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REBUTTAL TESTIMONY

OF

ROGER A. MORIN

Before the Missouri Public Service Commission

On behalf of Union Electric Co.

d/b/a AmerenUE

Case No. ER-2010-0036

ROE Considerations

February 11, 2010

Rebuttal Testimony of
Roger Morin

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I. INTRODUCTION

Q. Please state your name.

A. Dr. Roger A. Morin.

Q. Are you the same Dr. Roger A. Morin who provided pre-filed direct testimony in this proceeding on behalf of Union Electric Company d/b/a AmerenUE ("UE," or "Company")?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. This rebuttal testimony responds to the direct rate of return testimonies of Mr. David Murray on behalf of the Staff of the Missouri Public Service Commission; Mr. Michael P. Gorman on behalf of Missouri Industrial Energy Consumers; and Mr. Daniel J. Lawton on behalf of the Missouri Office of the Public Counsel.

Q. Can you describe how your Rebuttal Testimony is organized?

A. My rebuttal testimony is organized in three sections, corresponding to each of the aforementioned individuals. I also provide an updated recommendation in view of the changes that have occurred in capital market conditions since I prepared my original testimony.

Q. Please summarize the rate of return on common equity ("ROE") recommendations of the three witnesses you are rebutting in this case, along with your own.

A. The ROEs recommended by each witness in this case, including my own updated recommendation, are as follows:

	Range	Recommended ROE
Mr. Murray	9.0% - 9.7%	9.35%
Mr. Gorman	9.5% - 10.5%	10.00%
Mr. Lawton	9.3% - 10.9%	10.20%
Dr. Morin	N/A	10.8%

I would note that during the past two years, the average allowed ROEs for integrated electric utilities by state commissions have stayed very consistent, as have the ranges:

2008-09 Range of Allowed ROEs	10.0% - 11.25%[1]
2009 Average of Allowed ROEs	10.59%[2]

My general reaction to the recommendations of the other witnesses in this case is that even before correcting for inconsistencies in their analyses, the upper end of both Mr. Gorman's (10.5%) and Mr. Lawton's (10.9%) recommended ranges are very close to my updated recommendation (10.8%). Mr. Murray's recommendation is clearly the outlier in this case, and it contains a large number of errors, inconsistencies and problems. Consequently, I will direct the majority of my rebuttal comments to Mr.

[1] Regulatory Research Associates ("RRA"), Regulatory Focus, January 12, 2009; January 8, 2010 (attached to this testimony as Schedules RAM-ER10 and RAM-ER11). The range eliminates Orange and Rockland Utilities and United Illuminating in Connecticut, as they are distribution only utilities, and Mid-American Energy, which received a stipulated ROE relating to a generation project in Iowa.

[2] *Id.*

Murray's testimony. While I agree with several, but not all, of Mr. Gorman's and Mr. Lawton's procedures and methodologies, I will also address their recommendations in more detail after addressing Mr.Murray's.

At the outset, I would note that I was very surprised by Mr. Murray's extremely low recommendation in this case given that it is less than Public Counsel's, a very rare occurrence in my experience. Moreover, as I show later, Mr. Murray's recommendation is far lower than any ROE recently granted for an electric utility by the Commission, and is far outside the allowed ROEs being allowed by regulatory commissions across the country. As pointed out above, the allowed ROE for integrated electric utilities by state commissions ranged from 10.0% to 11.25% in 2008 - 2009. I also note that no integrated electric utility has received an allowed ROE below 10% during those two years, and as noted earlier the average allowed ROE was 10.59% for 2009. Moreover, the average authorized ROE for the electric utility industry as a whole is 10.7%, as published in AUS Utility Reports, December 2009. Finally, I note that Staff recommended an ROE of 10.26% in a recent Empire District Electric Company case (Case No. ER-2008-0093), and the Commission allowed 10.8%. These ROEs differ markedly from Mr. Murray's extremely low recommendation in this case.

II. REBUTTAL OF MR. MURRAY'S TESTIMONY

Q. Please summarize the recommended ROE of Mr. Murray.

A. Mr. Murray recommends an ROE for UE of only 9.35%, which is the midpoint of Mr. Murray's range of 9.00% – 9.70%. His recommendation is based primarily on the results of his two Discounted Cash Flow ("DCF") analyses. The first DCF analysis relies on the conventional constant growth DCF model applied to a group of twelve electric

utilities. As summarized on Schedule 15 of his testimony,[3] the constant growth DCF study produces an estimated ROE in the range of 9.2% - 10.2 %. Mr. Murray then rejects the result of this conventional DCF analysis, despite the fact that the Commission has relied heavily upon the constant growth DCF model in the past, and relies instead on a Two-Stage DCF analysis of the same group of companies. Mr. Murray performs one formal check on his DCF estimate, based on the Capital Asset Pricing Model ("CAPM") methodology, but ignores the results of this analysis. Based on these analyses, as summarized on page 36 of his testimony, Mr. Murray concludes that the ROE for UE lies in the range of 9.0% - 9.7% with a midpoint of 9.35%.

Q. Please summarize your specific criticisms of the ROE recommended by Mr. Murray.

A. The ROE recommended by Mr. Murray significantly understates an appropriate ROE for UE for the following reasons:

i. Mr. Murray's Recommended ROE for UE is Well Outside of the Mainstream for Electric Utilities. The ROE recommended by Mr. Murray for UE is well outside the range of currently authorized ROEs for electric utilities in the United States and outside the zone of currently authorized ROEs for Mr. Murray's own sample of comparable companies.

ii. Mr. Murray Uses Ambiguous and Arbitrary Growth Rates for Each Utility in His DCF Analysis. Mr. Murray's DCF estimates are unreliable because he has selected growth rates in his comparable group that are ambiguous, arbitrary and impossible to replicate.

iii. Mr. Murray Erroneously Relies on Historical Growth Rates in His DCF Analysis. Mr. Murray understates his DCF estimates by erroneously using historical growth rates that have little relevance as proxies for future long-term growth forecasts in the DCF model.

[3] References to Mr. Murray's Schedules are references to the Schedules in the "An Analysis of the Cost of Capital" section of the Staff's Cost of Service Report Appendices.

iv. Mr. Murray Erroneously Relies on Negative Historical Growth Rates in His DCF Analysis. Mr. Murray understates his DCF estimates by improperly relying on negative historical growth rates.

v. Mr. Murray Should have Relied on Prospective Growth Rates in His DCF Analysis. Proper recognition of analysts' growth forecasts raises his DCF estimates substantially.

vi. Mr. Murray's DCF Schedules Contain Several Arithmetic Errors Which Cast a Dark Shadow on the Reliability of His Results.

vii. Mr. Murray Improperly Discards His Results from the Conventional DCF Model, Which is the Model Most Consistently Relied Upon by ROE Analysts and State Regulatory Commissions, Including this Commission.

viii. Mr. Murray Relies on the Wrong Long-Term Growth Rate in His Two-Stage DCF Analysis. The DCF analysis requires that growth rates be based on earnings/dividend growth, not on electricity demand growth. Moreover, Mr. Murray's selected growth rate is quite inconsistent with history, and indeed is inconsistent with the source Mr. Murray used to derive inputs in other of his analyses.

ix. Mr. Murray Should Have Relied on the Quarterly Version of the DCF Model Rather Than the Annual Version. Failure to use the quarterly version of the DCF understates the DCF results because it ignores the time value of quarterly dividend payments, as the Commission has recognized.

x. Mr. Murray's Proxy for the Risk-Free Rate in the CAPM Analysis is Stale. More recent data indicates that the risk free rate is 50 basis points higher, which is substantially consistent with the risk-free rate that Mr. Gorman used in his analyses.

xi. Mr. Murray Improperly Uses Total Bond Returns Rather Than the Income Component of Bond Returns in his Estimate of the Market Risk Premium ("MRP") Component of his CAPM Analysis. It is necessary to use the income return on government bonds as an estimate of the market risk premium in the CAPM analysis, because bond investors focus on income rather than realized capital gains/losses.

xii. Mr. Murray Improperly Uses the Geometric Mean Market Risk Premium Rather Than the Arithmetic Mean MRP in his CAPM Analysis. Mr. Murray understates his CAPM estimates because he improperly uses the geometric mean MRP rather than the arithmetic mean MRP. As the Morningstar publication from which Mr. Murray himself derives his MRP estimate explains, use of geometric means is inappropriate and understates the MRP.

xiii. Mr. Murray Erroneously Relies Upon the Plain Vanilla Version of the CAPM. Mr. Murray erroneously relies upon the plain vanilla version of the CAPM, a model known to understate return requirements for low beta firms, such as UE.

xiv. Actuarial Data Utilized For Pension Fund Accounting, Which Mr. Murray Cites, Are Irrelevant In Estimating A Utility's Cost Of Capital. Mr. Murray's citation of projected returns on one pension fund's investment (which reflects a portfolio of diversified investments, not a fair ROE for one stock) is irrelevant to setting an allowed return for a regulated utility.

As I show below, correction of these errors would increase the range of Mr. Murray's constant growth DCF results by 230 basis points, the range of Mr. Murray's multi-stage growth DCF by 300 basis points, and the range of Mr. Murray's CAPM results by 272 basis points. It will be clear from my rebuttal comments that Mr. Murray's logic of arriving at a range of 9% to 9.7% is demonstrably flawed because it relies on analyses that are understated by a minimum of 200 basis points.

i. MR. MURRAY'S RECOMMENDED ROE FOR UE IS WELL OUTSIDE OF THE MAINSTREAM FOR ELECTRIC UTILITIES

Q. Dr. Morin, can you comment on recent decisions regarding allowed ROEs for vertically integrated electric utilities like AmerenUE?

A. Yes, I can. Allowed ROEs, although not a precise indication of a utility's cost of equity capital, are nevertheless important determinants of investor growth perceptions and investor expected returns. They also serve to provide some perspective on the validity and reasonableness of Mr. Murray's recommended ROE. Using Regulatory Research Associates (now SNL) reported data for ROE decisions rendered for 2009, the average allowed ROE for integrated electric utilities was 10.59%. These ROE decisions are well in excess of Mr. Murray's recommended 9.35%.

Q. Is Mr. Murray's recommended ROE for UE consistent with the average authorized ROE of the electric utilities in Mr. Murray's comparable group?

A. No, it is nowhere near. The AUS Utility Reports survey for December 2009 reports that the average authorized ROE is 10.7% for both the combination gas and electric industry and the overall electric utility industry. Fifty-seven (57) of the 58 authorized ROEs reported by AUS Utility Reports exceed Mr. Murray's 9.35% recommendation. If we remove the less risky "wires" electric utilities from the AUS sample, the currently authorized returns are substantially higher.

Moreover, Mr. Murray's recommended ROE for UE is below the authorized ROE of each electric utility in Mr. Murray's comparable group and far below the average authorized ROE of 10.9% for the same group, as shown on the table below. Given that UE is a vertically integrated electric utility and not a "wires" utility, Northeast Utilities should be excluded from the group, and the average allowed ROE for the integrated electric utilities becomes 11.0%.

Mr. Murray's Group of Electric Utilities

	Company Name	Allowed ROE
1	Alliant Energy	11.02
2	American Electric Power	10.71
3	Cleco Corporation	10.70
4	DPL Inc.	11.00
5	IDACORP	10.50
6	Northeast Utilities	9.72
7	PG&E Corp	11.35
8	Pinnacle West Capital	10.75
9	Progress Energy	12.42
10	Southern Company	11.93
11	Westar Energy	10.00
12	Xcel Energy	10.76
	AVERAGE	**10.91**
	AVERAGE w/o Northeast Utilities	**11.01**

Source: AUS Utility Reports 12/2009

Although decisions of other regulatory bodies regarding authorized ROEs do not bind this Commission, one cannot overlook the glaring difference between Mr. Murray's recommended ROE and the ROEs currently authorized for the electric utility industry. One also cannot overlook the fact that those allowed ROEs also impact investor expectations, which are driven in part by the ROEs being allowed by utility commissions across the country, which in turn impact both access to and the cost of equity capital.

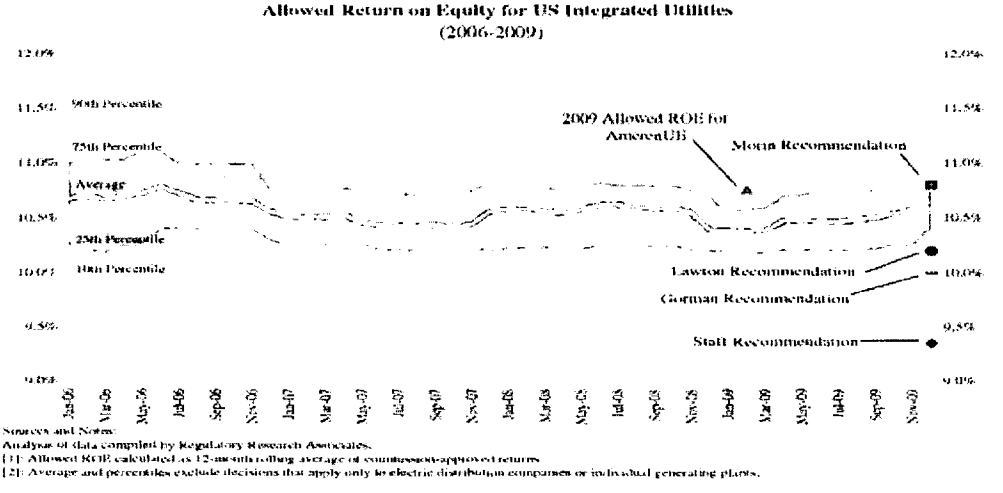
Q. What ROE did Staff recommend in a recent Empire District Electric Company Case?

A. In Case No. ER-2008-0093, Staff recommended an ROE range of 9.72% - 10.80% with a midpoint of 10.26%, which is substantially higher than Mr. Murray's very low recommendation of 9.35%. Mr. Murray, who is testifying on behalf of Staff, did not

provide any explanation for the substantial divergence of his opinion from Staff's testimony in the very recent Empire District case, and from the Commission's very recent Empire District decision on ROE (approving a 10.8% ROE).

Q. Is Mr. Murray's recommended ROE significantly lower than other ROEs approved by the Commission in recent cases?

A. Yes. Set forth below is a chart depicting industry average ROEs approved in recent Commission cases for all of Missouri's electric utilities, and ROEs recommended by all the ROE witnesses in this case. As the chart shows, Mr. Murray's recommendation is a clear outlier, and indeed is off the charts.[4]



[4] As I discuss later, Mr. Gorman's and Mr. Lawton's recommendations will also fail to meet the expectations of those who provide equity to the Company, in that they are also below the 10th percentile of allowed ROEs nationally.

ii. MR. MURRAY USES AMBIGUOUS AND ARBITRARY GROWTH RATES IN HIS CONVENTIONAL DCF ANALYSIS

Q. What specific DCF methodologies does Mr. Murray use to estimate an ROE for UE equity?

A. Mr. Murray first applies a conventional constant growth DCF analysis to one sample of twelve electric utilities. Second, Mr. Murray applies a two-stage DCF analysis using the same group of companies.

For the conventional DCF analysis, Mr. Murray bases the expected dividend yield component on a 3-month average stock price, as shown on Schedule 14. For the growth component, Mr. Murray examines a broad array of growth rate estimates, including (i) 5-year and 10-year historical growth rates in book value, earnings, and dividends (Schedule 10-3), (ii) Value Line book value, earnings, and dividends growth forecasts (Schedule 11), and (iii) analysts' growth forecasts (Schedule 12 Column 2).

Adding the average dividend yield component of 5.2% to the arbitrary average growth component of 3.95%, Mr. Murray produces a DCF estimate of 9.14% for the group of electric utilities. However, at the bottom of Schedule 15, Mr. Murray reverses course. From the smorgasbord of growth rates reported on Schedules 10 to 13, Mr. Murray pulls out of thin air a growth range of 4.0% - 5.0% instead of the 3.95% average growth rate reported in that same table. Adding the dividend yield of 5.2% to the growth range of 4.0% - 5.0% produces the DCF range of 9.2% - 10.2% estimated by Mr. Murray.

Q. Did you attempt to replicate Mr. Murray's DCF growth range of 4.0% - 5.0%?

A. Yes, but I was unable to replicate the analysis. Mr. Murray reports the following average

growth rates for his comparable group of utilities:

	Growth Proxies	Estimate	Reference
1	10-yr historical Book Value	1.63%	Schedule 10-1
2	10-yr historical Dividend	-0.46%	Schedule 10-1
3	10-yr historical Earnings	1.17%	Schedule 10-1
4	5-yr historical Book Value	4.42%	Schedule 10-2
5	5-yr historical Dividend	-0.21%	Schedule 10-2
6	5-yr historical Earnings	3.17%	Schedule 10-2
7	VL Projected dividend	4.50%	Schedule 11
8	VL Projected earnings	5.75%	Schedule 11
9	VL projected Book Value	4.42%	Schedule 11
10	Analyst projections	6.29%	Schedule 12

The growth rates range from -0.46% to 6.29%, with a midpoint of 2.92%. The average growth rate from all the proxies is 3.07% and the median is 3.8%

From this array of growth rate estimates, Mr. Murray arbitrarily selects, with little formal substantiation, a DCF growth range of 4.0% - 5.0%. Not only is it unclear how the growth rates reported in the above table square with the final choice of a 4.0% - 5.0% growth range, but there are several anomalies in his choice of growth rates discussed below.

iii. MR. MURRAY ERRONEOUSLY RELIES ON HISTORICAL GROWTH RATES IN HIS DCF ANALYSIS

Q. Please discuss the use of historical growth rates in applying the DCF model to energy utilities.

A. The first anomaly is that historical growth rates have little relevance as proxies for long-term growth forecasts. because (1) such historical growth patterns are *already incorporated* in analysts' growth forecasts that should be used in the DCF model, and are

therefore redundant, and (2) structural changes in the energy industry, including mergers, restructuring, and competition, have made these historical growth rates inappropriate.

Q. What did Staff have to say on historical growth rates in a recent Empire District Electric case?

A. In a 2008 Empire District Electric rate case, Staff witness Matthew J. Barnes rejected historical growth rates and gave complete weight to the projected growth rates. I agree with this position. It is not clear as to why Mr. Murray's position on DCF growth rates in this case differs so markedly from Staff's position in previous cases. Neither does Mr. Murray provide any support for his position.

iv. MR. MURRAY ERRONEOUSLY RELIES ON NEGATIVE HISTORICAL GROWTH RATES IN HIS DCF ANALYSIS

Q. Are negative growth rates appropriate to employ in a DCF analysis?

A. No, they are not. The second anomaly in Mr. Murray's choice of growth rates is that he incorporates nineteen (19) negative growth rates in computing his average historical growth rates shown on Schedules 10-1 and 10-2. Such negative growth rates are quite contrary to the constant perpetual positive-growth assumption that is at the core of the DCF model. The notion of perpetual negative growth rates is illogical for a regulated utility. It is also inconsistent with Mr. Murray's sample selection process where he directly states that he eliminates companies that have reduced dividends since 2006. If cutting dividends is a disqualifier for sample inclusion, then logical consistency requires that Mr. Murray eliminate negative growth rates and the resulting DCF estimate increases by 80 basis points.

