

Exhibit No.:
Issue: Revenue Requirement
Witness: Michael P. Gorman
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: Missouri Industrial Energy Consumers
Case No.: ER-2014-0258
Date Testimony Prepared: January 16, 2015

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company,
d/b/a Ameren Missouri's Tariff to Increase
Its Revenues for Electric Service

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) **Case No. ER-2014-0258**
)
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Rebuttal Testimony and Schedules of

Michael P. Gorman

Regarding Revenue Requirement Issues

On behalf of

Missouri Industrial Energy Consumers

January 16, 2015



Project 9913

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company,
d/b/a Ameren Missouri's Tariff to Increase
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STATE OF MISSOURI)
)
COUNTY OF ST. LOUIS) **SS**

Affidavit of Michael P. Gorman

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Missouri Industrial Energy Consumers in this proceeding on its behalf.

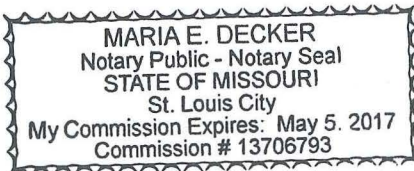
2. Attached hereto and made a part hereof for all purposes are my rebuttal testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2014-0258.

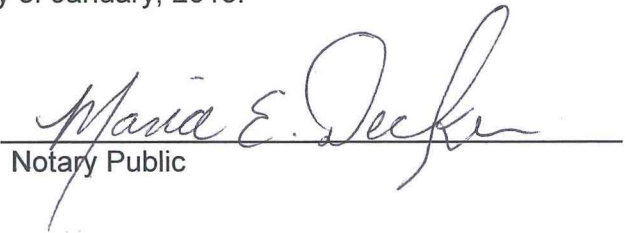
3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.



Michael P. Gorman

Subscribed and sworn to before me this 15th day of January, 2015.





Notary Public

**BEFORE THE PUBLIC SERVICE COMMISSION
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**In the Matter of Union Electric Company,
d/b/a Ameren Missouri's Tariff to Increase
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Case No. ER-2014-0258

Rebuttal Testimony of Michael P. Gorman

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,
3 Chesterfield, MO 63017.

4 **Q WHAT IS YOUR OCCUPATION?**

5 A I am a consultant in the field of public utility regulation and Managing Principal of
6 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

7 **Q ARE YOU THE SAME MICHAEL P. GORMAN WHO PREVIOUSLY FILED
8 TESTIMONY IN THIS PROCEEDING?**

9 A Yes. On December 5, 2014, I filed Direct Testimony on behalf of Missouri Industrial
10 Energy Consumers ("MIEC").

11 **Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

12 A My rebuttal testimony will respond to Ameren Missouri witness Mr. Robert Hevert's
13 proposed return on equity of 10.40% and explain why Mr. Hevert's recommended
14 return on equity is excessive and should be rejected.

**Michael P. Gorman
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1 **I. Response to Ameren Missouri Witness Mr. Robert Hevert**

2 **Q WHAT RETURN ON COMMON EQUITY IS AMEREN MISSOURI PROPOSING FOR**
3 **THIS PROCEEDING?**

4 A Mr. Hevert recommends a return on equity for Ameren Missouri of 10.40%,¹ which is
5 at the midpoint of his recommended range of 10.20% to 10.60%. Mr. Hevert relies on
6 constant growth and multi-stage Discounted Cash Flow (“DCF”) analyses, Capital
7 Asset Pricing Model (“CAPM”) studies, and a Bond Yield Plus Risk Premium
8 approach to support his recommended return.

9 **Q ARE MR. HEVERT’S RETURN ON EQUITY ESTIMATES REASONABLE?**

10 A No. Mr. Hevert’s estimated return on equity of 10.40% is overstated and should be
11 rejected. Mr. Hevert’s analyses produce excessive results for various reasons,
12 including the following: (1) his constant growth DCF results are based on excessive,
13 unsustainable growth rates; (2) his multi-stage DCF is based on an unrealistic Gross
14 Domestic Product (“GDP”) growth estimate and unreasonable payout ratio
15 assumptions; (3) his CAPM is based on inflated market risk premiums; and (3) his
16 Bond Yield Plus Risk Premium is based on inflated utility equity risk premiums.

17 **Q PLEASE SUMMARIZE MR. HEVERT’S RETURN ON EQUITY ESTIMATES.**

18 A Mr. Hevert’s return on equity estimates are summarized in Table 1 below. In
19 Column 2, I show the results with reasonable corrections to his common equity return
20 estimates. With the corrections, Mr. Hevert’s own studies show my recommended
21 return on equity for Ameren Missouri of 9.3% is reasonable.

¹Direct Testimony of Robert Hevert at 2.

TABLE 1

Hevert's Return on Equity Estimates
(Excluding Flotation Cost Adder)

Description	Electric Mean ¹ (1)	Adjusted Electric (2)
<u>Constant Growth DCF</u>		
30-Day Average Stock Price	9.56%	9.00%
90-Day Average Stock Price	9.62%	9.06%
180-Day Average Stock Price	9.73%	9.17%
<u>Multi-Stage DCF</u>		
30-Day Average Stock Price	9.93%	8.70%
90-Day Average Stock Price	10.00%	8.77%
180-Day Average Stock Price	10.13%	8.90%
DCF Range	9.60% - 10.10%	8.80% - 9.20% 9.00%
<u>CAPM Results (Bloomberg Beta)</u>		
Current 30-Year Treasury (<i>Value Line</i> – 3.42%)	10.69%	8.87%
Current 30-Year Treasury (Bloomberg DCF – 3.42%)	11.27%	8.87%
Near-Term Projected 30-Year Treasury (<i>Value Line</i> – 4.07%)	11.34%	9.52%
Near-Term Projected 30-Year Treasury (Bloomberg DCF – 4.07%)	<u>11.92%</u>	<u>9.52%</u>
Average	11.31%	9.20%
<u>CAPM Results (Value Line Beta)</u>		
Current 30-Year Treasury (<i>Value Line</i> – 3.42%)	10.59%	8.80%
Current 30-Year Treasury (Bloomberg DCF – 3.42%)	11.17%	8.80%
Near-Term Projected 30-Year Treasury (<i>Value Line</i> – 4.07%)	11.24%	9.45%
Near-Term Projected 30-Year Treasury (Bloomberg DCF – 4.07%)	<u>11.82%</u>	<u>9.45%</u>
Average	11.21%	9.12%
<u>Risk Premium</u>		
Current	10.16%	7.53%
Near-Term Projected	10.31%	8.43%
Long-Term Projected	<u>10.77%</u>	<u>Reject</u>
Average	10.41%	7.98%
Range	10.20%-10.60%	8.75%-9.24%
Recommended Return on Equity	10.40%	9.30%

Sources:

¹Direct Testimony of Robert Hevert at 42-43, and Schedules RBH-1 through RBH-6.

1 Q PLEASE DESCRIBE MR. HEVERT'S CONSTANT GROWTH DCF RETURN
2 ESTIMATES.

3 A His constant growth DCF returns are developed in his Schedule RBH-1, pages 1-3.

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1 Mr. Hevert's constant growth DCF models are based on consensus growth rates
2 published by Zacks and First Call, and individual growth rate projections made by
3 *Value Line*. He relied on dividend yield calculations based on average stock prices
4 over three different periods: 30-day, 90-day, and 180-day.

5 **Q ARE THE DCF RESULTS PRODUCED BY MR. HEVERT REASONABLE?**

6 A Most of his DCF return estimates are based on growth rates that are too high to be
7 reasonable estimates of long-term sustainable growth. Therefore, many of his
8 constant growth DCF analyses reflecting analysts' growth are not producing
9 reasonable DCF return estimates.

