

UNION GAS LIMITED

EXHIBIT LIST

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PREFILED EVIDENCE OF

MICHAEL BROEDERS, MANAGER FINANCIAL PLANNING AND FORECASTING

This evidence summarizes Union's rate of return and delivery-related revenue deficiency for the 2013 test year. The revenues and cost of gas in the 2013 test year forecast are based on the transportation tolls, gas commodity prices, and rates approved by the Board in the January 1, 2011 Quarterly Rate Adjustment Mechanism ("QRAM"). Variances between the 2013 forecast cost of gas and the costs approved in the January 1 QRAM are forecast in the gas supply-related deferral accounts. The result is to separate the delivery-related revenue deficiency in this evidence from those items that are addressed in the QRAM process.

Union's 2013 test year forecast results in an overall requested rate of return on rate base of 7.80%¹ assuming a return on equity ("ROE") of 9.58%. The final rate of return on rate base for 2013 will be determined once the September 2012 actual and forecast bond yields are available. Union is proposing that the ROE for the 2013 test year be established using the formula as determined in the "Report of the Board on the Cost of Capital for Ontario's Regulated Utilities" dated December 11, 2009 (EB-2009-0084). The Board's findings in the Report maintain a formulaic approach to setting ROE levels. However, the formula (originally established in the Board's "Draft Guidelines on a Formula-Based Return on Common Equity for Regulated Utilities" released in March 1997) was reset primarily to address relatively low ROE levels as well as to reduce its sensitivity to changes in government bond yields.

¹ This compares to the 2007 Board-Approved rate of return on rate base of 7.93%.

1 Union's request to use the Board's formula to establish an appropriate allowed ROE for 2013 is
2 supported by the expert testimony filed by James Vander Weide at Exhibit F2.

3
4 Calculations supporting this request are found at Exhibit F3, Tab 1, Schedule 1. Details of
5 Union's 2012, 2011 and 2010 returns on rate base are found at Exhibits F4, F5 and F6
6 respectively.

7
8 Union's revenue deficiency for 2013 is forecast to be \$71.4 million (\$70.6 million before
9 adjusting for the shareholder portion of short-term storage and balancing services) as shown at
10 Exhibit F3, Tab 1, Schedule 1.

11
12 As shown on Table 1, the revenue deficiency of \$71.4 million is primarily the result of
13 increasing costs required to provide service to customers that have not been fully offset by
14 increased revenues, and the impact of continued declines in use per customer.

Table 1
Summary of the Components of the Revenue Deficiency
(\$millions)

Line No.		Board- Approved <u>2007</u> (a)	Actual <u>2010</u> ⁽¹⁾ (b)	Actual <u>2011</u> ⁽¹⁾ (c)	Forecast <u>2012</u> (d)	Forecast <u>2013</u> (e)
1	Operating revenue ⁽²⁾	831.0	929.6	954.4	929.7	900.7
2	Revenue requirement:					
3	Operating costs ⁽³⁾	568.0	608.1	627.5	651.2	654.8
4	Cost of capital ⁽⁴⁾	259.5	260.8	251.4	255.6	291.9
5	Income taxes ⁽⁵⁾	<u>20.8</u>	<u>16.5</u>	<u>16.4</u>	<u>17.1</u>	<u>24.6</u>
6	Revenue Requirement	<u>848.3</u>	<u>885.4</u>	<u>895.3</u>	<u>923.9</u>	<u>971.3</u>
7	Revenue (Sufficiency) Deficiency ⁽⁶⁾	17.3	(44.2)	(59.1)	(5.8)	70.6
8	Long-term storage premium subsidy ⁽⁶⁾	(19.2)	(5.3)	0.0	0.0	0.0
9	Shareholder portion of transactional S&T margin ⁽⁶⁾	<u>1.9</u>	<u>4.8</u>	<u>2.3</u>	<u>1.5</u>	<u>0.8</u>
10	Adjusted Revenue (Sufficiency)/Deficiency ⁽⁶⁾	<u>0.0</u>	<u>(44.7)</u>	<u>(56.8)</u>	<u>(4.3)</u>	<u>71.4</u>

Note:

(1) 2010 actual and 2011 actual are not weather normalized.

(2) Provided at Exhibits C3-C6, Tab 1, Schedule 1, line 5 less Cost of Gas in Exhibit D1, Summary Schedule 1, line 1.

(3) Provided at Exhibit D1, Summary Schedule 1, lines 2-6.

(4) Provided at Exhibit E1, Tab 1, Table 1, line 5.

(5) Provided at Exhibit D1, Summary Schedule 1, line 7 (Income Tax) + Exhibits F3-F6, Tab 1, Schedule 1, line 6 (Provision for Income Tax).

(6) Provided at Exhibits F3-F6, Tab 1, Schedule 1, lines 7-11.

Operating costs have increased \$86.8 million primarily as a result of increased O&M expenses of \$67.0 million, increased depreciation of \$22.7 million, increased other financing of \$0.8 million

1 and, decreased property and capital taxes of \$3.7 million. Depreciation and taxes have increased
2 as a result of additional investment in property, plant and equipment. The increases in O&M
3 expenses are detailed in the evidence of Ms. Beth Cummings filed at Exhibit D1, Tab 2.

4
5 Cost of capital has increased \$32.4 million primarily as a result of increased investment in rate
6 base, a proposed increase in ROE resulting from the formula noted earlier, and a proposed
7 increase in the equity component of Union's capital structure. These increases are partially offset
8 by a decrease in interest rates which resulted from the refinancing of long term debt. The
9 changes in rate base are discussed in the evidence of Ms. Linda Vienneau and Mr. Michael
10 Broeders at Exhibit B1, Tab 1. The changes in the cost of capital are discussed in more detail in
11 the evidence of Mr. Michael Broeders filed at Exhibit E1, Tab 1.

12
13 Income taxes have increased \$3.8 million. Increased earnings and the proposed increase in equity
14 are partially offset by the decline in tax rates. The changes in income taxes are described further
15 in the evidence of Mr. Ken Horner filed at Exhibit D1, Tab 4.

16
17 The increase in operating costs and carrying costs noted above that are attributable to growth in
18 rate base is approximately \$70.0 million.

19
20 The increase in revenue requirement is offset partially by an increase in operating revenues of
21 \$69.7 million. Operating revenues are comprised of the total revenue forecast from gas sales,
22 distribution, storage, and transmission services, net of the cost of gas. Operating revenues also

1 include other revenue items which are comprised primarily of customer connection charges, late
2 payment charges, and billing service fees. The drivers for the changes in general service
3 revenues are discussed in more detail in the evidence of Mr. Paul Gardiner filed at Exhibit C1,
4 Tab 1. The changes in the business market demand forecast are detailed in the evidence of Ms.
5 Sarah Van Der Paelt and Mr. Paul Gardiner filed at Exhibit C1, Tab 2 and, the changes in the
6 storage & transportation forecast are provided in the evidence of Ms. Carol Cameron and Ms.
7 Patti Piatt filed at Exhibit C1, Tab 3.

ONTARIO ENERGY BOARD

EB-2011-0210

JAMES H. VANDER WEIDE, PH.D.

FOR

UNION GAS INC.

2011

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1 **I. Introduction**

2 Q 1 What is your name, occupation, and business address?

3 A 1 My name is James H. Vander Weide. I am Research Professor of
4 Finance and Economics at Duke University, Fuqua School of Business. I
5 am also President of Financial Strategy Associates, a firm that provides
6 strategic and financial consulting services to corporate clients. My
7 business address is 3606 Stoneybrook Drive, Durham, North Carolina
8 27705.

9 Q 2 Please summarize your qualifications.

10 A 2 I graduated from Cornell University with a Bachelor's Degree in
11 Economics and from Northwestern University with a Ph.D. in Finance.
12 After joining the faculty of the School of Business at Duke University, I
13 was named Assistant Professor, Associate Professor, Professor, and
14 then Research Professor. I have published research in the areas of
15 finance and economics and taught courses in these fields at Duke for
16 more than thirty-five years. I am now retired from my teaching duties at
17 Duke. A summary of my research, teaching, and other professional
18 experience is presented in Appendix 1.

19 Q 3 Have you previously testified on financial and economic issues?

20 A 3 Yes. As an expert on financial and economic theory and practice, I have
21 participated in more than four hundred regulatory and legal proceedings
22 before the U.S. Congress, the Canadian Radio-Television and
23 Telecommunications Commission, the Federal Communications
24 Commission, the National Telecommunications and Information
25 Administration, the Federal Energy Regulatory Commission, the National
26 Energy Board, the public service commissions of forty-three states and
27 four Canadian provinces, the insurance commissions of five states, the
28 Iowa State Board of Tax Review, the National Association of Securities
29 Dealers, and the North Carolina Property Tax Commission. In addition, I
30 have prepared expert testimony in proceedings before the U.S. Tax
31 Court, the U.S. District Court for the District of Nebraska; the U.S. District
32 Court for the District of New Hampshire; the U.S. District Court for the

1 District of Northern Illinois; the U.S. District Court for the Eastern District
2 of North Carolina; the Montana Second Judicial District Court, Silver Bow
3 County; the U.S. District Court for the Northern District of California; the
4 Superior Court, North Carolina; the U.S. Bankruptcy Court for the
5 Southern District of West Virginia; and the U. S. District Court for the
6 Eastern District of Michigan.

7 Q 4 What is the purpose of your written evidence in this proceeding?

8 A 4 I have been asked by Union Gas Limited ("Union" or "the Company") to
9 prepare an independent appraisal of the reasonableness of the
10 Company's requested return on equity ("ROE") in this proceeding.

11 Q 5 What ROE is Union requesting in this proceeding?

12 A 5 Union is requesting that it be allowed to earn the Ontario Energy Board's
13 ("OEB's" or "the Board's") formula ROE on an equity ratio equal to
14 40 percent.

15 Q 6 Are you familiar with the Board's ROE formula for the regulated natural
16 gas and electric companies under its jurisdiction?

17 A 6 Yes. The Board's ROE formula is given by the equation:

$$18 \quad ROE_t = 9.75\% + 0.5 \times (LCBF_t - 4.25\%) + 0.5 \times (UtilBondSpread_t - \\ 19 \quad 1.415\%)$$

20 where:

21 $LCBF_t$ = the Long Canada Bond forecast for the test year, and
22 $UtilBondSpread_t$ = the average spread of 30-year A-rated Canadian Utility
23 bond yields over 30-year Government of Canada bond
24 yields in the month three months in advance of the
25 implementation date for rates.

26 Q 7 How often does the Board update the parameters of its ROE formula?

27 A 7 The Board updates the parameters of its ROE formula once each year for
28 rates effective at the beginning of May.

29 Q 8 Has the Board updated its formula ROE for rates effective May 1, 2011?

30 A 8 Yes. In a memorandum dated March 3, 2011, the Board announced that
31 the updated ROE for rates effective May 1, 2011, is 9.58 percent.

1 Q 9 How will you assess the reasonableness of Union's request to earn the
2 Board's formula ROE on a capital structure containing 40 percent equity?

3 A 9 I will assess the reasonableness of Union's request by: (1) estimating
4 the cost of equity for groups of comparable risk utilities; (2) examining
5 information on average utility actual and allowed capital structures; and
6 (3) comparing my cost of equity estimates and information on average
7 utility capital structures to Union's requested cost of equity and capital
8 structure in this proceeding.

9 Q 10 Why do you apply your cost of equity methods to a group of comparable
10 risk utilities rather than solely to Union?

11 A 10 I apply my cost of equity methods to a group of comparable risk utilities
12 because standard cost of equity methods such as the DCF, risk premium,
13 and CAPM require inputs of quantities that are not easily measured.
14 Since these inputs can only be estimated, there is naturally some degree
15 of uncertainty surrounding the estimate of the cost of equity for each
16 utility. However, the uncertainty in the estimate of the cost of equity for a
17 single utility can be greatly reduced by applying cost of equity methods to
18 a sample of comparable risk utilities. Intuitively, unusually high estimates
19 for some utilities are offset by unusually low estimates for other utilities.
20 Thus, financial economists invariably apply cost of equity methods to a
21 group of comparable utilities. In utility regulation, the practice of using a
22 group of comparable utilities, called the comparable company approach,
23 is further supported by the Supreme Court standard that the utility should
24 be allowed to earn a return on its investment that is commensurate with
25 returns being earned on other investments of the same risk.¹

¹ See *Northwestern Utilities Ltd. v. Edmonton*, where Mr. Justice Lamont states:

1 **II. Comparable Risk Utilities**

2 Q 11 How do you select your groups of comparable risk utilities?

3 A 11 I use the criteria that selected utilities: (1) must have stock that is publicly
4 traded; (2) must have sufficient available data to reasonably apply
5 standard cost of equity estimation techniques; (3) must be comparable in
6 risk; and (4) taken together, must constitute a relatively large sample of
7 companies.

8 Q 12 Is Union included in your comparable company group?

9 A 12 No. Union is not included in my comparable company group because its
10 stock is not publicly traded.

11 Q 13 Why must comparable utilities be publicly traded?

12 A 13 Comparable utilities must be publicly traded because information on a
13 company's stock price is a key input in standard cost of equity estimation
14 methods. If the company is not publicly traded, the information required
15 to estimate the cost of equity will not be available.

16 Q 14 Why is data availability a concern in estimating the cost of equity for
17 Union?

18 A 14 Data availability is a concern because standard cost of equity estimation
19 methods like the Discounted Cash Flow ("DCF"), the risk premium, and
20 the Capital Asset Pricing Model ("CAPM") require estimates of inputs,
21 such as the expected growth rate, required risk premium, and beta, that
22 are inherently uncertain. If there is insufficient data available to estimate
23 these inputs, there is little basis for arriving at a reasonable estimate of
24 the cost of equity for the comparable risk utilities.

The duty of the Board was to fix fair and reasonable rates; rates which, under the circumstances, would be fair to the consumer on the one hand, and which, on the other hand, would secure to the company a fair return for the capital invested. By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company's enterprise.
[*Northwestern Utilities Ltd. v. Edmonton*, [1929] S.C.R. 186.]

1 Q 15 Is there any way to assure that your comparable utilities have exactly the
2 same risk as Union?

3 A 15 No. First, it is impossible to measure Union's risk precisely because most
4 generally accepted risk measures require that a company have publicly-
5 traded stock. Second, there is no single generally agreed upon measure
6 of risk. Third, there are no Canadian natural gas distribution companies
7 ("LDCs") with publicly-traded stock. Fourth, there are only several
8 Canadian regulated utilities with publicly-traded stock.

9 Q 16 Recognizing the difficulty in identifying companies with exactly the same
10 risk as Union, what companies do you consider as potential comparables
11 for the purpose of estimating the cost of equity for Union?

12 A 16 I consider two groups of Canadian utilities and two groups of US utilities.

13 Q 17 What two groups of Canadian utilities do you consider?

14 A 17 I consider the group of Canadian utilities included in the basket of utility
15 and pipeline companies of the Bank of Montreal Capital Markets ("BMO
16 CM") and the group of companies in the S&P/TSX utilities index.

17 Q 18 What are the advantages of using the BMO CM basket of Canadian
18 utilities as comparables for the purpose of estimating the cost of equity for
19 Union?

20 A 18 The primary advantage of the BMO CM basket of Canadian utilities is that
21 it only includes companies that receive a relatively large portion of their
22 revenues from traditional utility operations.

23 Q 19 What are the advantages of using the companies in the S&P/TSX utilities
24 index as comparables in this proceeding?

25 A 19 The primary advantage of using the companies in the S&P/TSX utilities
26 index is that there are more companies in the index and return data for
27 these companies is available for a longer period of time than for the BMO
28 CM basket of utility stocks.

29 Q 20 Are there any disadvantages of using these two groups of Canadian
30 utilities as comparables for Union?

31 A 20 Yes. An obvious disadvantage is that neither group contains companies
32 with a significant percentage of revenues or income from natural gas

1 distribution operations. This disadvantage is important because Union is
2 a natural gas distribution company. Another disadvantage is that, while
3 the indices provide useful historical return information on Canadian
4 utilities, they provide little or no forward-looking information on investor
5 required returns. In addition, seven of the ten companies in the S&P/TSX
6 index receive most of their revenues and income from unregulated
7 generation and marketing activities.

8 Q 21 What two groups of U.S. utilities do you consider?

9 A 21 I consider a natural gas utility company group and an electric utility
10 company group. My natural gas utility group contains companies that,
11 like Union, have large LDC operations. My electric utility group includes a
12 larger sample of utilities with electric and/or electric and natural gas
13 distribution operations.

14 Q 22 What are the advantages of using your two U.S. utilities groups as
15 comparables for the purpose of estimating the cost of equity for Union?

16 A 22 The primary advantages of my U.S. utilities groups are: (1) they include a
17 reasonable number of companies with LDC operations; (2) they include a
18 significantly larger sample of companies with traditional utility operations
19 than my Canadian groups; (3) reasonable estimates of expected growth
20 rates are available for these companies, whereas the same data are not
21 available for the Canadian utilities; and (4) historical risk premium data for
22 the U.S. utilities are available for a much greater length of time than for
23 the Canadian utilities.

24 Q 23 Is there a significant difference in the business risk of Canadian and U.S.
25 utilities?

26 A 23 No. The business risk of natural gas and electric utilities is approximately
27 the same in the U.S. as it is in Canada.

28 Q 24 Why is the business risk of natural gas and electric utilities approximately
29 the same in the U.S. as it is in Canada?

30 A 24 The business risk of natural gas and electric utilities is approximately the
31 same in the U.S. and Canada because: (1) U.S. natural gas and electric
32 utilities rely on essentially the same natural gas and electric technologies

1 to deliver their services to the public as natural gas and electric utilities in
2 Canada; (2) the economics of natural gas and electric transmission and
3 distribution is similar in the U.S. and Canada; and (3) U.S. natural gas
4 and electric utilities are regulated under similar cost-based regulatory
5 structures and fair rate of return principles as Canadian utilities.

6 Q 25 Some observers have argued that Canadian utilities have lower
7 regulatory risk than U.S. utilities because Canadian regulators generally
8 make greater use of cost adjustment and revenue stabilization
9 mechanisms than U.S. regulators. Do you agree with this argument?

10 A 25 No. U.S. utilities have many of the same cost adjustment and revenue
11 stabilization mechanisms as Canadian utilities. For example, U.S. natural
12 gas distribution companies typically have cost adjustment mechanisms
13 for the cost of purchased gas, removal expenses, and bad debt
14 expenses; and revenue stabilization mechanisms for weather
15 normalization and declining customer usage. In addition, U.S. natural gas
16 utilities increasingly have rate designs that allow them to recover higher
17 percentages of their fixed costs through fixed monthly rates rather than
18 through variable rates. U.S. electric utilities generally have cost
19 adjustment mechanisms for costs of fuel and purchased power, pension
20 expenses, storm damage expenses, environmental expenses,
21 decommissioning expenses, demand-side management program costs,
22 FERC-approved transmission costs, and new generation plant
23 investment; and revenue stabilization mechanisms for unusual weather
24 and customer usage.

25 Q 26 Do cost recovery and revenue stabilization mechanisms guarantee that a
26 public utility will earn its cost of equity?

27 A 26 No. Regulatory risk is associated with the possibility that a utility will be
28 unable to earn its required rate of return as a result of regulation.
29 Although cost recovery and revenue stabilization mechanisms generally
30 reduce the gap between a utility's actual and allowed returns, they do not
31 necessarily reduce the gap between a utility's actual and required returns.
32 Canadian utilities may face greater regulatory risk than U.S. utilities

1 because Canadian utilities are generally regulated through formula ROEs,
2 and formula ROEs may be more likely to differ from the market cost of
3 equity than ROEs based on market evidence in each rate proceeding.

4 Q 27 What is the difference between business and financial risk?

5 A 27 Business risk is the variability in return on investment that equity investors
6 experience from a company's business operations when the company is
7 entirely financed with equity. Financial risk is the additional variability in
8 return on investment that equity investors experience due to the
9 company's use of debt financing or leverage.

10 Q 28 How does the financial risk of Canadian utilities compare to the financial
11 risk of U.S. utilities?

12 A 28 Canadian utilities generally have greater financial risk than U.S. utilities
13 because, as shown below, they rely more heavily on debt financing than
14 U.S. utilities.

15 Q 29 What are the average bond ratings of your groups of natural gas and
16 electric utilities?

17 A 29 The average bond rating of my groups of natural gas and electric utilities
18 is BBB+, the same bond rating as Union.

19 Q 30 What conclusions do you draw from your investigation of alternative
20 groups of comparable utilities?

21 A 30 I conclude that my groups of Canadian and U.S. utilities are reasonable
22 proxies for the purpose of estimating Union's cost of equity.

23 Q 31 Has the Board determined that cost of equity evidence for U.S. utilities is
24 useful in estimating the cost of equity for Ontario utilities?

25 A 31 Yes. In the Report of the Board on the Cost of Capital for Ontario's
26 Regulated Utilities, EB-2009-0084, December 11, 2009, ("2009 Cost of
27 Capital Report") the Board states:

28 Second, there was a general presumption held by participants
29 representing ratepayer groups in the consultation that Canadian
30 and U.S. utilities are not comparators, due to differences in the
31 "time value of money, the risk value of money and the tax value
32 of money." In other words, because of these differences,
33 Canadian and U.S. utilities cannot be comparators. The Board
34 disagrees and is of the view that they are indeed comparable,

1 and that only an analytical framework in which to apply judgment
2 and a system of weighting are needed. ...

