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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2014-0258

SURREBUTTAL TESTIMONY

OF

ROBERT B. HEVERT

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

Framingham, Massachusetts
February 6, 2015

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I. INTRODUCTION

Q. Please state your name, affiliation and business address.

A. My name is Robert B. Hevert. I am Managing Partner of Sussex Economic Advisors, LLC. My business address is 161 Worcester Road, Suite 503, Framingham, Massachusetts 01701.

Q. Are you the same Robert B. Hevert who submitted Direct and Rebuttal Testimony in this proceeding?

A. Yes, I filed Direct and Rebuttal Testimony on behalf of Union Electric Company, d/b/a Ameren Missouri. I use the terms "Ameren Missouri" and the "Company" to refer to Union Electric Company.

Q. What is the purpose of your Surrebuttal Testimony?

A. On behalf of Ameren Missouri, my Surrebuttal Testimony responds to the Rebuttal Testimony submitted in this proceeding by Mr. David Murray on behalf of the Missouri Public Service Commission ("Commission") Utility Services Division ("Staff"), Mr. Lance Schafer on behalf of the Missouri Office of the Public Counsel ("OPC" or "Public Counsel"), and Mr. Michael P. Gorman on behalf of the Missouri Industrial Energy Consumers ("MIEC", together with Staff and OPC, the "Opposing ROE Witnesses") as each witness' Rebuttal Testimony relates to the Company's market-required Return on Equity ("ROE" or the "Cost of

Equity"). My analyses and conclusions are supported by the data presented in Schedules RBH-S29 through RBH-S34, which have been prepared by me or under my direction.

II. SUMMARY AND OVERVIEW OF TESTIMONY

Q. Please provide an overview of the recommendations and principal issues addressed in your Surrebuttal Testimony.

A. In my Direct Testimony, I recommended a Return on Equity ("ROE") range of 10.20 percent to 10.60 percent, with a specific recommendation of 10.40 percent; my Rebuttal Testimony maintained that range and ROE recommendation. For the reasons discussed in the balance of my Surrebuttal Testimony, none of the arguments raised in the Opposing ROE Witnesses' Rebuttal Testimony have caused me to revise my recommendation. As such, I continue to recommend an ROE of 10.40 percent, within a range of 10.20 percent to 10.60 percent.

Because many of the issues raised by the Opposing ROE Witnesses in their Rebuttal Testimony already have been addressed in my Rebuttal Testimony, my Surrebuttal Testimony addresses only those points that are incremental. A theme that arose in the Opposing ROE Witnesses' Direct Testimony, and which was reiterated in their Rebuttal Testimony, is the notion that the Cost of Equity necessarily has fallen since the Company's prevailing ROE was authorized in December 2012. Rather than address that point in my response to each of the Opposing ROE Witnesses, I will do so in the following section of my Surrebuttal Testimony.

Before responding to specific issues, however, it is important to put in context the Opposing ROE Witnesses' recommendations. Staff states very clearly that in its view, it is "not improbable" that the Cost of Equity for vertically-integrated utilities such as Ameren Missouri is

in the range of 6.00 percent to 7.00 percent.[1] Nonetheless, in its report Staff recommended an ROE of 9.25 percent (within a range of 9.00 percent to 9.50 percent), based in part on its view that "there appears to be some concern in setting an allowed return on equity based on a reasonable estimate of the cost of equity."[2] In his Rebuttal Testimony, Mr. Murray recommends an ROE of 9.25 percent, but no more than 9.50 percent.[3] Despite his recommendation, Mr. Murray states that "it really should be fairly intuitive that the cost of equity for regulated utility companies is below 9%."[4]

Mr. Schafer continues to recommend a range of 8.74 percent to 9.22 percent (with a point estimate of 9.01 percent) which, he suggests, is supported by various "corrections" to the other witnesses' models (including my own).[5] Because his proposed adjustments to my models are misplaced, and given that his recommendation is wholly inconsistent with returns recently authorized by this and other regulatory commissions, I do not believe that Mr. Schafer's analyses or recommendations should be given any weight in determining the Company's ROE.

Mr. Gorman maintains his recommended ROE of 9.30 percent based in part on his assertion that "all" market indicators, including authorized ROEs, suggest that the overall rate of return is at historically low levels, and will remain so for the "foreseeable future."[6] In that regard, Mr. Gorman suggests that the market's "preference" for investments, such as utility stocks, has bid up their price, resulting in a historically low "overall rate of return."[7] Mr. Gorman also supports his recommendation by making various adjustments to my models, although those adjustments are misplaced and bias the results downward.

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1 Staff Revenue Requirement Cost of Service Report, at 43.
2 *Ibid.*, at 46.
3 Rebuttal Testimony of David Murray, at 35
4 *Ibid.*
5 *See* Rebuttal Testimony of Lance C. Schafer, at 75 – 77.
6 Rebuttal Testimony and Schedules of Michael P. Gorman, at 19 – 20.
7 *Ibid.*, at 20.

As discussed below, the Opposing ROE Witnesses' recommendations, which remain tightly clustered in the 9.01 percent to 9.30 percent range, are far below the returns that investors would expect from vertically-integrated electric utilities operating in other jurisdictions, and are based on assumptions regarding interest rates, valuation levels, and authorized returns that are not supported by observable data. Moreover, regardless of the modeling "adjustments" that the Opposing ROE Witnesses propose, they fail to recognize that under the *Hope* and *Bluefield* standards, it is the result reached rather than the method employed that controls in determining whether a return is reasonable.[8] Since many of those "adjustments" produce implausibly low ROE estimates, it is important to consider the reasonableness of their results, regardless of the methods used to derive them. In that important respect, nowhere in their testimony have the Opposing ROE Witnesses demonstrated that a 50 to 80 basis point reduction in the ROE – to a level below returns available to less risky natural gas distribution utilities[9] - is reasonable for Ameren Missouri.

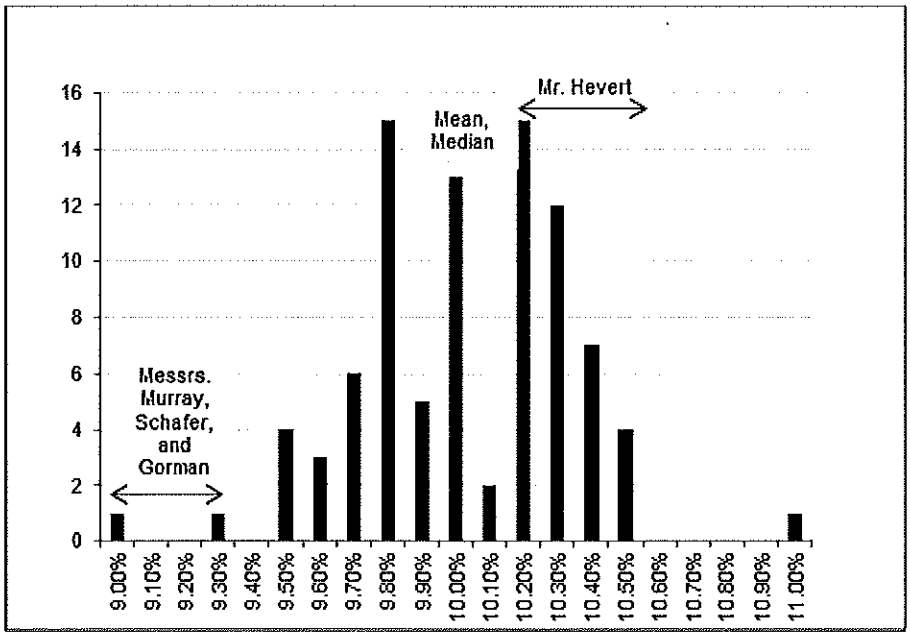
ROE Recommendations Relative to Recently Authorized Returns

As noted above, the Opposing ROE Witnesses' positions are based in part on their assertions that capital market conditions indicate that the Cost of Equity has dramatically fallen since December 2012. However, even the highest of the three recommendations (Mr. Gorman's 9.30 percent ROE) falls in the bottom one percentile of returns authorized for vertically-integrated electric utilities from 2012 through 2014 (*see* Chart 1, below).

[8] Please note that I am not making a legal argument. Rather, because the *Hope* and *Bluefield* standards are so widely recognized, it is my position that the financial community will assess ROE authorizations based on the reasonableness of the outcome.

[9] *See* Rebuttal Testimony of Robert B. Hevert, at 5.

Chart 1: Authorized ROEs and Witness Recommendations[10]



Taken from a slightly different perspective, Mr. Gorman's 9.30 percent recommendation is more than two standard deviations below the average ROE of 10.01 percent.[11] Mr. Schafer's recommendation is more than three standard deviations below the mean. As such, there is less than a 0.30 percent (that is, .003) likelihood that Mr. Schafer's recommendation would be observed. Similarly, there is less than a 2.00 percent chance that Mr. Gorman's recommendation would occur. In the context of recently-authorized ROEs, which reflect the return available to investments of generally similar risk with which Ameren Missouri must compete for capital (and which Messrs. Murray and Gorman acknowledge is a benchmark on which the Commission traditionally has relied in setting returns), the Opposing ROE Witnesses' recommendations are

[10] Source: Regulatory Research Associates. ROEs relate to vertically integrated electric utilities, only. That is, ROEs authorized for transmission and distribution utilities, as well as generation-only rate riders are excluded. *See*, also, Schedule RBH-S29.

[11] Source: Regulatory Research Associates.

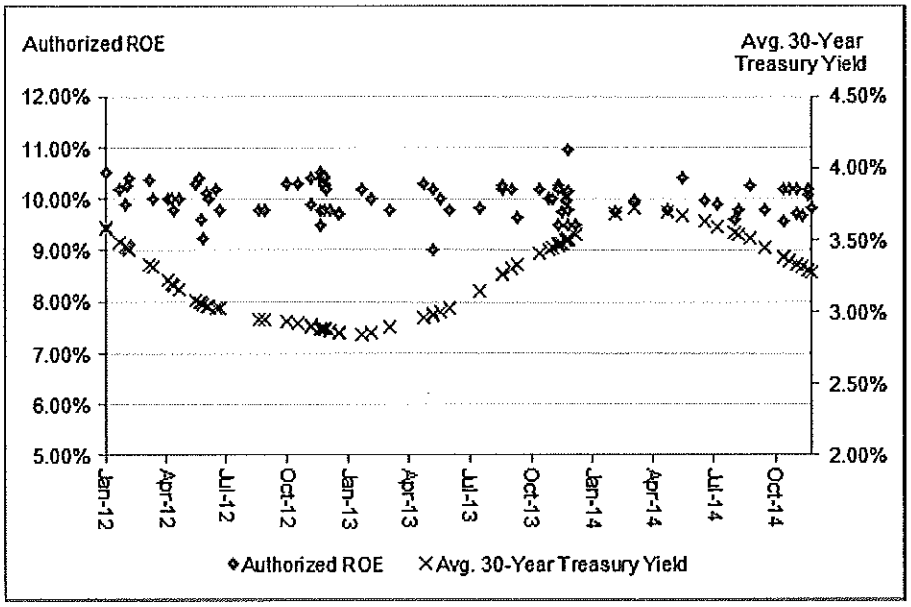
highly improbable. Conversely, the lower end of my recommended range (10.20 percent) is only 19 basis points (less than one standard deviation) from the average-authorized ROE.

Changes in Capital Market Conditions

To support his estimates and recommendation, Mr. Murray suggests that the Cost of Equity must have fallen during the last calendar quarter of 2014 since long-term Treasury yields declined during that period.[12] Similarly, Mr. Gorman notes that long-term Treasury yields decreased during the thirteen-week period ended January 2, 2015.[13] Although it is true that long-term yields fell in late 2014, the average yield did not fall below the levels observed at the time of the Company's last rate case. To that point, while the average thirty-year Treasury yield was 2.89 percent on December 12, 2012, by December 18, 2014 (the date of the last order in 2014), it had risen to 3.27 percent.[14] During that period, authorized ROEs remained consistent with the overall average of 10.01 percent (*see* Chart 2, below).

[12] Rebuttal Testimony of David Murray, at 8.
[13] Rebuttal Testimony of Michael P. Gorman, at 20.
[14] Source: Federal Reserve Schedule H.15. Consistent with my Risk Premium analysis, the average is calculated over 201 days to reflect the average duration of rate proceedings.

Chart 2: Authorized Returns and Average 30-Year Treasury Yield (2012 – 2014)[15]



On the basis of observed-authorized returns and long-term Treasury yields, there is no reason to conclude that the Cost of Equity has fallen since the Commission authorized the Company's 9.80 percent ROE, as Messrs. Murray and Gorman assert. In fact, if we were to accept Mr. Gorman's position that the Equity Risk Premium (that is, the difference between the ROE and interest rates) does not change with the level of interest rates,[16] the 6.91 percent equity premium implied by the Commission's 9.80 percent authorization would produce an ROE of 10.18 percent when applied to the 3.27 percent average Treasury yield observed in December 2014.[17]

As Mr. Gorman points out in his Exhibit MPG-R-5, from December 2013 through October 2014, the Federal Reserve had discussed the continued "tapering" of asset purchases under its Quantitative Easing policy. Although interest rates began to drift downward in the

[15] Sources: Regulatory Research Associates Federal Reserve Schedule H.15. Includes vertically integrated electric utilities, only.
[16] *See* Rebuttal Testimony of Robert B. Hevert at 114- 115. This issue is further discussed in Section V, below.
[17] 6.91% = 9.80% - 2.89%.

latter half of 2014 (*see* also Chart 2, above), authorized returns did not follow suit: the average authorized ROE from December 2013 to May 2014 was 9.94 percent, and the average return from June through December 2014 was 9.96 percent. Both are within seven basis points of the longer-term (2012 – 2014) average of 10.01 percent. A reasonable conclusion is that regulatory commissions have recognized that the capital markets remain unstable, and they do not see the Cost of Equity as having fallen in parallel with interest rates.[18] Consequently, current interest rates cannot rationalize ROE recommendations that are 70 to 100 basis points below prevailing industry levels, as the Opposing ROE Witnesses suggest.

Messrs. Murray and Gorman also point to recently-elevated utility stock valuations as a basis for their unreasonably low ROE recommendations. There is no disagreement that utility valuations recently have increased. Taken as a group, the proxy companies included in the combined proxy group used in my Rebuttal Testimony historically have traded at Price/Earnings ("P/E") multiples that are approximately 95.00 percent of the market P/E multiple.[19] From December 2014 through January 2015, however, the group traded at a 17.00 percent premium to the market. Viewed in isolation, the group now is trading outside of a one-standard deviation band from its long-term average. While the group has traded at relatively high P/E ratios in the past, those levels have not persisted; the P/E ratio tends to revert to levels within the one-standard deviation range (*see* Chart 3, below).

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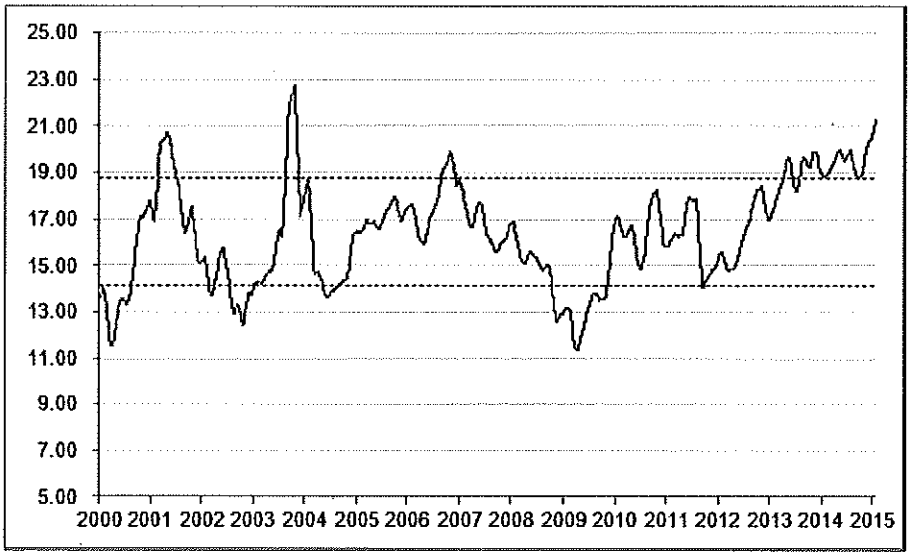
[18] As discussed in my Direct Testimony, the semi-log regression used in my Risk Premium model accounts for periods during which interest rates were either extremely high or extremely low (*see* Direct Testimony of Robert B. Hevert, at 29 – 30). In the case of very low interest rates, the Risk Premium increases at a faster rate, reflecting the fact that extremely low interest rates may reflect the tendency of investors to seek the relative safety of Treasury securities during periods of elevated market uncertainty. In that case, low interest rates reflect higher degrees of risk aversion and, therefore, higher required equity returns.

[19] Source: SNL Financial. Proxy group measured as an index; 95.00 percent reflects median P/E ratios from January 2000 through January 23, 2015. *See* also Rebuttal Testimony of Robert B. Hevert at 5 – 6; 91 – 93.

Chart 3: Proxy Group Price/Earnings Ratio Over Time (30-Day Moving Average)[20]



The salient question is not whether recent utility valuation levels are high relative to historical standards. Rather, the issue is the extent to which the recently-elevated valuation levels are or should be reflected in ROE recommendations.[21] Simply observing that the proxy companies currently are trading at relatively high valuation multiples does not mean that the Cost of Equity, which would apply during the period in which the rates set in this proceeding will be in effect, should be set at historically low levels. That is especially the case given that federal monetary policy continues to influence capital markets.

It is important to keep in mind that certain ROE witnesses in this proceeding have given particular weight to Discounted Cash Flow-based methods. Those methods are based on fundamental valuation approaches - they assume that the current market price reflects the long-term assumptions regarding the subject company's future cash flows. To the extent that current

[20] Source: SNL Financial Proxy group measured as an index.

[21] As noted in Schedule RBH-R8, pages 22 and 25, the implied terminal P/E ratio from my Multi-Stage DCF model is in the range of 16.31 to 16.45, which is consistent with the long-term mean and median of 16.43 and 16.40, respectively.

valuation levels reflect near-term trading activity, rather than long-term fundamental investing activity, the models will produce unreliable results. That is the case here.

Aside from the tendency of P/E ratios to revert toward their long-term average, there are other reasons why the current levels should not be used to rationalize historically low ROE recommendations. First, utility companies would trade at multiples in excess of the market if (1) there was a fundamental shift in the way that investors value equity securities in general and utilities in particular, or (2) utilities expected growth rates were expected to persistently exceed the market growth rate. Nowhere in their Rebuttal Testimony have any of the Opposing ROE Witnesses shown whether or why either of those conditions would hold now or over the long run.

A second and related point is that in the context of DCF-based valuation models, higher relative P/E ratios are generally the result of higher-expected growth rates. Here, the Opposing ROE Witnesses have included higher valuation levels, but have assumed lower growth rates in their analyses. That is, the Opposing ROE Witnesses have combined high valuations with low growth rates, a combination that is contrary to the fundamental assumptions underlying the Constant Growth DCF model. The decision to do so biased their DCF-based results downward, well below any reasonable estimate of the Company's Cost of Equity.

Regardless of how the Opposing ROE Witnesses applied their models, there are many data points indicating that investors believe current utility stock prices exceed their intrinsic value (that is, investors' required returns are higher than the returns implied by current utility stock prices). For example, my Rebuttal Testimony noted that: (1) Value Line projects stock price declines for many of the proxy companies; (2) Morningstar has noted utility prices are nearly 10.00 percent over their fair value estimate; and (3) short interest in the XLU, an

Exchange Traded Fund holding 60 utility companies, remains elevated relative to historical levels.[22]

We also can look to long-dated options on the XLU to assess investors' views of the likely future direction of prices for utility stocks. Currently, investors are willing to pay approximately twice the premium for the option to sell the XLU at today's price in January 2017 than they are willing to pay for the option to buy the index at today's price.[23] Because the option to sell (the put option) increases in value as the XLU falls below its current price, and the option to buy (the call option) increases as the XLU rises above its current price, the difference in put and call option premiums suggest that investors see a greater likelihood of decreases in utility valuation levels than increases.[24] Those data points suggest that current valuation levels may not fully reflect the fundamental assumptions on which many of the Cost of Equity estimation techniques rely.

Lastly, although Messrs. Murray and Gorman assume that decreases in Treasury yields will cause, or at least will be related to higher valuation levels, over time there has been virtually no relationship between the two (*see* Chart 4, below). For example, during periods in which Treasury yields were 3.00 percent, the proxy group P/E ratio ranged from slightly less than 13.00 to over 21.00. Rather than interest rates, the more reliable predictor of the P/E ratio on a given day is the P/E ratio from the prior day. Consequently, the notion that a decrease in long-term interest rates is necessarily associated with a long-term increase in P/E ratios is not supported by historical market data.

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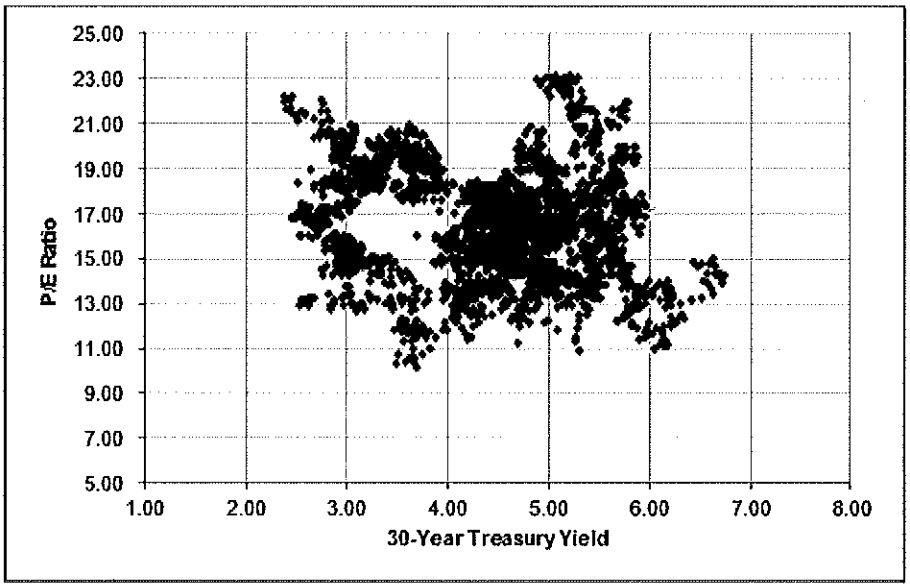
[22] Rebuttal Testimony of Robert B. Hevert, at 16-17. As noted on page 23 of his rebuttal testimony, Mr. Murray also recognizes that Value Line expects a degree of contraction in utility P/E ratios.

[23] Source: http://www.nasdaq.com/

[24] As discussed in my response to Mr. Murray, the same holds for long-term Treasury yields (that is, option prices on an at-the-money index of Treasury securities indicate that investors see a greater likelihood of increases in interest rates than decreases).

Chart 4: Proxy Group P/E Ratio vs. 30-Year Treasury Yield[25]



Other Indicators of Required Equity Returns

Much of the discussion contained in the Opposing ROE Witnesses' Rebuttal Testimony relates to changes in interest rates and utility stock valuation levels, and their effects on DCF-based model results. Because those models rely on current prices, and knowing that current market conditions are incompatible with (in particular) the Constant Growth DCF method, their results must be viewed with considerable caution. We also can look to changes in the inputs to the Capital Asset Pricing Model as measures of changes in market conditions and investors' required equity returns. As discussed in my response to Mr. Murray, all of the components of that model, including Beta coefficients, interest rates, and the Market Risk Premium have increased since the Company's last rate proceeding. Taken from that perspective, the Cost of Equity likely has increased since 2012.

[25] Source: SNL Financial, Federal Reserve Schedule H.15.

Summary

The Opposing ROE Witnesses recommend that the Commission reduce the Company's ROE from 9.80 percent to 9.30 percent, or lower. They justify their recommendations, in part, by pointing to current interest rates and utility stock valuation levels, and in part by "adjusting" the models provided in my Direct and Rebuttal Testimony. Because many of the issues surrounding those "adjustments" were discussed in my Rebuttal Testimony, I have not comprehensively addressed them in my Surrebuttal Testimony. Putting aside issues of methodology, the Opposing ROE Witnesses do not recognize that from 2012 through 2014, authorized returns for vertically-integrated electric utilities, such as Ameren Missouri, remained at about 10.00 percent, even as interest rates drifted lower. Consequently, there is no reason to conclude that the Commission should now reduce the Company's return to a level well below those currently authorized for other electric utilities (and those authorized for natural gas distribution utilities) on the basis of changes in interest rates, as the Opposing ROE Witnesses recommend.

The notion that the Commission should dramatically reduce the Company's ROE based on the current utility valuation multiples also is misplaced. P/E ratios tend to revert back toward their mean over time; various forward-looking market indices support that view. If the Opposing ROE Witnesses believe that the current levels represent a fundamental shift in how investors value stocks in general, and utility stocks in particular, they have not explained that position. If they see the shift as temporary change based on trading, rather than fundamental valuation precepts, they have not adequately reflected that change in the assumptions included in their ROE estimation methods and recommendations. In either case, the conclusion that the

Commission should reduce the Company's ROE simply is not supported by observable and relevant market data.