If we eliminate the negative growth rates from the computation of 5-year and

10-year historical averages from Mr. Murray's Schedule 10-3, the average growth rate shown at the bottom of Column 3 on Schedule 10-3 goes from 1.74% to 3.38%, and the average of historical and projected growth rates of 3.88% shown at the bottom of Column 5 of Schedule 13 increases from 3.9% to 4.7%. The net result is that Mr. Murray's DCF estimates on Schedule 15 increase by 80 basis points.

v. MR. MURRAY SHOULD HAVE RELIED ON PROSPECTIVE GROWTH RATES IN HIS DCF ANALYSIS

Q. What growth rates should Mr. Murray have relied upon in his DCF analysis?

A. Published studies in the academic literature demonstrate that (i) analysts' growth rate forecasts are reasonable indicators of investor expectations and (ii) investors rely on such forecasts. Cragg and Malkiel present detailed empirical evidence that (i) the average analysts' growth rate forecast is a better predictor of investor expectations than are historical growth rates; (ii) the average analysts' growth rate forecast represents the best possible source of DCF growth rate forecasts; and (iii) historical growth rates do not contain any information not already included in analysts' growth rate forecasts.[5] Other studies confirm the superiority of analysts' growth rate forecasts over historical growth extrapolations.[6]

Q. What do you conclude from Mr. Murray's DCF growth rate analysis?

A. Although Mr. Murray reports and discusses historical growth rates, it is difficult to discern to what extent, if any, Mr. Murray relies on historical growth rates. To the extent

[5] Malkiel Burton & John Cragg, *Expectations and the Structure of Share Prices* (1982).
[6] James Vander Weide & Willard Carleton, "Investor Growth Expectations: Analysts vs. History," *The Journal of Portfolio Management* (Spring 1988); Stephen Timme & Peter Eisemann, "On the Use of Consensus Forecasts of Growth in the Constant Growth Model: The Case of Electric Utilities," *Financial Management* (Winter 1989).

Mr. Murray relies on historical growth rates, he does so in error.

One would expect that averages of analysts' earnings growth forecasts, such as those contained in IBES, First Call, Reuters, or Zacks, are more reliable estimates of the investors' consensus expectations than either historical growth rates or one particular firm's dividend growth forecast. As discussed above, the empirical finance literature has demonstrated that consensus analysts' growth forecasts (i) are reflected in stock prices, (ii) possess a high explanatory power of equity values, and (iii) are used by investors.

Moreover, it is necessary to use earnings forecasts rather than dividend forecasts because of the extreme scarcity of dividend forecasts compared to the availability of earnings forecasts. Given the paucity and variability of dividend forecasts, use of dividend forecasts produces unreliable DCF results.

Use of analyst growth forecasts (as used by Staff in prior cases) would have generated an average growth rate forecast in the range of 5.8% - 6.3% for Mr. Murray's sample group of electric utilities[7], and not the 4.0% - 5.0% arbitrary range shown on Mr. Murray's Schedule 15. Growth rate forecasts of 5.8% - 6.3% instead of 4.0% - 5.0% would raise Mr. Murray's DCF estimates by at least 1.3% (130 basis points) from 9.2% - 10.2% to the 10.5% - 11.5% range for his group of electric utilities.

Q. Did you notice any inconsistency in Mr. Murray's choice of DCF growth rates?

[7] See Murray Schedule 13, columns 2 and 4 averages. The average analysts' growth forecasts are 5.8% from Value Line and 6.3% from Reuters.

A. Yes, I did. On page 26 lines 10-11 of his direct testimony, Mr. Murray states unequivocally that his two-stage DCF analysis "*give*[s] *full weight to the analysts' earning growth estimates*...."

It is not clear why Mr. Murray chose not to apply the same logic in his conventional DCF analysis.

vi. MR. MURRAY'S DCF SCHEDULES CONTAIN SEVERAL ARITHMETIC ERRORS WHICH CAST A SHADOW ON THE RELIABILITY OF HIS RESULTS

Q. Did you notice any arithmetic errors in Mr. Murray's DCF Schedules?

A. Yes, I notice several errors and discrepancies:

1. On Schedule 10-2, the average of 3.17% shown at the bottom of the column labeled EPS is 3.45% and not the 3.17% shown.

2. On Schedule 15, the average growth rates shown in Column 4 are drawn from Column 5 of Schedule 13 for each individual company. However, the growth numbers shown for Westar Energy and Xcel Energy on Schedule 15 do not match those from Schedule 13. I was unable to reconcile these estimates.

3. The average calculation for the DPS, EPS, and BVPS growth rates on Schedules 10-2, 10-3, and 11 relies on the Excel function "AVERAGEA" instead of "AVERAGE", which assumes that non-numerical entries are zero. For example, a series of 9 positive figures and 1 "NMF" figure would be summed and divided by 10. Mr. Murray's choice of the wrong Excel function understates the historical EPS growth rates by some 28 basis points on Schedule 10-2.

4. The standard deviation calculations shown on the same spreadsheets suffer from the same problem. Mr. Murray should have used the "STDEV" Excel function instead of the STDDEVPA function.

5. Column 9 for Schedule 17 contains another inconsistency. The Internal Rate of Return formula used for IDACORP, namely IRR (cash flows, 0.10) is not the same as the formula used for the remaining companies, namely IRR (cash flows, 0.11).

It is difficult to assess the impact of all these careless arithmetic errors on the reliability of Mr. Murray's overall results and recommendation, but they certainly cast a dark shadow on the reliability of his recommendation.

vii. MR. MURRAY IMPROPERLY DISCARDS HIS RESULTS FROM THE CONVENTIONAL DCF MODEL

Q. Do you agree with Mr. Murray's dismissal of his DCF results based on the conventional DCF model?

A. No, I do not. On page 24 of his direct testimony, Mr. Murray discounts the results from his conventional DCF analysis, despite the fact that the conventional DCF analysis is well-recognized by this Commission and others as a reliable tool to use in estimating the cost of equity for utilities. He argues that analysts' growth forecasts are overstated because of the large investment cycle of the electric utility industry, and are therefore unsustainable. He thus believes that a multistage DCF methodology is superior.

I was astonished by this rationale to dismiss the conventional DCF results. In fact, the very opposite is true. When a utility embarks on a large multi-year construction program, near-term growth forecasts understate, and not overstate, the long-term growth prospects of a regulated utility. This is because large capital additions have the effect of

temporarily depressing earned returns, earnings, and earnings growth, and therefore dividend growth. To wit, utility dividend payout policies have declined in recent years and are expected to continue declining in response to massive needs of internal financing. Indeed, Ameren Corporation, UE's parent company, substantially cut its dividend in early 2009.

viii. MR. MURRAY RELIES ON THE WRONG LONG-TERM GROWTH RATE IN HIS TWO-STAGE DCF ANALYSIS

Q. Do you agree with Mr. Murray's two-stage DCF analysis?

A. While I certainly agree with the general validity of the two-stage DCF methodology and agree with Mr. Murray's input data for the first growth stage, I have some serious disagreements with the key input data Mr. Murray used in the second growth stage, namely, the long-term growth estimate of 3.1%. Mr. Murray bases the latter on the Energy Information Administration's ("EIA") projected demand for electricity of 1% over the 2007-2030 period plus an inflation premium of 2.1%. I note that Mr. Murray's very low estimate of 3.1% is far less than Mr. Gorman's estimate of 4.7% and Mr. Lawton's estimate of 5.11%.

Q. Did you notice any inconsistency in Mr. Murray's choice of long-term growth rate in his Two-Stage DCF analysis?

A. Yes, I did. I was confused by Mr. Murray's reference on page 23, lines 1-4 to a 2.5% long-term growth projection in real growth by EIA. Yet, on page 26 he chooses to rely on an EIA projection of 1.0% in real growth in his two-stage DCF analysis.

Q. Do you agree with Mr. Murray's very low 3.1% long-term growth estimate in the second stage of the two-stage DCF analysis?

A. No, I do not. First, it is based on demand growth and not on earnings/dividends growth as *required* by the DCF model. Second, it is quite inconsistent with history. Mr. Murray should have compared his utility growth rate forecasts with the historical long-term growth of the economy as a whole and/or the long-range growth forecasts in gross domestic product ("GDP") projected for the very long-term.

A long-term forecast of nominal growth in GDP can be formulated by combining a long-term inflation estimate with a long-term real growth rate forecast as follows:

GDP Nominal Growth = GDP Real Growth + Expected Inflation

The growth rate in U.S. real GDP has been reasonably stable over time. Therefore, its historical performance can be used as a reasonable estimate of expected long-term future performance. The growth in real GDP for the 1929-2008 period was approximately 3.5%.

The long-term expected inflation rate can be obtained by comparing the yield on long-term U.S. Treasury bonds with the yield on inflation-adjusted bonds of the same maturity. The current yield on 20-year Treasury bonds as of December 2009 is 4.6%, and the yield on inflation-adjusted bonds ("Treasury Inflation Protected Securities," or "TIPS") for the same maturity is 2.1%. The difference between the two securities yields an approximate inflation rate of 2.5% (4.6% – 2.1% = 2.5%).

Using the above formula, the long-term expected GDP nominal growth is 6.0% (3.5% + 2.5% = 6.0%). In sum, Mr. Murray's growth forecast of only 3.1% for his comparable group of electric utilities understates the long-term expected GDP nominal growth by approximately 300 basis points.

I should also point out that the same source used by Mr. Murray to derive the market risk premium in the CAPM analysis, namely Morningstar's *Stocks, Bond, Bills and Inflation 2009 Yearbook Valuation Edition*, uses 6.0%, as its estimate of the U.S. economy long-term growth rate, and *not* the 3.1% used by Mr. Murray.

Q. How would Mr. Murray's DCF results change if the appropriate long-term GDP growth forecast is used in his two-stage DCF analysis?

A. Using the GDP long-term growth forecast of 6.0% in Mr. Murray's second-stage DCF analysis show on Schedule 17 instead of his forecast of 3.1% raises his DCF estimates by nearly 300 basis points.

ix. MR. MURRAY SHOULD HAVE RELIED ON THE QUARTERLY VERSION OF THE DCF MODEL RATHER THAN THE ANNUAL VERSION

Q. What is the appropriate form of the DCF model?

A. The two annual DCF models used by Mr. Murray ignore the time value of quarterly dividend payments and assume that dividends are paid once a year at the end of the year. Since investors are aware of the quarterly timing of dividend payments, this knowledge is reflected in stock prices. As I show in Chapter 11 of my book, *The New Regulatory Finance*, the use of the annual version of the DCF model understates the cost of equity by approximately 20 basis points, depending on the magnitude of the dividend yield component.

By analogy, a bank rate on deposits that does not take into consideration the timing of the interest payments understates the true yield if you receive the interest payments more than once a year. The actual yield will exceed the stated nominal rate.

To illustrate, if an investor has a choice between investing $1,000 in a bank account which promises a return of 10% compounded annually and another bank account which promises a return of 10% but compounded quarterly, he will clearly select the latter. Due to the quarterly compounding of interest, the investor earns an effective return of 10.38% on the latter bank account versus 10% on the former. The same is true for the return on common stocks.

Despite the Commission's support of the quarterly form of the DCF model in past cases, Mr. Murray chose not to rely on this model and has thus understated investor returns by 20 basis points in his DCF analyses from this source alone.

Mr. Murray's only rationale for this omission is that the published Value Line dividend yield does not reflect quarterly compounding. Value Line is a provider of capital market data and it is up to the analyst to make proper use of the data and not up to Value Line. Proper use of the Value Line data in the context of determining an ROE for a regulated utility requires an adjustment to account for the quarterly payment of dividends.

x. MR. MURRAY'S RISK-FREE RATE PROXY IN HIS CAPM ANALYSIS IS STALE

Q. Does Mr. Murray employ a CAPM estimate to check his DCF results?

A. Yes. As a check on his DCF estimate, Mr. Murray performs a CAPM analysis of ROE summarized on Schedule 16.

Q. Do you agree with Mr. Murray's risk-free rate proxy in his CAPM analysis?

A. No. Mr. Murray's risk-free rate proxy in his CAPM analysis is stale. As a proxy for the

risk-free rate, Mr. Murray uses 4.23%, which is the average yield on 30-year Treasury bonds for the 3-month period September 2009 – November 2009. The latest Value Line issue reports a yield of 4.7% on 30-year Treasury bonds, an increase of 50 basis points. As a result, Mr. Murray's CAPM results are understated by 50 basis points.

I note also that Mr. Gorman relies on a 5% risk-free rate in his CAPM analysis based on the current Blue Chip forecast rather than the 4.23% Mr. Murray uses. Use of such a forecast would increase Mr. Murray's CAPM estimate by 77 basis points.

Q. Do you agree with Mr. Murray's beta estimate in the CAPM analysis?

A. Yes, I do.

xi. MR. MURRAY IMPROPERLY USES TOTAL BOND RETURNS *RATHER THAN THE INCOME COMPONENT OF BOND* RETURNS IN HIS ESTIMATE OF THE MARKET RISK PREMIUM COMPONENT OF HIS CAPM ANALYSIS

Q. Do you agree with Mr. Murray's MRP estimate in the CAPM analysis?

A. No, I do not.

Q. How does Mr. Murray estimate the MRP component of the CAPM?

A. As described on page 31 lines 3-7, Mr. Murray uses two MRP estimates in his CAPM analysis:

Historical MRP 1926-2008 Arithmetic Mean:	5.6%
Historical MRP 1926-2008 Geometric Mean:	3.9%

The first estimate is the realized market risk premium over the period 1926-2008 based on arithmetic averages as reported by Morningstar (formerly Ibbotson Associates), whereas the second estimate is the realized MRP over the same period based on a

geometric average.

Q. Do you agree with Mr. Murray's first estimate of 5.6% for the MRP in his CAPM analysis?

A. No. For his first MRP proxy, Mr. Murray used a historical MRP of 5.6%. This estimate was provided by Morningstar in the Stock, Bonds, Bills and Inflation 2009 Yearbook. Over the period 1926 through 2008, Morningstar estimated that the arithmetic average of the achieved total return on the S&P 500 was 11.7%, and the total return on long-term Treasury bonds was 6.1%. The indicated equity risk premium is 5.6% (11.7% - 6.1% = 5.6%).

As discussed in my direct testimony, the more accurate way to estimate the MRP from historic data is to use the *income* return, not *total* returns, on government bonds. The long-term 1926-2008 MRP based on income returns, as required, is 6.5% rather than 5.6%. Moreover, Ibbotson / Morningstar in Appendix A (Table A-1 p. 2) calculates what they call "Long Horizon Equity Risk Premium" and arrive at 7.1% (for the period 1926-2008).

Morningstar recommends use of the *income* return on government bonds as a more reliable estimate of the historical MRP because the income component of total bond return (*i.e.* the coupon rate) is a better estimate of expected return than the total return (*i.e.* the coupon rate + capital gain).[8] In other words, bond investors focus on income rather than realized capital gains/losses.

This correction alone increases Mr. Murray's CAPM estimate by

[8] *See* Morningstar, *Stocks, Bonds, Bills, and Inflation 2009 Yearbook: Valuation Edition*, at page 66

approximately 60 basis points, that is, the product of (i) the difference between 6.5% and 5.6% and (ii) Mr. Murray's beta of 0.66.

xii. MR. MURRAY IMPROPERLY USES THE GEOMETRIC MEAN MARKET RISK PREMIUM IN HIS CAPM ANALYSIS

Q. Do you agree with Mr. Murray's second MRP estimate based on geometric averages in measuring expected return?

A. No. Only arithmetic means are appropriate for forecasting and estimating the cost of capital, and geometric means are not.[9] Indeed, the Morningstar publication from which Mr. Murray derives his MRP estimate contains a detailed and rigorous discussion of the impropriety of using geometric averages in estimating the cost of capital. There is no theoretical or empirical justification for the use of geometric mean rates of returns when estimating the cost of capital. Please see Chapter 4 Appendix A of my book *The New Regulatory Finance* for a complete discussion regarding the theoretical underpinnings, empirical validation, and the consensus of academics on why geometric means are inappropriate for forecasting and estimating the cost of capital.

Q. What is the effect of Mr. Murray's use of the geometric mean MRP?

A. Mr. Murray's use of the geometric mean MRP of 3.9% rather than the arithmetic mean of 5.6% significantly understates the MRP, which suggests an understatement of his CAPM results by 112 basis points (using Mr. Murray's beta of 0.66):

$$\beta_{UE} \times (\text{Arithmetic Mean} - \text{Geometric Mean})$$
$$0.66 \times (5.6\% - 3.9\%)$$

(2008).

[9] *See* Roger A. Morin, *Regulatory Finance: Utilities' Cost of Capital*, chapter 11 (1994); Roger A. Morin, *The New Regulatory Finance: Utilities' Cost of Capital*, chapter 4 (2006); Richard A Brealey, *et al.*, *Principles of Corporate Finance* (8th ed. 2006).

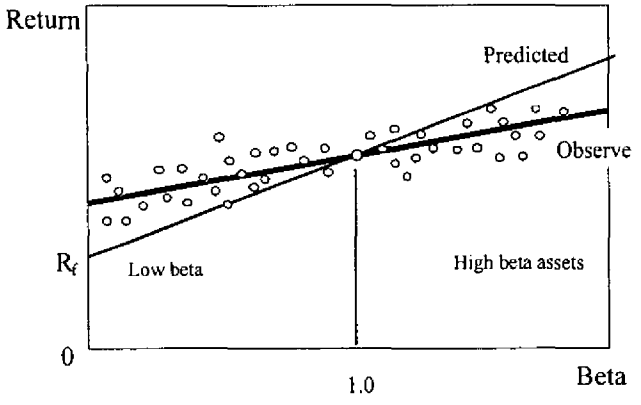
$$0.66 \times (1.7\%) = 112$$

xiii. MR. MURRAY ERRONEOUSLY RELIES UPON THE PLAIN VANILLA VERSION OF THE CAPM AND UNDERSTATES AN APPROPRIATE ROE FOR UE

Q. Do you agree with the use of the plain vanilla version of the CAPM used by Mr. Murray to estimate the cost of capital?

A. No. Mr. Murray erroneously uses the plain vanilla CAPM, which understates the cost of capital, as discussed in my pre-filed direct testimony and supporting exhibits. As stated in my direct testimony and Appendix A of my direct testimony, a myriad of empirical tests of the CAPM have shown that the risk-return tradeoff is not as steeply sloped as that predicted by the CAPM. That is, low-beta securities, such as utilities, earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital to beta: low-beta stocks tend to have higher returns and high-beta stocks tend to have lower risk returns than predicted by the CAPM. The difference between the CAPM and the type of relationship observed in the empirical studies is depicted in the figure below.

CAPM: vs Observed



This is one of the most widely known empirical findings of the finance literature. *See also* Roger A. Morin, *The New Regulatory Finance*, chapter 6 (1st ed. 2006). As a result of the phenomenon, Mr. Murray's use of the plain vanilla CAPM understates the ROE for UE by approximately 50 basis points.

