EB-2024-0063

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15 (Schedule B);

AND IN THE MATTER OF a generic proceeding commenced by the Ontario Energy Board on its own motion to consider the cost of capital parameters and deemed capital structure to be used to set rates

Compendium of the Consumers Council of Canada (CCC)
Concentric Energy Advisors Witness Panel

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And I think that actually, in an IR response, if I can put my hands on it, yes, we were asked to calculate our results. This is in response to CCC-6, using raw betas, and our results for the North American combined proxy group using raw betas, no Blume adjustment, is 9.87 versus the 10 or is it 10.1 in our adjusted results through all the models.

So I don't want to underestimate the importance of the issue, but it doesn't make the difference in results that it would have at one point in time.

MR. MONDROW: But it matters enough that you recommend adjustment and object to those who recommend use of raw beta?

MR. COYNE: It's the industry standard, and it's one that we use consistently and we believe -- you know, most of the investment community that we interact with uses the Blume beta as a standard, so, if you don't use the Blume-adjusted beta, if you -- for example we haven't adjusted the beta for leverage. The experts from NEXUS have adjusted the beta for leverage. The same is true for the experts from LEI. And so we have made no further adjustments to beta, other than what we would call the standard Blume adjustment, which is sourced from value line as its is or selected thus so from Bloomberg. I just wanted to put it in perspective, so there is --

MR. MONDROW: Yes, I appreciate that.

MR. COYNE: I think it's a 13- or 14-basis-point difference in the result if you were not to adjust beta, at

all. And I just don't see any basis for that, but, if you had that belief, that would be the end result.

MR. MONDROW: Well, we will come back to the basis for it in just a second, pardon the pun. But the premise of the Blume adjustment is that you expect the risk of the stock over time to equal the average market risk; that's the premise of the Blume adjustment; right?

MR. COYNE: No, no, it never gets to "1."

MR. MONDROW: It never gets to "1"?

MR. COYNE: No. The premise of the Blume adjustment is that, the farther away you are from the market return, the more you will -- the tendency will be to move that, the risk of that company and that stock closer to the market.

MR. MONDROW: But never reach --

MR. COYNE: High-risk companies become less risky over time, you know. Maybe it's an AI company that today is soaring with a very high beta that over time becomes a company that looks more like Microsoft than it does ChatGPT, and the same is true for a very low risk company that will invest those proceeds in different ways and move closer to the market. But the purpose of beta the adjustment isn't to determine whether or not they actually ever get to one.

Financial analysts and empirical economists that look at the capital asset pricing model look at whether or not the results from the model perform better if you use an adjusted beta or not. And Fernandez did a study that we quote in our testimony, has studied this issue extensively,

Ontario Energy Association (OEA)

Answer to Interrogatory from
Consumers Council of Canada (CCC)

INTERROGATORY

Reference:

Ex. M2/p. 66 and Exhibit CEA-7.1

Question(s):

a) Please confirm that the average Value Line and Bloomberg betas shown in Figure 16 reflect a simple average of the betas shown in CEA-7.1 for each proxy group.

b) Please confirm that the betas shown in Exhibit CEA-7.1 reflect adjusted betas.

c) Please explain the applicability of the statement that an "individual company beta is more likely than not to move toward the market mean of 1.0 over time" in the context of the regulated utility sector.

d) Please advise whether Concentric is aware of the beta estimate for any Canadian regulated utility ever reaching 1.0.

e) Please provide Concentric's views on the differential in risk between Canadian and US utilities as expressed by the beta estimates. Historically, do US utilities have higher beta estimates than Canadian firms?

f) Please provide revised ROE results using historical MRP, similar to what is set out in Figure 18, that use raw betas (as opposed to adjusting betas toward 1.0).

g) To understand the CAPM-derived ROE sensitivity to changes in beta estimates using Concentric's recommended approach, please provide the ROE based on:
   i. A beta of 0.5
   ii. A beta of 0.25

Response:

a) Confirmed.

b) Confirmed. Concentric has used Blume-adjusted betas in its CAPM analysis.

c) The conclusion of the Blume study is that betas for all companies tend to migrate toward the market mean of 1.0 over time. Based on Dr. Blume's research, this is true both for high beta companies (i.e., those with betas in excess of 1.0) and low betas companies (i.e., those with betas lower than 1.0). As explained on page 67 of Concentric's report, Exhibit M2, Dr. Blume studied four groups of betas, ranging from a very low beta group (averaging 0.5) to a very high beta group. Dr. Blume found that his adjustment best predicted future betas for each of the four groups over the next seven years.

d) Yes, Concentric is aware of betas for Canadian and U.S. utilities exceeding 1.0. For example, as shown in Exhibit CEA-7.1, the Bloomberg beta for AltaGas Ltd. was over 1.0 as of May 31, 2024. In addition, the Bloomberg beta for Algonquin Power and Utilities Corp. (which is not included in Concentric's Canadian proxy group) also was over 1.0 at the end of May 2024. In the U.S., the Bloomberg betas for OGE Energy and PPL Corporation were over 1.0 at the end of May, and the Value Line betas for NextEra Energy Inc, OGE Energy, and PPL Corporation exceeded 1.0. In those situations, the Blume adjustments serve to reduce the raw beta, which are higher than those used in Concentric's CAPM analysis.

e) In Concentric's experience over the past decade, betas for Canadian utility companies are generally, although not always, slightly lower than betas for U.S. electric utility companies. The table below shows the betas used in Concentric's ROE analysis for a sample of cases involving Canadian utilities. As shown in the table, the differential between Canadian and U.S. electric betas has narrowed in recent years.

Canadian Utility	**Date**	**Canadian proxy group avg. beta**	**US proxy group avg. beta**	**Differential**
Hydro Quebec	2013	0.54	0.59	9.26%
Newfoundland Power	2015	0.64	0.73	14.06%
ENMAX	2020	0.66	0.57	-13.64%
Nova Scotia Power	2021	0.90	0.92	2.22%
FortisBC	2022	0.89	0.91	2.25%
Newfoundland Power	2023	0.87	0.89	2.30%

f) Please see revised ROE results using raw betas rather than Blume adjusted betas.

Proxy Group	Historical MRP
Canadian	8.55%
U.S. Electric	10.39%
U.S. Gas	9.46%
North American Electric	9.88%
North American Gas	9.47%
North American Combined	9.87%

g) Please see revised ROE results using betas of 0.50 and 0.25.

a. 0.50 Betas

Proxy Group	Historical MRP
Canadian	7.18%
U.S. Electric	7.85%
U.S. Gas	7.85%
North American Electric	7.71%
North American Gas	7.51%
North American Combined	7.69%

b. 0.25 Betas

Proxy Group	Historical MRP
Canadian	5.57%
U.S. Electric	6.25%
U.S. Gas	6.25%
North American Electric	6.10%
North American Gas	5.91%
North American Combined	6.08%

results. While Concentric estimated the return on equity under various analytical approaches, we have narrowed the results to three models (i.e., the Multi-Stage DCF, the historical CAPM, and the Risk Premium approach) to develop our ROE rebasing recommendation in this proceeding. Those models provide a conservative (lower) estimate for Ontario utility ROEs relative to other models and are consistent with models that have been relied on in other jurisdictions evaluating a generic cost of capital to be applied across industry segments. Those models' results range from 9.7 percent to 10.3 percent, depending on the proxy group. It is important to emphasize that these results are based on conservative model inputs and, therefore, represent the lowest reasonable estimate of the required return for Ontario's electric and gas utilities as a whole.