Considering a variety of methods and a broad range of data, as the Commission encourages, gives a different perspective than a limited view of DCF-based inputs and results. That more comprehensive perspective demonstrates that the Opposing ROE Witnesses' position - that the Company's Cost of Equity has fallen by 50 to 80 basis points since December 2012 - is misplaced and should be given no weight in determining the Company's ROE in this proceeding.

Q. How is the remainder of your Surrebuttal Testimony organized?

A. The remainder of my testimony is organized as follows:

- Section III provides my response to Mr. Murray;
- Section IV provides my response to Mr. Schafer;
- Section V provides my response to of Mr. Gorman; and
- Section VI summarizes my conclusions and recommendations.

III. RESPONSE TO THE REBUTTAL TESTIMONY OF MR. MURRAY

Q. Please briefly summarize Mr. Murray's Rebuttal Testimony.

A. Mr. Murray's Rebuttal Testimony does not update or revise the ROE analyses included in Staff's Revenue Requirement Cost of Service Report. Rather than recommending an ROE consistent with the results of Staff's analyses, Mr. Murray continues to recommend that the Commission lower the Company's ROE by 25 to 75 basis points.[26] Similar to the approach used in the Staff's Revenue Requirement Cost of Service Report, Mr. Murray supports his recommendation by comparing the results of my Multi-Stage DCF model using data from July 13, 2012 (the timing of the data I used in the Company's 2012 rate case) with updated

[26] Rebuttal Testimony of David Murray, at 7.

results using data through December 31, 2014. Mr. Murray performs that comparison first using the 2012 proxy group I relied on (excluding Cleco Corporation, Integrys Corporation and Otter Tail Corporation), and then using the proxy group I rely on in this proceeding (excluding Empire District Electric Corporation, PNM Resources, Otter Tail, NextEra Energy and Hawaiian Electric).[27] Mr. Murray, however, disregards the comparative change in my CAPM and Bond Yield Plus Risk Premium analyses, under the presumption that those models are flawed and do not allow for a meaningful comparison.[28] Pointing to declining long-term Treasury yields and elevated utility P/E ratios, Mr. Murray suggests current capital market conditions support his recommendation to lower the Company's ROE.[29]

With respect to the analyses discussed in my Direct Testimony, Mr. Murray's Rebuttal Testimony presents four principal areas of disagreement:

1. The market return estimates used in my calculation of the MRP component of the CAPM;[30]
2. The use of projected long-term Treasury yields as the risk-free rate component of the CAPM;[31]
3. The long-term growth rates used in my DCF analyses;[32] and
4. The use of authorized returns in my Risk Premium analysis, suggesting authorized returns are not the same as the Cost of Equity.[33]

Each of those points is discussed in turn, below.

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27 *Ibid.*, at 11-15.
28 *Ibid.*, at 25.
29 *Ibid.*, at 7-11.
30 *Ibid.*, at 25-27.
31 *Ibid.*, at 31.
32 *Ibid.*, at 5.
33 *Ibid.*, at 34.

Q. What is your response to Mr. Murray's recommendation to lower the Company's ROE?

A. As discussed in my Rebuttal Testimony, Mr. Murray's recommendation is based on a narrow review of certain Multi-Stage DCF results.[34] In that regard, there are several factors that suggest that other models, in particular risk premium-based methods, also should be considered in reviewing changes in market conditions. For example, utility P/E ratios (on both an absolute basis and relative to the S&P 500 Index) currently are elevated while other market data, such as increased short-interest in and options on the XLU, indicate that investors expect utility stock prices to decline.[35] Similarly, Mr. Murray notes the unusually high valuations in the utility sector and points to Value Lines' projection for a decrease in utility stock P/E ratios. Mr. Murray also cites a UBS report stating the investment bank's analysts are "skittish" with current utility valuations.[36]

As noted in my Rebuttal Testimony, academic literature supports the use of multiple Cost of Equity models (including the DCF model, CAPM and Bond Yield Plus Risk Premium model), as well as the need to assess our confidence in each model's input data before interpreting their results.[37] Given concerns with the current level of stock prices, I believe the CAPM and Risk Premium models (which reflect a longer span of data) should be given particular consideration. The results of those models suggest that the Cost of Equity has remained generally unchanged, if not somewhat increased, since the Company's last rate case. That conclusion is consistent with the relatively constant level of authorized ROEs (for vertically-integrated electric utilities) since

[34] Rebuttal Testimony of Robert B. Hevert, at 14-17.
[35] *See* Rebuttal Testimony of Robert B. Hevert, at 16-17.
[36] Rebuttal Testimony of David Murray, at 7-11.
[37] Rebuttal Testimony of Robert B. Hevert, at 14.

December 2012. Consequently, I believe the premise of Mr. Murray's recommendation to reduce the Company's ROE (that is, relying solely on changes in DCF results) is misplaced.

Q. Do the results of the Bond Yield Risk Premium model support Mr. Murray's suggestion that Ameren Missouri's Cost of Equity should be lowered by 25 to 75 basis points?

A. No, they do not. A comparison of the Bond Yield Plus Risk Premium results presented in Schedule RBH-R12 to backdated results using the Treasury yields reported in my Rebuttal Testimony in Case No. ER-2012-0166 indicates that the Cost of Equity has remained relatively constant, or even moderately increased. As shown in Schedule RBH-S30, while the 30-day average 30-year Treasury yield increased by approximately 36 basis points (from 2.68 percent to 3.04 percent), the implied risk premium decreased by an equal amount resulting in no change to the estimated Cost of Equity (10.10 percent). Similarly, the 48 basis point increase in the near-term projected 30-year Treasury yield (from 3.20 percent to 3.68 percent) is partly offset by a decrease in the implied risk premium, with the estimated ROE increasing only nine basis points (10.11 percent to 10.20 percent).

Q. Do the CAPM results support Mr. Murray's position that the Company's Cost of Equity has decreased by 25 to 75 basis points since the 2012 rate case?

A. No, they do not. As shown below, all three components of the CAPM have increased since the Company's 2012 rate case.

Table 1: Change in Capital Asset Pricing Model Components:

July 13, 2012 to November 14, 2014[38]

	As of July, 2012	As of November 14, 2014
Risk-Free Rate		
Current 30 yr. Treasury Yield	2.68%	3.04%
Near-Term Projected 30 yr. Treasury Yield	3.20%	3.68%
Beta Coefficients		
Value Line - 2012 Proxy Group (excluding CNL, TEG and OTTR)	0.711	0.731
Bloomberg - 2012 Proxy Group (excluding CNL, TEG and OTTR)	0.671	0.753
Value Line- 2014 Proxy Group (excluding EDE, HE, NEE, OTTR, PNM)	0.694	0.728
Bloomberg - 2014 Proxy Group (excluding EDE, HE, NEE, OTTR, PNM)	0.658	0.732
Market Risk Premium		
Ex-ante Market DCF Derived - Bloomberg	10.25%	10.45%
Range of CAPM Results	9.42% -10.49%	10.64% - 11.55%

Table 1 indicates that the Cost of Equity has increased from a range of 9.42 percent to 10.49 percent in July 2012 to a range of 10.64 percent to 11.55 percent in November 2014.

Q. What are Mr. Murray's concerns with your CAPM analyses?

A. Mr. Murray suggests that the Market Risk Premium ("MRP") estimates in my Direct Testimony are "irrational" because they are calculated using analysts' three to five-year earnings growth projections, which produce higher expected market returns than those published by sources cited by Mr. Murray. Mr. Murray also disagrees with the use of forward-looking

[38] Source: Schedules RBH-R9, RBH-R10, and RBH-R11; Case No. ER-2012-0166, Rebuttal Testimony of Robert B. Hevert, Schedules RBH-ER12, and RBH-ER13. Additional historical data from Bloomberg and Value Line.

interest rates because he believes "current market prices (and their resulting yields) already reflect investors' expectations of capital market and economic changes in the future."[39]

Q. What is your response to Mr. Murray's suggestion that the market returns used in your CAPM analyses are too high?

A. For purposes of calculating the Company's required Return on Equity, the salient issue is not whether Mr. Murray believes the expected market returns are correct, but whether they reflect investors' expectations. In that regard, I calculated the expected market return by applying the Constant Growth DCF model using consensus projected analyst growth rates and current expected dividend yields on a market capitalization-weighted basis for the S&P 500 Index.[40] That calculation was performed using earnings growth rate projections from two sources (Bloomberg and Value Line). The expected market returns derived from Bloomberg and Value Line data were 13.44 percent and 12.70 percent, respectively (updated to 13.49 percent and 12.75 percent in Schedule RBH-R9).

As discussed in my Rebuttal Testimony, and shown in Schedule RBH-R26, market return estimates of 12.75 percent to 13.49 percent are highly consistent with market returns observed historically.[41] The return on the S&P 500 Index has been at least 15.00 percent (more than 150 basis points above the highest of the expected market returns used in my CAPM analyses) in eleven of the past twenty years, and four of the past five years.[42] And, as discussed in my response to Mr. Gorman, given the volatility in historical market returns, my estimates statistically are nearly indistinguishable from the long-term (arithmetic) average return.

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39 Rebuttal Testimony of David Murray, at 5 and 25-27.
40 *See*, Direct Testimony of Robert B. Hevert, at 26.
41 *See*, Rebuttal Testimony of Robert B. Hevert, at 104-105.
42 *See*, Schedule RBH-R26.

Q. Do you have any concerns with Mr. Murray's comparison of your market return estimates (to be applied in the CAPM) to the 6.50 percent long-term market return assumption used by JP Morgan's Global Institutional Asset Management group?

A. Yes, I do. Mr. Murray ignores an important limiting condition stated on the front page of the JP Morgan report he cites, which states "for institutional/wholesale or professional client use only | Not for retail distribution." In fact, the report states that the figures it provides are meant to be used for asset allocation decisions by institutional investors including "corporate pension plans, endowments, foundations, insurance companies, sovereigns and government-affiliated institutions."[43] The Commission previously rejected Mr. Murray's use of expected returns for pension funds, stating that "[t]he problem with using a pension fund's expectations in this way is that pension funds have different investment goals and thus are not well suited to assessing the cost of equity capital in a rate proceeding."[44]

Q. Would using a 6.50 percent market return estimate in the CAPM analysis produce reasonable results?

A. No, it would not. Using the 3.04 percent 30-day average Treasury yield reported in Schedule RBH-R9, a 6.50 percent market return would imply a Market Risk Premium ("MRP") of 3.46 percent.[45] Applying the CAPM using a 3.04 percent risk-free rate, a 3.46 percent MRP and a 0.76 Beta coefficient (the average Beta coefficient reported by both Bloomberg and Value Line for the combination proxy group, as shown in Schedule RBH-R10)

[43] JP Morgan's Global Institutional Asset Management, *Long-term Capital Market Return Assumptions*, 2014.
[44] Report and Order, Case No. ER-2010-0036, at paragraph 19.
[45] 6.50% - 3.04% = 3.46%.

produces an ROE result of 5.67 percent.[46] Assuming the near-term projected risk-free rate of 3.68 percent presented in Schedule RBH-R11 would increase the ROE result to 6.31 percent.

Of course, ROE results that are 363 basis points to 427 basis points below the recent 9.94 percent average authorized ROE for vertically integrated electric utilities ROE[47] (and that are as few as ten basis points above Ameren Missouri's 5.565 percent embedded cost of long-term debt)[48] have no practical meaning in determining the Company's required ROE.

Q. Do you have any concerns with Mr. Murray's comparison of the market returns used in your CAPM analyses to the 6.00 percent long-term S&P 500 return reported in the Federal Reserve Bank of Philadelphia's *Survey of Professional Forecasters*?[49]

A. Yes, I do. First, by referring to the survey by the Federal Reserve Bank of Philadelphia, Mr. Murray suggests that my estimated market return is inconsistent with those used by professional forecasters. On reviewing the survey from the first quarter 2014 (which was the most recent survey to report the expected return for the S&P 500), I note that only 27 of 45 survey participants responded to the question regarding the expected return for the S&P 500 over the next ten years.[50] Similarly, 33 of 45 responded to the question regarding expected return on ten-year Treasury bonds. Since a considerable portion of the survey respondents did not answer those questions, it is difficult to have confidence that the estimates represent the market's expected total return.

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46 3.04% + (0.76 x 3.46%) = 5.67%.

47 *See* Schedule RBH-S29. 9.94% is the average authorized ROE in 2014 for decisions that relate to vertically integrated electric utilities, only.

48 *See* Direct Testimony of Ryan Martin, at 9. Note, Mr. Murray accepted the Company's long-term cost of debt estimate; see Staff Revenue Requirement Cost of Service Report, at 26.

49 Rebuttal Testimony of David Murray, at 27.

50 *See*, Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters, First Quarter of 2014, at 18.

It also is interesting to note that the volatility of responses is higher for projections of the three-month Treasury Bills than it is for expected stock returns. As shown on Schedule RBH-S31, the Coefficient of Variation[51] is 0.36 for the projection of Treasury Bill returns, and 0.32 for expected Stock Returns. Since the Federal Reserve has stated its intention to keep the federal funds rate in the 0.00 percent to 0.25 percent range, and that it can be "patient in beginning to normalize the stance of monetary policy,"[52] it is difficult to understand why those projections, which relate to a short-term security that is largely influenced by federal monetary policy, would be considerably more variable than expected stock returns.

In essence, the limited number of responses, and the comparative variability of responses calls into question the usefulness of the survey for the purpose of the CAPM. As a practical matter, however, Mr. Murray's 9.25 percent ROE recommendation, which applies to a company that is less risky than the overall market (Mr. Murray and I agree that Beta coefficients for our proxy companies are less than 1.0), is 325 basis points *above* the expected market return suggested by the Philadelphia Federal Reserve survey. If the survey results are reasonable estimates of the expected market return, Mr. Murray's ROE recommendation should be no higher than 6.00 percent.[53]

Q. What is your response to Mr. Murray's concern regarding the near-term risk-free rate used in your CAPM analyses?

A. Mr. Murray's suggestion that current Treasury bond yields reflect investors' expectations may be an over-simplification of the market forces influencing current interest

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[51] The Coefficient of Variation, which is the ratio of the Standard Deviation to the Mean, is a normalized measure of variability. It often is used to compare the variability of two series when the means are substantially different from each other.

[52] *See* Federal Reserve Policy Statement, January 28, 2015.

[53] 6.00 percent equals the expected market return suggested by the Philadelphia Federal Reserve survey.

rates. For example, the premiums for options to sell (essentially) at-the-money options on the TLT (a long-term Government Bond index) in January 2017 recently have been valued at approximately twice the premium to buy the index.[54] Because yields move inversely with bond prices, those option premiums suggest that investors view increases in long-term Treasury yields as more likely than decreases in those yields. Blue Chip's near-term forecast of the 30-year Treasury yield, which is the consensus projection of approximately fifty business economists for the average 30-year U.S. Treasury yield in the coming six quarters, also indicates investors expect interest rates to rise. In general, expectations for rising interest rates are not surprising given the discontinuation of the Federal Reserve's Quantitative Easing program in October 2014, and the uncertainty surrounding when and how the Federal Reserve may unwind its balance sheet.[55]

Because the Cost of Equity is forward-looking, it is reasonable to rely on forward-looking estimates of the risk-free rate when applying the CAPM. In that regard, both Mr. Gorman and I consider forward looking estimates of the risk-free rate. Moreover, I note that Duff & Phelps' 2014 Valuation Handbook (cited by Mr. Murray for his MRP data)[56] recommends the use of a normalized risk-free rate of 4.00 percent,[57] which is 32 basis points higher than the 3.68 percent near-term projected 30-year Treasury yield used in my CAPM analysis (and 83 basis points above the 3.17 percent risk-free rate used by Mr. Murray).[58] Consequently, I continue to believe it is appropriate to consider both current and projected 30-year Treasury yields when estimating the risk-free rate component of the CAPM.

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54 Source: http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=-1&page=11

55 *See*, Direct Testimony of Robert B. Hevert, at 38-40. *See also*, Federal Reserve Press Release dated October 29, 2014.

56 *See*, Staff Revenue Requirement Cost of Service Report, at 43.

57 *See* Duff & Phelps, 2014 Valuation Handbook, 3-24.

58 *See*, Staff Revenue Requirement Cost of Service Report, at 42.

Q. What is your response to Mr. Murray's observation that your Multi-Stage DCF model produces P/E ratios between 16 and 17?[59]

A. I agree with Mr. Murray's view that absent data indicating otherwise, it is reasonable to assume that the terminal P/E ratio in the Multi-Stage DCF model should be generally consistent with the historical range of observed P/E ratios. To that point, one of the benefits of the Multi-Stage DCF model that was discussed in my Direct Testimony is that the model allows the user to check the consistency of certain internal assumptions, such as the terminal P/E ratio, with observed market data.[60] Mr. Murray suggests that my Multi-Stage DCF model results are overstated because they do not reflect the potential for a contraction in P/E ratios from currently elevated levels. However, that suggestion is incorrect. As shown in Schedule RBH-R8, the mean terminal P/E ratios for the Multi-Stage DCF analyses using the combined proxy group were 17.27 percent and 16.63 percent, 16.48 percent for the 30, 90 and 180-day average stock prices scenarios. Those P/E multiples are highly consistent with the proxy group's long-term average of 16.43 noted above, as well as the long-term average P/E ratio presented in Gorman's Schedule MPG-R-4.

Q. What are Mr. Murray's concerns regarding the growth rates used in your DCF analyses?

A. Mr. Murray states that it is "incorrect" to assume investors expect utilities to increase their dividends per share in perpetuity at the same rate that analysts project utilities to increase their earnings per share over the coming five years. He also suggests that the long-term GDP growth rate used in the terminal stage of my Multi-Stage DCF is "inflated."[61]

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[59] Rebuttal Testimony of David Murray, at 24.
[60] Direct Testimony of Robert B. Hevert, at 20-21.
[61] Rebuttal Testimony of David Murray, at 5.

Q. What is your response to Mr. Murray's concerns regarding the long-term growth rates used in your DCF analyses?

A. As shown in Schedule RBH-R7, the average analyst estimate of earnings per share growth used in my Constant Growth DCF analysis was 5.54 percent for my Revised Proxy Group and 5.68 percent for the Combined Proxy Group. Those growth rates are highly consistent with the 5.63 percent long-term Gross Domestic Product ("GDP") growth rate estimate used in my Rebuttal analysis and as such, I believe they are quite reasonable. The reasonableness of that 5.63 percent long-term GDP growth estimate was discussed in detail in my Rebuttal Testimony,[62] and Mr. Murray provides no additional data to support his assertion that those growth rates (analysts' three to five year earnings per share growth projections and my long-term GDP growth estimate) do not reflect the basis of investors' expectations for long-term dividend per share growth.

Q. Please summarize Mr. Murray's concern regarding your Bond Yield Plus Risk Premium analysis.

A. Mr. Murray's principal concern is that the Bond Yield Plus Risk Premium analysis assumes authorized ROEs reflect utilities' actual Cost of Equity, which Mr. Murray believes not to be true. He also expresses a concern that there is circularity involved in using authorized ROEs to estimate the Cost of Equity.[63]

Q. What is your response to Mr. Murray on those points?

A. In my experience, utility commissions in other jurisdictions consider the standards established in the *Hope* and *Bluefield* cases cited on pages 11 and 12 of Staff's Revenue Requirement Cost of Service Report. Those commissions also consider the analyses and

[62] *See*, Rebuttal Testimony of Robert B. Hevert, at 40-47.
[63] Rebuttal Testimony of David Murray, at 34.

recommendations provided by ROE witnesses when determining their authorized ROE; those analyses are based on market data. Authorized returns in other jurisdictions, therefore, provide a reasonable estimate of investors required returns for utilities in general and are an appropriate input for the Bond Yield Plus Risk Premium model.

Lastly, investors frame their return requirements, at least in part, by reference to returns authorized in other jurisdictions. Consequently, authorized returns in other jurisdictions are a relevant benchmark because Ameren Missouri must compete for capital with other comparable regulated electric utilities.

IV. RESPONSE TO THE REBUTTAL TESTIMONY OF MR. SCHAFER

Q. Please briefly summarize OPC Witness Schafer's ROE analyses and recommendations.

A. In his Rebuttal Testimony, Mr. Schafer responded to my Direct Testimony, Staff's Revenue Requirement Cost of Service Report, and Mr. Gorman's Direct Testimony. Mr. Schafer supports his recommended ROE range of 8.74 percent to 9.22 percent (with a point estimate of 9.01 percent) by making various modifications to the analyses provided by the other witnesses in the proceeding. With regard to my recommendation, Mr. Schafer disagrees with certain aspects of my analyses, including: (1) the application and presentation of "mean low" and "mean high" DCF results; (2) the timing of dividend payments in the Multi-Stage DCF model; (3) the payout ratio included in the Multi-Stage DCF model; (4) the long-term growth rate

applied in my estimate of the MRP; and (5) the inverse relationship between interest rates and the Cost of Equity implied by the application of the Bond Yield Plus Risk Premium analysis.[64]

Q. What is your response to Mr. Schafer's suggestion that his "corrected" results support his recommended range?[65]

A. As discussed below, Mr. Schafer's adjustments to the Cost of Equity analyses are inappropriate and their results should be viewed with considerable caution and given no weight in determining the Company's ROE. Putting aside methodological issues, Mr. Schafer's recommended range falls well below the returns authorized recently for the vertically integrated electric utilities against which Ameren Missouri must compete for capital.[66] Although Mr. Schafer discusses a number of methodological issues, his recommendation fails to meet a basic test of reasonableness: His analytical results are incompatible with prevailing returns available to equity investors in utilities with commensurate risk. Mr. Schafer offers no explanation as to why the Company is so much less risky than other vertically integrated electric utilities that investors would lower their return requirements by more than 90 basis points relative to recently authorized returns. Perhaps more telling, Mr. Schafer has not explained why Ameren Missouri, a vertically integrated electric utility, should be authorized an ROE well below those authorized for natural gas distribution utilities.

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[64] Rebuttal Testimony of Lance Schafer, at 2. At p. 6 - 7 of his rebuttal testimony, Mr. Schafer states that he excluded Duke Energy Corporation ("Duke") from his proxy group due to the pending sale of its Midwest commercial electric generation business to Dynegy, Inc., for $2.8 billion. That transaction, which was announced in August 2014, would be completed pursuant to an Asset Purchase Agreement (see Duke Energy Corporation SEC Form 8-K dated August 21, 2014). Because the transaction represents the sale of assets, it is helpful to view its size relative to Duke's Enterprise Value (that is, the market value of its debt and equity). In that regard, the Midwest generation transaction represents less than 3.00 percent of Duke's current Enterprise Value of approximately $101 billion. In addition, going forward the transaction will reduce the assets devoted to, and income derived from non-utility segments. Given the transaction's small size relative to Duke's Enterprise Value and in light of the fact that it will serve to increase the proportion of value derived from its regulated businesses, I do not believe that Duke should be removed from the proxy group.

[65] Rebuttal Testimony of Lance Schafer, at 77.

[66] Rebuttal Testimony of Robert B. Hevert, at 72-73.

Q. What is your response to Mr. Schafer's position that your "mean low" and "mean high" DCF calculations are unclear?

A. Mr. Schafer's assertion that the DCF results are not presented in a clear manner is unfounded. I described the method in my Direct Testimony:

> For each proxy company, I calculated the high DCF result by combining the maximum EPS growth rate estimate as reported by Value Line, Zacks, and First Call with the subject company's dividend yield. The mean high result simply is the average of those estimates. I used the same approach to calculate the low DCF result, using instead the minimum of the Value Line, Zacks, and First Call estimate for each proxy company, and calculating the average result for those estimates.[67]

That method is consistent with the approach I applied in prior cases before the Commission, including Case Nos. GR-2010-0363, ER-2011-0028, ER-2012-0166, GR-2013-0171, GR-2014-0152, EC-2014-0223, and ER-2014-0370. Further, Mr. Schafer's definition of a "traditional mean"[68] or "actual mean"[69] is unclear. Mr. Schafer offers no explanation as to why the midpoint of the Mean Low and Mean High DCF results ("Actual Mean of Low and High")[70] is more meaningful than the Mean DCF results presented in my Direct Testimony. As I discussed in my Direct Testimony,

> Because the application of financial models and interpretation of their results often is the subject of differences among analysts in regulatory proceedings, I believe that it is important to review and consider a variety of data points; doing so enables us to put in context both quantitative analyses and the associated recommendations.[71]

Although Mr. Schafer provides alternative summary calculations of my Constant Growth DCF analysis, none of those approaches address the fundamental concern with that model: the

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67 Rebuttal Testimony of Robert B. Hevert, at 18.
68 Rebuttal Testimony of Lance Schafer, at 13.
69 *Ibid.*, at 15.
70 *Ibid.*, at 15.
71 Direct Testimony of Robert B. Hevert, at 41-42.

Constant Growth DCF model requires a constant P/E ratio in perpetuity, yet the proxy companies' current P/E ratios exceed their long-term average.