10 **Q WHAT ARE THE GROWTH RATES REFLECTING MR. HEVERT'S LOW, MEAN
11 AND HIGH DCF ESTIMATES FOR HIS 30-, 90- AND 180-DAY DCF RESULTS?**

12 A Growth rates for his high-end DCF estimate are much higher than that forecasted by
13 First Call, *Value Line* and Zacks. As shown on the attached Schedule MPG-R-1, the
14 growth rate reflecting his high-end DCF return on equity reflects a proxy group
15 average of 6.96%. In contrast, the proxy group averages for First Call, *Value Line*
16 and Zacks are 5.36%, 5.97% and 5.34%, respectively. Hence, Mr. Hevert's high-end
17 DCF return estimates simply are not reflective of any market participant's growth rate
18 outlooks, even over the next three to five years.

19 Further, Mr. Hevert's average proxy growth rate of 5.34% to 5.97% also
20 exceeds reasonable long-term sustainable growth rate estimates for his proxy
21 companies. Mr. Hevert's use of growth rate estimates that are too high to be
22 reasonable estimates of long-term sustainable growth, unreasonably increases his
23 DCF return estimates.

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1 Q WHY DO YOU BELIEVE THAT THE THREE- TO FIVE-YEAR GROWTH RATE
2 ESTIMATES IN MR. HEVERT'S MEAN AND HIGH GROWTH DCF ANALYSES
3 OVERSTATE REASONABLE ESTIMATES OF LONG-TERM SUSTAINABLE
4 GROWTH AS REQUIRED BY THE CONSTANT GROWTH DCF MODEL?

5 A The average of the mean and high proxy group growth rates used by Mr. Hevert in
6 his constant growth DCF are 5.67% and 6.96%, respectively. These proxy group
7 mean growth estimates are substantially higher than the consensus economists' long-
8 term growth outlooks of the U.S. economy. The GDP growth of the U.S. general
9 economy, which is a proxy for the growth rate of the economies in which these utilities
10 operate, is between 4.4% and 4.8% indefinitely.² It is simply not rational to expect
11 that these companies can grow considerably faster than the economies in which they
12 provide service over a long period of time.

13 Q CAN MR. HEVERT'S CONSTANT GROWTH DCF STUDIES PRODUCE
14 REASONABLE ESTIMATES OF A FAIR RETURN ON EQUITY FOR AMEREN
15 MISSOURI?

16 A Yes, if they are modified to reflect reasonable estimates of long-term sustainable
17 growth. With this correction, Mr. Hevert's DCF studies support a DCF return for
18 Ameren Missouri in the range of 8.51% to 9.64%, with a midpoint of approximately
19 9.10%. This range is based on Mr. Hevert's proxy group mean growth rate of 5.67%,
20 and low-end growth rate of 4.57%. These growth rates capture a range of long-term
21 sustainable growth that can be used to produce a DCF estimate.

22 As shown on my Schedule MPG-R-1, Mr. Hevert's Electric Proxy Group DCF
23 estimates based on the proxy group low and mean growth rates are 8.51% and

²Blue Chip Financial Forecasts, December 1, 2014 at 14.

1 9.64%, respectively. I believe this represents a reasonable range of the DCF range
2 of return on equity estimates for his Electric Proxy Group (8.51% to 9.64% with a
3 midpoint of approximately 9.08%).

4 Again, the DCF returns based on Mr. Hevert's high-end estimates reflect
5 growth rates that are far too high to be reasonable estimates of long-term sustainable
6 growth. However, the DCF returns based on his low-end estimates are based on
7 growth rates that are in line with the consensus economists' projection of GDP
8 growth. For the high growth rate DCF return estimates, I believe the DCF returns do
9 not reflect the central tendency of the results of the full proxy group estimates, and
10 therefore should be given no weight in determining a fair return on equity for Ameren
11 Missouri in this proceeding.

12 Based on this analysis, I believe Mr. Hevert's constant growth DCF studies
13 reasonably support a return on equity for Ameren Missouri in the range of 8.5% to
14 9.6%, with a midpoint of approximately 9.1%.

15 **Q DID MR. HEVERT PERFORM A MULTI-STAGE GROWTH DCF ANALYSIS?**

16 A Yes, he did; however, it is flawed for at least two reasons. First, Mr. Hevert relied on
17 a long-term GDP growth rate of 5.71% as a long-term sustainable growth. Mr.
18 Hevert's GDP growth rate is based on a nominal GDP growth rate that is considerably
19 higher than the market GDP growth outlooks as reflected in the consensus analysts'
20 projections. Second, he makes an inconsistent assumption on his long-term steady-
21 state growth rate, in combination with his long-term steady-state dividend payout
22 ratio. The assumptions underlying these two growth outlooks are contradictory and
23 produce an implausible transitional stage dividend growth rate outlook.

1 **Q HOW DID MR. HEVERT CALCULATE A NOMINAL GDP GROWTH RATE?**

2 A Mr. Hevert relied on the long-term historical real GDP return of 3.27%, as measured
3 over the period 1929 through 2013.³ He then adjusted this to a nominal GDP growth
4 by an inflation rate of 2.37%, which is the 30-day average projected inflation
5 measured as the difference, or the spread, between yields on long-term nominal
6 Treasuries and long-term Treasury Inflation Protected Securities (“TIPS”).⁴ Using an
7 inflation factor of 2.37% and a historical real GDP growth of 3.27%, Mr. Hevert
8 produced a nominal GDP growth rate outlook of 5.71%.

9 **Q WHY IS MR. HEVERT’S GDP GROWTH ESTIMATE EXCESSIVE IN COMPARISON**
10 **TO THAT OF PUBLISHED MARKET ANALYSTS?**

11 A Mr. Hevert’s nominal GDP growth rate is based on a historical real GDP growth rate
12 that is out of line with the consensus economists’ forward-looking real GDP growth
13 outlooks. I reached this conclusion by comparing Mr. Hevert’s nominal GDP growth
14 forecast based on the real and inflation outlooks, compared to the consensus
15 analysts’ projections published by *The Blue Chip Financial Forecasts*. As shown in
16 Table 2 below, Mr. Hevert’s nominal GDP growth rate of 5.7% is based on a real GDP
17 growth rate of 3.3%.

³Direct Testimony of Robert Hevert at 22.

⁴*Id.* at 22-23.

TABLE 2			
<u>GDP Projections</u>			
<u>Description</u>	<u>GDP Inflation</u>	<u>Real GDP</u>	<u>Nominal GDP</u>
Mr. Hevert ¹	2.4%	3.3%	5.71%
Consensus Economists (5-Year) ²	2.1%	2.6%	4.75%
Consensus Economists (10-Year) ²	2.1%	2.3%	4.45%
Sources:			
¹ Hevert Direct Testimony at 22.			
² <i>Blue Chip Financial Forecasts</i> , December 1, 2014 at 14.			

1 As shown in Table 2 above, Mr. Hevert’s real GDP growth rate is significantly
2 higher than independent consensus economists’ projections of a real GDP growth
3 rate outlook over the long term, which falls in the range of 2.3% to 2.6%. Because
4 Mr. Hevert’s use of a historical real GDP growth rate does not reflect independent
5 consensus economists’ outlook for future real GDP growth, his nominal GDP growth
6 rate used as his growth rate in his multi-stage DCF model overstates a reasonable
7 multi-growth DCF return for his proxy group.