Figure 1: Summary of ROE Results[6]

	CANADIAN PROXY GROUP	U.S. ELECTRIC PROXY GROUP	U.S. GAS PROXY GROUP	NORTH AMERICAN ELECTRIC PROXY GROUP	NORTH AMERICAN GAS PROXY GROUP	NORTH AMERICAN COMBINED
MULTI-STAGE DCF	10.38%	9.87%	9.60%	9.83%	10.21%	9.95%
CAPM – HISTORICAL MRP	9.36%	10.62%	10.00%	10.23%	9.89%	10.22%
RISK PREMIUM	9.44%	10.36%	10.30%	9.90%	9.87%	10.03%
AVERAGE	**9.7%**	**10.3%**	**10.0%**	**10.0%**	**10.0%**	**10.1%**

We also present a risk assessment of Ontario's utilities in relation to the proxy group companies for purposes of determining the appropriate deemed equity ratios for Ontario's utilities. Lastly, we assess whether our recommendations meet all three prongs of the Fair Return Standard.

Based on these results, we conclude that the current formula return of 9.21 percent in Ontario has diverged from a fair return for comparable risk companies, and changes to the authorized ROE and the deemed equity ratios for Ontario's utilities are required to meet the Fair Return Standard.

6 The DCF and CAPM results include an adjustment of 50 basis points for flotation costs and financial flexibility.

Ontario Energy Association (OEA)

Answer to Interrogatory from
Consumers Council of Canada (CCC)

INTERROGATORY

Reference:

Ex. M2/pp. 46, 47-50 and Exhibit CEA-2
Ex. M1/p. 129

Question(s):

For each company in each proxy group listed in Exhibit CEA-2, please provide a table that includes the following information (if available and as applicable):

a) Company name
b) Credit rating
c) S&P business risk rating
d) S&P financial risk rating
e) Percentage of operating income from, as applicable, electricity distribution, electricity transmission, electricity generation, natural gas operations
f) Percentage of operating income, as applicable, by operating area (i.e., electricity distribution, transmission, generation or natural gas operations) that is regulated
g) Percentage of overall operating income that is regulated
h) Beta information:
    i. Raw beta
    ii. Beta used by expert in CAPM calculation
i) The regulatory agency that regulates the company (i.e., OEB, AUC, CPUC, etc.) and the applicable rating as set out in the "Utility Regulatory Jurisdiction Assessment performed by S&P Global" (see p. 129 of Exhibit M1 – LEI Expert Report)
j) Description of ratemaking approach applied to the company. As part of this response, please include information regarding:
    i. Most prevalent form of ratemaking (e.g., cost of service, cost of service plus IRM, etc.)
    ii. Application of a forward test year approach in cost of service ratemaking CCC
    iii. Availability of Custom IR option (which, as applied in Ontario, allows for multi-year (typically 5 years) recovery of approved capital budgets as proposed by the utility)
    iv. Availability of mechanisms that allow the recovery of incremental capital between rebasing proceedings (and a description of how those mechanisms operate)
    v. Reliance on fixed vs. variable rates (by rate class)

vi. Availability of deferral and variance accounts for non pass-through costs and revenues (and the types of accounts that are available)
vii. Availability of Z-factor relief (and the types of relief available through this mechanism)
viii. Availability of off-ramp provisions when actual ROE falls below a certain threshold

Response:

Please see CCC-4, Attachment 1, for the information requested in parts (a) through (i), to the extent that information was readily available. Concentric does not have the details requested in part (j) at its disposal. However, please see CCC-4, Attachment 2, which provides ratemaking details and regulatory mechanisms of the operating companies of the companies listed in Exhibit CEA-2.

CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Company Name	**Ticker**	**S&P Credit Rating**	**S&P Business Rating**	**S&P Financial Risk Rating**	**% of Operating Income from Regulated Operations**	**% of Regulated Operating Income from Regulated Electric Operations**	**Raw Five-Year Bloomberg Beta**	**Adjusted Five-Year Bloomberg Beta**	**Regulatory Agency(ies)**	**Regulatory Agency S&P Global Credit Supportiveness Rating**
AltaGas Limited	ALA	BBB-	Strong	Aggressive	38%	n/a	1.23	1.16	Alberta Utilities Commission, Multiple U.S. Jurisdictions	Highly Credit Supportive; multiple U.S. rankings
Canadian Utilities Limited	CU	A-*	n/a	n/a	92%	n/a	0.79	0.86	Alberta Utilities Commission	Highly Credit Supportive
Emera Inc.	EMA	BBB	Excellent	Aggressive	100%	n/a	0.58	0.72	Nova Scotia Utility and Review Board, Florida Public Service Commission, New Mexico Public Regulation Commission	Credit Supportive, Most Credit Supportive, Credit Supportive
Enbridge Inc.	ENB	BBB+	Excellent	Aggressive	13%	n/a	0.90	0.93	Ontario Energy Board, Régie de l'énergie	Most Credit Supportive (both)
Fortis, Inc.	FTS	A-	Excellent	Significant	99%	n/a	0.58	0.72	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Hydro One, Ltd.	H	A**	Excellent	Significant	102%	n/a	0.54	0.69	Ontario Energy Board	Most Credit Supportive

**Credit rating from Fitch*

***Upgraded from A- to A from S&P on June 10, 2024*

U.S. ELECTRIC PROXY GROUP

Company Name	**Ticker**	**Credit Rating**	**S&P Business Rating**	**S&P Financial Risk Rating**	**% of Operating Income from Regulated Operations**	**% of Regulated Operating Income from Regulated Electric Operations**	**Raw Five-Year Bloomberg Beta**	**Adjusted Five-Year Bloomberg Beta**	**Regulatory Agency(ies)**	**Regulatory Agency S&P Global Credit Supportiveness Rating**
Alliant Energy Corporation	LNT	A-	Excellent	Significant	97%	91%	0.81	0.87	Iowa Utilities Board, Public Service Commission of Wisconsin	Most Credit Supportive (both)
Ameren Corporation	AEE	BBB+	Excellent	Significant	98%	85%	0.76	0.84	Missouri Public Service Commission, Illinois Commerce Commission	Very Credit Supportive (both)
American Electric Power Company, Inc.	AEP	BBB+	Excellent	Significant	98%	100%	0.77	0.84	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Duke Energy Corporation	DUK	BBB+	Excellent	Significant	95%	90%	0.74	0.82	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Entergy Corporation	ETR	BBB+	Excellent	Significant	99%	99%	0.96	0.97	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Eversource Energy	ES	A-	Excellent	Significant	95%	81%	0.85	0.90	Massachusetts Department of Public Utilities, Connecticut Public Utilities Regulatory Authority, New Hampshire Public Utilities Commission	Highly Credit Supportive, More Credit Supportive, Highly Credit Supportive
Exelon Corporation	EXC	BBB+	Excellent	Significant	100%	91%	0.97	0.98	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Evergy, Inc.	EVRG	BBB+	Excellent	Significant	100%	100%	0.84	0.89	Kansas Corporation Commission, Missouri Public Service Commission	Highly Credit Supportive, Very Credit Supportive
NextEra Energy, Inc.	NEE	A-	Excellent	Significant	88%	100%	0.87	0.91	Florida Public Service Commission	Most Credit Supportive
OGE Energy Corporation	OGE	BBB+	Excellent	Significant	100%	100%	1.03	1.02	Oklahoma Corporation Commission, Arkansas Public Service Commission	Very Credit Supportive, Highly Credit Supportive
Pinnacle West Capital Corporation	PNW	BBB+	Excellent	Significant	100%	100%	0.90	0.94	Arizona Corporation Commission	More Credit Supportive
PPL Corporation	PPL	A-	Excellent	Significant	100%	94%	1.10	1.07	Kentucky Public Service Commission, Pennsylvania Public Utilities Commission, Rhode Island Public Utilities Commission	Most Credit Supportive, Highly Credit Supportive, Very Credit Supportive
Portland General Electric Company	POR	BBB+	Excellent	Significant	100%	100%	0.82	0.88	Oregon Public Utility Commission	More Credit Supportive
Southern Company	SO	A-	Excellent	Significant	94%	82%	0.85	0.90	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Xcel Energy Inc.	XEL	BBB+	Excellent	Significant	100%	86%	0.74	0.83	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)