Q. Please respond to Mr. Schafer's assertion that your Multi-Stage DCF model forecasts a year of dividend payments over a period of only six months.

A. As discussed in my Rebuttal Testimony, it is appropriate to adjust the DCF model to reflect that, on average, dividend payments are received mid-year, not year-end.[72] A reasonable approach to address that limitation is to assume that cash flows are received (on average) in the middle of the year. That approach is consistent with the common practice in the Constant Growth DCF model of accounting for periodic growth in dividends by applying one-half of the expected annual dividend growth rate to calculate the expected dividend yield. Mr. Schafer made that adjustment to his Constant Growth DCF model,[73] and it is unclear as to why he believes such an adjustment is appropriate for the Constant Growth DCF model, but not appropriate for the Multi-Stage DCF model.

Q. What is your response to Mr. Schafer's adjustment to the payout ratio assumption included in your Multi-Stage DCF analysis?

A. As discussed in my Direct Testimony,[74] one of the principal benefits of my Multi-Stage DCF model is the flexibility to reflect assumptions regarding the timing and extent of changes in the payout ratio to reflect, for example, increases or decreases in expected capital spending, or a transition from current payout levels to long-term expected levels. Mr. Schafer, however, has modified the model and eliminated that flexibility. Rather than applying Value Line's forward looking estimates of company-specific payout ratios, or the long-term industry

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72 *Ibid.*, at 79.
73 Direct Testimony of Lance Schafer, at 13.
74 Rebuttal Testimony of Robert B. Hevert, at 20-21.

average payout ratio, Mr. Schafer modified the Multi-Stage DCF model to assume that each proxy company's current payout ratio will remain constant in perpetuity.[75]

Mr. Schafer's assumption suggests that the current payout ratio, which may be affected by short-term factors such as elevated levels of capital expenditures, is appropriate for all future years. The constant payout assumption, however, does not apply to Mr. Schafer's proxy companies, or to my Revised Proxy Group. In fact, data provided by Value Line indicates that none of the sixteen companies in his proxy group, or my proxy group, will maintain their payout ratios at a constant level over the next three to five years (six of the sixteen companies are expected to change their payout ratios by more than 5.00 percentage points). Management decisions to conserve cash for capital investments, to manage the dividend payout for the purpose of minimizing future dividend reductions or to signal future earnings prospects, can and do influence dividend payout decisions in the near-term. It is for that reason that the Multi-Stage DCF model discussed in my Direct Testimony specifically allows for a change in payout ratios over time.

Mr. Schafer has not explained why current payout ratios are more appropriate than Value Line's near-term projections, or the long-term industry average. Although Mr. Schafer suggests that there is an "error" in my Multi-Stage DCF model because "a payout-ratio forecast that features lower retention ratios and higher earnings would be completely misguided,"[76] I demonstrated in my Rebuttal Testimony that this has historically been the case for my proxy companies. As shown in my Rebuttal Testimony, Schedule RBH-R23, there was a significant negative relationship between five-year earnings growth rates and the corresponding earnings retention ratio. Mr. Schafer states that it would be a mistake to believe that such a correlation

[75] Rebuttal Testimony of Lance Schafer, at 31 and Schedule LCS-2.
[76] Rebuttal Testimony of Lance Schafer, at 30-31

suggests a causal relationship.[77] However, my Multi-Stage DCF model does not rely on such a causal relationship. The earnings growth estimates and payout ratio estimates applied in my Multi-Stage DCF analysis rely on analyst estimates of each component, as well as a long-term measure of the payout ratio that reflects a variety of economic conditions.

Q. What is your response to Mr. Schafer's position that you did not analyze the reliability of the Market Risk Premium estimates applied in your CAPM analysis?

A. As discussed in my Rebuttal Testimony, the estimates of the MRP applied in my CAPM analysis are consistent with historical observations. Mr. Schafer's suggestion that my estimate of the MRP is unreasonably high is based on his comparison to GDP growth rates.[78] When viewed in the context of historical MRP observations, my estimation of the MRP is highly consistent with annual Market Risk Premia reported by Morningstar.[79] Further, the expected market return on which the MRP relies is highly consistent with historical observations; as discussed in my response to Mr. Gorman, given the variation in historical returns my expected market return estimate essentially is statistically indistinguishable from the long-term average return.

Q. What is your response to Mr. Schafer's suggestion that the inverse relationship between Treasury yields and risk premia no longer applies?

A. The fundamental issue in question is whether the premium required by debt and equity investors has remained constant as Treasury yields have decreased. That issue becomes increasingly important considering the Federal Reserve's recently completed Quantitative Easing policy, its future monetary policy initiatives, and their effect on interest rates. To the extent the

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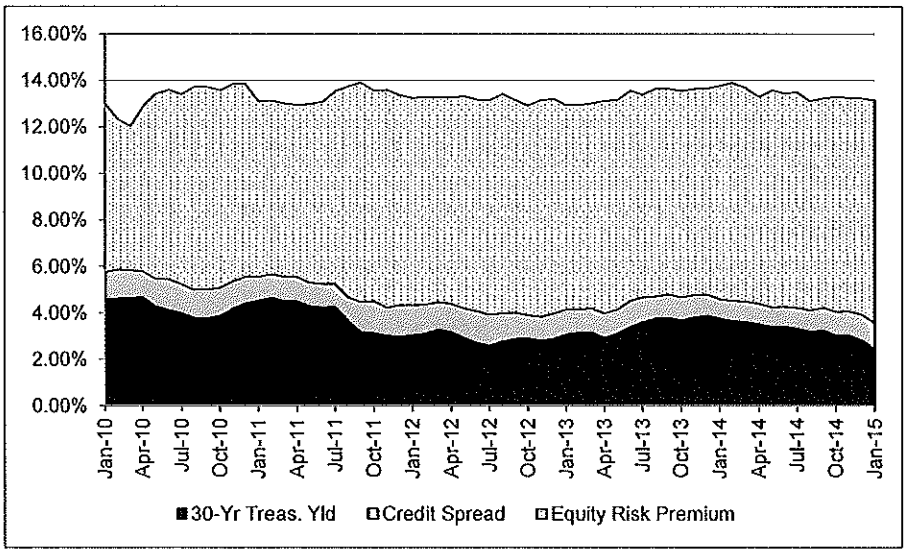
77 *Ibid.*, at 31.
78 *Ibid.*, at 43.
79 Rebuttal Testimony of Robert B. Hevert, at 107-109.

risk premium has increased, the higher premium has offset, at least to some degree, the decline in Treasury yields, indicating that the Cost of Equity has not fallen in lock step with the decline in interest rates.[80]

One method of performing that analysis is to analyze the implied required market return of the S&P 500 companies on a "build-up" basis. From that perspective, the required market return represents the sum of: (1) long-term Treasury yields; (2) the credit spread (*i.e.*, the incremental return required by debt investors over Treasury yields; and (3) the Equity Risk Premium (*i.e.*, the incremental return required by equity investors over the cost of debt). As shown in Charts 5a and 5b (below), equity investors have required increased risk premiums as long-term Treasury yields have fallen.

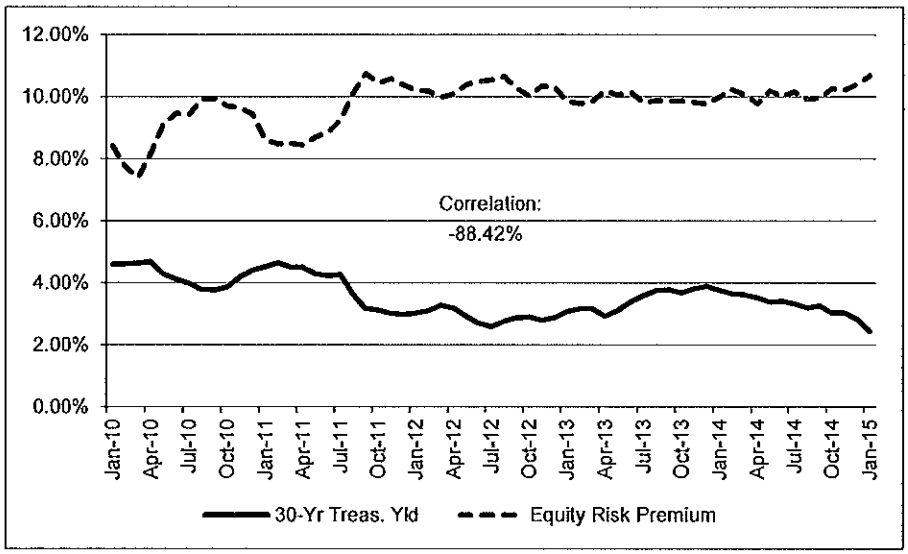
Chart 5a: Components of S&P 500 Market Risk Premium (2010 – 2014)[81]



[80] I also discuss the relationship between interest rates and the Equity Risk Premium in my response to Mr. Gorman.

[81] Source: Bloomberg Professional.

Chart 5b: S&P 500 Market Risk Premium and 30-Year Treasury Yield (2010 – 2014)[82]



The proposition that the risk premium has increased even as Treasury yields have declined makes practical sense: as investors seek the safety of Treasury securities they require higher equity returns to overcome the currently perceived risk of equity markets vis-à-vis Treasury securities. Even if the decrease in Treasury yields is driven by investors' expectations of market intervention on the part of central banks generally, that expectation does not affect the fundamental assessment of risks associated with equity investments in utility companies. If anything, the uncertainty surrounding the timing and degree of future intervention introduces an additional element of uncertainty, which increases investment risk and, therefore, the required return.

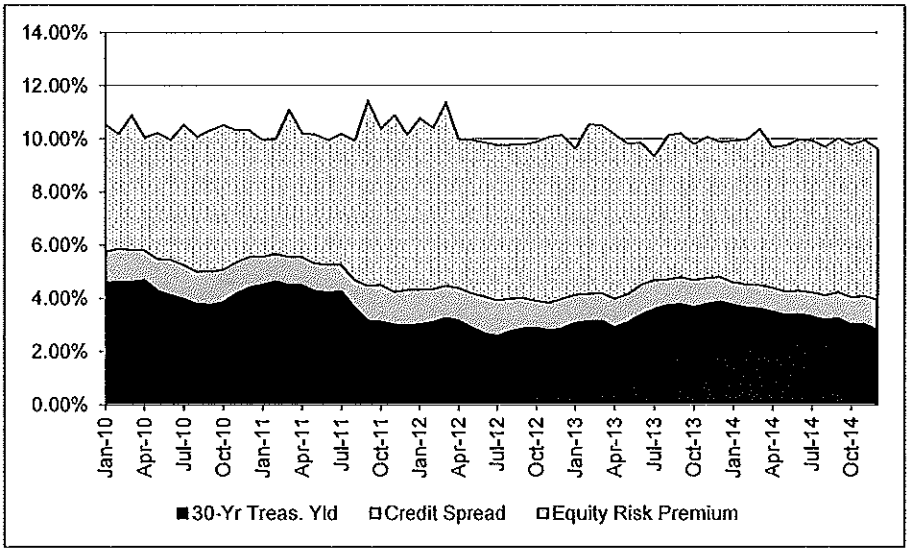
Q. Have you also analyzed the relationship between authorized ROEs and long-term Treasury yields since 2012?

A. Yes. As discussed in Section II, authorized returns have remained relatively stable even as interest rates recently have declined. The fact that authorized ROEs have

[82] Source: Bloomberg Professional. Equity Risk Premium relative to 30-year Treasury yield.

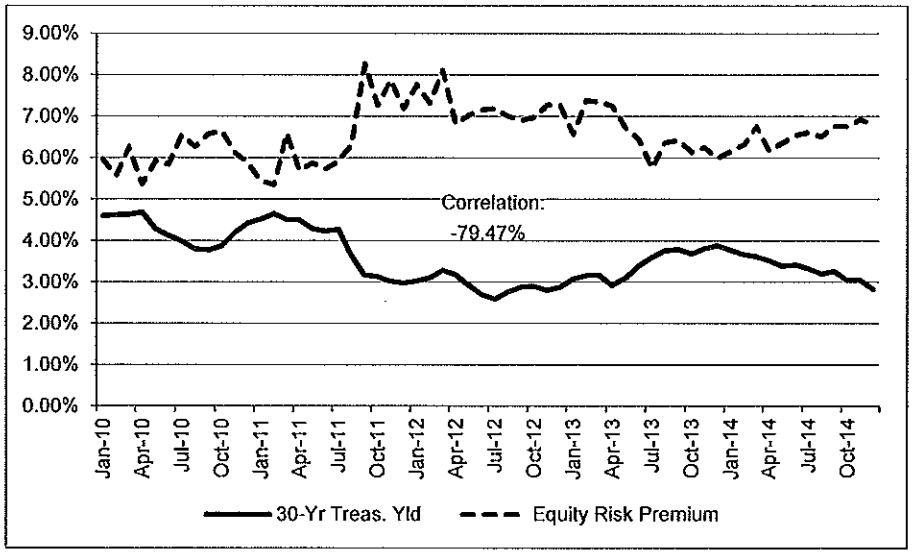
remained stable as interest rates have fallen is not surprising when we consider financial principles and the circumstances underlying the decline in Treasury yields. Charts 6a and 6b shows that the Equity Risk Premium for utilities have increased approximately 80 basis points over the past twelve months.

Chart 6a: Components of Equity Risk Premium for Electric Utilities (2010 – 2014)[83]



[83] Source: Bloomberg Professional and Regulatory Research Associates.

Chart 6b: Equity Risk Premium for Electric Utilities and 30-Year Treasury Yield (2010 – 2014)[84]



V. RESPONSE TO THE REBUTTAL TESTIMONY OF MR. GORMAN

Q. Please briefly summarize Mr. Gorman's recommendation regarding the Company's Cost of Equity.

A. Mr. Gorman continues to recommend an ROE of 9.30 percent, which is the approximate midpoint between his Constant Growth DCF estimate (i.e., 8.95 percent) and his Risk Premium approach (9.60 percent).[85] In his Direct Testimony Mr. Gorman stated that his 9.00 percent Constant Growth DCF estimate was appropriate because the recent decline in dividend yields may be temporary and therefore calls for a conservative interpretation.[86] In his Rebuttal Testimony, Mr. Gorman states that investors' sentiment regarding utility stocks has produced a robust market, manifesting itself in higher valuation multiples. To support that

[84] Source: Bloomberg Professional and Regulatory Research Associates. Equity Risk Premium relative to 30-year Treasury yield.
[85] Rebuttal Testimony of Michael P. Gorman, at 2; Direct Testimony of Michael P. Gorman, at 2.
[86] Direct Testimony of Michael P. Gorman, at 26.

position, Mr. Gorman provided additional data in his Rebuttal Testimony, in particular average annual P/E ratios, and ratios of Price to Cash Flow.[87]

Q. Has Mr. Gorman's Rebuttal Testimony caused you to change your position regarding the reasonableness of his ROE recommendation?

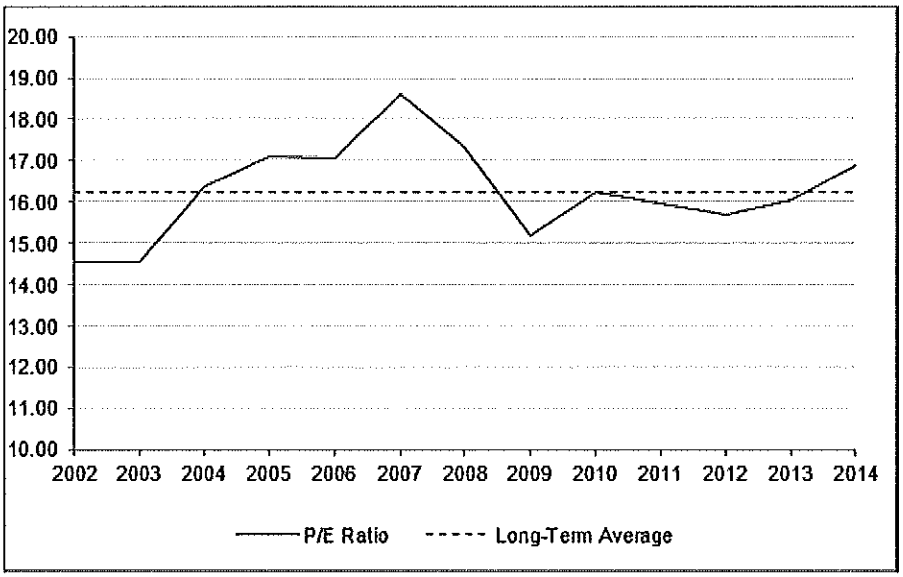
A. No, it has not. As discussed earlier, Mr. Gorman's recommendation continues to rely on flawed analyses, and remains well below the range of returns authorized for both vertically integrated electric utilities and natural gas distribution utilities.

Q. What is your response to Mr. Gorman regarding the current level of utility stock valuations?

A. First, I agree that the P/E ratios are above their long-term average. And since it is the case that we would expect the ratios to revert toward their long-term average, it also is true that the current level should not be expected to remain constant in perpetuity, as the Constant Growth DCF model assumes. As Chart 7 (below) demonstrates, Mr. Gorman's data indicate that the current P/E ratio currently is above the long-term average.

[87] Schedule MPG-R-4.

Chart 7: Mr. Gorman's Historical Price/Earnings Multiples[88]



While I appreciate that Mr. Gorman recognized that current valuation levels are above their long-term averages thereby producing low DCF-based estimates, his proposed solution – relying on his Constant Growth DCF results – does not address a fundamental flaw in this analysis. As discussed in my Rebuttal Testimony, the Constant Growth DCF model assumes that the Price/Earnings ratio, which Mr. Gorman agrees currently is elevated, will remain constant in perpetuity.[89] By relying on the Constant Growth model Mr. Gorman implicitly has assumed that the currently elevated Price/Earnings ratios will stay in place, forever. Such an outcome would require a fundamental shift in the way that investors value utility shares, now and in perpetuity. Mr. Gorman, however, has not explained that fundamental change.

In addition (and as discussed earlier in my Surrebuttal Testimony), the Constant Growth DCF model assumes that higher valuation levels are associated with higher growth rates. Here, Mr. Gorman has reflected high valuation levels (and, therefore, low dividend yields), but has

[88] Source: Schedule MPG-R-4.
[89] *See* Rebuttal Testimony of Robert B. Hevert, at 5 – 6.

assumed comparatively low expected growth rates. Again, Mr. Gorman's application of the model runs counter to its fundamental assumptions.

In essence, Mr. Gorman's solution to DCF results that he deems to be too low is to rely on a model whose fundamental assumptions conflict with the data that he applies to it. Consequently, the low end of Mr. Gorman's recommended range (9.00 percent) is tenuous and should be given little weight in determining the Company's ROE.

Q. Mr. Gorman continues to assert that your Constant Growth DCF results are not producing reasonable results because the growth rates you use are too high to be sustainable in the long term.[90] What is your response to Mr. Gorman on that point?

A. I have addressed Mr. Gorman's concern by employing the Multi-Stage DCF analysis, which takes into account the possibility that short-term growth rates, specifically three to five-year projections in earnings growth, may be unsustainably low or high over the long-term.

Q. What is your response to Mr. Gorman's concerns regarding the use of historical GDP growth as the basis of the terminal growth rate in your Multi-Stage DCF model?

A. As a preliminary matter, it is important to keep in mind that the terminal growth rate represents the market's view of expected growth beginning in the terminal period (that is, ten years from now). Because there are no forecasts of which I am aware matching that horizon, I rely on the historical (geometric) average growth real GDP growth rate as the measure of long-term expected real growth.[91] I then combine that average with the implied rate of inflation based

[90] Rebuttal Testimony of Michael P. Gorman, at 5.
[91] The arithmetic average would be 3.39 percent relative to the 3.27 percent geometric average used in my calculations.

on differences in forward yields between nominal and inflation-protected Treasury securities. As stated in my Direct Testimony at page 23, my real GDP growth rate projection is based on the assumption that absent specific knowledge to the contrary, it is reasonable to assume that over time real GDP growth will revert to its long-term mean. As to the level of expected inflation, I agree with Mr. Gorman that it is important to reflect the sentiments and expectations of investors to the extent possible; that is accomplished by using market-based data to estimate expected inflation.

Q. How much weight does Mr. Gorman place on his long term expected GDP growth rates of 4.40 percent to 4.60 percent?

A. Mr. Gorman places no weight on his Multi-Stage DCF analysis and, therefore, no weight on his expected GDP growth rates. Rather, Mr. Gorman relied on his Constant Growth DCF model, which implied a 5.05 percent long-term growth rate.[92] That is, Mr. Gorman has assumed that 5.05 percent is a reasonable estimate of long-term, sustainable growth for his proxy companies, even though it exceeds his expected GDP growth rate by 45 basis points. As such, the relevance of Mr. Gorman's long-term GDP growth in estimating Ameren Missouri's Cost of Equity is limited, at best.

Q. Mr. Gorman then criticizes your transition to industry payout ratios in the transition stage of your multi-stage DCF, saying they are not compatible with your sustainable growth rate. Please respond to Mr. Gorman's on that point.

A. Mr. Gorman's suggestion that the long-term payout ratio used in my model is based on Value Line's projected three to five-year payout ratio for the industry[93] is incorrect. As stated in my Direct Testimony at page 23, the long-term payout ratio reflects the long-term

[92] Direct Testimony of Michael P. Gorman, Page 26; Schedule MPG-4.
[93] Rebuttal Testimony of Michael P. Gorman, at 9.

historical industry average payout ratio of approximately 67.00 percent, not Value Line's near-term projection.

Q. Does Mr. Gorman note any objections to your CAPM analysis?

A. Yes, Mr. Gorman asserts that my DCF-derived MRP estimate is based on a growth rate component that is "far too high" to be a "sustainable" growth rate. Because Mr. Gorman's concern with the "sustainability" of growth rates arises in other aspects of his testimony, I address his specific concern regarding the expected market growth rate below.

Q. What is the basis of Mr. Gorman's claim that your DCF-derived market return is not "sustainable"?

A. Mr. Gorman notes that the earnings growth rate component of my DCF-derived market return is higher than estimates of long-term nominal GDP growth and on that basis, concludes that those projections are "far too high to be a rational outlook for sustainable long-term market growth."[94] Mr. Gorman supports his position by noting that "Morningstar estimates the actual capital appreciation for the S&P 500 over the period 1926 through 2013 to have been 5.80% to 7.7%." Adding the market average dividend yield of 2.00 percent to the high 7.70 percent rate of growth, Mr. Gorman concludes that a reasonable expectation of the total market return would be 9.70 percent.[95]

Q. Do you agree with Mr. Gorman's position?

A. No, I do not. Since Mr. Gorman supports his position in terms of the historical rate of capital appreciation, it also is appropriate to consider the expected market return in the context of historical market returns. In that regard, from 1926 through 2013, the arithmetic

[94] Rebuttal Testimony of Michael P. Gorman, at 12.
[95] Rebuttal Testimony of Michael P. Gorman, at 12.

average market return (including the 7.70 percent capital appreciation rate noted by Mr. Gorman) was 12.10 percent, or 240 basis points above Mr. Gorman's 9.70 percent estimate.[96]

Returns of 12.10 percent (which is consistent with the analysis in my Direct Testimony) and higher actually occurred quite often. In fact, the 12.75 percent and 13.49 percent estimates contained in my updated CAPM analyses (as shown in Schedule RBH-R9), represent approximately the 50th percentile of the actual returns observed from 1926 to 2013. In other words, of the 88 annual observations, 45 were 13.49 percent or higher. By that measure, my estimate is entirely consistent with historical experience, although Mr. Gorman's estimate is low relative to that standard.

It also is interesting to note that the 7.70 percent capital appreciation rate on which Mr. Gorman relies is derived from the long-run historical market return of 12.10 percent.[97] Morningstar, the source of that data, also reports the standard deviation of the long-term market return as 20.10 percent. That is, there is a very wide range around the long-term average. Consequently, my 13.49 percent estimate is within .0695 of one standard deviation of the long-term average. Statistically, 13.49 percent is nearly indistinguishable from the 12.10 percent return on which Mr. Gorman's calculation relies. On that basis alone I disagree with Mr. Gorman that my estimated market returns are "inflated and unreliable."[98]

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96 Morningstar, Inc., 2014 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook, at 91.

97 *See* Morningstar, Inc., 2014 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook, at 91.

98 Rebuttal Testimony of Michael P. Gorman, at 12. I also note that the long-term market return of 12.10 percent is based on an "income", or dividend yield, of 4.10 percent (*see* Morningstar, Inc., 2014 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook, at 91). The data contained in Schedule RBH-R9 indicate that the expected dividend yield is approximately 2.00 percent. As shown on Chart 11 (page 107) of my Rebuttal Testimony, the market retention ratio has increased from 1926 through 2013. Under the "sustainable growth" method, higher retention ratios would produce lower dividends, and higher growth rates. The lower dividend yield and higher growth rates contained in my estimates are consistent with that principle.

Q. Mr. Gorman continues to assert that there is not an inverse relationship between interest rates and the equity risk premiums. Please respond to that assertion.

