Exhibit No.:	
Issue:	Revenue Requirement
Witness:	Michael P. Gorman
Type of Exhibit:	Rebuttal Testimony
Sponsoring Parties:	Midwest Energy Consumers' Group and Missouri Industrial Energy Consumers
Case No.:	ER-2016-0179
Date Testimony Prepared:	January 20, 2017

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))))	**Case No. ER-2016-0179**

Rebuttal Testimony and Schedules of

Michael P. Gorman

On behalf of

Midwest Energy Consumers' Group
and
Missouri Industrial Energy Consumers

January 20, 2017

Project 10202

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)	**Case No. ER-2016-0179**

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

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 the Midwest Energy Consumers' Group ("MECG") and the Missouri Industrial Energy Consumers ("MIEC") in this proceeding on their 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-2016-0179.

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 20th day of January, 2017.

MARIA E. DECKER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis City
My Commission Expires: May 5, 2017
Commission # 13706793

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION
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In the Matter of Union Electric d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))))	**Case No. ER-2016-0179**

Rebuttal Testimony of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q ARE YOU THE SAME MICHAEL P. GORMAN WHO PREVIOUSLY FILED DIRECT TESTIMONY IN THIS CASE?

A Yes. On December 9, 2016, I filed direct testimony on behalf of the Midwest Energy Consumers' Group ("MECG") and the Missouri Industrial Energy Consumers ("MIEC").

Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A I will address Ameren Missouri's proposed capital structure as sponsored by its witness, Mr. Ryan Martin. I will respond to Ameren Missouri's witness Mr. Robert Hevert's recommended return on equity range of 9.75% to 10.50% and Ameren Missouri's requested return on equity of 9.90%.[1]

My silence in regards to any issue should not be construed as an endorsement of Ameren Missouri's position.

[1]Hevert Direct Testimony at 2.

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND FINDINGS IN YOUR REBUTTAL TESTIMONY.

A I address the reasonableness of the Company's requested capital structure as projected at the true-up date. The true-up capital structure is projected to consist of 51.80% common equity, 47.14% long-term debt and 1.06% of preferred stock. Ameren Missouri's capital structure is sponsored by its witness, Mr. Ryan J. Martin.

I find the Company's forecasted true-up date capital structure reflects an unjustified increase in its common equity ratio relative to the Company's actual capital structure during calendar year 2015, and the first two quarters of 2016, reflecting maturing senior secured debt repayments. Further, the Company's actual capital structure during this six-quarter period ending June 2016 was adequate to support Ameren Missouri's investment grade bond rating, and would result in a common equity ratio for Ameren Missouri that is comparable to capital structure credit metrics for companies with bond ratings similar to Ameren Missouri's, and would produce a ratemaking capital structure that is more comparable to the industry average capital structure used to set rates for electric utilities over the last six years.

Mr. Martin's projected capital structure, in contrast, reflects an unjustified increase in the common equity ratio compared to the most recent six-quarter period, and will unnecessarily increase Ameren Missouri's claimed revenue deficiency and cost of service in this proceeding.

I recommend that the Missouri Public Service Commission ("Commission") direct Ameren Missouri to maintain a ratemaking capital structure with a 50.4% common equity ratio. I also explain that providing ratemaking signals to Ameren Missouri will not necessarily result in a cost disallowance, because Ameren Missouri can respond to the price signals approved by the Commission in this proceeding and

adjust its actual capital structure to align with what the Commission found to be a reasonable capital structure for setting rates. More specifically, however, this price signals to Ameren Missouri to essentially manage its capital structure mix in a similar manner that it actually did use to manage capital during the six-quarter period ending the second quarter of 2016.

I respond to the return on equity recommendations of Ameren Missouri witness Robert Hevert. The Company's recommended return on equity of 9.9% is overstated and unreasonable. As outlined later in this testimony, corrections to Mr. Hevert's studies or use of more balanced market-based information supports a return on equity for Ameren Missouri in the range of 9.0% to 9.5%.

I. AMEREN MISSOURI'S REQUESTED CAPITAL STRUCTURE

Q WHAT IS AMEREN MISSOURI'S PROPOSED CAPITAL STRUCTURE?

A Ameren Missouri's proposed capital structure is shown below in Table 1. This capital structure is based on a pro forma period December 31, 2016 and is sponsored by Ameren Missouri witness Mr. Ryan Martin. Mr. Martin states that the pro forma will be updated with actual at the true-up. (Martin Direct at 7).

TABLE 1

Ameren Missouri's
Proposed Capital Structure
(December 31, 2016)

Description	Weight
Long-Term Debt	47.14%
Preferred Stock	1.06%
Common Equity	51.80%
Total	100.00%

Source: Schedule RJM-1.

Mr. Martin describes how he developed his projected capital structure at the true-up date of December 31, 2016. He states that he started with the Company's actual capital structure at March 31, 2016. He then compared that capital structure to the capital structure at the true-up date in the Company's last rate case, December 31, 2014. As shown at page 10 of Mr. Martin's testimony, the capital structure at March 31, 2016 had a similar common equity ratio as the capital structure in the Company's last rate case. He states that the March 31, 2016 capital structure reflected: (1) a decrease in long-term debt of $119 million, which was attributable to repayment of $374 million senior secured notes that matured in March 2015 and February 2016 net of an issuance of $250 million of senior notes in April 2015; and (2) a decrease in common equity of $90 million between year-end December 31, 2014 and March 31, 2016, due to dividend payments from Ameren Missouri to Ameren Corporation.

From March 31, 2016 through year-end 2016, Mr. Martin states that he is projecting an increase in common equity of approximately $133 million based on

retained net income, and an anticipated increase in long-term debt of $153 million in March 2016 primarily reflecting a pro forma $150 million senior secured note issuance projected for June 2016. (*Id*. at 11).

Q DO YOU BELIEVE THAT THE COMPANY'S PROPOSED CAPITAL STRUCTURE IS REASONABLE FOR RATEMAKING PURPOSES?

A No. I note that the Company's proposed true-up capital structure reflects an unjustified increase to its common equity ratio compared to its actual capital structure over the six quarter period through June 2016.

Q PLEASE EXPLAIN.

A This is illustrated on my Schedule MPG-R-1. As shown in that schedule, at year-end 2014, the true-up period in the last case, the Company's common equity ratio was around 51.2%, which was reasonably consistent with the capital structure in Ameren Missouri's last rate order. (Case No. ER-2014-0258). However, the common equity ratio dropped to approximately 50.5% on average, during 2015.

As noted by Mr. Martin, a senior secured note of $260 million matured in February 2016. Ameren Missouri repaid the $260 million February 2016 bond maturity using short-term debt and cash on hand.[2] As a result, Ameren Missouri's debt ratio decreased and its common equity ratio increased. Specifically, during the first two quarters of 2016, Ameren Missouri's common equity ratio, including the short-term debt that was temporarily used to refinance the maturing senior secured note that matured in February 2016, was 50.3% and 50.1%, respectively, as shown

[2] "In February 2016, $260 million principal amount of Ameren Missouri's 5.40% senior secured notes matured and were repaid with cash on hand and commercial paper borrowings." Union Electric Company 2015 FERC Form 1 at 123.25 and 123.26.

on my Schedule MPG-R-1, line 10. In the third quarter 2016, Ameren Missouri increased its common equity ratio up to 51.6%, which aligns with its proposed capital structure at the true-up date for this proceeding.

Q DO YOU BELIEVE IT IS APPROPRIATE FOR THE COMPANY TO INCREASE ITS COMMON EQUITY RATIO AT THE TRUE-UP DATE, RELATIVE TO THE CAPITAL STRUCTURE MIX IT ACTUALLY MAINTAINED FOR THE SIX-QUARTER PERIOD THROUGH THE SECOND QUARTER OF 2016?

A No, for several reasons. First, the Company's actual capital structure mix for the six-quarter period ending second quarter of 2016 was reasonable and adequate to support its investment grade bond rating. Indeed, as noted by credit rating agencies, Ameren Missouri's financial strength and balance sheet strength supported its "Stable" credit rating outlook in 2015 and into 2016. This credit rating outlook was made in 2015 when Ameren Missouri's capital structure had a lower common equity ratio than that reflected in Ameren Missouri's proposed true-up capital structure. Further, the credit metrics suggest that its capital structure mix during this six-quarter period ending second quarter 2016 also supported credit metrics that align with Ameren Missouri's investment grade bond rating. As such, there is no need to increase the common equity ratio as Mr. Martin proposes.

Second, the regulatory capital structure maintained by Ameren Missouri during the six-quarter period reflected a common equity ratio of around 50%. This 50% common equity is reasonably consistent with industry capital structures approved by regulatory commissions for setting rates. For these reasons, I recommend the Commission reject Ameren Missouri witness Martin's projected

increase in common equity ratio at the true-up date as he has offered in his testimony.

Q WHY DO YOU BELIEVE THAT THE AMEREN MISSOURI TRUE-UP CAPITAL STRUCTURE SHOWS A HIGHER EQUITY RATIO THAN WAS SEEN DURING THE PREVIOUS SIX QUARTERS?

A The Company has complete flexibility to exercise management discretion in managing its capital structure. For instance, the Company can decide to replace a maturing debt issuance with another debt issuance of equal amount or it can, as Ameren Missouri has done, pay the maturing debt issuance with short term debt and cash on hand. In the first instance, the equity ratio would not be materially impacted. In the second instance, however, the debt ratio will decrease, and the equity ratio will increase, based on the designed capital mix pursued by management.

More disconcerting, however, is that the Company can temporarily pay the maturing debt with short-term debt and cash on hand for purposes of inflating the equity ratio at the true-up date during a rate case. This will increase the utility's cost of service and profit opportunity under the approved cost of service. However, once the rate case is completed, the Company can then issue long-term debt and adjust common equity capital to produce a more normal capital structure mix. This further increases profit opportunity under approved rates.

Q WHY IS THIS IMPORTANT?

A The Commission should not blindly accept the true-up capital structure as reasonable for setting rates. As with other cost of service items, the capital structure should be reviewed and proven to be cost-effective and reasonable for setting rates. In this

case, Ameren Missouri's proposed true-up capital structure does not include a normalized nor reasonable ratio of common equity to total capital..

Q WHAT DO YOU PROPOSE FOR A RATEMAKING CAPITAL STRUCTURE?

A I recognize that Ameren Missouri had a maturing debt issuance in February of 2016. Rather than retire that debt issuance using short term debt and cash on hand, however, I believe that Ameren Missouri should have replaced that debt issuance with a new issuance of the same amount. This step would have produced a capital structure that is more reasonable for ratemaking purposes.

Mr. Martin's capital structure projections assumed a $260 million senior secured note retirement in February 2016 will be replaced by a $150 million senior secured note to be issued in June 2016. I recommend the Company's approved capital structure reflect a June 2016 senior bond note issuance in an amount equal to the note that retired in February 2016. The difference in bond issue amount is approximately $110 million, which would have produced additional net debt proceeds to Ameren Missouri of approximately $108.3 million.[3] Therefore, in my proposed capital structure, I am proposing to increase debt by $108.3 million and reduce common equity by the same amount. This would have reduced Mr. Martin's projected increase in common equity of $133 million down to $25 million ($133 less $108). With these assumptions, the ratemaking capital structure dollar amount would not change but the common equity ratio of total capital would be reduced from 51.8% down to 50.4% as shown in Table 2 below.

[3]The Company assumed a bond issuance cost of approximately 1.5%.

TABLE 2

Revised Ameren Missouri
True-Up Capital Structure
(December 31, 2016)

Description	Amount ($ Millions) (1)	Weight (2)
Long-Term Debt	$3,756.3	48.54%
Preferred Stock	$81.8	1.06%
Common Equity	$3,899.8	50.40%
Total	$7,737.9	100.00%

Source: Schedule MPG-R-2.

Q DO YOU BELIEVE THAT A CAPITAL STRUCTURE CONSISTING OF A 50.4% COMMON EQUITY RATIO INCLUDES A REASONABLE AMOUNT OF COMMON EQUITY?

A Yes. As indicated, during the previous six quarters, the average Ameren Missouri capital structure consisted of 50.5% common equity. Thus, assuming that the $260 million maturing debt issuance had been refinanced in the manner that I described would result in a capital structure that more closely aligns with Ameren Missouri's actual capital structure in 2015, and through June 2016 if short-term debt, which was used to repay the February 2016 debt maturity, is considered.