U.S. GAS PROXY GROUP

Company Name	**Ticker**	**Credit Rating**	**S&P Business Rating**	**S&P Financial Risk Rating**	**% of Operating Income from Regulated Operations**	**% of Regulated Operating Income from Regulated Gas Operations**	**Raw Five-Year Bloomberg Beta**	**Adjusted Five-Year Bloomberg Beta**	**Regulatory Agency(ies)**	**Regulatory Agency S&P Global Credit Supportiveness Rating**
Atmos Energy Corp.	ATO	A-	Excellent	Significant	100%	100%	0.74	0.83	Multiple (four or more jurisdictions)	Multiple (four or more jurisdictions)
Northwest Natural Gas Company	NWN	A+	Excellent	Intermediate	100%	91%	0.62	0.74	Oregon Public Utility Commission, Washington Utilities and Transportation Commission	More Credit Supportive
ONE Gas, Inc.	OGS	A-	Excellent	Significant	100%	100%	0.75	0.83	Kansas Corporation Commission, Oklahoma Corporation Commission, Railroad Commission of Texas	Highly Credit Supportive, Very Credit Supportive, Highly Credit Supportive
Spire, Inc.	SR	BBB+	Excellent	Aggressive	83%	100%	0.80	0.86	Missouri Public Service Commission, Alabama Public Service Commission, Mississippi Public Service Commission	Very Credit Supportive, Most Credit Supportive, Very Credit Supportive

Notes:

[1] - [3] Source: S&P Global, as of August 15, 2024

[4] - [5] Source: Form 10-Ks; 2021-2023 three-year average

[6] - [7] Source: Bloomberg Professional, as of May 31, 2024

[8] Source: Company websites and filings

[9] Source: S&P Global RatingsDirect, "North American Utility Regulatory Jurisdictions Update: Ontario Remains Unchanged, Notable Developments Elsewhere", March 11, 2024

Proxy Group Regulatory Risk Assessment

					[1]	[2]	[3]	[4]	[4]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
Company	**Ticker**	**Operating Subsidiary**	**Service Type**	**Jurisdiction**	**Test Year**	**Credit Rating**	**Credit Rating (numerical)**	**Authorized ROE (%)**	**Authorized Equity Ratio (%)**	**Electric fuel/gas commodity/purch. power**	**Full Decoupling**	**Partial Decoupling**	**Conserv. program expense**	**Renewables/ Non-Traditional Generation**	**Environmental compliance**	**Delivery Infrastructure**	**Transmission costs**	**Capital Cost Recovery**
Canadian Proxy Group																		
AltaGas Limited	ALA	ENSTAR Natural Gas Company	Natural Gas	AK	Historical	NR		11.88	54.11	✓								
		Washington Gas Light Company	Natural Gas	DC	Historical	A-	7	9.65	52.00	✓				✓		✓		✓
		Washington Gas Light Company	Natural Gas	MD	Historical	A-	7	9.50	52.60	✓		✓	✓			✓		✓
		SEMCO Energy, Inc.	Natural Gas	MI	Fully Forecasted	BBB	9	9.87	54.00	✓			✓			✓		✓
		Washington Gas Light Company	Natural Gas	VA	Historical	A-	7	NA	52.53	✓		✓				✓		✓
Canadian Utilities Limited	CU	ATCO Electric	Electric	Alberta	Historical	NR		9.28	37.00	NA						✓	✓	✓
		ATCO Gas	Natural Gas	Alberta	Historical	NR		9.28	37.00	NA		✓				✓	✓	✓
Emera Inc.	EMA	Tampa Electric Company	Electric	FL	Fully Forecasted	BBB+	8	9.95	45.07	✓			✓	✓	✓			✓
		Peoples Gas System	Natural Gas	FL	Fully Forecasted	A-	7	10.15	NA	✓			✓		✓	✓		✓
		New Mexico Gas Company, Inc.	Natural Gas	NM	Historical	NR		9.38	52.00	✓		✓	✓					✓
		Nova Scotia Power Inc.	Electric	Nova Scotia	Fully Forecasted	BBB-	10	9.00	40.00	✓		✓				✓		✓
Enbridge	ENB	Enbridge Gas	Natural Gas	Ontario	Fully Forecasted	A-	7	9.21	38.00	✓		✓						
		Gazifere	Natural Gas	Quebec		NR		9.05	40.00	✓								
Fortis Inc.	FTS	Central Hudson Gas & Electric Corp.	Electric	NY	Fully Forecasted	BBB+	8	9.00	50.00		✓		✓	✓		✓		✓
		Central Hudson Gas & Electric Corp.	Natural Gas	NY	Fully Forecasted	BBB+	8	9.00	50.00	✓	✓		✓		✓	✓		✓
		Tucson Electric Power Company	Electric	AZ	Historical	A-	7	9.55	54.32	✓		✓	✓	✓	✓		✓	✓
		UNS Electric, Inc.	Electric	AZ	Historical	A3	7	9.75	53.72	✓		✓	✓	✓	✓		✓	✓
		UNS Gas, Inc.	Natural Gas	AZ	Historical	A3	7	9.75	50.82	✓		✓	✓					✓
		FortisBC	Electric	British Columbia	Fully Forecasted	A-	7	9.65	41.00	✓	✓		✓			✓		✓
		FortisBC Energy	Natural Gas	British Columbia	Fully Forecasted	A-	7	9.65	45.00	✓	✓		✓			✓		✓
		Newfoundland Power Inc	Electric	Newfoundland & Labrador	Fully Forecasted	Baa1	8	8.50	45.00	✓		✓	✓			✓		✓
		Maritime Electric Company Ltd.	Electric	Prince Edward Island	Fully Forecasted	BBB+	8	9.35	40.00	✓		✓	✓			✓		✓
HydroOne Inc.	H	Hydro One Inc.	Electric	Ontario	Fully Forecasted	A-	7	9.21	40.00	✓			✓		✓	✓	✓	✓
U.S. Electric Proxy Group																		
Alliant Energy Corporation	LNT	Interstate Power and Light Company	Electric	IA	Historical	A-	7	10.02	51.00	✓			✓	✓	✓		✓	✓
		Interstate Power and Light Company	Natural Gas	IA	Historical	A-	7	9.60	51.00	✓								
		Wisconsin Power and Light Company	Electric	WI	Fully Forecasted	A	6	9.80	53.70	✓								
		Wisconsin Power and Light Company	Natural Gas	WI	Fully Forecasted	A	6	9.80	53.70	✓								
Ameren Corporation	AEE	Ameren Illinois Company	Electric	IL	Historical	BBB+	8	8.72	50.00			✓	✓	✓	✓		✓	✓
		Ameren Illinois Company	Natural Gas	IL	Fully Forecasted	BBB+	8	9.44	50.00	✓		✓	✓		✓	✓		✓
		Union Electric Company	Electric	MO	Historical	BBB+	8	NA	NA	✓		✓	✓	✓		✓	✓	✓
		Union Electric Company	Natural Gas	MO	Historical	BBB+	8	NA	NA	✓		✓				✓		✓
American Electric Power Company, Inc.	AEP	Southwestern Electric Power Company	Electric	AR	Historical	BBB+	8	9.50	44.54	✓		✓	✓		✓		✓	✓
		Indiana Michigan Power Company	Electric	IN	Fully Forecasted	BBB+	8	9.85	NA	✓		✓	✓	✓	✓	✓	✓	✓
		Kentucky Power Company	Electric	KY	Historical	BBB	9	9.75	41.25	✓		✓	✓		✓			✓
		Southwestern Electric Power Company	Electric	LA	Historical	BBB+	8	9.50	NA	✓		✓	✓					✓
		Indiana Michigan Power Company	Electric	MI	Fully Forecasted	BBB+	8	9.86	46.56	✓		✓	✓	✓				✓
		Ohio Power Company	Electric	OH	Partially Forecasted	BBB+	8	9.70	54.43			✓	✓	✓		✓	✓	✓
		Public Service Company of Oklahoma	Electric	OK	Historical	BBB+	8	9.30	52.00	✓		✓	✓	✓		✓	✓	✓
		Kingsport Power Company	Electric	TN	Fully Forecasted	NR		9.50	48.90	✓								
		AEP Texas Inc.	Electric	TX	Historical	BBB+	8	9.40	42.50				✓			✓	✓	✓
		Southwestern Electric Power Company	Electric	TX	Historical	BBB+	8	9.25	49.37	✓			✓			✓	✓	✓
		Appalachian Power Company	Electric	VA	Historical	BBB+	8	NA	NA	✓			✓		✓		✓	✓
		Wheeling Power Company	Electric	WV	Historical	BBB+	8	NA	NA	✓			✓		✓			✓