Q. Is Mr. Murray correct that the results of a CAPM analysis are less reliable than those from a DCF analysis?

A. Yes, at this point in time, CAPM results are less reliable than those from a DCF analysis.

xiv. ACTUARIAL DATA UTILIZED FOR PENSION FUND ACCOUNTING, WHICH MR. MURRAY CITES, ARE IRRELEVANT IN ESTIMATING A UTILITY'S COST OF CAPITAL

Q. Are actuarial data relevant in estimating the cost of equity capital for a utility?

A. No, they are not. On page 35 of his direct testimony, Mr. Murray tests the reasonableness of his recommended ROE of 9.35% by comparing this recommendation to expected stock market returns of 8.5% that are implied in pension fund actuarial data

of the Missouri State Employees' Retirement System ("MOSERS"). This comparison, in the context of a rate proceeding, is highly unusual and inappropriate. To the best of my recollection, I only know of one cost of capital witness (Mr. Stephen Hill, who was the Staff's ROE witness in the Company's last rate case) comparing an individual utility's ROE to a pension fund's actuarial data in all the years that I have provided rate of return testimony. Additionally, I am unaware of any regulatory commission that has relied on such data. Indeed, the California Public Utilities Commission recently considered similar arguments from Mr. Hill and concluded as follows:

> *The objectives of a pension fund are fundamentally different from that of an equity investor in a single utility and the risk profiles are not comparable. The Employee Retirement Income Security Act dictates that pension funds must be diversified whereas a utility's ROE is based on risks specific to that utility's operations.*
>
> *More importantly, pension fund returns are related to market value of assets held in the pension fund while a utility's ROE is applied to a book value rate base. This difference can best be illustrated by dividing an average pension fund return by PG&E's market-to-book ratio. Based on ATU's 9.62% calculated average pension fund return and DRA's market-to-book ratio of 1.9 for PG&E, PG&E would only need to earn a 5.06% ROE on its rate base to equal the 9.62% average pension fund return. However, a 5.06% ROE is 116 basis points below its long-term debt cost, effectively eliminating PG&E's ability to support its credit and to raise the equity necessary to fulfill its public utility responsibilities as required by Bluefield and Hope. Pension return assumptions are not comparable to the ROE used in utility ratemaking. Having resolved this issue, PG&E should not be required to continue comparing its pension return assumptions to its ratemaking ROE in future ROE proceedings.*
>
> *In re S. Cal. Edison Co.*, 262 P.U.R. 4th 53, 72 (Ca. Pub. Utils. Comm'n. 2007).

Q. Do you find the reasoning of the California Public Utilities Commission convincing?

A. Yes. Actuarial data utilized for pension fund accounting are by nature very conservative, consistent with Generally Accepted Accounting Principles, and are not well suited for

assessing the cost of equity capital in a rate proceeding. By virtue of the very long-term nature of pension fund assets, projected returns on pension fund assets are not indicative of the cost of equity in the context of a regulatory proceeding. Moreover, the actuarial data on which Mr. Murray relies--namely just one particular corporate actuary's assumptions (MOSER) --is highly selective.

Q. Are actuarial pension fund projected returns based on arithmetic or geometric averages?

A. The actuarial pension data are normally based on geometric mean returns rather than on arithmetic mean returns because of the very long-term nature of pension fund assets. As discussed earlier in my rebuttal testimony, *only* arithmetic means are appropriate for forecasting and estimating the cost of capital.

In short, this Commission, like the California Public Utilities Commission, should ignore the use of actuarial pension returns and individual financial advisory returns in determining a utility's allowed ROE.

Q. How do you respond to Mr. Murray's references to equity research reports by Goldman Sachs, Bank of America, and others to buttress the reasonableness of his ROE recommendation?

A. On pages 32-35 of his direct testimony, Mr. Murray argues that the ROEs implied in selected equity research reports from the investment community corroborate his recommended ROE of 9.35%.

Reliance on selected equity research reports to support Mr. Murray's recommendation does not provide the kind of analysis that would allow this Commission

to make a reasonable determination of the appropriate ROE. A handful of equity reports is a highly questionable source of information in assessing an appropriate ROE for a regulated utility and in gauging the academic state of the art in the field of finance.

Q. What do you conclude from Mr. Murray's recommended ROE?

A. Mr. Murray seriously understates the appropriate ROE for UE. The following table recapitulates the understatements of equity costs and the principal reasons why Mr. Murray's recommended ROE understates an appropriate ROE for UE and should be rejected:

ROE Understatements

Source of Error	Basis Points Impact
DCF Results: Negative DCF Growth Rates	80
DCF Results: Failure to Use Analysts Growth Forecasts	130
DCF Results: Failure to Use Quarterly Timing Adjustment	20
TOTAL DCF	**230**
Two-Stage DCF Results: Use of Wrong GDP Growth Rate	300
TOTAL TWO-STAGE DCF	**300**
CAPM: Use of a Stale Risk-Free Rate	50
CAPM: Failure to Use the Income Component of MRP	60
CAPM: Failure to use the Arithmetic Mean MRP	112
CAPM: Use of the Plain CAPM	50
TOTAL CAPM	**272**

Correction of these errors would increase the range of Mr. Murray's constant growth DCF results by 230 basis points, the range of Mr. Murray's multi-stage growth DCF by 300 basis points, and the range of Mr. Murray's CAPM results by 272 basis points. It is clear from this table that Mr. Murray's logic of arriving at a range of 9% to

9.7% is demonstrably flawed because it relies on analyses that are understated by a minimum of 200 basis points.

Q. Would the adoption of Mr. Murray's recommended ROE endanger UE's credit quality?

A. Yes, it certainly increases the probability of a deterioration in UE's credit quality. Extreme decreases in UE's authorized ROE, such as the decreases recommended by Mr. Murray, could alarm the investment community, lower stock price, and threaten UE's credit ratings. A weakening of UE's credit quality, stock price, and earnings power at a time when the UE needs to attract significant external capital on reasonable terms is ill-advised in the current environment of unsettled capital market conditions.

Q. Is your position supported by credit rating agencies?

A. Yes, in an August 17, 2009 credit report, Moody's explicitly stated that it viewed AmerenUE's last rate case as credit supportive because it gave the Company higher cash flows:

> *Moody's views AmerenUE's most recent rate case outcome as credit supportive with the MPSC approving a $162.8 million rate increase based on a 10.76% ROE.*[10]

Similarly, Standard & Poor's noted the additional cash flow from the last rate case and the fuel adjustment clause as credit enhancing.[11] At the same time, both Moody's and Standard & Poor's warned against the pressure on UE's cash flow. In the words of Moody's, the following were ratings considerations:

[10] Moody's Investors Service, "Union Electric Company," August 17, 2009.
[11] Standard & Poor's, "Union Electric Co." August 27, 2009.

Declining cash flow coverage metrics caused by increased operating costs and higher debt levels, although Moody's expects them to stabilize at current levels.[12]

This excerpt was written shortly after the Commission approved an ROE of 10.76% and a much lower cash flow stream clearly will put pressure on the company's credit quality.

It is not unusual for credit agencies to review the financial performance of utilities whose cash flows have come under pressure from regulatory decisions. For example, FPL's credit rating was recently put on negative watch following a recent rate case decision in Florida, citing "lower-than-expected-revenues"[13] and the economic sluggishness as key drivers. There is a similar watch on Progress Energy.

Q. Do you have any final observations on Mr. Murray's testimony?

A. Yes, I have several. First, the mere fact that Mr. Murray recommends an ROE that is below the range of allowed ROEs for integrated utilities and approximately 150 basis points below the ROE this Commission allowed the Company in its recent rate case, is clear evidence that his recommendation is outside reasonable limits. It is unreasonable to expect AmerenUE to attract capital if its return is lower than that of other electric utilities. Second, AmerenUE is regulated on a historic test year, causing a delay between the time AmerenUE invests in electric assets and is allowed to earn a return on these assets. Therefore, the allowed return granted to AmerenUE will not be earned on all of Union Electric's utility assets. As a result, its realized ROE is expected to be lower than

[12] Moody's Investors Service, "Union Electric Company," August 17, 2009.
[13] Standard & Poor's RatingsDirect, "FPL Group Inc.'s 'A' Credit Rating Placed On CreditWatch Negative Following Rate Hike Denial," January 14, 2010.

its allowed return. Mr. Murray is silent on this risk factor in his recommendation. Third, it is important to rely on estimation methods that are well-specified and recognized as appropriate by academics and practitioners as well as to be consistent through time when determining the ROE. In this case, Mr. Murray has deviated from standard methods as evidenced by, for example, his use of historical growth rates, which not only I but also Messrs. Gorman and Lawton, and previously Staff have rejected.

III. REBUTTAL OF MR. GORMAN'S TESTIMONY

Q. Please summarize the recommended ROE of Mr. Gorman.

A. Mr. Gorman recommends an ROE for UE of 10.0%, which is the midpoint of Mr. Gorman's range of 9.5% – 10.5%. Mr. Gorman performs three DCF analyses, the results of which are summarized in table form on page 38 of his direct testimony. First, he applies a standard constant growth DCF analysis to two groups of comparable investment-grade electric utilities. The standard DCF analysis for the proxy companies produces an ROE estimate of 11.02%. Second, he applies a sustainable growth DCF model to the same groups of companies, and derives an estimate of 10.2%. Third, Mr. Gorman implements a three-stage DCF analysis that produces an ROE estimate of 10.16% as shown in table form on page 36 of his testimony.

As summarized on page 42, lines 5-20, Mr. Gorman also applies a risk premium analysis based on the difference between the ROEs authorized by regulatory bodies and the contemporaneous level of interest rates. This analysis produces an authorized risk premium in the range of 4.40% to 6.08% over the yield on long-term Treasury bonds. Adding the forecast long-term bond yield of 5.0% to that risk premium range produces an

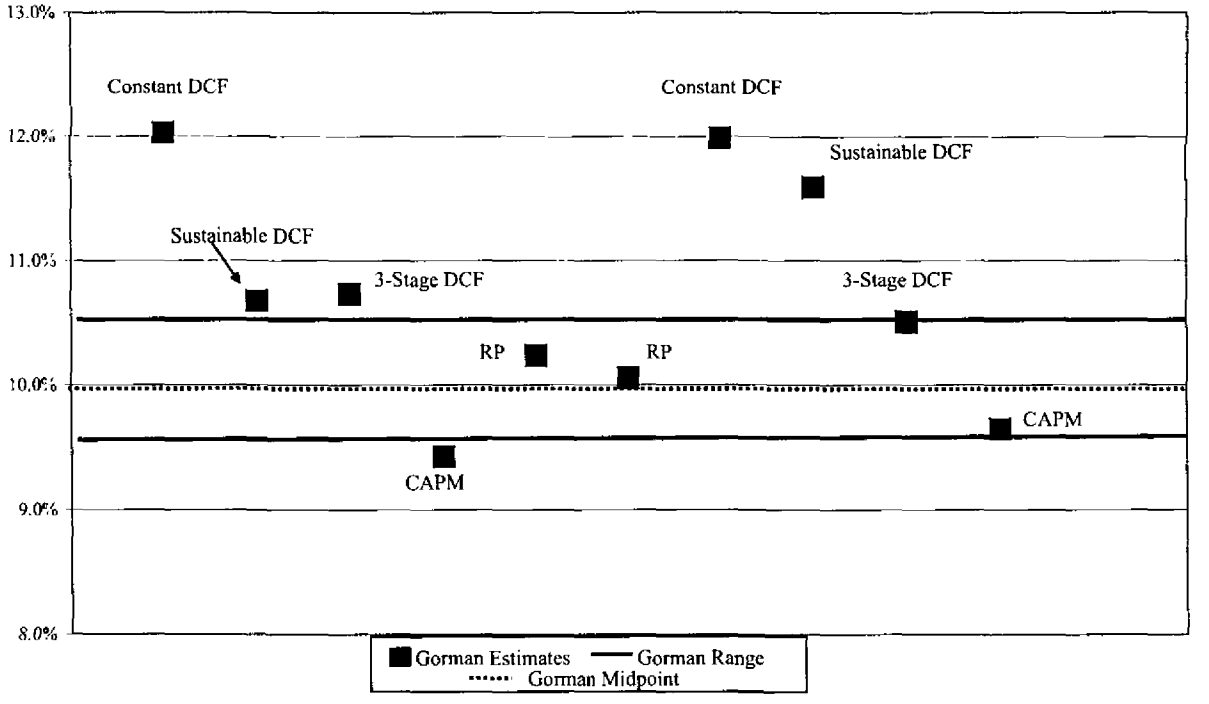
ROE in the range of 9.40% – 11.08%, with a midpoint estimate of 10.24%. Repeating the same process using Moody's utility bond yields instead of Treasury bond yields, Mr. Gorman obtains an ROE in the range of 9.19% to 10.55%, with a midpoint of 9.87%.

Finally, Mr. Gorman applies a CAPM analysis to the same two groups of electric utilities and obtains an ROE in the range of 9.43% to 9.66%, with a midpoint of 9.54%. This is shown on page 48 lines 2-5 of his direct testimony.

Q. What is your general reaction to Mr. Gorman's ROE testimony?

A. My general reaction is that Mr. Gorman's recommendation of 10% ROE is inconsistent with his own estimates. Mr. Gorman's recommendation is at the very low end of the range of his own estimates. Mr. Gorman relies on five estimation methods: Constant Growth DCF, Sustainable Growth DCF, Three-Stage DCF, Risk Premium, and a plain vanilla CAPM. As depicted in the chart below, six (6) of the twelve (12) average ROE estimates computed by Mr. Gorman are at or above 10.5%. Only one (1) of twelve estimates is below 9.5%; yet Mr. Gorman recommends a range of 9.5% to 10.5%. This means that *half* of Mr. Gorman's ROE estimates are at or *above* his recommended range while only the plain vanilla CAPM estimate is below his range. And as noted earlier, it is very problematic to rely on the CAPM (and certainly on the plain vanilla CAPM) under current market conditions. The data summarized on the chart below clearly indicates that in order to properly capture Mr. Gorman's various ROE estimates the appropriate range should have been 9.5% - 12.0%, and not 9.5% - 10.5%. In addition, the only way Mr. Gorman's range is able to reach below 10% at all is by relying on the outlying CAPM estimates, which Mr. Gorman in the past has de-emphasized and which both Mr. Lawton and I agree should be de-emphasized.

Gorman Estimates and Recommendation



Moreover, Mr. Gorman has quite often in the past relied primarily on his constant growth DCF method and found the "*DCF results to be reasonable*"[14], but "*does not recommend relying on the results of the constant growth DCF study in this case.*"[15] This is simply inconsistent.

Q. Please summarize your specific criticisms of the ROE recommended by Mr. Gorman.

A. Although I agree with several of the procedures and methodologies employed by Mr. Gorman, he has departed significantly from his past testimonies and previous practices in arriving at his recommended ROE. These departures result in a

[14] See, Gorman Testimony in Puget Sound.

recommended ROE that understates an appropriate ROE for UE for the following reasons:

(i) Mr. Gorman Places Little Weight on His Standard DCF Analysis. because Mr. Gorman arbitrarily concludes that his standard DCF analysis is not reasonable and is inflated.

(ii) Mr. Gorman Erroneously Relies Upon the Plain Vanilla Version of the Capital Asset Pricing Model. Mr. Gorman erroneously relies upon the plain vanilla version of the CAPM—a model known to understate return requirements for low beta firms, such as UE.

(iii) Mr. Gorman Improperly Relies Upon Total Returns on Government Bonds for His MRP. Mr. Gorman understates his CAPM analysis by approximately 60 basis points by improperly relying upon *total* returns on government bonds for the MRP in his CAPM analysis.

(iv) Mr. Gorman's Risk Premium Analysis Fails to Account for the Inverse Behavior Between Authorized Risk Premiums and Interest Rates.

(v) Mr. Gorman's DCF Results are Understated by 20 Basis Points Because They Ignore the Time Value of Quarterly Dividend Payments.

i. MR. GORMAN PLACES LITTLE WEIGHT ON HIS STANDARD DCF ANALYSIS IN FAVOR OF HIS TWO-STAGE DCF ANALYSIS

Q. Do you agree with Mr. Gorman's standard constant growth DCF analysis?

A. Broadly speaking, I agree with Mr. Gorman's first DCF analysis. Mr. Gorman applies the traditional, standard constant growth DCF analysis to two groups of electric utilities using a 13-week average stock price, a forward-looking dividend yield, and a growth proxy based on analysts' growth forecasts. As shown on his Schedule MPG-6, the traditional DCF analysis for the two proxy groups produces a DCF return of 11.03% and 11.01%.

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[15] Gorman p. 25.

Q. Is Mr. Gorman's constant growth DCF analysis consistent with his past practices?

A. Yes. In past years, Mr. Gorman has normally performed, and weighted heavily, a traditional DCF analysis.

Q. What did Mr. Gorman have to say regarding the reasonableness of his standard DCF analysis in a 2006 rate case involving Puget Sound Energy?

A. Mr. Gorman had this to say about his standard DCF analysis in a recent Puget Sound Energy rate case:

> *Q. DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR DCF ANALYSIS?*
>
> *A. Yes. I believe the results of my constant growth DCF analysis, and a DCF analysis in general in today's marketplace, reflect rational investment financial metrics and reflect today's very low cost capital market. Therefore, the DCF results are reasonable.*

Q. What does Mr. Gorman have to say about his standard DCF analysis in this case?

A. In this case (page 18 lines 17-23 to page 19 lines 1-3 of his direct testimony), Mr. Gorman criticizes the same DCF analysis he has performed in numerous previous rate cases.

Q. Why does Mr. Gorman now reject the results of his standard DCF analysis?

A. Mr. Gorman asserts that the results produced by his standard DCF analysis are not reasonable and represent an inflated return. On page 25, he argues that dividend yields **set by the market** are abnormal and that growth rates are too high. In other words, Mr. Gorman refuses to believe market-based data and substitutes his own judgment for that of the overall equity market. I find this argument unconvincing and self-serving. For the vast majority of the numerous cases where Mr. Gorman has provided cost of

capital testimony, Mr. Gorman made no such argument in the past.[16] It is only fairly recently that Mr. Gorman has begun to argue that the traditional DCF model is deficient.

I also note that Mr. Gorman's growth estimate of 5.5% in his conventional DCF analysis (page 23, line 23) is virtually identical to the long-term growth rate of the overall U.S. economy as I discuss later, and therefore quite consistent with Mr. Gorman's position that DCF growth rates should track those of the U.S. economy.

The bottom line is that Mr. Gorman's underweighting of the results from the traditional DCF model has the effect of substantially reducing his recommended ROE. His traditional DCF estimates of 11.01% and 11.02% should be weighted very heavily by the Commission.

Q. Did you note any other inconsistencies in Mr. Gorman's views on the conventional DCF model?

A. Yes, I did. On page 38 lines 1-3, Mr. Gorman states that he believes that his constant growth DCF model based on analysts' growth is not reasonable because such projections are not reasonable estimates of long-term sustainable growth. Yet, Mr. Gorman uses those same growth rates in the first stage of his three-stage DCF analysis. Moreover, as I show below, these growth rates are quite consistent with the long-term growth of the U.S. economy and are therefore reasonable according to Mr. Gorman's argument.

Lastly, it is puzzling that Mr. Gorman labels the dividend yield set by the market as "abnormal", but has no problem relying on market data for his risk premium in the

[16] See, for example, Mr. Gorman's testimony in (i) Docket No. UE-050684 regarding PacifiCorp before the State of Washington Utilities Commission; (ii) Docket No. 05-304 regarding Delmarva Power & Light before the Delaware Public Service Commission; and (iii) Docket No. 9036 regarding Baltimore Gas &

CAPM calculations. The data underlying these calculations are also set by the market and logically would also be impacted by the "constrained market conditions"[17] and consequently be viewed with skepticism. In summary, this appears to be a case of picking market data when it lowers his ROE estimates, but ignoring it when it would raise his ROE estimates.

Q. Does Mr. Gorman use any sustainable growth rate calculations?

A. Yes. On pages 29-32 and on Schedules MPG-11 to MPG-12, Mr. Gorman applies the sustainable growth approach to two comparable groups of companies as the second of his DCF methodologies.