8 **Q PLEASE EXPLAIN HOW MR. HEVERT’S MULTI-STAGE GROWTH DCF MODEL**
9 **OVERSTATED DIVIDEND CASH FLOWS BECAUSE OF HIS LONG-TERM**
10 **DIVIDEND PAYOUT RATIO ASSUMPTION.**

11 **A**Mr. Hevert’s multi-stage DCF model adjusts dividend growth by expected growth of
12 dividends, and changes in payout ratio. Because Mr. Hevert’s multi-stage model
13 reflects an expectation of increasing payout ratio, his dividend cash flow projections
14 reflect a faster growth rate than the proxy group earnings growth through 2024. For
15 example, his proxy group payout ratios in 2013 and 2017 are 61.13% and 60.33%,

1 respectively, at a 5.67% growth rate. Mr. Hevert assumes that the proxy group
2 payout ratio increases from 60.33% in 2017 to 67.05% by 2024 while the growth rate
3 converges towards GDP growth.

4 By adjusting the inputs to cause dividends to grow faster than earnings over
5 this time period, his cash flows increase which increases his DCF return estimate.

6 **Q IS IT REASONABLE FOR MR. HEVERT TO BELIEVE THAT THE DIVIDEND**
7 **PAYOUT RATIO WILL INCREASE OVER THE PERIOD 2013-2024 AS HE**
8 **REFLECTED IN HIS MULTI-STAGE DCF MODEL?**

9 A No. Based on the information used by Mr. Hevert, this assumption is not supported.
10 His long-term payout ratio is based on *Value Line's* three- to five-year projected
11 dividend payout ratio of the electric utility industry. However, his payout ratio for year
12 2017⁵ is also based on *Value Line's* three- to five-year projections for the payout
13 ratios of the companies included in his proxy group. There is simply no legitimate
14 basis for Mr. Hevert to assume that *Value Line's* three- to five-year projections for the
15 proxy group, should be superseded by *Value Line's* three- to five-year payout
16 projections for the utility industry.

17 Simply observing the variation in payout ratios on his Schedule RBH-2,
18 page 1, shows significant differences in the payout ratios of the proxy group
19 companies, which equate to differences in the short-term growth rates. Mr. Hevert's
20 changing payout ratio assumptions simply are not reasonable based on the similar
21 projections made by *Value Line* for the industry and the individual companies
22 included in the proxy group, and his long-term payout ratio has not been shown to be
23 compatible with his long-term sustainable growth rate.

⁵Schedule RBH-2.

1 Because *Value Line's* three- to five-year payout ratio projections for the
2 industry are in line with historical averages, and generally consistent with the industry
3 average, there is no legitimate basis for Mr. Hevert to have assumed a change in the
4 payout ratio as he did in 2017 through 2024. Making this adjustment in his model
5 simply inflates the growth rate for dividends relative to earnings growth during the
6 period 2017-2024, and increases his DCF return estimate.

7 **Q HOW WOULD MR. HEVERT'S MULTI-STAGE GROWTH DCF MODEL CHANGE IF**
8 **THE TWO CORRECTIONS YOU DESCRIBED ABOVE ARE MADE TO HIS**
9 **RETURN ESTIMATE?**

10 A As shown below in Table 3 and on my Schedule MPG-R-2, revising the GDP growth
11 rate to the consensus analysts' projection and coordinating the payout ratio
12 assumption with the long-term earnings growth rate assumption reduces Mr. Hevert's
13 multi-stage growth DCF return from 10.02% to 8.80% for his Electric Proxy Group.

<u>Description</u>	<u>Electric Mean¹</u> (1)	<u>Corrected Electric²</u> (2)
30-Day Average Stock Price	9.93%	8.70%
90-Day Average Stock Price	10.00%	8.77%
180-Day Average Stock Price	<u>10.13%</u>	<u>8.90%</u>
Average	10.02%	8.79%

Sources:
¹Schedule RBH-2.
²Schedule MPG-R-2.

1 Reflecting independent economists' projections of future long-term GDP
2 growth, and a more reasonable estimate of cash flows expected to be realized
3 through utility stock investments, results in a multi-stage growth DCF analysis, based
4 on Mr. Hevert's construct, of 8.70% up to 8.90%, with a midpoint estimate of 8.80%.

5 **Q PLEASE DESCRIBE THE ISSUES YOU TAKE WITH MR. HEVERT'S CAPM**
6 **ANALYSES.**

7 A My major concern with Mr. Hevert's CAPM analysis is his inflated market risk
8 premium estimates.

9 **Q PLEASE DESCRIBE MR. HEVERT'S MARKET RISK PREMIUMS.**

10 A Mr. Hevert developed two market risk premium estimates. They are DCF-derived
11 market risk premiums of 10.02% (Bloomberg) and 9.28% (*Value Line*), which are
12 based on market DCF returns of 13.44% and 12.70%, respectively, less the current
13 30-year Treasury bond yield of 3.42%.⁶

14 **Q WHAT ISSUES DO YOU HAVE WITH MR. HEVERT'S DCF-DERIVED MARKET**
15 **RISK PREMIUM ESTIMATES?**

16 A Mr. Hevert's DCF-derived market risk premiums are based on market returns of
17 approximately 13.44% and 12.70%, which consist of growth rate components of
18 approximately 11.49% and 10.62% and an expected dividend yield of approximately

⁶Schedules RBH-3 and RBH-4.

1 1.95% and 2.08%, respectively.⁷ As discussed above, the DCF model requires a
2 long-term sustainable growth rate. Mr. Hevert's sustainable market growth rates of
3 approximately 11.49% and 10.62% are far too high to be a rational outlook for
4 sustainable long-term market growth. These growth rates are more than two times
5 the growth rate of the U.S. GDP long-term growth outlook of 4.6%. Indeed, they are
6 almost twice Mr. Hevert's flawed and overstated GDP growth projection.

7 As a result of this unreasonable long-term market growth rate estimate,
8 Mr. Hevert's market DCF returns are inflated and not reliable. Consequently,
9 Mr. Hevert's 10.02% (Bloomberg) and 9.28% (*Value Line*) market risk premiums are
10 inflated and not reliable.⁸

11 **Q IS THERE INFORMATION ON ACTUAL ACHIEVED CAPITAL APPRECIATION**
12 **FOR THE MARKET INDEX USED BY MR. HEVERT?**

13 A Yes. Morningstar estimates the actual capital appreciation for the S&P 500 over the
14 period 1926 through 2013 to have been 5.8% to 7.7%.⁹ While I do not endorse the
15 use of a historical growth rate to draw assessments of the market's forward-looking
16 growth rate outlooks, this data can be used to show how the market return estimates
17 used by Mr. Hevert are unreasonable and inflated. For example, using the highest
18 historical arithmetic average growth rate of 7.7% and an expected dividend yield of
19 2% as estimated by Mr. Hevert, would suggest a forward-looking market DCF return
20 estimate of 9.7%.

⁷Mr. Hevert's DCF-derived market returns and market risk premiums are shown on pages 1 and 8 of his Schedule RBH-3. His estimated market returns are the weighted averages of the individual DCF estimates as shown on his Schedule RBH-3. The expected dividend yields of 1.95% and 2.08% are calculated as a weighted average of the individual dividend yield components. To calculate the growth components of 11.49% and 10.62%, I subtracted the weighted dividend yields from Mr. Hevert's estimated market returns.

⁸Schedules RBH-3, pages 1 and 8.

⁹2014 Ibbotson *S&P Classic Yearbook* at 91.

1 Further, simply observing the geometric and arithmetic average historical
2 market risk premiums also shows these estimates to be reasonable, and Mr. Hevert's
3 estimated DCF returns on the market of approximately 13.4% and 12.7% to be
4 excessive. Specifically, historically, the geometric and arithmetic average return on
5 the market has ranged from 9.8% to 11.8%.

6 Virtually all historical data shows that Mr. Hevert's 13.4% and 12.7% projected
7 returns on the market are excessive and produce an inflated market risk premium.