Q IF THE COMPANY REPLACED THE FEBRUARY 2016 MATURING SENIOR SECURED NOTE, WITH THE SAME AMOUNT OF SENIOR SECURED NOTE ISSUED IN JUNE OF 2016, WOULD ITS CAPITAL STRUCTURE BE REASONABLE AND SUPPORT AMEREN MISSOURI'S FINANCIAL INTEGRITY?

A Yes. I reached this conclusion for several reasons. First, I reviewed the adjusted total debt ratio for Ameren Missouri using Standard & Poor's methodologies over the eight quarter period ending September 2016. I did this using information from Standard & Poor's ("S&P") CreditStats Direct. This information relies on Ameren Missouri's filings with the Securities and Exchange Commission ("SEC"), which reflects its financial information from its SEC Form 10-K. S&P also considers Ameren Missouri's off-balance sheet obligations in estimating its adjusted debt ratio. The adjusted debt ratio reflects all on-balance sheet debt (both long-term and short-term) and the debt equivalents of off-balance sheet financial obligations such as purchased power agreements, operating leases, etc. A majority of Ameren Missouri's off-balance sheet obligations reflect its operating lease obligations.

As noted above, my proposed debt refinancing would produce a true-up capital structure consisting of a common equity ratio for ratemaking purposes of around 50%. With an adjusted debt ratio calculation using S&P's methodology, this ratemaking capital structure would maintain an adjusted debt ratio in the range of 51%. This adjusted debt ratio is reasonably consistent with Ameren Missouri's actual adjusted debt ratio as recorded by S&P over the six-quarter period ending September 2016. This is shown on my Schedule MPG-R-3.

As shown on Schedule MPG-R-3, page 1, the adjusted total debt ratio for Ameren Missouri using September 30, 2016 off-balance sheet debt of $140.73 million is 49.5%.

Q HOW DOES AMEREN MISSOURI'S ADJUSTED DEBT RATIO UNDER YOUR PROPOSED RATEMAKING CAPITAL STRUCTURE COMPARE TO THE ADJUSTED DEBT RATIO METRICS OF THE UTILITY INDUSTRY DIFFERENTIATED BY BOND RATING?

A My adjustment to Ameren Missouri's capital structure produces an adjusted debt ratio that compares very favorably to the utility industry average adjusted debt ratios for utilities with bond ratings comparable to Ameren Missouri. This is illustrated below in Table 3.

TABLE 3

Operating Utility Subsidiaries
(Industry Medians)

S&P Rating[1]	Adj. Debt Ratio (1)	Distribution (50% - 55%) (2)
AA	42.6%	–
A	51.5%	78%
A-	51.7%	35%
BBB+	54.3%	36%
BBB	52.9%	38%
Ameren Missouri	51% - 54%	

[1]Schedule MPG-R-3, page 3.

My proposed adjustment to Mr. Martin's projections, which simply reflect issuing new senior secured debt to fully fund the repayment of maturing senior secured debt that occurred in 2016, produces an adjusted debt ratio (51% to 54%) that is aligned with the utility industry median ratio of 54.3% (BBB+), and falls within the adjusted debt

ratio range of 50% to 55% for A- and A-rated utilities, to support Ameren Missouri's investment grade bond rating.

Q HOW WOULD THE COMMON EQUITY RATIO IN YOUR PROPOSED TRUE-UP CAPITAL STRUCTURE COMPARE TO THE INDUSTRY AVERAGE COMMON EQUITY RATIOS FOR ELECTRIC UTILITIES USED TO SET RATES?

A This compares very favorably. This is shown below in Table 4. For calendar years 2010-2016, the electric industry average and median common equity ratios for ratemaking purposes are shown. I show both the average and the median because some jurisdictions include non-investor capital in the ratemaking capital structure. This has the effect of reducing the industry average common equity ratio. However, the median generally shows what the common equity ratio would be if only investor capital is included in the ratemaking capital structure mix. As shown below in Table 4, by and large, regulatory commissions approve ratemaking capital structures that have approximately 50.4% common equity and 49.6% debt and preferred stock.

TABLE 4

Trends in
State Authorized Common Equity Ratios

Line	Year	Electric Industry Average	Electric Industry Median
	(1)	(2)	(3)
1	2010	49.5%	49.8%
2	2011	49.1%	49.1%
3	2012	51.5%	52.0%
4	2013	50.1%	51.0%
5	2014	50.3%	50.0%
6	2015	50.2%	50.5%
7	2016*	49.5%	50.0%
8	**Average**	**50.0%**	**50.3%**
9	Min	49.1%	49.1%
10	Max	51.5%	52.0%
11	**Midpoint**	**50.3%**	**50.6%**

Source:

SNL Financial, downloaded on Dec 15, 2016.
*Includes through Sep. 30, 2016

As such, my proposed adjustment to Mr. Martin's projected true-up capital structure would produce a common equity ratio of 50.4%, which is generally in line with the capital structures typically used to set rates for electric utility companies.

Q IS THERE EVIDENCE THAT THE REGULATORY AWARDS FOR RATE OF RETURN INCLUDING RETURN ON EQUITY AND COMMON EQUITY RATIOS HAVE SUPPORTED FINANCIAL INTEGRITY AND ACCESS TO CAPITAL FOR ELECTRIC UTILITIES?

A Yes. This was discussed at pages 5-20 of my direct testimony. There, I noted that electric utility companies have been able to access large amounts of capital to fund large capital programs under reasonable terms and prices. Further, I noted that the electric utility industry bond rating outlook is "Stable" and was actually upgraded in 2014 in part due to supportive regulatory decisions. These reasons help support the reasonableness of awarding Ameren Missouri a capital structure mix that is reasonably aligned with that of the electric utility industry.

Q ARE YOU RECOMMENDING THE COMMISSION CRITICALLY REVIEW AND ADJUST AMEREN MISSOURI'S ACTUAL CAPITAL STRUCTURE AT THE TIME OF THE TRUE-UP?

A Yes. As described above, Ameren Missouri can make financing decisions which maintain a more reasonable capital structure for ratemaking purposes. As described above, a capital structure with a common equity ratio of around 50.4% is generally in line with Ameren Missouri's actual capital structure over the six-quarter period ending June 2016, is a capital structure that has supported a "Stable" investment grade bond rating outlook for Ameren Missouri over this same time period, and produces a capital structure that is generally in line with the electric utility industry average capital structure used to set rates.

More importantly, the Commission's adjustment to Ameren Missouri's actual true-up capital structure may not necessarily result in a disallowance to Ameren

Missouri. Ameren Missouri can manage its actual capital structure to align with what the Commission found to be reasonable for ratemaking purposes. As such, if the Commission adjusts the actual capital structure at the true-up period to reflect a more reasonable mix of debt and equity, then Ameren Missouri can modify its capitalization decisions after the rate order to produce an actual capital structure that aligns with the capital structure used to set rates. More specifically, creating price signals to encourage Ameren Missouri to adjust its cost of service to align with what the Commission finds to be a reasonable and prudent cost of service creates rate-setting discipline which should be implemented in a regulatory process. This is the same kind of discipline that is created in a competitive marketplace by unregulated companies responding to market prices in adjusting cost of service in order to meet their profit targets at prices set by the market. In a similar vein, regulated utilities should adjust their costs to align with costs found appropriate by regulatory commissions in setting prices. This simply instills discipline for utility management to respond to reasonable price signals.

Q WHAT CAPITAL STRUCTURE DO YOU RECOMMEND THE COMMISSION USE TO SET AMEREN MISSOURI'S OVERALL RATE OF RETURN IN THIS PROCEEDING?

A For the reasons outlined above, I believe that the Commission should use the ratemaking capital structure shown in Table 5 below.

TABLE 5

Gorman Proposed
Ratemaking Capital Structure
(December 31, 2016)

Description	Weight
Long-Term Debt	48.54%
Preferred Stock	1.06%
Common Equity	50.40%
Total	100.00%

Source: Schedule MPG-R-2.

II. RESPONSE TO AMEREN MISSOURI WITNESS MR. ROBERT B. HEVERT

II.A. Summary of Rebuttal

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

A The Company has requested a return on equity of 9.90% based on the recommended range of 9.75% to 10.50% sponsored by its witness, Mr. Robert Hevert. Mr. Hevert concludes that his recommended return on equity range is reasonable, but conservative.[4] His recommended return on equity is based on: (1) a constant growth Discounted Cash Flow ("DCF") analysis, (2) a multi-stage growth DCF analysis, (3) Capital Asset Pricing Model ("CAPM") studies, and (4) a Bond Yield Plus Risk Premium methodology.

[4] Hevert Direct Testimony at 3.

Q ARE MR. HEVERT'S RETURN ON EQUITY ESTIMATES REASONABLE?

A No. Mr. Hevert's estimated return on equity is overstated and should be rejected. Mr. Hevert's analyses produce excessive results for various reasons, including the following:

1. His constant growth DCF results are based on unsustainably high growth rates;
2. his multi-stage growth DCF is based on:
    a. an unrealistic long-term Gross Domestic Product ("GDP") growth estimate that is not aligned with market participants' outlooks,
    b. a manipulated dividend payout ratio adjustment, and
    c. a terminal stock price that is produced by an unjustified price-to-earnings ("P/E") ratio assumption;
3. his CAPM is based on inflated market risk premiums; and
4. his Bond Yield Plus Risk Premium studies are based on inflated utility equity risk premiums.

Q PLEASE SUMMARIZE MR. HEVERT'S RETURN ON EQUITY ESTIMATES.

A Mr. Hevert's return on equity estimates are summarized in Table 6 below. In Column 2, I show the results with prudent and sound adjustments to correct the shortfalls referenced above. With such adjustments to his proxy group's DCF, CAPM, and Risk Premium return estimates, Mr. Hevert's own studies show my 9.20% recommended return on equity for Ameren Missouri is reasonable.

TABLE 6

Hevert's Return on Equity Estimates

Description	Mean[1] (1)	Adjusted[2] (2)
Constant Growth DCF:		
30-Day Average	8.74%	8.74%
90-Day Average	8.80%	8.80%
180-Day Average	8.98%	8.98%
Average Constant Growth DCF	8.84%	8.84%
Multi-Stage Growth DCF:		
30-Day Average	9.49%	8.10%
90-Day Average	9.65%	8.17%
180-Day Average	10.13%	8.37%
Average Multi-Stage Growth DCF	9.76%	8.21%
DCF Range	8.8% to 9.3%	8.2% to 8.9%
CAPM Results (Bloomberg Beta)		
Current 30-Yr Treasury (BL – 2.65%)	9.11%	7.45%
Current 30-Yr Treasury (*VL* – 2.65%)	9.48%	7.45%
Near-Term Projected 30-Yr Treasury (BL – 3.08%)	9.55%	7.89%
Near-Term Projected 30-Yr Treasury (VL – 3.08%)	9.92%	7.89%
CAPM Results (*Value Line* Beta)		
Current 30-Yr Treasury (BL – 2.65%)	10.73%	8.64%
Current 30-Yr Treasury (*VL* – 2.65%)	11.19%	8.64%
Near-Term Projected 30-Yr Treasury (BL – 3.08%)	11.17%	9.08%
Near-Term Projected 30-Yr Treasury (VL – 3.08%)	11.63%	9.08%
Risk Premium		
Current 30-Yr Treasury (2.65%)	10.04%	8.75%
Near-Term Projected 30-Yr Treasury (3.08%)	10.05%	9.18%
Long-Term Projected 30-Yr Treasury (4.45%)	10.39%	Reject
Alternative Risk Premium		
Current 30-Yr Treasury (2.65%)	9.74%	9.75%
Near-Term Projected 30-Yr Treasury (3.08%)	9.75%	9.75%
Long-Term Projected 30-Yr Treasury (4.45%)	10.04%	9.75%
Range	9.75% to 10.50%	8.2% to 9.75%

Sources:
[1]Hevert Schedules RBH-1, RBH-2, RBH-5 – RBH-7.
[2]Schedule MPG-R-4 and Schedule MPG-R-5.