Q. What is the sustainable growth rate technique used by Mr. Gorman to implement the DCF model?

A. In the sustainable growth method, the internal growth rate forecast is based on the equation g = b(ROE), where b is the percentage of earnings retained and ROE is the expected rate of return on book equity. Mr. Gorman also accounts for the impact of external stock financing on growth by adding an external growth term (g = sv) as shown on the last column of Schedules MPG-11.

Q. Is the sustainable growth methodology an appropriate technique to implement the DCF model in this proceeding?

A. No, it is not. I disagree with the sustainable growth technique for four reasons: 1) the method is logically circular, 2) it is inconsistent with the empirical evidence as

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Electric before the Maryland Public Service Commission.

[17] Gorman direct, p. 24, line 14.

demonstrated in academic research, 3) the potential lack of representativeness of Value Line's forecasts as proxies for the market consensus, and 4) a technical error.

Q. Dr. Morin, why is the sustainable growth methodology circular?

A. The sustainable growth methodology contains a puzzling logical contradiction. The contradiction arises because the method requires an explicit assumption on the ROE expected from the retained earnings that produce future growth. Mr. Gorman bases his ROE estimate on Value Line's forecast ROE for the next five years (Column 5 on Schedule MPG-11, page 1). But the ROEs used by Mr. Gorman in calculating the sustainable growth rate do not match Mr. Gorman's ROE recommendation.

The average expected ROE of 11.49% used in Mr. Gorman's sustainable growth computation and reported on Schedule MPG-11 page 1 Column 5 exceeds Mr. Gorman's recommended 9.5% - 10.5%. Mr. Gorman's analysis thus assumes that the earned returns (ROE) of the sample companies exceed what he has determined to be their cost of equity forever. That is, Mr. Gorman is assuming that these companies will earn an ROE higher than that granted by their regulators and reflected in their rates. While this scenario may be imaginable for an unregulated company, it is implausible to assume for a regulated company whose rates are continually re-set by its regulator at a level designed to permit the company to earn a return equal to its cost of capital. This logical flaw compromises the integrity of Mr. Gorman's analysis, and it should be a sufficient basis for rejecting the results Mr. Gorman produced by this method. In essence, by using an ROE that differs from his recommended cost of equity, Mr. Gorman requires the Commission to make two inconsistent findings regarding ROE. I am perplexed as to why Mr. Gorman assumes that the group of comparable electric utilities is expected to earn

11.49% forever, while at the same time he recommends an ROE of 9.5% - 10.5% for UE. The only way that these utilities can earn an ROE of 11.49% is if rates are set so that they will in fact earn 11.49%. The only logical conclusion to be drawn from the data is that the group's cost of equity is 11.49%, since these are the returns implied in Mr. Gorman's sustainable growth analysis.

In brief, Mr. Gorman's implementation of the sustainable growth method is logically circular because it *assumes* an ROE in a regulatory process that is itself designed to *estimate* the fair and reasonable ROE.

Q. Is the sustainable growth rate technique consistent with empirical evidence?

A. No. Empirical finance literature demonstrates that the sustainable growth rate technique is a very poor explanatory variable of market value and is not correlated significantly to measures of value, such as stock price and price/earnings ratios.

Q. Are the Value Line estimates of ROE and retention ratio representative of the market consensus?

A. No, not necessarily. Mr. Gorman's exclusive reliance on Value Line forecasts of ROE and retention ratio runs the risk that such forecasts are not representative of investors' consensus forecast. Moreover, the forecasts of the expected ROE published by Value Line are based on end-of-period book equity rather than on average book equity. The following formula adjusts the reported end-of-year values so that they are based on average common equity, which is the common regulatory practice:

$$r_a = r_t \frac{2\,B_t}{B_t + B_{t-1}}$$

Where: r_a = return on average equity
r_t = return on year-end equity as reported
B_t = reported year-end book equity of the current year
B_{t-1} = reported year-end book equity of the previous year

This one error alone—failing to use average common equity—understates Mr. Gorman's DCF estimates by approximately 10-20 basis points, depending on the magnitude of the book value growth rate forecast.

Q. Do you agree with Mr. Gorman's three-stage DCF analysis?

A. Although I generally agree with the validity of the three-stage DCF methodology when it is properly applied, and agree with Mr. Gorman's input data for the first growth stage, I disagree with the key input data Mr. Gorman uses in the third growth stage—the long-term growth estimate. Mr. Gorman bases the latter on the Blue Chip Economic Indicators consensus economic projections of GDP growth of 4.7% over the 2016-2020 period.

Q. What is the basis for your disagreement with Mr. Gorman's use of those projections?

A. Mr. Gorman should have compared the utility growth rate forecasts with the historical long-term growth of the economy as a whole and/or the long-range growth forecasts in GDP projected for the very long-term. Mr. Gorman's comparison to a relatively short period -term growth rate forecast (just five years -- 2016-2020) is inappropriate because the growth term of the DCF model is *perpetual* in nature.

As discussed earlier in my rebuttal of Mr. Murray, a long-term forecast of nominal growth in GDP can be formulated by combining a long-term inflation estimate with a long-

term real growth rate forecast, and the long-term expected GDP nominal growth is approximately 6.0% (3.5% + 2.5% = 6.0%). It should be noted that Morningstar's *Stocks, Bond, Bills and Inflation 2009 Yearbook Valuation Edition*—the same source used by Mr. Gorman to justify his claim that a company's earnings/dividends growth cannot exceed that of the U.S. GDP—uses 6.0% as its estimate of the U.S. economy long-term growth rate and not the 4.7% used by Mr. Gorman.

Q. How would Mr. Gorman's DCF results change if the appropriate long-term GDP growth forecast is used in the three-stage DCF analysis?

A. Use of the GDP long-term growth forecast of 6.0% in Mr. Gorman's second-stage DCF analysis instead of the medium-term forecast of 4.7% would raise Mr. Gorman's DCF estimates by approximately 130 basis points, from 10.16% to above 11%.

ii. MR. GORMAN ERRONEOUSLY RELIES UPON THE PLAIN VANILLA VERSION OF THE CAPM

Q. Does Mr. Gorman's CAPM analysis understate a fair ROE for UE?

A. Yes. As previously discussed and in my direct testimony and supporting exhibits, and as addressed above regarding Mr. Murray's similar error, empirical evidence demonstrates that the plain vanilla CAPM understates the cost of capital for low-beta securities, such as electric and natural gas utilities, and overstates the return from high-beta securities. Mr. Gorman's use of the plain vanilla CAPM understates the ROE for UE by approximately 50 basis points.

iii. MR. GORMAN IMPROPERLY RELIES UPON TOTAL RETURNS ON GOVERNMENT BONDS FOR HIS MRP

Q. Is Mr. Gorman's use of a historical MRP of 5.6% for the CAPM appropriate?

A. No. The historical MRP of 5.6% cited by Mr. Gorman is based on the difference between stock returns and total bond returns. As previously discussed, the more accurate way to estimate the MRP from historic data is to use the *income* return, not *total* returns, on government bonds. The long-term (1926-2008) MRP based on *income* returns is 6.5%, rather than 5.6%. Correction of this error alone increases Mr. Gorman's CAPM estimate by approximately 80 basis points, that is, the product of (i) the difference between 6.5% and 5.6% and (ii) Mr. Gorman's beta of 0.73. As a result of this correction, the lowest ROE estimate obtained by Mr. Gorman becomes 9.7% and 10% for the two samples, respectively, so that all but one of Mr. Gorman's estimates are above the 10% he recommends.

iv. MR. GORMAN'S RISK PREMIUM ANALYSIS FAILS TO ACCOUNT FOR THE INVERSE BEHAVIOR BETWEEN AUTHORIZED RISK PREMIUMS AND INTEREST RATES

Q. Please describe Mr. Gorman's authorized risk premium analysis.

A. Mr. Gorman examines the historical risk premiums implied in the returns on equity authorized by regulatory commissions over the period 1986-2009, relative to the contemporaneous level of long-term Treasury and "A" rated utility bond yields. As shown on page 39 of his testimony, Mr. Gorman then derives an authorized risk premium in the range of 4.4% – 6.08% over long-term Treasury yields by cherry picking 18 of the 24 observations, and in the range of 3.03% – 4.39% over Moody's utility bond yield.

Use of the projected long-term Treasury bond yield of 5.0% and a Treasury bond

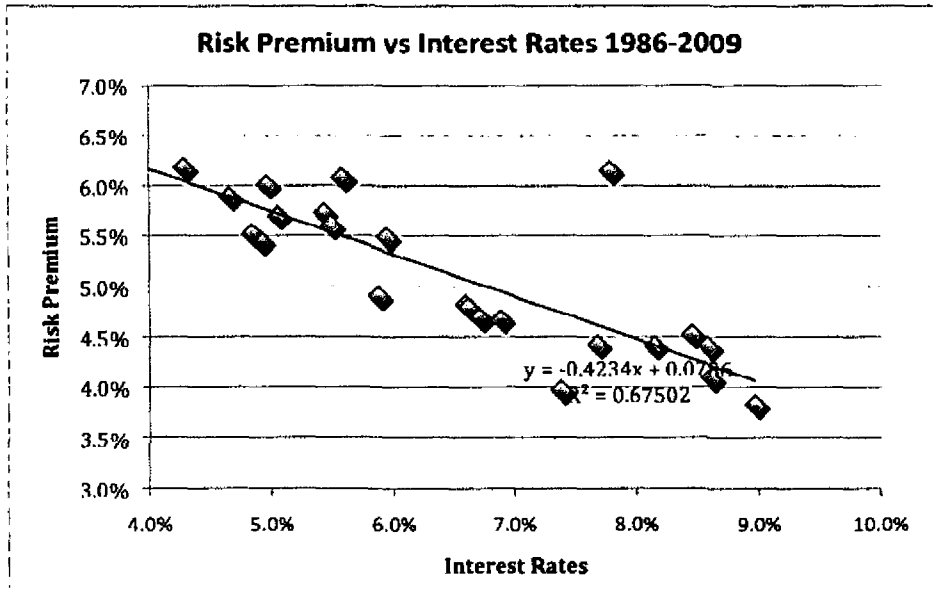
risk premium of 4.40% to 6.08% produces an estimated common equity return in the range of 9.40% to 11.08%, with a midpoint estimate of 10.24%. The addition of the utility bond yield of 6.16% to the utility equity risk premium of 3.03% – 4.39% produces an estimated range of ROE of 9.19% – 10.55%, with a midpoint estimate of 9.87%. *See* Page 42 of Mr. Gorman's direct testimony, lines 5-17.

In summary, Mr. Gorman's risk premium analyses produce an ROE estimate in the range of 9.87% – 10.24% with a midpoint estimate of 10.08% (page 42, lines 21-12.)

Q. Do you agree with Mr. Gorman's authorized risk premium analysis?

A. No, I disagree for two reasons. First, what Mr. Gorman fails to recognize is that the current level of risk premium over Treasury bonds and utility bonds is much higher at 6.45% and 4.26%, respectively. Adding the latter to the Treasury bond yield of 5.0% and utility bond yield of 6.16% produces a cost of equity of 11.45% and 10.42%, respectively.

Second, a careful review of ROE decisions relative to interest rates reported in Schedule MPG-15 reveals an inverse relationship between authorized risk premiums and interest rates for which Mr. Gorman fails to account. In other words, the authorized risk premium decreases when interest rates are high and increases when interest rates are low, as displayed on the graph below:



The following statistical relationship between the risk premium and Treasury bond yields emerges over the 1986-2009 period:

$$RP = 7.86 - 0.4234\ YIELD \qquad R^2 = 0.67$$

The relationship is statistically significant as indicated by the high R^2.

Inserting Mr. Gorman's long-term Treasury bond yield of 5.0% in the above equation suggests an authorized risk premium estimate of 5.7%, and not the 5.16% which Mr. Gorman reports on page 39 line 22 and Schedule MPG-15. Use of the proper allowed risk premium of 5.7% would result in an authorized ROE of 10.7% (5.0% + 5.7%) for UE instead of Mr. Gorman's 10.24% estimate. In short, Mr. Gorman's result from this method is understated by approximately 50 basis points.

Q. Do you have any further comment on Mr. Gorman's lack of consistency from testimony to testimony?

A. Yes, I do. In Mr. Gorman's CAPM analysis, I found it curious that Mr. Gorman in Schedule MPG-18 reports only current betas for the electric utilities in his samples whereas in past testimonies, at a time when betas were increasing (which would have the effect of lowering his ROE estimates), Mr. Gorman reported a five year history of beta estimates and used the increase in betas to argue that his use of current betas were conservative.[18] In this case, however, Mr. Gorman only reports current betas at a time when betas are decreasing (which would have the effect of raising his ROE estimates). As shown in the table below, betas for the sample utilities have fallen in recent times due to the turmoil in financial markets rather than due to a change in the inherent risk in electric utilities. Therefore, to be consistent with Mr. Gorman's past testimony, reliance on current betas is anything but conservative. Instead, reliance on current betas alone is aggressive; that is, it artificially lowers Mr. Gorman's ROE estimates. Mr. Gorman is silent on this issue. The change in betas is further evidence that the CAPM results currently should be viewed with some degree of skepticism, and are likely to be downward biased as I indicated in my direct testimony.

[18] See, for example, Schedule MPG-14 in Direct Testimony and Schedules of Michael P. Gorman in Case No. ER-2008-0093.

	2005	2006	2007	2008	Gorman
ALLETE		0.9	0.95	0.85	0.7
Allegheny Energy	1.75	1.95	2.1	1.1	0.95
Alliant Energy	0.85	0.9	0.9	0.8	0.7
Amer. Elec. Power	1.2	1.25	1.15	0.85	0.7
Ameren Corp.	0.75	0.75	0.8	0.8	0.8
CMS Energy Corp.	1.4	1.55	1.55	0.95	0.8
Cleco Corp.	1.15	1.25	1.35	0.9	0.65
DPL Inc.	0.95	0.95	0.9	0.75	0.6
DTE Energy	0.7	0.75	0.8	0.75	0.75
Duke Energy				0.6	0.65
Edison Int'l	1.05	1.15	1.05	0.85	0.8
Empire Dist. Elec.	0.7	0.8	0.85	0.8	0.75
Entergy Corp.	0.75	0.85	0.85	0.8	0.7
Exelon Corp.	0.75	0.8	0.9	0.85	0.85
FPL Group	0.75	0.85	0.8	0.8	0.75
FirstEnergy Corp.	0.75	0.8	0.9	0.75	0.8
G't Plains Energy	0.85	0.9	0.85	0.75	0.75
Hawaiian Elec.	0.7	0.7	0.7	0.75	0.7
IDACORP Inc.	0.95	1	1	0.85	0.7
PG&E Corp.	1.1	1.15	0.95	0.85	0.55
Pepco Holdings	0.9	0.85	0.9	0.9	0.8
Portland General				0.7	0.7
Progress Energy	0.85	0.85	0.95	0.75	0.65
Public Serv. Enterprise	0.85	0.95	0.95	0.85	0.8
Southern Co.	0.65	0.65	0.75	0.65	0.55
TECO Energy	0.95	1.05	1.1	0.85	0.85
Westar Energy	0.85	0.9	0.9	0.85	0.75
Wisconsin Energy	0.7	0.8	0.8	0.75	0.65
Xcel Energy Inc.	0.8	0.9	1.05	0.75	0.65
Average	0.91	0.97	0.99	0.81	0.73

Source: Value Line, January 2010 and Gorman Schedule MPG-18.

v. MR. GORMAN'S DCF RESULTS ARE UNDERSTATED BY 20 BASIS POINTS BECAUSE THEY IGNORE THE TIME VALUE OF QUARTERLY DIVIDEND PAYMENTS

Q. Please comment on the use of the quarterly adjustment to the annual DCF model.

A. The DCF model used by Mr. Gorman assumes that dividend payments are made annually at the end of the year and are increased once a year, while most utilities in fact pay dividends on a quarterly basis. Since the stock price fully reflects the quarterly payment of dividends, it is essential that the DCF model used to estimate equity returns also reflect the actual timing of quarterly dividends. In the same way that bond yield calculations are

routinely adjusted to reflect semiannual interest payments, it stands to reason that stock yields should be similarly adjusted for quarterly compounding. It should be pointed out that the quarterly DCF model uses the exact same assumptions as the annual DCF model, but refines the latter so as to capture the exact timing of cash flows received by the investor. By failing to recognize the quarterly nature of dividend payments in his DCF computation, Mr. Gorman understates the required return on equity capital by about 20 basis points.

Q. Do you agree with Mr. Gorman's views on the quarterly DCF model?

A. No, I do not. Mr. Gorman argues that the return from the reinvestment of dividends is not a cost to the utility and, therefore, should not be included in the allowed ROE. I disagree. Mr. Gorman is confusing a cost of service item with a capital cost item. The latter is concerned with investor return requirements. Since the stock price employed in the DCF model to determine investor returns reflects a quarterly stream of dividends, it stands to reason that the quarterly nature of dividend payments be explicitly recognized. Cash flows, that is, dividends, are actually received quarterly. Thus, a quarterly model should be applied. This is because investors set prices based on the present value of the cash flows that they receive. Since investors receive dividends quarterly, a quarterly model best matches the investor's expectations to the prices set in the market place and those prices reflect the quarterly receipt of cash flows. Moreover, by paying the dividends earlier (at the end of the first, second and third quarters, and not all at once at the end of the year), the utility is deprived of the cash that it pays earlier, which indeed does have a cost to the utility.

Q. Do you have a final summary comment on Mr. Gorman's testimony?

A. Yes. The key issue in Mr. Gorman's testimony is that he ignores the fact that all but one of his numerous ROE estimates with proper inputs are above his recommended 10% and

half of the estimates exceed the upper end of his range. In order to properly reflect Mr. Gorman's various ROE estimates, the range needs to be expanded upwards. Specifically, Mr. Gorman has in the past emphasized the constant growth DCF methodology, which results in an ROE estimate of 11%. His sustainable growth and three-stage DCF models result in ROE estimates of approximately 10.2% to 11.5%. Furthermore, once his risk premium model is amended to account for the inverse relationship between authorized risk premia and interest rates, the resulting ROE estimate is approximately 10.7%. Finally, an implementation of the CAPM that uses Ibbotson's recommended income returns to calculate the market risk premium results in CAPM estimates of almost 10%, and further correcting for the empirical fact that CAPM under estimates the required return for low beta stock, leads me to believe that an appropriately implemented CAPM would result in an ROE estimate of 10.2% to 10.4%. Thus, every single ROE estimate lies above the 10% recommended by Mr. Gorman.

IV. REBUTTAL OF MR. LAWTON'S TESTIMONY

Q. Please summarize Mr. Lawton's rate of return recommendation.

A. Mr. Lawton develops an ROE range of 9.3% - 10.9% and recommends that an ROE allowance of 10.2% be employed on the common equity capital of UE. In determining UE's cost of common equity capital, Mr. Lawton applies a single-stage DCF analysis and a two-stage DCF analysis to two groups of electric utilities, the same two groups I developed in my direct testimony. For the crucial growth component of the DCF analysis, Mr. Lawton relies on analysts' forecast of earnings growth over the next few years.

Mr. Lawton applies a risk premium analysis based on the historical differential

A. Given that I agree with several of Mr. Lawton's procedures, I have only three specific comments:

(i). Mr. Lawton Should Have Relied on the Quarterly Version of the DCF Model Rather Than the Annual Version.

(ii). Mr. Lawton Relies on the Wrong Long-Term Growth Rate in His Two-Stage DCF Analysis.