3 The Board is of the view that the U.S. is a relevant source for
4 comparable data. The Board often looks to the regulatory policies
5 of State and Federal agencies in the United States for guidance
6 on regulatory issues in the province of Ontario. For example, in
7 recent consultations, the Board has been informed by U.S.
8 regulatory policies relating to low income customer concerns,
9 transmission cost connection responsibility for renewable
10 generation, and productivity factors for 3rd generation incentive
11 ratemaking. [2009 Cost of Capital Report at 21 – 23]

12 Q 32 Has the National Energy Board (“NEB”) determined that cost of equity
13 evidence for U.S. utilities is useful in determining the cost of equity for
14 Trans Québec & Maritimes Pipeline Inc. (“TQM”)?

15 A 32 Yes. In Decision RH-1-2008 the Board finds:

16 In light of the Board's views expressed above on the integration
17 of U.S. and Canadian financial markets, the problems with
18 comparisons to either Canadian negotiated or litigated returns,
19 and the Board's view that risk differences between Canada and
20 the U.S. can be understood and accounted for, the Board is of
21 the view that U.S. comparisons are very informative for
22 determining a fair return for TQM for 2007 and 2008. [RH-1-2008
23 at 71.]

24 **III. Estimates of Comparable Utilities' Cost of Equity**

25 Q 33 How do you estimate your comparable utilities' cost of equity?

26 A 33 I estimate my comparable utilities' cost of equity by applying standard
27 cost of equity methods to groups of comparable risk companies.

28 Q 34 What methods do you use to estimate your comparable utilities' cost of
29 equity?

30 A 34 I use three generally accepted methods: the discounted cash flow
31 (“DCF”), the risk premium, and the CAPM. The DCF method assumes
32 that the current market price of a firm's stock is equal to the discounted
33 value of all expected future cash flows. The risk premium method
34 assumes that the investor's required rate of return on an equity
35 investment is equal to the interest rate on a long-term bond plus an
36 additional equity risk premium to compensate the investor for the risks of
37 investing in equities compared to bonds. The CAPM assumes that the

investors' required rate of return is equal to a risk-free rate of interest plus the product of a company-specific risk factor, beta, and the expected risk premium on the market portfolio.

A. Discounted Cash Flow Estimate

Q 35 Please describe the DCF model.

A 35 The DCF model is based on the assumption that investors value an asset on the basis of the future cash flows they expect to receive from owning the asset. Thus, investors value an investment in a bond because they expect to receive a sequence of semi-annual coupon payments over the life of the bond and a terminal payment equal to the bond's face value at the time the bond matures. Likewise, investors value an investment in a firm's stock because they expect to receive a sequence of dividend payments and, perhaps, expect to sell the stock at a higher price sometime in the future.

A second fundamental principle of the DCF method is that investors value a dollar received in the future less than a dollar received today. A future dollar is valued less than a current dollar because investors could invest a current dollar in an interest earning account and increase their wealth. This principle is called the time value of money.

Applying the two fundamental DCF principles noted above to an investment in a bond leads to the conclusion that investors value their investment in the bond on the basis of the present value of the bond's future cash flows. Thus, the price of the bond should be equal to:

EQUATION 1

$$P_B = \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \dots + \frac{C+F}{(1+i)^n}$$

where:

P_B = Bond price;

8 Applying these same principles to an investment in a firm's stock
9 suggests that the price of the stock should be equal to:

Equation (2) is frequently called the annual discounted cash flow model of stock valuation. Assuming that dividends grow at a constant annual rate, g , this equation can be solved for k , the cost of equity. The resulting cost of equity equation is $k = D_1/P_s + g$, where k is the cost of equity, D_1 is the expected next period annual dividend, P_s is the current price of the stock, and g is the constant annual growth rate in earnings, dividends, and book value per share. The term D_1/P_s is called the

1 dividend yield component of the annual DCF model, and the term g is
2 called the growth component of the annual DCF model.

3 Q 36 Are you recommending that the annual DCF model be used to estimate
4 Union's cost of equity?

5 A 36 No. The DCF model assumes that a company's stock price is equal to
6 the present discounted value of all expected future dividends. The annual
7 DCF model is only a correct expression for the present discounted value
8 of future dividends if dividends are paid annually at the end of each year.
9 Because the companies in my proxy group all pay dividends quarterly, the
10 current market price that investors are willing to pay reflects the expected
11 quarterly receipt of dividends. Therefore, a quarterly DCF model should
12 be used to estimate the cost of equity for these firms. The quarterly DCF
13 model differs from the annual DCF model in that it expresses a
14 company's price as the present discounted value of a quarterly stream of
15 dividend payments.

16 Q 37 How do you estimate the dividend component of the DCF model?

17 A 37 The quarterly DCF model requires an estimate of the dividends, d_1 , d_2 , d_3 ,
18 and d_4 , investors expect to receive over the next four quarters. I estimate
19 the next four quarterly dividends by multiplying the previous four quarterly
20 dividends by the factor, $(1 + \text{the growth rate, } g)$.

21 Q 38 How do you estimate the growth component of the quarterly DCF model?

22 A 38 I use the analysts' estimates of future earnings per share ("EPS") growth
23 reported by I/B/E/S Thomson Reuters.

24 Q 39 What is I/B/E/S?

25 A 39 I/B/E/S is a firm (now owned by Thomson Reuters) that reports analysts'
26 EPS growth forecasts for a broad group of companies. The forecasts are
27 expressed in terms of a mean forecast and a standard deviation of
28 forecast for each firm. Investors use the mean forecast as a consensus
29 estimate of future firm performance.

30 Q 40 Why do you use the I/B/E/S growth estimates?

31 A 40 The I/B/E/S growth rates: (1) are widely circulated in the financial
32 community, (2) include the projections of multiple reputable financial

1 analysts who develop estimates of future EPS growth, (3) are reported on
2 a timely basis to investors, and (4) are widely used by institutional and
3 other investors.

4 Q 41 Why do you rely on analysts' projections of future EPS growth to estimate
5 the growth component of the DCF model rather than looking at past
6 historical growth rates?

7 A 41 I rely on analysts' projections of future EPS growth because: (1) the DCF
8 model assumes that a company's stock price is equal to the present value
9 of all expected *future* cash flows from investing in the stock; (2) stock
10 prices are determined by investors in the marketplace; and (3) I have
11 found that analysts' growth forecasts are the best proxy for investor
12 growth expectations.

13 Q 42 Does the DCF model require that analysts' growth forecasts be perfectly
14 accurate?

15 A 42 No. The DCF model recognizes that all growth forecasts necessarily
16 involve uncertainty. The DCF model only requires that the growth
17 forecasts used in the model are reasonable proxies for investors' growth
18 expectations.

19 Q 43 What price do you use in your DCF model?

20 A 43 I use a simple average of the monthly high and low stock prices for each
21 firm for the three-month period ending March 2011. These high and low
22 stock prices were obtained from I/B/E/S Thomson Reuters.

23 Q 44 Why do you use a three-month average stock price in applying the DCF
24 method?

25 A 44 I use a three-month average stock price in applying the DCF method
26 because stock prices fluctuate daily, while financial analysts' forecasts for
27 a given company are generally changed less frequently, often on a
28 quarterly basis. Thus, to match the stock price with an earnings forecast,
29 it is appropriate to average stock prices over a three-month period

30 Q 45 How do you use the DCF model to estimate the cost of equity on an
31 investment in your comparable risk companies?

1 A 45 I apply the DCF model to the groups of U.S. natural gas and electric
2 utilities shown in Exhibit 1 and Exhibit 2.

3 Q 46 How do you select your comparable groups of U.S. natural gas and
4 electric utilities?

5 A 46 I select the publicly-traded natural gas and electric utilities that: (1) paid
6 dividends during every quarter and did not decrease dividends during any
7 quarter of the past two years; (2) have at least three analysts included in
8 the I/B/E/S mean growth forecast; (3) are not in the process of being
9 acquired; (4) have a Value Line Safety Rank of 1, 2, or 3; and (5) have
10 investment grade S&P bond ratings.

11 Q 47 Why do you use U.S. utilities rather than Canadian utilities in your DCF
12 studies?

13 A 47 As noted above, the DCF model requires estimates of investors' growth
14 expectations, which are best measured from the average of analysts'
15 growth forecasts for each company. The difficulty with using Canadian
16 utilities is that there are very few, if any, analysts' growth forecasts
17 available for the Canadian utilities.

18 Q 48 Why do you eliminate companies that have either decreased or
19 eliminated their dividend during the past two years?

20 A 48 The DCF model requires the assumption that dividends will grow at a
21 constant positive rate into the indefinite future. If a company has
22 decreased its dividend in recent years, an assumption that the company's
23 dividend will grow at the same positive rate into the indefinite future is
24 questionable.

25 Q 49 Why do you eliminate companies that have fewer than three analysts'
26 estimates included in the I/B/E/S mean forecast?

27 A 49 The DCF model also requires a reliable estimate of a company's
28 expected future growth. For most companies, the I/B/E/S mean growth
29 forecast is the best available estimate of the growth term in the DCF
30 Model. However, the I/B/E/S estimate may be less reliable if the mean
31 estimate is based on the inputs of very few analysts. On the basis of my

1 professional judgment, I believe that at least three analysts' estimates are
2 a reasonable minimum number.

3 Q 50 Why do you eliminate companies that are being acquired in transactions
4 that are not yet completed?

5 A 50 A merger announcement generally increases the target company's stock
6 price. Analysts' growth forecasts for the target company, on the other
7 hand, are necessarily related to the company as it currently exists. The
8 use of a stock price that includes the growth-enhancing prospects of
9 potential mergers in conjunction with growth forecasts that do not include
10 the growth-enhancing prospects of potential mergers produces DCF
11 results that tend to distort a company's cost of equity.

12 Q 51 Please summarize the results of your application of the DCF model to
13 your comparable groups of utilities.

14 A 51 My application of the DCF model to my comparable group of natural gas
15 utilities produces a result of 10.3 percent, and to my comparable group of
16 electric utilities, 10.3 percent (see Exhibit 1 and Exhibit 2).

17 **B. Risk Premium Method**

18 Q 52 Please describe the risk premium method of estimating Union's cost of
19 equity.

20 A 52 The risk premium method is based on the principle that investors expect
21 to earn a return on an equity investment in Union that reflects a
22 "premium" over and above the return they expect to earn on an
23 investment in a portfolio of bonds. This equity risk premium compensates
24 equity investors for the additional risk they bear in making equity
25 investments versus bond investments.

26 Q 53 Does the risk premium approach specify what debt instrument should be
27 used to estimate the interest rate component in the methodology?

28 A 53 No. The risk premium approach can be implemented using virtually any
29 debt instrument. However, the risk premium approach does require that
30 the debt instrument used to estimate the risk premium be the same as the
31 debt instrument used to calculate the interest rate component of the risk
32 premium approach. For example, if the risk premium on equity is

1 calculated by comparing the returns on stocks and the returns on A-rated
2 utility bonds, then the interest rate on A-rated utility bonds must be used
3 to estimate the interest rate component of the risk premium approach.

4 Q 54 How do you measure the required risk premium on an equity investment
5 in Union?

6 A 54 I use two methods to estimate the required risk premium on an equity
7 investment in Union. The first is called the ex post risk premium method
8 and the second is called the ex ante risk premium method.

9 **1. Ex Post Risk Premium Method**

10 Q 55 Please describe your ex post risk premium method for estimating the
11 required risk premium on an equity investment in your comparable
12 utilities.

13 A 55 My ex post risk premium method estimates the required risk premium on
14 an equity investment in my comparable utilities from historical data on the
15 returns experienced by investors in Canadian utility stocks compared to
16 investors in long-term Canada bonds.

17 Q 56 How do you measure the return experienced by investors in Canadian
18 utility stocks?

19 A 56 I measure the return experienced by investors in Canadian utility stocks
20 from historical data on returns earned by investors in: (1) the S&P/TSX
21 utilities stock index; and (2) a basket of Canadian utility stocks created by
22 the BMO CM.

23 Q 57 What companies are currently included in these indices of Canadian utility
24 stock performance?

25 A 57 The companies included in the S&P/TSX utilities stock index are
26 Atco Ltd., Atlantic Power Corporation, Brookfield Renewable Power Fund,
27 Capital Power Income L.P., Canadian Utilities Limited, Emera
28 Incorporated, Fortis Inc., Just Energy Group Inc., Northland Power Inc.,
29 and TransAlta Corporation.

30 The BMO CM basket of utility and pipeline companies includes
31 Canadian Utilities Ltd., Emera Inc., Enbridge Inc., Fortis Inc., Pacific
32 Northern Gas, and TransCanada Corporation. The BMO CM basket also

1 includes return data for Westcoast Energy Inc. until December 2001 and
2 Terasen Inc. through July 2005.

3 Q 58 What time periods do your experienced Canadian utility stock return data
4 cover?

5 A 58 The S&P/TSX utilities stock return data cover the period 1956 through
6 2010, and the BMO CM stock return data cover the period 1983 through
7 2010.

8 Q 59 Why do you analyze investors' experienced returns over such long time
9 periods?

10 A 59 I analyze investors' experienced returns over long time periods because
11 experienced returns over short periods can deviate significantly from
12 expectations. However, I recognize that experienced returns over long
13 periods may also deviate from expected returns if the data in some
14 portion of the long time period are unreliable.

15 Q 60 Would your study provide different risk premium results if you had
16 included different time periods?

17 A 60 Yes. The risk premium results vary somewhat depending on the
18 historical time period chosen. My policy was to go back as far in history
19 as I could get reliable data. With regard to the S&P/TSX utilities index,
20 the data began in 1956, and for the BMO CM utility stock basket, the data
21 began in 1983.

22 Q 61 Why do you choose two sets of Canadian utilities stock return
23 performance data rather than simply relying on the S&P/TSX utilities
24 stock index data?

25 A 61 I choose two sets of Canadian utility stock return performance data
26 because each data set provides different information on Canadian utility
27 stock returns. The S&P/TSX utilities index is valuable because it provides
28 information on the returns experienced by investors in a portfolio of
29 Canadian utility stocks over a relatively long period of time. However,
30 seven of the ten companies included in the S&P/TSX utility index operate
31 mainly in the unregulated power generation and marketing business
32 segments of the utility industry. The BMO CM utility stock return

1 database is valuable because it provides information on the experienced
2 returns for a sample of Canadian companies that receive a significantly
3 higher percentage of revenues from traditional utility operations than the
4 companies in the S&P/TSX index. However, the time period covered is
5 not as long as the period covered by the S&P/TSX utility index.

6 Q 62 How are the experienced returns on an investment in each utility data set
7 calculated?

8 A 62 The experienced returns on an investment in each utility data set are
9 calculated from the historical record of stock prices and dividends for the
10 companies in the data set. From the historical record of stock prices and
11 dividends, the index sponsors construct an index of investors' wealth at
12 the end of each period, assuming a \$100 investment in the index at the
13 time the index was constructed. An annual rate of return is calculated
14 from the wealth index by dividing the wealth index at the end of each
15 period by the wealth index at the beginning of the period and subtracting
16 one [$r_t = (W_t \div W_{t-1}) - 1$].

17 Q 63 How do you measure the interest rate earned on long-term Canada
18 bonds in your experienced, or ex post, risk premium studies?

19 A 63 I use the interest rate data on long-term Canada bonds reported by the
20 Canadian Institute of Actuaries.

21 Q 64 What average risk premium results do you obtain from your analysis of
22 returns experienced by investors in Canadian utility stocks?

23 A 64 As shown in Table 1 below, I obtain an average experienced risk
24 premium equal to 6.5 percent (the annual data that produce these results
25 are shown in Exhibit 3 and Exhibit 4).

TABLE 1
EX POST RISK PREMIUM RESULTS

COMPARABLE GROUP	PERIOD OF STUDY	AVERAGE STOCK RETURN	AVERAGE BOND YIELD	RISK PREMIUM
S&P/TSX Utilities	1956 – 2010	12.09	7.41	4.7
BMO CM Utilities Stock Data Set	1983 – 2010	15.65	7.38	8.3
Average				6.5

Q 65 What conclusions do you draw from your ex post risk premium analyses about your comparable utilities' cost of equity?

A 65 My studies provide evidence that investors in these companies require an equity return equal to at least 6.5 percentage points above the interest rate on long-term Canada bonds. The Consensus Economics forecast interest rate on long-term Canada bonds for 2012 as of April 2011 is 4.21 percent. Adding a 6.5 percentage point risk premium to an expected yield of 4.21 percent on long-term Canada bonds and including a 50-basis allowance for flotation costs and financial flexibility produces an expected return on equity equal to 11.2 percent from my ex post risk premium studies.

2. Ex Ante Risk Premium Estimate

Q 66 Please describe your ex ante risk premium approach for measuring the required risk premium on an equity investment in Union.

A 66 My ex ante risk premium method is based on studies of the expected return on comparable groups of utilities in each month of my study period compared to the interest rate on long-term government bonds.

Q 67 How do you estimate the forward-looking required equity risk premium on an equity investment in utility stocks in each month of your study period.

A 67 My estimate of the required equity risk premium is based on studies of the discounted cash flow ("DCF") expected return on comparable groups of utilities in each month of my study period compared to the interest rate on long-term government bonds. Specifically, for each month in my study period, I calculate the risk premium using the equation,

$$RP_{COMP} = DCF_{COMP} - I_B$$

where:

RP_{COMP} = the required risk premium on an equity investment in the comparable utilities,

DCF_{COMP} = average DCF expected rate of return on a portfolio of comparable utilities; and

I_B = the yield to maturity on an investment in long-term U.S. Treasury bonds.

Q 68 What comparable utilities do you use in your forward-looking equity risk premium studies?

A 68 I use two sets of comparable U.S. utilities, a natural gas utilities company group and an electric utilities company group. For my natural gas company group, I select all the utilities in Standard & Poor's natural gas company group that: (1) paid dividends during every quarter and did not decrease dividends during any quarter of the past two years; (2) have at least three analysts included in the I/B/E/S mean growth forecast; (3) are not in the process of being acquired; (4) have a Value Line Safety Rank of 1, 2, or 3; and (5) have investment grade S&P bond ratings. For my electric group, I use the Moody's group of 24 electric companies because they are a widely-followed group of utilities, and the use of this constant group greatly simplifies the data collection task required to estimate the ex ante risk premium over the months of my study. Simplifying the data collection task is desirable because my forward-looking equity risk premium studies require that the DCF model be estimated for every company in every month of the study period.

Q 69 Why do you use U.S. utilities rather than Canadian utilities in your forward-looking, or ex ante, risk premium studies?

A 69 My ex ante risk premium studies rely on the DCF model to determine the expected risk premium on utility stocks. As noted above, the DCF model requires estimates of investors' growth expectations, which are best measured from the average of analysts' growth forecasts for each company. The difficulty with using Canadian utilities is that there are very

1 few, if any, analysts' growth forecasts available for each Canadian utility
2 over the time periods of my studies.

3 Q 70 How do you test whether your forward-looking required equity risk
4 premium estimates are sensitive to changes in interest rates?

5 A 70 To test whether my estimated monthly equity risk premiums are sensitive
6 to changes in interest rates, I perform a regression analysis of the
7 relationship between the forward-looking equity risk premium and the
8 yield to maturity on twenty-year U.S. Treasury bonds using the equation:

$$9 \qquad \qquad \qquad RP_{COMP} = a + (b \times I_B) + e$$

10 where:

11 RP_{COMP} = risk premium on comparable company group;

12 I_B = yield to maturity on long-term U.S. Treasury bonds;

13 e = a random residual; and

14 a, b = coefficients estimated by the regression procedure.

15 Q 71 What risk premium estimates do you obtain from your forward-looking risk
16 premium studies?

17 A 71 For my natural gas comparable group, I obtain a forward-looking risk
18 premium equal to 6.9 percent, and for my electric utility comparable
19 group, I obtain a forward-looking risk premium equal to approximately
20 6.8 percent.

21 Q 72 What cost of equity results do you obtain from your ex ante risk premium
22 studies?

23 A 72 As described above, in the ex ante risk premium approach, one must add
24 the expected interest rate on long-term government bonds to the
25 estimated risk premium to calculate the cost of equity. Since Union is a
26 Canadian utility, I estimate the expected yield on long-term government
27 bonds using the forecast interest rate on long-term Canada bonds at the

time of my studies, 4.21 percent. Adding this 4.21 percent interest rate to my 6.9 percent and 6.8 percent ex ante risk premium estimates, I obtain cost of equity estimates of 11.1 percent and 11.0 percent ($4.2 + 6.9 = 11.1$ and $4.2 + 6.8 = 11.0$). A more detailed description of my ex ante risk premium approach and results is described in Exhibit 5, Exhibit 6, and Appendix 2.

C. Capital Asset Pricing Model ("CAPM")

Q 73 What is the CAPM?

A 73 The CAPM is an equilibrium model of the security markets in which the expected or required return on a given security is equal to the risk-free rate of interest, plus the company equity "beta," times the market risk premium:

$$\text{Cost of equity} = \text{Risk-free rate} + \text{Equity beta} \times \text{Market risk premium}$$

The risk-free rate in this equation is the expected rate of return on a risk-free government security, the equity beta is a measure of the company's risk relative to the market as a whole, and the market risk premium is the premium investors require to invest in the market basket of all securities compared to the risk-free security.

Q 74 How do you use the CAPM to estimate the cost of equity for your proxy companies?

A 74 The CAPM requires an estimate of the risk-free rate, the company-specific risk factor or beta, and the expected return on the market portfolio. For my estimate of the risk-free rate, I use the 4.21 percent forecasted yield to maturity on long Canada bonds. For my estimate of the company-specific risk, or beta, I use the average Value Line beta of 0.83 for my proxy natural gas utilities. For my estimate of the expected risk premium on the market portfolio, I use the Ibbotson® SBBI® 6.7 percent risk premium on the market portfolio, which is measured from the difference between the arithmetic mean return on the S&P 500 and the income return on twenty-year Treasury bonds.