II.B. Hevert DCF

II.B.1. Hevert Constant Growth DCF

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

A His constant growth DCF returns are developed in Schedule RBH-1. Mr. Hevert's constant growth DCF models are based on consensus growth rates published by Zacks and First Call and individual growth rate projections made by *Value Line*.

He relied on dividend yield calculations based on average stock prices over three different periods: 30-day, 90-day, and 180-day – all reflecting one-half year dividend growth adjustments.

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

A Mr. Hevert's constant growth DCF studies generally support a return on equity in the range of 8.75% to 9.0%, which is similar to the results of my constant growth DCF study that was presented in my direct testimony.

Similar to my constant growth DCF result, Mr. Hevert's mean constant growth DCF return estimates are reasonable high-end estimates because they are based on a proxy group average growth rate of 5.28% (Schedule RBH-1, pages 1-3). This growth rate is a very optimistic future growth in comparison to my long-term GDP growth of 4.25%. As such, his constant growth DCF return estimates should be considered as a high-end estimate of the current market cost of equity.

II.B.2. Hevert Multi-Stage Growth DCF

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

A Yes, he did. Mr. Hevert's multi-stage growth DCF analysis is impacted by various assumptions Mr. Hevert has modeled in his DCF study, all of which produce a DCF return estimate that is simply inflated. As a comparison, Mr. Hevert's long-term steady-state growth rate used in his multi-stage growth DCF analysis was 5.28%. (Schedule RBH-2, pages 1, 3 and 4 under Column 6). This long-term growth rate is identical to the average growth rate used in his constant growth DCF study of 5.28% as reflected in his Schedule RBH-1 under Column 8. While using a virtually identical growth rate, the results of his multi-stage growth DCF analysis were considerably higher than his constant growth DCF study. This inflation to the multi-stage growth DCF results largely reflects assumptions and inputs made by Mr. Hevert to manipulate dividend payout ratios and hence cash flow projections during the transitional stage of his model, and to use an artificial P/E ratio estimate to produce an inflated terminal value stock price in the steady-state growth rate period. The manipulative effect of these multi-growth study assumptions is clearly illustrated by a comparison of his constant growth and multi-stage growth DCF study results. The long-term steady-state growth rate used in the multi-stage growth DCF study is reasonably comparable to the average growth rate used in a constant growth DCF analysis. Therefore, one would reasonably expect the two DCF studies to produce reasonably comparable results. However, Mr. Hevert's multi-stage growth DCF study results are 75 to 100 basis points higher than his constant growth DCF results. Again, this is a suspicious result since the growth rates and dividend yields are nearly identical between the two studies.

Aside from this concern with the irrational results of Mr. Hevert's multi-stage growth DCF study, I believe his multi-stage growth DCF model is also inflated and unreliable for several reasons. First, he relied on a long-term GDP growth rate significantly higher than a projection that reflects consensus market participant outlooks for future GDP growth. Second, his dividend payout ratio assumption is flawed and simply inflates dividend payments and DCF return estimates. Third, his terminal value P/E ratio is arbitrarily based on the market P/E and/or a flawed assumption that the proxy group P/E ratio will not change as the growth rate outlook declines from the accelerated growth period to the lower sustainable growth period. Further, the terminal P/E ratio assumption is not related to his long-term growth rate assumption. The arbitrary terminal value P/E ratio input has the effect of further inflating Mr. Hevert's multi-stage growth DCF return estimate.

Q HOW DID MR. HEVERT CALCULATE A LONG-TERM GROWTH RATE?

A Mr. Hevert relied on the long-term historical real GDP growth of 3.24%, as measured over the period 1929 through 2015, and a forward inflation rate outlook of 1.98%. Mr. Hevert's 1.98% inflation rate outlook is the midpoint of two separate projections. First, he derived an inflation rate outlook of 1.76% based on the average of the 180-day average spread between the yields on long-term nominal Treasuries and long-term Treasury Inflation-Protected Securities ("TIPS"). Second, he used the Consumer Price Index ("CPI") projection for 2022-2026 of 2.20% from *Blue Chip Financial Forecasts*. The midpoint inflation rate outlook is 1.98% (1.76% to 2.20%).

Using an inflation factor of 1.98% and an historical real GDP growth of 3.24%, Mr. Hevert produced a nominal GDP growth rate outlook of 5.28%.[5]

[5][1.0324 x 1.0198 – 1], Hevert Direct Testimony at 28.

Q IS MR. HEVERT'S LONG-TERM GROWTH RATE ESTIMATE OF 5.28% REASONABLE?

A No. The methodology used by Mr. Hevert to develop his growth rate is problematic in that it is not based on market participants' outlooks for future growth opportunities of the proxy companies specifically, or even electric industry growth in general. Therefore, Mr. Hevert's GDP growth rate projection simply is not comparable to independent consensus analysts' projections of future GDP growth and, therefore, does not reasonably reflect investors' outlook used to make investment decisions.

Q WHY DO MR. HEVERT'S GDP GROWTH PROJECTIONS NOT ALIGN WITH INDEPENDENT MARKET PARTICIPANTS' GDP GROWTH PROJECTIONS?

A As mentioned, Mr. Hevert's growth rate of 5.28% is based on an historical real GDP growth rate of 3.24% and his independently derived projected inflation. This historical real GDP growth rate is considerably higher than the real GDP growth projection of 2.2% provided by consensus economists and published in the *Blue Chip Financial Forecasts*.

In order to measure the current market cost of equity demanded by investors in today's marketplace, it is necessary to reasonably capture the outlooks by investors that have formed evaluations of observable stock prices used in the various time periods underlying Mr. Hevert's and my DCF studies. In this regard, historical GDP growth rates dated back to 1929 do not reflect the outlooks of current market participants. Mr. Hevert's long-term growth rate simply ignores current consensus independent market participants' outlooks for future growth, and therefore he is not reasonably nor accurately reflecting the data likely relied upon by current market participants to value utility stocks.

A comparison of Mr. Hevert's GDP growth rate and consensus economists' projected growth over the next 5 and 10 years is shown in Table 7 below. As shown in this table, Mr. Hevert's GDP rate of 5.28% is significantly higher than consensus economists' projections of nominal GDP over the next 5 and 10 years of 4.14% to 4.35%, with a midpoint of 4.25%.

As is clearly evident in Table 7, Mr. Hevert's historical GDP growth is much higher than, and not representative of, consensus market expected forward-looking GDP growth.

TABLE 7

GDP Projections

Description	GDP Inflation	Real GDP	Nominal GDP
Mr. Hevert[1]	2.0%	3.2%	5.28%
Consensus Economists (5-Year)[2]	2.1%	2.2%	4.35%
Consensus Economists (10-Year)[2]	2.0%	2.1%	4.14%

Sources:

[1]Hevert Direct Testimony at 52.
[2]*Blue Chip Financial Forecasts*, December 1, 2016 at 14.

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

A As with his long term growth rates, where he ignored consensus projections of GDP growth in favor of historical values, Mr. Hevert also ignored dividend payout projections in favor of historical payouts. Specifically, Mr. Hevert modified analysts'

current dividend payout projections of 63.00% for his proxy group and assumed that eventually they would converge to the historical industry average dividend payout ratio of 66.88%.[6]

Q IS MR. HEVERT'S ASSUMPTION THAT THE PROXY GROUP'S PAYOUT RATIO WILL INCREASE TOWARD THE INDUSTRY HISTORIC DIVIDEND PAYOUT RATIO REASONABLE?

A No. The proxy group's current dividend payout ratio is reasonably consistent with the projection for the industry average payout ratio expected over time. As such, there is no basis to assume that every utility in the industry will converge upon the same historical payout ratio. Rather, it is more balanced and logical to assume that payout ratios should be reasonably consistent with the target industry payout ratio over time, and it is important to recognize that the proxy group is already at that target. Because the proxy group is reasonably aligned with outlooks for the industry as a whole going forward, there is simply no logical basis to assume the payout ratio will increase as Mr. Hevert assumed. Further, this assumption has a significant impact on the cash flows underlying Mr. Hevert's projection. Therefore, this unsupported payout ratio model adjustment caused an unjustified increase to the multi-stage growth DCF result.

[6]Hevert Direct Testimony at 55.

Q PLEASE EXPLAIN WHY MR. HEVERT'S ASSUMPTION FOR AN INCREASED PAYOUT RATIO FOR HIS PROXY GROUP, BASED ON HISTORICAL INDUSTRY AVERAGES INCREASES HIS MULTI-STAGE GROWTH DCF ESTIMATE.

A By assuming an increased payout ratio, Mr. Hevert is assuming that dividend growth will exceed earnings growth during the intermediate stage growth period. This elevated growth projection for dividends increases the cash flows in the DCF study, which artificially increases the DCF return estimate. Because this estimate is not based on any market participant's outlook for the proxy group generally, and since Mr. Hevert has not provided any information that the proxy group is not reasonably consistent with the range of expected payout ratios for the electric utility industry as a whole, this assumption simply is unreliable and inflates the DCF return estimate.

Q PLEASE DESCRIBE MR. HEVERT'S ASSUMPTION IN DERIVING THE TERMINAL GROWTH VALUE FOR THE COMPANIES IN HIS MULTI-STAGE GROWTH DCF ANALYSIS.

A Mr. Hevert states that he relied on a terminal value based on the current P/E ratio of the companies in his proxy group (Direct at 56). Mr. Hevert asserts that the proxy group's stock prices have traded at a discount to the market of about 13.0% and that it is reasonable to assume projected proxy group P/E ratio will continue to trade at a 13.0% discount to the market in the future. (Direct at 56-57).

Q IS THIS CONSTANT P/E RATIO ASSUMPTION REASONABLE WITHIN HIS MULTI-STAGE GROWTH DCF STUDY?

A No. The P/E ratio will change as the growth outlooks for each of the proxy group companies changes. Reflecting the current capital investment period occurring within

the industry, the current P/E ratio reflects an outlook for an accelerated growth rate period. This accelerated growth period is then followed by a contraction to a lower sustainable long-term growth rate. Under Mr. Hevert's assumption, however, there will be no contraction. Instead, the current P/E ratio will remain in effect during the terminal growth stage. That is an unreasonable assumption because after the current accelerated growth period ends, and growth declines to a lower sustainable level, it is reasonable to expect that the P/E ratio would also respond to those lower growth outlooks and decline. By overstating the terminal value price, based on a P/E ratio that does not reflect the decline in growth, Mr. Hevert is overstating the cash flows in his DCF study and overstating the multi-stage growth DCF return estimate.

Q HOW CAN MR. HEVERT'S MODEL BE CORRECTED TO ELIMINATE HIS UNREASONABLE ASSUMPTIONS?

A By adjusting the GDP growth outlook for long-term sustainable growth, down to the consensus economists' outlooks for future nominal GDP growth of 4.25% (rather than Mr. Hevert's inflated estimate of 5.28% which does not reflect independent market participants' growth outlooks), and reflecting long-term dividend growth in a multi-stage DCF model without the erroneous terminal value price estimate performed by Mr. Hevert, Mr. Hevert's multi-stage growth DCF model would produce a return more reflective of current market participant investment return outlooks.

Revising Mr. Hevert's multi-stage growth to correct all three of the identified flaws produces the multi-stage growth DCF return estimates shown in Table 8 below.

TABLE 8

Hevert Multi-Stage Growth DCF Analysis

Description	Mean[1] (1)	Adjusted[2] (2)
30-Day Average	9.49%	8.09%
90-Day Average	9.65%	8.16%
180-Day Average	10.13%	8.36%
Average	9.76%	8.20%

Sources:
[1]Hevert Direct Testimony at 56.
[2]Schedule MPG-R-4.

II.C. Mr. Hevert's CAPM

Q PLEASE DESCRIBE THE ISSUES WITH MR. HEVERT'S CAPM ANALYSIS.

A As indicated in my direct testimony, the CAPM analysis is based upon the theory that the market required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. The risk premium associated with the specific security is expressed mathematically as:

$B_i \times (R_m - R_f)$ where:

B_i = Beta - Measure of the risk for stock
R_m = Expected return for the market portfolio
R_f = Risk-free rate

This risk-free rate is added to this risk premium to produce the CAPM return. My major concern with Mr. Hevert's CAPM analysis is his use of an inflated market return or the R_m factor in the equation above.