A. Mr. Gorman continues to be of the view that the inverse relationship between interest rates and the equity risk premium "is not supported by academic research."[99] He suggests that while there has been an inverse relationship between these variables in the past, the relationship is explained by the variability of interest rates, the relative risk of debt and equity investments, and inflation expectations; interest rates alone, he suggests, provide too "simplistic" an explanation.

Putting aside for the moment which variables may explain the relationship, the fact is that whether the data contain over 1,400 daily observations as in the study contained in my Direct Testimony,[100] or the 29 annual observations taken from Mr. Gorman's Schedules MPG-11 and MPG-12[101] the conclusion remains statistically valid: As interest rates fall, the equity risk premium increases. Mr. Gorman has not challenged the validity of those results. Rather, he suggests that other factors are at play, and that by not reflecting those factors, the results are somehow unreliable. Despite his concerns, Mr. Gorman does not undertake any empirical analyses to support or test his position.

As to his own model, Mr. Gorman modified the Risk Premium analysis contained in his Rebuttal Testimony, which now calculates the risk premium based on rolling five- and ten-year averages "rather than throw out the three highest and three lowest."[102] That modification, which appears intended to address the point that his Risk Premium-based estimate (and, therefore, his

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99 Rebuttal Testimony of Michael P. Gorman, at 14.

100 *See* Schedule RBH-6.

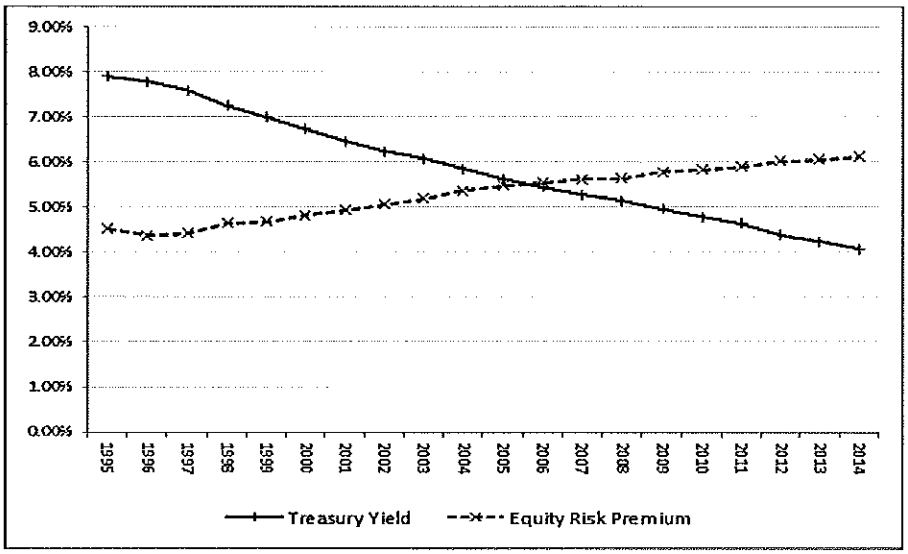
101 *See* Schedule RBH-R28. Additionally, at pages 109 - 110 of my Rebuttal Testimony, I cite several publications in academic literature that confirms that there is an inverse relationship between interest rates and equity risk premiums.

102 Rebuttal Testimony of Michael P. Gorman, at 16 – 17; Schedule MPG-R-3.

ROE recommendation) depended on individual observations that are nearly three decades old,[103] does not alter the fundamental relationship between interest rates and the equity risk premium. As Chart 8 (below) demonstrates, even when calculated based on a rolling ten-year average basis, the two move in opposite directions. That is, Mr. Gorman's averaging convention does not change the fundamental finding that as interest rates fall, the equity risk premium increases. The same holds true when five-year rolling averages are used; Schedule RBH-S32 provides the results for both the Treasury and Utility Bond analyses. Consequently, Mr. Gorman's modified approach does not address the fundamental flaw of ignoring the relationship between interest rates and the equity risk premium.

[103] *See* Rebuttal Testimony of Robert B. Hevert, at 112.

Chart 8: Rolling Ten-Year Average Treasury Yield and Equity Risk Premium[104]



Although he suggests that factors such as the relative risk of debt and equity investments and expected inflation may negate the effect of interest rates on the equity risk premium, Mr. Gorman did not test his theory. Using the data contained in Schedules MPG-13 and MPG-R-3, I undertook several analyses to do so. To address the prospect that the relative risk of equity and debt would affect the relationship between interest rates and the equity risk premium, I first calculated the "credit spread," or the differences between: (1) the Moody's A-Utility Bond yield and the 30-year Treasury yield; (2) the Moody's Baa-Utility Bond yield and the 30-Year Treasury yield; and (3) the difference between the Moody's A and Baa-Utility Bond yields. Those credit spreads reflect the incremental risk associated with utility debt.[105] To reflect the risk of equity investments, I calculated the average annual VIX since 1990, the first year for which data is available. I then performed a series of regression analyses in which the Equity Risk

[104] Source: Schedule MPG-R-3.

[105] It is interesting to note that the 2014 difference between the A and Baa yields was somewhat higher than the long-term average, indicating that the cost of lower credit ratings is somewhat higher than it had been over the long-term. Source: Schedule MPG-13.

Premium is the dependent variable, and various combinations of credit spreads and the VIX were the explanatory variables.[106] There were three principal findings from those analyses (*see* Schedule RBH-S33):

1. None of the credit spread variables, alone or in combination, negated the statistically significant inverse relationship between interest rates and the Equity Risk Premium.
2. There is a high degree of correlation between credit spreads and the VIX, indicating that the two move closely together. That is, the "relative risk" of the two is not a meaningful factor.
3. Regardless of what combinations of credit spreads and the VIX are used, based on Mr. Gorman's expected long-term Treasury yield of 4.10 percent the expected ROE falls in the rather narrow range of 10.24 percent to 10.28 percent. Although at the lower end, all are within my recommended range.

Lastly, I considered Mr. Gorman's view that expected inflation may affect the relationship between interest rates and the equity risk premium by calculating the average annual "TIPS spread" (that is, the difference between nominal and inflation-indexed Treasury yields) over five, seven and ten-year terms. As noted in my Direct Testimony, the TIPS spread represents investors' collective views regarding long-term inflation. As shown in Schedule RBH-S34, data regarding inflation-indexed Treasury yields is available beginning in 2003, and provides thirteen years of data. Although a somewhat smaller data set, the results indicate that

[106] I performed a Durbin-Watson test to check for autocorrelation on all of the regression analyses in Schedule RBH-S33. The results of the tests showed either no significant autocorrelation or fell in the "inconclusive" range.

expected inflation does not affect the statistically significant, inverse relationship between interest rates and the equity risk premium.[107]

In summary, Mr. Gorman continues to deny the inverse relationship between interest rates and equity risk premiums despite empirical evidence suggesting that relationship exists, including a study using his own data. In addition, none of the factors that Mr. Gorman suggests may affect the relationship between interest rates and the Equity Risk Premium did so. In fact, based on Mr. Gorman's assumed 4.10 percent Treasury yield and based (in large measure) on data from his own schedules, the ROE derived from the risk premium approach ranges from 10.24 percent to 10.28 percent. Mr. Gorman's criticisms of my risk premium model, therefore, are unfounded and should be dismissed.

Q. Mr. Gorman discusses the Federal Reserve's intervention in long-term interest rates and its effect on the cost of capital for utilities on pages 19-20 of his Rebuttal Testimony. Please comment on his observations.

A. On page 19, lines 12-15 of his Rebuttal Testimony, Mr. Gorman states:

> Although the Fed's intervention in long-term interest rates has recently ended, the impact of this intervention on long-term interest rates s neither well known, nor capable of being accurately predicted.

I agree with that statement, which serves to confirm my view, expressed on pages 37-41 of my Direct Testimony that the uncertainty revolving around federal intervention in the capital markets increases the Cost of Equity.

[107] Again, a Durbin-Watson test was performed to test for autocorrelation. The result was inconclusive, which is common among datasets with small sample sizes.

VI. SUMMARY AND CONCLUSIONS

Q. Please summarize your Surrebuttal Testimony.

A. In my Direct Testimony and Rebuttal Testimony, I recommended a Return on Equity ("ROE") range of 10.20 percent to 10.60 percent, with a specific recommendation of 10.40 percent. For the reasons discussed throughout my Surrebuttal Testimony, none of the arguments raised in the Opposing ROE Witnesses' Rebuttal Testimony have caused me to revise my recommendation. As such, I continue to recommend an ROE of 10.40 percent, within a range of 10.20 percent to 10.60 percent.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.

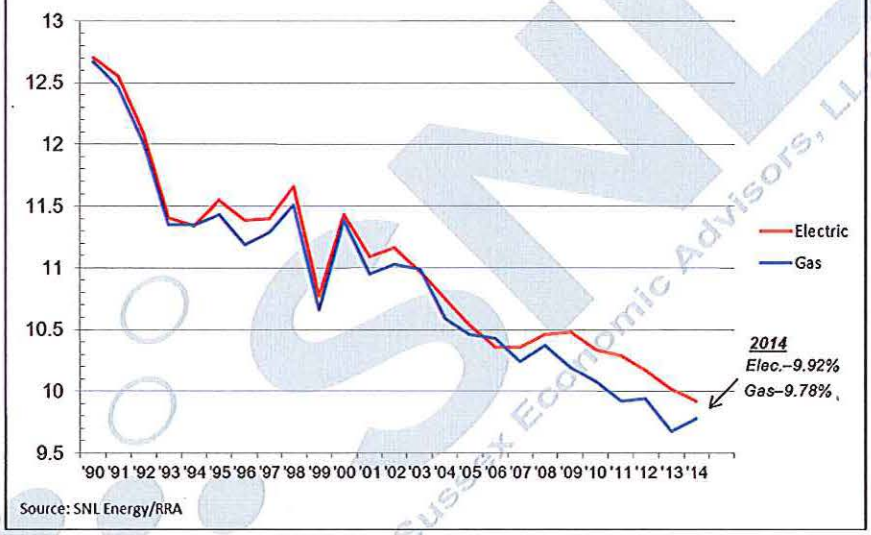
Regulatory Research Associates
REGULATORY FOCUS

January 15, 2015

MAJOR RATE CASE DECISIONS--CALENDAR 2014

The average return on equity (ROE) authorized electric utilities was 9.92% in 2014, compared to 10.02% in 2013. There were 37 electric ROE determinations in 2014, versus 50 in 2013. We note that the data includes several surcharge/rider generation cases in Virginia that incorporate plant-specific ROE premiums. Virginia statutes authorize the State Corporation Commission to approve ROE premiums of up to 200 basis points for certain generation projects (see the Virginia Commission Profile). Excluding these Virginia surcharge/rider generation cases from the data, the average authorized electric ROE was 9.76% in 2014 compared to 9.8% in 2013. The average ROE authorized gas utilities was 9.78% in 2014 compared to 9.68% in 2013. There were 26 gas cases that included an ROE determination in 2014, versus 21 in 2013. The 2014 averages do not include a Feb. 20, 2014 New York Public Service Commission steam rate decision for Consolidated Edison Co. of New York that adopted a 9.3% ROE. (We note that this report utilizes the simple mean for the return averages.)

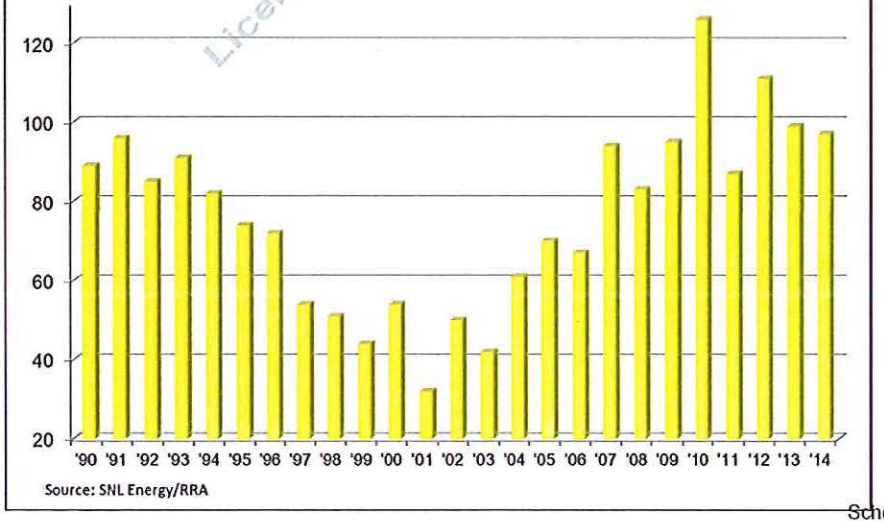
Graph 1: Average Authorized ROEs – Electric and Gas Rate Decisions



Source: SNL Energy/RRA

After reaching a low in the early-2000s, the number of rate case decisions for energy companies has generally increased over the last several years, as shown in Graph 2 below. There were 97 electric and gas rate

Graph 2: Volume of Electric and Gas Rate Case Decisions



Source: SNL Energy/RRA

cases resolved in 2014 versus 99 in 2013, 111 in 2012, and only 32 back in 2001. Increased costs for environmental compliance, generation and delivery infrastructure upgrades and expansion, renewable generation mandates, and employee benefits, argue for the continuation of an active rate case agenda over the next few years.

As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations (which we footnote in our chronology beginning on page 5), thus complicating historical data comparability. We also note that despite the heightened business risk associated with the less-than-robust economy, average authorized ROEs have declined modestly since 2008. In fact, some state commissions have cited the economy and customer hardship as factors influencing their equity return authorizations.

The table on page 3 shows the average ROE authorized in major electric and gas rate decisions annually since 1990, and by quarter since 2009, followed by the number of observations in each period. The tables on page 4 show the composite electric and gas industry data for all major cases summarized annually since 2000 and by quarter for the past eight quarters. The individual electric and gas cases decided in 2014 are listed on pages 5-10, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return (ROR), 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.

The table below tracks the average equity return authorized for all electric and gas rate cases combined, by year, for the last 25 years. As the table indicates, since 1990 the authorized ROEs have generally trended downward, reflecting the significant decline in interest rates and capital costs 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 2014, and the number of observations for each year are as follows:

1990	12.69%	(75)	2003	10.98%	(47)
1991	12.51	(80)	2004	10.67	(39)
1992	12.06	(77)	2005	10.50	(55)
1993	11.37	(77)	2006	10.39	(42)
1994	11.34	(59)	2007	10.30	(76)
1995	11.51	(49)	2008	10.42	(67)
1996	11.29	(42)	2009	10.36	(68)
1997	11.34	(24)	2010	10.24	(96)
1998	11.59	(20)	2011	10.21	(59)
1999	10.74	(29)	2012	10.08	(93)
2000	11.41	(24)	2013	9.92	(71)
2001	11.05	(25)	2014	9.86	(63)
2002	11.10	(43)			

Please note: Historical data provided in this report may not match data provided on RRA's website due to certain differences in presentation.

Dennis Sperduto

Average Equity Returns Authorized January 1990 - December 2014

		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)
2003	Full Year	10.97	(22)	10.99	(25)
2004	Full Year	10.75	(19)	10.59	(20)
2005	Full Year	10.54	(29)	10.46	(26)
2006	Full Year	10.36	(26)	10.43	(16)
2007	Full Year	10.36	(39)	10.24	(37)
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)
	1st Quarter	10.66	(17)	10.24	(9)
	2nd Quarter	10.08	(14)	9.99	(11)
	3rd Quarter	10.26	(11)	9.93	(4)
	4th Quarter	10.30	(17)	10.09	(12)
2010	**Full Year**	**10.34**	(59)	**10.08**	(37)
	1st Quarter	10.32	(13)	10.10	(5)
	2nd Quarter	10.12	(10)	9.88	(5)
	3rd Quarter	10.36	(8)	9.65	(2)
	4th Quarter	10.34	(11)	9.88	(4)
2011	**Full Year**	**10.29**	(42)	**9.92**	(16)
	1st Quarter	10.84	(12)	9.63	(5)
	2nd Quarter	9.92	(13)	9.83	(8)
	3rd Quarter	9.78	(8)	9.75	(1)
	4th Quarter	10.10	(25)	10.07	(21)
2012	**Full Year**	**10.17**	(58)	**9.94**	(35)
	1st Quarter	10.24	(15)	9.57	(3)
	2nd Quarter	9.84	(7)	9.47	(6)
	3rd Quarter	10.06	(7)	9.60	(1)
	4th Quarter	9.90	(21)	9.83	(11)
2013	**Full Year**	**10.02**	(50)	**9.68**	(21)
	1st Quarter	10.23	(8)	9.54	(6)
	2nd Quarter	9.83	(5)	9.84	(8)
	3rd Quarter	9.90	(11)	9.45	(6)
	4th Quarter	9.78	(13)	10.28	(6)
2014	**Full Year**	**9.92**	**(37)**	**9.78**	**(26)**

Electric Utilities--Summary Table

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
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)
2008	Full Year	8.25	(35)	10.46	(37)	48.41	(33)	2,899.4	(42)
2009	Full Year	8.23	(38)	10.48	(39)	48.61	(37)	4,192.3	(58)
2010	Full Year	7.99	(59)	10.34	(59)	48.45	(54)	5,567.7	(77)
2011	Full Year	8.00	(43)	10.29	(42)	48.26	(42)	2,853.5	(56)
2012	Full Year	7.95	(51)	10.17	(58)	50.55	(52)	3,131.5	(70)
	1st Quarter	7.81	(13)	10.24	(15)	49.02	(13)	765.8	(16)
	2nd Quarter	7.64	(7)	9.84	(7)	50.56	(6)	653.6	(10)
	3rd Quarter	7.86	(8)	10.06	(7)	50.77	(8)	734.4	(11)
	4th Quarter	7.46	(17)	9.90	(21)	48.20	(16)	1,315.8	(25)
2013	**Full Year**	**7.66**	**(45)**	**10.02**	**(50)**	**49.25**	**(43)**	**3,469.6**	**(62)**
	1st Quarter	7.71	(6)	10.23	(8)	51.08	(8)	251.4	(9)
	2nd Quarter	7.81	(3)	9.83	(5)	49.12	(4)	92.5	(6)
	3rd Quarter	7.67	(10)	9.90	(11)	50.63	(10)	563.7	(15)
	4th Quarter	7.61	(12)	9.78	(13)	50.96	(11)	1,039.1	(19)
2014	**Full Year**	**7.67**	**(31)**	**9.92**	**(37)**	**50.67**	**(33)**	**1,946.7**	**(49)**

Gas Utilities--Summary Table

	Period	ROR %	(# Cases)	ROE %	(# Cases)	Eq. as % Cap. Struc.	(# Cases)	Amt. $ Mil.	(# Cases)
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)
2008	Full Year	8.48	(30)	10.37	(30)	50.47	(30)	884.8	(41)
2009	Full Year	8.15	(28)	10.19	(29)	48.72	(28)	475.0	(37)
2010	Full Year	7.95	(38)	10.08	(37)	48.56	(38)	816.7	(49)
2011	Full Year	8.09	(18)	9.92	(16)	52.49	(14)	436.3	(31)
2012	Full Year	7.98	(30)	9.94	(35)	51.13	(32)	263.9	(41)
	1st Quarter	7.31	(3)	9.57	(3)	48.80	(3)	39.0	(6)
	2nd Quarter	7.21	(5)	9.47	(6)	51.21	(5)	259.1	(12)
	3rd Quarter	7.53	(1)	9.60	(1)	53.84	(1)	6.1	(3)
	4th Quarter	7.47	(11)	9.83	(11)	50.52	(11)	189.5	(16)
2013	**Full Year**	**7.39**	**(20)**	**9.68**	**(21)**	**50.60**	**(20)**	**493.7**	**(37)**
	1st Quarter	7.67	(6)	9.54	(6)	51.14	(6)	23.5	(9)
	2nd Quarter	7.76	(8)	9.84	(8)	52.12	(8)	62.2	(12)
	3rd Quarter	7.40	(8)	9.45	(6)	49.51	(8)	329.1	(11)
	4th Quarter	7.96	(7)	10.28	(6)	52.35	(7)	115.5	(16)
2014	**Full Year**	**7.69**	**(29)**	**9.78**	**(26)**	**51.25**	**(29)**	**530.3**	**(48)**

ELECTRIC UTILITY DECISIONS

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
2/20/14	Consolidated Edison of New York (NY)	7.05	9.20	48.00	12/14-A	-76.2 (D,B,1)
2/26/14	Northern States Power-Minnesota (ND)	7.45	9.75	52.56	--	9.0 (I,B,2)
2/28/14	MidAmerican Energy (IA)	--	--	--	12/12	263.6 (I,B,Z)
2/28/14	Virginia Electric and Power (VA)	7.95	11.00	50.00	3/15	14.8 (3)
3/14/14	Virginia Electric and Power (VA)	--	12.00	50.00	3/15	3.3 (4)
3/14/14	Virginia Electric and Power (VA)	--	11.00	50.00	3/15	-9.0 (5)
3/17/14	Liberty Utilities (EnergyNorth NG) (NH)	7.92	9.55	55.00	12/12-YE	9.8 (D,B,I,6)
3/26/14	Potomac Electric Power (DC)	7.65	9.40	49.19	12/12-A	23.4 (D)
3/26/14	Southwestern Public Service (NM)	8.26	9.96	53.89	12/14-A	12.7
2014	***1ST QUARTER: AVERAGES/TOTAL***	**7.71**	**10.23**	**51.08**		**251.4**
	OBSERVATIONS	**6**	**8**	**8**		**9**
4/2/14	Delmarva Power & Light (DE)	7.26	9.70	49.22	12/12-A	15.1 (I)
4/23/14	Duquesne Light (PA)	--	--	--	4/15	48.0 (D,B)
5/16/14	Entergy Texas (TX)	--	9.80	--	3/13	18.5 (I,B,7)
5/30/14	Fitchburg Gas & Electric Light (MA)	8.28	9.70	47.78	12/12-YE	5.6 (D)
6/6/14	Wisconsin Power and Light (WI)	7.90 (8)	10.40	50.46	12/15-A	0.0 (8)
6/30/14	Emera Maine (ME)	--	9.55	49.00	12/12	5.3 (D,B,9)
2014	***2ND QUARTER: AVERAGES/TOTAL***	**7.81**	**9.83**	**49.12**		**92.5**
	OBSERVATIONS	**3**	**5**	**4**		**6**
7/2/14	Potomac Electric Power (MD)	7.61	9.62	49.18	9/13-A	8.8 (D)
7/8/14	Virginia Electric and Power (VA)	7.95	11.00	50.00	8/15-A	41.1 (10)
7/10/14	Entergy Louisiana (LA)	--	9.95	--	--	9.3 (B,Z)
7/17/14	Kansas City Power & Light (KS)	--	--	--	12/11-YE	11.5 (B,11)
7/23/14	Rockland Electric (NJ)	7.83	9.75	50.35	3/14-YE	13.0 (D,B)
7/29/14	Central Maine Power (ME)	7.06	9.45	50.00	12/12-A	24.3 (D,B,12)
7/31/14	Cheyenne Light, Fuel and Power (WY)	7.98	9.90	54.00	6/13-YE	8.4 (B)
8/14/14	Pacific Gas and Electric (CA)	--	--	--	12/14-A	196.0 (13)
8/20/14	Atlantic City Electric (NJ)	7.75	9.75	49.83	12/13-YE	19.0 (D,B)
8/25/14	Green Mountain Power (VT)	7.46	9.60	50.00	9/13-A	-8.8 (B,14)
8/29/14	PacifiCorp (UT)	7.57	9.80	51.43	6/15	54.2 (B,Z)
9/15/14	Florida Public Utilities (FL)	--	10.25	--	9/15	3.8 (I,B)
9/18/14	Avista Corp. (ID)	--	--	--	--	0.0 (B,15)
9/24/14	South Carolina Electic & Gas (SC)	8.53	--	53.52	6/14-YE	66.2 (16)
9/25/14	NorthWestern Corp. (MT)	6.91	9.80	48.00	12/14-A	116.9 (17)
2014	***3RD QUARTER: AVERAGES/TOTAL***	**7.67**	**9.90**	**50.63**		**563.7**
	OBSERVATIONS	**10**	**11**	**10**		**15**