Company	Ticker	Operating Subsidiary	Service Type	Jurisdiction	Test Year	Credit Rating	Credit Rating (numerical)	Authorized ROE (%)	Authorized Equity Ratio (%)	Electric fuel/gas commodity/purch. power	Full Decoupling	Partial Decoupling	Conserv. program expense	Renewables/ Non-Traditional Generation	Environmental compliance	Delivery infrastructure	Transmission costs	Capital Cost Recovery
Duke Energy Corporation	DUK	Duke Energy Florida, LLC	Electric	FL	Fully Forecasted	BBB+	8	10.10	NA	✓			✓	✓	✓			✓
		Duke Energy Indiana, LLC	Electric	IN	Historical	BBB+	8	9.70	40.98	✓		✓	✓	✓	✓	✓	✓	✓
		Duke Energy Kentucky, Inc.	Electric	KY	Fully Forecasted	BBB+	8	9.75	52.15	✓		✓	✓		✓			✓
		Duke Energy Kentucky, Inc.	Natural Gas	KY	Fully Forecasted	BBB+	8	9.38	51.34	✓		✓	✓			✓		✓
		Duke Energy Carolinas, LLC	Electric	NC	Historical	BBB+	8	10.10	53.00	✓			✓	✓	✓			✓
		Duke Energy Progress, LLC	Electric	NC	Historical	BBB+	8	9.80	53.00	✓			✓	✓	✓			✓
		Piedmont Natural Gas Company, Inc.	Natural Gas	NC	Historical	BBB+	8	9.60	51.60	✓	✓		✓			✓		✓
		Duke Energy Ohio, Inc.	Electric	OH	Partially Forecasted	BBB+	8	9.50	50.50			✓	✓	✓		✓	✓	✓
		Duke Energy Ohio, Inc.	Natural Gas	OH	Partially Forecasted	BBB+	8	9.60	52.32	✓					✓	✓		✓
		Duke Energy Progress, LLC	Electric	SC	Historical	BBB+	8	9.60	52.43	✓			✓		✓			✓
		Duke Energy Carolinas, LLC	Electric	SC	Historical	BBB+	8	9.50	53.00	✓			✓		✓			✓
		Piedmont Natural Gas Company, Inc.	Natural Gas	SC	Historical	BBB+	8	9.30	53.13	✓		✓	✓					✓
		Piedmont Natural Gas Company, Inc.	Natural Gas	TN	Fully Forecasted	BBB+	8	9.80	50.09	✓		✓				✓		✓
Entergy Corporation	ETR	Entergy Arkansas, LLC	Electric	AR	Fully Forecasted	A-	7	NA	38.65	✓		✓	✓	✓		✓	✓	✓
		Entergy New Orleans, LLC	Electric	LA	Partially Forecasted	BB	12	9.35	50.00	✓			✓	✓	✓		✓	✓
		Entergy New Orleans, LLC	Natural Gas	LA	Partially Forecasted	BB	12	9.35	50.00	✓								
		Entergy Louisiana, LLC	Electric	LA	Historical	BBB+	8	9.95	NA	✓		✓	✓		✓			✓
		Entergy Mississippi, LLC	Electric	MS	Partially Forecasted	A-	7	10.07	NA	✓		✓					✓	✓
		Entergy Texas, Inc.	Electric	TX	Historical	BBB+	8	9.57	51.21	✓			✓			✓	✓	✓
Eversource Energy	ES	The Connecticut Light and Power Company	Electric	CT	Historical	A	6	9.25	53.00		✓		✓			✓	✓	✓
		Yankee Gas Services Company	Natural Gas	CT	Historical	A-	7	9.30	53.76	✓	✓		✓			✓		✓
		Eversource Gas Company of Massachusetts	Natural Gas	MA	Historical	A-	7	9.70	53.25	✓	✓		✓		✓	✓		✓
		NSTAR Electric Company	Electric	MA	Historical	A	6	NA	NA		✓		✓	✓		✓	✓	✓
		NSTAR Gas Company	Natural Gas	MA	Historical	A-	7	NA	NA	✓	✓		✓		✓	✓		✓
		Public Service Company of New Hampshire	Electric	NH	Historical	A	6	9.30	54.40	✓		✓				✓	✓	✓
Evergy, Inc.	EVRG	Evergy Kansas Central, Inc.	Electric	KS	Historical	BBB+	8	NA	NA	✓		✓	✓	✓	✓		✓	✓
		Evergy Kansas South, Inc.	Electric	KS	Historical	BBB+	8	10.40	50.13	✓		✓	✓	✓	✓		✓	✓
		Evergy Metro, Inc.	Electric	KS	Historical	A-	7	NA	NA	✓			✓			✓	✓	✓
		Evergy Metro, Inc.	Electric	MO	Historical	A-	7	NA	NA	✓		✓	✓			✓	✓	✓
		Evergy Missouri West, Inc.	Electric	MO	Historical	BBB+	8	NA	NA	✓		✓	✓	✓		✓	✓	✓
Exelon Corporation	EXC	Delmarva Power & Light Company	Electric	DE	Historical	A-	7	9.60	50.50				✓			✓	✓	✓
		Delmarva Power & Light Company	Natural Gas	DE	Historical	A-	7	9.60	49.94	✓					✓	✓		✓
		Potomac Electric Power Company	Electric	DC	Historical	A-	7	9.28	50.68			✓		✓		✓		✓
		Commonwealth Edison Company	Electric	IL	Historical	A-	7	8.91	50.00				✓	✓	✓	✓	✓	✓
		Baltimore Gas and Electric Company	Electric	MD	Historical	A	6	9.50	52.00		✓		✓					✓
		Baltimore Gas and Electric Company	Natural Gas	MD	Historical	A	6	9.45	52.00	✓	✓		✓			✓		✓
		Delmarva Power & Light Company	Electric	MD	Historical	A-	7	9.60	50.50		✓		✓					✓
		Potomac Electric Power Company	Electric	MD	Historical	A-	7	9.55	50.50		✓		✓			✓		✓
		Atlantic City Electric Company	Electric	NJ	Partially Forecasted	A-	7	9.60	50.20			✓	✓		✓	✓		✓
		PECO Energy Company	Electric	PA	Fully Forecasted	BBB+	8	NA	NA				✓			✓	✓	✓
		PECO Energy Company	Natural Gas	PA	Fully Forecasted	BBB+	8	NA	NA	✓			✓			✓		✓
NextEra Energy, Inc.	NEE	Florida Power & Light Company	Electric	FL	Fully Forecasted	A	6	10.80	NA	✓			✓	✓	✓			✓
		Pivotal Utility Holdings, Inc.	Natural Gas	FL	Fully Forecasted	NR		9.50	59.60	✓			✓		✓	✓		✓
		Lone Star Transmission, LLC	Electric	TX	Historical	NR		NA	NA							✓	✓	✓
OGE Energy Corporation	OGE	Oklahoma Gas and Electric Company	Electric	AR	Historical	A-	7	NA	38.39	✓		✓	✓	✓	✓	✓	✓	✓
		Oklahoma Gas and Electric Company	Electric	OK	Historical	A-	7	9.50	53.37	✓		✓	✓		✓	✓	✓	✓
Pinnacle West Capital Corporation	PNW	Arizona Public Service Company	Electric	AZ	Historical	BBB+	8	9.55	51.93	✓		✓	✓	✓	✓		✓	✓
PPL Corporation	PPL	Kentucky Utilities Company	Electric	KY	Fully Forecasted	A-	7	9.43	NA	✓		✓	✓		✓			✓
		Louisville Gas and Electric Company	Electric	KY	Fully Forecasted	A-	7	9.43	NA	✓		✓	✓		✓			✓
		Louisville Gas and Electric Company	Natural Gas	KY	Fully Forecasted	A-	7	9.43	NA	✓		✓	✓			✓		✓
		PPL Electric Utilities Corporation	Electric	PA	Fully Forecasted	A	6	NA	NA				✓			✓	✓	✓
		The Narragansett Electric Company	Electric	RI	Historical	A-	7	9.28	50.95		✓		✓			✓	✓	✓
		The Narragansett Electric Company	Natural Gas	RI	Historical	A-	7	9.28	50.95	✓	✓		✓		✓	✓		✓
		Kentucky Utilities Company	Electric	VA	Historical	A-	7	NA	NA	✓								
Portland General Electric Company	POR	Portland General Electric Company	Electric	OR	Fully Forecasted	BBB+	8	9.50	50.00	✓			✓	✓	✓		✓	✓
Southern Company	SO	Alabama Power Company	Electric	AL	Historical	A	6	NA	NA	✓				✓	✓			✓
		Atlanta Gas Light Company	Natural Gas	GA	Partially Forecasted	A-	7	NA	56.00						✓	✓		✓
		Georgia Power Company	Electric	GA	Partially Forecasted	A	6	10.50	56.00	✓					✓			✓
		Northern Illinois Gas Company	Natural Gas	IL	Fully Forecasted	A-	7	9.51	50.00	✓		✓	✓		✓	✓		✓
		Mississippi Power Company	Electric	MS	Partially Forecasted	A-	7	NA	53.00	✓		✓			✓			✓
		Chattanooga Gas Company	Natural Gas	TN	Fully Forecasted	NR		9.80	49.23	✓	✓							
		Virginia Natural Gas, Inc.	Natural Gas	VA	Historical	NR		NA	NA	✓		✓				✓		✓
Xcel Energy Inc.	XEL	Public Service Company of Colorado	Electric	CO	Historical	A-	7	9.30	55.69	✓		✓	✓	✓			✓	✓
		Public Service Company of Colorado	Natural Gas	CO	Historical	A-	7	9.20	53.78	✓		✓	✓			✓		✓
		Northern States Power Company	Electric	MN	Fully Forecasted	A-	7	9.25	52.50	✓		✓	✓	✓	✓		✓	✓
		Northern States Power Company	Natural Gas	MN	Fully Forecasted	A-	7	9.57	52.50	✓			✓			✓		✓
		Southwestern Public Service Company	Electric	NM	Historical	BBB	9	9.50	54.70	✓			✓	✓				✓
		Northern States Power Company	Electric	ND	Fully Forecasted	A-	7	9.50	52.50	✓				✓		✓	✓	✓
		Northern States Power Company	Natural Gas	ND	Fully Forecasted	A-	7	9.80	52.54	✓								
		Northern States Power Company	Electric	SD	Historical	A-	7	NA	NA	✓		✓	✓		✓	✓	✓	✓
		Southwestern Public Service Company	Electric	TX	Historical	BBB	9	NA	NA	✓			✓				✓	✓
		Northern States Power Company	Electric	WI	Fully Forecasted	A-	7	9.80	52.50	✓								
		Northern States Power Company	Natural Gas	WI	Fully Forecasted	A-	7	9.80	52.50	✓								