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

A Mr. Hevert derived his market risk premiums by conducting a DCF analysis for the market. Mr. Hevert used two market risk premium estimates. They are DCF-derived

market risk premiums of 10.50% (using Bloomberg data) and 11.10% (using *Value Line* data). When added to the current 30-year Treasury bond yield of 2.65%, these produce market DCF returns of 13.14% and 13.75% respectively.[7]

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

A Mr. Hevert's DCF-derived market risk premiums are based on market returns of approximately 13.14% and 13.75%, which consist of growth rate components of approximately 11.08% and 11.71% and a market weighted expected dividend yield of approximately 2.06% and 2.04%, respectively.[8] As discussed in greater detail in my direct testimony, the DCF model requires a long-term sustainable growth rate. Mr. Hevert's sustainable market growth rates of approximately 11.08% and 11.71% are far too high to be a rational outlook for sustainable long-term market growth. These growth rates are more than two times the growth rate of the consensus U.S. GDP long-term growth outlook of 4.25%.

As a result of this unreasonable long-term market growth rate estimate, Mr. Hevert's market DCF returns used within his CAPM analysis are inflated and not reliable. Consequently, Mr. Hevert's 10.50% (Bloomberg) and 11.10% (*Value Line*) market risk premiums should not be used to estimate the Company's required CAPM based cost of common equity.

[7]Hevert Direct Testimony at 60-61 and Schedule RBH-3.
[8]Schedule RBH-3. (13.14% = 11.08% + 2.06% and 13.75% = 11.71% + 2.04%)

Q DO HISTORICAL ACTUAL RETURNS ON THE MARKET SUPPORT MR. HEVERT'S PROJECTED MARKET RETURNS?

A No. This is significant because Mr. Hevert does rely on historical market returns to produce real returns on the market for use in developing his GDP growth forecast in his DCF study. Using the same line of logic, historical data shows just how unreasonable Mr. Hevert's projected DCF return on the market is going forward. Clearly then, Mr. Hevert uses historical data when it supports a higher return, but abandons such data when it demonstrates the flaws in his inflated recommendation.

Q PLEASE EXPLAIN.

A Duff & Phelps estimates the actual capital appreciation for the Standard & Poor's ("S&P") 500 over the period 1926 through 2015 to have been 5.8% to 7.7%.[9] This compares to Mr. Hevert's projected growth of the market of 11.08% to 11.71%. Further, historically the geometric growth of the market of 5.8%[10] has reflected geometric growth of GDP over this same time period of approximately 6.2%.[11]

This review of historical data establishes two facts very clearly. First, historical, actual achieved growth has been substantially less than projected by Mr. Hevert. Second, historical growth on the market has tracked historical growth of the U.S. GDP. Projected growth of the U.S. GDP now is closer to the 4% to 5% area. All of this information strongly supports the conclusion that Mr. Hevert's projected growth on the market of 11.08% to 11.71% is substantially overstated. While I do not endorse the use of an historical growth rate to draw assessments of the market's

[9]Duff & Phelps, *2016 Valuation Handbook: Guide to Cost of Capital* at 2-4.

[10]Real historical growth 3.25% (Hevert Direct Testimony at 52) and historical inflation of 2.9% (Duff & Phelps, *2016 Valuation Handbook: Guide to Cost of Capital* at 2-4).

[11]Hevert Direct Testimony at 53. Real GDP of 3.24% and historical inflation of 2.9%.

forward-looking growth rate outlooks, this data can be used to show how the market return estimates produced by Mr. Hevert are unreasonable and grossly inflated.

Q CAN MR. HEVERT'S CAPM ANALYSIS BE REVISED TO REFLECT A MORE REASONABLE MARKET RISK PREMIUM AND RECENT RISK-FREE RATES?

A Yes. Using Mr. Hevert's risk-free rates of 2.65% and 3.08%, the average published Bloomberg and *Value Line* beta estimates of 0.615 and 0.77,[12] respectively; and my calculated high-end market risk premium of 7.8%, Mr. Hevert's CAPM would be no higher than 9.1%.

II.D. Bond Yield Plus Risk Premium

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

A Mr. Hevert proposes two risk premium studies: (1) a Primary bond yield plus ("BYP") risk premium study; and (2) an Alternative BYP risk premium study. The Primary BYP risk premium reflects a simple regression analysis based on a simple inverse relationship between interest rates and equity risk premiums. His Alternative BYP risk premium also uses a regression study but explains risk premiums by changes in interest rates, market volatility, and yield spreads between A-rated utility bonds and Treasury bond yields.

Mr. Hevert supports his risk premium findings by placing primary reliance on his Primary BYP risk premium. He concludes his risk premium methodology supports a return on equity in the range of 10.04% to 10.39%. I will comment on both Mr.

[12]Schedule RBH-4.

Hevert's BYP risk premium studies and his conclusion on what these methodologies support as a fair return on equity on Ameren Missouri.

II.D.1. Primary BYP Risk Premium

Q PLEASE DESCRIBE MR. HEVERT'S PRIMARY BYP RISK PREMIUM.

A As shown on Schedule RBH-6, Mr. Hevert constructs a risk premium return on equity estimate based on the premise that equity risk premiums are inversely related to interest rates. He estimates an average electric risk premium of 4.50% over the period January 1980 through April 29, 2016. Then he applies a regression formula to the current, near-term, and long-term projected 30-year Treasury bond yields of 2.65%, 3.08%, and 4.45% to produce electric risk premiums of 7.39%, 6.97%, and 5.94%, respectively. When added, he calculates return on equity estimates of 10.04%, 10.05%, and 10.39%, respectively.

Q IS MR. HEVERT'S PRIMARY BYP RISK PREMIUM METHODOLOGY REASONABLE?

A No. Mr. Hevert's reliance on only a simplistic inverse relationship between equity risk premiums and nominal interest rates to gauge equity risk premium is not supported by academic research. While academic studies have shown that, in the past, there has been an inverse relationship between these variables, researchers have found that the relationship changes over time and is influenced by changes in perception of

the investment risk of bond investments relative to equity investments, and not only changes to nominal interest rates.[13]

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

In today's marketplace, interest rate volatility is not as extreme as it was during the 1980s.[14] Nevertheless, changes in the perceived risk of bond investments relative to equity investments still drive changes in equity premiums and cannot be measured simply by observing nominal interest rates. Changes in nominal interest rates are heavily influenced by changes to inflation outlooks, which also change equity return expectations. As such, another relevant factor needed to explain changes in equity risk premiums is the relative changes to the risk of equity versus debt securities investments, in addition to changes in interest rates.

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

[13] "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.

[14] "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.

Q DO YOU HAVE ANY OTHER COMMENTS CONCERNING MR. HEVERT'S BYP RISK PREMIUM METHODOLOGY?

A Yes. Mr. Hevert's use of a long-term projected Treasury bond yield of 4.45% is not reflective of market participants' outlooks for Ameren Missouri's cost of capital during the true-up period nor the period rates determined in this proceeding will be in effect. This bond yield is largely based on projections of Treasury bond yields five to 10 years beyond 2016. Those projections are highly uncertain projections and in any event do not reflect the cost of capital in the test period, the true-up period, or even the period over the next two to three years, the period in which rates determined in this proceeding will likely be in effect. As such, the risk premium methodology should be based on observable bond yields in the market today and/or should reflect bond yield projections for periods out over the next two to three years, a period that reflects the rate-effective period from this case.

Q CAN MR. HEVERT'S BYP RISK PREMIUM ANALYSIS BE REVISED TO REFLECT CURRENT PROJECTIONS OF TREASURY YIELDS?

A Yes. Mr. Hevert's simplistic and incomplete notion that equity risk premiums change only with changes to nominal interest rates should be rejected, should be corrected to reflect a risk premium that reflects the current market required return differences based on investment risk as I have proposed above.

Adding my weighted average equity risk premium over Treasury bonds of 6.1% as described in my direct testimony to his Treasury yields of 2.65% and 3.08%, produces a BYP of 8.75% to 9.18%.

II.D.2. Alternative BYP Risk Premium

Q PLEASE DESCRIBE MR. HEVERT'S ALTERNATIVE BYP RISK PREMIUM ANALYSIS?

A Mr. Hevert developed an Alternative BYP risk premium analysis to test how market conditions affect the relationship between interest rates and equity risk premiums. Specifically, he developed a regression analysis in which the equity risk premium was the dependent variable and the: (1) Treasury bond yields, (2) the spreads between Moody's A-rated yields and Treasury yields, and (3) a market volatility index as measured by the Chicago Board Options Exchange ("CBOE") Volatility Index ("VIX") were the independent variables. Based on this analysis, he concluded these additional variables (the credit spreads and the VIX) did not add statistical significance to the explanatory power of his Primary BYP risk premium study rates.[15] Thus, his Alternative BYP is simply dependent on "nominal" Treasury bond yields.

His Alternative BYP risk premium supported a return on equity in the range of 9.74% to 10.04%.[16]

Q WHAT ISSUES DO YOU HAVE WITH MR. HEVERT'S ALTERNATIVE BYP RISK PREMIUM METHODOLOGY?

A Mr. Hevert's Alternative BYP risk premium was developed on Schedule RBH-7 and is a substantial improvement to his simplistic Primary BYP risk premium. As noted above, the Primary BYP risk premium assumes current risk premiums in the market can be measured by simply changes in interest rates. This simplistic relationship is not supported in academic literature nor is it a reasonable outlook for changes in invested capital. As illustrated above, inflation outlooks can impact both equity

[15] Hevert Direct Testimony at 42.
[16] Schedule RBH-7.

returns and bond yields in a similar manner. Hence, declines in inflation outlooks can impact the equity return in bond interest rates without impacting the equity risk premium. Mr. Hevert's Primary BYP risk premium simply ignores this indisputable relationship.

Mr. Hevert applies his regression analysis to risk premiums based on individual rate case decisions with contemporary Treasury yields, A-rated utility bond and Treasury yield spreads, and the VIX market volatility index. He adjusted for rate case lag based on when the case was filed and when the case was decided. His analysis had 622 individual observations since December 1992. By including all of these individual observations with his speculative lag adjustment, his analysis produced a result with limited explanatory power (measured through the Adjusted R-Squared measure) and a higher standard error. These are statistical parameters that describe the reliability of the regression results.

Q PLEASE COMMENT ON THE ALTERNATIVE BYP RISK PREMIUM STUDY.

A Mr. Hevert's Alternative BYP risk premium study, while better than his Primary BYP risk premium, still needs improvement. Mr. Hevert has not shown that the volatility index he uses can accurately describe the difference between expected returns for utility securities and the general stock market. Investment return volatility for utility investors is far more stable than that of the overall stock market. This is illustrated by the fact utility companies have lower betas than that of the overall market. Hence, market volatility may explain increases in market return, but may overstate a fair return for a lower risk utility stock.

A spread between a utility bond security and Treasury market is a much better indication of changes in investment risk outlooks by the marketplace for utility versus

general market investments. Had Mr. Hevert's Alternative BYP risk premium regressed changes in interest rates and utility to Treasury yield spread, it would have substantially improved the reasonableness of Mr. Hevert's BYP risk premium study.

Q HOW WOULD MR. HEVERT'S ALTERNATIVE BYP RISK PREMIUM STUDY BE IMPACTED IF YOU REMOVE MR. HEVERT'S LAG ADJUSTMENT AND EXCLUDE THE VIX INDEX IN THE REGRESSION ANALYSIS?

A I reproduced two versions of a multi-factor regression analysis. In my first analysis, I regressed risk premium (dependent) to (1) 30-year Treasury yield; and (2) yield spreads (A-rated utility to Treasury bond). This regression study produced stronger regression metrics than Mr. Hevert's risk premium study – an adjusted R-squared of 84.5% and a standard error of approximately 0.0037, compared to Mr. Hevert's adjusted R-squared and standard error of 68.6% and 0.0054, respectively.

When applying the current 13-week average 30-Year Treasury yield of 2.91%, the current A utility-Treasury bond spread is 1.19%. This data produces a risk premium of 6.85% and a cost of equity of approximately 9.76% (6.85% plus 2.91%, as shown on page 1 of Schedule MPG-R-5).