(iii) Mr. Lawton's Use of the 3-Month Period Ending November 2009 to Calculate the Average Risk-Free Rate in His CAPM Analysis Ignores the Impact of Higher Interest Rates Over That 3-Month Period.

i. MR. LAWTON SHOULD HAVE RELIED ON THE QUARTERLY VERSION OF THE DCF MODEL RATHER THAN THE ANNUAL VERSION

Q. What is the appropriate form of the DCF model?

A. The annual DCF model used by Mr. Lawton ignores the time value of quarterly dividend payments and assumes that dividends are paid once a year at the end of the year. Since investors are aware of the quarterly timing of dividend payments, this knowledge is reflected in stock prices. As discussed earlier in my rebuttal of Mr. Murray, the use of the annual version of the DCF model understates the cost of equity by approximately 20 basis points, depending on the magnitude of the dividend yield component. With this adjustment, Mr. Lawton's DCF results increase by 20 basis points.

ii. MR. LAWTON RELIES ON THE WRONG LONG-TERM GROWTH RATE IN HIS TWO-STAGE DCF ANALYSIS

Q. Do you agree with Mr. Lawton's long-term growth estimate in the second stage of the two-stage DCF analysis?

A. No, I do not. Mr. Lawton relies on A Two-Stage DCF model with a long-term growth rate of 5.11%. As I discussed extensively earlier in my rebuttal testimony, the

appropriate long-term growth rate based on historical data is 6.0%. Changing the long-term growth rate in Mr. Lawton's two-stage model to 6.0% results in an increase in an estimated ROE of approximately 0.90% to 11.1%, rather than the 10.2% relied on by Mr. Lawton.

iii. MR. LAWTON'S USE OF THE 3-MONTH PERIOD ENDING NOVEMBER 2009 TO CALCULATE THE AVERAGE RISK-FREE RATE IN HIS CAPM ANALYSIS IGNORES THE IMPACT OF HIGHER INTEREST RATES OVER THAT 3-MONTH PERIOD

Q. Do you agree with Mr. Lawton's risk-free rate estimate?

A. No, I do not. As a proxy for the risk-free rate, Mr. Lawton relies on a CAPM and ECAPM with a 30-year Treasury bond yield of 4.2%. This figure is stale and a more current figure is 4.7%, as reported in the current issue of Value Line.

Q. How would Mr. Lawton's CAPM/ECAPM results change if the appropriate risk-free rate proxy is used in the analysis?

A. Use of the appropriate risk-free rate of 4.7% in Mr. Lawton's CAPM/ECAPM analyses instead of the 4.2% stale estimate raises Mr. Lawton's estimates by 50 basis points (4.5% - 4.2%), that is, from 8.9% - 9.3% to 9.4% - 9.8%.

Q. What happens to Mr. Lawton's recommended ROE range once all of the aforementioned adjustments are taken into account?

A. With the three aforementioned adjustments, namely the quarterly DCF, the proper long-term DCF growth rate, and the current risk-free rate, Mr. Lawton's range becomes 9.4% (CAPM) to 11.3% (DCF). Since Mr. Lawton views the CAPM/ECAPM results with

between allowed equity returns and bond returns. Mr. Lawton also applies a CAPM analysis to the same two groups of companies, but correctly places little weight on the results produced by that method and by the risk premium method for that matter.

Q. Do you have a general comment on Mr. Lawton's direct testimony?

A. Yes, I do. In his introduction, Mr. Lawton makes it quite clear that he relies on the DCF approach and places little weight on the Risk Premium and CAPM approaches:

> *"I employ the DCF methodology for estimating the cost of equity...."*
> (page 11 lines 13-14)
>
> *"Other return on equity modeling techniques such as the CAPM and risk premium are often used to check the reasonableness of the DCF results."*
> (page 11 lines 18-20)
>
> *"...risk premium methods should be viewed with considerable caution."*
> (page 27 lines 21-22)

Despite these cautionary notes and his strongly expressed preference for DCF results, Mr. Lawton places equal weight on the risk premium and CAPM results. As per Mr. Lawton's viewpoint, and I agree with this viewpoint, the risk premium and CAPM results should be given little, if any, weight. But if we look at Mr. Lawton's summary table of results on page 31, it appears that Mr. Lawton contradicts this position and places considerable weight (in fact, 50% of his weighting) on the risk premium/CAPM results to derive the bottom of his recommended range. The DCF results range from 10.2% to 11.1% with a midpoint of 10.7%. To be consistent, that should have been Mr. Lawton's recommendation based on his own results and viewpoints. In short, it is not clear how Mr. Lawton's summary of results matches with this point of view that risk premium and CAPM results are only checks and should be viewed with considerable caution.

Q. Please summarize your specific comments on Mr. Lawton's testimony.

caution and only as checks, he should logically emphasize the DCF estimates, and his recommendation should be in the upper end of a 9.4% - 11.3% range (midpoint 10.5%).

Q. What are your basic conclusions regarding Mr. Lawton's cost of equity testimony?

A. A proper application and weighting of cost of capital methodologies would provide results substantially higher than those obtained by Mr. Lawton. Mr. Lawton's errors result in an understatement of UE's cost of common equity. Correcting these errors would bring Mr. Lawton's recommended ROE to the upper end of a 9.4% - 11.3% range, which is close to my recommended ROE.

V. UPDATED ROE RECOMMENDATION

Q. What is the purpose of this section of your rebuttal testimony?

A. The purpose of this section is to review my original ROE recommendation in light of the changes in capital markets that have occurred since I filed my direct testimony in June 2009. My updated ROE recommendation for AmerenUE is 10.8%.

Q. Can you briefly describe the behavior of interest rates since you filed your original testimony based on earlier data?

A. Yes. As of December 2009, 30-year U.S. Treasury 30-year bonds are yielding 4.6%, which is very close to the 4.5% used in direct testimony. I note that the yields are projected to increase to 5.0% in 2010 as noted by Mr. Gorman.

Q. What has happened to utility betas and the MRP in the CAPM analyses since you prepared your direct testimony?

A. Both have basically remained the same.

Q. Please describe what has happened to the DCF results since the financial crisis began.

A. They have declined. Utility stock prices are showing some recovery as the financial crisis gradually unwinds, implying lower dividend yields, which, in turn, imply lower DCF estimates. Expected DCF growth rates are lower as well, implying lower DCF results also. Since June 2009, the DCF results for utilities have decreased significantly in response to higher stock prices (lower dividend yields) and lower growth rates.

Q. What input data did you use in the CAPM analysis to arrive at your updated ROE?

A. For the risk-free rate, I used 4.6%, based on the level of 30-year Treasury bond yields in December 2009. For beta, I used 0.74 and for the MRP, I used 6.5%, the same inputs as in my direct testimony.

Q. Did you make any methodological changes in your historical risk premium analysis of the utility industry?

A. No.

Q. Did you make any methodological changes in your DCF analyses?

A. No major change in the DCF analysis was applied. I relied on December 2009 stock prices in order to update the analysis. The period was chosen as to facilitate comparison of results with those obtained by Mr. Gorman and Mr. Lawton who relied on a similar time-period.

Q. Please summarize your updated results from the various methodologies.

A. The revised ROE estimates for the average risk electric utility are summarized in the table below.

STUDY	Updated ROE
CAPM	9.70%
Empirical CAPM	10.10%
Risk Premium Electric	11.12%
DCF Vert. Integrated Electric Utilities Value Line Growth	11.20%
DCF Vert. Integrated Electric Utilities Zacks Growth	11.20%
DCF S&P Electric Utilities Value Line Growth	10.60%
DCF S&P Electric Utilities Zacks Growth	11.60%

The overall average result is 10.8%, the truncated mean is also 10.8%, and the median result is 11.1%.

Q. Should the effect of flotation cost be removed from the estimates shown in the above table?

A. Given the Commission's past treatment and Ameren's actual equity issuance since my direct testimony was filed, yes, it should. All the market-based estimates reported above include an adjustment for flotation costs. This is because I normally would include flotation costs as an adder to ROE. However, in keeping with the specific circumstances of this case whereby the Commission has allowed flotation costs to be recovered through the cost of service, I have removed the flotation cost adjustment from the various estimates shown in the above table and I have not included these costs in my final ROE recommendation. The results without flotation costs are shown on the table below.

Q. Should the quarterly adjustment be applied to the DCF results shown on the above table?

A. Yes, it should. All the DCF estimates reported do not include an adjustment for the quarterly nature of dividend payments. However, in keeping with the Commission's preference for the quarterly version of the DCF model, I have incorporated the quarterly adjustment in the DCF results shown in the above table. The final results without flotation costs and with the quarterly adjustment are shown on the table below.

STUDY	Updated ROE
CAPM	9.40%
Empirical CAPM	9.80%
Risk Premium Electric	10.82%
DCF Vert. Integrated Electric Utilities Value Line Growth	11.00%
DCF Vert. Integrated Electric Utilities Zacks Growth	11.00%
DCF S&P Electric Utilities Value Line Growth	10.50%
DCF S&P Electric Utilities Zacks Growth	11.50%

The overall average result is 10.6%, the truncated mean is also 10.6%, and the median result is 10.8%. From these results, I conclude that an ROE of 10.8% is fair and reasonable, although conservative.

Q. Why do you deem your updated ROE as conservative?

A. I consider my ROE recommendation conservative because AmerenUE is slightly riskier than the industry average for two main reasons. First, the Company's exposure to regulatory lag is significant. The problem of regulatory lag is well-known in the utility industry and is particularly acute in the case of AmerenUE because of the use of historical test years rather than forward test years. The presence of regulatory lag makes it difficult to earn a reasonable rate of return, especially in an inflationary environment. In fact, AmerenUE has been unable to earn its allowed return for several years. One expedient solution to the regulatory lag issue is the use of forward test years rather than

historical test years as in the case in Missouri. Second, UE's higher reliance on coal-based generation relative to the industry average increases risk. This is because there are uncertainties with regard to new state and federal regulations to reduce the impact of greenhouse gas emissions. UE is thus at a higher risk for potential environmental compliance cost increases. Compounding this effect is Missouri law that prohibits the inclusion of construction work in progress (CWIP) for electric plant in rates until the electric plant is in service.

Q. What is your final conclusion regarding AmerenUE's updated ROE?

A. Based on the results of all my analyses, the application of my professional judgment, and the risk circumstances of AmerenUE, it is my opinion that a just and reasonable ROE for AmerenUE is 10.8%.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE's Tariffs to Increase its Annual Revenues for Electric Service.	)	Case No. ER-2010-0036
	)	Tracking No. YE-2010-0054
	)	Tracking No. YE-2010-0055

AFFIDAVIT OF ROGER A. MORIN

STATE OF GA)
) ss
CITY OF JEKYLL IS.)

Roger A. Morin, being first duly sworn on his oath, states:

1. My name is Roger A. Morin. I work in Atlanta, Georgia, and I am employed by Georgia State University.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 57 pages and Schedules RAM-ER 10 through RAM-ER 11, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

Roger A. Morin

Roger A. Morin

Subscribed and sworn to before me this 10 day of February, 2010.

Anita S. Crockett

Notary Public

My commission expires:

MY COMMISSION EXPIRES
APRIL 15, 2013

Regulatory Research Associates
REGULATORY FOCUS

January 12, 2009

MAJOR RATE CASE DECISIONS--JANUARY 2007-DECEMBER 2008 SUPPLEMENTAL STUDY

This Supplemental Study was prepared in conjunction with the Special Report entitled *Major Rate Case Decisions--January 1990-December 2008* that was uploaded to our website on Jan. 8. This study contains chronological listings of all major electric and gas cases decided during the years 2007 and 2008. These listings, with key data concerning each case, appear on pages 5 through 11 of this report. Tables summarizing industry-wide cases decided in past years appear on pages 2 and 3. The average return on equity (ROE) authorized electric utilities in 2008 approximated 10.5%, compared to 10.4% in 2007. There were 37 electric ROE determinations in 2008, and 39 in 2007. The average ROE authorized gas utilities approximated 10.4% in 2008, compared to 10.2% in 2007. There were 30 gas cases that included an ROE determination in 2008, and 37 in 2007. We note that these ROEs are simple, non-weighted averages. Not included in these averages is a Sept. 17, 2008 steam rate case decision for Consolidated Edison of New York, in which the New York Public Service Commission adopted a settlement that incorporated a 9.3% return on common equity (48% of capital) and a 7.5% return on rate base.

After reaching a low in the late-1990's and early-2000's, the number of equity return determinations for energy companies has generally increased over the last several years. The total number of electric and gas equity return determinations in 2008 (67) was 180% greater than the number in 2000 (24). Increased costs, including environmental compliance expenditures, and the need for generation and delivery system infrastructure upgrades and expansion at many companies argue for a continuation of the increased level of rate case activity over the next several years. However, cost efficiencies from technological improvements, the use of multi-year settlements that do not specify return parameters, and a reduced number of companies due to mergers may prevent the number of rate cases and equity return determinations from significantly increasing further. We note that electric industry restructuring in many states has led to the unbundling of rates, with state commissions authorizing revenue requirement and return parameters for delivery operations only (which we footnote in our chronology), thus complicating historical data comparability. We also note that the financial crisis that began in September 2008 and the resulting significant increase in non-U.S. Treasury debt yields may indicate that utility equity costs have increased and lead to higher authorized ROEs by commissions.

The individual electric and gas cases listed on pages 5 through 11 are presented with the decision date shown first, followed by the company name, the abbreviation of the state issuing the decision, the authorized rate of return (ROR) and ROE, and the common equity component of the adopted capital structure. If the capital structure included cost-free capital or investment tax credit balances at the overall rate of return, an asterisk (*) follows the number in this column. Next we show the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base valuation, and the amount of the permanent rate change authorized. Fuel adjustment clause and other rider-related rate changes are not reflected in this study.

The table on page 2 shows the average ROE authorized annually since 1990, and by quarter since 2002, in major electric and gas rate decisions, followed by the number of observations in each period. The tables on page 3 show the composite electric and gas industry data for all the cases included in the chronology of this and earlier reports, summarized annually since 1995 and by quarter for the past eight quarters.

(Text continued on page 4.)

Average Equity Returns Authorized January 1990 - December 2008

		Electric Utilities		Gas Utilities	
Year	**Period**	**ROE %**	**(# Cases)**	**ROE %**	**(# Cases)**
1990	Full Year	12.70	(44)	12.67	(31)
1991	Full Year	12.55	(45)	12.46	(35)
1992	Full Year	12.09	(48)	12.01	(29)
1993	Full Year	11.41	(32)	11.35	(45)
1994	Full Year	11.34	(31)	11.35	(28)
1995	Full Year	11.55	(33)	11.43	(16)
1996	Full Year	11.39	(22)	11.19	(20)
1997	Full Year	11.40	(11)	11.29	(13)
1998	Full Year	11.66	(10)	11.51	(10)
1999	Full Year	10.77	(20)	10.66	(9)
2000	Full Year	11.43	(12)	11.39	(12)
2001	Full Year	11.09	(18)	10.95	(7)
	1st Quarter	10.87	(5)	10.67	(3)
	2nd Quarter	11.41	(6)	11.64	(4)
	3rd Quarter	11.06	(4)	11.50	(3)
	4th Quarter	11.20	(7)	10.78	(11)
2002	**Full Year**	**11.16**	(22)	**11.03**	(21)
	1st Quarter	11.47	(7)	11.38	(5)
	2nd Quarter	11.16	(4)	11.36	(4)
	3rd Quarter	9.95	(5)	10.61	(5)
	4th Quarter	11.09	(6)	10.84	(11)
2003	**Full Year**	**10.97**	(22)	**10.99**	(25)
	1st Quarter	11.00	(3)	11.10	(4)
	2nd Quarter	10.54	(6)	10.25	(2)
	3rd Quarter	10.33	(2)	10.37	(8)
	4th Quarter	10.91	(8)	10.66	(6)
2004	**Full Year**	**10.75**	(19)	**10.59**	(20)
	1st Quarter	10.51	(7)	10.65	(2)
	2nd Quarter	10.05	(7)	10.54	(5)
	3rd Quarter	10.84	(4)	10.47	(5)
	4th Quarter	10.75	(11)	10.40	(14)
2005	**Full Year**	**10.54**	(29)	**10.46**	(26)
	1st Quarter	10.38	(3)	10.63	(6)
	2nd Quarter	10.68	(6)	10.50	(2)
	3rd Quarter	10.06	(7)	10.45	(3)
	4th Quarter	10.39	(10)	10.14	(5)
2006	**Full Year**	**10.36**	(26)	**10.43**	(16)
	1st Quarter	10.27	(8)	10.44	(10)
	2nd Quarter	10.27	(11)	10.12	(4)
	3rd Quarter	10.02	(4)	10.03	(8)
	4th Quarter	10.56	(16)	10.27	(15)
2007	**Full Year**	**10.36**	(39)	**10.24**	(37)
	1st Quarter	10.45	(10)	10.38	(7)
	2nd Quarter	10.57	(8)	10.17	(3)
	3rd Quarter	10.47	(11)	10.49	(7)
	4th Quarter	10.33	(8)	10.34	(13)
2008	**Full Year**	**10.46**	(37)	**10.37**	(30)

Electric Utilities--Summary Table*

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
1995	Full Year	9.44	(30)	11.55	(33)	45.90	(30)	455.7	(43)
1996	Full Year	9.21	(20)	11.39	(22)	44.34	(20)	-5.6	(38)
1997	Full Year	9.16	(12)	11.40	(11)	48.79	(11)	-553.3	(33)
1998	Full Year	9.44	(9)	11.66	(10)	46.14	(8)	-429.3	(31)
1999	Full Year	8.81	(18)	10.77	(20)	45.08	(17)	-1683.8	(30)
2000	Full Year	9.20	(12)	11.43	(12)	48.85	(12)	-291.4	(34)
2001	Full Year	8.93	(15)	11.09	(18)	47.20	(13)	14.2	(21)
2002	Full Year	8.72	(20)	11.16	(22)	46.27	(19)	-475.4	(24)
2003	Full Year	8.86	(20)	10.97	(22)	49.41	(19)	313.8	(12)
2004	Full Year	8.44	(18)	10.75	(19)	46.84	(17)	1091.5	(30)
2005	Full Year	8.30	(26)	10.54	(29)	46.73	(27)	1373.7	(36)
2006	Full Year	8.24	(24)	10.36	(26)	48.67	(23)	1465.0	(42)
	1st Quarter	8.44	(8)	10.27	(8)	47.80	(8)	403.5	(9)
	2nd Quarter	7.94	(11)	10.27	(11)	46.02	(11)	718.6	(12)
	3rd Quarter	7.90	(4)	10.02	(4)	48.34	(4)	119.1	(6)
	4th Quarter	8.38	(15)	10.56	(16)	49.59	(14)	160.7	(19)
2007	Full Year	8.22	(38)	10.36	(39)	48.01	(37)	1401.9	(46)
	1st Quarter	8.36	(9)	10.45	(10)	49.25	(8)	802.9	(9)
	2nd Quarter	8.21	(7)	10.57	(8)	47.64	(7)	510.5	(8)
	3rd Quarter	8.32	(10)	10.47	(11)	48.96	(10)	737.5	(13)
	4th Quarter	8.09	(9)	10.33	(8)	47.58	(8)	848.5	(12)
2008	**Full Year**	**8.25**	**(35)**	**10.46**	**(37)**	**48.41**	**(33)**	**2899.4**	**(42)**

Gas Utilities--Summary Table*

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
1995	Full Year	9.64	(16)	11.43	(16)	49.98	(15)	-61.5	(31)
1996	Full Year	9.25	(23)	11.19	(20)	47.69	(19)	193.4	(34)
1997	Full Year	9.13	(13)	11.29	(13)	47.78	(11)	-82.5	(21)
1998	Full Year	9.46	(10)	11.51	10)	49.50	(10)	93.9	(20)
1999	Full Year	8.86	(9)	10.66	(9)	49.06	(9)	51.0	(14)
2000	Full Year	9.33	(13)	11.39	(12)	48.59	(12)	135.9	(20)
2001	Full Year	8.51	(6)	10.95	(7)	43.96	(5)	114.0	(11)
2002	Full Year	8.80	(20)	11.03	(21)	48.29	(18)	303.6	(26)
2003	Full Year	8.75	(22)	10.99	(25)	49.93	(22)	260.1	(30)
2004	Full Year	8.34	(21)	10.59	(20)	45.90	(20)	303.5	(31)
2005	Full Year	8.25	(29)	10.46	(26)	48.66	(24)	458.4	(34)
2006	Full Year	8.51	(16)	10.43	(16)	47.43	(16)	444.0	(25)
	1st Quarter	8.40	(10)	10.44	(10)	48.33	(9)	158.4	(13)
	2nd Quarter	8.32	(3)	10.12	(4)	49.67	(4)	37.3	(5)
	3rd Quarter	7.88	(7)	10.03	(8)	48.70	(6)	402.0	(12)
	4th Quarter	7.97	(12)	10.27	(15)	47.74	(11)	215.7	(18)
2007	Full Year	8.12	(32)	10.24	(37)	48.37	(30)	813.4	(48)
	1st Quarter	8.78	(7)	10.38	(7)	52.07	(7)	129.6	(7)
	2nd Quarter	8.28	(3)	10.17	(3)	51.80	(3)	52.0	(4)
	3rd Quarter	8.33	(7)	10.49	(7)	50.58	(7)	312.8	(10)
	4th Quarter	8.45	(13)	10.34	(13)	49.25	(13)	390.4	(20)
2008	**Full Year**	**8.48**	**(30)**	**10.37**	**(30)**	**50.47**	**(30)**	**884.8**	**(41)**

* Number of observations in each period indicated in parentheses.