Company	Ticker	Operating Subsidiary	Service Type	Jurisdiction	Test Year	Credit Rating	Credit Rating (numerical)	Authorized ROE (%)	Authorized Equity Ratio (%)	Electric fuel/gas commodity/purch. power	Full Decoupling	Partial Decoupling	Conserv. program expense	Renewables/ Non-Traditional Generation	Environmental compliance	Delivery infrastructure	Transmission costs	Capital Cost Recovery
US Gas Proxy Group																		
Atmos Energy Corp	ATO	Atmos Energy Corporation	Natural Gas	KS	Historical	A-	7	NA	NA	✓		✓				✓		✓
		Atmos Energy Corporation	Natural Gas	KY	Fully Forecasted	A-	7	9.23	54.50	✓		✓	✓			✓		✓
		Atmos Energy Corporation	Natural Gas	LA	Historical	A-	7	10.77	53.25	✓		✓						
		Atmos Energy Corporation	Natural Gas	MS	Partially Forecasted	A-	7	12.94	77.76	✓		✓				✓		✓
		Atmos Energy Corporation	Natural Gas	TN	Fully Forecasted	A-	7	NA	62.20	✓		✓						
		Atmos Energy Corporation	Natural Gas	TX	Historical	A-	7	9.80	60.12	✓		✓				✓		✓
Northwest Natural Holding Company	NWN	Northwest Natural Gas Company	Natural Gas	OR	Fully Forecasted	A+	5	9.40	50.00	✓		✓	✓		✓			✓
		Northwest Natural Gas Company	Natural Gas	WA	Historical	A+	5	NA	NA	✓			✓					✓
ONE Gas, Inc.	OGS	Kansas Gas Service Company, Inc.	Natural Gas	KS	Historical	NR		NA	NA	✓		✓				✓		✓
		Oklahoma Natural Gas Company	Natural Gas	OK	Historical	NR		NA	NA	✓		✓	✓					✓
		Texas Gas Service Company, Inc.	Natural Gas	TX	Historical	NR		9.70	59.07	✓		✓				✓		✓
Spire, Inc.	SR	Spire Missouri Inc.	Natural Gas	MO	Partially Forecasted	BBB+	8	NA	NA	✓		✓				✓		✓
		Spire Alabama Inc.	Natural Gas	AL	Historical	BBB+	8	NA	NA	✓		✓						
		Spire Gulf Inc.	Natural Gas	AL	Historical	NR		13.60	46.99	✓		✓						
Proxy Group Results				**Total:**	Fully Forecasted = 33%	**Average:**	7	9.66	50.53	**Adjustment Clauses Count & Percentages of Total Proxy Group:**								
				130	Partially Forecasted = 9%	A-				111	17	64	88	34	48	71	44	113
					Historical = 57%					85%	13%	49%	68%	26%	37%	55%	34%	87%