In my second analysis, I again regressed risk premium against two variables: (1) Treasury bond yields; and (2) yield spread (Baa utility to Treasury). This analysis produced very similar results to my first study regression -- adjusted R-squared of 83.7% and standard error of 0.0038.

Applying the current 13-week average 30-Year Treasury yield of 2.91% and a Baa utility bond/Treasury yield spread of 1.73%, produces an estimated risk premium of 6.83% and a cost of equity of 9.73%, as shown on page 2 of Schedule MPG-R-5.

This revised Alternative BYP risk premium study supports a return on equity for Ameren Missouri no higher than 9.75%. Of course, this risk premium still only reflects changes in interest rates and not differences in required investment returns.

Q WOULD IT BE APPROPRIATE TO USE PROJECTED TREASURY BOND YIELDS IN THIS REGRESSION STUDY TO MEASURE EQUITY RISK PREMIUMS?

A No. This model is specifically designed to capture relationships between observable Treasury bond yields and utility bond to Treasury bond yield spreads. If a projected Treasury bond yield was used, it would be necessary to also project the yield spreads between utility bond yields and Treasury yields. This yield spread data simply is not available. Therefore, this model can only be reliably applied to current observable Treasury bond yields, and yield spreads.

II.E. Additional Risks

Q DID MR. HEVERT CONSIDER ADDITIONAL BUSINESS RISKS TO JUSTIFY A RETURN ON EQUITY WITHIN HIS RANGE?

A Mr. Hevert believes Ameren Missouri's regulatory environment, the environmental regulations associated with its generation portfolio, and its substantial capital expenditure plan relative to the proxy group conservatively support a return on equity within Mr. Hevert's range. I disagree. Setting the return on equity within Mr. Hevert's range will place an unreasonable burden on the ratepayers and should be rejected. As discussed below, Ameren Missouri's relative risk is comparable to the risk of the utility companies included in the proxy group.

Q WHY DO YOU BELIEVE THAT AMEREN MISSOURI FACES RISKS THAT ARE COMPARABLE TO THE RISKS FACED BY THE PROXY GROUP USED BY BOTH MR. HEVERT'S AND YOURSELF?

A The business risks identified by Mr. Hevert (regulatory environment, environmental regulations and declining customer usage) as well as all other relevant business risks are considered in the establishment of a credit rating by the various credit rating agencies. As shown on my Schedule MPG-4 included in my direct testimony and presented as Schedule MPG-R-4 in this testimony, the average S&P credit rating for my proxy group of "BBB+" is the same as Ameren Missouri's credit rating. The relative risks discussed on pages 21-35 of Mr. Hevert's testimony are already incorporated in the credit ratings of the proxy group companies. S&P and other credit rating agencies go through great detail in assessing a utility's business risk and financial risk in order to evaluate their assessment of its total investment risk. Therefore, this total risk investment assessment of Ameren Missouri, in comparison to a proxy group, is fully absorbed into the market's perception of Ameren Missouri's risk and the proxy group fully captures the investment risk of Ameren Missouri.

Q HOW DOES S&P ASSIGN CORPORATE CREDIT RATINGS FOR REGULATED UTILITIES?

A In assigning corporate credit ratings, the credit rating agency considers both business and financial risks. Business risks, among others, include company's size and competitive position, generation portfolio, capital expenditure programs, consideration of the regulatory environment, current state of the industry, and the economy as whole. Specifically, S&P states:

> To determine the assessment for a corporate issuer's business risk profile, the criteria combine our assessments of industry risk, country

> risk, and competitive position. Cash flow/leverage analysis determines a company's financial risk profile assessment. The analysis then combines the corporate issuer's business risk profile assessment and its financial risk profile assessment to determine its anchor. In general, the analysis weighs the business risk profile more heavily for investment-grade anchors, while the financial risk profile carries more weight for speculative-grade anchors.[17]

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

A Yes. Mr. Hevert suggests a few factors that gauge investor sentiment, including the relationship between the Federal Reserve's balance sheet and market volatility, measured by the CBOE Volatility Index, known as the VIX.[18] He concludes these metrics indicate that current levels of instability and risk aversion are at historically low levels and that the constant growth DCF results are at odds with market conditions.

Q DO YOU BELIEVE THAT MR. HEVERT'S USE OF THESE MARKET SENTIMENTS SUPPORTS HIS FINDINGS THAT AMEREN MISSOURI'S MARKET COST OF EQUITY IS CURRENTLY IN THE RANGE OF 9.75% TO 10.50%?

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

[17] Standard & Poor's RatingsDirect: "Criteria/Corporates/General: Corporate Methodology," November 19, 2013.

[18] Hevert Direct Testimony at 35-39.

Q WHAT IS THE MARKET SENTIMENT FOR UTILITY INVESTMENTS?

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

For example, this is illustrated by my Schedule MPG-15 filed with my direct testimony, under column 11 showing the spread between "A" rated utility bond yields and "Aaa" rated corporate bond yields. The spread is approximately 0.28%. This is a relatively low spread over the 36-year time horizon. Indeed, current spreads of utility versus high-grade corporate bond yields are at the lowest level they have been in most periods over the last 36 years. This is also reflective of the spreads between "Baa" utility bond yields relative to "Baa" corporate bond yields. Currently, utility bonds are trading at a premium to corporate bonds. This has been largely the case during the significant market turbulence that has occurred over the last five to eight years. However, over longer periods of time, utility bond yields on average trade even with or at a premium to corporate "Baa" rated bond yields. The current strong utility bond valuation is an indication of the market's sentiment that utility bonds have lower risk than general corporate bonds and are generally regarded as a safe haven by the investment industry.

Further, other measures of utility stock valuations also support a robust market for utility stocks. As shown on my Schedule MPG-3 included in my direct testimony, utility valuation measures – *e.g.*, P/E ratio and market price to cash flow ratio – show stock valuation measures for the proxy group are robust. For example, for the proxy group, the current P/E ratio is comparable to and the cash flow ratio is stronger than the 14-year average valuation metrics.

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

Q DO YOU HAVE ANY COMMENTS CONCERNING MR. HEVERT'S CONTENTION THAT INTEREST RATES ARE GOING TO INCREASE?

A Yes. Mr. Hevert develops his risk premium studies mainly relying on near-term and long-term projected interest rates, which he believes are expected to increase (Hevert Direct Testimony at 39). Mr. Hevert's proposal to rely mainly on forecasted Treasury bond yields is unreasonable because he is not considering the highly likely outcome that current observable interest rates will prevail during the period rates determined in this proceeding will be in effect. This is important because, while current observable interest rates are based on actual market data that provides a measure of the current cost of capital, the accuracy of forecasted interest rates is problematic at best.

Q WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST RATES IS HIGHLY PROBLEMATIC?

A Over the last several years, observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections. Schedule MPG-R-3 illustrates this point. On this schedule, under Columns 1 and 2, I show the actual market yield at the time a projection is made for Treasury bond yields two years in the future. In Column 1, I show the actual Treasury yield. In Column 2, I show the projected yield two years out.

As shown in Columns 1 and 2, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. In Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in this schedule, economists consistently have been projecting that interest rates will increase over several years. However, as shown in Column 5, those yield projections have turned out to be overstated in almost every case. Indeed, actual Treasury yields have decreased or remained flat over the last several years rather than increased as the economists' projections indicated. As such, current observable interest rates are more likely to accurately predict future interest rates, than are economists' projections.

Q DO YOU HAVE ANY FURTHER COMMENTS IN REGARD TO MR. HEVERT'S INTEREST RATE PROJECTIONS?

A Yes. First, it is simply not known how much, if any, long-term interest rates will increase from current levels or whether they have already fully accounted for the termination of the Federal Reserve's Quantitative Easing program and the increase in the Federal Funds rate. Nevertheless, I do agree this Federal Reserve program introduced risk or uncertainty in long-term interest rate markets. Because of this uncertainty, caution should be taken in estimating Ameren Missouri's current return on common equity in this case. However, as noted in the Edison Electric Institute ("EEI") quote below, the increase in short-term interest rates had no impact on longer-

term yields that "remain at historically low levels and are influenced more by the level of inflation and economic strength than by the Fed's short-term rate policy."[19]

Second, I would note Ameren Missouri is largely shielded from significant changes in capital market costs. To the extent interest rates ultimately increase above current levels, which may have an impact on required returns on common equity, at that point in time, Ameren Missouri, like all other utilities, can file to change rates to restate its authorized rate of return at the prevailing market levels.

Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A Yes.

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[19] *EEI Q4 2015 Financial Update*: "Stock Performance" at 4.

Ameren Missouri

Regulatory Capital Structure

(FERC Form 1 Data in Millions)

Line	Regulatory Capital Structure	Sep-30-2016 (1)	Jun-30-2016 (2)	Mar-31-2016 (3)	Dec-31-2015 (4)	Sep-30-2015 (5)	Jun-30-2015 (6)	Mar-31-2015 (7)	True-up Case No. ER-2014-0258 Dec-31-2014 (8)
1	Long-Term Debt	$ 3,730.52	$ 3,730.39	$ 3,581.02	$ 3,840.88	$ 3,840.74	$ 3,840.60	$ 3,705.05	$ 3,704.91
2	Preferred Stock	80.76	80.76	80.76	80.76	80.76	80.76	80.76	80.76
3	Common Equity	4,066.20	3,898.19	3,875.41	4,001.83	4,037.75	3,873.51	3,913.30	3,971.81
4	Total Capital	$ 7,877.48	$ 7,709.33	$ 7,537.18	$ 7,923.47	$ 7,959.25	$ 7,794.87	$ 7,699.11	$ 7,757.48
5	Short-Term Debt	$ -	$ 76.50	$ 165.30	$ -	$ -	$ 37.80	$ 139.50	$ 96.50
6	Long-Term Debt	47.36%	48.39%	47.51%	48.47%	48.26%	49.27%	48.12%	47.76%
7	Preferred Stock	1.03%	1.05%	1.07%	1.02%	1.01%	1.04%	1.05%	1.04%
8	Common Equity	51.62%	50.56%	51.42%	50.51%	50.73%	49.69%	50.83%	51.20%
9	Total Req Capital	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10	Common Equity Ratio with Short-Term Debt	51.62%	50.07%	50.31%	50.51%	50.73%	49.45%	49.92%	50.57%

		Without Short-Term Debt	With Short-Term Debt
11	Average Common Equity Ratio 2015-Q2 2016	50.62%	50.17%

Source:
FERC Forms 3Q, various dates.

Ameren Missouri

Gorman Proposed Capital Structure
(December 31,2016)

Line		Balance (1)	Adjustment (2)	Adjustment Balance (3)	Weights (4)
1	Long-Term debt	$ 3,647,651,680	$ 108,621,841	$ 3,756,273,521	48.54%
2	Short-term debt	-		-	0.00%
3	Preferred Stock	81,827,509		81,827,509	1.06%
4	Common equity	4,008,376,639	(108,621,841)	3,899,754,798	50.40%
5	Total	$ 7,737,855,828	$ -	$ 7,737,855,828	100.00%

Source:

[1] Direct Testimony of Ryan J. Martin.

[2] $110 million at approximately 1.25% issuance cost.

[3] Sum Col (1) and Col (2).

Ameren Missouri

Gorman Proposed Capital Structure
(December 31,2016)

Line		Adjustment Balance (1)	Weights (2)
1	Long-Term debt	$ 3,756,273,521	47.68%
2	Short-term debt	-	0.00%
3	OBS Debt Equivalents	140,734,776	1.79%
4	Total Debt	$ 3,897,008,297	49.46%
5	Preferred Stock	$ 81,827,509	1.04%
6	Common equity	3,899,754,798	49.50%
7	Total	$ 7,878,590,604	100.00%

Source:

[1] Direct Testimony of Ryan J. Martin.

[2] S&P CreditStats Direct, downloaded on January 16, 2017.

[3] FERC Form 3Q, various dates.