ELECTRIC UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
10/9/14	Nevada Power (NV)	8.09	9.80	48.17	12/13	0.0 (B)
11/6/14	MidAmerican Energy (IL)	7.14	9.56	51.73	12/12-YE	16.4 (R)
11/6/14	Wisconsin Public Service (WI)	8.39	10.20	50.28	12/15-A	24.6
11/12/14	Potomac Electric Power (DC)	--	--	--	--	4.7 (18)
11/14/14	Wisconsin Electric Power (WI)	8.60	10.20	51.90	12/15-A	15.4
11/25/14	Avista Corp. (WA)	--	--	--	6/13	7.0 (B)
11/26/14	Appalachian Power (VA)	--	9.70	--	12/13	0.0
11/26/14	Madison Gas and Electric (WI)	7.96	10.20	58.96	12/15-A	15.4
12/4/14	Portland General Electric (OR)	7.56	9.68	50.00	12/15-A	44.3 (B)
12/10/14	Ameren Illinois (IL)	8.08	9.25	51.00 (Hy)	12/13-YE	200.6 (D)
12/10/14	Commonwealth Edison (IL)	7.06	9.25	45.77	12/13-YE	232.8 (D)
12/11/14	Entergy Mississippi (MS)	7.51	10.07	--	12/15-A	177.7 (B)
12/12/14	Baltimore Gas and Electric (MD)	--	--	--	8/14	22.0 (B)
12/12/14	Northern States Power-Wisconsin (WI)	--	10.20	52.54	12/15	14.2
12/18/14	Arizona Public Service (AZ)	6.09 (F)	--	--	--	57.1 (19)
12/17/14	Connecticut Light and Power (CT)	7.31	9.17	50.38	12/13-A	134.1 (20)
12/18/14	Black Hills Colorado Electric (CO)	7.55	9.83	49.83	12/13-A	9.2
12/18/14	Georgia Power (GP)	--	--	--	12/15	26.6 (21)
12/18/14	Southwestern Public Service (TX)	--	--	--	6/13	37.0 (B)
2014	***4TH QUARTER: AVERAGES/TOTAL***	**7.61**	**9.78**	**50.96**		**1,039.1**
	OBSERVATIONS	**12**	**13**	**11**		**19**
2014	***FULL-YEAR: AVERAGES/TOTAL***	**7.67**	**9.92**	**50.67**		**1,946.7**
	OBSERVATIONS	**31**	**37**	**33**		**49**

GAS UTILITY DECISIONS

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
1/21/14	Avista Corp. (OR)	7.47	9.65	48.00	12/14-A	5.6 (B,Z)
1/22/14	Connecticut Natural Gas (CT)	7.88	9.18	52.52	12/12-A	7.3 (R)
1/28/14	Atmos Energy (KS)	--	--	--	9/13-YE	1.2 (22)
1/29/14	Baltimore Gas and Electric (MD)	--	--	--	12/18-A	34.1 (Z,23)
1/31/14	Columbia Gas of Maryland (MD)	--	--	--	--	-- (24)
2/20/14	Consolidated Edison of New York (NY)	7.10	9.30	48.00	12/14-A	-54.6 (B,25)
2/21/14	Questar Gas (UT)	7.64	9.85	52.07	12/14-A	7.6 (B)
2/28/14	Bay State Gas (MA)	7.83	9.55	53.68	12/12-YE	19.3
3/16/14	Atmos Energy (CO)	8.07	9.72	52.57	12/12-A	1.3 (I,B)
3/19/14	Missouri Gas Energy (MO)	--	--	--	9/13-YE	1.7 (26)
2014	***1ST QUARTER: AVERAGES/TOTAL***	**7.67**	**9.54**	**51.14**		**23.5**
	OBSERVATIONS	**6**	**6**	**6**		**9**
4/2/14	Laclede Gas (MO)	--	--	--	12/13-YE	7.0 (26)
4/21/14	Northern Utilities (NH)	8.28	9.50	51.76	12/12-YE	4.6 (I,B,27)
4/22/14	Atmos Energy (KY)	7.71	9.80	49.16	11/14-A	8.6 (I)
4/23/14	Missouri Gas Energy (MO)	--	--	--	4/13	7.8 (B)
5/8/14	CenterPoint Energy Resources (MN)	7.42	9.59	52.60	9/14-A	32.9 (I)
5/8/14	National Fuel Gas Distribution (NY)	7.56	9.10	48.00	9/14-A	-3.6 (B,28)
5/15/14	Delta Natural Gas (KY)	--	--	--	12/13-YE	1.1 (29)
6/4/14	Washington Gas Light (MD)	--	--	--	9/14-A	1.7 (23)
6/6/14	Wisconsin Power and Light (WI)	7.90 (30)	10.40	50.46	12/15-A	-5.0 (30)
6/12/14	Southwest Gas (So. California) (CA)	6.83	10.10	55.00	12/14-A	1.9
6/12/14	Southwest Gas (No. California) (CA)	8.18	10.10	55.00	12/14-A	2.5
6/12/14	Southwest Gas (So. Lake Tahoe) (CA)	8.18	10.10	55.00	12/14-A	2.7
2014	***2ND QUARTER: AVERAGES/TOTAL***	**7.76**	**9.84**	**52.12**		**62.2**
	OBSERVATIONS	**8**	**8**	**8**		**12**
7/3/14	CenterPoint Energy Resources (OK)	8.64	--	50.00	12/13-YE	0.3 (B,31)
7/7/2014	SourceGas Arkansas (AR)	5.71	9.30	41.60 *	9/13-YE	13.8 (B)
7/25/14	Arkansas Oklahoma Gas (AR)	6.18	9.30	39.94 *	12/13-YE	4.2 (B)
7/31/14	Cheyenne Light, Fuel and Power (WY)	7.98	9.90	54.00	6/13-YE	0.8 (B)
8/5/14	Oklahoma Natural Gas (OK)	8.54	--	55.30	12/13-YE	13.7 (B,32)
8/14/14	Pacific Gas and Electric (CA)	--	--	--	12/14-A	264.0 (33)
8/18/14	Columbia Gas of Maryland (MD)	--	--	--	12/14	0.4 (34)
9/4/14	Atmos Energy (KS)	7.75	9.10 (35)	53.00	9/13-YE	4.3 (B,35)
9/18/14	Avista Corp. (ID)	--	--	--	--	0.0 (B,15)
9/24/14	Minnesota Energy Resources (MN)	7.30	9.35	50.31	12/14-A	7.6 (I)
9/30/14	South Jersey Gas (NJ)	7.10	9.75	51.90	6/14-YE	20.0 (B)
2014	***3RD QUARTER: AVERAGES/TOTAL***	**7.40**	**9.45**	**49.51**		**329.1**
	OBSERVATIONS	**8**	**6**	**8**		**11**

GAS UTILITY DECISIONS (continued)

Date	Company (State)	ROR %	ROE %	Common Eq. as % Cap. Str.	Test Year & Rate Base	Amt. $ Mil.
10/7/14	Black Hills Kansas Gas Utility (KS)	--	--	--	4/14-YE	0.6 (22)
10/8/14	Missouri Gas Energy (MO)	--	--	--	6/14-YE	2.0 (26)
10/10/14	Atmos Energy (KY)	--	--	--	9/15-YE	4.4 (29)
10/15/14	Laclede Gas (MO)	--	--	--	6/14-YE	2.8 (B,26)
10/15/14	South Carolina Electric & Gas (SC)	8.13	--	53.52	3/14-YE	-2.6 (M)
10/29/14	Summit Natural Gas of Missouri (MO)	7.54	10.80	57.00	9/13-YE	7.1
11/6/14	Wisconsin Public Service (WI)	7.95	10.20	50.28	12/15-A	-15.4
11/13/14	Columbia Gas of Pennsylvania (PA)	--	--	--	12/15	32.5 (B)
11/14/14	Wisconsin Electric Power (WI)	8.60	10.20	51.90	12/15-A	-10.7
11/14/14	Wisconsin Gas (WI)	8.36	10.30	48.91	12/15-A	38.5 (Z)
11/25/14	Kansas Gas Service (KS)	--	--	--	6/14-YE	3.5 (22)
11/25/14	Avista Corp. (WA)	--	--	--	6/13	8.5 (B)
11/26/14	Madison Gas and Electric (WI)	7.98	10.20	58.96	12/15-A	-3.8
12/5/14	Liberty Utilities (Midstates NG) (MO)	7.16	10.00	45.89	9/13-YE	4.9
12/12/14	Baltimore Gas and Electric (MD)	--	--	--	8/14	38.0 (B)
12/16/14	Black Hills Kansas Gas Utility (KS)	--	--	--	12/13	5.2 (B)
2014	***4TH QUARTER: AVERAGES/TOTAL***	**7.96**	**10.28**	**52.35**		**115.5**
	OBSERVATIONS	**7**	**6**	**7**		**16**
2014	***FULL-YEAR: AVERAGES/TOTAL***	**7.69**	**9.78**	**51.25**		**530.3**
	OBSERVATIONS	**29**	**26**	**29**		**48**

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.
COC- Case involved only the determination of cost-of-capital parameters.
CWIP- Construction work in progress
D- Applies to electric delivery only
DCt Date certain rate base valuation
E- Estimated
F- Return on fair value rate base
Hy- Hypothetical capital structure utilized
I- Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.
M- "Make-whole" rate change based on return on equity or overall return authorized in previous case.
R- Revised
Te- Temporary rates implemented prior to the issuance of final order.
U- Double leverage capital structure utilized.
W- Case withdrawn
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) Approved joint proposal (stipulation) includes two-year rate plan that specifies a second-year $124 million revenue requirement increase.
(2) Approved settlement includes a four-year electric rate plan. In addition to the $9 million first-year rate increase, an incremental $9.3 million second-step increase based on a 10% ROE is to be implemented in 2014, and an incremental $10.1 million third-step increase based on a 10% ROE is to be implemented in 2015. Rates are to remain unchanged in 2016 based on a 10.25% ROE.
(3) Increase authorized through a surcharge, Rider W, which reflects in rates the investment in the Warren County Power Station and associated transmission facilities.
(4) This proceeding determines the revenue requirement for Rider B, which is the mechanism through which the company recovers costs associated with its plan to convert the Altavista, Hopewell, and Southampton Power Stations to burn biomass fuels.
(5) This proceeding determines the revenue requirement for Rider S for the year ending 3/31/15. Rider S recognizes the company's investment in the Virginia City Hybrid Energy Center.
(6) An additional step increase of about $1.1 million was authorized to be effective 4/1/14.
(7) The rate increase is effective retroactive to 3/31/14.
(8) Return on capital. The Commission approved the company's proposal to freeze electric base rates in 2015 and 2016.
(9) Settlement and order provide for an additional $1.2 million increase for the recovery of costs associated with winter 2013 ice and snow storms.
(10) Increase authorized through a surcharge, Rider BW, which reflects in rates the investment in the Brunswick County Power Station.
(11) "Abbreviated" rate case that addressed only the incremental revenue requirement associated with the installation of emissions-control equipment at a generation plant.
(12) Rate increase authorized retroactive to 7/1/14.
(13) Rate increase authorized retroactive to 1/1/14. Additional "attrition" increases of $230 million and $285 million authorized for 2015 and 2016, respectively.
(14) Rate reduction effective 10/1/14.
(15) The approved settlement extends the terms of the company's existing rate plan approved in March 2013, for one year through 12/31/15, thereby keeping base electric and gas rates unchanged.
(16) Case involves company's request for a cash return on incremental V.C. Summer Units 2 and 3 CWIP and incorporates the 11% ROE that was initially authorized in 2009 for use in Summer CWIP-related proceedings.
(17) Case is a limited-issue proceeding associated with the company's purchase of certain hydroelectric facilities.
(18) Rate increase is to flow through the company's "undergrounding surcharge" as permitted by law.
(19) Rate increase is through a new rider associated with company's acquisition of a 48% share of Four Corners 4 and 5 from another utility. ROR represents return on a fair value rate base.
(20) Initial rate increase to be $130.2 million to relect a one-year, 15-basis-point equity return penalty.
(21) Rate increase represents a cash return on incremental 2015 CWIP and a preliminary true-up of the cash return on 2014 CWIP for Plant Vogtle Units 3 and 4 under the company's legislatively-enabled nuclear construction cost recovery tariff.
(22) Case represents the company's gas system reliability surcharge rider.
(23) Case involves the strategic infrastructure replacement (STRIDE) rider, a surcharge associated with the company's infrastrucure replacement program.

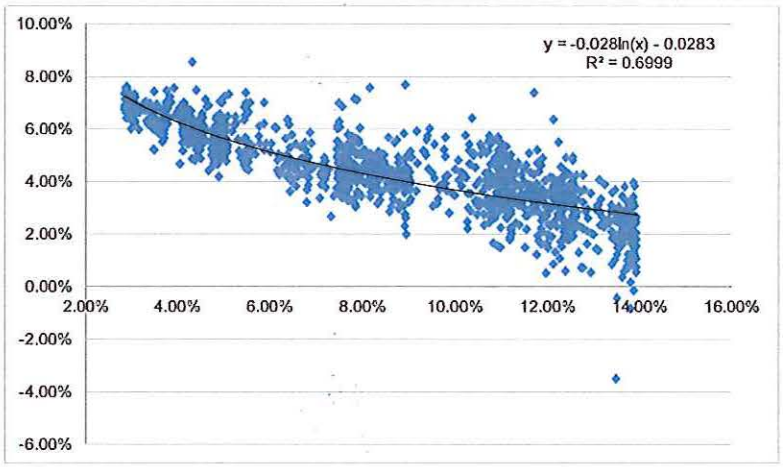
FOOTNOTES (continued)

(24) Company's proposed strategic infrastructure replacement (STRIDE) program and an associated rider were rejected by the Commission.
(25) Approved joint proposal (stipulation) includes a three-year rate plan that specifies second-year $38.6 million and third-year $56.8 million revenue requirement increases.
(26) Case involves the company's infrastrucure system replacement surcharge rider.
(27) Additional "step increases" of about $1.4 million to be effective on 5/1/14 and 5/1/15.
(28) Two-year rate plan adopted. A $6.1 million revenue requirement increase is to be effective on 10/1/14.
(29) Case involves the company's pipe replacement program (PRP) rider.
(30) Return on capital. The Commission approved the company's proposal to reduce gas base rates by $5 million in 2015 and then freeze base rates in 2016.
(31) Case involves the company's performance-based ratemaking plan.
(32) Rate increase authorized pursuant to company's performanced-based ratemaking plan.
(33) Rate increase authorized retroactive to 1/1/14. Additional "attrition" increases of $94 million and $87 million authorized for 2015 and 2016, respectively.
(34) Case involves the company's infrastructure replacement and improvement plan.
(35) The Commission adopted a partial settlement that had resolved all oustanding issues in the case, except for ROE and two other matters, and established a 9.1% ROE for the company.

Dennis Sperduto

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
	-2.83%	-2.83%			
Treasury Yields as of July 13, 2012:					
		Current	2.68%	7.42%	10.10%
		Near Term Projected	3.20%	6.91%	10.11%
		Long Term Projected	5.30%	5.48%	10.78%
Treasury Yields as of November 14, 2014:					
		Current	3.04%	7.06%	10.10%
		Near Term Projected	3.68%	6.52%	10.20%
		Long Term Projected	5.45%	5.41%	10.86%



Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Sources: Case No. ER-2012-1066, Rebuttal Testimony of Robert B. Hevert, Schedule RBH-ER14, Bloomberg Professional
Near Term Projected = Blue Chip Financial Forecasts, Vol. 33, No. 11, November 1, 2014, at 2,
Long Term Projected = Blue Chip Financial Forecasts, Vol. 33, No. 6, June 1, 2014, at 14
[4] Equals [1] + ln([3]) x [2]
[5] Equals [3] + [4]
[6] Source: SNL Financial
[7] Source: SNL Financial (excludes Rate Riders)
[8] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period) as of November 14, 2014
[9] Equals [7] - [8]