8 **Q CAN MR. HEVERT'S CAPM ANALYSIS BE REVISED TO REFLECT A MORE**
9 **REASONABLE MARKET RISK PREMIUM?**

10 A Yes. Using (1) Mr. Hevert's risk-free rates of 3.42% and 4.07%; (2) average
11 published Bloomberg and *Value Line* beta estimates of 0.784 and 0.773,¹⁰
12 respectively; and (3) the 6.96% market risk premium which is the highest Morningstar
13 estimate of the market risk premium, Mr. Hevert's CAPM would be in the range of
14 8.80% to 9.52% with a midpoint of approximately 9.16%.

15 **Q PLEASE DESCRIBE MR. HEVERT'S BOND YIELD PLUS RISK PREMIUM.**

16 A As shown on Schedule RBH-6, Mr. Hevert constructs a risk premium return on equity
17 estimate based on the premise that equity risk premiums are inversely related to
18 interest rates. He estimates an average electric risk premium of 4.43% over the
19 period January 1980 through May 2014. Then he applies a regression formula to the
20 current 30-year Treasury, near-term and long-term projected Treasury bond yields of
21 3.42%, 4.07%, and 5.25% to produce electric risk premiums of 6.74%, 6.25%, and

¹⁰Schedule RBH-5.

1 5.52%, respectively. Thus, he calculates return on equity estimates of 10.16%,
2 10.31%, and 10.77%, respectively.

3 **Q IS MR. HEVERT'S BOND YIELD PLUS RISK PREMIUM METHODOLOGY**
4 **REASONABLE?**

5 A No. Mr. Hevert's contention that there is a simplistic inverse relationship between
6 equity risk premiums and interest rates is not supported by academic research. While
7 academic studies have shown that, in the past, there has been an inverse
8 relationship among these variables, researchers have found that the relationship
9 changes over time and is influenced by changes in perception of the risk of bond
10 investments relative to equity investments, and not simply changes to interest rates.¹¹

11 In the 1980s, equity risk premiums were inversely related to interest rates, but
12 that was likely attributable to the interest rate volatility that existed at that time. As
13 such, when interest rates were more volatile, the relative perception of bond
14 investment risk increased relative to the investment risk of equities. This changing
15 investment risk perception caused changes in equity risk premiums.

16 In today's marketplace, interest rate volatility is not as extreme as it was
17 during the 1980s.¹² Nevertheless, changes in the perceived risk of bond investments
18 relative to equity investments still drive changes in equity premiums. However, a
19 relative investment risk differential cannot be measured simply by observing nominal
20 interest rates. Changes in nominal interest rates are heavily influenced by changes
21 to inflation outlooks, which also change equity return expectations. As such, the

¹¹"The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts," Robert S. Harris and Felicia C. Marston, *Journal of Applied Finance*, Volume 11, No. 1, 2001 and "The Risk Premium Approach to Measuring a Utility's Cost of Equity," Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *Financial Management*, Spring 1985.

¹²"The Risk Premium Approach to Measuring a Utility's Cost of Equity," Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *Financial Management*, Spring 1985, at 44.

1 relevant factor needed to explain changes in equity risk premiums is the relative
2 changes to the risk of equity versus debt securities investments, and not simply
3 changes in interest rates.

4 Importantly, Mr. Hevert's analysis simply ignores investment risk differentials.
5 He bases his adjustment to the equity risk premium exclusively on changes in
6 nominal interest rates. This is a flawed methodology that does not produce accurate
7 or reliable risk premium estimates.

8 **Q DO YOU HAVE ANY OTHER COMMENTS CONCERNING MR. HEVERT'S RISK**
9 **PREMIUM ANALYSES?**

10 A Yes. Mr. Hevert's use of projected long-term Treasury yields is not appropriate
11 because the accuracy of those projections could be highly problematic. However, to
12 limit the issues with Mr. Hevert's studies and considering the low interest rate
13 environment today, I will not take issue with his use of long-term projected Treasury
14 bond yields.

15 **Q CAN MR. HEVERT'S BOND YIELD PLUS RISK PREMIUM STUDY BE USED TO**
16 **PRODUCE A MORE REASONABLE RETURN ON EQUITY ESTIMATE FOR**
17 **AMEREN MISSOURI?**

18 A Yes. Mr. Hevert's equity risk premium average of 4.43% applied to *Blue Chip*
19 *Financial Forecasts'* Treasury bond yield outlook of 3.1% to 4.0% over the next two
20 years¹³ will produce a risk premium return estimate in the range of 7.53% to 8.43%.
21 While I agree with Mr. Hevert that this estimate is low because it is influenced by the

¹³*Blue Chip Financial Forecasts*, January 1, 2015 at 2.

1 current low-cost interest environment, I find his attempt to increase the average equity
2 risk premium by applying the notion of an inverse relationship inappropriate.

3 **Q DO YOU BELIEVE THAT THE BOND YIELD PLUS RISK PREMIUM STUDY CAN**
4 **BE USED TO PRODUCE A MORE ROBUST ESTIMATE OF AMEREN MISSOURI'S**
5 **CURRENT MARKET COST OF EQUITY?**

6 A Yes. In addition to the adjusted risk premium estimates using Mr. Hevert's study
7 described above, I continue to rely on the risk premium data I offered in my Direct
8 Testimony. However, as shown on my Schedule MPG-R-3, I modified the analysis
9 somewhat to reflect a rolling average of equity risk premiums, rather than throw out
10 the three highest and three lowest.

11 As shown on my Schedule MPG-R-3, reflecting a five-year rolling average and
12 a 10-year rolling average, indicates equity risk premiums over Treasury bonds in the
13 range of 4.25% to 6.40% based on a five-year rolling average, and 4.38% to 6.12%
14 based on a 10-year rolling average. The indicated range of risk premiums over utility
15 bond yields on a five-year rolling average basis is 2.88% to 5.28% and between
16 3.20% and 4.82% on a 10-year rolling average basis.

17 Reflecting the projected Treasury bond yield of 4.0% and current "Baa" rated
18 utility bond yield of 4.69%, the range of these five- and 10-year rolling averages
19 indicates an equity risk premium return on equity for Ameren Missouri in the range of
20 7.6% to 10.4%. Mr. Hevert's adjusted risk premium estimates and my risk premium
21 estimates fall within this range.

22 I believe the risk premium offered in my Direct Testimony, and my
23 adjustments to Mr. Hevert's risk premium, and this revised rolling average risk

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1 premium study all support a return on equity for Ameren Missouri near my
2 recommended return on equity of 9.3%.

3 **Q DID MR. HEVERT ALSO OFFER AN ASSESSMENT OF CURRENT MARKET**
4 **CONDITIONS IN SUPPORT OF HIS RECOMMENDED RETURN ON EQUITY?**

5 A Yes. Mr. Hevert describes a few factors that, he suggests, gauge investor sentiment,
6 including the relationship between the Fed's balance sheet and market volatility,
7 measured by the CBOE Volatility Index, known as the VIX.¹⁴ He concludes that these
8 metrics indicate a negative correlation between the Fed's balance sheet and
9 volatility.¹⁵

10 **Q DO YOU BELIEVE THAT MR. HEVERT'S USE OF THESE MARKET SENTIMENTS**
11 **SUPPORTS HIS FINDINGS THAT AMEREN MISSOURI'S MARKET COST OF**
12 **EQUITY IS CURRENTLY 10.40%?**

13 A No. Indeed, in many instances Mr. Hevert's analysis simply ignores market
14 sentiments favorable toward utility companies and instead lumps utility investments in
15 with general corporate investments. A fair analysis of utility securities shows that the
16 market generally regards utility securities as low-risk investment instruments and
17 supports the finding that utilities' cost of capital is very low in today's marketplace.