Q 75 Why do you recommend that the risk premium on the market portfolio be estimated using the arithmetic mean return on the S&P 500?

1 A 75 As explained in Ibbotson® SBBI®, the arithmetic mean return is the best
2 approach for calculating the return investors expect to receive in the
3 future:

4 The equity risk premium data presented in this book are
5 arithmetic average risk premia as opposed to geometric
6 average risk premia. The arithmetic average equity risk
7 premium can be demonstrated to be most appropriate when
8 discounting future cash flows. For use as the expected equity
9 risk premium in either the CAPM or the building block
10 approach, the arithmetic mean or the simple difference of the
11 arithmetic means of stock market returns and riskless rates is
12 the relevant number. This is because both the CAPM and the
13 building block approach are additive models, in which the cost
14 of capital is the sum of its parts. The geometric average is
15 more appropriate for reporting past performance, since it
16 represents the compound average return.²

17 Q 76 Why do you recommend that the risk premium on the market portfolio be
18 estimated using the income return on twenty-year Treasury bonds rather
19 than the total return on these bonds?

20 A 76 As discussed above, the CAPM requires an estimate of the risk-free rate
21 of interest. When Treasury bonds are issued, the income return on the
22 bond is risk free, but the total return, which includes both income and
23 capital gains or losses, is not. Thus, the income return should be used in
24 the CAPM because it is only the income return that is risk free.

25 Q 77 What CAPM result do you obtain when you estimate the expected return
26 on the market portfolio from the arithmetic mean difference between the
27 return on the market and the yield on twenty-year Treasury bonds?

28 A 77 I obtain a CAPM estimate of 10.3 percent based on a risk-free rate of
29 4.21 percent, a beta of 0.83, a market risk premium of 6.7 percent, and a
30 fifty basis point allowance for flotation costs and financial flexibility (see
31 Exhibit 7).

32 **D. Cost of Equity Conclusion**

33 Q 78 Based on your application of the DCF, risk premium, and CAPM methods
34 to your comparable risk companies, what is your conclusion regarding
35 your comparable risk companies' cost of equity?

2 Ibbotson® SBBI® 2011 Valuation Edition Yearbook, p. 56.

1 A 78 I conclude that my comparable utilities' cost of equity is in the range
 2 10.3 percent to 11.2 percent, with an average of 10.7 percent.

3 **TABLE 2**
 4 **SUMMARY OF COST OF EQUITY RESULTS**

METHOD	MODEL RESULT
Discounted Cash Flow	10.3
Ex Post Risk Premium	11.2
Ex Ante Risk Premium	11.1
CAPM	10.3
Average	10.7

5 **IV. Allowed ROEs and Equity Ratios for Comparable Risk Utilities**

6 Q 79 Do you have evidence on recent allowed rates of return on equity for U.S.
 7 utilities?

8 A 79 Yes. I have evidence on recent allowed rates of return on equity for U.S.
 9 natural gas and electric utilities from January 2009 through May 2011.
 10 Since January 2009, the average allowed ROE for natural gas utilities has
 11 been in the range 10.1 percent to 10.3 percent, and for electric utilities,
 12 10.3 percent to 10.5 percent (see Exhibit 8 and Exhibit 9).

13 Q 80 Why do you examine data on allowed rates of return on equity for U.S.
 14 utilities rather than Canadian utilities?

15 A 80 I examine data on allowed rates of return on equity for U.S. utilities rather
 16 than Canadian utilities because allowed rates of return on equity for U.S.
 17 utilities are based on cost of equity studies for utilities at the time of each
 18 case rather than on an ROE formula. Thus, recent allowed rates of return
 19 on equity for U.S. utilities are an independent test of the reasonableness
 20 of Union's requested ROE in this proceeding.

21 Q 81 Are allowed rates of return on equity the best measure of the cost of
 22 equity at each point in time?

23 A 81 No. Since the cost of equity is determined by investors in the
 24 marketplace, not by regulators, the cost of equity is best measured using
 25 market models such as the equity risk premium and the discounted cash
 26 flow model. However, as noted above, because allowed rates of return in
 27 non-formula jurisdictions are based on regulators' judgments regarding

the cost of equity and fair rate of return, they provide additional information on the reasonableness of Union's recommended ROE.

Q 82 You note that Union is recommending a common equity ratio equal to 40 percent. How do the approved equity ratios for U.S. utilities compare to Union's requested equity ratio?

A 82 The average approved equity ratio for U.S. natural gas utilities during the period January 2009 through May 2011 is in the range 48 percent to 52 percent, and for U.S. electric utilities, 48 percent (see Exhibit 8 and Exhibit 9). Thus, the average approved equity ratio for U.S. utilities is significantly higher than Union's requested 40 percent equity ratio in this proceeding.

Q 83 How does Union's requested equity ratio compare to the approved equity ratios for other Canadian gas and electric distribution utilities?

A 83 Union's requested equity ratio is approximately equal to the average approved equity ratio of Canadian gas and electric distribution utilities (see following table).

TABLE 3

COMPANY	DEEMED EQUITY RATIO
Terasen (Fortis B.C.)	40%
Pacific Northern Gas	40% - 45%
ATCO Electric Disco	39%
Enmax Disco	41%
Epcor Disco	41%
ATCO Gas	39%
Fortis Alberta	41%
Alta Gas	43%
Gaz Metro	38.5%
Gazifère	40%
Nova Scotia Power	40%
Heritage Gas Ltd.	45%
Enbridge Gas	36%
Union	36%

Q 84 How does Union's requested equity ratio compare to the market value equity ratios for your comparable groups of U.S. utilities at March 2011?

A 84 The composite market value equity ratio for my group of natural gas utilities at March 2011 is 63 percent, and for my group of electric utilities, 60 percent (see Exhibit 10).

1 Q 85 Why do you present evidence on market value equity ratios for U.S.
2 utilities as well as evidence on book value equity ratios?

3 A 85 I present evidence on market value equity ratios as well as book value
4 equity ratios because financial risk depends on the market value
5 percentages of debt and equity in a company's capital structure rather
6 than on the book value percentages of debt and equity in the company's
7 capital structure.

8 Q 86 What conclusions do you draw from your evidence that allowed ROEs
9 and equity ratios for comparable U.S. utilities are significantly higher than
10 the Board's formula-derived ROE and Union's requested equity ratio?

11 A 86 My evidence on allowed ROEs and equity ratios for U.S. utilities provides
12 further support for the conclusion that Union's recommended ROE and
13 equity ratio is reasonable.

14 **V. Summary and Recommendations**

15 Q 87 Please summarize your written evidence in this proceeding.

16 A 87 My written evidence may be summarized as follows:

- 17 1. I assess the reasonableness of Union's request to earn the Board's
18 formula ROE on a 40 percent equity ratio by examining evidence on the
19 required rate of return on equity (cost of equity) and capital structure for
20 several groups of comparable risk utilities.
- 21 2. The cost of equity for my comparable risk utilities falls in the range
22 10.3 percent to 11.2 percent, based on my application of the DCF, Ex
23 Post Risk Premium, Ex Ante Risk Premium, and CAPM cost of equity
24 methods.
- 25 3. Recent average allowed rates of return on equity for U.S. utilities are in
26 the range 10.1 percent to 10.5 percent, whereas the Board's formula
27 currently produces an ROE equal to 9.58 percent.
- 28 4. Recent average allowed equity ratios for U.S. utilities are in the range
29 48 percent to 52 percent, whereas Union is requesting an equity ratio
30 equal to 40 percent.
- 31 5. The average allowed equity ratio for Canadian natural gas and electric
32 distribution companies is approximately 40 percent.

1 6. Union's business risk is approximately equal to the average business
2 risk of my U.S. utility groups.

3 Q 88 What conclusion do you reach from this evidence?

4 A 88 I conclude that Union's request to earn the Board's formula ROE on an
5 equity ratio equal to 40 percent is reasonable, if not conservative.

6 Q 89 Does this conclude your written evidence?

7 A 89 Yes, it does.

EXHIBIT 1
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR NATURAL GAS UTILITIES

LINE NO.	COMPANY	D ₀	P ₀	GROWTH	COST OF EQUITY
1	AGL Resources	0.450	37.698	5.6%	11.1%
2	Atmos Energy	0.340	33.249	3.6%	8.2%
3	National Fuel Gas	0.345	69.627	5.3%	7.6%
4	NiSource Inc.	0.230	18.668	5.7%	11.4%
5	Northwest Nat. Gas	0.435	46.088	3.9%	8.0%
6	ONEOK Inc.	0.520	61.017	10.0%	13.7%
7	Piedmont Natural Gas	0.290	28.938	3.6%	7.9%
8	Questar	0.153	17.577	5.3%	10.1%
9	South Jersey Inds.	0.365	53.963	6.3%	9.3%
10	Market-weighted Average				10.3%
11	Average				9.7%

Notes:

- d₀ = Most recent quarterly dividend.
d₁, d₂, d₃, d₄ = Next four quarterly dividends, calculated by multiplying the last four quarterly dividends per *Value Line* by the factor (1 + g).
P₀ = Average of the monthly high and low stock prices during the three months ending March 2011 per Thomson Reuters.
FC = Flotation costs expressed as a percent of gross proceeds (five percent of stock price).
g = I/B/E/S forecast of future earnings growth March 2011.
k = Cost of equity using the quarterly version of the DCF model.

$$k = \frac{d_1(1+k)^{.75} + d_2(1+k)^{.50} + d_3(1+k)^{.25} + d_4}{P_0(1-FC)} + g$$

EXHIBIT 2
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR ELECTRIC UTILITIES

LINE NO.	COMPANY	D ₀	P ₀	GROWTH	COST OF EQUITY
1	ALLETE	0.445	37.555	5.0%	10.4%
2	Alliant Energy	0.425	38.227	9.3%	14.4%
3	Amer. Elec. Power	0.460	35.497	4.0%	9.6%
4	Avista Corp.	0.275	22.787	4.7%	9.8%
5	Consol. Edison	0.600	49.712	4.2%	9.7%
6	Dominion Resources	0.493	44.057	3.5%	8.2%
7	DPL Inc.	0.333	26.348	3.9%	9.3%
8	Duke Energy	0.245	17.898	4.7%	10.9%
9	Edison Int'l	0.320	36.917	5.0%	9.0%
10	Hawaiian Elec.	0.310	24.452	7.0%	13.0%
11	IDACORP Inc.	0.300	37.530	4.7%	8.3%
12	Integrus Energy	0.680	48.873	7.5%	14.1%
13	NextEra Energy	0.550	53.903	5.7%	10.1%
14	Northeast Utilities	0.275	33.258	8.0%	11.7%
15	OGE Energy	0.375	47.320	7.0%	10.6%
16	Pepco Holdings	0.270	18.513	7.0%	13.9%
17	PG&E Corp.	0.455	45.671	6.2%	10.8%
18	Pinnacle West Capital	0.525	41.898	6.4%	12.2%
19	Portland General	0.260	22.857	4.7%	9.8%
20	Public Serv. Enterprise	0.343	31.802	3.7%	8.5%
21	SCANA Corp.	0.485	40.713	4.7%	10.1%
22	Sempra Energy	0.480	52.362	5.6%	9.2%
23	Southern Co.	0.455	37.785	5.2%	10.8%
24	TECO Energy	0.205	18.167	6.1%	11.3%
25	UIL Holdings	0.432	30.173	3.1%	9.5%
26	Westar Energy	0.320	25.752	6.5%	12.2%
27	Wisconsin Energy	0.260	29.782	8.5%	11.9%
28	Xcel Energy Inc.	0.253	23.773	6.2%	11.1%
29	Market-weighted Average				10.3%
30	Average				10.7%

Notes:

- d_0 = Most recent quarterly dividend.
 d_1, d_2, d_3, d_4 = Next four quarterly dividends, calculated by multiplying the last four quarterly dividends per *Value Line* by the factor $(1 + g)$.
 P_0 = Average of the monthly high and low stock prices during the three months ending March 2011 per Thomson Reuters.
 FC = Flotation costs expressed as a percent of gross proceeds (five percent of stock price).
 g = I/B/E/S forecast of future earnings growth March 2011.
 k = Cost of equity using the quarterly version of the DCF model.

$$k = \frac{d_1(1+k)^{.75} + d_2(1+k)^{.50} + d_3(1+k)^{.25} + d_4}{P_0(1-FC)} + g$$

EXHIBIT 3
EXPERIENCED RISK PREMIUMS ON
S&P/TSX CANADIAN UTILITIES STOCK INDEX
1956—2010

LINE NO.	YEAR	S&P/TSX CANADIAN UTILITIES STOCK INDEX TOTAL RETURN	YIELD LONG-TERM CANADA BOND	RISK PREMIUM
1	1956	0.17	3.63	-3.45
2	1957	-3.43	4.11	-7.54
3	1958	9.81	4.15	5.66
4	1959	0.21	5.08	-4.86
5	1960	26.81	5.19	21.62
6	1961	19.17	5.05	14.12
7	1962	-0.72	5.11	-5.83
8	1963	6.19	5.09	1.10
9	1964	21.59	5.18	16.41
10	1965	4.23	5.21	-0.98
11	1966	-13.17	5.69	-18.86
12	1967	5.07	5.94	-0.87
13	1968	7.41	6.75	0.66
14	1969	-8.62	7.58	-16.20
15	1970	23.34	7.91	15.43
16	1971	4.29	6.95	-2.66
17	1972	-0.44	7.23	-7.68
18	1973	-4.14	7.56	-11.70
19	1974	14.38	8.90	5.48
20	1975	5.75	9.04	-3.28
21	1976	15.02	9.18	5.84
22	1977	19.00	8.70	10.30
23	1978	27.28	9.27	18.01
24	1979	12.61	10.21	2.40
25	1980	5.74	12.48	-6.74
26	1981	-0.55	15.22	-15.77
27	1982	35.90	14.26	21.65
28	1983	40.97	11.79	29.17
29	1984	24.31	12.75	11.56
30	1985	10.04	11.04	-1.00
31	1986	11.48	9.52	1.96
32	1987	1.07	9.95	-8.88
33	1988	5.63	10.22	-4.59
34	1989	22.07	9.92	12.15
35	1990	0.58	10.85	-10.28
36	1991	27.02	9.76	17.25
37	1992	-2.24	8.77	-11.00

LINE NO.	YEAR	S&P/TSX CANADIAN UTILITIES STOCK INDEX TOTAL RETURN	YIELD LONG- TERM CANADA BOND	RISK PREMIUM
38	1993	23.52	7.85	15.67
39	1994	-6.04	8.63	-14.68
40	1995	18.44	8.28	10.16
41	1996	32.68	7.50	25.18
42	1997	37.33	6.42	30.91
43	1998	36.55	5.47	31.09
44	1999	-27.14	5.69	-32.83
45	2000	50.06	5.89	44.17
46	2001	10.83	5.78	5.05
47	2002	6.33	5.66	0.67
48	2003	24.94	5.28	19.66
49	2004	9.42	5.08	4.34
50	2005	38.29	4.39	33.90
51	2006	7.01	4.30	2.71
52	2007	11.89	4.34	7.55
53	2008	-20.46	4.04	-24.50
54	2009	19.00	3.89	15.11
55	2010	18.39	3.66	14.73
56	Average	12.09	7.41	4.68

EXHIBIT 4
EXPERIENCED RISK PREMIUMS ON BMO CAPITAL MARKETS
UTILITIES STOCK DATA SET
1983—2010

LINE NO.	YEAR	BMO CAPITAL MARKETS UTILITIES & PIPELINE TOTAL RETURN	YIELD LONG-TERM CANADA BOND	RISK PREMIUM
1	1983	25.84	11.79	14.05
2	1984	6.89	12.75	-5.86
3	1985	20.09	11.04	9.04
4	1986	-1.22	9.52	-10.74
5	1987	11.98	9.95	2.03
6	1988	6.67	10.22	-3.56
7	1989	23.80	9.92	13.88
8	1990	10.00	10.85	-0.86
9	1991	12.92	9.76	3.16
10	1992	0.75	8.77	-8.02
11	1993	33.00	7.85	25.15
12	1994	-1.22	8.63	-9.85
13	1995	15.13	8.28	6.85
14	1996	31.66	7.50	24.15
15	1997	50.16	6.42	43.74
16	1998	4.12	5.47	-1.34
17	1999	-24.11	5.69	-29.80
18	2000	59.57	5.89	53.69
19	2001	16.05	5.78	10.27
20	2002	14.46	5.66	8.80
21	2003	28.74	5.28	23.46
22	2004	15.56	5.08	10.48
23	2005	33.36	4.39	28.97
24	2006	17.77	4.30	13.47
25	2007	4.90	4.34	0.57
26	2008	-4.21	4.04	-8.25
27	2009	20.24	3.89	16.35
28	2010	5.39	3.66	1.73
29	Average	15.65	7.38	8.27

EXHIBIT 5
COMPARISON OF DCF EXPECTED RETURN ON AN INVESTMENT IN
NATURAL GAS UTILITIES TO THE INTEREST RATE
ON LONG-TERM GOVERNMENT BONDS

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
1	Jun-98	0.1154	0.0580	0.0574
2	Jul-98	0.1186	0.0578	0.0608
3	Aug-98	0.1234	0.0566	0.0668
4	Sep-98	0.1273	0.0538	0.0735
5	Oct-98	0.1260	0.0530	0.0730
6	Nov-98	0.1211	0.0548	0.0663
7	Dec-98	0.1185	0.0536	0.0649
8	Jan-99	0.1195	0.0545	0.0650
9	Feb-99	0.1243	0.0566	0.0677
10	Mar-99	0.1257	0.0587	0.0670
11	Apr-99	0.1260	0.0582	0.0678
12	May-99	0.1221	0.0608	0.0613
13	Jun-99	0.1208	0.0636	0.0572
14	Jul-99	0.1222	0.0628	0.0594
15	Aug-99	0.1220	0.0643	0.0577
16	Sep-99	0.1226	0.0650	0.0576
17	Oct-99	0.1233	0.0666	0.0567
18	Nov-99	0.1240	0.0648	0.0592
19	Dec-99	0.1280	0.0669	0.0611
20	Jan-00	0.1301	0.0686	0.0615
21	Feb-00	0.1344	0.0654	0.0690
22	Mar-00	0.1344	0.0638	0.0706
23	Apr-00	0.1316	0.0618	0.0698
24	May-00	0.1292	0.0655	0.0637
25	Jun-00	0.1295	0.0628	0.0667
26	Jul-00	0.1317	0.0620	0.0697
27	Aug-00	0.1290	0.0602	0.0688
28	Sep-00	0.1257	0.0609	0.0648
29	Oct-00	0.1260	0.0604	0.0656
30	Nov-00	0.1251	0.0598	0.0653
31	Dec-00	0.1239	0.0564	0.0675
32	Jan-01	0.1261	0.0565	0.0696
33	Feb-01	0.1261	0.0562	0.0699
34	Mar-01	0.1275	0.0549	0.0726
35	Apr-01	0.1227	0.0578	0.0649
36	May-01	0.1302	0.0592	0.0710
37	Jun-01	0.1304	0.0582	0.0722
38	Jul-01	0.1338	0.0575	0.0763
39	Aug-01	0.1327	0.0558	0.0769
40	Sep-01	0.1268	0.0553	0.0715

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
41	Oct-01	0.1268	0.0534	0.0734
42	Nov-01	0.1268	0.0533	0.0735
43	Dec-01	0.1254	0.0576	0.0678
44	Jan-02	0.1236	0.0569	0.0667
45	Feb-02	0.1241	0.0561	0.0680
46	Mar-02	0.1189	0.0593	0.0596
47	Apr-02	0.1159	0.0585	0.0574
48	May-02	0.1162	0.0581	0.0581
49	Jun-02	0.1170	0.0565	0.0605
50	Jul-02	0.1242	0.0551	0.0691
51	Aug-02	0.1234	0.0519	0.0715
52	Sep-02	0.1260	0.0487	0.0773
53	Oct-02	0.1250	0.0500	0.0750
54	Nov-02	0.1221	0.0504	0.0717
55	Dec-02	0.1216	0.0501	0.0715
56	Jan-03	0.1219	0.0502	0.0717
57	Feb-03	0.1232	0.0487	0.0745
58	Mar-03	0.1195	0.0482	0.0713
59	Apr-03	0.1162	0.0491	0.0671
60	May-03	0.1126	0.0452	0.0674
61	Jun-03	0.1114	0.0434	0.0680
62	Jul-03	0.1127	0.0492	0.0635
63	Aug-03	0.1139	0.0539	0.0600
64	Sep-03	0.1127	0.0521	0.0606
65	Oct-03	0.1123	0.0521	0.0602
66	Nov-03	0.1089	0.0517	0.0572
67	Dec-03	0.1071	0.0511	0.0560
68	Jan-04	0.1059	0.0501	0.0558
69	Feb-04	0.1039	0.0494	0.0545
70	Mar-04	0.1037	0.0472	0.0565
71	Apr-04	0.1041	0.0516	0.0525
72	May-04	0.1045	0.0546	0.0499
73	Jun-04	0.1036	0.0545	0.0491
74	Jul-04	0.1011	0.0524	0.0487
75	Aug-04	0.1008	0.0507	0.0501
76	Sep-04	0.0976	0.0489	0.0487
77	Oct-04	0.0974	0.0485	0.0489
78	Nov-04	0.0962	0.0489	0.0473
79	Dec-04	0.0970	0.0488	0.0482
80	Jan-05	0.0990	0.0477	0.0513
81	Feb-05	0.0979	0.0461	0.0518
82	Mar-05	0.0979	0.0489	0.0490
83	Apr-05	0.0988	0.0475	0.0513
84	May-05	0.0981	0.0456	0.0525
85	Jun-05	0.0976	0.0435	0.0541
86	Jul-05	0.0966	0.0448	0.0518
87	Aug-05	0.0969	0.0453	0.0516