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
01/01/1980	14.50%	9.36%	5.14%
01/07/1980	14.39%	9.38%	5.01%
01/09/1980	15.00%	9.40%	5.60%
01/14/1980	15.17%	9.42%	5.75%
01/17/1980	13.93%	9.44%	4.49%
01/23/1980	15.50%	9.47%	6.03%
01/30/1980	13.86%	9.52%	4.34%
01/31/1980	12.61%	9.53%	3.08%
02/06/1980	13.71%	9.58%	4.13%
02/13/1980	12.80%	9.63%	3.17%
02/14/1980	13.00%	9.65%	3.35%
02/19/1980	13.50%	9.68%	3.82%
02/27/1980	13.75%	9.78%	3.97%
02/29/1980	13.75%	9.81%	3.94%
02/29/1980	14.00%	9.81%	4.19%
02/29/1980	14.77%	9.81%	4.96%
03/07/1980	12.70%	9.89%	2.81%
03/14/1980	13.50%	9.97%	3.53%
03/26/1980	14.16%	10.10%	4.06%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
03/27/1980	14.24%	10.12%	4.12%
03/28/1980	14.50%	10.13%	4.37%
04/11/1980	12.75%	10.27%	2.48%
04/14/1980	13.85%	10.29%	3.56%
04/16/1980	15.50%	10.31%	5.19%
04/22/1980	13.25%	10.35%	2.90%
04/22/1980	13.90%	10.35%	3.55%
04/24/1980	16.80%	10.38%	6.43%
04/29/1980	15.50%	10.41%	5.09%
05/06/1980	13.70%	10.45%	3.25%
05/07/1980	15.00%	10.45%	4.55%
05/08/1980	13.75%	10.46%	3.29%
05/09/1980	14.35%	10.47%	3.88%
05/13/1980	13.60%	10.48%	3.12%
05/15/1980	13.25%	10.49%	2.76%
05/19/1980	13.75%	10.51%	3.24%
05/27/1980	13.62%	10.54%	3.08%
05/27/1980	14.60%	10.54%	4.06%
05/29/1980	16.00%	10.56%	5.44%
05/30/1980	13.80%	10.56%	3.24%
06/02/1980	15.63%	10.57%	5.06%
06/09/1980	15.90%	10.60%	5.30%
06/10/1980	13.78%	10.60%	3.18%
06/12/1980	14.25%	10.61%	3.64%
06/19/1980	13.40%	10.62%	2.78%
06/30/1980	13.00%	10.65%	2.35%
06/30/1980	13.40%	10.65%	2.75%
07/09/1980	14.75%	10.67%	4.08%
07/10/1980	15.00%	10.68%	4.32%
07/15/1980	15.80%	10.70%	5.10%
07/18/1980	13.80%	10.71%	3.09%
07/22/1980	14.10%	10.72%	3.38%
07/24/1980	15.00%	10.73%	4.27%
07/25/1980	13.48%	10.73%	2.75%
07/31/1980	14.58%	10.75%	3.83%
08/08/1980	13.50%	10.78%	2.72%
08/08/1980	14.00%	10.78%	3.22%
08/08/1980	15.45%	10.78%	4.67%
08/11/1980	14.85%	10.78%	4.07%
08/14/1980	14.00%	10.79%	3.21%
08/14/1980	16.25%	10.79%	5.46%
08/25/1980	13.75%	10.82%	2.93%
08/27/1980	13.80%	10.83%	2.97%
08/29/1980	12.50%	10.84%	1.66%
09/15/1980	13.50%	10.88%	2.62%
09/15/1980	13.93%	10.88%	3.05%
09/15/1980	15.80%	10.88%	4.92%
09/24/1980	12.50%	10.93%	1.57%
09/24/1980	15.00%	10.93%	4.07%
09/26/1980	13.75%	10.94%	2.81%
09/30/1980	14.10%	10.96%	3.14%
09/30/1980	14.20%	10.96%	3.24%
10/01/1980	13.90%	10.97%	2.93%
10/03/1980	15.50%	10.98%	4.52%
10/07/1980	12.50%	10.99%	1.51%
10/09/1980	13.25%	11.00%	2.25%
10/09/1980	14.50%	11.00%	3.50%
10/09/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/04/1980	15.00%	11.12%	3.88%
11/05/1980	13.75%	11.12%	2.63%
11/05/1980	14.00%	11.12%	2.88%
11/08/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/08/1980	14.15%	11.22%	2.93%
12/08/1980	15.10%	11.22%	3.88%
12/09/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
01/02/1981	15.25%	11.22%	4.03%
01/07/1981	14.30%	11.21%	3.09%
01/19/1981	15.25%	11.20%	4.05%
01/23/1981	13.10%	11.20%	1.90%
01/23/1981	14.40%	11.20%	3.20%
01/26/1981	15.25%	11.20%	4.05%
01/27/1981	15.00%	11.21%	3.79%
01/31/1981	13.47%	11.22%	2.25%
02/03/1981	15.25%	11.23%	4.02%
02/05/1981	15.75%	11.25%	4.50%
02/11/1981	15.60%	11.28%	4.32%
02/20/1981	15.25%	11.33%	3.92%
03/11/1981	15.40%	11.49%	3.91%
03/12/1981	14.51%	11.50%	3.01%
03/12/1981	16.00%	11.50%	4.50%
03/13/1981	13.02%	11.52%	1.50%
03/18/1981	16.19%	11.55%	4.64%
03/19/1981	13.75%	11.56%	2.19%
03/23/1981	14.30%	11.58%	2.72%
03/25/1981	15.30%	11.60%	3.70%
04/01/1981	14.53%	11.68%	2.85%
04/03/1981	19.10%	11.71%	7.39%
04/09/1981	15.00%	11.78%	3.22%
04/09/1981	15.30%	11.78%	3.52%
04/09/1981	16.50%	11.78%	4.72%
04/09/1981	17.00%	11.78%	5.22%
04/10/1981	13.75%	11.80%	1.95%
04/13/1981	13.57%	11.82%	1.75%
04/15/1981	15.30%	11.85%	3.45%
04/16/1981	13.50%	11.87%	1.63%
04/17/1981	14.10%	11.87%	2.23%
04/21/1981	14.00%	11.90%	2.10%
04/21/1981	16.80%	11.90%	4.90%
04/24/1981	16.00%	11.95%	4.05%
04/27/1981	12.50%	11.97%	0.53%
04/27/1981	13.61%	11.97%	1.64%
04/29/1981	13.65%	12.00%	1.65%
04/30/1981	13.50%	12.02%	1.48%
05/04/1981	16.22%	12.05%	4.17%
05/05/1981	14.40%	12.07%	2.33%
05/07/1981	16.25%	12.11%	4.14%
05/07/1981	16.27%	12.11%	4.16%
05/08/1981	13.00%	12.13%	0.87%
05/08/1981	16.00%	12.13%	3.87%
05/12/1981	13.50%	12.16%	1.34%
05/15/1981	15.75%	12.22%	3.53%
05/18/1981	14.88%	12.23%	2.65%
05/20/1981	16.00%	12.26%	3.74%
05/21/1981	14.00%	12.27%	1.73%
05/26/1981	14.90%	12.30%	2.60%
05/27/1981	15.00%	12.31%	2.69%
05/29/1981	15.50%	12.34%	3.16%
06/01/1981	16.50%	12.35%	4.15%
06/03/1981	14.67%	12.37%	2.30%
06/05/1981	13.00%	12.39%	0.61%
06/10/1981	16.75%	12.42%	4.33%
06/17/1981	14.40%	12.46%	1.94%
06/18/1981	16.33%	12.47%	3.86%
06/25/1981	14.75%	12.51%	2.24%
06/26/1981	16.00%	12.52%	3.48%
06/30/1981	15.25%	12.54%	2.71%
07/01/1981	15.50%	12.56%	2.94%
07/01/1981	17.50%	12.56%	4.94%
07/10/1981	16.00%	12.62%	3.38%
07/14/1981	16.90%	12.64%	4.26%
07/15/1981	16.00%	12.65%	3.35%
07/17/1981	15.00%	12.67%	2.33%
07/20/1981	15.00%	12.68%	2.32%
07/21/1981	14.00%	12.69%	1.31%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
07/28/1981	13.48%	12.74%	0.74%
07/31/1981	13.50%	12.78%	0.72%
07/31/1981	15.00%	12.78%	2.22%
07/31/1981	16.00%	12.78%	3.22%
08/05/1981	15.71%	12.83%	2.88%
08/10/1981	14.50%	12.87%	1.63%
08/11/1981	15.00%	12.88%	2.12%
08/20/1981	13.50%	12.95%	0.55%
08/20/1981	16.50%	12.95%	3.55%
08/24/1981	15.00%	12.97%	2.03%
08/28/1981	15.00%	13.01%	1.99%
09/03/1981	14.50%	13.05%	1.45%
09/10/1981	14.50%	13.11%	1.39%
09/11/1981	16.00%	13.12%	2.88%
09/16/1981	16.00%	13.15%	2.85%
09/17/1981	16.50%	13.16%	3.34%
09/23/1981	15.85%	13.20%	2.65%
09/28/1981	15.50%	13.23%	2.27%
10/09/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/03/1981	15.17%	13.53%	1.64%
11/05/1981	16.60%	13.55%	3.05%
11/06/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/01/1981	15.70%	13.61%	2.09%
12/01/1981	16.00%	13.61%	2.39%
12/01/1981	16.49%	13.61%	2.88%
12/01/1981	16.50%	13.61%	2.89%
12/04/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
01/04/1982	15.50%	13.67%	1.83%
01/11/1982	14.50%	13.72%	0.78%
01/11/1982	17.00%	13.72%	3.28%
01/13/1982	14.75%	13.74%	1.01%
01/14/1982	15.75%	13.75%	2.00%
01/15/1982	15.00%	13.76%	1.24%
01/15/1982	16.50%	13.76%	2.74%
01/22/1982	16.25%	13.79%	2.46%
01/27/1982	16.84%	13.81%	3.03%
01/28/1982	13.00%	13.81%	-0.81%
01/29/1982	15.50%	13.82%	1.68%
02/01/1982	15.85%	13.82%	2.03%
02/03/1982	16.44%	13.84%	2.60%
02/08/1982	15.50%	13.86%	1.64%
02/11/1982	16.00%	13.88%	2.12%
02/11/1982	16.20%	13.88%	2.32%
02/17/1982	15.00%	13.89%	1.11%
02/19/1982	15.17%	13.89%	1.28%
02/26/1982	15.25%	13.89%	1.36%
03/01/1982	15.03%	13.89%	1.14%
03/01/1982	16.00%	13.89%	2.11%
03/03/1982	15.00%	13.88%	1.12%
03/08/1982	17.10%	13.88%	3.22%
03/12/1982	16.25%	13.88%	2.37%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
03/17/1982	17.30%	13.88%	3.42%
03/22/1982	15.10%	13.89%	1.21%
03/27/1982	15.40%	13.89%	1.51%
03/30/1982	15.50%	13.90%	1.60%
03/31/1982	17.00%	13.91%	3.09%
04/01/1982	14.70%	13.91%	0.79%
04/01/1982	16.50%	13.91%	2.59%
04/02/1982	15.50%	13.91%	1.59%
04/05/1982	15.50%	13.92%	1.58%
04/08/1982	16.40%	13.93%	2.47%
04/13/1982	14.50%	13.94%	0.56%
04/23/1982	15.75%	13.94%	1.81%
04/27/1982	15.00%	13.94%	1.06%
04/28/1982	15.75%	13.94%	1.81%
04/30/1982	14.70%	13.94%	0.76%
04/30/1982	15.50%	13.94%	1.56%
05/03/1982	16.60%	13.94%	2.66%
05/04/1982	16.00%	13.94%	2.06%
05/14/1982	15.50%	13.92%	1.58%
05/18/1982	15.42%	13.92%	1.50%
05/19/1982	14.69%	13.92%	0.77%
05/20/1982	15.00%	13.91%	1.09%
05/20/1982	15.10%	13.91%	1.19%
05/20/1982	15.50%	13.91%	1.59%
05/20/1982	16.30%	13.91%	2.39%
05/21/1982	17.75%	13.91%	3.84%
05/27/1982	15.00%	13.89%	1.11%
05/28/1982	15.50%	13.89%	1.61%
05/28/1982	17.00%	13.89%	3.11%
06/01/1982	13.75%	13.89%	-0.14%
06/01/1982	16.60%	13.89%	2.71%
06/09/1982	17.86%	13.88%	3.98%
06/14/1982	15.75%	13.88%	1.87%
06/15/1982	14.85%	13.88%	0.97%
06/18/1982	15.50%	13.87%	1.63%
06/21/1982	14.90%	13.87%	1.03%
06/23/1982	16.00%	13.86%	2.14%
06/23/1982	16.17%	13.86%	2.31%
06/24/1982	14.85%	13.86%	0.99%
06/25/1982	14.70%	13.86%	0.84%
07/01/1982	16.00%	13.84%	2.16%
07/02/1982	15.62%	13.84%	1.78%
07/02/1982	17.00%	13.84%	3.16%
07/13/1982	14.00%	13.82%	0.18%
07/13/1982	16.80%	13.82%	2.98%
07/14/1982	15.76%	13.82%	1.94%
07/14/1982	16.02%	13.82%	2.20%
07/19/1982	16.50%	13.80%	2.70%
07/22/1982	14.50%	13.77%	0.73%
07/22/1982	17.00%	13.77%	3.23%
07/27/1982	16.75%	13.75%	3.00%
07/29/1982	16.50%	13.74%	2.76%
08/11/1982	17.50%	13.68%	3.82%
08/18/1982	17.07%	13.63%	3.44%
08/20/1982	15.73%	13.60%	2.13%
08/25/1982	16.00%	13.57%	2.43%
08/26/1982	15.50%	13.56%	1.94%
08/30/1982	15.00%	13.55%	1.45%
09/03/1982	16.20%	13.53%	2.67%
09/08/1982	15.00%	13.52%	1.48%
09/15/1982	13.08%	13.50%	-0.42%
09/15/1982	16.25%	13.50%	2.75%
09/16/1982	16.00%	13.50%	2.50%
09/17/1982	15.25%	13.50%	1.75%
09/23/1982	17.17%	13.47%	3.70%
09/24/1982	14.50%	13.46%	1.04%
09/27/1982	15.25%	13.46%	1.79%
10/01/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/01/1982	15.50%	13.15%	2.35%
11/03/1982	17.20%	13.13%	4.07%
11/04/1982	16.25%	13.11%	3.14%
11/05/1982	16.20%	13.09%	3.11%
11/09/1982	16.00%	13.05%	2.95%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/01/1982	17.04%	12.79%	4.25%
12/06/1982	15.00%	12.73%	2.27%
12/06/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
01/05/1983	17.33%	12.40%	4.93%
01/11/1983	15.90%	12.34%	3.56%
01/12/1983	14.63%	12.33%	2.30%
01/12/1983	15.50%	12.33%	3.17%
01/20/1983	17.75%	12.24%	5.51%
01/21/1983	15.00%	12.22%	2.78%
01/24/1983	14.50%	12.21%	2.29%
01/24/1983	15.50%	12.21%	3.29%
01/25/1983	15.85%	12.19%	3.66%
01/27/1983	16.14%	12.17%	3.97%
02/01/1983	18.50%	12.13%	6.37%
02/04/1983	14.00%	12.10%	1.90%
02/10/1983	15.00%	12.06%	2.94%
02/21/1983	15.50%	11.98%	3.52%
02/22/1983	15.50%	11.97%	3.53%
02/23/1983	15.10%	11.96%	3.14%
02/23/1983	16.00%	11.96%	4.04%
03/02/1983	15.25%	11.89%	3.36%
03/09/1983	15.20%	11.82%	3.38%
03/15/1983	13.00%	11.77%	1.23%
03/18/1983	15.25%	11.73%	3.52%
03/23/1983	15.40%	11.69%	3.71%
03/24/1983	15.00%	11.67%	3.33%
03/29/1983	15.50%	11.63%	3.87%
03/30/1983	16.71%	11.61%	5.10%
03/31/1983	15.00%	11.59%	3.41%
04/04/1983	15.20%	11.58%	3.62%
04/08/1983	15.50%	11.51%	3.99%
04/11/1983	14.81%	11.49%	3.32%
04/19/1983	14.50%	11.38%	3.12%
04/20/1983	16.00%	11.36%	4.64%
04/29/1983	16.00%	11.24%	4.76%
05/01/1983	14.50%	11.24%	3.26%
05/09/1983	15.50%	11.15%	4.35%
05/11/1983	16.46%	11.12%	5.34%
05/12/1983	14.14%	11.11%	3.03%
05/18/1983	15.00%	11.05%	3.95%
05/23/1983	14.90%	11.01%	3.89%
05/23/1983	15.50%	11.01%	4.49%
05/25/1983	15.50%	10.98%	4.52%
05/27/1983	15.00%	10.96%	4.04%
05/31/1983	14.00%	10.95%	3.05%
05/31/1983	15.50%	10.95%	4.55%
06/02/1983	14.50%	10.93%	3.57%
06/17/1983	15.03%	10.84%	4.19%
07/01/1983	14.80%	10.78%	4.02%
07/01/1983	14.90%	10.78%	4.12%
07/08/1983	16.25%	10.76%	5.49%
07/13/1983	13.20%	10.75%	2.45%
07/19/1983	15.00%	10.74%	4.26%
07/19/1983	15.10%	10.74%	4.36%
07/25/1983	16.25%	10.73%	5.52%
07/28/1983	15.90%	10.74%	5.16%
08/03/1983	16.34%	10.75%	5.59%
08/03/1983	16.50%	10.75%	5.75%
08/19/1983	15.00%	10.80%	4.20%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
08/22/1983	15.50%	10.80%	4.70%
08/22/1983	16.40%	10.80%	5.60%
08/31/1983	14.75%	10.84%	3.91%
09/07/1983	15.00%	10.86%	4.14%
09/14/1983	15.78%	10.89%	4.89%
09/16/1983	15.00%	10.90%	4.10%
09/19/1983	14.50%	10.91%	3.59%
09/20/1983	16.50%	10.91%	5.59%
09/28/1983	14.50%	10.94%	3.56%
09/29/1983	15.50%	10.95%	4.55%
09/30/1983	15.25%	10.95%	4.30%
09/30/1983	16.15%	10.95%	5.20%
10/04/1983	14.80%	10.96%	3.84%
10/07/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/01/1983	16.00%	11.06%	4.94%
11/09/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/05/1983	15.25%	11.15%	4.10%
12/06/1983	15.07%	11.15%	3.92%
12/08/1983	15.90%	11.16%	4.74%
12/09/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
01/03/1984	14.75%	11.27%	3.48%
01/10/1984	15.90%	11.30%	4.60%
01/12/1984	15.60%	11.31%	4.29%
01/18/1984	13.75%	11.33%	2.42%
01/19/1984	15.90%	11.33%	4.57%
01/30/1984	16.10%	11.37%	4.73%
01/31/1984	15.25%	11.37%	3.88%
02/01/1984	14.80%	11.38%	3.42%
02/06/1984	13.75%	11.40%	2.35%
02/06/1984	14.75%	11.40%	3.35%
02/09/1984	15.25%	11.42%	3.83%
02/15/1984	15.70%	11.44%	4.26%
02/20/1984	15.00%	11.46%	3.54%
02/20/1984	15.00%	11.46%	3.54%
02/22/1984	14.75%	11.47%	3.28%
02/28/1984	14.50%	11.51%	2.99%
03/02/1984	14.25%	11.54%	2.71%
03/20/1984	16.00%	11.64%	4.36%
03/23/1984	15.50%	11.67%	3.83%
03/26/1984	14.71%	11.68%	3.03%
04/02/1984	15.50%	11.71%	3.79%
04/06/1984	14.74%	11.75%	2.99%
04/11/1984	15.72%	11.78%	3.94%
04/17/1984	15.00%	11.81%	3.19%
04/18/1984	16.20%	11.82%	4.38%
04/25/1984	14.64%	11.85%	2.79%
04/30/1984	14.40%	11.87%	2.53%
05/16/1984	14.69%	11.98%	2.71%
05/16/1984	15.00%	11.98%	3.02%
05/22/1984	14.40%	12.02%	2.38%
05/29/1984	15.10%	12.06%	3.04%
06/13/1984	15.25%	12.15%	3.10%
06/15/1984	15.60%	12.17%	3.43%
06/22/1984	16.25%	12.21%	4.04%
06/29/1984	15.25%	12.26%	2.99%
07/02/1984	13.35%	12.27%	1.08%
07/10/1984	16.00%	12.31%	3.69%
07/12/1984	16.50%	12.32%	4.18%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
07/13/1984	16.25%	12.33%	3.92%
07/17/1984	14.14%	12.35%	1.79%
07/18/1984	15.30%	12.36%	2.94%
07/18/1984	15.50%	12.36%	3.14%
07/19/1984	14.30%	12.37%	1.93%
07/24/1984	16.79%	12.39%	4.40%
07/31/1984	16.00%	12.43%	3.57%
08/03/1984	14.25%	12.44%	1.81%
08/17/1984	14.30%	12.49%	1.81%
08/20/1984	15.00%	12.49%	2.51%
08/27/1984	16.30%	12.51%	3.79%
08/31/1984	15.55%	12.52%	3.03%
09/06/1984	16.00%	12.53%	3.47%
09/10/1984	14.75%	12.54%	2.21%
09/13/1984	15.00%	12.55%	2.45%
09/17/1984	17.38%	12.56%	4.82%
09/26/1984	14.50%	12.57%	1.93%
09/28/1984	15.00%	12.57%	2.43%
09/28/1984	16.25%	12.57%	3.68%
10/09/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/07/1984	15.60%	12.58%	3.02%
11/09/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/03/1984	15.80%	12.56%	3.24%
12/04/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
01/03/1985	14.75%	12.49%	2.26%
01/10/1985	15.75%	12.47%	3.28%
01/11/1985	16.30%	12.46%	3.84%
01/23/1985	15.80%	12.43%	3.37%
01/24/1985	15.82%	12.43%	3.39%
01/25/1985	16.75%	12.42%	4.33%
01/30/1985	14.90%	12.40%	2.50%
01/31/1985	14.75%	12.39%	2.36%
02/08/1985	14.47%	12.35%	2.12%
03/01/1985	13.84%	12.31%	1.53%
03/08/1985	16.85%	12.28%	4.57%
03/14/1985	15.50%	12.25%	3.25%
03/15/1985	15.62%	12.25%	3.37%
03/29/1985	15.62%	12.17%	3.45%
04/03/1985	14.60%	12.14%	2.46%
04/09/1985	15.50%	12.11%	3.39%
04/16/1985	15.70%	12.06%	3.64%
04/22/1985	14.00%	12.02%	1.98%
04/26/1985	15.50%	11.98%	3.52%
04/29/1985	15.00%	11.97%	3.03%
05/02/1985	14.68%	11.94%	2.74%
05/08/1985	15.62%	11.89%	3.73%
05/10/1985	16.50%	11.87%	4.63%
05/29/1985	14.61%	11.73%	2.88%
05/31/1985	16.00%	11.71%	4.29%
06/14/1985	15.50%	11.61%	3.89%
07/09/1985	15.00%	11.45%	3.55%
07/16/1985	14.50%	11.39%	3.11%
07/26/1985	14.50%	11.33%	3.17%
08/02/1985	14.80%	11.29%	3.51%
08/07/1985	15.00%	11.27%	3.73%
08/28/1985	14.25%	11.15%	3.10%
08/28/1985	15.50%	11.15%	4.35%
08/29/1985	14.50%	11.15%	3.35%
09/09/1985	14.60%	11.11%	3.49%
09/09/1985	14.90%	11.11%	3.79%
09/17/1985	14.90%	11.08%	3.82%
09/23/1985	15.00%	11.06%	3.94%
09/27/1985	15.50%	11.05%	4.45%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
09/27/1985	15.80%	11.05%	4.75%
10/02/1985	14.00%	11.03%	2.97%
10/02/1985	14.75%	11.03%	3.72%
10/03/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/04/1985	14.50%	10.92%	3.58%
11/07/1985	15.50%	10.90%	4.60%
11/08/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
01/24/1986	15.40%	10.41%	4.99%
01/31/1986	15.00%	10.35%	4.65%
02/05/1986	15.00%	10.32%	4.68%
02/05/1986	15.75%	10.32%	5.43%
02/10/1986	13.30%	10.29%	3.01%
02/11/1986	12.50%	10.28%	2.22%
02/14/1986	14.40%	10.24%	4.16%
02/18/1986	16.00%	10.23%	5.77%
02/24/1986	14.50%	10.18%	4.32%
02/26/1986	14.00%	10.15%	3.85%
03/05/1986	14.90%	10.08%	4.82%
03/11/1986	14.50%	10.02%	4.48%
03/12/1986	13.50%	10.00%	3.50%
03/27/1986	14.10%	9.86%	4.24%
03/31/1986	13.50%	9.84%	3.66%
04/01/1986	14.00%	9.83%	4.17%
04/02/1986	15.50%	9.81%	5.69%
04/04/1986	15.00%	9.78%	5.22%
04/14/1986	13.40%	9.69%	3.71%
04/23/1986	15.00%	9.57%	5.43%
05/16/1986	14.50%	9.32%	5.18%
05/16/1986	14.50%	9.32%	5.18%
05/29/1986	13.90%	9.19%	4.71%
05/30/1986	15.10%	9.18%	5.92%
06/02/1986	12.81%	9.17%	3.64%
06/11/1986	14.00%	9.07%	4.93%
06/24/1986	16.63%	8.94%	7.69%
06/26/1986	12.00%	8.91%	3.09%
06/26/1986	14.75%	8.91%	5.84%
06/30/1986	13.00%	8.87%	4.13%
07/10/1986	14.34%	8.75%	5.59%
07/11/1986	12.75%	8.73%	4.02%
07/14/1986	12.60%	8.71%	3.89%
07/17/1986	12.40%	8.66%	3.74%
07/25/1986	14.25%	8.57%	5.68%
08/06/1986	13.50%	8.44%	5.06%
08/14/1986	13.50%	8.35%	5.15%
09/16/1986	12.75%	8.06%	4.69%
09/19/1986	13.25%	8.03%	5.22%
10/01/1986	14.00%	7.95%	6.05%
10/03/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/05/1986	13.00%	7.75%	5.25%
12/03/1986	12.90%	7.58%	5.32%
12/04/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
01/02/1987	13.00%	7.49%	5.51%
01/12/1987	12.40%	7.47%	4.93%
01/27/1987	12.71%	7.46%	5.25%
03/02/1987	12.47%	7.47%	5.00%
03/03/1987	13.60%	7.47%	6.13%
03/04/1987	12.38%	7.47%	4.91%
03/10/1987	13.50%	7.47%	6.03%
03/13/1987	13.00%	7.47%	5.53%
03/31/1987	13.00%	7.46%	5.54%
04/06/1987	13.00%	7.47%	5.53%
04/14/1987	12.50%	7.49%	5.01%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
04/16/1987	14.50%	7.50%	7.00%
04/27/1987	12.00%	7.54%	4.46%
05/05/1987	12.85%	7.58%	5.27%
05/12/1987	12.65%	7.62%	5.03%
05/28/1987	13.50%	7.70%	5.80%
06/15/1987	13.20%	7.78%	5.42%
06/29/1987	15.00%	7.83%	7.17%
06/30/1987	12.50%	7.84%	4.66%
07/08/1987	12.00%	7.86%	4.14%
07/10/1987	12.90%	7.86%	5.04%
07/15/1987	13.50%	7.88%	5.62%
07/16/1987	13.50%	7.88%	5.62%
07/16/1987	15.00%	7.88%	7.12%
07/27/1987	13.00%	7.92%	5.08%
07/27/1987	13.40%	7.92%	5.48%
07/27/1987	13.50%	7.92%	5.58%
07/31/1987	12.98%	7.95%	5.03%
08/26/1987	12.63%	8.06%	4.57%
08/26/1987	12.75%	8.06%	4.69%
08/27/1987	13.25%	8.06%	5.19%
09/09/1987	13.00%	8.14%	4.86%
09/30/1987	12.75%	8.31%	4.44%
09/30/1987	13.00%	8.31%	4.69%
10/02/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/02/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/03/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
01/20/1988	13.80%	8.94%	4.86%
01/26/1988	13.90%	8.95%	4.95%
01/29/1988	13.20%	8.96%	4.24%
02/04/1988	12.60%	8.96%	3.64%
03/01/1988	11.56%	8.94%	2.62%
03/23/1988	12.87%	8.92%	3.95%
03/24/1988	11.24%	8.92%	2.32%
03/30/1988	12.72%	8.92%	3.80%
04/01/1988	12.50%	8.92%	3.58%
04/07/1988	13.25%	8.93%	4.32%
04/25/1988	10.96%	8.96%	2.00%
05/03/1988	12.91%	8.97%	3.94%
05/11/1988	13.50%	8.99%	4.51%
05/16/1988	13.00%	8.99%	4.01%
06/30/1988	12.75%	9.00%	3.75%
07/01/1988	12.75%	8.99%	3.76%
07/20/1988	13.40%	8.96%	4.44%
08/05/1988	12.75%	8.92%	3.83%
08/23/1988	11.70%	8.93%	2.77%
08/29/1988	12.75%	8.94%	3.81%
08/30/1988	13.50%	8.94%	4.56%
09/08/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
01/27/1989	13.00%	9.05%	3.95%
01/31/1989	13.00%	9.05%	3.95%
02/17/1989	13.00%	9.05%	3.95%
02/20/1989	12.40%	9.05%	3.35%
03/01/1989	12.76%	9.05%	3.71%
03/08/1989	13.00%	9.05%	3.95%
03/30/1989	14.00%	9.05%	4.95%
04/05/1989	14.20%	9.05%	5.15%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
04/18/1989	13.00%	9.05%	3.95%
05/05/1989	12.40%	9.05%	3.35%
06/02/1989	13.20%	9.00%	4.20%
06/08/1989	13.50%	8.98%	4.52%
06/27/1989	13.25%	8.91%	4.34%
06/30/1989	13.00%	8.90%	4.10%
08/14/1989	12.50%	8.77%	3.73%
09/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/09/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
01/10/1990	12.80%	8.24%	4.56%
01/11/1990	12.90%	8.24%	4.66%
01/17/1990	12.80%	8.22%	4.58%
01/26/1990	12.00%	8.20%	3.80%
02/09/1990	12.10%	8.17%	3.93%
02/24/1990	12.86%	8.15%	4.71%
03/30/1990	12.90%	8.16%	4.74%
04/04/1990	15.76%	8.17%	7.59%
04/12/1990	12.52%	8.18%	4.34%
04/19/1990	12.75%	8.20%	4.55%
05/21/1990	12.10%	8.28%	3.82%
05/29/1990	12.40%	8.30%	4.10%
05/31/1990	12.00%	8.30%	3.70%
06/04/1990	12.90%	8.30%	4.60%
06/06/1990	12.25%	8.31%	3.94%
06/15/1990	13.20%	8.32%	4.88%
06/20/1990	12.92%	8.32%	4.60%
06/27/1990	12.90%	8.33%	4.57%
06/29/1990	12.50%	8.33%	4.17%
07/06/1990	12.10%	8.34%	3.76%
07/06/1990	12.35%	8.34%	4.01%
08/10/1990	12.55%	8.41%	4.14%
08/16/1990	13.21%	8.43%	4.78%
08/22/1990	13.10%	8.45%	4.65%
08/24/1990	13.00%	8.46%	4.54%
09/26/1990	11.45%	8.59%	2.86%
10/02/1990	13.00%	8.61%	4.39%
10/05/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
01/02/1991	13.10%	8.65%	4.45%
01/04/1991	12.50%	8.65%	3.85%
01/15/1991	12.75%	8.64%	4.11%
01/25/1991	11.70%	8.63%	3.07%
02/04/1991	12.50%	8.60%	3.90%
02/07/1991	12.50%	8.59%	3.91%
02/12/1991	13.00%	8.58%	4.43%
02/14/1991	12.72%	8.57%	4.15%
02/22/1991	12.80%	8.55%	4.25%
03/06/1991	13.10%	8.53%	4.57%
03/08/1991	12.30%	8.52%	3.78%
03/08/1991	13.00%	8.52%	4.48%
04/22/1991	13.00%	8.49%	4.51%
05/07/1991	13.50%	8.47%	5.03%
05/13/1991	13.25%	8.47%	4.78%
05/30/1991	12.75%	8.44%	4.31%
06/12/1991	12.00%	8.41%	3.59%
06/25/1991	11.70%	8.39%	3.31%
06/28/1991	12.50%	8.38%	4.12%
07/01/1991	12.00%	8.38%	3.62%
07/03/1991	12.50%	8.37%	4.13%
07/19/1991	12.10%	8.34%	3.76%
08/01/1991	12.90%	8.32%	4.58%
08/16/1991	13.20%	8.29%	4.91%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
09/27/1991	12.50%	8.23%	4.27%
09/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/01/1991	12.00%	8.19%	3.81%
11/05/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
01/09/1992	12.80%	8.09%	4.71%
01/16/1992	12.75%	8.07%	4.68%
01/21/1992	12.00%	8.06%	3.94%
01/22/1992	13.00%	8.06%	4.94%
01/27/1992	12.65%	8.05%	4.60%
01/31/1992	12.00%	8.04%	3.96%
02/11/1992	12.40%	8.03%	4.37%
02/25/1992	12.50%	8.01%	4.49%
03/16/1992	11.43%	7.98%	3.45%
03/18/1992	12.28%	7.98%	4.30%
04/02/1992	12.10%	7.95%	4.15%
04/09/1992	11.45%	7.94%	3.51%
04/10/1992	11.50%	7.93%	3.57%
04/14/1992	11.50%	7.93%	3.57%
05/05/1992	11.50%	7.89%	3.61%
05/12/1992	11.87%	7.88%	3.99%
05/12/1992	12.46%	7.88%	4.58%
06/01/1992	12.30%	7.87%	4.43%
06/12/1992	10.90%	7.86%	3.04%
06/26/1992	12.35%	7.85%	4.50%
06/29/1992	11.00%	7.85%	3.15%
06/30/1992	13.00%	7.85%	5.15%
07/13/1992	11.90%	7.84%	4.06%
07/13/1992	13.50%	7.84%	5.66%
07/22/1992	11.20%	7.83%	3.37%
08/03/1992	12.00%	7.81%	4.19%
08/06/1992	12.50%	7.80%	4.70%
09/22/1992	12.00%	7.71%	4.29%
09/28/1992	11.40%	7.71%	3.69%
09/30/1992	11.75%	7.70%	4.05%
10/02/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/03/1992	12.00%	7.71%	4.29%
12/03/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
01/12/1993	12.00%	7.61%	4.39%
01/21/1993	11.25%	7.59%	3.66%
02/02/1993	11.40%	7.56%	3.84%
02/15/1993	12.30%	7.52%	4.78%
02/24/1993	11.90%	7.49%	4.41%
02/26/1993	11.80%	7.48%	4.32%
02/26/1993	12.20%	7.48%	4.72%
04/23/1993	11.75%	7.29%	4.46%
05/11/1993	11.75%	7.25%	4.50%
05/14/1993	11.50%	7.24%	4.26%
05/25/1993	11.50%	7.23%	4.27%
05/28/1993	11.00%	7.22%	3.78%
06/03/1993	12.00%	7.21%	4.79%
06/16/1993	11.50%	7.19%	4.31%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
06/18/1993	12.10%	7.18%	4.92%
06/25/1993	11.67%	7.17%	4.50%
07/21/1993	11.38%	7.10%	4.28%
07/23/1993	10.46%	7.09%	3.37%
08/24/1993	11.50%	6.96%	4.54%
09/21/1993	10.50%	6.81%	3.69%
09/29/1993	11.47%	6.77%	4.70%
09/30/1993	11.60%	6.76%	4.84%
11/02/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
01/04/1994	10.07%	6.44%	3.63%
01/13/1994	11.00%	6.42%	4.58%
01/21/1994	11.00%	6.40%	4.60%
01/28/1994	11.35%	6.39%	4.96%
02/03/1994	11.40%	6.38%	5.02%
02/17/1994	10.60%	6.36%	4.24%
02/25/1994	11.25%	6.35%	4.90%
02/25/1994	12.00%	6.35%	5.65%
03/01/1994	11.00%	6.35%	4.65%
03/04/1994	11.00%	6.35%	4.65%
04/25/1994	11.00%	6.41%	4.59%
05/10/1994	11.75%	6.45%	5.30%
05/13/1994	10.50%	6.46%	4.04%
06/03/1994	11.00%	6.54%	4.46%
06/27/1994	11.40%	6.65%	4.75%
08/05/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/09/1994	10.85%	7.39%	3.46%
11/09/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/08/1994	11.50%	7.54%	3.96%
12/08/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
01/09/1995	12.28%	7.64%	4.64%
01/31/1995	11.00%	7.69%	3.31%
02/10/1995	12.60%	7.70%	4.90%
02/17/1995	11.90%	7.70%	4.20%
03/09/1995	11.50%	7.71%	3.79%
03/20/1995	12.00%	7.72%	4.28%
03/23/1995	12.81%	7.72%	5.09%
03/29/1995	11.60%	7.72%	3.88%
04/06/1995	11.10%	7.71%	3.39%
04/07/1995	11.00%	7.71%	3.29%
04/19/1995	11.00%	7.70%	3.30%
05/12/1995	11.63%	7.68%	3.95%
05/25/1995	11.20%	7.65%	3.55%
06/09/1995	11.25%	7.60%	3.65%
06/21/1995	12.25%	7.56%	4.69%
06/30/1995	11.10%	7.52%	3.58%
09/11/1995	11.30%	7.20%	4.10%
09/27/1995	11.30%	7.12%	4.18%
09/27/1995	11.50%	7.12%	4.38%
09/27/1995	11.75%	7.12%	4.63%
09/29/1995	11.00%	7.11%	3.89%
11/09/1995	11.38%	6.90%	4.48%
11/09/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/04/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
02/05/1996	12.25%	6.48%	5.77%
03/29/1996	10.67%	6.42%	4.25%
04/08/1996	11.00%	6.42%	4.58%
04/11/1996	12.59%	6.43%	6.16%
04/11/1996	12.59%	6.43%	6.16%
04/24/1996	11.25%	6.43%	4.82%
04/30/1996	11.00%	6.43%	4.57%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
05/13/1996	11.00%	6.44%	4.56%
05/23/1996	11.25%	6.43%	4.82%
06/25/1996	11.25%	6.48%	4.77%
06/27/1996	11.20%	6.48%	4.72%
08/12/1996	10.40%	6.57%	3.83%
09/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/05/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
01/03/1997	10.70%	6.83%	3.87%
02/13/1997	11.80%	6.82%	4.98%
02/20/1997	11.80%	6.82%	4.98%
03/31/1997	10.02%	6.80%	3.22%
04/02/1997	11.65%	6.80%	4.85%
04/28/1997	11.50%	6.81%	4.69%
04/29/1997	11.70%	6.81%	4.89%
07/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
02/02/1998	12.75%	6.39%	6.36%
03/02/1998	11.25%	6.29%	4.96%
03/06/1998	10.75%	6.27%	4.48%
03/20/1998	10.50%	6.22%	4.28%
04/30/1998	12.20%	6.12%	6.08%
07/10/1998	11.40%	5.94%	5.46%
09/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
02/05/1999	10.30%	5.38%	4.92%
03/04/1999	10.50%	5.34%	5.16%
04/06/1999	10.94%	5.32%	5.62%
07/29/1999	10.75%	5.52%	5.23%
09/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
01/07/2000	11.50%	6.05%	5.45%
01/07/2000	11.50%	6.05%	5.45%
02/17/2000	10.60%	6.17%	4.43%
03/28/2000	11.25%	6.20%	5.05%
05/24/2000	11.00%	6.18%	4.82%
07/18/2000	12.20%	6.16%	6.04%
09/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
01/23/2001	11.25%	5.79%	5.46%
02/08/2001	11.50%	5.77%	5.73%
05/08/2001	10.75%	5.62%	5.13%
06/26/2001	11.00%	5.62%	5.38%
07/25/2001	11.02%	5.60%	5.42%
07/25/2001	11.02%	5.60%	5.42%
07/31/2001	11.00%	5.59%	5.41%
08/31/2001	10.50%	5.56%	4.94%
09/07/2001	10.75%	5.55%	5.20%
09/10/2001	11.00%	5.55%	5.45%
09/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/03/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
01/22/2002	10.00%	5.50%	4.50%
03/27/2002	10.10%	5.45%	4.65%
04/22/2002	11.80%	5.45%	6.35%
05/28/2002	10.17%	5.46%	4.71%
06/10/2002	12.00%	5.47%	6.53%
06/18/2002	11.16%	5.48%	5.68%
06/20/2002	11.00%	5.48%	5.52%
06/20/2002	12.30%	5.48%	6.82%
07/15/2002	11.00%	5.48%	5.52%
09/12/2002	12.30%	5.45%	6.85%
09/26/2002	10.45%	5.41%	5.04%
12/04/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
01/08/2003	11.10%	5.19%	5.91%
01/31/2003	12.45%	5.13%	7.32%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
02/28/2003	12.30%	5.05%	7.25%
03/06/2003	10.75%	5.03%	5.72%
03/07/2003	9.96%	5.02%	4.94%
03/20/2003	12.00%	4.98%	7.02%
04/03/2003	12.00%	4.96%	7.04%
04/15/2003	11.15%	4.94%	6.21%
06/25/2003	10.75%	4.79%	5.96%
06/26/2003	10.75%	4.79%	5.96%
07/09/2003	9.75%	4.79%	4.96%
07/16/2003	9.75%	4.79%	4.96%
07/25/2003	9.50%	4.80%	4.70%
08/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
01/13/2004	12.00%	4.95%	7.05%
03/02/2004	10.75%	4.99%	5.76%
03/26/2004	10.25%	5.02%	5.23%
04/05/2004	11.25%	5.03%	6.22%
05/18/2004	10.50%	5.07%	5.43%
05/25/2004	10.25%	5.08%	5.17%
05/27/2004	10.25%	5.08%	5.17%
06/02/2004	11.22%	5.08%	6.14%
06/30/2004	10.50%	5.10%	5.40%
06/30/2004	10.50%	5.10%	5.40%
07/16/2004	11.60%	5.11%	6.49%
08/25/2004	10.25%	5.10%	5.15%
09/09/2004	10.40%	5.10%	5.30%
11/09/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
01/06/2005	10.70%	5.08%	5.62%
02/18/2005	10.30%	4.98%	5.32%
02/25/2005	10.50%	4.96%	5.54%
03/10/2005	11.00%	4.93%	6.07%
03/24/2005	10.30%	4.90%	5.40%
04/04/2005	10.00%	4.88%	5.12%
04/07/2005	10.25%	4.87%	5.38%
05/18/2005	10.25%	4.78%	5.47%
05/25/2005	10.75%	4.76%	5.99%
05/26/2005	9.75%	4.76%	4.99%
06/01/2005	9.75%	4.75%	5.00%
07/19/2005	11.50%	4.64%	6.86%
08/05/2005	11.75%	4.62%	7.13%
08/15/2005	10.13%	4.61%	5.52%
09/28/2005	10.00%	4.54%	5.46%
10/04/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
01/05/2006	11.00%	4.53%	6.47%
01/27/2006	9.75%	4.52%	5.23%
03/03/2006	10.39%	4.53%	5.86%
04/17/2006	10.20%	4.61%	5.59%
04/26/2006	10.60%	4.64%	5.96%
05/17/2006	11.60%	4.69%	6.91%
06/06/2006	10.00%	4.74%	5.26%
06/27/2006	10.75%	4.80%	5.95%
07/06/2006	10.20%	4.83%	5.37%
07/24/2006	9.60%	4.86%	4.74%
07/26/2006	10.50%	4.86%	5.64%
07/28/2006	10.05%	4.86%	5.19%
08/23/2006	9.55%	4.89%	4.66%
09/01/2006	10.54%	4.90%	5.64%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
09/14/2006	10.00%	4.91%	5.09%
10/06/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/01/2006	10.25%	4.95%	5.30%
12/01/2006	10.50%	4.95%	5.55%
12/07/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
01/05/2007	10.00%	4.95%	5.05%
01/11/2007	10.10%	4.95%	5.15%
01/11/2007	10.10%	4.95%	5.15%
01/11/2007	10.90%	4.95%	5.95%
01/12/2007	10.10%	4.95%	5.15%
01/13/2007	10.40%	4.95%	5.45%
01/19/2007	10.80%	4.94%	5.86%
03/21/2007	11.35%	4.87%	6.48%
03/22/2007	9.75%	4.86%	4.89%
05/15/2007	10.00%	4.81%	5.19%
05/17/2007	10.25%	4.81%	5.44%
05/17/2007	10.25%	4.81%	5.44%
05/22/2007	10.20%	4.80%	5.40%
05/22/2007	10.50%	4.80%	5.70%
05/23/2007	10.70%	4.80%	5.90%
05/25/2007	9.67%	4.80%	4.87%
06/15/2007	9.90%	4.82%	5.08%
06/21/2007	10.20%	4.83%	5.37%
06/22/2007	10.50%	4.83%	5.67%
06/28/2007	10.75%	4.84%	5.91%
07/12/2007	9.67%	4.86%	4.81%
07/19/2007	10.00%	4.87%	5.13%
07/19/2007	10.00%	4.87%	5.13%
08/15/2007	10.40%	4.88%	5.52%
10/09/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/06/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
01/08/2008	10.75%	4.83%	5.92%
01/17/2008	10.75%	4.81%	5.94%
01/28/2008	9.40%	4.80%	4.60%
01/30/2008	10.00%	4.79%	5.21%
01/31/2008	10.71%	4.79%	5.92%
02/29/2008	10.25%	4.75%	5.50%
03/12/2008	10.25%	4.73%	5.52%
03/25/2008	9.10%	4.68%	4.42%
04/22/2008	10.25%	4.60%	5.65%
04/24/2008	10.10%	4.60%	5.50%
05/01/2008	10.70%	4.59%	6.11%
05/19/2008	11.00%	4.56%	6.44%
05/27/2008	10.00%	4.55%	5.45%
06/10/2008	10.70%	4.54%	6.16%
06/27/2008	10.50%	4.54%	5.96%
06/27/2008	11.04%	4.54%	6.50%
07/10/2008	10.43%	4.52%	5.91%
07/16/2008	9.40%	4.52%	4.88%
07/30/2008	10.80%	4.51%	6.29%
07/31/2008	10.70%	4.51%	6.19%
08/11/2008	10.25%	4.51%	5.74%
08/26/2008	10.18%	4.50%	5.68%
09/10/2008	10.30%	4.50%	5.80%
09/24/2008	10.65%	4.48%	6.17%
09/24/2008	10.65%	4.48%	6.17%
09/24/2008	10.65%	4.48%	6.17%
09/30/2008	10.20%	4.48%	5.72%
10/08/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
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12/01/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
01/14/2009	10.50%	4.15%	6.35%
01/21/2009	10.50%	4.12%	6.38%
01/21/2009	10.50%	4.12%	6.38%
01/21/2009	10.50%	4.12%	6.38%
01/27/2009	10.76%	4.09%	6.67%
01/30/2009	10.50%	4.08%	6.42%
02/04/2009	8.75%	4.06%	4.69%
03/04/2009	10.50%	3.96%	6.54%
03/12/2009	11.50%	3.93%	7.57%
04/02/2009	11.10%	3.85%	7.25%
04/21/2009	10.61%	3.80%	6.81%
04/24/2009	10.00%	3.79%	6.21%
04/30/2009	11.25%	3.78%	7.47%
05/04/2009	10.74%	3.77%	6.97%
05/20/2009	10.25%	3.74%	6.51%
05/28/2009	10.50%	3.74%	6.76%
06/22/2009	10.00%	3.76%	6.24%
06/24/2009	10.80%	3.77%	7.03%
07/08/2009	10.63%	3.77%	6.86%
07/17/2009	10.50%	3.78%	6.72%
08/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/02/2009	10.70%	4.09%	6.61%
11/03/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/03/2009	10.50%	4.18%	6.32%
12/07/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
01/04/2010	10.80%	4.28%	6.52%
01/11/2010	11.00%	4.30%	6.70%
01/26/2010	10.13%	4.35%	5.78%
01/27/2010	10.40%	4.35%	6.05%
01/27/2010	10.40%	4.35%	6.05%
01/27/2010	10.70%	4.35%	6.35%
02/09/2010	9.80%	4.38%	5.42%
02/18/2010	10.60%	4.40%	6.20%
02/24/2010	10.18%	4.41%	5.77%
03/02/2010	9.63%	4.41%	5.22%
03/04/2010	10.50%	4.41%	6.09%
03/05/2010	10.50%	4.41%	6.09%
03/11/2010	11.90%	4.42%	7.48%
03/17/2010	10.00%	4.41%	5.59%
03/25/2010	10.15%	4.42%	5.73%
04/02/2010	10.10%	4.43%	5.67%
04/27/2010	10.00%	4.46%	5.54%
04/29/2010	9.90%	4.46%	5.44%
04/29/2010	10.06%	4.46%	5.60%
04/29/2010	10.26%	4.46%	5.80%
05/12/2010	10.30%	4.45%	5.85%
05/12/2010	10.30%	4.45%	5.85%
05/28/2010	10.10%	4.44%	5.66%
05/28/2010	10.20%	4.44%	5.76%
06/07/2010	10.30%	4.44%	5.86%
06/16/2010	10.00%	4.44%	5.56%
06/28/2010	9.67%	4.43%	5.24%
06/28/2010	10.50%	4.43%	6.07%
06/30/2010	9.40%	4.43%	4.97%
07/01/2010	10.25%	4.43%	5.82%
07/15/2010	10.53%	4.43%	6.10%
07/15/2010	10.70%	4.43%	6.27%
07/30/2010	10.70%	4.41%	6.29%