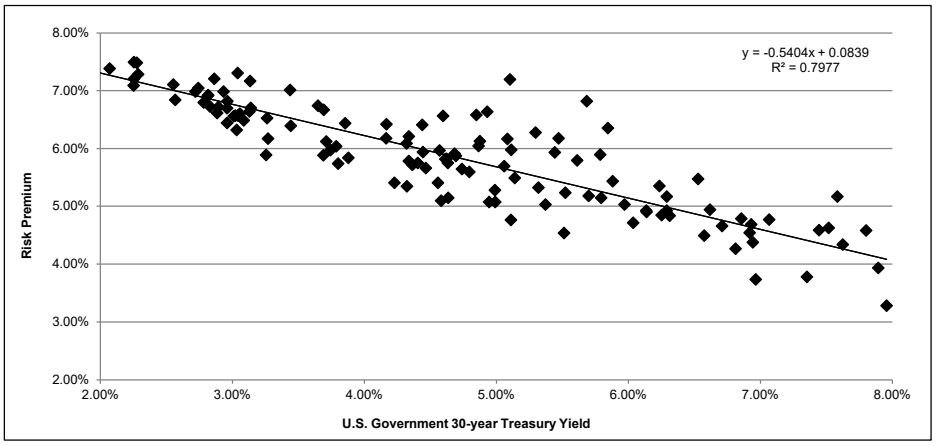
Notes:
[1] Source: S&P Capital IQ Pro, as of May 31, 2024
[2] Bloomberg Professional. S&P Rating, unless noted. May 31, 2024
[3] Bloomberg Professional
[4] Source: S&P Capital IQ Pro, rate cases as of May 31, 2024. "NA" indicates either undisclosed ROE, most recent rate case prior to 2010, or operating subsidiary is not covered by S&P, or an equity ratio observed in a state including zero-cost-of-capital items (AR, IN, FL, MI)
[5] Source: Regulatory Research Associates, "Adjustment Clauses: A State by State Overview", July 18, 2022

Risk Premium -- Electric Utilities (US)

	[1] Average Authorized Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
1992.1	12.38%	7.80%	4.58%
1992.2	11.83%	7.89%	3.93%
1992.3	12.03%	7.45%	4.59%
1992.4	12.14%	7.52%	4.62%
1993.1	11.84%	7.07%	4.77%
1993.2	11.64%	6.86%	4.79%
1993.3	11.15%	6.31%	4.84%
1993.4	11.04%	6.14%	4.90%
1994.1	11.07%	6.57%	4.49%
1994.2	11.13%	7.35%	3.78%
1994.3	12.75%	7.58%	5.17%
1994.4	11.24%	7.96%	3.28%
1995.1	11.96%	7.63%	4.34%
1995.2	11.32%	6.94%	4.37%
1995.3	11.37%	6.71%	4.66%
1995.4	11.58%	6.23%	5.35%
1996.1	11.46%	6.29%	5.17%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	6.96%	3.74%
1996.4	11.56%	6.62%	4.94%
1997.1	11.08%	6.81%	4.27%
1997.2	11.62%	6.93%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.06%	6.14%	4.92%
1998.1	11.31%	5.88%	5.43%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.47%	6.18%
1998.4	12.30%	5.10%	7.20%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.79%	5.15%
1999.3	10.75%	6.04%	4.71%
1999.4	11.10%	6.25%	4.85%
2000.1	11.21%	6.29%	4.92%
2000.2	11.00%	5.97%	5.03%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.38%	5.44%	5.93%
2001.2	10.88%	5.70%	5.18%
2001.3	10.76%	5.52%	5.23%
2001.4	11.57%	5.30%	6.27%
2002.1	10.05%	5.51%	4.54%
2002.2	11.41%	5.61%	5.79%
2002.3	11.25%	5.08%	6.17%
2002.4	11.57%	4.93%	6.64%
2003.1	11.43%	4.85%	6.58%
2003.2	11.16%	4.60%	6.56%
2003.3	9.88%	5.11%	4.76%
2003.4	11.09%	5.11%	5.98%
2004.1	11.00%	4.88%	6.12%
2004.2	10.64%	5.32%	5.32%
2004.3	10.75%	5.06%	5.69%
2004.4	10.91%	4.86%	6.04%
2005.1	10.56%	4.69%	5.87%
2005.2	10.13%	4.47%	5.66%
2005.3	10.85%	4.44%	6.41%
2005.4	10.59%	4.68%	5.91%
2006.1	10.38%	4.63%	5.75%
2006.2	10.63%	5.14%	5.49%
2006.3	10.06%	4.99%	5.07%
2006.4	10.39%	4.74%	5.65%
2007.1	10.39%	4.80%	5.59%
2007.2	10.27%	4.99%	5.28%
2007.3	10.02%	4.95%	5.07%
2007.4	10.43%	4.61%	5.81%
2008.1	10.15%	4.41%	5.75%
2008.2	10.54%	4.57%	5.97%
2008.3	10.38%	4.44%	5.94%
2008.4	10.39%	3.65%	6.74%
2009.1	10.45%	3.44%	7.01%
2009.2	10.58%	4.17%	6.42%
2009.3	10.41%	4.32%	6.09%
2009.4	10.54%	4.34%	6.21%
2010.1	10.45%	4.62%	5.82%
2010.2	10.08%	4.36%	5.71%
2010.3	10.29%	3.86%	6.43%
2010.4	10.34%	4.17%	6.17%
2011.1	9.96%	4.56%	5.40%
2011.2	10.12%	4.34%	5.78%
2011.3	10.36%	3.69%	6.67%
2011.4	10.34%	3.04%	7.31%
2012.1	10.30%	3.14%	7.17%
2012.2	9.92%	2.93%	6.98%

Risk Premium -- Electric Utilities (US)