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
88	Sep-05	0.0980	0.0451	0.0529
89	Oct-05	0.0990	0.0474	0.0516
90	Nov-05	0.1049	0.0483	0.0566
91	Dec-05	0.1045	0.0473	0.0572
92	Jan-06	0.0982	0.0465	0.0517
93	Feb-06	0.1124	0.0473	0.0651
94	Mar-06	0.1127	0.0491	0.0636
95	Apr-06	0.1100	0.0522	0.0578
96	May-06	0.1056	0.0535	0.0521
97	Jun-06	0.1049	0.0529	0.0520
98	Jul-06	0.1087	0.0525	0.0562
99	Aug-06	0.1041	0.0508	0.0533
100	Sep-06	0.1053	0.0493	0.0560
101	Oct-06	0.1030	0.0494	0.0536
102	Nov-06	0.1033	0.0478	0.0555
103	Dec-06	0.1035	0.0478	0.0557
104	Jan-07	0.1013	0.0495	0.0518
105	Feb-07	0.1018	0.0493	0.0525
106	Mar-07	0.1018	0.0481	0.0537
107	Apr-07	0.1007	0.0495	0.0512
108	May-07	0.0967	0.0498	0.0469
109	Jun-07	0.0970	0.0529	0.0441
110	Jul-07	0.1006	0.0519	0.0487
111	Aug-07	0.1021	0.0500	0.0521
112	Sep-07	0.1014	0.0484	0.0530
113	Oct-07	0.1080	0.0483	0.0597
114	Nov-07	0.1083	0.0456	0.0627
115	Dec-07	0.1084	0.0457	0.0627
116	Jan-08	0.1113	0.0435	0.0678
117	Feb-08	0.1139	0.0449	0.0690
118	Mar-08	0.1147	0.0436	0.0711
119	Apr-08	0.1167	0.0444	0.0723
120	May-08	0.1069	0.0460	0.0609
121	Jun-08	0.1062	0.0474	0.0588
122	Jul-08	0.1086	0.0462	0.0624
123	Aug-08	0.1123	0.0453	0.0670
124	Sep-08	0.1130	0.0432	0.0698
125	Oct-08	0.1213	0.0445	0.0768
126	Nov-08	0.1221	0.0427	0.0794
127	Dec-08	0.1162	0.0318	0.0844
128	Jan-09	0.1131	0.0346	0.0785
129	Feb-09	0.1155	0.0383	0.0772
130	Mar-09	0.1198	0.0378	0.0820
131	Apr-09	0.1146	0.0384	0.0762
132	May-09	0.1225	0.0422	0.0803
133	Jun-09	0.1208	0.0451	0.0757
134	Jul-09	0.1145	0.0438	0.0707

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
135	Aug-09	0.1109	0.0433	0.0676
136	Sep-09	0.1109	0.0414	0.0695
137	Oct-09	0.1146	0.0416	0.0730
138	Nov-09	0.1148	0.0424	0.0724
139	Dec-09	0.1123	0.0440	0.0683
140	Jan-10	0.1198	0.0450	0.0748
141	Feb-10	0.1167	0.0448	0.0719
142	Mar-10	0.1074	0.0449	0.0625
143	Apr-10	0.0934	0.0453	0.0481
144	May-10	0.0970	0.0411	0.0559
145	Jun-10	0.0953	0.0395	0.0558
146	Jul-10	0.1050	0.0380	0.0670
147	Aug-10	0.1038	0.0352	0.0686
148	Sep-10	0.1034	0.0347	0.0687
149	Oct-10	0.1050	0.0352	0.0698
150	Nov-10	0.1041	0.0382	0.0659
151	Dec-10	0.1029	0.0417	0.0612
152	Jan-11	0.1019	0.0428	0.0591
153	Feb-11	0.1004	0.0442	0.0562
154	Mar-11	0.1014	0.0427	0.0587

Notes: Government bond yield information from the Federal Reserve. DCF results are calculated using a quarterly DCF model as follows:

- d_0 = Latest quarterly dividend per Value Line
 P_0 = Average of the monthly high and low stock prices for each month per Thomson Reuters.
 FC = Flotation costs expressed as a percent of gross proceeds.
 g = I/B/E/S forecast of future earnings growth for each month
 k = Cost of equity using the quarterly version of the DCF model.

$$k = \left[\frac{d_0(1+g)^{\frac{1}{4}}}{P_0(1-FC)} + (1+g)^{\frac{1}{4}} \right]^4 - 1$$

EXHIBIT 6
COMPARISON OF DCF EXPECTED RETURN ON AN INVESTMENT IN
ELECTRIC UTILITIES TO THE INTEREST RATE
ON LONG-TERM GOVERNMENT BONDS

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
1	Sep-99	0.1168	0.0650	0.052
2	Oct-99	0.1176	0.0666	0.051
3	Nov-99	0.1207	0.0648	0.056
4	Dec-99	0.1257	0.0669	0.059
5	Jan-00	0.1248	0.0686	0.056
6	Feb-00	0.1293	0.0654	0.064
7	Mar-00	0.1334	0.0638	0.070
8	Apr-00	0.1256	0.0618	0.064
9	May-00	0.1241	0.0655	0.059
10	Jun-00	0.1265	0.0628	0.064
11	Jul-00	0.1275	0.0620	0.066
12	Aug-00	0.1246	0.0602	0.064
13	Sep-00	0.1179	0.0609	0.057
14	Oct-00	0.1181	0.0604	0.058
15	Nov-00	0.1186	0.0598	0.059
16	Dec-00	0.1168	0.0564	0.060
17	Jan-01	0.1204	0.0565	0.064
18	Feb-01	0.1209	0.0562	0.065
19	Mar-01	0.1214	0.0549	0.066
20	Apr-01	0.1276	0.0578	0.070
21	May-01	0.1303	0.0592	0.071
22	Jun-01	0.1308	0.0582	0.073
23	Jul-01	0.1323	0.0575	0.075
24	Aug-01	0.1329	0.0558	0.077
25	Sep-01	0.1355	0.0553	0.080
26	Oct-01	0.1333	0.0534	0.080
27	Nov-01	0.1337	0.0533	0.080
28	Dec-01	0.1334	0.0576	0.076
29	Jan-02	0.1314	0.0569	0.074
30	Feb-02	0.1326	0.0561	0.076
31	Mar-02	0.1286	0.0593	0.069
32	Apr-02	0.1249	0.0585	0.066
33	May-02	0.1258	0.0581	0.068
34	Jun-02	0.1256	0.0565	0.069
35	Jul-02	0.1321	0.0551	0.077
36	Aug-02	0.1268	0.0519	0.075
37	Sep-02	0.1287	0.0487	0.080
38	Oct-02	0.1291	0.0500	0.079

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
39	Nov-02	0.1237	0.0504	0.073
40	Dec-02	0.1207	0.0501	0.071
41	Jan-03	0.1171	0.0502	0.067
42	Feb-03	0.1208	0.0487	0.072
43	Mar-03	0.1170	0.0482	0.069
44	Apr-03	0.1129	0.0491	0.064
45	May-03	0.1071	0.0452	0.062
46	Jun-03	0.1026	0.0434	0.059
47	Jul-03	0.1033	0.0492	0.054
48	Aug-03	0.1034	0.0539	0.050
49	Sep-03	0.1004	0.0521	0.048
50	Oct-03	0.0988	0.0521	0.047
51	Nov-03	0.0977	0.0517	0.046
52	Dec-03	0.0948	0.0511	0.044
53	Jan-04	0.0922	0.0501	0.042
54	Feb-04	0.0918	0.0494	0.042
55	Mar-04	0.0915	0.0472	0.044
56	Apr-04	0.0926	0.0516	0.041
57	May-04	0.0965	0.0546	0.042
58	Jun-04	0.0965	0.0545	0.042
59	Jul-04	0.0958	0.0524	0.043
60	Aug-04	0.0962	0.0507	0.046
61	Sep-04	0.0955	0.0489	0.047
62	Oct-04	0.0952	0.0485	0.047
63	Nov-04	0.0910	0.0489	0.042
64	Dec-04	0.0930	0.0488	0.044
65	Jan-05	0.0932	0.0477	0.046
66	Feb-05	0.0929	0.0461	0.047
67	Mar-05	0.0924	0.0489	0.044
68	Apr-05	0.0926	0.0475	0.045
69	May-05	0.0921	0.0456	0.046
70	Jun-05	0.0926	0.0435	0.049
71	Jul-05	0.0912	0.0448	0.046
72	Aug-05	0.0922	0.0453	0.047
73	Sep-05	0.0949	0.0451	0.050
74	Oct-05	0.0961	0.0474	0.049
75	Nov-05	0.1005	0.0483	0.052
76	Dec-05	0.1011	0.0473	0.054
77	Jan-06	0.1015	0.0465	0.055
78	Feb-06	0.1125	0.0473	0.065
79	Mar-06	0.1111	0.0491	0.062
80	Apr-06	0.1122	0.0522	0.060
81	May-06	0.1118	0.0535	0.058
82	Jun-06	0.1157	0.0529	0.063

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
83	Jul-06	0.1151	0.0525	0.063
84	Aug-06	0.1138	0.0508	0.063
85	Sep-06	0.1164	0.0493	0.067
86	Oct-06	0.1154	0.0494	0.066
87	Nov-06	0.1158	0.0478	0.068
88	Dec-06	0.1145	0.0478	0.067
89	Jan-07	0.1136	0.0495	0.064
90	Feb-07	0.1110	0.0493	0.062
91	Mar-07	0.1120	0.0481	0.064
92	Apr-07	0.1074	0.0495	0.058
93	May-07	0.1108	0.0498	0.061
94	Jun-07	0.1169	0.0529	0.064
95	Jul-07	0.1179	0.0519	0.066
96	Aug-07	0.1169	0.0500	0.067
97	Sep-07	0.1135	0.0484	0.065
98	Oct-07	0.1129	0.0483	0.065
99	Nov-07	0.1108	0.0456	0.065
100	Dec-07	0.1129	0.0457	0.067
101	Jan-08	0.1229	0.0435	0.079
102	Feb-08	0.1143	0.0449	0.069
103	Mar-08	0.1178	0.0436	0.074
104	Apr-08	0.1137	0.0444	0.069
105	May-08	0.1142	0.0460	0.068
106	Jun-08	0.1123	0.0474	0.065
107	Jul-08	0.1172	0.0462	0.071
108	Aug-08	0.1184	0.0453	0.073
109	Sep-08	0.1128	0.0432	0.070
110	Oct-08	0.1219	0.0445	0.077
111	Nov-08	0.1247	0.0427	0.082
112	Dec-08	0.1246	0.0318	0.093
113	Jan-09	0.1225	0.0346	0.088
114	Feb-09	0.1254	0.0383	0.087
115	Mar-09	0.1288	0.0378	0.091
116	Apr-09	0.1261	0.0384	0.088
117	May-09	0.1164	0.0422	0.074
118	Jun-09	0.1143	0.0451	0.069
119	Jul-09	0.1140	0.0438	0.070
120	Aug-09	0.1078	0.0433	0.065
121	Sep-09	0.1076	0.0414	0.066
122	Oct-09	0.1076	0.0416	0.066
123	Nov-09	0.1100	0.0424	0.068
124	Dec-09	0.1034	0.0440	0.059
125	Jan-10	0.1043	0.0450	0.059
126	Feb-10	0.1050	0.0448	0.060

LINE NO.	DATE	DCF	BOND YIELD	RISK PREMIUM
127	Mar-10	0.1035	0.0449	0.059
128	Apr-10	0.1083	0.0453	0.063
129	May-10	0.1056	0.0411	0.065
130	Jun-10	0.1065	0.0395	0.067
131	Jul-10	0.1042	0.0380	0.066
132	Aug-10	0.1020	0.0352	0.067
133	Sep-10	0.1023	0.0347	0.068
134	Oct-10	0.1011	0.0352	0.066
135	Nov-10	0.1015	0.0382	0.063
136	Dec-10	0.1018	0.0417	0.060
137	Jan-11	0.1006	0.0428	0.058
138	Feb-11	0.1004	0.0442	0.056
139	Mar-11	0.0990	0.0427	0.056

Notes: See written evidence above and Appendix 2 for a description of the ex ante methodology and data employed. Government bond yield information from the Federal Reserve. DCF results are calculated using a quarterly DCF model as follows:

- d_0 = Latest quarterly dividend per Value Line
 P_0 = Average of the monthly high and low stock prices for each month per Thomson Reuters.
 FC = Flotation costs expressed as a percent of gross proceeds (five percent).
 g = I/B/E/S forecast of future earnings growth for each month.
 k = Cost of equity using the quarterly version of the DCF model.

$$k = \left[\frac{d_0(1+g)^{\frac{1}{4}}}{P_0(1-FC)} + (1+g)^{\frac{1}{4}} \right]^4 - 1$$

EXHIBIT 7
CALCULATION OF CAPITAL ASSET PRICING MODEL COST OF EQUITY
USING IBBOTSON[®] SBBI[®] 6.7 PERCENT RISK PREMIUM

LINE NO.			
1	Risk-free Rate	4.21%	Long Canada Bond Forecast
2	Beta	0.83	Average LDC Beta
3	Risk Premium	6.70%	Long-horizon SBBI [®] risk premium
4	Beta x Risk Premium	5.54%	
5	Flotation cost	0.50%	
6	Cost of Equity	10.3%	

Notes:

Beta is the Value Line beta for the comparable companies from Value Line Investment Analyzer.
 SBBI[®] risk premium from *Ibbotson[®] SBBI[®] 2011[®] Valuation Edition Yearbook*.

EXHIBIT 7 (continued)
COMPARABLE COMPANY VALUE LINE BETAS

LINE NO.	COMPANY	BETA	MARKET CAP \$ (MIL)
1	AGL Resources	0.75	3,139
2	Atmos Energy	0.65	3,123
3	National Fuel Gas	0.95	6,209
4	NiSource Inc.	0.85	5,413
5	Northwest Nat. Gas	0.60	1,234
6	ONEOK Inc.	0.95	7,229
7	Piedmont Natural Gas	0.65	2,218
8	South Jersey Inds.	0.65	1,699
9	Questar	NA	
10	Market-weighted Average	0.83	

Betas from The Value Line Investment Analyzer March 2011; market capitalization Thomson Reuters

EXHIBIT 8
ALLOWED RETURNS ON EQUITY AND EQUITY RATIOS FOR
U.S. NATURAL GAS UTILITIES
2009, 2010, MAY 2011^[3]

STATE	COMPANY	CASE NO.	ORDER DATE	RETURN ON EQUITY (%)	COMMON EQUITY /TOTAL CAPITAL (%)
Michigan	Michigan Gas Utilities Corp	C-U-15549	13-Jan-09	10.45	46.49
Massachusetts	New England Gas Company	DPU 08-35	2-Feb-09	10.05	34.19
Tennessee	Atmos Energy Corp.	D-08-00197	9-Mar-09	10.30	48.12
Illinois	Northern Illinois Gas Co.	D-08-0363	25-Mar-09	10.17	51.07
Louisiana	Entergy New Orleans Inc.	D-UD-08-03 (gas)	2-Apr-09	10.75	NA
Florida	Peoples Gas System	D-080318-GU	5-May-09	10.75	48.51
New York	Niagara Mohawk Power Corp.	C-08-G-0609	15-May-09	10.20	43.70
Florida	Florida Public Utilities Co.	D-080366-GU	27-May-09	10.85	42.17
New Hampshire	EnergyNorth Natural Gas Inc.	D-DG-08-009	29-May-09	9.54	50.00
Iowa	Black Hills Iowa Gas Utility	D-RPU-08-3	3-Jun-09	10.10	51.38
New York	Central Hudson Gas & Electric	C-08-G-0888	22-Jun-09	10.00	47.00
Minnesota	Minnesota Energy Resources	D-G-007,011/GR-08-835	29-Jun-09	10.21	48.77
Connecticut	CT Natural Gas Corp.	D-08-12-06	30-Jun-09	9.31	52.52
Connecticut	Southern Connecticut Gas Co.	D-08-12-07	17-Jul-09	9.26	52.00
Idaho	Avista Corp.	C-AVU-G-09-01	17-Jul-09	10.50	50.00
New York	Orange & Rockland Utlts Inc.	C-08-G-1398	16-Oct-09	10.40	48.00
Oregon	Avista Corp.	D-UG-186	26-Oct-09	10.10	50.00
Nevada	Southwest Gas Corp.	D-09-04003 (Southern)	28-Oct-09	10.15	47.09
Nevada	Southwest Gas Corp.	D-09-04003 (Northern)	28-Oct-09	10.15	47.09
Massachusetts	Columbia Gas of Massachusetts	DPU 09-30	30-Oct-09	9.95	53.57
West Virginia	Hope Gas Inc	C-08-1783-G-42T	20-Nov-09	9.45	42.34
Oklahoma	ONEOK Inc.	Ca-PUD200900110	14-Dec-09	10.50	55.30
Michigan	Michigan Gas Utilities Corp	C-U-15990	16-Dec-09	10.75	47.27
New Jersey	Pivotal Utility Holdings Inc.	D-GR-09030195	17-Dec-09	10.30	47.89
Wisconsin	Wisconsin Electric Power Co.	D-5-UR-104 (WEP-GAS)	18-Dec-09	10.40	53.02
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-117 (gas)	18-Dec-09	10.40	50.38
Wisconsin	Wisconsin Gas LLC	D-5-UR-104 (WG)	18-Dec-09	10.50	46.62
Washington	Avista Corp.	D-UG-090135	22-Dec-09	10.20	46.50
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-116 (gas)	22-Dec-09	10.40	55.34
Kentucky	Duke Energy Kentucky Inc.	C-2009-00202	29-Dec-09	10.38	49.90
Minnesota	CenterPoint Energy Resources	D-G-008/GR-08-1075	11-Jan-10	10.24	52.55
Illinois	Peoples Gas Light & Coke Co.	D-09-0167	21-Jan-10	10.23	56.00
Illinois	North Shore Gas Co.	D-09-0166	21-Jan-10	10.33	56.00
Texas	Atmos Energy Corp.	D-GUD 9869	26-Jan-10	10.40	48.91
Missouri	Southern Union Co.	C-GR-2009-0355	10-Feb-10	10.00	38.66
Texas	CenterPoint Energy Resources	D-GUD 9902	23-Feb-10	10.50	55.60
Nebraska	SourceGas Distribution LLC	D-NG-0060	9-Mar-10	9.60	49.96

^[3] SNL Financial, May 27, 2011

STATE	COMPANY	CASE NO.	ORDER DATE	RETURN ON EQUITY (%)	COMMON EQUITY /TOTAL CAPITAL (%)
Illinois	MidAmerican Energy Co.	D-09-0312	24-Mar-10	10.13	47.08
Georgia	Atmos Energy Corp.	D-30442	31-Mar-10	10.70	47.70
Arizona	UNS Gas Inc.	D-G-04204A-08-0571	1-Apr-10	9.50	49.90
Washington	Puget Sound Energy Inc.	D-UG-090705	2-Apr-10	10.10	46.00
Utah	Questar Gas Co.	D-09-057-16	8-Apr-10	10.35	52.91
Illinois	Ameren Illinois	D-09-0310 (CIPS)	29-Apr-10	9.19	48.67
Illinois	Ameren Illinois	D-09-0309 (CILCO)	29-Apr-10	9.40	43.61
Illinois	Ameren Illinois	D-09-0311 (IP)	29-Apr-10	9.40	43.55
Michigan	Consumers Energy Co.	C-U-15986	17-May-10	10.55	40.78
Tennessee	Chattanooga Gas Company	D-09-00183	24-May-10	10.05	46.06
Michigan	Michigan Consolidated Gas Co.	C-U-15985	3-Jun-10	11.00	38.78
New York	Central Hudson Gas & Electric	C-09-G-0589	16-Jun-10	10.00	48.00
New Jersey	Public Service Electric Gas	D-GR09050422 (G)	18-Jun-10	10.30	51.20
Nebraska	Black Hills Nebraska Gas	D-NG-0061	17-Aug-10	10.10	52.00
New York	Consolidated Edison Co. of NY	C-09-G-0795	16-Sep-10	9.60	48.00
New York	Consolidated Edison Co. of NY	C-09-S-0794	16-Sep-10	9.60	48.00
New York	NY State Electric & Gas Corp.	C-09-G-0716	16-Sep-10	10.00	48.00
New York	Rochester Gas & Electric Corp.	C-09-G-0718	16-Sep-10	10.00	48.00
New Jersey	South Jersey Gas Co.	D-GR-10010035	16-Sep-10	10.30	51.20
Kentucky	Delta Natural Gas Co.	C-2010-00116	21-Oct-10	10.40	44.49
Massachusetts	Boston Gas Co.	D.P.U. 10-55 (BG)	2-Nov-10	9.75	50.00
Massachusetts	Colonial Gas Co.	D.P.U. 10-55 (CG)	2-Nov-10	9.75	50.00
Georgia	Atlanta Gas Light Co.	D-31647	3-Nov-10	10.75	51.00
Indiana	Northern IN Public Svc Co.	Ca-43894	4-Nov-10	NA	46.29
Washington	Avista Corp.	D-UG-100468	19-Nov-10	10.20	46.50
Colorado	SourceGas Distribution LLC	D-10AL-455G	1-Dec-10	10.00	50.48
Maryland	Baltimore Gas and Electric Co.	C-9230 (gas)	6-Dec-10	9.56	51.93
Minnesota	Northern States Power Co. – MN	D-G-002/GR-09-1153	6-Dec-10	10.09	52.46
Montana	NorthWestern Energy Division	D-D2009.9.129 (gas)	9-Dec-10	10.25	48.00
Texas	Texas Gas Service Co.	D-GUD 9988, 9992	14-Dec-10	10.33	59.24
Virginia	Columbia Gas of Virginia Inc	C-PUE-2010-00017	17-Dec-10	10.10	42.70
Nevada	Sierra Pacific Power Co.	D-10-06002	20-Dec-10	10.10	44.11
Wyoming	SourceGas Distribution LLC	D-30022-148-GR-10	23-Dec-10	9.92	50.34
Michigan	SEMCO Energy Inc.	C-U-16169	6-Jan-11	10.35	NA
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-117 (gas)	12-Jan-11	10.30	58.06
Wisconsin	Wisconsin Public Service Corp	D-6690-UR-120 (gas)	13-Jan-11	10.30	51.65
Oregon	Avista Corp.	D-UG 201	10-Mar-11	10.10	50.00
Massachusetts	New England Gas Company	DPU 10-114	31-Mar-11	9.45	50.17
Texas	CenterPoint Energy Resources	D-GUD-10038	18-Apr-11	10.05	55.44
California	Pacific Gas and Electric Co.	AP-09-12-020 (gas)	13-May-11	11.35	52.00
Michigan	Consumers Energy Co.	C-U-16418	26-May-11	10.50	NA
Average ROE, % Equity 2009				10.22	48.49
Average ROE, % Equity 2010				10.07	48.62
Average ROE, % Equity May 2011				10.30	52.89