18 **Q WHAT IS THE MARKET SENTIMENT FOR UTILITY INVESTMENTS?**

19 A The market sentiment toward utility investments, rather than just general corporate
20 investments, is that the market is placing high value on utility securities recognizing
21 their low risk and stable characteristics.

¹⁴Direct Testimony of Robert Hevert at 37-40.

¹⁵*Id.* at 40.

1 For example, this is illustrated by my Schedule MPG-13, under column 11,
2 which shows the spread between “A” rated utility bond yields and “Aaa” rated
3 corporate bond yields. Currently, the spread is one-tenth of 1 percentage point. This
4 is a relatively low spread over the 34-year time horizon. Indeed, current spreads of
5 utility versus high-grade corporate bond yields are at the lowest level they have been
6 in most periods over the last 34 years. This is also reflective of the spreads between
7 “Baa” utility bond yields relative to “Baa” corporate bond yields. Currently, utility
8 bonds are trading at a premium to corporate bonds. This has been largely the case
9 during the significant market turbulence that has occurred over the last five to eight
10 years. However, over longer periods of time, utility bond yields on average trade at
11 parity to a premium to corporate “Baa” rated bond yields. The current strong utility
12 bond valuation is an indication of the market’s sentiment that utility bonds have lower
13 risk than general corporate bonds, and are generally regarded as a safe haven by the
14 investment industry.

15 Further, other measures of utility stock valuations also support a robust
16 market for utility stocks. As shown on my Schedule MPG-R-4, utility valuation
17 measures – e.g., price-to-earnings ratio and market price to cash flow ratio – show
18 that stock valuation measures for the proxy groups are robust. For example, for the
19 Electric Proxy Group, the current 2014 price-to-earnings ratio and cash flow ratios are
20 comparable to the 13-year average of this ratio.

21 For all these reasons, direct assessments of valuation measures and market
22 sentiment toward utility securities support the credit rating agencies’ findings, as
23 quoted above, that the utility industry is largely regarded as a low-risk, safe haven
24 investment. All of this supports my findings that utilities’ market cost of equity is very
25 low in today’s very low cost capital market environment.

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1 Q DOES MR. HEVERT EXPRESS CONCERNS ABOUT THE RELIABILITY OF
2 MEASURING A UTILITY'S RETURN ON EQUITY BASED ON CAPM AND RISK
3 PREMIUM STUDIES IN THIS CASE?

4 A Yes. At pages 37-41 of his Direct Testimony, Mr. Hevert expresses concern that the
5 Federal Reserve's ("Fed") intervention in long-term interest rates has market data in
6 disarray and that, absent stimulus efforts by the Fed, interest rates have an
7 opportunity to increase thereby increasing the yield and growth components of the
8 DCF model.

9 Q PLEASE RESPOND.

10 A I appreciate Mr. Hevert's concern about government stimulus efforts in long-term
11 interest rates. These Fed efforts have driven down interest rates and have
12 maintained relatively low long-term interest rates for several years. Although the
13 Fed's intervention in long-term interest rate markets has recently ended, the impact of
14 this intervention on long-term interest rates is neither well known, nor capable of
15 being accurately predicted. Indeed, interest rates initially increased in anticipation of
16 the termination of these Fed stimulus activities. It is simply not known how much, if
17 any, long-term interest rates will increase from current levels, or whether they have
18 already fully accounted for the termination of the Fed's quantitative easing program.
19 Nevertheless, I do agree that this Fed program introduced uncertainty in long-term
20 interest rate markets. Because of this uncertainty, caution should be taken in
21 estimating Ameren Missouri's current return on common equity in this case.

22 However, all market indicators and authorized returns being awarded by other
23 commissions suggest that utilities' overall rate of return today is at a historically low
24 level, and will remain at historically low levels for the foreseeable future.

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1 Because of the market's preference and demand for stable low-risk
2 investments, utility security prices have been bid up, and their overall rate of return
3 has declined. As such, it would be unfair to customers to ignore this historically low
4 capital cost to utilities in developing the utilities' cost of service and rates.

5 **Q HAS THE TERMINATION OF THE FED'S QUANTITATIVE EASING POLICY**
6 **RESULTED IN AN INCREASE IN UTILITIES' COST OF CAPITAL?**

7 A No. The Fed ended its asset purchasing program on October 29, 2014 after eight
8 tapering events, and interest rates for utility securities have not increased, but rather
9 have been stable to slightly lower. This is shown on my Schedule MPG-R-5.
10 Treasury yields, as well as interest rates for utility bonds rated "Baa" and "A" have
11 actually decreased in the 13-week period average ending January 2, 2015, compared
12 to the 26-week average. This is significant because the end of the Fed's quantitative
13 easing program took place in the last 13 weeks.

14 In these steps, the Fed reduced its procurement of collateralized mortgage
15 agreements and Treasury securities from \$85 billion a month prior to December 2013,
16 down to nothing currently. Despite this tapering, and subsequent end, of the Fed's
17 quantitative easing, utilities' overall rate of return has not increased. In fact, 30-year
18 Treasury yields have fallen 119 basis points, and "Baa" and "A" rated utility bond
19 yields have fallen 65 (5.25% - 4.60%) and 98 (4.80% - 3.82%) basis points,
20 respectively, since December 13, 2013, the Friday before the Fed's first tapering
21 announcement.

22 While the Fed's quantitative easing does create uncertainty about future
23 interest rates, it is not proper to interpret the risk as a certainty that interest rates will
24 increase once the Fed's quantitative easing is terminated.

1 Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

2 A Yes.

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Ameren Missouri

Revised Hevert Constant Growth Discounted Cash Flow Model 30 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Low Growth Rate	Mean Growth Rate	High Growth Rate	Low ROE	Mean ROE	High ROE
American Electric Power Company, Inc.	AEP	\$2.00	\$52.51	3.81%	3.90%	4.40%	4.56%	4.79%	8.29%	8.46%	8.69%
Cleco Corporation	CNL	\$1.60	\$51.44	3.11%	3.21%	4.50%	6.50%	8.00%	7.68%	9.71%	11.23%
Duke Energy Corporation	DUK	\$3.12	\$72.19	4.32%	4.42%	4.19%	4.46%	5.00%	8.60%	8.88%	9.43%
Empire District Electric Company	EDE	\$1.02	\$24.01	4.25%	4.32%	3.00%	3.33%	4.00%	7.31%	7.65%	8.33%
Great Plains Energy Inc.	GXP	\$0.92	\$26.14	3.52%	3.62%	5.10%	5.45%	6.00%	8.71%	9.07%	9.63%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$24.04	5.16%	5.27%	3.20%	4.40%	6.00%	8.44%	9.67%	11.31%
IDACORP, Inc.	IDA	\$1.72	\$54.88	3.13%	3.19%	2.00%	3.33%	4.00%	5.17%	6.52%	7.20%
NextEra Energy, Inc.	NEE	\$2.90	\$97.12	2.99%	3.08%	6.00%	6.21%	6.40%	9.08%	9.29%	9.48%
Northeast Utilities	NU	\$1.57	\$45.96	3.42%	3.54%	6.36%	7.09%	8.00%	9.88%	10.62%	11.55%
Otter Tail Corporation	OTTR	\$1.21	\$28.68	4.22%	4.44%	6.00%	10.50%	15.00%	10.34%	14.94%	19.53%
Pinnacle West Capital Corporation	PNW	\$2.27	\$55.36	4.10%	4.19%	4.00%	4.13%	4.28%	8.18%	8.31%	8.47%
PNM Resources, Inc.	PNM	\$0.74	\$27.74	2.67%	2.80%	8.39%	9.63%	12.00%	11.17%	12.43%	14.83%
Portland General Electric Company	POR	\$1.12	\$32.84	3.41%	3.54%	5.00%	7.67%	11.21%	8.50%	11.21%	14.81%
Southern Company	SO	\$2.10	\$44.28	4.74%	4.83%	3.50%	3.61%	3.70%	8.33%	8.44%	8.53%
Westar Energy, Inc.	WR	\$1.40	\$35.54	3.94%	4.02%	2.90%	4.20%	6.00%	6.90%	8.22%	10.06%
PROXY GROUP MEAN				3.79%	3.89%	4.57%	5.67%	6.96%	8.44%	9.56%	10.87%
PROXY GROUP MEDIAN				3.81%	3.90%	4.40%	4.56%	6.00%	8.44%	9.07%	9.63%