	[1] Average Authorized Electric ROE	[2] U.S. Govt. 30-year Treasury	[3] Risk Premium
2012.3	9.78%	2.74%	7.04%
2012.4	10.07%	2.86%	7.21%
2013.1	9.77%	3.13%	6.64%
2013.2	9.84%	3.14%	6.70%
2013.3	9.83%	3.71%	6.12%
2013.4	9.82%	3.79%	6.04%
2014.1	9.57%	3.69%	5.88%
2014.2	9.83%	3.44%	6.39%
2014.3	9.79%	3.26%	6.52%
2014.4	9.78%	2.96%	6.81%
2015.1	9.66%	2.55%	7.11%
2015.2	9.50%	2.88%	6.61%
2015.3	9.40%	2.96%	6.44%
2015.4	9.65%	2.96%	6.69%
2016.1	9.70%	2.72%	6.98%
2016.2	9.41%	2.57%	6.84%
2016.3	9.76%	2.28%	7.48%
2016.4	9.55%	2.83%	6.72%
2017.1	9.61%	3.04%	6.57%
2017.2	9.61%	2.90%	6.71%
2017.3	9.73%	2.82%	6.91%
2017.4	9.74%	2.82%	6.92%
2018.1	9.59%	3.02%	6.57%
2018.2	9.57%	3.09%	6.49%
2018.3	9.66%	3.06%	6.60%
2018.4	9.44%	3.27%	6.17%
2019.1	9.57%	3.01%	6.56%
2019.2	9.58%	2.78%	6.79%
2019.3	9.57%	2.29%	7.28%
2019.4	9.74%	2.25%	7.49%
2020.1	9.45%	1.89%	7.56%
2020.2	9.52%	1.38%	8.14%
2020.3	9.34%	1.37%	7.98%
2020.4	9.32%	1.62%	7.70%
2021.1	9.45%	2.07%	7.38%
2021.2	9.46%	2.25%	7.20%
2021.3	9.37%	1.93%	7.44%
2021.4	9.37%	1.94%	7.43%
2022.1	9.34%	2.25%	7.09%
2022.2	9.35%	3.03%	6.32%
2022.3	9.14%	3.26%	5.88%
2022.4	9.72%	3.88%	5.84%
2023.1	9.71%	3.74%	5.97%
2023.2	9.54%	3.80%	5.74%
2023.3	9.63%	4.23%	5.41%
2023.4	9.68%	4.58%	5.09%
2024.1	9.66%	4.32%	5.34%
2024.2	9.78%	4.64%	5.15%
AVERAGE	10.47%	4.54%	5.94%
MEDIAN	10.38%	4.58%	5.95%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.893152903
R Square	0.797722108
Adjusted R Square	0.796141812
Standard Error	0.00442956
Observations	130

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.009904541	0.0099045	504.7928315	2.99514E-46
Residual	128	0.002511488	1.962E-05		
Total	129	0.012416029			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.083866479	0.00115824	72.40857	9.7847E-106	0.081574704	0.0861583	0.0815747	0.08615825
X Variable 1	-0.540359911	0.024050634	-22.467595	2.99514E-46	-0.587948199	-0.492772	-0.5879482	-0.4927716

	[7] U.S. Govt. 30-year Treasury	[8] Risk Premium	[9] ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	4.66%	5.87%	10.53%
Blue Chip Near-Term Projected Forecast (Q3 2024 - Q3 2025) [5]	4.40%	6.01%	10.41%
Blue Chip Long-Term Projected Forecast (2026-2030) [6]	4.30%	6.06%	10.36%
AVERAGE			10.43%

Notes:
[1] Source: Regulatory Research Associates, rate cases through May 31, 2024
[2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] Source: Bloomberg Professional, 30-day average as of May 31, 2024
[5] Source: Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024 at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024 at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.083866 + (-0.540360 x Column [7])
[9] Equals Column [7] + Column [8]

- Risk-premium;
- In the final Subsection we provide an overview of how these methodologies achieved the results displayed in Table 2.

As we noted earlier, LEI's computed equity costs, when corrected for errors as shown in Table 4, are not far from our own results, as shown in Table 5, and are within our 95 percent confidence interval. Likewise, LEI's risk premium analysis produces an average authorized return on equity provided to firms of comparable operating risk, and adjusted to similar financial risk using the Deemed Debt Ratio.

Taken together, the LEI cost estimates corrected and in total present a different picture of equity costs than LEI's recommended ROE of 8.95 percent and suggests both that LEI's recommended ROE is unreasonable, and that Nexus' independent analysis is a reasonable estimate of a fair return on equity.

1. Nexus Economics' Selection of Comparable Firms

Because Canada and the US are integrated economies with an integrated North American capital market, for the reasons set out above, US companies can serve as proxies to Canadian companies. Both compete for capital in the same market, and there is no need to adjust the derived cost of equity based on US companies when applied to Canadian companies resulting from Country Risk.[77]

The Fair Return Standard requires firms of comparable, though not identical, risk.[78] Accordingly, we used the following method to select firms of comparable risk. Our method of selection was as follows.

[77] LEI's derivation of the Annual Adjustment Mechanism is based on US peers.
[78] 2009 Report, p. 21. "'Like' does not mean the 'same'."

As a first pass, we selected all firms with NAICS codes of 2211 and SIC Codes of 4991, 4931, 4911 from the S&P CapIQ database.[79] These industry classification codes are for "Electric Power Generation Transmission and Distribution." The SIC Codes are:

- 4911. Electric Services. "Establishments engaged in the generation, transmission, and/or distribution of electric energy for sale"; and
- 4931. "Establishments primarily engaged in providing electric services in combination with other services, with electric services as the major part though less than 95 percent of the total."

We kept only those firms that traded on North American exchanges (NYSE, NASDAQ, TSX, and OTC). We then examined each of the surviving candidates for special issues that made them inappropriate for comparison. We rejected those that (1) had no operations; (2) no longer existed; (3) were REITs rather than operating companies; (4) had no distribution or transmission (were IPPs, engineering companies, developers, or marketers) (5) only renewables or biogas (too speculative); (6) had considerable negatives in the historical data such as no revenues or no history of positive earnings (too speculative).

Our filters produced 43 candidates, most of which had at least one financial data provider with a beta and an expected earnings-per-share growth rate. The financial services data providers that we examined, CapIQ, Yahoo Finance, Zacks, and StockAnalysis.com had relevant information for somewhat over half of the candidates that could be used in the DCF.

[79] NAICS (North American Industrial Classification System) is used by the US, Canadian, and Mexican agencies to collect business data. NAICS was designed to supersede the Standard Industrial Code system, though both are used. See: "What is a NAICS Code and Why do I Need One" at NAICS Association at What is a NAICS Code and Why do I Need One? | NAICS Association. Note: SIC Code 4991 does not exist but was erroneously assigned to AES Corp in the CapIQ database. For that reason, we retained the "4991" company.