EXHIBIT 9
ALLOWED RETURNS ON EQUITY AND EQUITY RATIOS FOR
U.S. ELECTRIC UTILITIES
2009, 2010, MAY 2011^[4]

STATE	COMPANY	CASE NO.	ORDER DATE	RETURN ON EQUITY (%)	COMMON EQUITY /TOTAL CAPITAL (%)
Oklahoma	Public Service Co. of OK	Ca-PUD-200800144	14-Jan-09	10.50	44.10
Virginia	Appalachian Power Co.	C-PUE-2009-00039	14-Jan-09	10.60	41.53
Ohio	Cleveland Elec Illuminating Co	C-07-0551-EL-AIR (CEI)	21-Jan-09	10.50	49.00
Ohio	Ohio Edison Co.	C-07-0551-EL-AIR (OE)	21-Jan-09	10.50	49.00
Ohio	Toledo Edison Co.	C-07-0551-EL-AIR (TE)	21-Jan-09	10.50	49.00
Missouri	Union Electric Co.	C-ER-2008-0318	27-Jan-09	10.76	52.01
Idaho	Idaho Power Co.	C-IPC-E-08-10	30-Jan-09	10.50	49.27
Connecticut	United Illuminating Co.	D-08-07-04	4-Feb-09	8.75	50.00
Indiana	Indiana Michigan Power Co.	Ca-43306	4-Mar-09	10.50	45.80
California	Southern California Edison Co.	Ap-07-11-011	12-Mar-09	11.50	48.00
Louisiana	Entergy New Orleans Inc.	D-UD-08-03 (elec.)	2-Apr-09	11.10	NA
Utah	PacifiCorp	D-08-035-38	21-Apr-09	10.61	51.00
New York	Consolidated Edison Co. of NY	C-08-E-0539	24-Apr-09	10.00	48.00
Florida	Tampa Electric Co.	D-080317-EI	30-Apr-09	11.25	47.49
Minnesota	ALLETE (Minnesota Power)	D-E-015/GR-08-415	4-May-09	10.74	54.79
Arkansas	Oklahoma Gas and Electric Co.	D-08-103-U	20-May-09	10.25	36.04
New Mexico	Public Service Co. of NM	C-08-00273-UT	28-May-09	10.50	50.47
Idaho	Idaho Power Co.	C-IPC-E-09-07	29-May-09	10.50	49.27
New York	Central Hudson Gas & Electric	C-08-E-0887	22-Jun-09	10.00	47.00
Nevada	Nevada Power Co.	D-08-12002	24-Jun-09	10.80	44.15
Ohio	Duke Energy Ohio Inc.	C-08-0709-EL-AIR	8-Jul-09	10.63	51.59
Idaho	Avista Corp.	C-AVU-E-09-01	17-Jul-09	10.50	50.00
Texas	Oncor Electric Delivery Co.	D-35717	31-Aug-09	10.25	40.00
Louisiana	Cleco Power LLC	D-U-30689	14-Oct-09	10.70	51.00
Minnesota	Northern States Power Co. - MN	D-E-002/GR-08-1065	23-Oct-09	10.88	52.47
Michigan	Consumers Energy Co.	C-U-15645	2-Nov-09	10.70	40.51
California	Sierra Pacific Power Co.	AP-08-08-004	3-Nov-09	10.70	43.71
Arkansas	Southwestern Electric Power Co	D-09-008-U	24-Nov-09	10.25	33.99
North Dakota	Otter Tail Power Co.	C-PU-08-862	25-Nov-09	10.75	53.30
Massachusetts	Massachusetts Electric Co.	DPU 09-39	30-Nov-09	10.35	49.99
Colorado	Public Service Co. of CO	D-09AL-299E	3-Dec-09	10.50	58.56
North Carolina	Duke Energy Carolinas LLC	D-E-7, Sub 909	7-Dec-09	10.70	52.50
Michigan	Upper Peninsula Power Co.	C-U-15988	16-Dec-09	10.90	49.52
Arizona	Arizona Public Service Co.	D-E-01345A-08-0172	16-Dec-09	11.00	53.79
Wisconsin	Wisconsin Electric Power Co.	D-5-UR-104 (WEP-EL)	18-Dec-09	10.40	53.02
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-117 (elec)	18-Dec-09	10.40	50.38
Washington	Avista Corp.	D-UE-090134	22-Dec-09	10.20	46.50

^[4] SNL Financial, May 27, 2011

STATE	COMPANY	CASE NO.	ORDER DATE	RETURN ON EQUITY (%)	COMMON EQUITY /TOTAL CAPITAL (%)
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-116 (elec)	22-Dec-09	10.40	55.34
Wisconsin	Northern States Power Co - WI	D-4220-UR-116 (elec)	22-Dec-09	10.40	52.30
Maryland	Delmarva Power & Light Co.	C-9192	30-Dec-09	10.00	49.87
Iowa	Interstate Power & Light Co.	D-RPU-2009-0002	4-Jan-10	10.80	49.52
Michigan	Detroit Edison Co.	C-U-15768	11-Jan-10	11.00	39.48
Oregon	PacifiCorp	D-UE-210	26-Jan-10	10.13	51.00
Kansas	Kansas Gas and Electric Co.	D-09-WSEE-925-RTS (KG&E)	27-Jan-10	10.40	50.13
Kansas	Westar Energy Inc.	D-09-WSEE-925-RTS (WR)	27-Jan-10	10.40	50.13
South Carolina	Duke Energy Carolinas LLC	D-2009-226-E	27-Jan-10	10.70	53.00
Rhode Island	Narragansett Electric Co.	D-4065	9-Feb-10	9.80	42.75
Utah	PacifiCorp	D-09-035-23	18-Feb-10	10.60	51.00
Oregon	Idaho Power Co.	D-UE-213	24-Feb-10	10.18	49.80
District of Columbia	Potomac Electric Power Co.	F.C. 1076	2-Mar-10	9.63	46.18
Virginia	Kentucky Utilities Co.	C-PUE-2009-00029	4-Mar-10	10.50	53.62
Florida	Florida Power Corp.	D-090079-EI	5-Mar-10	10.50	46.74
Virginia	Virginia Electric & Power Co.	C-PUE-2009-00019	11-Mar-10	11.90	NA
Virginia	Virginia Electric & Power Co.	C-PUE-2009-00011	11-Mar-10	12.30	47.71
Virginia	Virginia Electric & Power Co.	C-PUE-2009-00017	11-Mar-10	12.30	47.41
Florida	Florida Power & Light Co.	D-080677-EI	17-Mar-10	10.00	47.00
New York	Consolidated Edison Co. of NY	C-09-E-0428	25-Mar-10	10.15	48.00
Washington	Puget Sound Energy Inc.	D-UE-090704	2-Apr-10	10.10	46.00
Wyoming	MDU Resources Group Inc.	D-20004-81-ER-09	27-Apr-10	10.00	49.77
Illinois	Ameren Illinois	D-09-0306 (CILCO)	29-Apr-10	9.90	43.61
Illinois	Ameren Illinois	D-09-0307 (CIPS)	29-Apr-10	10.06	48.67
Illinois	Ameren Illinois	D-09-0308 (IP)	29-Apr-10	10.26	43.55
New Jersey	Atlantic City Electric Co.	D-ER-09080664	12-May-10	10.30	49.10
New Jersey	Rockland Electric Company	D-ER-09080668	12-May-10	10.30	49.85
Missouri	Union Electric Co.	C-ER-2010-0036	28-May-10	10.10	51.26
Arkansas	Entergy Arkansas Inc.	D-09-084-U	28-May-10	10.20	29.32
New Jersey	Public Service Electric Gas	D-GR09050422 (EL)	7-Jun-10	10.30	51.20
New York	Central Hudson Gas & Electric	C-09-E-0588	16-Jun-10	10.00	48.00
New Hampshire	Public Service Co. of NH	D-DE-09-035	28-Jun-10	9.67	52.40
Kentucky	Kentucky Power Co.	C-2009-00459	28-Jun-10	10.50	NA
Connecticut	Connecticut Light & Power Co.	D-09-12-05	30-Jun-10	9.40	49.20
Michigan	Wisconsin Electric Power Co.	C-U-15981	1-Jul-10	10.25	47.61
Virginia	Appalachian Power Co.	C-PUE-2009-00030	15-Jul-10	10.53	41.53
South Carolina	South Carolina Electric & Gas	D-2009-489-E	15-Jul-10	10.70	52.96
Hawaii	Maui Electric Company Ltd	D-2006-0387	30-Jul-10	10.70	54.89
Colorado	Black Hills Colorado Electric	D-10AL-008E	4-Aug-10	10.50	52.00
Maryland	Potomac Electric Power Co.	C-9217	6-Aug-10	9.83	48.87
Indiana	Northern IN Public Svc Co.	Ca-43526	25-Aug-10	9.90	49.95
Hawaii	Hawaiian Electric Co.	D-2006-0386	14-Sep-10	10.70	55.10
New York	NY State Electric & Gas Corp.	C-09-E-0715	16-Sep-10	10.00	48.00
New York	Rochester Gas & Electric Corp.	C-09-E-0717	16-Sep-10	10.00	48.00
Arizona	UNS Electric Inc.	D-E-04204A-09-0206	30-Sep-10	9.75	45.76

STATE	COMPANY	CASE NO.	ORDER DATE	RETURN ON EQUITY (%)	COMMON EQUITY /TOTAL CAPITAL (%)
Michigan	Indiana Michigan Power Co.	C-U-16180	14-Oct-10	10.35	44.14
Hawaii	Hawaii Electric Light Co	D-2005-0315	28-Oct-10	10.70	51.19
Minnesota	ALLETE (Minnesota Power)	D-E-015/GR-09-1151	2-Nov-10	10.38	54.29
Michigan	Consumers Energy Co.	C-U-16191	4-Nov-10	10.70	41.59
Washington	Avista Corp.	D-UE-100467	19-Nov-10	10.20	46.50
Kansas	Kansas City Power & Light	D-10-KCPE-415-RTS	22-Nov-10	10.00	49.66
Texas	Entergy Texas Inc.	D-37744	1-Dec-10	10.13	NA
Maryland	Baltimore Gas and Electric Co.	C-9230 (elec)	6-Dec-10	9.86	51.93
Montana	NorthWestern Energy Division	D-D2009.9.129 (elec)	9-Dec-10	10.00	48.00
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 459	13-Dec-10	10.70	51.00
Oregon	PacifiCorp	D-UE-217	14-Dec-10	10.13	51.00
Iowa	Interstate Power & Light Co.	D-RPU-2010-0001	15-Dec-10	10.44	44.24
Oregon	Portland General Electric Co.	D-UE 215	17-Dec-10	10.00	50.00
Nevada	Sierra Pacific Power Co.	D-10-06001	20-Dec-10	10.60	44.11
Michigan	Upper Peninsula Power Co.	C-U-16166	21-Dec-10	10.30	50.42
Idaho	PacifiCorp	C-PAC-E-10-07	27-Dec-10	9.90	52.10
Georgia	Georgia Power Co.	D-31958	29-Dec-10	11.15	NA
Oklahoma	Public Service Co. of OK	Ca-PUD201000050	5-Jan-11	10.15	45.84
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-117 (elec)	12-Jan-11	10.30	58.06
Wisconsin	Wisconsin Public Service Corp	D-6690-UR-120 (elec)	13-Jan-11	10.30	51.65
Delaware	Delmarva Power & Light Co.	D-09-414	18-Jan-11	10.00	NA
New York	Niagara Mohawk Power Corp.	C-10-E-0050	20-Jan-11	9.30	48.00
Texas	Texas-New Mexico Power Co.	D-38480	20-Jan-11	10.13	45.00
Massachusetts	Western Massachusetts Electric	DPU 10-70	31-Jan-11	9.60	50.70
Texas	CenterPoint Energy Houston	D-38339	3-Feb-11	10.00	45.00
Hawaii	Hawaiian Electric Co.	D-2008-0083	25-Feb-11	10.00	55.81
Virginia	Virginia Electric & Power Co.	C-PUE-2010-00054	22-Mar-11	12.30	49.37
Virginia	Virginia Electric & Power Co.	C-PUE-2010-00055	22-Mar-11	12.30	49.37
Washington	PacifiCorp	D-UE-100749	25-Mar-11	9.80	49.10
West Virginia	Appalachian Power Co.	C-10-0699-E-42T	30-Mar-11	10.00	42.20
Missouri	Kansas City Power & Light	C-ER-2010-0355	12-Apr-11	10.00	46.30
Minnesota	Otter Tail Power Co.	D-E-017/GR-10-239	25-Apr-11	10.74	51.70
New Hampshire	Unitil Energy Systems Inc.	D-DE 10-055	26-Apr-11	9.67	45.45
Indiana	Southern Indiana Gas & Elec Co	Ca-43839	27-Apr-11	10.40	43.46
Missouri	KCP&L Greater Missouri Op Co	C-ER-2010-0356 (MPS)	4-May-11	10.00	46.58
Missouri	KCP&L Greater Missouri Op Co	C-ER-2010-0356 (L&P)	4-May-11	10.00	46.58
California	Pacific Gas and Electric Co.	AP-09-12-020 (elec)	13-May-11	11.35	52.00
Illinois	Commonwealth Edison Co.	D-10-0467	24-May-11	10.50	47.28
Average ROE, % Equity 2009				10.52	48.57
Average ROE, % Equity 2010				10.35	48.37
Average ROE, % Equity May 2011				10.33	48.47

EXHIBIT 10
MARKET VALUE EQUITY RATIOS FOR U.S. NATURAL GAS
AND ELECTRIC UTILITIES AT MARCH 2010

LINE NO.	COMPANY	LONG-TERM DEBT	PREFERRED EQUITY	MARKET CAP \$ (MIL)	% MARKET EQUITY
1	AGL Resources	1,974	0	3,139	61%
2	Atmos Energy	2,169	0	3,123	59%
3	National Fuel Gas	1,249	0	6,209	83%
4	NiSource Inc.	5,965	0	5,413	48%
5	Northwest Nat. Gas	602	0	1,234	67%
6	ONEOK Inc.	4,334	0	7,229	63%
7	Piedmont Natural Gas	733	0	2,218	75%
8	Questar	2,180	0	3,094	59%
9	South Jersey Inds.	313	0	1,699	84%
10	Composite	19,519	0	33,357	63%
11	Average				67%

EXHIBIT 10 (CONTINUED)
MARKET VALUE EQUITY RATIOS FOR U.S. NATURAL GAS
AND ELECTRIC UTILITIES AT MARCH 2010

LINE NO.	COMPANY	LONG-TERM DEBT	PREFERRED EQUITY	MARKET CAP \$ (MIL)	% MARKET EQUITY
1	ALLETE	696	0	1,421	67%
2	Alliant Energy	2,405	244	4,381	62%
3	Amer. Elec. Power	15,757	61	17,055	52%
4	Avista Corp.	1,088	0	1,348	55%
5	Consol. Edison	9,854	0	14,896	60%
6	Dominion Resources	15,481	257	26,034	62%
7	DPL Inc.	1,224	23	3,247	72%
8	Duke Energy	16,113	0	24,465	60%
9	Edison Int'l	10,437	907	12,019	51%
10	Hawaiian Elec.	1,365	34	2,387	63%
11	IDACORP Inc.	1,410	0	1,905	57%
12	Integrus Energy	2,395	51	3,968	62%
13	NextEra Energy	16,300	0	23,653	59%
14	Northeast Utilities	4,935	116	6,167	55%
15	OGE Energy	2,089	0	5,010	71%
16	Pepco Holdings	4,947	0	4,246	46%
17	PG&E Corp.	11,208	252	17,653	61%
18	Pinnacle West Capital	3,371	0	4,686	58%
19	Portland General	1,558	0	1,827	54%
20	Public Serv. Enterprise	7,645	80	15,632	67%
21	SCANA Corp.	4,483	0	5,080	53%
22	Sempra Energy	7,460	179	13,002	63%
23	Southern Co.	18,131	1,082	32,395	63%
24	TECO Energy	3,202	0	4,057	56%
25	UIL Holdings	674	0	1,555	70%
26	Westar Energy	2,600	21	3,022	54%
27	Wisconsin Energy	3,876	30	7,169	65%
28	Xcel Energy Inc.	7,889	105	11,667	59%
29	Composite	178,589	3,443	269,948	60%
30	Average				60%

Data are from The Value Line Investment Analyzer, April 2011.

**EXHIBIT 11
APPENDIX 1
QUALIFICATIONS OF JAMES H. VANDER WEIDE, PH.D.**

JAMES H. VANDER WEIDE, Ph.D.

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James H. Vander Weide is Research Professor of Finance and Economics at Duke University, the Fuqua School of Business. Dr. Vander Weide is also founder and President of Financial Strategy Associates, a consulting firm that provides strategic, financial, and economic consulting services to corporate clients, including cost of capital and valuation studies.

Educational Background and Prior Academic Experience

Dr. Vander Weide holds a Ph.D. in Finance from Northwestern University and a Bachelor of Arts in Economics from Cornell University. He joined the faculty at Duke University and was named Assistant Professor, Associate Professor, Professor, and then Research Professor of Finance and Economics.

Since joining the faculty at Duke, Dr. Vander Weide has taught courses in corporate finance, investment management, and management of financial institutions. He has also taught courses in statistics, economics, and operations research, and a Ph.D. seminar on the theory of public utility pricing. In addition, Dr. Vander Weide has been active in executive education at Duke and Duke Corporate Education, leading executive development seminars on topics including financial analysis, cost of capital, creating shareholder value, mergers and acquisitions, real options, capital budgeting, cash management, measuring corporate performance, valuation, short-run financial planning, depreciation policies, financial strategy, and competitive strategy. Dr. Vander Weide has designed and served as Program Director for several executive education programs, including the Advanced Management Program, Competitive Strategies in Telecommunications, and the Duke Program for Manager Development for managers from the former Soviet Union.

Publications

Dr. Vander Weide has written a book entitled *Managing Corporate Liquidity: An Introduction to Working Capital Management* published by John Wiley and Sons, Inc. He has also written a chapter titled, "Financial Management in the Short Run" for *The Handbook of Modern Finance*; a chapter titled "Principles for Lifetime Portfolio Selection: Lessons from Portfolio Theory" for *The Handbook of Portfolio Construction: Contemporary Applications of Markowitz Techniques*; and written research papers on such topics as portfolio management, capital budgeting, investments, the effect of regulation on the performance of public utilities, and cash management. His articles have been published in *American Economic Review*, *Financial Management*, *International Journal of Industrial Organization*, *Journal of Finance*, *Journal of Financial and Quantitative Analysis*, *Journal of Bank Research*, *Journal of Portfolio Management*, *Journal of Accounting Research*, *Journal of Cash Management*, *Management Science*, *Atlantic Economic Journal*, *Journal of Economics and Business*, and *Computers and Operations Research*.