Source:
Schedule RBH-1, page 1

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Revised Hevert Constant Growth Discounted Cash Flow Model 90 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Low Growth Rate	Mean Growth Rate	High Growth Rate	Low ROE	Mean ROE	High ROE
American Electric Power Company, Inc.	AEP	\$2.00	\$50.54	3.96%	4.05%	4.40%	4.56%	4.79%	8.44%	8.61%	8.84%
Cleco Corporation	CNL	\$1.60	\$49.91	3.21%	3.31%	4.50%	6.50%	8.00%	7.78%	9.81%	11.33%
Duke Energy Corporation	DUK	\$3.12	\$71.04	4.39%	4.49%	4.19%	4.46%	5.00%	8.67%	8.95%	9.50%
Empire District Electric Company	EDE	\$1.02	\$23.73	4.30%	4.37%	3.00%	3.33%	4.00%	7.36%	7.70%	8.38%
Great Plains Energy Inc.	GXP	\$0.92	\$25.93	3.55%	3.64%	5.10%	5.45%	6.00%	8.74%	9.09%	9.65%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$24.85	4.99%	5.10%	3.20%	4.40%	6.00%	8.27%	9.50%	11.14%
IDACORP, Inc.	IDA	\$1.72	\$54.47	3.16%	3.21%	2.00%	3.33%	4.00%	5.19%	6.54%	7.22%
NextEra Energy, Inc.	NEE	\$2.90	\$94.09	3.08%	3.18%	6.00%	6.21%	6.40%	9.17%	9.39%	9.58%
Northeast Utilities	NU	\$1.57	\$44.89	3.50%	3.62%	6.36%	7.09%	8.00%	9.97%	10.71%	11.64%
Otter Tail Corporation	OTTR	\$1.21	\$29.41	4.11%	4.33%	6.00%	10.50%	15.00%	10.24%	14.83%	19.42%
Pinnacle West Capital Corporation	PNW	\$2.27	\$54.53	4.16%	4.25%	4.00%	4.13%	4.28%	8.25%	8.38%	8.53%
PNM Resources, Inc.	PNM	\$0.74	\$26.51	2.79%	2.93%	8.39%	9.63%	12.00%	11.30%	12.56%	14.96%
Portland General Electric Company	POR	\$1.12	\$31.86	3.52%	3.65%	5.00%	7.67%	11.21%	8.60%	11.32%	14.92%
Southern Company	SO	\$2.10	\$43.16	4.87%	4.95%	3.50%	3.61%	3.70%	8.45%	8.57%	8.66%
Westar Energy, Inc.	WR	\$1.40	\$34.62	4.04%	4.13%	2.90%	4.20%	6.00%	7.00%	8.33%	10.17%
PROXY GROUP MEAN				3.84%	3.95%	4.57%	5.67%	6.96%	8.50%	9.62%	10.93%
PROXY GROUP MEDIAN				3.96%	4.05%	4.40%	4.56%	6.00%	8.45%	9.09%	9.65%

Source:

Schedule RBH-1, page 2

Ameren Missouri

Revised Hevert Constant Growth Discounted Cash Flow Model 180 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Low Growth Rate	Mean Growth Rate	High Growth Rate	Low ROE	Mean ROE	High ROE
American Electric Power Company, Inc.	AEP	\$2.00	\$48.18	4.15%	4.25%	4.40%	4.56%	4.79%	8.64%	8.81%	9.04%
Cleco Corporation	CNL	\$1.60	\$47.92	3.34%	3.45%	4.50%	6.50%	8.00%	7.91%	9.95%	11.47%
Duke Energy Corporation	DUK	\$3.12	\$70.14	4.45%	4.55%	4.19%	4.46%	5.00%	8.73%	9.01%	9.56%
Empire District Electric Company	EDE	\$1.02	\$23.04	4.43%	4.50%	3.00%	3.33%	4.00%	7.49%	7.83%	8.52%
Great Plains Energy Inc.	GXP	\$0.92	\$24.72	3.72%	3.82%	5.10%	5.45%	6.00%	8.92%	9.27%	9.83%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$25.31	4.90%	5.01%	3.20%	4.40%	6.00%	8.18%	9.41%	11.05%
IDACORP, Inc.	IDA	\$1.72	\$52.61	3.27%	3.32%	2.00%	3.33%	4.00%	5.30%	6.66%	7.33%
NextEra Energy, Inc.	NEE	\$2.90	\$89.07	3.26%	3.36%	6.00%	6.21%	6.40%	9.35%	9.57%	9.76%
Northeast Utilities	NU	\$1.57	\$43.38	3.62%	3.75%	6.36%	7.09%	8.00%	10.09%	10.83%	11.76%
Otter Tail Corporation	OTTR	\$1.21	\$29.13	4.15%	4.37%	6.00%	10.50%	15.00%	10.28%	14.87%	19.46%
Pinnacle West Capital Corporation	PNW	\$2.27	\$54.50	4.17%	4.25%	4.00%	4.13%	4.28%	8.25%	8.38%	8.53%
PNM Resources, Inc.	PNM	\$0.74	\$24.93	2.97%	3.11%	8.39%	9.63%	12.00%	11.48%	12.74%	15.15%
Portland General Electric Company	POR	\$1.12	\$30.57	3.66%	3.80%	5.00%	7.67%	11.21%	8.76%	11.47%	15.08%
Southern Company	SO	\$2.10	\$42.21	4.97%	5.06%	3.50%	3.61%	3.70%	8.56%	8.68%	8.77%
Westar Energy, Inc.	WR	\$1.40	\$33.10	4.23%	4.32%	2.90%	4.20%	6.00%	7.19%	8.52%	10.36%
PROXY GROUP MEAN				3.95%	4.06%	4.57%	5.67%	6.96%	8.61%	9.73%	11.04%
PROXY GROUP MEDIAN				4.15%	4.25%	4.40%	4.56%	6.00%	8.64%	9.27%	9.83%

Source:

Schedule RBH-1, page 3

Ameren Missouri

Summary of Revised Hevert Multi-Stage DCF Analysis

<u>Line</u>	<u>Description</u>	<u>Low</u> (1)	<u>Mean</u> (2)	<u>High</u> (3)	<u>Average</u> (4)
1	30-Day	8.36%	8.67%	9.07%	8.70%
2	90-Day	8.43%	8.73%	9.15%	8.77%
3	180-Day	8.55%	8.86%	9.28%	8.90%
4	Average				8.79%

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Equity Risk Premium - Treasury Bond

