PBR has allowed Utilities
to Over-Earn: Invariably
Increases Actual over
allowed ROEs*

BOOTH CAMPUS APRIL 2008



BETAS FOR REGULATED CANADIAN UTILITIES

"Raw" Betas														
Five Year Period Ending:														
<u>COMPANY</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
Canadian Utilities	0.46	0.54	0.48	0.55	0.63	0.62	0.54	0.38	0.27	0.19	0.05	0.03	0.20	0.32
Emera	na	na	na	0.52	0.40	0.55	0.41	0.27	0.20	0.15	-0.05	0.01	0.07	0.12
Enbridge	0.35	0.53	0.46	0.44	0.43	0.48	0.26	0.07	-0.10	-0.18	-0.37	-0.32	-0.19	0.22
Fortis	0.35	0.44	0.51	0.37	0.30	0.49	0.33	0.23	0.14	0.13	-0.06	0.01	0.21	0.48
PNG	0.51	0.56	0.42	0.30	0.39	0.55	0.47	0.44	0.42	0.44	0.37	0.49	0.54	0.54
Terasen Inc ^{1/}	0.40	0.53	0.59	0.53	0.46	0.48	0.36	0.25	0.18	0.12	0.02	-0.02	0.06	na
TransCanada Pipelines	0.40	0.57	0.56	0.52	0.36	0.55	0.21	0.15	-0.08	-0.09	-0.38	-0.16	-0.15	0.34
Mean	0.41	0.53	0.50	0.46	0.42	0.53	0.37	0.26	0.14	0.11	-0.06	0.01	0.11	0.34
Median	0.40	0.54	0.50	0.52	0.40	0.55	0.36	0.25	0.18	0.13	-0.05	0.01	0.07	0.33
TSE Gas/Electric Index	0.42	0.48	0.52	0.52	0.46	0.55	0.38	0.21	0.17	0.14	NA	NA	NA	NA
S&P/TSX Utilities	0.55	0.63	0.67	0.65	0.53	0.55	0.30	0.14	-0.03	-0.06	-0.25	-0.13	0.00	0.25
Adjusted Betas ^{2/}														
Five Year Period Ending:														
<u>COMPANY</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
Canadian Utilities	0.64	0.69	0.65	0.70	0.75	0.75	0.69	0.58	0.51	0.46	0.37	0.35	0.47	0.54
Emera	NA	NA	NA	0.68	0.60	0.70	0.60	0.51	0.46	0.43	0.29	0.33	0.38	0.41
Enbridge	0.56	0.69	0.64	0.62	0.62	0.65	0.50	0.38	0.26	0.21	0.08	0.12	0.21	0.48
Fortis	0.57	0.62	0.67	0.58	0.53	0.66	0.55	0.48	0.42	0.41	0.29	0.34	0.47	0.65
PNG	0.67	0.71	0.61	0.53	0.59	0.70	0.65	0.63	0.61	0.63	0.58	0.66	0.69	0.69
Terasen Inc	0.60	0.69	0.72	0.69	0.64	0.65	0.57	0.50	0.45	0.41	0.35	0.32	0.37	na
TransCanada Pipelines	0.60	0.71	0.71	0.68	0.57	0.70	0.47	0.43	0.28	0.27	0.08	0.22	0.23	0.56
Mean	0.61	0.68	0.67	0.64	0.61	0.69	0.58	0.50	0.43	0.40	0.29	0.33	0.40	0.56
Median	0.60	0.69	0.66	0.68	0.60	0.70	0.57	0.50	0.45	0.41	0.29	0.33	0.38	0.55
TSE Gas/Electric Index	0.61	0.65	0.68	0.68	0.64	0.70	0.59	0.47	0.44	0.42	NA	NA	NA	NA
S&P/TSX Utilities	0.70	0.76	0.78	0.77	0.69	0.70	0.53	0.42	0.31	0.29	0.16	0.24	0.33	0.50



INDIVIDUAL COMPANY RISK DATA FOR BENCHMARK SAMPLE OF
 US ELECTRIC AND GAS UTILITIES

	Value Line							S & P		Moody's	Average		
	Safety	Earnings Predictability	Financial Strength	Forecast Common Equity Ratio 2010-2012	Forecast Return On Average Common Equity 2010-2012	Dividend Payout Forecast 2010-2012	Beta	Research Insight Beta ^{1'}	Common Equity Ratio 2006	Business Profile	Debt Rating	Debt Rating ^{2'}	Market/ Book Ratio 1994-2006
AGL Resources	2	75	B++	50.8%	14.2%	58.1%	0.95	0.58	42.7%	4	A-	A3	1.76
Consol. Edison	1	85	A++	50.5%	9.1%	70.6%	0.75	0.43	47.0%	2	A	A2	1.49
FPL Group	1	80	A+	51.0%	12.4%	51.8%	0.85	0.69	44.6%	5	A	A2	1.89
Integrus Energy	2	70	B++	49.5%	11.1%	65.7%	0.85	0.66	42.4%	5	A-	A3	1.62
New Jersey Resources	1	95	A	69.3%	10.7%	54.6%	0.80	0.39	50.2%	2	A+	na	2.19
NICOR Inc.	3	75	A	69.0%	13.2%	63.5%	1.30	0.99	50.7%	3	AA	A3	2.28
Northwest Nat. Gas	1	80	A	52.0%	11.6%	60.0%	0.75	0.44	48.1%	1	AA-	A3	1.56
NSTAR	1	95	A	55.5%	15.7%	58.3%	0.80	0.64	34.4%	1	A+	A2	1.74
Piedmont Natural Gas	2	80	B++	52.8%	11.2%	71.9%	0.80	0.60	47.0%	2	A	A3	2.00
SCANA Corp.	2	95	A	49.0%	11.1%	61.5%	0.85	0.70	43.4%	4	A-	A3	1.64
Southern Co.	1	95	A	44.0%	13.0%	74.0%	0.70	0.33	40.6%	4	A	A3	2.08
Vectren Corp.	2	70	A	51.0%	10.5%	71.5%	0.95	0.71	40.6%	4	A-	Baa1	1.91
WGL Holdings Inc.	1	65	A	64.5%	11.1%	63.3%	0.85	0.54	52.2%	3	AA-	A2	1.71
Mean	2	82	A	54.5%	11.9%	63.4%	0.86	0.59	44.9%	3	A	A2	1.84
Median	1	80	A	51.0%	11.2%	63.3%	0.85	0.60	44.6%	3	A	A3	1.76
Weighted Average	1	86	A	50.0%	12.0%	64.6%	0.80	0.53	43.5%	4	A	A2	1.84

BOOTH CAMPUS APRIL 2008



Canadian Utility Regulation

- ◆ Remove utility risk: almost non-existent
- ◆ Load up on tax deductible debt
- ◆ Award ROEs in line with market interest rates
- ◆ Constantly monitor performance to respond to emerging risks and pass all costs on to rate payers
 - Very good investment grade bond ratings
 - Lower investment risk than highest grade US utilities
- ◆ Keep average rates down

Benefits everyone: no utility wants the removal of regulatory protection they just want the US ROEs as well.....