Professional Consulting Experience

Dr. Vander Weide has provided financial and economic consulting services to firms in the telecommunications, electric, gas, insurance, and water industries for more than twenty-five years. He has testified on the cost of capital, competition, risk, incentive regulation, forward-looking economic cost, economic pricing guidelines, depreciation, accounting, valuation, and other financial and economic issues in more than four hundred cases before the United States Congress, the Canadian Radio-Television and Telecommunications Commission, the Federal Communications Commission, the National Energy Board (Canada), the National Telecommunications and Information Administration, the Federal Energy Regulatory Commission, the public service commissions of forty-three states, the District of Columbia, four Canadian provinces, the insurance commissions of five states, the Iowa State Board of Tax Review, the National Association of Securities Dealers, and the North Carolina Property Tax Commission. In addition, he has testified as an expert witness in telecommunications-related proceedings before the United States District Court for the District of New Hampshire, United States District Court for the Northern District of California, United States District Court for the Northern District of Illinois, Montana Second Judicial District Court Silver Bow County, the United States Bankruptcy Court for the Southern District of West Virginia, and United States District Court for the Eastern District of Michigan. He also testified as an expert before the United States Tax Court, United States District Court for the Eastern District of North Carolina; United States District Court for the District of Nebraska, and Superior Court of North Carolina. Dr. Vander Weide has testified in thirty states on issues relating to the pricing of unbundled network elements and universal

service cost studies and has consulted with Bell Canada, Deutsche Telekom, and Telefónica on similar issues. He has also provided expert testimony on issues related to natural gas and electric restructuring. He has worked for Bell Canada/Nortel on a special task force to study the effects of vertical integration in the Canadian telephone industry and has worked for Bell Canada as an expert witness on the cost of capital. Dr. Vander Weide has provided consulting and expert witness testimony to the following companies:

ELECTRIC, GAS, WATER, OIL COMPANIES	
Alcoa Power Generating, Inc.	Kinder Morgan Energy Partners
Alliant Energy and subsidiaries	Maritimes & Northeast Pipeline
AltaLink, L.P.	MidAmerican Energy and subsidiaries
Ameren	National Fuel Gas
American Water Works	Nevada Power Company
Atmos Energy and subsidiaries	NICOR
BP p.l.c.	North Carolina Natural Gas
Central Illinois Public Service	North Shore Gas
Citizens Utilities	Northern Natural Gas Company
Dominion Resources and subsidiaries	NOVA Gas Transmission Ltd.
Duke Energy and subsidiaries	PacifiCorp
Empire District Electric Company	Peoples Energy and its subsidiaries
EPCOR Distribution & Transmission Inc.	PG&E
EPCOR Energy Alberta Inc.	Progress Energy
FortisAlberta Inc.	PSE&G
Hope Natural Gas	Public Service Company of North Carolina
Interstate Power Company	Sempra Energy/San Diego Gas & Electric
Iberdrola Renewables	South Carolina Electric and Gas
Iowa Southern	Southern Company and subsidiaries
Iowa-American Water Company	Tennessee-American Water Company
Iowa-Illinois Gas and Electric	The Peoples Gas, Light and Coke Co.
Kentucky Power Company	TransCanada
Kentucky-American Water Company	Trans Québec & Maritimes Pipeline Inc.
	Union Gas
	United Cities Gas Company
	Virginia-American Water Company

TELECOMMUNICATIONS COMPANIES	
ALLTEL and subsidiaries	Phillips County Cooperative Tel. Co.
Ameritech (now AT&T new)	Pine Drive Cooperative Telephone Co.
AT&T (old)	Roseville Telephone Company (SureWest)
Bell Canada/Nortel	SBC Communications (now AT&T new)
BellSouth and subsidiaries	Sherburne Telephone Company
Centel and subsidiaries	Siemens
Cincinnati Bell (Broadwing)	Southern New England Telephone

TELECOMMUNICATIONS COMPANIES	
Cisco Systems	Sprint/United and subsidiaries
Citizens Telephone Company	Telefónica
Concord Telephone Company	Tellabs, Inc.
Contel and subsidiaries	The Stentor Companies
Deutsche Telekom	U S West (Qwest)
GTE and subsidiaries (now Verizon)	Union Telephone Company
Heins Telephone Company	United States Telephone Association
JDS Uniphase	Valor Telecommunications (Windstream)
Lucent Technologies	Verizon (Bell Atlantic) and subsidiaries
Minnesota Independent Equal Access Corp.	Woodbury Telephone Company
NYNEX and subsidiaries (Verizon)	
Pacific Telesis and subsidiaries	

Insurance Companies
Allstate
North Carolina Rate Bureau
United Services Automobile Association (USAA)
The Travelers Indemnity Company
Gulf Insurance Company

Other Professional Experience

Dr. Vander Weide conducts in-house seminars and training sessions on topics such as creating shareholder value, financial analysis, competitive strategy, cost of capital, real options, financial strategy, managing growth, mergers and acquisitions, valuation, measuring corporate performance, capital budgeting, cash management, and financial planning. Among the firms for whom he has designed and taught tailored programs and training sessions are ABB Asea Brown Boveri, Accenture, Allstate, Ameritech, AT&T, Bell Atlantic/Verizon, BellSouth, Progress Energy/Carolina Power & Light, Contel, Fisons, GlaxoSmithKline, GTE, Lafarge, MidAmerican Energy, New Century Energies, Norfolk Southern, Pacific Bell Telephone, The Rank Group, Siemens, Southern New England Telephone, TRW, and Wolseley Plc. Dr. Vander Weide has also hosted a nationally prominent conference/workshop on estimating the cost of capital. In 1989, at the request of Mr. Fuqua, Dr. Vander Weide designed the Duke Program for Manager Development for managers from the former Soviet Union, the first in the United States designed exclusively for managers from Russia and the former Soviet republics.

Early in his career, Dr. Vander Weide helped found University Analytics, Inc., which was one of the fastest growing small firms in the country. As an officer at University Analytics, he designed cash management models, databases, and software packages that are still used by most major U.S. banks in consulting with their corporate clients. Having sold his interest in University Analytics, Dr. Vander Weide now concentrates on strategic and financial consulting, academic research, and executive education.

PUBLICATIONS
JAMES H. VANDER WEIDE

The Lock-Box Location Problem: a Practical Reformulation, *Journal of Bank Research*, Summer, 1974, pp. 92-96 (with S. Maier). Reprinted in *Management Science in Banking*, edited by K. J. Cohen and S. E. Gibson, Warren, Gorham and Lamont, 1978.

A Finite Horizon Dynamic Programming Approach to the Telephone Cable Layout Problem, *Conference Record*, 1976 International Conference on Communications (with S. Maier and C. Lam).

A Note on the Optimal Investment Policy of the Regulated Firm, *Atlantic Economic Journal*, Fall, 1976 (with D. Peterson).

A Unified Location Model for Cash Disbursements and Lock-Box Collections, *Journal of Bank Research*, Summer, 1976 (with S. Maier). Reprinted in *Management Science in Banking*, edited by K. J. Cohen and S. E. Gibson, Warren Gorham and Lamont, 1978. Also reprinted in *Readings on the Management of Working Capital*, edited by K. V. Smith, West Publishing Company, 1979.

Capital Budgeting in the Decentralized Firm,' *Management Science*, Vol. 23, No. 4, December 1976, pp. 433-443 (with S. Maier).

A Monte Carlo Investigation of Characteristics of Optimal Geometric Mean Portfolios, *Journal of Financial and Quantitative Analysis*, June, 1977, pp. 215-233 (with S. Maier and D. Peterson).

A Strategy which Maximizes the Geometric Mean Return on Portfolio Investments, *Management Science*, June, 1977, Vol. 23, No. 10, pp. 1117-1123 (with S. Maier and D. Peterson).

A Decision Analysis Approach to the Computer Lease-Purchase Decision, *Computers and Operations Research*, Vol. 4, No. 3, September, 1977, pp. 167-172 (with S. Maier).

A Practical Approach to Short-run Financial Planning, *Financial Management*, Winter, 1978 (with S. Maier). Reprinted in *Readings on the Management of Working Capital*, edited by K. V. Smith, West Publishing Company, 1979.

Effectiveness of Regulation in the Electric Utility Industry,' *Journal of Economics and Business*, May, 1979 (with F. Tapon).

On the Decentralized Capital Budgeting Problem Under Uncertainty, *Management Science*, September 1979 (with B. Obel).

Expectations Data and the Predictive Value of Interim Reporting: A Comment, *Journal of Accounting Research*, Spring 1980 (with L. D. Brown, J. S. Hughes, and M. S. Rozeff).

General Telephone's Experience with a Short-run Financial Planning Model, *Cash Management Forum*, June 1980, Vol. 6, No. 1 (with J. Austin and S. Maier).

Deregulation and Oligopolistic Price-Quality Rivalry, *American Economic Review*, March 1981 (with J. Zalkind).

Forecasting Disbursement Float, *Financial Management*, Spring 1981 (with S. Maier and D. Robinson).

Recent Developments in Management Science in Banking, *Management Science*, October 1981 (with K. Cohen and S. Maier).

Incentive Considerations in the Reporting of Leveraged Leases, *Journal of Bank Research*, April 1982 (with J. S. Hughes).

A Decision-Support System for Managing a Short-term Financial Instrument Portfolio, *Journal of Cash Management*, March 1982 (with S. Maier).

An Empirical Bayes Estimate of Market Risk, *Management Science*, July 1982 (with S. Maier and D. Peterson).

The Bond Scheduling Problem of the Multi-subsidiary Holding Company, *Management Science*, July 1982 (with K. Baker).

Deregulation and Locational Rents in Banking: a Comment, *Journal of Bank Research*, Summer 1983.

What Lockbox and Disbursement Models Really Do, *Journal of Finance*, May 1983 (with S. Maier).

Financial Management in the Short Run, *Handbook of Modern Finance*, edited by Dennis Logue, published by Warren, Gorham, & Lamont, Inc., New York, 1984.

Measuring Investors' Growth Expectations: Analysts vs. History, *The Journal of Portfolio Management*, Spring 1988 (with W. Carleton).

Entry Auctions and Strategic Behavior under Cross-Market Price Constraints, *International Journal of Industrial Organization*, 20 (2002) 611-629 (with J. Anton and N. Vettas).

Principles for Lifetime Portfolio Selection: Lessons from Portfolio Theory, *Handbook of Portfolio Construction: Contemporary Applications of Markowitz Techniques*, John B. Guerard, (Ed.), Springer, 2009.

Managing Corporate Liquidity: an Introduction to Working Capital Management, John Wiley and Sons, 1984 (with S. Maier).

**SUMMARY EXPERT TESTIMONY
JAMES H. VANDER WEIDE**

SPONSOR	JURISDICTION	DATE	DOCKET NO.
Iberdrola Renewables Holdings, Inc.	United States Tax Court	Apr-11	525-10
North Carolina Rate Bureau (dwelling fire)	North Carolina Dept. of Insurance	Jan-11	
Atmos Energy	Railroad Commission of Texas	Dec-10	GUD 10041
Mississippi Power Company	FERC	Oct-10	
Empire District Electric Company	Missouri	Sep-10	ER-2011-0004
Tennessee-American Water Company	Tennessee	Sep-10	10-00189
Empire District Electric Company	Arkansas	Aug-10	10-052-U
Maritimes & Northeast Pipelines Limited Partnership	National Energy Board (Canada)	Jul-10	RH 4-2010
Georgia Power Company	Georgia	Jun-10	31958
West Virginia American Water Company	West Virginia	Jun-10	Case No. 10-0920-W-42T
Atmos Energy	Mississippi	Apr-10	2005-UN-503
BP Pipelines (Alaska) Inc.	FERC	Apr-10	IS09-348-000
Empire District Electric Company	FERC	Mar-10	ER10-877-000
Kentucky-American Water Company	Kentucky	Feb-10	2010-00036
Virginia-American Water Company	Virginia	Feb-10	PUE-2010-00001
Virginia Electric and Power	North Carolina	Feb-10	E-22 SUB 459
SFPP, L.P.	FERC	Dec-09	ISO9-437-000
Atmos Energy	Missouri	Dec-09	Gr-2010-0192
Empire District Electric Company	Kansas	Nov-09	10-EPDE-314-RTS
Empire District Electric Company	Missouri	Nov-09	ER-2010-0130
Atmos Energy	Kentucky	Oct-09	2009-00354
Atmos Energy	Georgia	Oct-09	30442
SFPP, L.P. and Calnev Pipeline, L.L.C.	California	Sep-09	09-05-014 et al
Union Gas	Ontario Energy Board	Sep-09	EB-2009-0084
Atmos Energy	Mississippi	Sep-09	05-UN-503
North Carolina Rate Bureau (workers)	North Carolina Dept. of Insurance	Sep-09	
Sidley Austin LLP, Tellabs, Inc. Securities Litigation	U.S. District Court Northern Dist. Illinois	Aug-09	C.A. No. 02-C-4356
Duke Energy Carolinas	South Carolina	Jul-09	2009-226-E
MidAmerican Energy Company	Iowa	Jul-09	RPU-2009-0003
Duke Energy Carolinas	North Carolina	Jun-09	E-7, SUB 909
Empire District Electric Company	Missouri	Jun-09	ER-2008-009
Terasen Gas Inc.	British Columbia Utilities Commission	May-09	
Atmos Energy	Railroad Commission of Texas	Apr-09	GUD-9869
Progress Energy	Florida	Mar-09	090079-EI
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jan-09	
EPCOR, FortisAlberta, AltaLink	Alberta Utilities Commission	Nov-08	1578571, ID-85
Trans Québec & Maritimes Pipeline Inc.	Alberta Utilities Commission	Nov-08	1578571, ID-85
Kentucky-American Water Company	Kentucky Public Service Commission	Oct-08	2008-00427
Atmos Energy	Tennessee Regulatory Authority	Oct-08	0800197
North Carolina Rate Bureau (workers compensation)	North Carolina Dept. of Insurance	Aug-08	
Dorsey & Whitney LLP-Williams v. Gannon	Montana 2nd Judicial Dist. Ct. Silver Bow County	Apr-08	DV-02-201
Atmos Energy	Georgia	Mar-08	27163-U
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jan-08	
Trans Québec & Maritimes Pipeline Inc.	National Energy Board (Canada)	Dec-07	RH-1-2008
Xcel Energy	North Dakota	Dec-07	PU-07-776
Verizon Southwest	Texas	Nov-07	34723
Empire District Electric Company	Missouri	Oct-07	ER-2008-0093

SPONSOR	JURISDICTION	DATE	DOCKET NO.
North Carolina Rate Bureau (workers compensation)	North Carolina Dept. of Insurance	Sep-07	
Verizon North Inc. Contel of the South Inc.	Michigan	Aug-07	Case No. U-15210
Georgia Power Company	Georgia	Jun-07	25060-U
Duke Energy Carolinas	North Carolina	May-07	E-7 Sub 828 et al
MidAmerican Energy Company	Iowa	May-07	SPU-06-5 et al
Morrison & Foerster LLP-JDS Uniphase Securities Litigation	U.S. District Court Northern District California	Feb-07	C-02-1486-CW
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Dec-06	
San Diego Gas & Electric	FERC	Nov-06	ER07-284-000
North Carolina Rate Bureau (workers compensation)	North Carolina Dept. of Insurance	Aug-06	
Union Electric Company d/b/a AmerenUE	Missouri	Jun-06	ER-2007-0002
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	May-06	
North Carolina Rate Bureau (dwelling fire)	North Carolina Dept. of Insurance	Mar-06	
Empire District Electric Company	Missouri	Feb-06	ER-2006-0315
PacifiCorp Power & Light Company	Washington	Jan-06	UE-050684
Verizon Maine	Maine	Dec-05	2005-155
Winston & Strawn LLP-Cisco Systems Securities Litigation	U.S. District Court Northern District California	Nov-05	C-01-20418-JW
Dominion Virginia Power	Virginia	Nov-05	PUE-2004-00048
Bryan Cave LLP--Omniplex Comms. v. Lucent Technologies	U.S. District Court Eastern District Missouri	Sep-05	04CV00477 ERW
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-05	
Empire District Electric Company	Kansas	Sep-05	05-EPDE-980-RTS
Verizon Southwest	Texas	Jul-05	29315
PG&E Company	FERC	Jul-05	ER-05-1284
Dominion Hope	West Virginia	Jun-05	05-034-G42T
Empire District Electric Company	Missouri	Jun-05	EO-2005-0263
Verizon New England	U.S. District Court New Hampshire	May-05	04-CV-65-PB
San Diego Gas & Electric	California	May-05	05-05-012
Progress Energy	Florida	May-05	50078
Verizon Vermont	Vermont	Feb-05	6959
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Feb-05	
Verizon Florida	Florida	Jan-05	050059-TL
Verizon Illinois	Illinois	Jan-05	00-0812
Dominion Resources	North Carolina	Sep-04	E-22 Sub 412
Tennessee-American Water Company	Tennessee	Aug-04	04-00288
Valor Telecommunications of Texas, LP.	New Mexico	Jul-04	3495 Phase C
Alcoa Power Generating Inc.	North Carolina Property Tax Commission	Jul-04	02 PTC 162 and 02 PTC 709
PG&E Company	California	May-04	04-05-21
Verizon Northwest	Washington	Apr-04	UT-040788
Verizon Northwest	Washington	Apr-04	UT-040788
Kentucky-American Water Company	Kentucky	Apr-04	2004-00103
MidAmerican Energy	South Dakota	Apr-04	NG4-001
Empire District Electric Company	Missouri	Apr-04	ER-2004-0570
Interstate Power and Light Company	Iowa	Mar-04	RPU-04-01
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Feb-04	
Northern Natural Gas Company	FERC	Feb-04	RP04-155-000
Verizon New Jersey	New Jersey	Jan-04	TO00060356
Verizon	FCC	Jan-04	03-173, FCC 03-224
Verizon	FCC	Dec-03	03-173, FCC 03-224
Verizon California Inc.	California	Nov-03	R93-04-003,193-04-002
Phillips County Telephone Company	Colorado	Nov-03	03S-315T
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Oct-03	
PG&E Company	FERC	Oct-03	ER04-109-000
Allstate Insurance Company	Texas Department of Insurance	Sep-03	2568

SPONSOR	JURISDICTION	DATE	DOCKET NO.
Verizon Northwest Inc.	Washington	Jul-03	UT-023003
Empire District Electric Company	Oklahoma	Jul-03	Case No. PUD 200300121
Verizon Virginia Inc.	FCC	Apr-03	CC-00218,00249,00251
North Carolina Rate Bureau (dwelling fire)	North Carolina Dept. of Insurance	Apr-03	
Northern Natural Gas Company	FERC	Apr-03	RP03-398-000
MidAmerican Energy	Iowa	Apr-03	RPU-03-1, WRU-03-25-156
PG&E Company	FERC	Mar-03	ER0366000
Verizon Florida Inc.	Florida	Feb-03	981834-TP/990321-TP
Verizon North	Indiana	Feb-03	42259
San Diego Gas & Electric	FERC	Feb-03	ER03-601000
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jan-03	
Gulf Insurance Company	Superior Court, North Carolina	Jan-03	2000-CVS-3558
PG&E Company	FERC	Jan-03	ER03409000
Verizon New England Inc. New Hampshire	New Hampshire	Dec-02	DT 02-110
Verizon Northwest	Washington	Dec-02	UT 020406
PG&E Company	California	Dec-02	
MidAmerican Energy	Iowa	Nov-02	RPU-02-3, 02-8
MidAmerican Energy	Iowa	Nov-02	RPU-02-10
Verizon Michigan	US District Court Eastern District of Michigan	Sep-02	Civil Action No. 00-73208
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-02	
Verizon New England Inc. New Hampshire	New Hampshire	Aug-02	DT 02-110
Interstate Power Company	Iowa Board of Tax Review	Jul-02	832
PG&E Company	California	May-02	A 02-05-022 et al
Verizon New England Inc. Massachusetts	FCC	May-02	EB 02 MD 006
Verizon New England Inc. Rhode Island	Rhode Island	May-02	Docket No. 2681
NEUMEDIA, INC.	US Bankruptcy Court Southern District W. Virginia	Apr-02	Case No. 01-20873
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Mar-02	
MidAmerican Energy Company	Iowa	Mar-02	RPU 02 2
North Carolina Natural Gas Company	North Carolina	Feb-02	G21 Sub 424
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jan-02	
Verizon Pennsylvania	Pennsylvania	Dec-01	R-00016683
Verizon Florida	Florida	Nov-01	99064B-TP
PG&E Company	FERC	Nov-01	ER0166000
Verizon Delaware	Delaware	Oct-01	96-324 Phase II
Florida Power Corporation	Florida	Sep-01	000824-EL
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-01	
Verizon Washington DC	District of Columbia	Jul-01	962
Verizon Virginia	FCC	Jul-01	CC-00218,00249,00251
Sherburne County Rural Telephone Company	Minnesota	Jul-01	P427/CI-00-712
Verizon New Jersey	New Jersey	Jun-01	TO01020095
Verizon Maryland	Maryland	May-01	8879
Verizon Massachusetts	Massachusetts	May-01	DTE 01-20
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Apr-01	
PG&E Company	FERC	Mar-01	ER011639000
Maupin Taylor & Ellis P.A.	National Association of Securities Dealers	Jan-01	99-05099
USTA	FCC	Oct-00	RM 10011
Verizon New York	New York	Oct-00	98-C-1357
Verizon New Jersey	New Jersey	Oct-00	TO00060356
PG&E Company	FERC	Oct-00	ER0166000
Verizon New Jersey	New Jersey	Sep-00	TO99120934
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-00	
PG&E Company	California	Aug-00	00-05-018