<u>Line</u>	<u>Year</u>	<u>Authorized Electric Returns¹</u> (1)	<u>Treasury Bond Yield²</u> (2)	<u>Indicated Risk Premium</u> (3)	<u>Rolling 5-Year Average</u> (4)	<u>Rolling 10-Year Average</u> (5)
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%	4.60%	
6	1991	12.55%	8.14%	4.41%	4.25%	
7	1992	12.09%	7.67%	4.42%	4.26%	
8	1993	11.41%	6.60%	4.81%	4.45%	
9	1994	11.34%	7.37%	3.97%	4.34%	
10	1995	11.55%	6.88%	4.67%	4.46%	4.53%
11	1996	11.39%	6.70%	4.69%	4.51%	4.38%
12	1997	11.40%	6.61%	4.79%	4.59%	4.42%
13	1998	11.66%	5.58%	6.08%	4.84%	4.65%
14	1999	10.77%	5.87%	4.90%	5.03%	4.68%
15	2000	11.43%	5.94%	5.49%	5.19%	4.82%
16	2001	11.09%	5.49%	5.60%	5.37%	4.94%
17	2002	11.16%	5.43%	5.73%	5.56%	5.07%
18	2003	10.97%	4.96%	6.01%	5.55%	5.19%
19	2004	10.75%	5.05%	5.70%	5.71%	5.37%
20	2005	10.54%	4.65%	5.89%	5.79%	5.49%
21	2006	10.36%	4.99%	5.37%	5.74%	5.56%
22	2007	10.36%	4.83%	5.53%	5.70%	5.63%
23	2008	10.46%	4.28%	6.18%	5.73%	5.64%
24	2009	10.48%	4.07%	6.41%	5.88%	5.79%
25	2010	10.24%	4.25%	5.99%	5.89%	5.84%
26	2011	10.07%	3.91%	6.16%	6.05%	5.90%
27	2012	10.01%	2.92%	7.09%	6.37%	6.03%
28	2013	9.79%	3.45%	6.34%	6.40%	6.07%
29	2014 ³	9.74%	3.46%	6.28%	6.37%	6.12%
30	Average	11.28%	5.91%	5.36%	5.30%	5.31%
31	Minimum				4.25%	4.38%
32	Maximum				6.40%	6.12%

Sources:

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.

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Equity Risk Premium - Utility Bond

<u>Line</u>	<u>Year</u>	<u>Authorized Electric Returns¹</u> (1)	<u>Average "A" Rated Utility Bond Yield²</u> (2)	<u>Indicated Risk Premium</u> (3)	<u>Rolling 5-Year Average</u> (4)	<u>Rolling 10-Year Average</u> (5)
1	1986	13.93%	9.58%	4.35%		
2	1987	12.99%	10.10%	2.89%		
3	1988	12.79%	10.49%	2.30%		
4	1989	12.97%	9.77%	3.20%		
5	1990	12.70%	9.86%	2.84%	3.12%	
6	1991	12.55%	9.36%	3.19%	2.88%	
7	1992	12.09%	8.69%	3.40%	2.99%	
8	1993	11.41%	7.59%	3.82%	3.29%	
9	1994	11.34%	8.31%	3.03%	3.26%	
10	1995	11.55%	7.89%	3.66%	3.42%	3.27%
11	1996	11.39%	7.75%	3.64%	3.51%	3.20%
12	1997	11.40%	7.60%	3.80%	3.59%	3.29%
13	1998	11.66%	7.04%	4.62%	3.75%	3.52%
14	1999	10.77%	7.62%	3.15%	3.77%	3.52%
15	2000	11.43%	8.24%	3.19%	3.68%	3.55%
16	2001	11.09%	7.76%	3.33%	3.62%	3.56%
17	2002	11.16%	7.37%	3.79%	3.61%	3.60%
18	2003	10.97%	6.58%	4.39%	3.57%	3.66%
19	2004	10.75%	6.16%	4.59%	3.86%	3.81%
20	2005	10.54%	5.65%	4.89%	4.20%	3.94%
21	2006	10.36%	6.07%	4.29%	4.39%	4.00%
22	2007	10.36%	6.07%	4.29%	4.49%	4.05%
23	2008	10.46%	6.53%	3.93%	4.40%	3.98%
24	2009	10.48%	6.04%	4.44%	4.37%	4.11%
25	2010	10.24%	5.46%	4.78%	4.35%	4.27%
26	2011	10.07%	5.04%	5.03%	4.49%	4.44%
27	2012	10.01%	4.13%	5.88%	4.81%	4.65%
28	2013	9.79%	4.48%	5.31%	5.09%	4.74%
29	2014 ³	9.74%	4.36%	5.38%	5.28%	4.82%
30	Average	11.28%	7.30%	3.98%	3.91%	3.90%
31	Minimum				2.88%	3.20%
32	Maximum				5.28%	4.82%

Sources:

¹ Regulatory Research Associates, Inc., Regulatory Focus, Jan. 85 - Dec. 06, and October 10, 2014, excluding the Virginia cases, which are subject to an adjustment for certain generation assets up to 200 basis points.

² Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields from 2010-2013 were obtained from <http://credittrends.moodys.com/>.

³ The data includes the period Jan - Sep 2014.

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Valuation Metrics

		Price to Earnings (P/E) Ratio ¹													
Line	Company	13-Year													
		Average (1)	2014 ² (2)	2013 (3)	2012 (4)	2011 (5)	2010 (6)	2009 (7)	2008 (8)	2007 (9)	2006 (10)	2005 (11)	2004 (12)	2003 (13)	2002 (14)
1	American Electric Power	13.19	16.10	14.49	13.77	11.92	13.42	10.03	13.06	16.27	12.91	13.70	12.42	10.66	12.68
2	Cleco Corp.	15.15	21.50	17.28	15.03	13.25	12.27	13.21	14.09	19.58	17.32	15.05	13.76	12.39	12.25
3	Duke Energy	15.49	15.80	17.45	17.46	13.76	12.69	13.32	17.28	16.13	N/A	N/A	N/A	N/A	N/A
4	Empire District Electric	17.82	17.90	15.00	15.76	15.76	16.75	14.34	17.26	21.70	15.92	24.50	24.81	15.83	16.18
5	Great Plains Energy	14.97	15.60	14.19	15.53	16.11	12.10	16.03	20.55	16.35	18.30	13.96	12.59	12.23	11.09
6	Hawaiian Elec.	18.02	17.00	16.21	15.81	17.09	18.59	19.79	23.16	21.57	20.33	18.27	19.18	13.76	13.47
7	IDACORP, Inc.	15.42	16.30	13.45	12.41	11.54	11.83	10.20	13.93	18.19	15.07	16.70	15.49	26.51	18.88
8	NextEra Energy, Inc.	14.21	19.30	16.57	14.43	4.81	10.83	13.42	14.48	18.90	13.65	17.88	13.60	12.65	N/A
9	Northeast Utilities	17.17	16.30	16.94	19.86	15.35	13.42	11.96	13.66	18.75	27.07	19.76	20.77	13.35	16.07
10	Otter Tail Corp.	25.07	16.30	21.12	21.75	47.48	55.10	31.16	30.06	19.02	17.35	15.40	17.34	17.77	16.01
11	Pinnacle West Capital	14.96	15.80	15.27	14.35	14.60	12.57	13.74	16.07	14.93	13.69	19.24	15.80	13.96	14.43
12	PNM Resources	17.40	17.60	16.13	14.97	14.53	14.05	18.09	NMF	35.65	15.57	17.38	15.02	14.73	15.08
13	Portland General	15.21	15.70	16.88	13.98	12.37	12.00	14.40	16.30	11.94	23.35	N/A	N/A	N/A	N/A
14	Southern Co.	15.55	16.40	16.19	16.97	15.85	14.90	13.52	16.13	15.95	16.19	15.92	14.68	14.83	14.63
15	Westar Energy	14.32	15.80	14.04	13.43	14.78	12.96	14.95	16.96	14.10	12.18	14.79	17.44	10.78	14.02
16	Average	16.26	16.89	16.08	15.70	15.95	16.23	15.21	17.36	18.60	17.06	17.12	16.38	14.57	14.57