4. RRA

The table below tracks the average equity return authorized for all electric and gas rate cases combined, by year, for the last 19 years. As the table reveals, since 1990 authorized ROEs have generally trended downward, reflecting the significant decline in interest rates that has occurred over this time frame. The combined average equity returns authorized for electric and gas utilities in each of the years 1990 through 2008, and the number of observations for each year are as follows:

1990	12.69%	(75)	2000	11.41	(24)
1991	12.51	(80)	2001	11.05	(25)
1992	12.06	(77)	2002	11.10	(43)
1993	11.37	(77)	2003	10.98	(47)
1994	11.34	(59)	2004	10.67	(39)
1995	11.51	(49)	2005	10.50	(55)
1996	11.29	(42)	2006	10.39	(40)
1997	11.34	(24)	2007	10.30	(76)
1998	11.59	(20)	2008	10.42	(67)
1999	10.74	(29)			

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ELECTRIC UTILITY DECISIONS

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
1/5/07	Oklahoma Gas & Electric (AR)	5.36	10.00	32.33 *	12/05-YE	5.4 (B)
1/5/07	Puget Sound Energy (WA)	8.40	10.40	44.00	9/05-A	-22.8
1/11/07	Metropolitan Edison (PA)	7.52	10.10	49.00	12/06-YE	58.7 (D)
1/11/07	Pennsylvania Electric (PA)	7.92	10.10	49.00	12/06-YE	50.2 (D)
1/11/07	Wisconsin Public Service (WI)	12.93	10.90	57.46	12/07-A/P	56.7
1/12/07	Portland General Electric (OR)	8.29	10.10	50.00 (Hy)	12/07-A	20.5 (Z)
1/19/07	Wisconsin Power and Light (WI)	9.27	10.80	54.13	12/07-A/P	36.2
3/21/07	Pacific Gas and Electric (CA)	---	---	---	12/07-A	192.2 (B,1)
3/22/07	Rockland Electric (NJ)	7.83	9.75	46.51	12/06-YE	6.4 (B,D)
2007	***1ST QUARTER: AVERAGES/TOTAL***	**8.44**	**10.27**	**47.80**		**403.5**
	MEDIAN	**8.11**	**10.10**	**49.00**		**---**
	OBSERVATIONS	**8**	**8**	**8**		**9**
5/15/07	Appalachian Power (VA)	7.36	10.00	41.11 *	12/05-YE	24.0
5/17/07	Aquila (MPS) (MO)	8.39	10.25	48.17	12/05-YE	45.2
5/17/07	Aquila (L&P) (MO)	8.93	10.25	48.17	12/05-YE	13.6
5/22/07	Monongahela Pow./Potomac Ed. (WV)	8.44	10.50	46.07	12/05-YE	-6.2
5/22/07	Union Electric (MO)	7.94	10.20	52.22	6/06-YE	41.8
5/23/07	Nevada Power (NV)	9.06	10.70	47.29	6/06-YE	120.5
5/24/07	AEP Texas North (TX)	---	---	---	6/06-YE	13.7 (B,D)
5/25/07	Public Service of New Hampshire (NH)	7.55	9.67	47.66	12/05-A	50.1 (B,I,D)
6/15/07	Entergy Arkansas (AR)	5.58	9.90	32.19 *	6/06-YE	-5.7
6/21/07	PacifiCorp (WA)	8.06	10.20	46.00	3/06-A	14.4 (R)
6/22/07	Appalachian Power (WV)	7.67 (E)	10.50 (E)	42.88 (E)	12/06-YE	85.5 (B,Z)
6/28/07	Arizona Public Service (AZ)	8.32	10.75	54.50	9/05-YE	321.7
2007	***2ND QUARTER: AVERAGES/TOTAL***	**7.94**	**10.27**	**46.02**		**718.6**
	MEDIAN	**8.06**	**10.25**	**47.29**		**---**
	OBSERVATIONS	**11**	**11**	**11**		**12**
7/3/07	El Paso Electric (NM)	---	---	---	12/05-YE	5.5 (B)
7/12/07	Granite State Electric (NH)	8.61	9.67	50.00 (Hy)	---	-2.2 (B,D,Z)
7/19/07	Delmarva Power & Light (MD)	7.68	10.00	48.63	9/06-A	14.9 (D,2)
7/19/07	Potomac Electric Power (MD)	7.99	10.00	47.69	9/06-A	10.6 (D,2)
7/27/07	Southwestern Public Service (TX)	---	---	---	9/05-YE	23.0 (B)
8/15/07	Southern Indiana Gas & Electric (IN)	7.32	10.40	47.05 *	3/06-YE	67.3 (B)
2007	***3RD QUARTER: AVERAGES/TOTAL***	**7.90**	**10.02**	**48.34**		**119.1**
	MEDIAN	**7.84**	**10.00**	**48.16**		**---**
	OBSERVATIONS	**4**	**4**	**4**		**6**
10/9/07	Public Service of Oklahoma (OK)	8.01	10.00	46.02	6/06-YE	9.8 (I)
10/18/07	Orange and Rockland Utilities (NY)	7.56	9.10	47.54	6/08-A	0.0
10/31/07	Electric Transmission Texas (TX)	7.88 (R)	9.96	40.00 (Hy)	6/08-YE	12.0 (R,Tr,3)

ELECTRIC UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
11/20/07	Kansas City Power & Light (KS)	---	---	---	---	28.0 (B)
11/29/07	Cheyenne Light, Fuel & Power (WY)	8.84	10.90	54.00 (Hy)	9/06-YE	6.7 (B)
11/29/07	Wisconsin Power and Light (WI)	---	---	---	12/08-A	25.8 (4)
12/6/07	Kansas City Power & Light (MO)	8.68	10.75	57.62	12/06-YE	35.3
12/6/07	PPL Electric Utilities (PA)	---	---	---	12/07-YE	55.0 (B,D)
12/13/07	AEP Texas Central (TX)	7.50	9.96	40.00 (Hy)	6/06-YE	40.8 (I,D)
12/14/07	Madison Gas and Electric (WI)	9.08	10.80	57.36	12/08-A/P	16.2
12/14/07	South Carolina Electric & Gas (SC)	8.62	10.70	53.32	3/07-YE	76.9 (B)
12/19/07	Avista Corporation (WA)	8.20	10.20	46.00	12/06-A	30.2 (B)
12/20/07	Duke Energy Carolinas (NC)	8.57	11.00	53.00	12/06-YE	-286.9 (Bp)
12/20/07	Bangor Hydro-Electric (ME)	8.60	10.20	---	---	1.1 (B,D)
12/21/07	Pacific Gas and Electric (CA)	8.79	11.35	52.00	12/08-A	0.0
12/21/07	San Diego Gas & Electric (CA)	8.40	11.10	49.00	12/08-A	8.2
12/21/07	Southern California Edison (CA)	8.75	11.50	48.00	12/08-A	-9.6
12/28/07	PacifiCorp (ID)	8.27	10.25	50.40	12/06	11.5 (B)
12/31/07	Georgia Power (GA)	---	11.25	---	7/08-A	99.7 (B)
2007	***4TH QUARTER: AVERAGES/TOTAL***	**8.38**	**10.56**	**49.59**		**160.7**
	MEDIAN	**8.57**	**10.73**	**49.70**		**---**
	OBSERVATIONS	**15**	**16**	**14**		**19**
2007	***FULL YEAR: AVERAGES/TOTAL***	**8.22**	**10.36**	**48.01**		**1401.9**
	MEDIAN	**8.28**	**10.25**	**48.17**		**---**
	OBSERVATIONS	**38**	**39**	**37**		**46**
1/8/08	Northern States Power-Wisconsin (WI)	9.67	10.75	52.51	12/08-A	39.4
1/17/08	Wisconsin Electric Power (WI)	9.26	10.75	54.36	12/08-A/P	148.4 (Z)
1/28/08	Connecticut Light & Power (CT)	7.72	9.40	48.99	12/06-YE	97.9 (D,Z)
1/30/08	Potomac Electric Power (DC)	7.96	10.00	46.55	2/07-A	28.3 (D,5)
1/31/08	Central Vermont Public Service (VT)	8.50	10.21 (R)	50.02	12/06-A	6.4 (B)
2/6/08	Interstate Power & Light (IA)	---	11.70 (6)	---	---	---
2/28/08	Idaho Power (ID)	8.10	---	---	---	32.1 (B)
2/29/08	Fitchburg Gas & Electric (MA)	8.38	10.25	42.80	12/06-YE	2.1 (D)
3/12/08	PacifiCorp (WY)	8.29	10.25	50.80	8/08	23.0 (B,7)
3/25/08	Consolidated Edison of New York (NY)	7.34	9.10	47.98	3/09-A	425.3 (D)
3/31/08	Virginia Electric Power (VA)	---	12.12 (8)	---	---	---
2008	***1ST QUARTER: AVERAGES/TOTAL***	**8.36**	**10.45**	**49.25**		**802.9**
	MEDIAN	**8.29**	**10.25**	**49.51**		**---**
	OBSERVATIONS	**9**	**10**	**8**		**9**
4/22/08	MDU Resources (MT)	8.58	10.25	50.67	12/06-A	4.1 (B,Z)
4/24/08	Public Service Co. of New Mexico (NM)	8.24	10.10	51.37	9/06-YE	34.4
5/1/08	Hawaiian Electric Company (HI)	8.66	10.70	55.79	12/05-A	44.9 (Bp,I)
5/27/08	UNS Electric (AZ)	9.02	10.00	48.85	6/06-YE	4.0
5/30/08	Idaho Power (ID)	--- (9)	---	---	---	8.9

ELECTRIC UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
6/10/08	Consumers Energy (MI)	6.93	10.70	41.75 *	12/08-A	221.0 (I)
6/16/08	MidAmerican Energy (IA)	---	11.70 (B,10)	---	---	---
6/27/08	Appalachian Power (WV)	7.65	10.50	41.54	12/07-YE	106.1 (B)
6/27/08	Sierra Pacific Power (NV)	8.41	10.60 (11)	43.49	6/07-YE	87.1
6/30/08	Oncor Electric Delivery (TX)	---	---	---	12/06	--- (D,12)
2008	***2ND QUARTER: AVERAGES/TOTAL***	**8.21**	**10.57**	**47.64**		**510.5**
	MEDIAN	**8.41**	**10.55**	**48.85**		**---**
	OBSERVATIONS	**7**	**8**	**7**		**8**
7/1/08	Central Maine Power (ME)	---	---	---	---	-20.3 (B,D,13)
7/2/08	NorthWestern Corporation (MT)	--- (14)	---	---	---	10.0 (B,I)
7/10/08	Otter Tail Corporation (MN)	8.33	10.43	50.00	12/06-A	3.8 (I)
7/16/08	Orange and Rockland Utilities (NY)	7.69	9.40	48.00	6/09-A	15.6 (B,D)
7/30/08	Empire District Electric (MO)	8.92	10.80	50.78	6/07-YE	22.0
7/31/08	San Diego Gas & Electric (CA)	--- (15)	--- (15)	--- (15)	12/08-A	234.0 (B,Z)
8/11/08	PacifiCorp (UT)	8.29	10.25	50.40	12/08-A	39.4 (R)
8/26/08	Southwestern Public Service (NM)	8.27	10.18	51.23	12/06-YE	13.1
8/27/08	MidAmerican Energy (IA)	---	11.70 (B,16)	---	---	---
9/10/08	Commonwealth Edison (IL)	8.36	10.30	45.04	12/06-YE	273.6 (D)
9/24/08	Central Illinois Light (IL)	8.01	10.65	46.50	12/06-YE	-2.8 (D)
9/24/08	Central Illinois Public Service (IL)	8.20	10.65	47.91	12/06-YE	22.0 (D)
9/24/08	Illinois Power (IL)	8.68	10.65	51.76	12/06-YE	103.9 (D)
9/30/08	Avista Corp. (ID)	8.45	10.20	47.94	12/07-A	23.2 (B)
2008	***3RD QUARTER: AVERAGES/TOTAL***	**8.32**	**10.47**	**48.96**		**737.5**
	MEDIAN	**8.31**	**10.43**	**49.00**		**---**
	OBSERVATIONS	**10**	**11**	**10**		**13**
10/8/08	PacifiCorp (WA)	8.06	---	---	---	20.4 (B)
10/8/08	Puget Sound Energy (WA)	8.25	10.15	46.00	9/07-A	130.2 (B)
11/13/08	NorthWestern Corporation (MT)	8.25 (17)	10.00 (17)	50.00 (17)	---	---
11/17/08	Appalachian Power (VA)	7.69	10.20	---	12/07	167.9 (I,B)
12/1/08	Tucson Electric Power (AZ)	8.03	10.25	42.50	12/06-YE	136.8 (B)
12/17/08	Duke Energy Ohio (OH)	---	---	---	---	98.0 (B,Gn,E,Z)
12/18/08	Madison Gas and Electric (WI)	---	---	---	12/09	-2.7
12/23/08	Detroit Edison (MI)	7.16	11.00	40.68 *	12/09-A	83.6
12/29/08	Portland General Electric (OR)	8.33	10.10 (Bp)	50.00	12/09-A	121.0
12/29/08	Avista Corporation (WA)	8.22	10.20	46.30	12/07-A	32.5 (B)
12/30/08	W.sconsin Power and Light (WI)	---	---	---	12/09	0.0 (B)
12/30/08	W.sconsin Public Service (WI)	---	---	53.41	12/09	48.0 (B,18)
12/31/08	Northern States Power (ND)	8.80	10.75	51.77	12/08	12.8 (I,B)
2008	***4TH QUARTER: AVERAGES/TOTAL***	**8.09**	**10.33**	**47.58**		**848.5**
	MEDIAN	**8.22**	**10.20**	**48.15**		**---**
	OBSERVATIONS	**9**	**8**	**8**		**12**
2008	***YEAR-TO-DATE: AVERAGES/TOTAL***	**8.25**	**10.46**	**48.41**		**2899.4**
	MEDIAN	**8.27**	**10.25**	**48.99**		**---**
	OBSERVATIONS	**35**	**37**	**33**		**42**

GAS UTILITY DECISIONS

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
1/5/07	Puget Sound Energy (WA)	8.40	10.40	44.00	9/05-A	29.5
1/9/07	SEMCO Energy Gas (MI)	7.75	11.00	42.94 *	---	12.6 (B)
1/11/07	Wisconsin Public Service (WI)	8.62	10.90	57.46	12/07-A/P	18.9
1/12/07	Cascade Natural Gas (WA)	8.85	---	---	---	7.1 (B)
1/19/07	Wisconsin Power and Light (WI)	9.15	10.80	54.13	12/07-A/P	-1.9
1/26/07	Fitchburg Gas & Electric (MA)	---	10.00	---	---	2.2 (B,Z)
2/8/07	PPL Gas Utilities (PA)	8.44	10.40	51.79 (Hy)	12/06-YE	8.1
3/14/07	Connecticut Natural Gas (CT)	8.60	10.10	53.60	3/06-YE	14.4 (B)
3/15/07	Union Electric (MO)	---	---	---	---	6.0 (B)
3/20/07	Delmarva Power & Light (DE)	7.73	10.25	46.90	3/06-A	9.0 (B,I)
3/21/07	Pacific Gas and Electric (CA)	---	---	---	12/07-A	20.5 (B,1)
3/22/07	Southern Union (MO)	8.60	10.50	36.06 (19)	12/05-YE	27.2
3/29/07	Atmos Energy (TX)	7.90	10.00	48.10	12/05-YE	4.8
2007	***1ST QUARTER: AVERAGES/TOTAL***	**8.40**	**10.44**	**48.33**		**158.4**
	MEDIAN	**8.52**	**10.40**	**48.10**		**---**
	OBSERVATIONS	**10**	**10**	**9**		**13**
5/16/07	Aquila (KS)	---	---	---	---	5.1 (B)
6/5/07	Cascade Natural Gas (OR)	---	10.10	45.00	---	-0.7 (B)
6/13/07	Northern States Power (ND)	8.96	10.75	51.59	12/07-A	2.2 (I,B)
6/29/07	Yankee Gas Services (CT)	8.03	10.10	50.30	6/06-A	22.1 (B)
6/29/07	Public Service Co. of New Mexico (NM)	7.96	9.53	51.80	12/05-YE	8.6
2007	***2ND QUARTER: AVERAGES/TOTAL***	**8.32**	**10.12**	**49.67**		**37.3**
	MEDIAN	**8.03**	**10.10**	**50.95**		**---**
	OBSERVATIONS	**3**	**4**	**4**		**5**
7/3/07	Public Service of Colorado (CO)	8.67	10.25	60.17	6/06-A	32.3 (B)
7/13/07	Arkansas Western Gas (AR)	6.06	9.50	34.29 *	10/06-YE	5.8 (B)
7/19/07	Laclede Gas (MO)	---	---	---	---	38.6 (B)
7/24/07	Aquila (NE)	8.80	10.40	50.73	6/06-YE	9.2 (I)
7/31/07	Atmos Energy (KY)	---	---	---	---	5.5 (B)
8/1/07	Southern Indiana Gas & Electric (IN)	7.20	10.15	47.05 *	3/06-YE	5.1 (B)
8/21/07	Consumers Energy (MI)	---	---	---	---	49.8 (Bp)
8/29/07	Columbia Gas of Kentucky (KY)	---	10.50	---	---	7.3 (B)
9/10/07	Northern States Power-Minnesota (MN)	8.37	9.71	51.98	12/07-A	14.4 (I)
9/19/07	Washington Gas Light (VA)	8.41	10.00	---	12/05	3.9 (B,I)
9/20/07	Pacific Gas and Electric (CA)	---	---	---	---	27.6 (B,Z,20)
9/25/07	Consolidated Edison of New York (NY)	7.63	9.70	48.00	9/08-A	202.5 (B,Z)
2007	***3RD QUARTER: AVERAGES/TOTAL***	**7.88**	**10.03**	**48.70**		**402.0**
	MEDIAN	**8.37**	**10.08**	**49.37**		**---**
	OBSERVATIONS	**7**	**8**	**6**		**12**