SPONSOR	JURISDICTION	DATE	DOCKET NO.
Verizon New York	New York	Jul-00	98-C-1357
PG&E Company	California	May-00	00-05-013
PG&E Company	FERC	Mar-00	ER00-66-000
PG&E Company	FERC	Mar-00	ER99-4323-000
Bell Atlantic	New York	Feb-00	98-C-1357
USTA	FCC	Jan-00	94-1, 96-262
MidAmerican Energy	Iowa	Nov-99	SPU-99-32
PG&E Company	California	Nov-99	99-11-003
PG&E Company	FERC	Nov-99	ER973255,981261,981685
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-99	
MidAmerican Energy	Illinois	Sep-99	99-0534
PG&E Company	FERC	Sep-99	ER99-4323-000
MidAmerican Energy	FERC	Jul-99	ER99-3887
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Jun-99	
Bell Atlantic	Vermont	May-99	6167
Nevada Power Company	FERC	May-99	
Bell Atlantic, GTE, US West	FCC	Apr-99	CC98-166
Nevada Power Company	Nevada	Apr-99	
Bell Atlantic, GTE, US West	FCC	Mar-99	CC98-166
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Mar-99	
PG&E Company	FERC	Mar-99	ER99-2326-000
MidAmerican Energy	Illinois	Mar-99	099-0310
PG&E Company	FERC	Feb-99	ER99-2358,2087,2351
MidAmerican Energy	US District Court, District of Nebraska	Feb-99	8:97 CV 346
Bell Atlantic, GTE, US West	FCC	Jan-99	CC98-166
The Southern Company	FERC	Jan-99	ER98-1096
Deutsche Telekom	Germany	Nov-98	
Telefonica	Spain	Nov-98	
Cincinnati Bell Telephone Company	Ohio	Oct-98	96899TPALT
MidAmerican Energy	Iowa	Sep-98	RPU 98-5
MidAmerican Energy	South Dakota	Sep-98	NG98-011
MidAmerican Energy	Iowa	Sep-98	SPU 98-8
GTE Florida Incorporated	Florida	Aug-98	980696-TP
GTE North and South	Illinois	Jun-98	960503
GTE Midwest Incorporated	Missouri	Jun-98	TO98329
GTE North and South	Illinois	May-98	960503
MidAmerican Energy	Iowa Board of Tax Review	May-98	835
San Diego Gas & Electric	California	May-98	98-05-024
GTE Midwest Incorporated	Nebraska	Apr-98	C1416
Carolina Telephone	North Carolina	Mar-98	P100Sub133d
GTE Southwest	Texas	Feb-98	18515
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Feb-98	P100sub133d
Public Service Electric & Gas	New Jersey	Feb-98	PUC734897N,-734797N,BPUEO97070461,-07070462
GTE North	Minnesota	Dec-97	P999/M97909
GTE Northwest	Oregon	Dec-97	UM874
The Southern Company	FERC	Dec-97	ER981096000
GTE North	Pennsylvania	Nov-97	A310125F0002
Bell Atlantic	Rhode Island	Nov-97	2681
GTE North	Indiana	Oct-97	40618
GTE North	Minnesota	Oct-97	P442,407/5321/CI961541
GTE Southwest	New Mexico	Oct-97	96310TC,96344TC
GTE Midwest Incorporated	Iowa	Sep-97	RPU-96-7
North Carolina Rate Bureau (workers)	North Carolina Dept. of Insurance	Sep-97	

SPONSOR	JURISDICTION	DATE	DOCKET NO.
GTE Hawaiian Telephone	Hawaii	Aug-97	7702
The Stentor Companies	Canadian Radio-television and Telecommunications Commission	Jul-97	CRTC97-11
New England Telephone	Vermont	Jul-97	5713
Bell-Atlantic-New Jersey	New Jersey	Jun-97	TX95120631
Nevada Bell	Nevada	May-97	96-9035
New England Telephone	Maine	Apr-97	96-781
GTE North, Inc.	Michigan	Apr-97	U11281
Bell Atlantic-Virginia	Virginia	Apr-97	970005
Cincinnati Bell Telephone	Ohio	Feb-97	96899TPALT
Bell Atlantic - Pennsylvania	Pennsylvania	Feb-97	A310203,213,236,258F002
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Feb-97	
Bell Atlantic-Washington, D.C.	District of Columbia	Jan-97	962
Pacific Bell, Sprint, US West	FCC	Jan-97	CC 96-45
United States Telephone Association	FCC	Jan-97	CC 96-262
Bell Atlantic-Maryland	Maryland	Jan-97	8731
Bell Atlantic-West Virginia	West Virginia	Jan-97	961516, 1561, 1009TPC,961533TT
Poe, Hoof, & Reinhardt	Durham Cnty Superior Court Kountis vs. Circle K	Jan-97	95CVS04754
Bell Atlantic-Delaware	Delaware	Dec-96	96324
Bell Atlantic-New Jersey	New Jersey	Nov-96	TX95120631
Carolina Power & Light Company	FERC	Nov-96	OA96-198-000
New England Telephone	Massachusetts	Oct-96	DPU 96-73/74,-75, -80/81, -83, -94
New England Telephone	New Hampshire	Oct-96	96-252
Bell Atlantic-Virginia	Virginia	Oct-96	960044
Citizens Utilities	Illinois	Sep-96	96-0200, 96-0240
Union Telephone Company	New Hampshire	Sep-96	95-311
Bell Atlantic-New Jersey	New Jersey	Sep-96	TO-96070519
New York Telephone	New York	Sep-96	95-C-0657, 94-C-0095,91-C-1174
North Carolina Rate Bureau (workers comp)	North Carolina Dept. of Insurance	Sep-96	
MidAmerican Energy Company	Illinois	Sep-96	96-0274
MidAmerican Energy Company	Iowa	Sep-96	RPU96-8
United States Telephone Association	FCC	Mar-96	AAD-96.28
United States Telephone Association	FCC	Mar-96	CC 94-1 PhaseIV
Bell Atlantic - Maryland	Maryland	Mar-96	8715
Nevada Bell	Nevada	Mar-96	96-3002
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Mar-96	
Carolina Tel. and Telegraph Co, Central Tel Co	North Carolina	Feb-96	P7 sub 825, P10 sub 479
Oklahoma Rural Telephone Coalition	Oklahoma	Oct-95	PUD950000119
BellSouth	Tennessee	Oct-95	95-02614
Wake County, North Carolina	US District Court, Eastern Dist. NC	Oct-95	594CV643H2
Bell Atlantic - District of Columbia	District of Columbia	Sep-95	814 Phase IV
South Central Bell Telephone Company	Tennessee	Aug-95	95-02614
GTE South	Virginia	Jun-95	95-0019
Roseville Telephone Company	California	May-95	A.95-05-030
Bell Atlantic - New Jersey	New Jersey	May-95	TX94090388
Cincinnati Bell Telephone Company	Ohio	May-95	941695TPACE
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	May-95	727
Northern Illinois Gas	Illinois	May-95	95-0219
South Central Bell Telephone Company	Kentucky	Apr-95	94-121
Midwest Gas	South Dakota	Mar-95	
Virginia Natural Gas, Inc.	Virginia	Mar-95	PUE940054
Hope Gas, Inc.	West Virginia	Mar-95	95-0003G42T
The Peoples Natural Gas Company	Pennsylvania	Feb-95	R-943252

SPONSOR	JURISDICTION	DATE	DOCKET NO.
and Coke Co., North Shore Gas, Iowa-Illinois Gas	Illinois	Jan-95	94-0403
and Electric, Central Illinois Public Service,	Illinois	Jan-95	94-0403
Northern Illinois Gas, The Peoples Gas, Light	Illinois	Jan-95	94-0403
United Cities Gas, and Interstate Power	Illinois	Jan-95	94-0403
Cincinnati Bell Telephone Company	Kentucky	Oct-94	94-355
Midwest Gas	Nebraska	Oct-94	
Midwest Power	Iowa	Sep-94	RPU-94-4
Bell Atlantic	FCC	Aug-94	CS 94-28, MM 93-215
Midwest Gas	Iowa	Jul-94	RPU-94-3
Bell Atlantic	FCC	Jun-94	CC 94-1
Nevada Power Company	Nevada	Jun-94	93-11045
Cincinnati Bell Telephone Company	Ohio	Mar-94	93-551-TP-CSS
Cincinnati Bell Telephone Company	Ohio	Mar-94	93-432-TP-ALT
GTE South/Contel	Virginia	Feb-94	PUC9300036
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Feb-94	689
Bell of Pennsylvania	Pennsylvania	Jan-94	P930715
GTE South	South Carolina	Jan-94	93-504-C
United Telephone-Southeast	Tennessee	Jan-94	93-04818
C&P of VA, GTE South, Contel, United Tel. SE	Virginia	Sep-93	PUC920029
Bell Atlantic, NYNEX, Pacific Companies	FCC	Aug-93	MM 93-215
C&P, Centel, Contel, GTE, & United	Virginia	Aug-93	PUC920029
Chesapeake & Potomac Tel Virginia	Virginia	Aug-93	93-00-
GTE North	Illinois	Jul-93	93-0301
Midwest Power	Iowa	Jul-93	INU-93-1
Midwest Power	South Dakota	Jul-93	EL93-016
Chesapeake & Potomac Tel. Co. DC	District of Columbia	Jun-93	926
Cincinnati Bell	Ohio	Jun-93	93432TPALT
North Carolina Rate Bureau (dwelling fire)	North Carolina Dept. of Insurance	Jun-93	671
North Carolina Rate Bureau (homeowners)	North Carolina Dept. of Insurance	Jun-93	670
Pacific Bell Telephone Company	California	Mar-93	92-05-004
Minnesota Independent Equal Access Corp.	Minnesota	Mar-93	P3007/GR931
South Central Bell Telephone Company	Tennessee	Feb-93	92-13527
South Central Bell Telephone Company	Kentucky	Dec-92	92-523
Southern New England Telephone Company	Connecticut	Nov-92	92-09-19
Chesapeake & Potomac Tel. Co.CDC	District of Columbia	Nov-92	814
Diamond State Telephone Company	Delaware	Sep-92	PSC 92-47
New Jersey Bell Telephone Company	New Jersey	Sep-92	TO-92030958
Allstate Insurance Company	New Jersey Dept. of Insurance	Sep-92	INS 06174-92
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Aug-92	650
North Carolina Rate Bureau (workers' comp)	North Carolina Dept. of Insurance	Aug-92	647
Midwest Gas Company	Minnesota	Aug-92	G010/GR92710
Pennsylvania-American Water Company	Pennsylvania	Jul-92	R-922428
Central Telephone Co. of Florida	Florida	Jun-92	920310-TL
C&P of VA, GTE South, Contel, United Tel. SE	Virginia	Jun-92	PUC920029
Chesapeake & Potomac Tel. Co. Maryland	Maryland	May-92	8462
Pacific Bell Telephone Company	California	Apr-92	92-05-004
Iowa Power Inc.	Iowa	Mar-92	RPU-92-2
Contel of Texas	Texas	Feb-92	10646
Southern Bell Telephone Company	Florida	Jan-92	880069-TL
Nevada Power Company	Nevada	Jan-92	92-1067
GTE South	Georgia	Dec-91	4003-U
GTE South	Georgia	Dec-91	4110-U
Allstate Insurance Company (property)	Texas Dept. of Insurance	Dec-91	1846
IPS Electric	Iowa	Oct-91	RPU-91-6

SPONSOR	JURISDICTION	DATE	DOCKET NO.
GTE South	Tennessee	Aug-91	91-05738
North Carolina Rate Bureau (workers' comp)	North Carolina Dept. of Insurance	Aug-91	609
Midwest Gas Company	Iowa	Jul-91	RPU-91-5
Pennsylvania-American Water Company	Pennsylvania	Jun-91	R-911909
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jun-91	606
Allstate Insurance Company	California Dept. of Insurance	May-91	RCD-2
Nevada Power Company	Nevada	May-91	91-5055
Kentucky Power Company	Kentucky	Apr-91	91-066
Chesapeake & Potomac Tel. Co.CD.C.	District of Columbia	Feb-91	850
Allstate Insurance Company	New Jersey Dept. of Insurance	Jan-91	INS-9536-90
GTE South	South Carolina	Nov-90	90-698-C
Southern Bell Telephone Company	Florida	Oct-90	880069-TL
GTE South	West Virginia	Aug-90	90-522-T-42T
North Carolina Rate Bureau (workers' comp)	North Carolina Dept. of Insurance	Aug-90	R90-08-
The Travelers Indemnity Company	Pennsylvania Dept. of Insurance	Aug-90	R-90-06-23
Chesapeake & Potomac Tel. Co.-Maryland	Maryland	Jul-90	8274
Allstate Insurance Company	Pennsylvania Dept. of Insurance	Jul-90	R90-07-01
Central Tel. Co. of Florida	Florida	Jun-90	89-1246-TL
Citizens Telephone Company	North Carolina	Jun-90	P-12, SUB 89
North Carolina Rate Bureau (auto)	North Carolina Dept. of Insurance	Jun-90	568
Iowa Resources, Inc. and Midwest Energy	Iowa	Jun-90	SPU-90-5
Contel of Illinois	Illinois	May-90	90-0128
Southern New England Tel. Co.	Connecticut	Apr-90	89-12-05
Bell Atlantic	FCC	Apr-90	89-624 II
Pennsylvania-American Water Company	Pennsylvania	Mar-90	R-901652
Bell Atlantic	FCC	Feb-90	89-624
GTE South	Tennessee	Jan-90	
Allstate Insurance Company	California Dept. of Insurance	Jan-90	REB-1002
Bell Atlantic	FCC	Nov-89	87-463 II
Allstate Insurance Company	California Dept. of Insurance	Sep-89	REB-1006
Pacific Bell	California	Mar-89	87-11-0033
Iowa Power & Light	Iowa	Dec-88	RPU-88-10
Pacific Bell	California	Oct-88	88-05-009
Southern Bell	Florida	Apr-88	880069TL
Carolina Independent Telcos.	North Carolina	Apr-88	P-100, Sub 81
United States Telephone Association	U. S. Congress	Apr-88	
Carolina Power & Light	South Carolina	Mar-88	88-11-E
New Jersey Bell Telephone Co.	New Jersey	Feb-88	87050398
Carolina Power & Light	FERC	Jan-88	ER-88-224-000
Carolina Power & Light	North Carolina	Dec-87	E-2, Sub 537
Bell Atlantic	FCC	Nov-87	87-463
Diamond State Telephone Co.	Delaware	Jul-87	86-20
Central Telephone Co. of Nevada	Nevada	Jun-87	87-1249
ALL TEL	Florida	Apr-87	870076-PU
Southern Bell	Florida	Apr-87	870076-PU
Carolina Power & Light	North Carolina	Apr-87	E-2, Sub 526
So. New England Telephone Co.	Connecticut	Mar-87	87-01-02
Northern Illinois Gas Co.	Illinois	Mar-87	87-0032
Bell of Pennsylvania	Pennsylvania	Feb-87	860923
Carolina Power & Light	FERC	Jan-87	ER-87-240-000
Bell South	NTIA	Dec-86	61091-619
Heins Telephone Company	North Carolina	Oct-86	P-26, Sub 93
Public Service Co. of NC	North Carolina	Jul-86	G-5, Sub 207
Bell Atlantic	FCC	Feb-86	84-800 III

SPONSOR	JURISDICTION	DATE	DOCKET NO.
BellSouth	FCC	Feb-86	84-800 III
ALLTEL Carolina, Inc	North Carolina	Feb-86	P-118, Sub 39
ALLTEL Georgia, Inc.	Georgia	Jan-86	3567-U
ALLTEL Ohio	Ohio	Jan-86	86-60-TP-AIR
Western Reserve Telephone Co.	Ohio	Jan-86	85-1973-TP-AIR
New England Telephone & Telegraph	Maine	Dec-85	
ALLTEL-Florida	Florida	Oct-85	850064-TL
Iowa Southern Utilities	Iowa	Oct-85	RPU-85-11
Bell Atlantic	FCC	Sep-85	84-800 II
Pacific Telesis	FCC	Sep-85	84-800 II
Pacific Bell	California	Apr-85	85-01-034
United Telephone Co. of Missouri	Missouri	Apr-85	TR-85-179
South Carolina Generating Co.	FERC	Apr-85	85-204
South Central Bell	Kentucky	Mar-85	9160
New England Telephone & Telegraph	Vermont	Mar-85	5001
Chesapeake & Potomac Telephone Co.	West Virginia	Mar-85	84-747
Chesapeake & Potomac Telephone Co.	Maryland	Jan-85	7851
Central Telephone Co. of Ohio	Ohio	Dec-84	84-1431-TP-AIR
Ohio Bell	Ohio	Dec-84	84-1435-TP-AIR
Carolina Power & Light Co.	FERC	Dec-84	ER85-184000
BellSouth	FCC	Nov-84	84-800 I
Pacific Telesis	FCC	Nov-84	84-800 I
New Jersey Bell	New Jersey	Aug-84	848-856
Southern Bell	South Carolina	Aug-84	84-308-C
Pacific Power & Light Co.	Montana	Jul-84	84.73.8
Carolina Power & Light Co.	South Carolina	Jun-84	84-122-E
Southern Bell	Georgia	Mar-84	3465-U
Carolina Power & Light Co.	North Carolina	Feb-84	E-2, Sub 481
Southern Bell	North Carolina	Jan-84	P-55, Sub 834
South Carolina Electric & Gas	South Carolina	Nov-83	83-307-E
Empire Telephone Co.	Georgia	Oct-83	3343-U
Southern Bell	Georgia	Aug-83	3393-U
Carolina Power & Light Co.	FERC	Aug-83	ER83-765-000
General Telephone Co. of the SW	Arkansas	Jul-83	83-147-U
Heins Telephone Co.	North Carolina	Jul-83	No.26 Sub 88
General Telephone Co. of the NW	Washington	Jul-83	U-82-45
Leeds Telephone Co.	Alabama	Apr-83	18578
General Telephone Co. of California	California	Apr-83	83-07-02
North Carolina Natural Gas	North Carolina	Apr-83	G21 Sub 235
Carolina Power & Light	South Carolina	Apr-83	82-328-E
Eastern Illinois Telephone Co.	Illinois	Feb-83	83-0072
Carolina Power & Light	North Carolina	Feb-83	E-2 Sub 461
New Jersey Bell	New Jersey	Dec-82	8211-1030
Southern Bell	Florida	Nov-82	820294-TP
United Telephone of Missouri	Missouri	Nov-82	TR-83-135
Central Telephone Co. of NC	North Carolina	Nov-82	P-10 Sub 415
Concord Telephone Company	North Carolina	Nov-82	P-16 Sub 146
Carolina Telephone & Telegraph	North Carolina	Aug-82	P-7, Sub 670
Central Telephone Co. of Ohio	Ohio	Jul-82	82-636-TP-AIR
Southern Bell	South Carolina	Jul-82	82-294-C
General Telephone Co. of the SW	Arkansas	Jun-82	82-232-U
General Telephone Co. of Illinois	Illinois	Jun-82	82-0458
General Telephone Co. of the SW	Oklahoma	Jun-82	27482
Empire Telephone Co.	Georgia	May-82	3355-U

SPONSOR	JURISDICTION	DATE	DOCKET NO.
Mid-Georgia Telephone Co.	Georgia	May-82	3354-U
General Telephone Co. of the SW	Texas	Apr-82	4300
General Telephone Co. of the SE	Alabama	Jan-82	18199
Carolina Power & Light Co.	South Carolina	Jan-82	81-163-E
Elmore-Coosa Telephone Co.	Alabama	Nov-81	18215
General Telephone Co. of the SE	North Carolina	Sep-81	P-19, Sub 182
United Telephone Co. of Ohio	Ohio	Sep-81	81-627-TP-AIR
General Telephone Co. of the SE	South Carolina	Sep-81	81-121-C
Carolina Telephone & Telegraph	North Carolina	Aug-81	P-7, Sub 652
Southern Bell	North Carolina	Aug-81	P-55, Sub 794
Woodbury Telephone Co.	Connecticut	Jul-81	810504
Central Telephone Co. of Virginia	Virginia	Jun-81	810030
United Telephone Co. of Missouri	Missouri	May-81	TR-81-302
General Telephone Co. of the SE	Virginia	Apr-81	810003
New England Telephone	Vermont	Mar-81	4546
Carolina Telephone & Telegraph	North Carolina	Aug-80	P-7, Sub 652
Southern Bell	North Carolina	Aug-80	P-55, Sub 784
General Telephone Co. of the SW	Arkansas	Jun-80	U-3138
General Telephone Co. of the SE	Alabama	May-80	17850
Southern Bell	North Carolina	Oct-79	P-55, Sub 777
Southern Bell	Georgia	Mar-79	3144-U
General Telephone Co. of the SE	Virginia	Mar-76	810038
General Telephone Co. of the SW	Arkansas	Feb-76	U-2693, U-2724
General Telephone Co. of the SE	Alabama	Sep-75	17058
General Telephone Co. of the SE	South Carolina	Jun-75	D-18269

EXHIBIT 12
APPENDIX 2
THE SENSITIVITY OF THE FORWARD-LOOKING
REQUIRED EQUITY RISK PREMIUM ON UTILITY STOCKS
TO CHANGES IN INTEREST RATES

My estimate of the required equity risk premium on utility stocks is based on studies of the discounted cash flow ("DCF") expected return on comparable groups of utilities in each month of my study period compared to the interest rate on long-term government bonds. Specifically, for each month in my study period, I calculate the risk premium using the equation

$$RP_{COMP} = DCF_{COMP} - I_B$$

where:

RP_{COMP}	=	the required risk premium on an equity investment in the comparable utilities,
DCF_{COMP}	=	average DCF expected rate of return on a portfolio of comparable utilities; and
I_B	=	the yield to maturity on an investment in long-term U.S. Treasury bonds.

Electric Company Ex Ante Risk Premium Analysis. For my electric company ex ante risk premium analysis, I begin with the Moody's group of twenty-four electric companies shown in Table 1. I use the Moody's group of electric companies because they are a widely followed group of electric utilities, and use of this constant group greatly simplifies the data collection task required to estimate the ex ante risk premium over the months of my study. Simplifying the data collection task is desirable because the ex ante risk premium approach requires that the DCF model be estimated for every company in every month of the study period. Exhibit 6 displays the average DCF expected return on an investment in the portfolio of electric companies and the yield to maturity on long-term Treasury bonds in each month of the study.

Previous studies have shown that the ex ante risk premium tends to vary inversely with the level of interest rates, that is, the risk premium tends to increase when interest rates decline, and decrease when interest rates go up. To test whether my studies also indicate that the ex ante risk premium varies inversely with the level of interest rates, I perform a regression analysis of the relationship between the ex ante risk premium and the yield to maturity on long-term Treasury bonds, using the equation,

$$RP_{COMP} = a + (b \times I_B) + e$$

where:

- RP_{COMP} = risk premium on comparable company group;
 I_B = yield to maturity on long-term U.S. Treasury bonds;
 e = a random residual; and
 a, b = coefficients estimated by the regression procedure.

Regression analysis assumes that the statistical residuals from the regression equation are random. My examination of the residuals revealed that there is a significant probability that the residuals are serially correlated (non-zero serial correlation indicates that the residual in one time period tends to be correlated with the residual in the previous time period). Therefore, I made adjustments to my data to correct for the possibility of serial correlation in the residuals.