Ameren Missouri

Financial vs. Regulatory Capital Structure
(SEC 10K Data in Millions)

Line	I. Financial Capital Structure	Sep-30-2016 (1)	Jun-30-2016 (2)	Mar-31-2016 (3)	Dec-31-2015 (4)	Sep-30-2015 (5)	Jun-30-2015 (6)	Mar-31-2015 (7)	Dec-31-2014 (8)
1	Long-Term Debt	$ 3,569.00	$ 3,568.00	$ 3,845.00	$ 3,844.00	$ 3,869.00	$ 3,869.00	$ 3,619.00	$ 3,879.00
2	Short-Term Debt	$ 431.00	$ 508.00	$ 171.00	$ 266.00	$ 266.00	$ 304.00	$ 581.00	$ 217.00
3	S&P OBS Debt Equivalents	140.73	158.68	118.58	(72.72)	448.28	267.53	186.68	126.08
4	Total Debt Adjusted	$ 4,140.73	$ 4,234.68	$ 4,134.58	$ 4,037.28	$ 4,583.28	$ 4,440.53	$ 4,386.68	$ 4,222.08
5	Preferred Stock	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00
6	Common Equity	$ 4,067.00	$ 3,899.00	$ 3,876.00	$ 4,002.00	$ 4,038.00	$ 3,874.00	$ 3,914.00	$ 3,972.00
7	Total Capital - Adjusted	$ 8,287.73	$ 8,213.68	$ 8,090.58	$ 8,119.28	$ 8,701.28	$ 8,394.53	$ 8,380.68	$ 8,274.08
8	Total Debt - Adjusted	49.96%	51.56%	51.10%	49.72%	52.67%	52.90%	52.34%	51.03%
9	Preferred Stock	0.97%	0.97%	0.99%	0.99%	0.92%	0.95%	0.95%	0.97%
10	Common Equity	49.07%	47.47%	47.91%	49.29%	46.41%	46.15%	46.70%	48.01%
11	Total Adj. Capital	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	II. Regulatory Capital Structure								
12	Total Adj. Debt.	$ 4,140.73	$ 4,234.68	$ 4,134.58	$ 4,037.28	$ 4,583.28	$ 4,440.53	$ 4,386.68	$ 4,222.08
13	Less: Short Debt	431.00	508.00	171.00	266.00	266.00	304.00	581.00	217.00
14	Less: OBS Debt Eq.	140.73	158.68	118.58	(72.72)	448.28	267.53	186.68	126.08
15	Long-Term Debt	$ 3,569.00	$ 3,568.00	$ 3,845.00	$ 3,844.00	$ 3,869.00	$ 3,869.00	$ 3,619.00	$ 3,879.00
16	Preferred Stock	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00	$ 80.00
17	Common Equity	4,067.00	3,899.00	3,876.00	4,002.00	4,038.00	3,874.00	3,914.00	3,972.00
18	Total Reg Capital	$ 7,716.00	$ 7,547.00	$ 7,801.00	$ 7,926.00	$ 7,987.00	$ 7,823.00	$ 7,613.00	$ 7,931.00
19	Long-Term Debt	46.25%	47.28%	49.29%	48.50%	48.44%	49.46%	47.54%	48.91%
20	Preferred Stock	1.04%	1.06%	1.03%	1.01%	1.00%	1.02%	1.05%	1.01%
21	Common Equity	52.71%	51.66%	49.69%	50.49%	50.56%	49.52%	51.41%	50.08%
22	Total Reg Capital	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
23	Average Common Equity Ratio 2015-Q2 2016	50.56%							

Ameren Missouri

S&P Adjusted Debt Ratio
(Operating Subsidiaries)

11 Quarter Average

Line	Rating	Count	Average	Median	High	Low	Distribution of Quarterly Average < 50	50 to 55	> 55
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	AA-	1	42.63	42.63	42.63	42.63	1	-	-
2	A	9	52.47	51.52	57.18	50.34	-	7	2
3	A-	31	50.80	51.65	63.93	38.36	12	11	8
4	BBB+	28	53.25	54.34	59.37	43.71	5	10	13
5	BBB	8	52.60	52.91	57.04	47.31	2	3	3
6	BBB-	9	56.51	56.74	61.41	51.11	-	3	6
7	BB	1	43.18	43.18	43.18	43.18	1	-	-
8	**Total**	**87**					**21**	**34**	**32**
9	**Average**		**50.20**	**50.42**	**54.96**	**45.23**			

Quarter Results - 2013Q4 through 2016Q2

Line	Rating	Count	Average	Median	High	Low	Distribution of Quarterly Results < 50	50 to 55	> 55
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
10	AA-	11	42.63	42.79	44.98	40.78	11	-	-
11	A	91	52.50	51.50	60.02	47.70	16	56	19
12	A-	323	50.70	51.43	64.53	31.05	137	118	68
13	BBB+	296	53.33	53.81	63.58	42.12	57	122	117
14	BBB	88	52.60	52.61	60.01	44.64	27	36	25
15	BBB-	98	56.52	56.30	67.82	45.83	4	37	57
16	BB	10	43.18	43.36	45.70	40.02	10	-	-
17	**Total**	**917**					**262**	**369**	**286**
18	**Average**		**50.21**	**50.26**	**58.09**	**41.73**			

Source:
Standard and Poor's Global Credit Portal, downloaded November 18, 2016.

Ameren Missouri

Hevert Revised Multi-Stage Growth Discounted Cash Flow Model

30 Day Average Stock Price

(Average EPS Growth Rate Estimate in First Stage)

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$56.26	4.50%	3.00%	4.00%	3.83%	4.25%	66.00%	64.00%	66.00%	($0.00)	8.49%	16.24	3.82
Alliant Energy Corporation	LNT	$35.91	6.10%	6.60%	6.00%	6.23%	4.25%	64.00%	64.00%	64.00%	$0.00	8.00%	17.77	4.18
American Electric Power Company, Inc.	AEP	$64.21	4.90%	4.10%	4.50%	4.50%	4.25%	64.00%	66.00%	64.00%	($0.00)	8.29%	16.53	3.89
Avista Corporation	AVA	$40.20	5.00%	5.00%	5.00%	5.00%	4.25%	68.00%	63.00%	68.00%	($0.00)	7.91%	19.39	4.56
CMS Energy Corporation	CMS	$40.94	6.40%	7.24%	6.00%	6.55%	4.25%	63.00%	63.00%	63.00%	$0.00	7.96%	17.70	4.16
DTE Energy Company	DTE	$89.05	5.80%	5.35%	4.50%	5.22%	4.25%	61.00%	64.00%	61.00%	$0.00	7.83%	17.74	4.17
IDACORP, Inc.	IDA	$72.54	4.00%	4.00%	3.00%	3.67%	4.25%	53.00%	60.00%	53.00%	$0.00	7.28%	18.22	4.29
NorthWestern Corporation	NWE	$57.42	5.00%	5.00%	6.50%	5.50%	4.25%	65.00%	59.00%	65.00%	($0.00)	8.12%	17.53	4.12
OGE Energy Corp.	OGE	$29.76	5.20%	4.30%	2.50%	4.00%	4.25%	64.00%	74.00%	64.00%	($0.00)	8.33%	16.34	3.84
Otter Tail Corporation	OTTR	$29.38	NA	6.00%	6.00%	6.00%	4.25%	80.00%	63.00%	80.00%	$0.00	9.30%	16.53	3.89
Pinnacle West Capital Corporation	PNW	$72.71	4.00%	3.73%	4.00%	3.91%	4.25%	64.00%	65.00%	64.00%	$0.00	7.97%	17.92	4.22
PNM Resources, Inc.	PNM	$32.12	7.60%	8.76%	9.00%	8.45%	4.25%	51.00%	55.00%	51.00%	($0.00)	8.04%	14.03	3.30
Portland General Electric Company	POR	$40.21	6.40%	6.57%	5.50%	6.16%	4.25%	56.00%	56.00%	56.00%	($0.00)	7.78%	16.52	3.89
SCANA Corporation	SCG	$68.85	5.30%	4.80%	4.50%	4.87%	4.25%	59.00%	60.00%	59.00%	($0.00)	8.00%	16.41	3.86
Xcel Energy Inc.	XEL	$40.51	5.30%	5.27%	5.50%	5.36%	4.25%	62.00%	63.00%	62.00%	$0.00	8.06%	16.97	3.99
												DCF Result		
											Mean	8.09%	17.06	4.01
											Max	9.30%	19.39	4.56
											Min	7.28%	14.03	3.30

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	**2021**	2022	2023	2024	2025	**2026**	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	$3.38	$3.51	$3.64	$3.78	$3.93	$4.08	$4.24	$4.41	$4.59	$4.77	$4.97	$5.18	$5.40	$5.63	$5.87	$6.12	$6.38
Alliant Energy Corporation	LNT	$1.69	$1.79	$1.90	$2.02	$2.15	$2.28	$2.41	$2.55	$2.68	$2.81	$2.94	$3.07	$3.20	$3.33	$3.48	$3.62	$3.78
American Electric Power Company, Inc.	AEP	$3.60	$3.76	$3.93	$4.11	$4.29	$4.49	$4.69	$4.89	$5.11	$5.33	$5.56	$5.79	$6.04	$6.30	$6.56	$6.84	$7.13
Avista Corporation	AVA	$1.89	$1.98	$2.08	$2.19	$2.30	$2.41	$2.53	$2.65	$2.77	$2.90	$3.02	$3.15	$3.29	$3.43	$3.57	$3.72	$3.88
CMS Energy Corporation	CMS	$1.89	$2.01	$2.15	$2.29	$2.44	$2.60	$2.76	$2.91	$3.07	$3.23	$3.38	$3.52	$3.67	$3.82	$3.99	$4.16	$4.33
DTE Energy Company	DTE	$4.44	$4.67	$4.92	$5.17	$5.44	$5.73	$6.01	$6.31	$6.61	$6.91	$7.21	$7.52	$7.84	$8.17	$8.52	$8.88	$9.26
IDACORP, Inc.	IDA	$3.87	$4.01	$4.16	$4.31	$4.47	$4.63	$4.81	$4.99	$5.19	$5.40	$5.63	$5.87	$6.11	$6.37	$6.65	$6.93	$7.22
NorthWestern Corporation	NWE	$2.90	$3.06	$3.23	$3.41	$3.59	$3.79	$3.99	$4.19	$4.40	$4.60	$4.81	$5.01	$5.23	$5.45	$5.68	$5.92	$6.17
OGE Energy Corp.	OGE	$1.71	$1.78	$1.85	$1.92	$2.00	$2.08	$2.16	$2.25	$2.35	$2.44	$2.55	$2.65	$2.77	$2.89	$3.01	$3.14	$3.27
Otter Tail Corporation	OTTR	$1.56	$1.65	$1.75	$1.86	$1.97	$2.09	$2.21	$2.33	$2.45	$2.56	$2.68	$2.79	$2.91	$3.04	$3.17	$3.30	$3.44
Pinnacle West Capital Corporation	PNW	$3.92	$4.07	$4.23	$4.40	$4.57	$4.75	$4.94	$5.14	$5.35	$5.57	$5.80	$6.05	$6.30	$6.57	$6.85	$7.14	$7.45
PNM Resources, Inc.	PNM	$1.64	$1.78	$1.93	$2.09	$2.27	$2.46	$2.65	$2.84	$3.02	$3.19	$3.35	$3.49	$3.64	$3.79	$3.95	$4.12	$4.30
Portland General Electric Company	POR	$2.04	$2.17	$2.30	$2.44	$2.59	$2.75	$2.91	$3.07	$3.23	$3.39	$3.54	$3.69	$3.85	$4.02	$4.19	$4.36	$4.55
SCANA Corporation	SCG	$3.81	$4.00	$4.19	$4.39	$4.61	$4.83	$5.06	$5.30	$5.54	$5.79	$6.04	$6.29	$6.56	$6.84	$7.13	$7.44	$7.75
Xcel Energy Inc.	XEL	$2.10	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.01	$3.15	$3.30	$3.45	$3.59	$3.75	$3.91	$4.07	$4.24	$4.42