Bond Yield Plus Risk Premium
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[6]	[7]	[8]	[9]
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08/04/2010	10.50%	4.41%	6.09%
08/06/2010	9.83%	4.41%	5.42%
08/25/2010	9.90%	4.37%	5.53%
09/03/2010	10.60%	4.35%	6.25%
09/14/2010	10.70%	4.33%	6.37%
09/16/2010	10.00%	4.33%	5.67%
09/16/2010	10.00%	4.33%	5.67%
09/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/02/2010	10.38%	4.20%	6.18%
11/04/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/01/2010	10.13%	4.16%	5.97%
12/06/2010	9.86%	4.15%	5.71%
12/09/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
01/05/2011	10.15%	4.13%	6.02%
01/12/2011	10.30%	4.12%	6.18%
01/13/2011	10.30%	4.12%	6.18%
01/18/2011	10.00%	4.12%	5.88%
01/20/2011	9.30%	4.12%	5.18%
01/20/2011	10.13%	4.12%	6.01%
01/31/2011	9.60%	4.12%	5.48%
02/03/2011	10.00%	4.12%	5.88%
02/25/2011	10.00%	4.14%	5.86%
03/25/2011	9.80%	4.18%	5.62%
03/30/2011	10.00%	4.18%	5.82%
04/12/2011	10.00%	4.21%	5.79%
04/25/2011	10.74%	4.23%	6.51%
04/26/2011	9.67%	4.23%	5.44%
04/27/2011	10.40%	4.24%	6.16%
05/04/2011	10.00%	4.24%	5.76%
05/04/2011	10.00%	4.24%	5.76%
05/24/2011	10.50%	4.27%	6.23%
06/08/2011	10.75%	4.30%	6.45%
06/16/2011	9.20%	4.32%	4.88%
06/17/2011	9.95%	4.32%	5.63%
07/13/2011	10.20%	4.36%	5.84%
08/01/2011	9.20%	4.39%	4.81%
08/08/2011	10.00%	4.38%	5.62%
08/11/2011	10.00%	4.38%	5.62%
08/12/2011	10.35%	4.37%	5.98%
08/19/2011	10.25%	4.36%	5.89%
09/02/2011	12.88%	4.32%	8.56%
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10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
01/25/2012	10.50%	3.57%	6.93%
01/27/2012	10.50%	3.56%	6.94%
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02/27/2012	10.25%	3.43%	6.82%
02/29/2012	10.40%	3.41%	6.99%
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04/04/2012	10.00%	3.30%	6.70%
04/26/2012	10.00%	3.21%	6.79%
05/02/2012	10.00%	3.18%	6.82%
05/07/2012	9.80%	3.17%	6.63%
05/15/2012	10.00%	3.14%	6.86%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
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06/07/2012	10.30%	3.08%	7.22%
06/14/2012	9.40%	3.06%	6.34%
06/15/2012	10.40%	3.06%	7.34%
06/18/2012	9.60%	3.06%	6.54%
06/19/2012	9.25%	3.05%	6.20%
06/26/2012	10.10%	3.04%	7.06%
06/29/2012	10.00%	3.04%	6.96%
07/09/2012	10.20%	3.03%	7.17%
07/16/2012	9.80%	3.02%	6.78%
07/20/2012	9.31%	3.01%	6.30%
07/20/2012	9.81%	3.01%	6.80%
09/13/2012	9.80%	2.94%	6.86%
09/19/2012	9.80%	2.94%	6.86%
09/19/2012	10.05%	2.94%	7.11%
09/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/09/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.90%	6.85%
11/29/2012	9.88%	2.90%	6.98%
12/05/2012	9.71%	2.89%	6.82%
12/05/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.88%	6.83%
12/19/2012	10.25%	2.88%	7.37%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
01/09/2013	9.70%	2.85%	6.85%
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02/27/2013	10.00%	2.86%	7.14%
03/14/2013	9.30%	2.88%	6.42%
03/27/2013	9.80%	2.90%	6.90%
05/01/2013	9.84%	2.94%	6.90%
05/15/2013	10.30%	2.96%	7.34%
05/30/2013	10.20%	2.98%	7.22%
05/31/2013	9.00%	2.98%	6.02%
06/11/2013	10.00%	3.00%	7.00%
06/21/2013	9.75%	3.02%	6.73%
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08/08/2013	9.83%	3.14%	6.69%
08/14/2013	9.15%	3.16%	5.99%
09/11/2013	10.20%	3.26%	6.94%
09/11/2013	10.25%	3.26%	6.99%
09/24/2013	10.20%	3.31%	6.89%
10/03/2013	9.65%	3.33%	6.32%
11/06/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/03/2013	10.25%	3.47%	6.78%
12/04/2013	9.50%	3.47%	6.03%
12/05/2013	10.20%	3.48%	6.72%
12/09/2013	8.72%	3.48%	5.24%
12/09/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%

Bond Yield Plus Risk Premium
Comparison of Results: Treasury Yields as of July 13, 2012 and November 14, 2014

[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
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12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
02/20/2014	9.20%	3.68%	5.52%
02/26/2014	9.75%	3.69%	6.06%
03/17/2014	9.55%	3.72%	5.83%
03/26/2014	9.40%	3.73%	5.67%
03/26/2014	9.96%	3.73%	6.23%
04/02/2014	9.70%	3.73%	5.97%
05/16/2014	9.80%	3.70%	6.10%
05/30/2014	9.70%	3.68%	6.02%
06/06/2014	10.40%	3.67%	6.73%
06/30/2014	9.55%	3.64%	5.91%
07/02/2014	9.62%	3.64%	5.98%
07/10/2014	9.95%	3.63%	6.32%
07/23/2014	9.75%	3.61%	6.14%
07/29/2014	9.45%	3.60%	5.85%
07/31/2014	9.90%	3.60%	6.30%
08/20/2014	9.75%	3.57%	6.18%
08/25/2014	9.60%	3.56%	6.04%
08/29/2014	9.80%	3.54%	6.26%
09/15/2014	10.25%	3.51%	6.74%
10/09/2014	9.80%	3.45%	6.35%
11/06/2014	9.56%	3.37%	6.19%
11/06/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
	Number of Rate Cases:		1,433
		Average:	4.45%

SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014

ANNUAL AVERAGE OVER THE NEXT 10 YEARS: 2014-2023

STOCK RETURNS (S&P 500)		BOND RETURNS (10-YEAR)		BILL RETURNS (3-MONTH)	
MINIMUM	2.70	MINIMUM	2.70	MINIMUM	0.10
LOWER QUARTILE	5.00	LOWER QUARTILE	4.00	LOWER QUARTILE	1.92
MEDIAN	6.00	MEDIAN	4.35	MEDIAN	2.50
UPPER QUARTILE	7.20	UPPER QUARTILE	4.70	UPPER QUARTILE	2.88
MAXIMUM	12.00	MAXIMUM	5.30	MAXIMUM	4.20
MEAN	6.43	MEAN	4.25	MEAN	2.37
STD. DEVIATION	2.07	STD. DEVIATION	0.64	STD. DEVIATION	0.85
N	27.00	N	33.00	N	32.00
MISSING	18.00	MISSING	12.00	MISSING	13.00
CoV	0.32	CoV	0.15	CoV	0.36
UPPER BOUND	10.57	UPPER BOUNI	5.53	UPPER BOUND	4.07
LOWER BOUND	2.29	LOWER BOUNI	2.97	LOWER BOUND	0.67

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA; SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014

MPG-R-3.1 - Ameren Missouri Replicated
Equity Risk Premium - Treasury Bond

Line	Year	Authorized Electric Returns[1] (1)	Treasury Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5-Year Average Treasury	Rolling 5-Year Average Risk Premium	Slope	Rolling 10-Year Average Treasury	Rolling 10-Year Average Risk Premium	Slope
1	1986	13.93%	7.80%	6.13%						
2	1987	12.99%	8.58%	4.41%						
3	1988	12.79%	8.96%	3.83%						
4	1989	12.97%	8.45%	4.52%						
5	1990	12.70%	8.61%	4.09%	8.48%	4.60%	-45.40%			-47.76%
6	1991	12.55%	8.14%	4.41%	8.55%	4.25%				
7	1992	12.09%	7.67%	4.42%	8.36%	4.26%				
8	1993	11.41%	6.60%	4.81%	7.89%	4.45%				
9	1994	11.34%	7.37%	3.97%	7.68%	4.34%				
10	1995	11.55%	6.88%	4.67%	7.33%	4.46%		7.91%	4.53%	
11	1996	11.38%	6.70%	4.68%	7.04%	4.51%		7.80%	4.38%	
12	1997	11.40%	6.61%	4.79%	6.83%	4.59%		7.60%	4.42%	
13	1998	11.66%	5.58%	6.08%	6.63%	4.84%		7.26%	4.65%	
14	1999	10.77%	5.87%	4.90%	6.33%	5.03%		7.00%	4.68%	
15	2000	11.43%	5.94%	5.49%	6.14%	5.19%		6.73%	4.82%	
16	2001	11.09%	5.49%	5.60%	5.90%	5.37%		6.47%	4.94%	
17	2002	11.16%	5.43%	5.73%	5.66%	5.56%		6.25%	5.07%	
18	2003	10.97%	4.96%	6.01%	5.54%	5.55%		6.08%	5.19%	
19	2004	10.75%	5.05%	5.70%	5.37%	5.71%		5.85%	5.37%	
20	2005	10.54%	4.65%	5.89%	5.11%	5.79%		5.63%	5.49%	
21	2006	10.36%	4.99%	5.37%	5.01%	5.74%		5.45%	5.56%	
22	2007	10.36%	4.83%	5.53%	4.90%	5.70%		5.28%	5.63%	
23	2008	10.46%	4.28%	6.18%	4.76%	5.73%		5.15%	5.64%	
24	2009	10.48%	4.07%	6.41%	4.56%	5.88%		4.97%	5.79%	
25	2010	10.24%	4.25%	5.99%	4.49%	5.89%		4.80%	5.84%	
26	2011	10.07%	3.91%	6.16%	4.27%	6.05%		4.64%	5.90%	
27	2012	10.01%	2.92%	7.09%	3.89%	6.37%		4.39%	6.03%	
28	2013	9.79%	3.45%	6.34%	3.72%	6.40%		4.24%	6.07%	
29	2014[3]	9.74%	3.46%	6.28%	3.60%	6.37%		4.08%	6.12%	
					3.44%			4.02%	6.15%	
30	Average	11.28%	5.91%	5.36%	3.94%	5.30%		4.12%	5.31%	
31	Minimum				4.27%	4.25%		4.03%	4.38%	
32	Maximum					6.40%			6.12%	

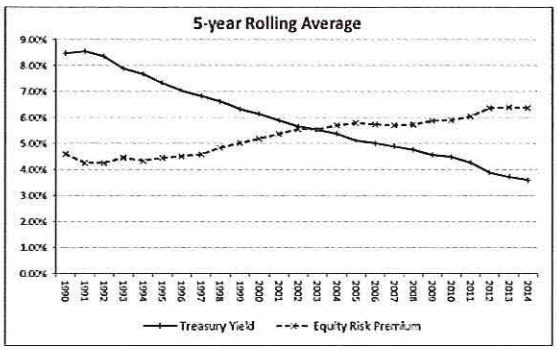
Sources: MPG-R-3.1

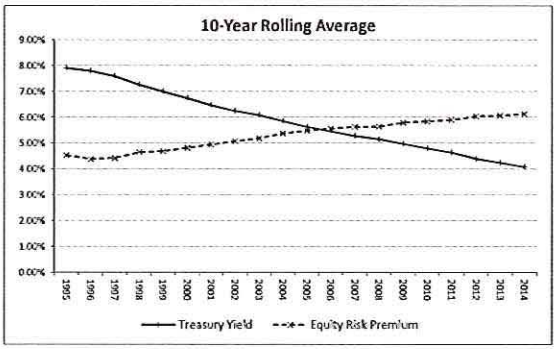
[1] Regulatory Research Associates, Inc., Regulatory Focus, Jan. 1985 - Dec. 1996, and October 10, 2014, excluding the Virginia cases, which are subject to an adjustment for certain generation assets up to 200 basis points.