The common procedure for dealing with serial correlation in the residuals is to estimate the regression coefficients in two steps. First, a multiple regression analysis is used to estimate the serial correlation coefficient, r . Second, the estimated serial correlation coefficient is used to transform the original variables into new variables whose serial correlation is approximately zero. The regression coefficients are then re-estimated using the transformed variables as inputs in the regression equation. Based on my regression analysis of the statistical relationship between the yield to maturity on long-term Treasury bonds and the required risk premium, my estimate of the ex ante risk premium on an investment in my proxy electric company group as compared to an investment in long-term Treasury bonds is given by the equation:

$$RP_{COMP} = 10.62 - .9153 \times I_B$$

(12.52) (-6.68)^[5] $R^2 = 24.7$ percent.

Using the 2012 forecast 4.21 percent yield to maturity on long-term Canada bonds obtained from Consensus Economics as of March 2011, the regression equation produces an ex ante risk premium equal to 6.76 percent ($10.62 - .9153 \times 4.21 = 6.76$).

Natural Gas Company Ex Ante Risk Premium Analysis. I also conduct an ex ante risk premium study applied to a natural gas proxy group following the procedures described above. To select my ex ante risk premium natural gas proxy group of companies, I use the same criteria that I use when estimating the DCF cost of equity, namely, I select all the companies in Value Line's groups of natural gas companies that: (1) paid dividends during every quarter of the last two years; (2) did not decrease dividends during any quarter of the past two years; (3) have at least three analysts included in the I/B/E/S mean growth forecast; (4) have an investment grade bond rating and a Value Line

[5] The t-statistics are shown in parentheses.

Safety Rank of 1, 2, or 3; and (5) are not the subject of a merger that has not been completed.

Exhibit 5 displays the results of my ex ante risk premium study, showing the average DCF expected return on an investment in the portfolio of natural gas companies and the yield to maturity on long-term Treasury bonds in each month.^[6]

Based on my knowledge of the statistical relationship between the yield to maturity on long-term Treasury bonds and the required risk premium, my estimate of the ex ante risk premium on an investment in my proxy natural gas companies as compared to an investment in long-term Treasury bonds is given by the equation:

$$RP_{COMP} = \frac{10.65}{(13.95)} - .883 \times I_B. \quad (-6.43)^{[7]} \quad R^2 = 21.5 \text{ percent}$$

Using the 4.21 percent forecast yield to maturity on long-term Canada bonds for 2012, the regression equation produces an ex ante risk premium equal to 6.93 percent ($10.65 - .88 \times 4.21 = 6.93$).

[6] My two ex ante risk premium studies cover slightly different time periods, with the natural gas company risk premium study extending over a longer period of time, because I began doing an ex ante study using natural gas companies before I began performing a similar study for the electric companies.

[7] The t-statistics are shown in parentheses.

TABLE 1
MOODY'S ELECTRIC COMPANIES

American Electric Power
Constellation Energy
Progress Energy
CH Energy Group
Cinergy Corp.
Consolidated Edison Inc.
DPL Inc.
DTE Energy Co.
Dominion Resources Inc.
Duke Energy Corp.
Energy East Corp.
FirstEnergy Corp.
Reliant Energy Inc.
IDACORP. Inc.
IPALCO Enterprises Inc.
NiSource Inc.
OGE Energy Corp.
Exelon Corp.
PPL Corp.
Potomac Electric Power Co.
Public Service Enterprise Group
Southern Company
Teco Energy Inc.
Xcel Energy Inc.

Source of data: *Mergent Public Utility Manual*, August 2002. Of these twenty-four companies, I do not include companies in my ex ante risk premium DCF analysis in months in which there are insufficient data to perform a DCF analysis. In addition, since the beginning period of my study, several companies have disappeared through mergers and acquisitions.

UNION GAS LIMITED
Comparison of Revenue Deficiency/(Sufficiency)
Calendar 2013 Test Year vs 2012 Bridge Year

Line No.	Particulars (\$000's)	Forecast 2013 (a)	Forecast 2012 (b)	Difference (c)	
1	Operating revenue	1,598,544	1,650,918	(52,374)	
2	Cost of service	<u>1,359,308</u>	<u>1,390,985</u>	<u>(31,676)</u>	/u
3	Utility income	239,236	259,933	(20,698)	/u
4	Requested Return	<u>291,851</u>	<u>255,643</u>	<u>36,208</u>	
5	Revenue deficiency/(sufficiency) after tax	52,615	(4,291)	56,906	/u
6	Provision for income taxes on deficiency/(sufficiency)	<u>18,009</u>	<u>(1,527)</u>	<u>19,536</u>	/u
7	Total revenue deficiency/(sufficiency)	70,625	(5,818)	76,442	/u
8	Long-term storage premium subsidy	-	-	-	
	Shareholder portion of transactional S&T margin:				
9	Short-term storage & balancing services	754	1,477	(723)	/u
10	Transportation & exchanges and other S&T services	<u>-</u>	<u>-</u>	<u>-</u>	
11	Adjusted revenue deficiency/(sufficiency)	<u><u>71,378</u></u>	<u><u>(4,341)</u></u>	<u><u>75,719</u></u>	/u

Updated: 2012-03-27

EB-2011-0210

Exhibit F3

Tab 1

Schedule 2

UNION GAS LIMITED
Statement of Indicated and Requested Rate of Return
Calendar Year Ending December 31

Line No.	Particulars (\$000's)	Forecast 2013	
1	Utility income	239,236	/u
2	Requested return	291,851	
3	Utility rate base	3,741,542	
4	Indicated rate of return (line1/line3)	6.39%	/u
5	Requested rate of return (line 2/line3)	7.80%	

UNION GAS LIMITED
Statement of Utility Income
Calendar Year Ending December 31, 2013

Line No.	Particulars (\$000's)	2013 Forecast			Utility Income (d)
		Corporate (a)	Unregulated Storage (b)	Adjustments (c)	
	Operating Revenues:				
1	Gas Sales	1,401,869	-	-	1,401,869
2	Transportation	162,055	-	-	162,055
3	Storage	97,546	97,546	11,488 ⁽¹⁾	11,488
4	Other	27,882	-	(4,750) ⁽²⁾	23,132
5	Earnings sharing	-	-	-	-
6		<u>1,689,352</u>	<u>97,546</u>	<u>6,738</u>	<u>1,598,544</u>
7	Operating Expenses:				
8	Cost of gas	698,398	2,252	1,692 ⁽³⁾	697,838 /u
9	Operating and maintenance expenses	406,854	15,143	1,518 ⁽⁴⁾	393,228 /u
10	Depreciation	206,176	9,709	-	196,467
11	Other financing	-	57	1,179 ⁽⁵⁾	1,179
12	Property taxes	65,424	1,402	-	64,022
13		<u>1,376,852</u>	<u>28,563</u>	<u>4,389</u>	<u>1,352,734</u> /u
14	Operating Income	312,500	68,983	2,349	245,810 /u
15	Other Income				
16	Gain/(loss) on sale of assets	-	-	-	-
17	Investment in HTLP	(1,000)	(1,000)	-	-
18	Gain/(loss) on foreign exchange	-	-	-	-
19	Total Other Income	<u>(1,000)</u>	<u>(1,000)</u>	<u>-</u>	<u>-</u>
20	Earnings Before Interest & Taxes	<u>311,500</u>	<u>67,983</u>	<u>2,349</u>	<u>245,810</u> /u
21	Income taxes				<u>6,574</u> /u
22	Total utility income				<u>239,236</u> /u

Notes:

- (1) Short term storage revenue
(2) Shared savings mechanism
(3) Excess utility storage space fuel costs

Charitable donations (743)
Excess utility storage space costs excluding fuel 2,261
(4) 1,518

Customer deposit interest 365
Fixed short term debt cost 814
(5) 1,179

UNION GAS LIMITED
Comparison of Revenue Deficiency/(Sufficiency)
Calendar 2012 Bridge Year vs 2011 Actual Year

Line No.	Particulars (\$000's)	Forecast 2012 (a)	Actual 2011 (b)	Difference (c)	
1	Operating revenue	1,650,918	1,710,387	(59,469)	/u
2	Cost of service	<u>1,390,985</u>	<u>1,416,602</u>	<u>(25,617)</u>	/u
3	Utility income	259,933	293,785	(33,851)	/u
4	Requested Return	<u>255,643</u>	<u>251,384</u>	<u>4,259</u>	/u
5	Revenue deficiency/(sufficiency) after tax	(4,291)	(42,401)	38,110	/u
6	Provision for income taxes on deficiency/(sufficiency)	<u>(1,527)</u>	<u>(16,694)</u>	<u>15,167</u>	/u
7	Total revenue deficiency/(sufficiency)	(5,818)	(59,095)	53,278	/u
8	Long-term storage premium subsidy	-	-	-	
	Shareholder portion of transactional S&T margin:				
9	Short-term storage & balancing services	1,477	2,283	(807)	/u
10	Transportation & exchanges and other S&T services	<u>-</u>	<u>-</u>	<u>-</u>	
11	Adjusted revenue deficiency/(sufficiency)	<u>(4,341)</u>	<u>(56,812)</u>	<u>52,471</u>	/u

Updated: 2012-03-27

EB-2011-0210

Exhibit F4

Tab 1

Schedule 2

UNION GAS LIMITED
Statement of Indicated and Requested Rate of Return
Calendar Year Ending December 31

<u>Line No.</u>	<u>Particulars (\$000's)</u>	<u>Forecast 2012</u>	
1	Utility income	259,933	/u
2	Requested return	255,643	
3	Utility rate base	3,682,830	
4	Indicated rate of return (line1/line3)	7.06%	/u
5	Requested rate of return (line 2/line3)	6.94%	

UNION GAS LIMITED
Statement of Utility Income
Calendar Year Ending December 31, 2012

Line No.	Particulars (\$000's)	2012 Forecast			
		Corporate (a)	Unregulated Storage (b)	Adjustments (c)	Utility Income (d)
	Operating Revenues:				
1	Gas Sales	1,437,998	-	-	1,437,998
2	Transportation	180,668	-	-	180,668
3	Storage	117,718	117,718	9,090 ⁽¹⁾	9,090 /u
4	Other	27,912	-	(4,750) ⁽²⁾	23,162
5	Earnings sharing	-	-	-	-
6		<u>1,764,296</u>	<u>117,718</u>	<u>4,340</u>	<u>1,650,918</u> /u
7	Operating Expenses:				
8	Cost of gas	721,684	2,176	1,720 ⁽³⁾	721,228 /u
9	Operating and maintenance expenses	396,979	14,735	1,530 ⁽⁴⁾	383,774 /u
10	Depreciation	213,025	8,880	-	204,145
11	Other financing	-	-	362 ⁽⁵⁾	362
12	Property taxes	<u>64,294</u>	<u>1,378</u>	<u>-</u>	<u>62,916</u>
13		<u>1,395,982</u>	<u>27,169</u>	<u>3,612</u>	<u>1,372,425</u> /u
14	Operating Income	368,314	90,549	728	278,493 /u
15	Other Income				
16	Gain/(loss) on sale of assets	-	-	-	-
17	Investment in HTLP	(1,000)	(1,000)	-	-
18	Gain/(loss) on foreign exchange	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
19	Total Other Income	<u>(1,000)</u>	<u>(1,000)</u>	<u>-</u>	<u>-</u>
20	Earnings Before Interest & Taxes	<u>367,314</u>	<u>89,549</u>	<u>728</u>	<u>278,493</u> /u
21	Income taxes				<u>18,560</u> /u
22	Total utility income				<u>259,933</u> /u

Notes:

- (1) Short term storage revenue
(2) Shared savings mechanism
(3) Excess utility storage space fuel costs

Charitable donations (731)
Excess utility storage space costs excluding fuel 2,261
(4) 1,530
(5) Customer deposit interest

UNION GAS LIMITED
Comparison of Revenue Deficiency/(Sufficiency)
Calendar 2011 Actual vs 2010 Actual Year

Line No.	Particulars (\$000's)	Actual 2011 (a)	Actual 2010 (b)	Difference (c)	
1	Operating revenue	1,710,387	1,725,173	(14,786)	/u
2	Cost of service	<u>1,416,602</u>	<u>1,433,824</u>	<u>(17,222)</u>	/u
3	Utility income	293,785	291,349	2,436	/u
4	Requested Return	<u>251,384</u>	<u>260,839</u>	<u>(9,455)</u>	/u
5	Revenue deficiency/(sufficiency) after tax	(42,401)	(30,510)	(11,891)	/u
6	Provision for income taxes on deficiency/(sufficiency)	<u>(16,694)</u>	<u>(13,707)</u>	<u>(2,987)</u>	/u
7	Total revenue deficiency/(sufficiency)	(59,095)	(44,217)	(14,878)	/u
8	Long-term storage premium subsidy	-	(5,351)	5,351	
	Shareholder portion of transactional S&T margin:				
9	Short-term storage & balancing services	2,283	4,842	(2,559)	/u
10	Transportation & exchanges and other S&T services	<u>-</u>	<u>-</u>	<u>-</u>	
11	Adjusted revenue deficiency/(sufficiency)	<u>(56,812)</u>	<u>(44,726)</u>	<u>(12,086)</u>	/u

Updated: 2012-03-27

EB-2011-0210

Exhibit F5

Tab 1

Schedule 2

UNION GAS LIMITED
Statement of Indicated and Requested Rate of Return
Calendar Year Ending December 31

Line No.	Particulars (\$000's)	Actual 2011	
1	Utility income	293,785	/u
2	Requested return	251,384	/u
3	Utility rate base	3,583,258	/u
4	Indicated rate of return (line1/line3)	8.20%	/u
5	Requested rate of return (line 2/line3)	7.02%	/u

UNION GAS LIMITED
Statement of Utility Income
Calendar Year Ending December 31, 2011

Line No.	Particulars (\$000's)	2011 Actual			Utility Income (d)	
		Corporate (a)	Unregulated Storage (b)	Adjustments (c)		
	Operating Revenues:					
1	Gas Sales	1,484,768	-	(2,030) ⁽¹⁾	1,482,738	/u
2	Transportation	193,795	-	(190) ⁽¹⁾	193,605	/u
3	Storage	116,314	116,314	10,964 ⁽²⁾	10,964	/u
4	Other	34,226	-	(11,146) ⁽³⁾	23,080	/u
5	Earnings sharing	(16,314)	-	16,314 ⁽⁴⁾	-	
6		<u>1,812,789</u>	<u>116,314</u>	<u>13,912</u>	<u>1,710,387</u>	/u
7	Operating Expenses:					
8	Cost of gas	755,265	(215)	461 ⁽⁵⁾	755,941	/u
9	Operating and maintenance expenses	384,773	14,716	1,674 ⁽⁶⁾	371,731	/u
10	Depreciation	204,344	8,731	(136) ⁽¹⁾	195,477	/u
11	Other financing	-	-	343 ⁽⁷⁾	343	/u
12	Property taxes	62,057	1,357	-	60,700	/u
13		<u>1,406,439</u>	<u>24,589</u>	<u>2,342</u>	<u>1,384,192</u>	/u
14	Operating Income	406,350	91,725	11,570	326,195	/u
15	Other Income					
16	Gain/(loss) on sale of assets	6,322	(115)	(6,402) ⁽¹⁾	35	/u
17	Investment in HTLP	(1,165)	(1,165)	-	-	/u
18	Gain/(loss) on foreign exchange	701	27	-	674	/u
19	Total Other Income	<u>5,858</u>	<u>(1,253)</u>	<u>(6,402)</u>	<u>709</u>	/u
20	Earnings Before Interest & Taxes	<u>412,208</u>	<u>90,471</u>	<u>5,168</u>	<u>326,904</u>	/u
21	Income taxes				<u>33,119</u>	/u
22	Total utility income				<u>293,785</u>	/u

Notes:

- (1) St. Clair Line activity
- (2) Short term storage revenue
- (3) Shared savings mechanism
- (4) Earnings sharing
- Excess utility storage space fuel costs 803 /u
- St. Clair Line activity (342)
- (5) 461 /u
- Charitable donations (587) /u
- Excess utility storage space costs excluding fuel 2,261
- (6) 1,674 /u
- (7) Customer deposit interest

UNION GAS LIMITED
Comparison of Revenue Deficiency/(Sufficiency)
Calendar Calendar 2010 Actual Year vs 2007 Board-Approved

Line No.	Particulars (\$000's)	Actual Year 2010 (a)	Board - Approved 2007 (b)	Difference (c)
1	Operating revenue	1,725,173	1,966,854	(241,681)
2	Cost of service	<u>1,433,824</u>	<u>1,718,440</u>	<u>(284,616)</u>
3	Utility income	291,349	248,414	42,935
4	Requested Return	<u>260,839</u>	<u>259,490</u>	<u>1,349</u>
5	Revenue deficiency/(sufficiency) after tax	(30,510)	11,076	(41,586)
6	Provision for income taxes on deficiency/(sufficiency)	<u>(13,707)</u>	<u>6,263</u>	<u>(19,970)</u>
7	Total revenue deficiency/(sufficiency)	(44,217)	17,339	(61,556)
8	Long-term storage premium subsidy	(5,351)	(19,265)	13,914
	Shareholder portion of transactional S&T margin:			
9	Short-term storage & balancing services	4,842	1,583	3,259
10	Transportation & exchanges and other S&T services	<u>-</u>	<u>343</u>	<u>(343)</u>
11	Adjusted revenue deficiency/(sufficiency)	<u>(44,726)</u>	<u>(0)</u>	<u>(44,726)</u>

UNION GAS LIMITED
Statement of Indicated and Requested Rate of Return
Calendar Year Ending December 31

Line No.	Particulars (\$000's)	Actual 2010
1	Utility income	291,349
2	Requested return	260,839
3	Utility rate base	3,570,303
4	Indicated rate of return (line1/line3)	8.16%
5	Requested rate of return (line 2/line3)	7.31%

UNION GAS LIMITED
Statement of Utility Income
Calendar Year Ending December 31, 2010

Line No.	Particulars (\$000's)	2010 Actual			Utility Income (d)
		Corporate (a)	Unregulated Storage (b)	Adjustments (c)	
	Operating Revenues:				
1	Gas Sales	1,497,451	-	-	1,497,451
2	Transportation ⁽¹⁾	183,657	-	(326)	183,331
3	Storage ⁽²⁾	123,904	123,904	20,887	20,887
4	Other ⁽³⁾	28,913	-	(5,409)	23,504
5	Earnings sharing	(4,149)	-	4,149	-
6		<u>1,829,776</u>	<u>123,904</u>	<u>19,301</u>	<u>1,725,173</u>
7	Operating Expenses:				
8	Cost of gas ⁽⁴⁾	793,775	669	2,443	795,549
9	Operating and maintenance expenses ⁽⁵⁾	363,410	13,339	1,563	351,634
10	Depreciation	198,821	8,645	-	190,176
11	Other financing ⁽⁶⁾	-	-	621	621
12	Property taxes	66,791	1,661	-	65,130
13		<u>1,422,797</u>	<u>24,314</u>	<u>4,627</u>	<u>1,403,110</u>
14	Operating Income	406,979	99,590	14,674	322,063
15	Other Income				
16	Gain/(loss) on sale of assets	(399)	(400)	-	1
17	Investment in HTLP	(1,067)	(1,067)	-	-
18	Gain/(loss) on foreign exchange	(520)	(19)	-	(501)
19	Total Other Income	<u>(1,986)</u>	<u>(1,486)</u>	<u>-</u>	<u>(500)</u>
20	Earnings Before Interest & Taxes	<u>404,993</u>	<u>98,104</u>	<u>14,674</u>	<u>321,563</u>
21	Income taxes				<u>30,214</u>
22	Total utility income				<u>291,349</u>

Note:

(1)	St. Clair Line activity	(326)
(2)	Short term storage revenue	20,887
(3)	Shared savings mechanism	(5,409)
	Excess utility storage space fuel costs	1,873
	St. Clair Line activity	(342)
	Accounting adjustment	912
(4)		<u>2,443</u>
	Charitable donations	(698)
	Excess utility storage space costs excluding fuel	<u>2,261</u>
(5)		1,563
(6)	Customer deposit interest	621

UNION GAS LIMITED
Short-Term Storage Revenue and Costs
Year Ending December 31

Line No.	Particulars (\$000's)	Board - Approved 2007 (a)	Actual 2010 (b)	Actual 2011 (c)	Forecast 2012 (d)	Forecast 2013 (e)	
1	Short-term storage revenue ⁽¹⁾	17,962	20,887	10,964	9,090	11,488	/u
2	Excess utility storage space fuel costs ⁽²⁾	(1,532)	(1,873)	(803)	(1,720)	(1,692)	/u
3	Excess utility storage space costs excluding fuel ⁽³⁾	<u>(599)</u>	<u>(2,261)</u>	<u>(2,261)</u>	<u>(2,261)</u>	<u>(2,261)</u>	
4	Cost of service excluding return	<u>15,831</u>	<u>16,753</u>	<u>7,900</u>	<u>5,109</u>	<u>7,535</u>	/u
5	Ratepayer portion ⁽⁴⁾	14,248	11,911	5,617	3,632	6,782 ⁽⁵⁾	/u
6	Shareholder portion	1,583	4,842	2,283	1,477	754 ⁽⁵⁾	/u

Note:

(1) Exhibit C1, Schedule 5, Line 12.

(2) Exhibit D3-D6, Tab 2, Schedule 1, Line 15.

(3) Exhibit D1, Summary Schedule 2, Line 33.

(4) 2007 = 90%, 2010-12 = 71.1% (EB-2005-0551), 2013 = 90% (EB-2011-0038).

/u

(5) 2013 portions will be updated as part of phase II evidence.