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE		66.00%	65.50%	65.00%	64.50%	64.00%	64.33%	64.67%	65.00%	65.33%	65.67%	66.00%	66.00%	66.00%	66.00%	66.00%	66.00%
Alliant Energy Corporation	LNT		64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
American Electric Power Company, Inc.	AEP		64.00%	64.50%	65.00%	65.50%	66.00%	65.67%	65.33%	65.00%	64.67%	64.33%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Avista Corporation	AVA		68.00%	66.75%	65.50%	64.25%	63.00%	63.83%	64.67%	65.50%	66.33%	67.17%	68.00%	68.00%	68.00%	68.00%	68.00%	68.00%
CMS Energy Corporation	CMS		63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%
DTE Energy Company	DTE		61.00%	61.75%	62.50%	63.25%	64.00%	63.50%	63.00%	62.50%	62.00%	61.50%	61.00%	61.00%	61.00%	61.00%	61.00%	61.00%
IDACORP, Inc.	IDA		53.00%	54.75%	56.50%	58.25%	60.00%	58.83%	57.67%	56.50%	55.33%	54.17%	53.00%	53.00%	53.00%	53.00%	53.00%	53.00%
NorthWestern Corporation	NWE		65.00%	63.50%	62.00%	60.50%	59.00%	60.00%	61.00%	62.00%	63.00%	64.00%	65.00%	65.00%	65.00%	65.00%	65.00%	65.00%
OGE Energy Corp.	OGE		64.00%	66.50%	69.00%	71.50%	74.00%	72.33%	70.67%	69.00%	67.33%	65.67%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Otter Tail Corporation	OTTR		80.00%	75.75%	71.50%	67.25%	63.00%	65.83%	68.67%	71.50%	74.33%	77.17%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Pinnacle West Capital Corporation	PNW		64.00%	64.25%	64.50%	64.75%	65.00%	64.83%	64.67%	64.50%	64.33%	64.17%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
PNM Resources, Inc.	PNM		51.00%	52.00%	53.00%	54.00%	55.00%	54.33%	53.67%	53.00%	52.33%	51.67%	51.00%	51.00%	51.00%	51.00%	51.00%	51.00%
Portland General Electric Company	POR		56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%
SCANA Corporation	SCG		59.00%	59.25%	59.50%	59.75%	60.00%	59.83%	59.67%	59.50%	59.33%	59.17%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%
Xcel Energy Inc.	XEL		62.00%	62.25%	62.50%	62.75%	63.00%	62.83%	62.67%	62.50%	62.33%	62.17%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE		$2.32	$2.39	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$4.21	$103.65
Alliant Energy Corporation	LNT		$1.15	$1.22	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$2.42	$67.14
American Electric Power Company, Inc.	AEP		$2.41	$2.54	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$4.57	$117.91
Avista Corporation	AVA		$1.35	$1.39	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$2.64	$75.29
CMS Energy Corporation	CMS		$1.27	$1.35	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$2.73	$76.69
DTE Energy Company	DTE		$2.85	$3.04	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$5.65	$164.30
IDACORP, Inc.	IDA		$2.13	$2.28	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$3.83	$131.59
NorthWestern Corporation	NWE		$1.99	$2.05	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$4.01	$108.21
OGE Energy Corp.	OGE		$1.14	$1.23	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$2.09	$53.41
Otter Tail Corporation	OTTR		$1.32	$1.33	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$2.75	$56.86
Pinnacle West Capital Corporation	PNW		$2.61	$2.72	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$4.76	$133.44
PNM Resources, Inc.	PNM		$0.91	$1.00	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$2.19	$60.27
Portland General Electric Company	POR		$1.21	$1.29	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$2.55	$75.14
SCANA Corporation	SCG		$2.36	$2.48	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$4.57	$127.19
Xcel Energy Inc.	XEL		$1.37	$1.45	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$2.74	$75.09

Projected Annual Data Investor Cash Flows			[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker		Initial Outflow	5/31/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE		($56.26)	$0.00	$1.36	$2.36	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$107.86
Alliant Energy Corporation	LNT		($35.91)	$0.00	$0.67	$1.18	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$69.55
American Electric Power Company, Inc.	AEP		($64.21)	$0.00	$1.41	$2.46	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$122.48
Avista Corporation	AVA		($40.20)	$0.00	$0.79	$1.38	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$77.93
CMS Energy Corporation	CMS		($40.94)	$0.00	$0.74	$1.31	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$79.42
DTE Energy Company	DTE		($89.05)	$0.00	$1.67	$2.92	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$169.95
IDACORP, Inc.	IDA		($72.54)	$0.00	$1.25	$2.17	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$135.42
NorthWestern Corporation	NWE		($57.42)	$0.00	$1.17	$2.04	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$112.22
OGE Energy Corp.	OGE		($29.76)	$0.00	$0.67	$1.16	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$55.50
Otter Tail Corporation	OTTR		($29.38)	$0.00	$0.78	$1.36	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$59.61
Pinnacle West Capital Corporation	PNW		($72.71)	$0.00	$1.53	$2.66	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$138.20
PNM Resources, Inc.	PNM		($32.12)	$0.00	$0.53	$0.95	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$62.46
Portland General Electric Company	POR		($40.21)	$0.00	$0.71	$1.25	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$77.69
SCANA Corporation	SCG		($68.85)	$0.00	$1.38	$2.41	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$131.77
Xcel Energy Inc.	XEL		($40.51)	$0.00	$0.80	$1.41	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$77.84

Ameren Missouri

Hevert Revised Multi-Stage Growth Discounted Cash Flow Model

90 Day Average Stock Price

(Average EPS Growth Rate Estimate in First Stage)

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$55.04	4.50%	3.00%	4.00%	3.83%	4.25%	66.00%	64.00%	66.00%	($0.00)	8.58%	15.88	3.74
Alliant Energy Corporation	LNT	$35.24	6.10%	6.60%	6.00%	6.23%	4.25%	64.00%	64.00%	64.00%	$0.00	8.08%	17.43	4.10
American Electric Power Company, Inc.	AEP	$63.66	4.90%	4.10%	4.50%	4.50%	4.25%	64.00%	66.00%	64.00%	($0.00)	8.32%	16.39	3.86
Avista Corporation	AVA	$39.22	5.00%	5.00%	5.00%	5.00%	4.25%	68.00%	63.00%	68.00%	($0.00)	8.00%	18.92	4.45
CMS Energy Corporation	CMS	$40.55	6.40%	7.24%	6.00%	6.55%	4.25%	63.00%	63.00%	63.00%	$0.00	8.00%	17.53	4.12
DTE Energy Company	DTE	$87.58	5.80%	5.35%	4.50%	5.22%	4.25%	61.00%	64.00%	61.00%	$0.00	7.90%	17.44	4.10
IDACORP, Inc.	IDA	$72.14	4.00%	4.00%	3.00%	3.67%	4.25%	53.00%	60.00%	53.00%	($0.00)	7.30%	18.12	4.26
NorthWestern Corporation	NWE	$58.61	5.00%	5.00%	6.50%	5.50%	4.25%	65.00%	59.00%	65.00%	($0.00)	8.04%	17.89	4.21
OGE Energy Corp.	OGE	$27.90	5.20%	4.30%	2.50%	4.00%	4.25%	64.00%	74.00%	64.00%	($0.00)	8.62%	15.28	3.60
Otter Tail Corporation	OTTR	$28.40	NA	6.00%	6.00%	6.00%	4.25%	80.00%	63.00%	80.00%	$0.00	9.47%	15.99	3.76
Pinnacle West Capital Corporation	PNW	$71.24	4.00%	3.73%	4.00%	3.91%	4.25%	64.00%	65.00%	64.00%	$0.00	8.05%	17.55	4.13
PNM Resources, Inc.	PNM	$32.35	7.60%	8.76%	9.00%	8.45%	4.25%	51.00%	55.00%	51.00%	($0.00)	8.01%	14.13	3.32
Portland General Electric Company	POR	$39.34	6.40%	6.57%	5.50%	6.16%	4.25%	56.00%	56.00%	56.00%	($0.00)	7.86%	16.16	3.80
SCANA Corporation	SCG	$67.31	5.30%	4.80%	4.50%	4.87%	4.25%	59.00%	60.00%	59.00%	$0.00	8.09%	16.04	3.77
Xcel Energy Inc.	XEL	$40.14	5.30%	5.27%	5.50%	5.36%	4.25%	62.00%	63.00%	62.00%	$0.00	8.09%	16.82	3.96
												DCF Result		
											Mean	8.16%	16.77	3.95
											Max	9.47%	18.92	4.45
											Min	7.30%	14.13	3.32

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	**2021**	2022	2023	2024	2025	**2026**	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	$3.38	$3.51	$3.64	$3.78	$3.93	$4.08	$4.24	$4.41	$4.59	$4.77	$4.97	$5.18	$5.40	$5.63	$5.87	$6.12	$6.38
Alliant Energy Corporation	LNT	$1.69	$1.79	$1.90	$2.02	$2.15	$2.28	$2.41	$2.55	$2.68	$2.81	$2.94	$3.07	$3.20	$3.33	$3.48	$3.62	$3.78
American Electric Power Company, Inc.	AEP	$3.60	$3.76	$3.93	$4.11	$4.29	$4.49	$4.69	$4.89	$5.11	$5.33	$5.56	$5.79	$6.04	$6.30	$6.56	$6.84	$7.13
Avista Corporation	AVA	$1.89	$1.98	$2.08	$2.19	$2.30	$2.41	$2.53	$2.65	$2.77	$2.90	$3.02	$3.15	$3.29	$3.43	$3.57	$3.72	$3.88
CMS Energy Corporation	CMS	$1.89	$2.01	$2.15	$2.29	$2.44	$2.60	$2.76	$2.91	$3.07	$3.23	$3.38	$3.52	$3.67	$3.82	$3.99	$4.16	$4.33
DTE Energy Company	DTE	$4.44	$4.67	$4.92	$5.17	$5.44	$5.73	$6.01	$6.31	$6.61	$6.91	$7.21	$7.52	$7.84	$8.17	$8.52	$8.88	$9.26
IDACORP, Inc.	IDA	$3.87	$4.01	$4.16	$4.31	$4.47	$4.63	$4.81	$4.99	$5.19	$5.40	$5.63	$5.87	$6.11	$6.37	$6.65	$6.93	$7.22
NorthWestern Corporation	NWE	$2.90	$3.06	$3.23	$3.41	$3.59	$3.79	$3.99	$4.19	$4.40	$4.60	$4.81	$5.01	$5.23	$5.45	$5.68	$5.92	$6.17
OGE Energy Corp.	OGE	$1.71	$1.78	$1.85	$1.92	$2.00	$2.08	$2.16	$2.25	$2.35	$2.44	$2.55	$2.65	$2.77	$2.89	$3.01	$3.14	$3.27
Otter Tail Corporation	OTTR	$1.56	$1.65	$1.75	$1.86	$1.97	$2.09	$2.21	$2.33	$2.45	$2.56	$2.68	$2.79	$2.91	$3.04	$3.17	$3.30	$3.44
Pinnacle West Capital Corporation	PNW	$3.92	$4.07	$4.23	$4.40	$4.57	$4.75	$4.94	$5.14	$5.35	$5.57	$5.80	$6.05	$6.30	$6.57	$6.85	$7.14	$7.45
PNM Resources, Inc.	PNM	$1.64	$1.78	$1.93	$2.09	$2.27	$2.46	$2.65	$2.84	$3.02	$3.19	$3.35	$3.49	$3.64	$3.79	$3.95	$4.12	$4.30
Portland General Electric Company	POR	$2.04	$2.17	$2.30	$2.44	$2.59	$2.75	$2.91	$3.07	$3.23	$3.39	$3.54	$3.69	$3.85	$4.02	$4.19	$4.36	$4.55
SCANA Corporation	SCG	$3.81	$4.00	$4.19	$4.39	$4.61	$4.83	$5.06	$5.30	$5.54	$5.79	$6.04	$6.29	$6.56	$6.84	$7.13	$7.44	$7.75
Xcel Energy Inc.	XEL	$2.10	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.01	$3.15	$3.30	$3.45	$3.59	$3.75	$3.91	$4.07	$4.24	$4.42