Table 6 – Firms Included in the Nexus ROE Analysis

			DCF					
Ticker	Name	Eligible	Yahoo	Zacks	CapIQ	Stock Analysis	CAPM	Any
TOTALS		43	29	23	20	27	43	43
AEE	Ameren Corp.	Yes	X	X	X	X	X	X
AEP	American Electric Power Co.	Yes	X	X		X	X	X
AES	The AES Corp.	Yes	X				X	X
AGR	Avangrid Inc.	Yes		X	X	X	X	X
ALE	ALLETE Inc.	Yes	X			X	X	X
APTL	Alaska Power & Telephone Co.	Yes					X	X
AQN	Algonquin Power & Utilities	Yes					X	X
AVA	Avista Corp.	Yes	X		X	X	X	X
CEG	Constellation Energy Corp.	Yes					X	X
CMS	CMS Energy Corp.	Yes	X	X	X	X	X	X
CNP	CenterPoint Energy Inc.	Yes	X	X	X	X	X	X
D	Dominion Energy	Yes		X		X	X	X
DTE	DTE Energy Co.	Yes	X	X	X	X	X	X
DUK	Duke Energy Corp	Yes	X	X		X	X	X
ED	Consolidated Edison Inc.	Yes	X	X			X	X
EIX	Edison International	Yes	X			X	X	X
EMA	Emera Inc.	Yes					X	X
ES	Eversource Energy	Yes	X	X			X	X
ETR	Entergy Corp.	Yes	X	X			X	X
EVRG	Evergy, Inc.	Yes	X	X	X	X	X	X
EXC	Exelon Corp.	Yes	X	X	X	X	X	X
FE	FirstEnergy Corp.	Yes	X			X	X	X
FTS	Fortis Inc.	Yes			X		X	X
H	Hydro One Ltd	Yes			X		X	X
HE	Hawaiian Electric Industries	Yes				X	X	X
IDA	IDACORP Inc.	Yes	X		X	X	X	X
LNT	Alliant Energy	Yes	X	X	X	X	X	X
MGEE	MGE Energy Inc	Yes	X				X	X
NEE	NextEra Energy Inc.	Yes	X	X		X	X	X
NWE	NorthWestern Energy Group	Yes	X		X	X	X	X
OGE	OGE Energy Corp.	Yes		X	X	X	X	X
OTTR	Otter Tail Corp.	Yes	X				X	X
PCG	PG&E Corp.	Yes	X		X	X	X	X
PEG	Public Svc Entpr Group Inc.	Yes		X			X	X
PNM	PNM Resources Inc.	Yes		X			X	X
PNW	Pinnacle West Capital Corp.	Yes	X	X	X	X	X	X
POR	Portland General Electric Co.	Yes	X			X	X	X
PPL	PPL Corp.	Yes	X	X			X	X
SO	The Southern Co.	Yes	X	X	X	X	X	X
TA	TransAlta Corp	Yes					X	X
UTL	Unitil Corp.	Yes	X		X	X	X	X
WEC	WEC Energy Group	Yes	X	X	X	X	X	X
XEL	Xcel Energy Inc.	Yes		X	X	X	X	X

Ontario Energy Association (OEA)

Answer to Interrogatory from
Ontario Energy Board Staff (OEB Staff)

INTERROGATORY

Reference:

EDA Report, pp. 43 & 46 & 84
Dr. Cleary Report, pp. 29 & 44
Concentric Report, pp. 136 & 137

Question(s):

Nexus stated that "capital from US exchanges is equivalent to capital from Canadian exchanges."

Nexus' proposal is that the OEB retain its existing policy regarding capital structure applicable to electricity distributors for now.

Dr. Cleary stated that U.S. utilities are not reasonable comparators for Canadian utilities. In Dr. Cleary's view, this is true because they have significantly higher business risk – partly due to their holding company structure and business holdings, partly due to operating in the U.S. and not in Canada, and partly due to the nature of their operations which entail more risk.

Concentric stated that it finds that Ontario's regulated distribution and transmission utilities generally have comparable business risk to the companies in the North American Electric and Gas comparator groups. Concentric also concluded that Ontario's utilities have similar financial risk to other electric and gas utilities in Canada and substantially greater financial risk than their U.S. peers due to the relatively low deemed equity ratios of 38 percent for Enbridge Gas, 40 percent for electric distribution and electric transmission, and 45 percent for OPG.

Concentric stated that an immediate move to parity with the U.S. would be abrupt. For that reason, Concentric recommended that the OEB set a minimum deemed equity ratio for Ontario utilities of 45 percent, which is at a point approximately halfway between the Ontario level and the U.S. average.

a) Concentric – please provide Concentric's views on Dr. Cleary's statement that U.S. utilities are not reasonable comparators for Canadian utilities.

b) Concentric – please explain why a minimum deemed equity ratio for Ontario utilities of 45 percent is appropriate, given Dr. Cleary's statements noted above, and Nexus' recommendation to keep the status quo.

Response:

a) Concentric disagrees with Dr. Cleary's conclusion that U.S. utilities are not reasonable comparators for Canadian utilities. In fact, as discussed in the Concentric report (at 51-52), Exhibit M2, both the BCUC and the AUC have accepted the use of a North America proxy group comprised of utility companies in both Canada and the U.S. to set the authorized ROE for utilities under their jurisdiction. In addition, as discussed on page 50 of Concentric's report, the OEB determined in 2009 that U.S. utilities can be used as comparators to Canadian utilities for purposes of establishing the authorized ROE. Also, in September 2013, Moody's published a report in which the rating agency changed its previous view that U.S. utilities had greater regulatory risk than their peers in Canada. Moody's ultimately concluded that U.S. utilities have similar regulatory risk as Canadian utilities, noting the increased use of forecast test years in the U.S. and the adoption of adjustment clauses and cost recovery mechanisms that enhanced the timeliness of cost recovery for U.S. companies and reduced regulatory lag.

   Further, Concentric's experience suggests that equity analysts perceive the U.S. and Canada as part of an integrated North American market for capital. This is demonstrated by a March 2019 report by equity analysts at Scotiabank indicating that they view the regulatory environments in Canada and the U.S. as being similar for regulated utilities. In explaining why they expect the valuations of Canadian and U.S. utilities to converge, Scotiabank observed: "Canadian and U.S. valuations should converge. Historically, the Canadian utilities have traded at a premium to their mid-cap U.S. peers. We attribute this to the historical view that Canadian regulation was superior to U.S. regulation (***we no longer have that view***) as well as to strong earnings growth in part due to M&A. As shown in Exhibit 19, based on forward consensus estimates, the Canadian names now trade at a 3x discount."[13]

b) Concentric has included U.S. companies in our North American proxy group analysis. Our recommended 45% minimum equity thickness falls short of parity with U.S. equity ratios, which, as described in the Concentric report, at page 134, average 51% for electric companies and 52% for gas LDCs.

Nexus' proposal is that the OEB retain its existing policy regarding capital structure applicable to electricity distributors for now. However, Nexus adjusts its authorized ROE recommendation to account for differences in financial leverage. Specifically, Nexus, at page 6, stated that they adjusted their ROE results "for differences in leverage to the Deemed Debt Rate of 60 percent. In this way, we put the results on the same financial risk footing as Ontario." As such, while Nexus has not recommended a change in equity thicknesses for Ontario utilities, Nexus has accounted for Ontario's lower equity thicknesses through its leverage adjustment, which "eliminate[s] financial risk as a cause for differentiation among cost of equity estimates." Further, Nexus observes at page 84 of their report that "[f]irst, a 50:50 Debt-to-Equity ratio for regulated electric utilities is common in the US. Second, Debt ratios greater than 60 percent are fairly rare. Third, Ontario's Deemed Debt-to-Capital Ratio of 60 percent is higher than those of the Comparable states (New York and California) identified by LEI in its report. British Columbia and Alberta have Deemed Debt Ratios of 55 percent."