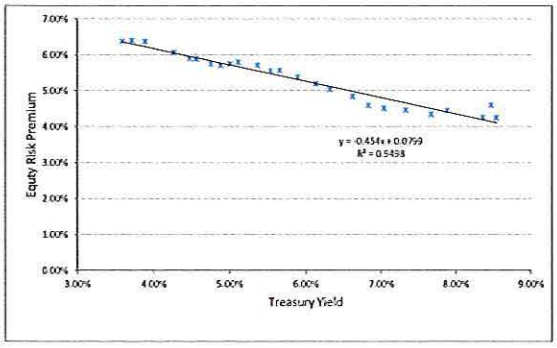
[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

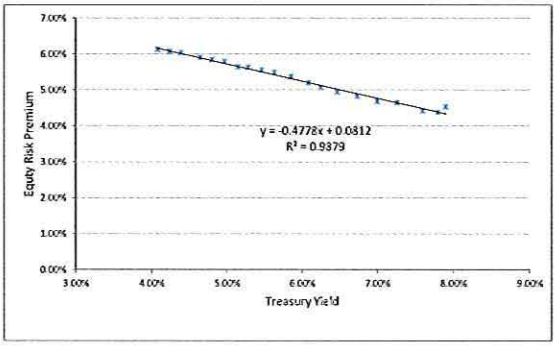
[3] The data includes the period Jan - Sep 2014.

MPG-R-3.1 - Ameren Missouri Replicated
Equity Risk Premium - Treasury Bond









EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

						CORRELATION TO VIX			
						78.3%	82.85%	43.7%	
	ROE [1]	"A" UTILITY BOND YIELD [2]	"Baa" UTILITY BOND YIELD [2]	TREASURY YIELD [2]	RISK PREMIUM	A-TREAS. CREDIT SPRD	Baa-TREAS. CREDIT SPRD	A-Baa CREDIT SPRD	VIX
1990	12.70%	9.86%	10.06%	8.61%	4.09%	1.25%	1.45%	0.20%	23.18
1991	12.55%	9.36%	9.55%	8.14%	4.41%	1.22%	1.41%	0.19%	17.77
1992	12.09%	8.69%	8.86%	7.67%	4.42%	1.02%	1.19%	0.17%	14.65
1993	11.41%	7.59%	7.91%	6.60%	4.81%	0.99%	1.31%	0.32%	12.39
1994	11.34%	8.31%	8.63%	7.37%	3.97%	0.94%	1.26%	0.32%	14.07
1995	11.55%	7.89%	8.29%	6.85%	4.67%	1.01%	1.41%	0.40%	12.40
1996	11.39%	7.75%	8.17%	6.70%	4.69%	1.05%	1.47%	0.42%	16.97
1997	11.40%	7.60%	7.95%	6.61%	4.79%	0.99%	1.34%	0.35%	23.26
1998	11.66%	7.04%	7.26%	5.58%	6.08%	1.46%	1.68%	0.22%	26.25
1999	10.77%	7.62%	7.88%	5.87%	4.90%	1.75%	2.01%	0.26%	24.54
2000	11.43%	8.24%	8.36%	5.94%	5.49%	2.30%	2.42%	0.11%	23.34
2001	11.09%	7.76%	8.03%	5.49%	5.60%	2.27%	2.54%	0.27%	25.49
2002	11.16%	7.37%	8.02%	5.43%	5.73%	1.94%	2.59%	0.65%	26.58
2003	10.97%	6.55%	6.84%	4.96%	6.01%	1.62%	1.89%	0.26%	21.81
2004	10.75%	6.16%	6.40%	5.05%	5.70%	1.11%	1.35%	0.23%	15.14
2005	10.54%	5.65%	5.93%	4.65%	5.89%	1.00%	1.28%	0.28%	12.93
2006	10.36%	6.07%	6.32%	4.99%	5.37%	1.08%	1.32%	0.25%	12.55
2007	10.36%	6.07%	6.33%	4.83%	5.53%	1.24%	1.50%	0.26%	17.73
2008	10.46%	6.53%	7.25%	4.26%	6.18%	2.25%	2.97%	0.72%	31.59
2009	10.48%	6.04%	7.06%	4.07%	6.41%	1.97%	2.99%	1.02%	31.79
2010	10.24%	5.46%	5.96%	4.25%	5.99%	1.21%	1.71%	0.50%	23.84
2011	10.07%	5.04%	5.56%	3.91%	6.16%	1.13%	1.65%	0.52%	23.61
2012	10.01%	4.13%	4.83%	2.92%	7.09%	1.21%	1.91%	0.70%	18.02
2013	9.79%	4.48%	4.98%	3.45%	6.34%	1.03%	1.53%	0.51%	14.79
2014	9.74%	4.36%	4.83%	3.46%	6.28%	0.90%	1.37%	0.47%	14.55

[1] Source: Schedule MPG-R-3
[2] Source: Schedule MPG-13

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD
1990	4.09%	8.61%
1991	4.41%	8.14%
1992	4.42%	7.67%
1993	4.81%	6.60%
1994	3.97%	7.37%
1995	4.67%	6.68%
1996	4.69%	6.70%
1997	4.79%	6.61%
1998	6.08%	5.58%
1999	4.90%	5.87%
2000	5.49%	5.94%
2001	5.60%	5.49%
2002	5.73%	5.43%
2003	6.01%	4.96%
2004	5.70%	5.05%
2005	5.89%	4.65%
2006	5.37%	4.99%
2007	5.53%	4.83%
2008	6.18%	4.28%
2009	6.41%	4.07%
2010	5.99%	4.25%
2011	6.16%	3.91%
2012	7.09%	2.92%
2013	6.34%	3.45%
2014	6.28%	3.46%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	94.47%
R Square	89.25%
Adjusted R Sqs	88.78%
Standard Error	0.27%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.001427348	0.001427348	190.8576925	1.26593E-12
Residual	23	0.000172008	7.4786E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	8.26%	0.002984719	39.42259574	1.26955E-22	0.078246015	0.056912529
TREASURY YIELD	-50.72%	0.036711454	-13.8151255	1.26593E-12	-0.583116772	-0.431229915

TREASURY YIELD	4.10%
ROE	10.28%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	A-TREAS. CREDIT SPRD	VIX
1990	4.09%	8.61%	1.25%	23.18
1991	4.41%	8.14%	1.22%	17.77
1992	4.42%	7.67%	1.02%	14.65
1993	4.81%	6.60%	0.99%	12.39
1994	3.97%	7.37%	0.84%	14.07
1995	4.67%	6.88%	1.01%	12.40
1996	4.69%	6.70%	1.05%	16.97
1997	4.79%	6.61%	0.99%	23.26
1998	6.03%	5.53%	1.46%	26.25
1999	4.90%	5.87%	1.75%	24.54
2000	5.49%	5.94%	2.30%	23.34
2001	5.60%	5.49%	2.27%	25.49
2002	5.73%	5.43%	1.94%	26.58
2003	6.01%	4.96%	1.62%	21.81
2004	5.70%	5.05%	1.11%	15.14
2005	5.89%	4.65%	1.00%	12.93
2006	5.37%	4.99%	1.08%	12.55
2007	5.53%	4.83%	1.24%	17.73
2008	6.18%	4.25%	2.25%	31.59
2009	6.41%	4.07%	1.97%	31.79
2010	5.99%	4.25%	1.21%	23.84
2011	6.16%	3.91%	1.13%	23.61
2012	7.09%	2.92%	1.21%	18.02
2013	6.34%	3.45%	1.03%	14.79
2014	6.28%	3.46%	0.90%	14.55

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.84%
R Square	91.85%
Adjusted R Sqr.	90.68%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	0.001468943	0.000489648	78.84670438	1.35118E-11
Residual	21	0.000130413	6.21012E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.73%	0.00280925	27.50377901	5.91845E-18	0.071422833	0.083107143
TREASURY YIELD	-49.27%	0.033934191	-14.52037299	2.0101E-12	-0.563307123	-0.422167097
A-TREAS. CREDIT SPRD	11.15%	0.179704277	0.620463241	0.541628545	-0.262215605	0.485215401
VIX	0.02%	0.000137351	1.095242677	0.285813164	-0.000135234	0.000436166

TREASURY YIELD	4.10%
A-TREAS. CREDIT SPRD	1.36%
VIX	19.97
ROE	10.26%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	Baa-TREAS. CREDIT SPRD	VIX
1990	4.09%	8.61%	1.45%	23.18
1991	4.41%	8.14%	1.41%	17.77
1992	4.42%	7.67%	1.19%	14.65
1993	4.81%	6.60%	1.31%	12.39
1994	3.97%	7.37%	1.26%	14.07
1995	4.67%	6.85%	1.41%	12.49
1996	4.69%	6.70%	1.47%	16.97
1997	4.79%	6.61%	1.34%	23.26
1998	6.08%	5.58%	1.68%	26.25
1999	4.90%	5.87%	2.01%	24.54
2000	5.49%	5.94%	2.42%	23.34
2001	5.60%	5.49%	2.54%	25.49
2002	5.73%	5.43%	2.59%	26.58
2003	6.01%	4.96%	1.89%	21.81
2004	5.70%	5.05%	1.35%	15.14
2005	5.89%	4.65%	1.28%	12.93
2006	5.37%	4.99%	1.32%	12.55
2007	5.53%	4.83%	1.50%	17.73
2008	6.18%	4.26%	2.97%	31.59
2009	6.41%	4.07%	2.99%	31.79
2010	5.99%	4.25%	1.71%	23.84
2011	6.16%	3.91%	1.65%	23.61
2012	7.09%	2.92%	1.91%	18.02
2013	6.34%	3.45%	1.53%	14.79
2014	6.28%	3.46%	1.37%	14.55

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.77%
R Square	91.72%
Adjusted R Sqr	90.54%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	0.001467005	0.000489002	77.58934173	1.57666E-11
Residual	21	0.000132351	6.30243E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.71%	0.003090543	24.95332773	4.31101E-17	0.070692199	0.083548471
TREASURY YIELD	-48.93%	0.036654982	-13.34995186	9.95244E-12	-0.565570458	-0.41311404
Baa-TREAS. CREDIT SPRD	4.85%	0.181239351	0.267875692	0.791408536	-0.328358247	0.42545748
VIX	0.02%	0.000156649	1.161111612	0.258625367	-0.000143882	0.000507655

TREASURY YIELD	4.10%
Baa-TREAS. CREDIT SPRD	1.74%
VIX	19.97
ROE	10.25%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	A-Baa CREDIT SPRD	VIX
1990	4.09%	8.61%	0.20%	23.18
1991	4.41%	8.14%	0.19%	17.77
1992	4.42%	7.67%	0.17%	14.65
1993	4.81%	6.60%	0.32%	12.39
1994	3.97%	7.37%	0.32%	14.07
1995	4.57%	6.88%	0.40%	12.40
1996	4.69%	6.70%	0.42%	16.97
1997	4.79%	6.61%	0.35%	23.26
1998	6.08%	5.58%	0.22%	26.25
1999	4.50%	5.87%	0.26%	24.54
2000	5.49%	5.94%	0.11%	23.34
2001	5.80%	5.49%	0.27%	25.49
2002	5.73%	5.43%	0.65%	26.58
2003	6.01%	4.96%	0.26%	21.81
2004	5.70%	5.05%	0.23%	15.14
2005	5.89%	4.65%	0.28%	12.93
2006	5.37%	4.99%	0.25%	12.55
2007	5.53%	4.83%	0.26%	17.73
2008	6.18%	4.28%	0.72%	31.59
2009	6.41%	4.07%	1.02%	31.79
2010	5.99%	4.25%	0.50%	23.84
2011	6.16%	3.91%	0.52%	23.61
2012	7.09%	2.92%	0.70%	18.02
2013	6.34%	3.45%	0.51%	14.79
2014	6.28%	3.46%	0.47%	14.55

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.84%
R Square	91.85%
Adjusted R Sq.	90.69%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	0.001469027	0.000489676	78.90176928	1.34215E-11
Residual	21	0.000130329	6.20614E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.85%	0.003274293	23.98831068	9.60766E-17	0.071735606	0.085354158
TREASURY YIELD	-50.75%	0.041072117	-12.35648213	4.23587E-11	-0.592921016	-0.422092732
A-Baa CREDIT SPRD	-20.40%	0.323150472	-0.63142035	0.534579059	-0.876071981	0.467984412
VIX	0.02%	9.51311E-05	2.545212109	0.018838609	4.42929E-05	0.000435965

TREASURY YIELD	4.10%
A-Baa CREDIT SPRD	0.38%
VIX	19.97
ROE	10.28%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	A-TREAS. CREDIT SPRD
1990	4.09%	8.61%	1.25%
1991	4.41%	8.14%	1.22%
1992	4.42%	7.67%	1.02%
1993	4.81%	6.60%	0.69%
1994	3.97%	7.37%	0.94%
1995	4.67%	6.88%	1.01%
1996	4.69%	6.70%	1.05%
1997	4.79%	6.61%	0.99%
1998	6.03%	5.58%	1.46%
1999	4.90%	5.87%	1.75%
2000	5.49%	5.94%	2.30%
2001	5.60%	5.49%	2.27%
2002	5.73%	5.43%	1.94%
2003	6.01%	4.96%	1.62%
2004	5.70%	5.05%	1.11%
2005	5.69%	4.65%	1.00%
2006	5.37%	4.99%	1.03%
2007	5.53%	4.83%	1.24%
2008	6.18%	4.28%	2.25%
2009	6.41%	4.07%	1.97%
2010	5.99%	4.25%	1.21%
2011	6.16%	3.91%	1.13%
2012	7.09%	2.92%	1.21%
2013	6.34%	3.45%	1.03%
2014	6.28%	3.46%	0.90%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.59%
R Square	91.38%
Adjusted R Sq.	90.60%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.001461494	0.000730747	116.6125152	1.85206E-12
Residual	22	0.000137862	6.26645E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.84%	0.002625193	29.86209445	2.68051E-19	0.072949453	0.083838094
TREASURY YIELD	-49.64%	0.033917748	-14.63671177	8.03671E-13	-0.56678541	-0.426103201
A-TREAS. CREDIT SPRD	26.47%	0.113377179	2.334365213	0.029111918	0.029527062	0.49978682

TREASURY YIELD	4.10%
A-TREAS. CREDIT SPRD	1.35%
ROE	10.26%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	Baa-TREAS. CREDIT SPRD
1990	4.09%	8.61%	1.45%
1991	4.41%	8.14%	1.41%
1992	4.42%	7.67%	1.19%
1993	4.81%	6.60%	1.31%
1994	3.97%	7.37%	1.26%
1995	4.67%	6.85%	1.41%
1996	4.69%	6.70%	1.47%
1997	4.79%	6.61%	1.34%
1998	6.03%	5.53%	1.68%
1999	4.90%	5.87%	2.01%
2000	5.49%	5.94%	2.42%
2001	5.60%	5.49%	2.54%
2002	5.73%	5.43%	2.59%
2003	6.01%	4.96%	1.89%
2004	5.70%	5.05%	1.35%
2005	5.89%	4.65%	1.28%
2006	5.37%	4.99%	1.32%
2007	5.53%	4.83%	1.50%
2008	6.18%	4.28%	2.97%
2009	6.41%	4.07%	2.99%
2010	5.99%	4.25%	1.71%
2011	6.15%	3.91%	1.65%
2012	7.09%	2.92%	1.91%
2013	6.34%	3.45%	1.53%
2014	6.28%	3.46%	1.37%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.50%
R Square	91.19%
Adjusted R Sq.	90.39%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.001458503	0.000729254	113.9071851	2.47092E-12
Residual	22	0.000140848	6.40218E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.72%	0.003114079	24.79124517	1.43502E-17	0.070743655	0.083660093
TREASURY YIELD	-48.03%	0.036091929	-13.30643021	5.33094E-12	-0.55510482	-0.40540466
Baa-TREAS. CREDIT SPRD	22.36%	0.101361526	2.206144669	0.038117033	0.013407251	0.433829131

TREASURY YIELD	4.10%
Baa-TREAS. CREDIT SPRD	1.74%
ROE	10.24%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	A-Baa CREDIT SPRD
1990	4.09%	8.61%	0.20%
1991	4.41%	8.14%	0.19%
1992	4.42%	7.67%	0.17%
1993	4.81%	6.60%	0.32%
1994	3.97%	7.37%	0.32%
1995	4.67%	6.85%	0.40%
1996	4.69%	6.70%	0.42%
1997	4.79%	6.61%	0.35%
1998	6.08%	5.58%	0.22%
1999	4.90%	5.87%	0.26%
2000	5.48%	5.94%	0.11%
2001	5.60%	5.49%	0.27%
2002	5.73%	5.43%	0.65%
2003	6.01%	4.96%	0.26%
2004	5.70%	5.05%	0.23%
2005	5.89%	4.65%	0.28%
2006	5.37%	4.99%	0.25%
2007	5.53%	4.83%	0.26%
2008	6.18%	4.28%	0.72%
2009	6.41%	4.07%	1.02%
2010	5.99%	4.25%	0.50%
2011	6.16%	3.91%	0.52%
2012	7.09%	2.92%	0.70%
2013	6.34%	3.45%	0.51%
2014	6.28%	3.46%	0.47%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	94.52%
R Square	89.34%
Adjusted R Sqr	88.37%
Standard Error	0.28%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.001428823	0.000714411	92.16426184	2.02534E-11
Residual	22	0.000170533	7.7515E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	8.14%	0.003437318	23.68225543	3.79292E-17	0.074274874	0.088531994
TREASURY YIELD	-49.58%	0.04561151	-10.86940491	2.59356E-10	-0.590362456	-0.401177491
A-Baa CREDIT SPRD	14.25%	0.327460269	0.43517863	0.666957516	-0.536279895	0.821942255

TREASURY YIELD	4.10%
A-Baa CREDIT SPRD	0.38%
ROE	10.26%

EQUITY RISK PREMIUM AND INTEREST RATE REGRESSION ANALYSIS

	RISK PREMIUM	TREASURY YIELD	VIX
1990	4.09%	8.61%	23.18
1991	4.41%	8.14%	17.77
1992	4.42%	7.67%	14.65
1993	4.81%	6.60%	12.39
1994	3.97%	7.37%	14.07
1995	4.67%	6.88%	12.40
1996	4.69%	6.70%	16.97
1997	4.79%	6.61%	23.26
1998	6.08%	5.55%	26.25
1999	4.90%	5.87%	24.54
2000	5.49%	5.94%	23.34
2001	5.60%	5.49%	25.49
2002	5.73%	5.43%	26.58
2003	6.01%	4.96%	21.81
2004	5.70%	5.05%	15.14
2005	5.89%	4.65%	12.93
2006	5.37%	4.99%	12.55
2007	5.53%	4.83%	17.73
2008	6.18%	4.28%	31.59
2009	6.41%	4.07%	31.79
2010	5.99%	4.25%	23.84
2011	6.15%	3.91%	23.61
2012	7.09%	2.92%	18.02
2013	6.34%	3.45%	14.79
2014	6.28%	3.46%	14.55

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.76%
R Square	91.70%
Adjusted R Sq.	90.94%
Standard Error	0.25%
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.001466552	0.000733276	121.4734442	1.29391E-12
Residual	22	0.000132803	6.03651E-06		
Total	24	0.001599356			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.75%	0.00275178	28.15012968	9.517E-19	0.071756125	0.08316981
TREASURY YIELD	-49.29%	0.033455666	-14.73250924	7.05147E-13	-0.562268717	-0.423503107
VIX	0.02%	8.50701E-05	2.548440447	0.018315725	4.03715E-05	0.00039322

TREASURY YIELD	4.10%
VIX	19.97
ROE	10.26%

EQUITY RISK PREMIUM AND EXPECTED INFLATION REGRESSION ANALYSIS

	Expected Inflation [1]			Treasury Bond Risk Premium		
	5-year TIPS	7-year TIPS	10-year TIPS	Avg ROE [2]	Yield [3]	Premium
2003	1.70	1.79	1.95	10.97%	4.96%	6.01%
2004	2.39	2.42	2.44	10.75%	5.05%	5.70%
2005	2.55	2.52	2.48	10.54%	4.65%	5.89%
2006	2.47	2.47	2.49	10.36%	4.99%	5.37%
2007	2.28	2.26	2.34	10.36%	4.83%	5.53%
2008	1.50	1.54	1.89	10.46%	4.28%	6.18%
2009	1.14	1.50	1.60	10.48%	4.07%	6.41%
2010	1.67	1.94	2.07	10.24%	4.25%	5.99%
2011	1.93	2.07	2.23	10.07%	3.91%	6.16%
2012	1.95	2.09	2.28	10.01%	2.92%	7.09%
2013	1.93	2.03	2.28	9.79%	3.45%	6.34%
2014	1.73	1.82	2.10	9.74%	3.46%	6.28%

REGRESSION DATA

	Premium	Yield [3]	5-year TIPS	7-year TIPS	10-year TIPS
2003	6.01%	4.96%	1.70	1.79	1.95
2004	5.70%	5.05%	2.39	2.42	2.44
2005	5.89%	4.65%	2.55	2.52	2.48
2006	5.37%	4.99%	2.47	2.47	2.49
2007	5.53%	4.83%	2.28	2.26	2.34
2008	6.18%	4.28%	1.50	1.54	1.89
2009	6.41%	4.07%	1.14	1.50	1.60
2010	5.99%	4.25%	1.67	1.94	2.07
2011	6.16%	3.91%	1.93	2.07	2.23
2012	7.09%	2.92%	1.95	2.09	2.28
2013	6.34%	3.45%	1.93	2.03	2.28
2014	6.28%	3.46%	1.73	1.82	2.10

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.925487465
R Square	0.856527048
Adjusted R Sqı	0.774542505
Standard Error	0.002150055
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	0.000193183	4.82957E-05	10.44742104	0.004472198
Residual	7	3.23592E-05	4.62274E-06		
Total	11	0.000225542			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.112684355	0.020471017	5.504580177	0.000902152	0.064278092	0.161090619	0.064278092	0.161090619
Treasury Yield	-0.695322585	0.171425752	-4.056115113	0.004833274	-1.100680076	-0.289965094	-1.100680076	-0.289965094
5-year TIPS	0.01008653	0.012277504	0.821545638	0.438417146	-0.018945154	0.039118213	-0.018945154	0.039118213
7-year TIPS	0.002404999	0.009176647	0.262078217	0.800805999	-0.019294323	0.024104322	-0.019294323	0.024104322
10-year TIPS	-0.02151281	0.016014974	-1.343293474	0.221092445	-0.059382205	0.016356585	-0.059382205	0.016356585

[1] Source: Federal Reserve Board of Governors H.15 Selected Interest Rates
[2] Source: MPG-R-3.2
[3] Source: MPG-R-3.1

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service.	)))	**File No. ER-2014-0258**

AFFIDAVIT OF ROBERT B. HEVERT

COMMONWEALTH OF MASSACHUSETTS)
) **ss**
COUNTY OF MIDDLESEX)

Robert B. Hevert, being first duly sworn on his oath, states:

1. My name is Robert B. Hevert and my office is located in Framingham, Massachusetts and I am Managing Partner of Sussex Economic Advisors, LLC.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 47 pages and Schedule(s) RBH-S29 through 34, 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.

Robert B. Hevert

Subscribed and sworn to before me this 4th day of February, 2015.

Notary Public

My commission expires:

KIMBERLY H. DAO
Notary Public
Commonwealth of Massachusetts
My Commission Expires
April 16, 2015