GAS UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
10/8/07	Atmos Energy (TN)	8.03	10.48	44.20	10/08-A	4.0 (B)
10/12/07	South Carolina Electric & Gas (SC)	---	---	---	3/07	4.6
10/19/07	Delta Natural Gas (KY)	---	10.50	---	---	3.9 (B)
10/25/07	CenterPoint Energy Resources (AR)	5.73	9.65	33.73 *	12/06-YE	20.0 (B)
11/15/07	Washington Gas Light (MD)	8.20	10.00	53.02	12/06-YE	20.6
11/20/07	Arkansas Oklahoma Gas (AR)	6.45	9.90	41.46 *	2/07-YE	3.3 (B)
11/27/07	UNS Gas (AZ)	8.30	10.00	50.00	12/05-YE	5.3
11/29/07	Cheyenne Light, Fuel & Power (WY)	8.84	10.90	54.00 (Hy)	9/06-YE	4.4 (B)
12/14/07	Madison Gas and Electric (WI)	9.09	10.80	57.36	12/08-A/P	7.8
12/18/07	NorthWestern Energy Div. (NE)	---	10.40	---	12/06	1.5 (B)
12/18/07	NorthWestern Energy Div. (SD)	7.96	---	---	12/06-A	3.1 (B,21)
12/19/07	Avista Corporation (WA)	8.20	10.20	46.00	12/06-A	3.3 (B)
12/21/07	Pacific Gas and Electric (CA)	8.79	11.35	52.00	12/08-A	0.0
12/21/07	San Diego Gas & Electric (CA)	8.40	11.10	49.00	12/08-A	1.4
12/21/07	Brooklyn Union Gas (NY)	---	9.80	---	---	46.9
12/21/07	KeySpan Gas East (NY)	---	9.80	---	---	82.4
12/21/07	National Fuel Gas Distribution (NY)	7.61	9.10	44.35	12/08-A	1.8
12/28/07	Washington Gas Light (DC)	---	---	---	6/06	1.4 (B)
2007	***4TH QUARTER: AVERAGES/TOTAL***	**7.97**	**10.27**	**47.74**		**215.7**
	MEDIAN	**8.20**	**10.20**	**49.00**		**---**
	OBSERVATIONS	**12**	**15**	**11**		**18**
2007	***FULL YEAR: AVERAGES/TOTAL***	**8.12**	**10.24**	**48.37**		**813.4**
	MEDIAN	**8.34**	**10.20**	**49.50**		**---**
	OBSERVATIONS	**32**	**37**	**30**		**48**
1/8/08	Northern States Power-Wisconsin (WI)	9.67	10.75	52.51	12/08-A	5.3
1/17/08	Wisconsin Electric Power (WI)	9.15	10.75	54.36	12/08-A/P	4.0
1/17/08	Wisconsin Gas (WI)	10.91	10.75	46.64	12/08-A/P	20.1
2/5/08	North Shore Gas (IL)	7.96	9.99	56.00	9/06-YE	-0.2
2/5/08	Peoples Gas Light & Coke (IL)	7.76	10.19	56.00	9/06-YE	71.2
2/13/08	Indiana Gas (IN)	7.80	10.20	48.99 *	12/06-YE	26.9 (B)
3/31/08	Avista Corp. (OR)	8.21	10.00	50.00	12/06-A	2.3 (B,Z)
2008	***1ST QUARTER: AVERAGES/TOTAL***	**8.78**	**10.38**	**52.07**		**129.6**
	MEDIAN	**8.21**	**10.20**	**52.51**		**---**
	OBSERVATIONS	**7**	**7**	**7**		**7**
4/23/08	Atmos Energy (KS)	---	---	---	---	2.1 (B)
5/28/08	Duke Energy (OH)	8.45	10.50	55.76	12/07-DC	18.2 (B)
6/24/08	Atmos Energy (TX)	7.98	10.00	48.27	6/07-YE	19.7 (22)
6/27/08	Questar Gas (UT)	8.41	10.00	51.38	12/08-A	12.0 (Bp)

GAS UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
2008	***2ND QUARTER: AVERAGES/TOTAL***	**8.28**	**10.17**	**51.80**		**52.0**
	MEDIAN	**8.41**	**10.00**	**51.38**		**---**
	OBSERVATIONS	**3**	**3**	**3**		**4**
7/1/08	NorthWestern Corporation (MT)	--- (23)	---	---	---	5.0 (B,I)
7/31/08	San Diego Gas & Electric (CA)	--- (15)	--- (15)	--- (15)	12/08-A	33.0 (B,Z)
7/31/08	Southern California Gas (CA)	--- (24)	--- (24)	--- (24)	12/08-A	214.0 (B,Z)
8/27/08	SourceGas Distribution (CO)	8.26	10.25	53.13	8/07-A	14.9 (B)
9/2/08	Chesapeake Utilities (DE)	8.91	10.25	61.81	3/07	0.3 (I,B)
9/17/08	Atmos Energy (GA)	7.75	10.70	45.00	3/09-A	3.4
9/24/08	Central Illinois Light (IL)	8.03	10.68	46.50	12/06-YE	-9.2
9/24/08	Central Illinois Public Service (IL)	8.22	10.68	47.91	12/06-YE	7.7
9/24/08	Illinois Power (IL)	8.70	10.68	51.76	12/06-YE	39.8
9/30/08	Avista Corp. (ID)	8.45	10.20	47.94	12/07-A	3.9 (B)
2008	***3RD QUARTER: AVERAGES/TOTAL***	**8.33**	**10.49**	**50.58**		**312.8**
	MEDIAN	**8.26**	**10.68**	**47.94**		**---**
	OBSERVATIONS	**7**	**7**	**7**		**10**
10/3/08	New Jersey Natural Gas (NJ)	7.76	10.30	51.20	4/08-YE	32.5 (B)
10/8/08	Puget Sound Energy (WA)	8.25	10.15	46.00	9/07-A	49.2 (B)
10/14/08	South Carolina Electric & Gas (SC)	---	---	---	3/08	3.7 (M)
10/15/08	East Ohio Gas (OH)	8.49 (R)	---	---	12/07-DC	40.5 (B,R)
10/20/08	CenterPoint Energy Resources (TX)	8.80	10.06	55.40	12/07-YE	1.2
10/23/08	Columbia Gas of Pennsylvania (PA)	---	---	---	9/07	41.5 (B)
10/23/08	PECO Energy (PA)	---	---	---	12/07	76.5 (B)
10/24/08	Piedmont Natural Gas (NC)	8.55	10.60	51.00	12/07-YE	15.7 (B)
10/24/08	Public Service of North Carolina (NC)	8.54	10.60	54.00	12/07-YE	9.1 (B,25)
11/24/08	Southwest Gas-So. California Div. (CA)	7.87	10.50	47.00	12/09-A	2.4 (B,26)
11/24/08	Southwest Gas-No. California Div. (CA)	8.99	10.50	47.00	12/09-A	-1.0 (B,26)
11/24/08	Southwest Gas-So. Lk. Tahoe Dist. (CA)	8.99	10.50	47.00	12/09-A	1.8 (B,26)
11/24/08	Narragansett Electric (RI)	---	10.50	47.71 (Hy)	9/07-A	13.7
12/3/08	Columbia Gas of Ohio (OH)	8.12	10.39	---	9/08-DC	47.1 (B)
12/23/08	Consumers Energy (MI)	---	---	---	---	22.4 (B)
12/24/08	Southwest Gas (AZ)	8.86 (E)	10.00	43.44	4/07-YE	33.5
12/26/08	Northwest Natural Gas (WA)	8.40	10.10	50.74	9/07-A	2.7 (B)
12/29/08	Avista Corporation (WA)	8.22	10.20	46.30	12/07-A	4.8 (B)
12/30/08	Wisconsin Power and Light (WI)	---	---	---	12/09	-3.9 (B)
12/30/08	Wisconsin Public Service (WI)	---	---	53.41	12/09	-3.0 (B)
2008	***4TH QUARTER: AVERAGES/TOTAL***	**8.45**	**10.34**	**49.25**		**390.4**
	MEDIAN	**8.49**	**10.39**	**47.71**		**---**
	OBSERVATIONS	**13**	**13**	**13**		**20**
2008	***YEAR-TO-DATE: AVERAGES/TOTAL***	**8.48**	**10.37**	**50.47**		**884.8**
	MEDIAN	**8.41**	**10.35**	**50.37**		**---**
	OBSERVATIONS	**30**	**30**	**30**		**41**

FOOTNOTES

A- Average
B- Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
Bp- Order followed partial stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
D- Applies to electric delivery only
DC- Date certain
E- Estimated
Hy- Hypothetical capital struture utilized.
I- Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.
M- "Make-whole" increase based on return on equity or overall return of previous case
P- Partial inclusion of CWIP in rate base without AFUDC offset to income
R- Revised
Tr- Applies to electric transmission only
YE- Year-end
Z- Rate change implemented in multiple steps.
* Capital structure includes cost-free items or tax credit balances at the overall rate of return.

(1) Rate increase effective retroactive to 1/1/07.
(2) Rate increase effective retroactive to 6/16/07.
(3) Represents initial revenue requirement for the newly established conpmany.
(4) Rate increase results from a limited issue reopening of a case initially decided on 1/19/07.
(5) Rate increase effective 2/20/08.
(6) ROE applies only to a proposed 200-MW wind generation facility, and is applicable over the 25-year depreciable life of the project.
(7) Rate increase effective 5/1/08.
(8) ROE applies only to a proposed 585-MW coal generation facility, is applicable for AFUDC and CWIP purposes and over the first 12 years of the plant's commercial operation, and includes a 100-basis-point incentive premium.
(9) The 8.1% ROR utilized in the company's case decided on 2/28/08, was incorporated into this proceeding.
(10) ROE applies only to a proposed 108-MW wind generation facility, and is applicable over the 20-year depreciable life of the project.
(11) Commission also authorized a 150-basis-point ROE premium for the new, 514-MW, combined-cycle Tracy generating plant, and a 500-basis-point premium for demand-side management investments.
(12) Case abated by Commission at company request.
(13) Rate reduction ordered in conjunction with the authorization of a new five-year alternative regulation plan.
(14) Order noted that an ROR of 7.04% is implied in the approved settement.
(15) Rate of return was not an issue in this proceeding. The authorized rate change incorporated the 10.7% return on equity (49% of capital) and the 8.23% return on rate base previously authorized the company for 2007.
(16) ROE applies only to a proposed 52.5-MW wind generation facility over the 20-year depreciable life of the project.
(17) Return and capital structure parameters apply only to the company's 30% interest in the 740-MW coal-fired Colstrip Unit 4 generating plant.
(18) Represents base rate increase. The company's overall electric rates were unchanged as the base rate increase represents the transfer to base rates of a $48 million fuel surcharge that was authorized on 7/3/08.
(19) Parent company capital structure utilized.
(20) Rate increases applicable to gas transmission and storage operations. Initial increase to be effective 1/1/08.
(21) Rate increase effective retroactive to 12/1/07.
(22) Parameters shown apply to parties for whom the case was fully litigated. A settlement executed with the majority of the cities served by Atmos specified a total company $10 million rate hike based on a 9.6% ROE (48% of capital) and a 7.79% ROR. The revenue requirement increase applicable to the settlement's signatories is $8.2 million, while that applicable to non-signatories subject to the Commission order is $3.5 million. The aggregate impact of the two rate adjustments is an $11.7 million increase.
(23) Order noted that an ROR of 7.59% is implied in the approved settement.
(24) Rate of return was not an issue in this proceeding. The rate change incorpated the 10.82% return on equity (48% of capital) and 8.68% return on rate base authorized the company in its automatic cost of capital adjustment mechanism.
(25) Indicated rate hike represents distribution or margin rate increase. Because fixed gas costs were reduced by $8.4 million, the net, overall rate increase was $0.7 million.
(26) Additional increases authorized for each year 2010 through 2013.

Regulatory Research Associates
REGULATORY FOCUS

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MAJOR RATE CASE DECISIONS--JANUARY 2009-DECEMBER 2009

The average return on equity (ROE) authorized electric utilities in 2009 approximated 10.5%, and was unchanged from the prior year. There were 39 electric ROE determinations in 2009, and 37 in 2008. The average ROE authorized gas utilities approximated 10.2% in 2009, compared to 10.4% in 2008. There were 29 gas cases that included an ROE determination in 2009, and 30 in 2008. Not included in these averages is a Sept. 17, 2008 steam rate case decision for Consolidated Edison of New York, in which the New York Public Service Commission adopted a settlement that incorporated a 9.3% return on common equity (48% of capital) and a 7.5% return on rate base. We note that our ROE averages are non-weighted.

After reaching a low in the early-2000's, the number of rate case decisions for energy companies has generally increased over the last several years. There were 95 electric and gas rate decisions in 2009, versus 83 in 2008, and only 32 in 2001. Increased costs, including environmental compliance expenditures, the need for generation and delivery infrastructure upgrades and expansion, and renewable generation requirements argue for a continuation of the increased level of rate case activity over the next several years. However, the use of multi-year settlements and a reduced number of companies due to mergers may prevent the number of rate cases from increasing significantly further.

We note that electric industry restructuring in certain states has led to the unbundling of rates and retail competition for generation. The state commissions in those states are now authorizing revenue requirement and return parameters for delivery operations only (which we footnote in our chronology), thus complicating historical data comparability. We also note that the higher cost of capital resulting from the economic downturn resulted in increased corporate debt yields and the authorization of higher ROEs by some commissions. However, on average, increased authorized ROEs did not materialize in 2009, as some commissions cited the hardship on customers as a reason to hold the line on equity returns.

The table on page 2 shows the average ROE authorized in major electric and gas rate decisions annually since 1990, and by quarter since 2003, followed by the number of observations in each period. The tables on page 3 show the composite electric and gas industry data for all major cases summarized annually since 1996 and by quarter for the past eight quarters. The individual electric and gas cases decided in 2009 are listed on pages 5-9, with the decision date (generally the date on which the final order was issued) shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return (ROR), return on equity (ROE), and percentage of common equity in the adopted capital structure. Next we show the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base, and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study. We note that the cases and averages included in this study may be slightly different from those in our online rate case history database. Any differences are likely the result of this study's inclusion of ROE determinations that are rendered in cost-of-capital-only proceedings in California or that apply only to specific generation plants. Both of these types of determinations are not included in the database, which encompasses major base rate cases only.

(Text continued on page 4.)

Average Equity Returns Authorized January 1990 - December 2009

		Electric Utilities		Gas Utilities	
Year	**Period**	**ROE %**	**(# Cases)**	**ROE %**	**(# Cases)**
1990	Full Year	12.70	(44)	12.67	(31)
1991	Full Year	12.55	(45)	12.46	(35)
1992	Full Year	12.09	(48)	12.01	(29)
1993	Full Year	11.41	(32)	11.35	(45)
1994	Full Year	11.34	(31)	11.35	(28)
1995	Full Year	11.55	(33)	11.43	(16)
1996	Full Year	11.39	(22)	11.19	(20)
1997	Full Year	11.40	(11)	11.29	(13)
1998	Full Year	11.66	(10)	11.51	(10)
1999	Full Year	10.77	(20)	10.66	(9)
2000	Full Year	11.43	(12)	11.39	(12)
2001	Full Year	11.09	(18)	10.95	(7)
2002	Full Year	11.16	(22)	11.03	(21)
	1st Quarter	11.47	(7)	11.38	(5)
	2nd Quarter	11.16	(4)	11.36	(4)
	3rd Quarter	9.95	(5)	10.61	(5)
	4th Quarter	11.09	(6)	10.84	(11)
2003	**Full Year**	**10.97**	(22)	**10.99**	(25)
	1st Quarter	11.00	(3)	11.10	(4)
	2nd Quarter	10.54	(6)	10.25	(2)
	3rd Quarter	10.33	(2)	10.37	(8)
	4th Quarter	10.91	(8)	10.66	(6)
2004	**Full Year**	**10.75**	(19)	**10.59**	(20)
	1st Quarter	10.51	(7)	10.65	(2)
	2nd Quarter	10.05	(7)	10.54	(5)
	3rd Quarter	10.84	(4)	10.47	(5)
	4th Quarter	10.75	(11)	10.40	(14)
2005	**Full Year**	**10.54**	(29)	**10.46**	(26)
	1st Quarter	10.38	(3)	10.63	(6)
	2nd Quarter	10.68	(6)	10.50	(2)
	3rd Quarter	10.06	(7)	10.45	(3)
	4th Quarter	10.39	(10)	10.14	(5)
2006	**Full Year**	**10.36**	(26)	**10.43**	(16)
	1st Quarter	10.27	(8)	10.44	(10)
	2nd Quarter	10.27	(11)	10.12	(4)
	3rd Quarter	10.02	(4)	10.03	(8)
	4th Quarter	10.56	(16)	10.27	(15)
2007	**Full Year**	**10.36**	(39)	**10.24**	(37)
	1st Quarter	10.45	(10)	10.38	(7)
	2nd Quarter	10.57	(8)	10.17	(3)
	3rd Quarter	10.47	(11)	10.49	(7)
	4th Quarter	10.33	(8)	10.34	(13)
2008	**Full Year**	**10.46**	(37)	**10.37**	(30)
	1st Quarter	10.29	(9)	10.24	(4)
	2nd Quarter	10.55	(10)	10.11	(8)
	3rd Quarter	10.46	(3)	9.88	(2)
	4th Quarter	10.54	(17)	10.27	(15)
2009	**Full Year**	**10.48**	**(39)**	**10.19**	(29)

Electric Utilities--Summary Table*

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
1996	Full Year	9.21	(20)	11.39	(22)	44.34	(20)	-5.6	(38)
1997	Full Year	9.16	(12)	11.40	(11)	48.79	(11)	-553.3	(33)
1998	Full Year	9.44	(9)	11.66	(10)	46.14	(8)	-429.3	(31)
1999	Full Year	8.81	(18)	10.77	(20)	45.08	(17)	-1,683.8	(30)
2000	Full Year	9.20	(12)	11.43	(12)	48.85	(12)	-291.4	(34)
2001	Full Year	8.93	(15)	11.09	(18)	47.20	(13)	14.2	(21)
2002	Full Year	8.72	(20)	11.16	(22)	46.27	(19)	-475.4	(24)
2003	Full Year	8.86	(20)	10.97	(22)	49.41	(19)	313.8	(12)
2004	Full Year	8.44	(18)	10.75	(19)	46.84	(17)	1,091.5	(30)
2005	Full Year	8.30	(26)	10.54	(29)	46.73	(27)	1,373.7	(36)
2006	Full Year	8.24	(24)	10.36	(26)	48.67	(23)	1,465.0	(42)
2007	Full Year	8.22	(38)	10.36	(39)	48.01	(37)	1,401.9	(46)
	1st Quarter	8.36	(9)	10.45	(10)	49.25	(8)	802.9	(9)
	2nd Quarter	8.21	(7)	10.57	(8)	47.64	(7)	510.5	(8)
	3rd Quarter	8.32	(10)	10.47	(11)	48.96	(10)	737.5	(13)
	4th Quarter	8.09	(9)	10.33	(8)	47.58	(8)	848.5	(12)
2008	Full Year	8.25	(35)	10.46	(37)	48.41	(33)	2,899.4	(42)
	1st Quarter	8.19	(8)	10.29	(9)	48.52	(8)	857.0	(14)
	2nd Quarter	8.05	(9)	10.55	(10)	47.66	(9)	1,425.0	(17)
	3rd Quarter	8.48	(3)	10.46	(3)	47.20	(3)	317.1	(7)
	4th Quarter	8.30	(18)	10.54	(17)	49.41	(17)	1,598.2	(20)
2009	**Full Year**	**8.23**	**(38)**	**10.48**	**(39)**	**48.61**	**(37)**	**4,197.3**	**(58)**