		Market Price to Cash Flow (MP/CF) Ratio ¹													
Line	Company	13-Year													
		Average (1)	2014 ^{2a} (2)	2013 (3)	2012 (4)	2011 (5)	2010 (6)	2009 (7)	2008 (8)	2007 (9)	2006 (10)	2005 (11)	2004 (12)	2003 (13)	2002 (14)
17	American Electric Power	5.79	7.06	6.83	6.18	5.46	5.54	4.71	5.71	6.84	5.54	6.07	5.50	4.69	5.19
18	Cleco Corp.	7.30	9.43	8.60	7.51	6.50	5.49	6.15	6.45	9.61	8.96	7.73	7.08	5.24	6.10
19	Duke Energy	7.29	7.81	8.11	9.53	6.56	6.01	5.96	7.13	7.16	N/A	N/A	N/A	N/A	N/A
20	Empire District Electric	7.66	7.16	7.07	6.97	6.43	6.88	6.23	6.94	8.78	8.17	9.20	9.60	8.22	7.93
21	Great Plains Energy	6.16	6.18	5.73	6.09	5.74	4.49	5.06	7.71	7.13	7.68	6.70	6.52	5.92	5.14
22	Hawaiian Elec.	7.76	7.67	8.15	8.05	7.73	7.81	6.95	9.10	7.95	8.47	8.29	8.44	6.12	6.20
23	IDACORP, Inc.	7.31	8.72	7.88	7.16	6.75	6.67	5.31	7.10	8.23	7.73	7.55	7.15	7.27	7.53
24	NextEra Energy, Inc.	6.90	8.71	7.60	7.58	5.98	5.52	6.09	7.34	9.02	6.51	6.71	5.97	5.77	N/A
25	Northeast Utilities	5.57	9.16	8.08	9.30	6.99	4.97	4.61	4.12	6.18	6.02	3.55	3.78	2.85	2.75
26	Otter Tail Corp.	8.85	8.39	9.58	8.43	9.04	8.07	8.01	11.65	9.53	8.66	8.18	9.01	8.13	8.33
27	Pinnacle West Capital	5.53	6.63	6.85	6.34	5.80	5.65	3.84	4.19	4.76	4.48	7.48	5.88	4.80	5.21
28	PNM Resources	6.51	7.32	6.47	5.80	4.94	4.58	4.53	7.10	10.67	7.50	7.62	6.84	5.55	5.72
29	Portland General	5.10	5.29	6.06	5.08	4.86	4.13	4.63	4.81	5.34	5.74	N/A	N/A	N/A	N/A
30	Southern Co.	8.16	7.92	8.30	8.75	8.22	7.79	7.08	8.18	8.62	8.47	8.41	8.28	8.28	7.83
31	Westar Energy	6.12	7.68	7.23	6.71	6.67	5.51	5.32	7.09	6.88	5.81	7.00	6.54	4.24	2.94
32	Average	6.80	7.68	7.50	7.30	6.51	5.94	5.63	6.98	7.78	7.12	7.27	6.97	5.93	5.90

Sources:

¹ *The Value Line Investment Survey Investment Analyzer Software*, downloaded on June 27, 2013 and December 17, 2014.

² *The Value Line Investment Survey*, August 22, September 19, and October 31, 2014.

Note:

³ Based on the average of the high and low price for 2014 and the projected 2014 cash flow per share, published in *The Value Line Investment Survey*, August 22, September 19, and October 31, 2014.

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Movement in Bond Yields

Week	Date	Utility Bonds		30-Year	Fed Announcements
		A-Rated	Baa-Rated	Treasury	
		Yield (1)	Yield (2)	Yield (3)	
1	1/2/2015	3.82%	4.60%	2.69%	
2	12/26/2014	3.94%	4.72%	2.81%	
3	12/19/2014	3.90%	4.71%	2.77%	
4	12/12/2014	3.87%	4.63%	2.75%	
5	12/5/2014	4.06%	4.73%	2.97%	
6	11/28/2014	3.99%	4.66%	2.89%	
7	11/21/2014	4.08%	4.77%	3.02%	
8	11/14/2014	4.09%	4.76%	3.04%	
9	11/7/2014	4.08%	4.71%	3.04%	
10	10/31/2014	4.10%	4.71%	3.07%	October 29, 2014 - Asset Purchases Ended
11	10/24/2014	4.09%	4.71%	3.05%	
12	10/17/2014	4.02%	4.64%	2.98%	
13	10/10/2014	4.03%	4.65%	3.03%	
14	10/3/2014	4.13%	4.72%	3.13%	
15	9/26/2014	4.20%	4.77%	3.22%	
16	9/19/2014	4.28%	4.83%	3.29%	September 17, 2014 - Tapering Announced
17	9/12/2014	4.33%	4.88%	3.35%	
18	9/5/2014	4.21%	4.74%	3.23%	
19	8/29/2014	4.05%	4.57%	3.09%	
20	8/22/2014	4.10%	4.64%	3.16%	
21	8/15/2014	4.06%	4.60%	3.13%	
22	8/8/2014	4.14%	4.65%	3.23%	
23	8/1/2014	4.20%	4.70%	3.29%	July 30, 2014 - Tapering Announced
24	7/25/2014	4.14%	4.60%	3.24%	
25	7/18/2014	4.19%	4.63%	3.29%	
26	7/11/2014	4.23%	4.65%	3.34%	
27	7/3/2014	4.37%	4.78%	3.47%	
28	6/27/2014	4.24%	4.66%	3.36%	
29	6/20/2014	4.33%	4.76%	3.44%	June 18, 2014 - Tapering Announced
30	6/13/2014	4.29%	4.72%	3.41%	
31	6/6/2014	4.32%	4.76%	3.44%	
32	5/30/2014	4.19%	4.62%	3.33%	
33	5/23/2014	4.26%	4.70%	3.40%	
34	5/16/2014	4.21%	4.64%	3.34%	
35	5/9/2014	4.33%	4.76%	3.47%	
36	5/2/2014	4.24%	4.67%	3.37%	April 30, 2014 - Tapering Announced
37	4/25/2014	4.32%	4.75%	3.46%	
38	4/18/2014	4.40%	4.83%	3.52%	
39	4/11/2014	4.37%	4.81%	3.48%	
40	4/4/2014	4.48%	4.94%	3.59%	
41	3/28/2014	4.45%	4.92%	3.55%	
42	3/21/2014	4.52%	5.01%	3.61%	March 19, 2014 - Tapering Announced
43	3/14/2014	4.48%	4.97%	3.59%	
44	3/7/2014	4.58%	5.07%	3.72%	
45	2/28/2014	4.46%	4.93%	3.59%	
46	2/21/2014	4.56%	5.03%	3.69%	
47	2/14/2014	4.56%	5.04%	3.69%	
48	2/7/2014	4.55%	5.03%	3.67%	
49	1/31/2014	4.49%	4.97%	3.61%	January 29, 2014 - Tapering Announced
50	1/24/2014	4.51%	5.00%	3.64%	
51	1/17/2014	4.60%	5.08%	3.75%	
52	1/10/2014	4.65%	5.11%	3.80%	
53	1/3/2014	4.81%	5.23%	3.93%	
54	12/26/2013	4.82%	5.24%	3.94%	
55	12/20/2013	4.73%	5.14%	3.82%	December 18, 2013 - Tapering Announced
56	12/13/2013	4.80%	5.25%	3.88%	
57	Average Since End of Stimulus	3.99%	4.70%	2.91%	
58	13 week average	4.01%	4.69%	2.93%	
59	26 week average	4.09%	4.69%	3.08%	
60	Average Since Dec. 13, 2013	4.29%	4.81%	3.35%	