Gas Utilities--Summary Table*

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
1996	Full Year	9.25	(23)	11.19	(20)	47.69	(19)	193.4	(34)
1997	Full Year	9.13	(13)	11.29	(13)	47.78	(11)	-82.5	(21)
1998	Full Year	9.46	(10)	11.51	(10)	49.50	(10)	93.9	(20)
1999	Full Year	8.86	(9)	10.66	(9)	49.06	(9)	51.0	(14)
2000	Full Year	9.33	(13)	11.39	(12)	48.59	(12)	135.9	(20)
2001	Full Year	8.51	(6)	10.95	(7)	43.96	(5)	114.0	(11)
2002	Full Year	8.80	(20)	11.03	(21)	48.29	(18)	303.6	(26)
2003	Full Year	8.75	(22)	10.99	(25)	49.93	(22)	260.1	(30)
2004	Full Year	8.34	(21)	10.59	(20)	45.90	(20)	303.5	(31)
2005	Full Year	8.25	(29)	10.46	(26)	48.66	(24)	458.4	(34)
2006	Full Year	8.51	(16)	10.43	(16)	47.43	(16)	444.0	(25)
2007	Full Year	8.12	(32)	10.24	(37)	48.37	(30)	813.4	(48)
	1st Quarter	8.78	(7)	10.38	(7)	52.07	(7)	129.6	(7)
	2nd Quarter	8.28	(3)	10.17	(3)	51.80	(3)	52.0	(4)
	3rd Quarter	8.33	(7)	10.49	(7)	50.58	(7)	312.8	(10)
	4th Quarter	8.45	(13)	10.34	(13)	49.25	(13)	390.4	(20)
2008	Full Year	8.48	(30)	10.37	(30)	50.47	(30)	884.8	(41)
	1st Quarter	8.11	(5)	10.24	(4)	44.97	(4)	167.6	(7)
	2nd Quarter	8.05	(7)	10.11	(8)	48.84	(7)	92.5	(8)
	3rd Quarter	8.30	(2)	9.88	(2)	51.00	(2)	19.2	(4)
	4th Quarter	8.19	(14)	10.27	(15)	49.35	(15)	195.7	(18)
2009	**Full Year**	**8.15**	**(28)**	**10.19**	**(29)**	**48.72**	**(28)**	**475.0**	**(37)**

* Number of observations in each period indicated in parentheses.

The table below tracks the average equity return authorized for all electric and gas rate cases combined, by year, for the last 20 years. As the table reveals, since 1990 authorized ROEs have generally trended downward, reflecting the significant decline in interest rates that has occurred over this time frame. The combined average equity returns authorized for electric and gas utilities in each of the years 1990 through 2009, and the number of observations for each year are as follows:

1990	12.69%	(75)	2000	11.41%	(24)
1991	12.51	(80)	2001	11.05	(25)
1992	12.06	(77)	2002	11.10	(43)
1993	11.37	(77)	2003	10.98	(47)
1994	11.34	(59)	2004	10.67	(39)
1995	11.51	(49)	2005	10.50	(55)
1996	11.29	(42)	2006	10.39	(42)
1997	11.34	(24)	2007	10.30	(76)
1998	11.59	(20)	2008	10.42	(67)
1999	10.74	(29)	2009	10.36	(68)

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ELECTRIC UTILITY DECISIONS

Order Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
1/14/09	Public Service Oklahoma (OK)	8.31	10.50	44.10	2/08-YE	59.3 (1)
1/21/09	Westar Energy (KS)	---	---	---	---	65.0 (B)
1/21/09	Kansas Gas & Electric (KS)	---	---	---	---	65.0 (B)
1/21/09	Cleveland Electric Illuminating (OH)	8.48	10.50 (E)	49.00	2/08-DC	29.2 (D)
1/21/09	Ohio Edison (OH)	8.48	10.50 (E)	49.00	2/08-DC	68.9 (D)
1/21/09	Toledo Edison (OH)	8.48	10.50 (E)	49.00	2/08-DC	38.5 (D)
1/30/09	Idaho Power (ID)	8.18	10.50	49.27	12/08-YE	27.0 (R)
2/4/09	United Illuminating (CT)	7.59	8.75	50.00	12/07-A	6.8 (D,R,2)
2/4/09	Interstate Power & Light (IA)	---	10.10 (3)	---	---	---
2/5/09	Kentucky Utilities (KY)	---	---	---	---	-8.9 (B)
2/5/09	Louisville Gas & Electric (KY)	---	---	---	---	-13.2 (B)
2/10/09	Union Electric (MO)	8.34	10.76	52.01	3/08-YE	161.7
3/4/09	Indiana Michigan Power (IN)	7.62	10.50	45.80 *	9/07-YE	19.1 (4)
3/11/09	Entergy Texas (TX)	---	---	---	3/07	30.5 (B,1,5)
3/17/09	Southern California Edison (CA)	---	---	---	12/09-A	308.1 (6)
2009	***1ST QUARTER: AVERAGES/TOTAL***	**8.19**	**10.29**	**48.52**		**857.0**
	MEDIAN	**8.33**	**10.50**	**49.00**		**---**
	OBSERVATIONS	**8**	**9**	**8**		**14**
4/2/09	Entergy New Orleans (LA)	---	11.10	---	12/08-YE	-24.7 (B,7)
4/16/09	PacifiCorp (ID)	---	---	---	---	4.4 (B)
4/21/09	PacifiCorp (UT)	8.36	10.61	51.00	12/09-A	45.0 (B)
4/24/09	Consolidated Edison of New York (NY)	7.79	10.00	48.00	3/10-A	523.4 (D)
4/30/09	Tampa Electric (FL)	8.29 (R)	11.25	47.49 *(R)	12/09-A	147.7 (Z,R)
5/4/09	Minnesota Power (MN)	8.45	10.74	54.79	6/09-A	20.4 (I,R)
5/20/09	Oklahoma Gas & Electric (AR)	6.43	10.25	36.04 *	12/07-YE	13.3 (B)
5/20/09	NorthWestern Corp. (MT)	8.38	10.25	50.00	---	--- (8)
5/20/09	PacifiCorp (WY)	---	---	---	---	18.0 (B)
5/28/09	Public Service New Mexico (NM)	8.77	10.50	50.47	3/08-YE	77.1 (B,Z)
5/29/09	Idaho Power (ID)	---	---	---	---	10.5 (9)
6/2/09	Southwestern Public Service (TX)	---	---	---	12/07	57.4 (B,I)
6/9/09	Public Service Co. of Colorado (CO)	---	---	---	---	112.2 (B)
6/10/09	Kansas City Power & Light (MO)	---	---	---	12/07-YE	95.0 (B)
6/10/09	KCP&L Greater Missouri Oper-L&P (MO)	---	---	---	12/07-YE	15.0 (B)
6/10/09	KCP&L Greater Missouri Oper-MPS (MO)	---	---	---	12/07-YE	48.0 (B)
6/22/09	Central Hudson Gas & Electric (NY)	7.28	10.00	47.00	6/10-A	39.6 (D)
6/24/09	Nevada Power (NV)	8.66 (10)	10.80 (10)	44.15	6/08-YE	222.7 (Z)
2009	***2ND QUARTER: AVERAGES/TOTAL***	**8.05**	**10.55**	**47.66**		**1,425.0**
	MEDIAN	**8.36**	**10.56**	**48.00**		**---**
	OBSERVATIONS	**9**	**10**	**9**		**17**

ELECTRIC UTILITY DECISIONS (continued)

Order Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
7/8/09	Duke Energy Ohio (OH)	8.61	10.63 (E)	51.59 (E)	12/08-DC	55.3 (D,B)
7/14/09	Southwestern Public Service (NM)	---	---	---	---	14.2 (B)
7/17/09	Avista Corp. (ID)	8.55	10.50	50.00	9/08-A	12.5 (B)
7/24/09	Kansas City Power & Light (KS)	---	---	---	12/07-YE	59.0 (B)
7/24/09	Oklahoma Gas & Electric (OK)	---	---	---	9/08-YE	48.3 (B)
8/21/09	Texas-New Mexico Power (TX)	---	---	---	3/08	12.7 (B)
8/31/09	Oncor Electric Delivery (TX)	8.28	10.25	40.00	12/07-YE	115.1 (D)
2009	***3RD QUARTER: AVERAGES/TOTAL***	**8.48**	**10.46**	**47.20**		**317.1**
	MEDIAN	**8.55**	**10.50**	**50.00**		**---**
	OBSERVATIONS	**3**	**3**	**3**		**7**
10/14/09	Cleco Power (LA)	8.52	10.70	51.00	6/09-A	173.3 (B)
10/23/09	Northern States Power-Minnesota (MN)	8.83	10.88	52.47	12/09-A	91.4 (I)
11/2/09	Consumers Energy (MI)	6.98	10.70	40.51	12/09-A	139.4 (I)
11/03/09	Sierra Pacific Power (CA)	8.51	10.70	43.71	12/09-A	5.5 (B)
11/24/09	Southwestern Electric Power (AR)	6.01	10.25	33.99 *	12/08-YE	17.8 (B)
11/25/09	Otter Tail Power (ND)	8.62	10.75	53.30	12/07-A	3.1 (I,Z,B)
11/30/09	Massachusetts El./Nantucket El. (MA)	7.85	10.35	43.15	12/08-YE	43.9 (D)
12/7/09	Duke Energy Carolinas (NC)	8.38	10.70	52.50	12/08-YE	315.2 (B)
12/10/09	El Paso Electric (NM)	---	---	---	12/08-YE	5.5 (B)
12/16/09	Arizona Public Service (AZ)	8.58	11.00	53.79	12/07-YE	344.7 (B)
12/16/09	Upper Peninsula Power (MI)	7.83	10.90	49.52 *	12/10	6.5 (B)
12/16/09	PacifiCorp (WA)	8.06	---	---	---	13.5 (B)
12/18/09	Wisconsin Electric Power (WI)	8.96	10.40	53.02	12/10-A	85.8
12/18/09	Wisconsin Power and Light (WI)	9.81	10.40	50.38	12/10-A	58.6
12/22/09	Avista Corp. (WA)	8.25	10.20	46.50	9/08-A	12.1 (Bp)
12/22/09	Madison Gas and Electric (WI)	8.67	10.40	55.34	12/10-A	11.9
12/22/09	Northern States Power-Wisconsin (WI)	8.93	10.40	52.30	12/10-A	6.4
12/22/09	Wisconsin Public Service (WI)	---	---	---	12/10	18.2
12/24/09	Public Service of Colorado (CO)	8.72	10.50	58.56	12/08-A	237.9 (B,Z,11)
12/30/09	Delmarva Power & Light (MD)	7.96	10.00	49.87	12/08-A	7.5 (D)
2009	***4TH QUARTER: AVERAGES/TOTAL***	**8.30**	**10.54**	**49.41**		**1,598.2**
	MEDIAN	**8.52**	**10.50**	**51.00**		**---**
	OBSERVATIONS	**18**	**17**	**17**		**20**
2009	***FULL YEAR AVERAGES/TOTAL***	**8.23**	**10.48**	**48.61**		**4,197.3**
	MEDIAN	**8.38**	**10.50**	**49.87**		**---**
	OBSERVATIONS	**38**	**39**	**37**		**58**

GAS UTILITY DECISIONS

Order Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
1/7/09	Vectren Energy Delivery of Ohio (OH)	8.89	---	---	5/08-DC	14.8 (B)
1/13/09	Michigan Gas Utilities (MI)	7.60	10.45	46.49 *	12/09	6.0 (B)
2/2/09	New England Gas (MA)	7.74	10.05	34.19	12/07-YE	3.7
2/5/09	Louisville Gas & Electric (KY)	---	---	---	---	22.0 (B)
2/26/09	Equitable Gas (PA)	---	---	---	12/08	38.4 (B)
3/9/09	Atmos Energy (TN)	8.24	10.30	48.12	6/08-A	2.5 (B)
3/25/09	Northern Illinois Gas (IL)	8.09 (R)	10.17	51.07 (R)	12/09-A	80.2 (R)
2009	***1ST QUARTER: AVERAGES/TOTAL***	**8.11**	**10.24**	**44.97**		**167.6**
	MEDIAN	**8.09**	**10.24**	**47.31**		**---**
	OBSERVATIONS	**5**	**4**	**4**		**7**
4/2/09	Entergy New Orleans (LA)	---	10.75	---	12/08-YE	5.0 (B,7)
5/15/09	Niagara Mohawk Power (NY)	7.70	10.20 (12)	43.70	3/10-A	39.4 (B)
5/29/09	EnergyNorth Natural Gas (NH)	8.28	9.54	50.00	6/07-A	5.5 (B,I)
6/3/09	Black Hills/Iowa Gas Utility (IA)	8.71	10.10	51.38	12/07-A	10.4 (B,I)
6/9/09	Peoples Gas System (FL)	8.50	10.75	48.51 *	12/09-A	19.2 (I)
6/22/09	Central Hudson Gas & Electric (NY)	7.28	10.00	47.00	6/10-A	13.8
6/29/09	Minnesota Energy Resources (MN)	7.98	10.21	48.77	12/08-A	15.4 (I)
6/30/09	Connecticut Natural Gas (CT)	7.92	9.31 (13)	52.52	6/08-(14)	-16.2
2009	***2ND QUARTER: AVERAGES/TOTAL***	**8.05**	**10.11**	**48.84**		**92.5**
	MEDIAN	**7.98**	**10.15**	**48.77**		**---**
	OBSERVATIONS	**7**	**8**	**7**		**8**
7/17/09	Southern Connecticut Gas (CT)	8.05	9.26 (13)	52.00	6/08-(14)	-12.5
7/17/09	Avista Corp. (ID)	8.55	10.50	50.00	9/08-A	1.9 (B)
8/27/09	UGI Penn Natural Gas (PA)	---	---	---	9/09	19.8 (B)
8/27/09	UGI Central Penn Gas (PA)	---	---	---	9/09	10.0 (B)
2009	***3RD QUARTER: AVERAGES/TOTAL***	**8.30**	**9.88**	**51.00**		**19.2**
	MEDIAN	**8.30**	**9.88**	**51.00**		**---**
	OBSERVATIONS	**2**	**2**	**2**		**4**

GAS UTILITY DECISIONS (continued)

10/13/09	South Carolina Electric & Gas (SC)	---	---	---	3/09	13.0 (M)
10/16/09	Orange and Rockland Utilities (NY)	8.49	10.40	48.00	10/10-A	27.0 (B,Z)
10/26/09	Columbia Gas of Kentucky (KY)	---	---	---	---	6.1 (B)
10/26/09	Avista Corporation (OR)	8.19	10.10	50.00	12/10-A	8.8 (B)
10/28/09	Southwest Gas, Southern Div. (NV)	7.40	10.15 (15)	47.09	11/08-YE	17.6
10/28/09	Southwest Gas, Northern Div. (NV)	8.30	10.15 (15)	47.09	11/08-YE	-0.5
10/30/09	Bay State Gas (MA)	8.18	9.95	53.57	12/08-YE	19.1
11/20/09	Hope Gas (WV)	6.86	9.45	42.34	3/08-A	8.8
12/14/09	ONEOK (OK)	8.53 (E)	10.50	55.30	12/08-YE	54.5 (B)
12/16/09	Michigan Gas Utilities (MI)	7.16	10.75	47.27 *	12/10	3.5 (Bp)
12/17/09	Pivotal Utility Holdings (NJ)	7.64	10.30	47.89	9/09-YE	2.9 (B)
12/18/09	Wisconsin Electric Power (WI)	8.85	10.40	53.02	12/10-A	-2.0
12/18/09	Wisconsin Gas (WI)	9.09	10.50	46.62	12/10-A	5.7
12/18/09	Wisconsin Power and Light (WI)	8.84	10.40	50.38	12/10-A	5.6
12/22/09	Avista Corp. (WA)	8.25	10.20	46.50	9/08-A	0.6 (Bp)
12/22/09	Madison Gas and Electric (WI)	8.86	10.40	55.34	12/10-A	-1.5
12/22/09	Wisconsin Public Service (WI)	---	---	---	12/10	13.5
12/29/09	Duke Energy Kentucky (KY)	---	10.38	49.90	---	13.0 (B)
2009	***4TH QUARTER: AVERAGES/TOTAL***	**8.19**	**10.27**	**49.35**		**195.7**
	MEDIAN	**8.28**	**10.38**	**48.00**		**---**
	OBSERVATIONS	**14**	**15**	**15**		**18**
2009	***FULL YEAR AVERAGES/TOTAL***	**8.15**	**10.19**	**48.72**		**475.0**
	MEDIAN	**8.22**	**10.21**	**48.64**		**---**
	OBSERVATIONS	**28**	**29**	**28**		**37**

FOOTNOTES

A- Average
B- Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
Bp- Order followed partial stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.
D- Applies to electric delivery only
DC- Date certain
E- Estimated
I- Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.
M- "Make-whole" increase based on return on equity or overall return of previous case
R- Revised
YE- Year-end
Z- Rate change implemented in multiple steps.
* Capital structure includes cost-free items or tax credit balances at the overall rate of return.

(1) Recovery of an additional $22.1 million authorized through adjustment mechanisms.
(2) Second-year distribution rate increase of about $19 million authorized based on a 7.76% ROR.
(3) Adopted ROE applies only to the company's proposed 649-MW, coal-fired Sutherland Unit 4 plant. The company subsequently cancelled plans to construct the plant.
(4) Commission decision modified a settlement. Recovery of an additional $22.5 million authorized through tracking mechanisms.
(5) Indicated rate increase includes a $46.7 million base rate increase offset by a net $16.2 million decrease in revenues collected under certain riders.
(6) Indicated rate increase is retroactive to January 1, 2009 and reflects the one-time refund of a $72.5 million overcollection of postretireement benefits other than pension costs. Additional rate increases of $205.3 million and $219 million authorized for 2010 and 2011, respectively. Rate of return was not an issue in this case.
(7) Rate changes effective June 1, 2009.
(8) Authorized return parameters apply only to the 120-150 MW, gas-fired Mill Creek generating plant.
(9) Rate increase associated with implementation of advanced metering infrastructure. Return parameters are those adopted in the company's previous rate case.
(10) Reflects incentive ROE (and ROR) for demand side mangement programs and the Chuck Lenzie generating plant. Without the incentives, a 10.5% ROE was authorized.
(11) The authorized increase reflects the transfer to base rates of $109.6 million of revenues previously recovered through other mechanisms. Therefore, the net ratepayer impact of the increase is $128.3 million.
(12) Indicated ROE includes a 20 basis-point premium associated with the multi-year term of the settlement.
(13) Adopted ROE reflects a 10-basis point penalty for billing errors.
(14) Rate base valued as of 12/31/09.
(15) Authorized equity return reflects a 25-basis point reduction to account for the reduced risk associated with the adoption of a decoupling mechanism.

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