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE		66.00%	65.50%	65.00%	64.50%	64.00%	64.33%	64.67%	65.00%	65.33%	65.67%	66.00%	66.00%	66.00%	66.00%	66.00%	66.00%
Alliant Energy Corporation	LNT		64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
American Electric Power Company, Inc.	AEP		64.00%	64.50%	65.00%	65.50%	66.00%	65.67%	65.33%	65.00%	64.67%	64.33%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Avista Corporation	AVA		68.00%	66.75%	65.50%	64.25%	63.00%	63.83%	64.67%	65.50%	66.33%	67.17%	68.00%	68.00%	68.00%	68.00%	68.00%	68.00%
CMS Energy Corporation	CMS		63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%
DTE Energy Company	DTE		61.00%	61.75%	62.50%	63.25%	64.00%	63.50%	63.00%	62.50%	62.00%	61.50%	61.00%	61.00%	61.00%	61.00%	61.00%	61.00%
IDACORP, Inc.	IDA		53.00%	54.75%	56.50%	58.25%	60.00%	58.83%	57.67%	56.50%	55.33%	54.17%	53.00%	53.00%	53.00%	53.00%	53.00%	53.00%
NorthWestern Corporation	NWE		65.00%	63.50%	62.00%	60.50%	59.00%	60.00%	61.00%	62.00%	63.00%	64.00%	65.00%	65.00%	65.00%	65.00%	65.00%	65.00%
OGE Energy Corp.	OGE		64.00%	66.50%	69.00%	71.50%	74.00%	72.33%	70.67%	69.00%	67.33%	65.67%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Otter Tail Corporation	OTTR		80.00%	75.75%	71.50%	67.25%	63.00%	65.83%	68.67%	71.50%	74.33%	77.17%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Pinnacle West Capital Corporation	PNW		64.00%	64.25%	64.50%	64.75%	65.00%	64.83%	64.67%	64.50%	64.33%	64.17%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
PNM Resources, Inc.	PNM		51.00%	52.00%	53.00%	54.00%	55.00%	54.33%	53.67%	53.00%	52.33%	51.67%	51.00%	51.00%	51.00%	51.00%	51.00%	51.00%
Portland General Electric Company	POR		56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%
SCANA Corporation	SCG		59.00%	59.25%	59.50%	59.75%	60.00%	59.83%	59.67%	59.50%	59.33%	59.17%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%
Xcel Energy Inc.	XEL		62.00%	62.25%	62.50%	62.75%	63.00%	62.83%	62.67%	62.50%	62.33%	62.17%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE		$2.32	$2.39	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$4.21	$101.36
Alliant Energy Corporation	LNT		$1.15	$1.22	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$2.42	$65.86
American Electric Power Company, Inc.	AEP		$2.41	$2.54	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$4.57	$116.89
Avista Corporation	AVA		$1.35	$1.39	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$2.64	$73.45
CMS Energy Corporation	CMS		$1.27	$1.35	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$2.73	$75.95
DTE Energy Company	DTE		$2.85	$3.04	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$5.65	$161.54
IDACORP, Inc.	IDA		$2.13	$2.28	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$3.83	$130.84
NorthWestern Corporation	NWE		$1.99	$2.05	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$4.01	$110.44
OGE Energy Corp.	OGE		$1.14	$1.23	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$2.09	$49.95
Otter Tail Corporation	OTTR		$1.32	$1.33	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$2.75	$55.00
Pinnacle West Capital Corporation	PNW		$2.61	$2.72	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$4.76	$130.68
PNM Resources, Inc.	PNM		$0.91	$1.00	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$2.19	$60.71
Portland General Electric Company	POR		$1.21	$1.29	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$2.55	$73.51
SCANA Corporation	SCG		$2.36	$2.48	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$4.57	$124.31
Xcel Energy Inc.	XEL		$1.37	$1.45	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$2.74	$74.40

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/31/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	($55.04)	$0.00	$1.36	$2.36	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$105.58
Alliant Energy Corporation	LNT	($35.23)	$0.00	$0.67	$1.18	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$68.28
American Electric Power Company, Inc.	AEP	($63.66)	$0.00	$1.41	$2.46	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$121.46
Avista Corporation	AVA	($39.22)	$0.00	$0.79	$1.38	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$76.09
CMS Energy Corporation	CMS	($40.55)	$0.00	$0.74	$1.31	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$78.68
DTE Energy Company	DTE	($87.58)	$0.00	$1.67	$2.92	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$167.19
IDACORP, Inc.	IDA	($72.14)	$0.00	$1.25	$2.17	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$134.67
NorthWestern Corporation	NWE	($58.61)	$0.00	$1.17	$2.04	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$114.46
OGE Energy Corp.	OGE	($27.90)	$0.00	$0.67	$1.16	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$52.04
Otter Tail Corporation	OTTR	($28.40)	$0.00	$0.78	$1.36	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$57.76
Pinnacle West Capital Corporation	PNW	($71.24)	$0.00	$1.53	$2.66	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$135.45
PNM Resources, Inc.	PNM	($32.35)	$0.00	$0.53	$0.95	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$62.90
Portland General Electric Company	POR	($39.34)	$0.00	$0.71	$1.25	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$76.06
SCANA Corporation	SCG	($67.31)	$0.00	$1.38	$2.41	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$128.89
Xcel Energy Inc.	XEL	($40.14)	$0.00	$0.80	$1.41	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$77.15

Ameren Missouri

Hevert Revised Multi-Stage Growth Discounted Cash Flow Model

180 Day Average Stock Price

(Average EPS Growth Rate Estimate in First Stage)

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$52.71	4.50%	3.00%	4.00%	3.83%	4.25%	66.00%	64.00%	66.00%	($0.00)	8.78%	15.19	3.57
Alliant Energy Corporation	LNT	$32.61	6.10%	6.60%	6.00%	6.23%	4.25%	64.00%	64.00%	64.00%	($0.00)	8.39%	16.13	3.79
American Electric Power Company, Inc.	AEP	$60.20	4.90%	4.10%	4.50%	4.50%	4.25%	64.00%	66.00%	64.00%	($0.00)	8.56%	15.48	3.64
Avista Corporation	AVA	$36.62	5.00%	5.00%	5.00%	5.00%	4.25%	68.00%	63.00%	68.00%	($0.00)	8.26%	17.67	4.16
CMS Energy Corporation	CMS	$38.00	6.40%	7.24%	6.00%	6.55%	4.25%	63.00%	63.00%	63.00%	$0.00	8.25%	16.43	3.87
DTE Energy Company	DTE	$83.96	5.80%	5.35%	4.50%	5.22%	4.25%	61.00%	64.00%	61.00%	$0.00	8.06%	16.71	3.93
IDACORP, Inc.	IDA	$69.33	4.00%	4.00%	3.00%	3.67%	4.25%	53.00%	60.00%	53.00%	($0.00)	7.43%	17.39	4.09
NorthWestern Corporation	NWE	$56.25	5.00%	5.00%	6.50%	5.50%	4.25%	65.00%	59.00%	65.00%	($0.00)	8.20%	17.17	4.04
OGE Energy Corp.	OGE	$27.27	5.20%	4.30%	2.50%	4.00%	4.25%	64.00%	74.00%	64.00%	($0.00)	8.72%	14.92	3.51
Otter Tail Corporation	OTTR	$27.52	NA	6.00%	6.00%	6.00%	4.25%	80.00%	63.00%	80.00%	$0.00	9.63%	15.51	3.65
Pinnacle West Capital Corporation	PNW	$67.37	4.00%	3.73%	4.00%	3.91%	4.25%	64.00%	65.00%	64.00%	($0.00)	8.27%	16.58	3.90
PNM Resources, Inc.	PNM	$30.47	7.60%	8.76%	9.00%	8.45%	4.25%	51.00%	55.00%	51.00%	($0.00)	8.24%	13.31	3.13
Portland General Electric Company	POR	$37.99	6.40%	6.57%	5.50%	6.16%	4.25%	56.00%	56.00%	56.00%	($0.00)	7.99%	15.60	3.67
SCANA Corporation	SCG	$62.73	5.30%	4.80%	4.50%	4.87%	4.25%	59.00%	60.00%	59.00%	$0.00	8.37%	14.93	3.51
Xcel Energy Inc.	XEL	$37.86	5.30%	5.27%	5.50%	5.36%	4.25%	62.00%	63.00%	62.00%	$0.00	8.33%	15.85	3.73
												DCF Result		
											Mean	8.36%	15.92	3.75
											Max	9.63%	17.67	4.16
											Min	7.43%	13.31	3.13

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	**2021**	2022	2023	2024	2025	**2026**	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	$3.38	$3.51	$3.64	$3.78	$3.93	$4.08	$4.24	$4.41	$4.59	$4.77	$4.97	$5.18	$5.40	$5.63	$5.87	$6.12	$6.38
Alliant Energy Corporation	LNT	$1.69	$1.79	$1.90	$2.02	$2.15	$2.28	$2.41	$2.55	$2.68	$2.81	$2.94	$3.07	$3.20	$3.33	$3.48	$3.62	$3.78
American Electric Power Company, Inc.	AEP	$3.60	$3.76	$3.93	$4.11	$4.29	$4.49	$4.69	$4.89	$5.11	$5.33	$5.56	$5.79	$6.04	$6.30	$6.56	$6.84	$7.13
Avista Corporation	AVA	$1.89	$1.98	$2.08	$2.19	$2.30	$2.41	$2.53	$2.65	$2.77	$2.90	$3.02	$3.15	$3.29	$3.43	$3.57	$3.72	$3.88
CMS Energy Corporation	CMS	$1.89	$2.01	$2.15	$2.29	$2.44	$2.60	$2.76	$2.91	$3.07	$3.23	$3.38	$3.52	$3.67	$3.82	$3.99	$4.16	$4.33
DTE Energy Company	DTE	$4.44	$4.67	$4.92	$5.17	$5.44	$5.73	$6.01	$6.31	$6.61	$6.91	$7.21	$7.52	$7.84	$8.17	$8.52	$8.88	$9.26
IDACORP, Inc.	IDA	$3.87	$4.01	$4.16	$4.31	$4.47	$4.63	$4.81	$4.99	$5.19	$5.40	$5.63	$5.87	$6.11	$6.37	$6.65	$6.93	$7.22
NorthWestern Corporation	NWE	$2.90	$3.06	$3.23	$3.41	$3.59	$3.79	$3.99	$4.19	$4.40	$4.60	$4.81	$5.01	$5.23	$5.45	$5.68	$5.92	$6.17
OGE Energy Corp.	OGE	$1.71	$1.78	$1.85	$1.92	$2.00	$2.08	$2.16	$2.25	$2.35	$2.44	$2.55	$2.65	$2.77	$2.89	$3.01	$3.14	$3.27
Otter Tail Corporation	OTTR	$1.56	$1.65	$1.75	$1.86	$1.97	$2.09	$2.21	$2.33	$2.45	$2.56	$2.68	$2.79	$2.91	$3.04	$3.17	$3.30	$3.44
Pinnacle West Capital Corporation	PNW	$3.92	$4.07	$4.23	$4.40	$4.57	$4.75	$4.94	$5.14	$5.35	$5.57	$5.80	$6.05	$6.30	$6.57	$6.85	$7.14	$7.45
PNM Resources, Inc.	PNM	$1.64	$1.78	$1.93	$2.09	$2.27	$2.46	$2.65	$2.84	$3.02	$3.19	$3.35	$3.49	$3.64	$3.79	$3.95	$4.12	$4.30
Portland General Electric Company	POR	$2.04	$2.17	$2.30	$2.44	$2.59	$2.75	$2.91	$3.07	$3.23	$3.39	$3.54	$3.69	$3.85	$4.02	$4.19	$4.36	$4.55
SCANA Corporation	SCG	$3.81	$4.00	$4.19	$4.39	$4.61	$4.83	$5.06	$5.30	$5.54	$5.79	$6.04	$6.29	$6.56	$6.84	$7.13	$7.44	$7.75
Xcel Energy Inc.	XEL	$2.10	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.01	$3.15	$3.30	$3.45	$3.59	$3.75	$3.91	$4.07	$4.24	$4.42

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE		66.00%	65.50%	65.00%	64.50%	64.00%	64.33%	64.67%	65.00%	65.33%	65.67%	66.00%	66.00%	66.00%	66.00%	66.00%	66.00%
Alliant Energy Corporation	LNT		64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
American Electric Power Company, Inc.	AEP		64.00%	64.50%	65.00%	65.50%	66.00%	65.67%	65.33%	65.00%	64.67%	64.33%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Avista Corporation	AVA		68.00%	66.75%	65.50%	64.25%	63.00%	63.83%	64.67%	65.50%	66.33%	67.17%	68.00%	68.00%	68.00%	68.00%	68.00%	68.00%
CMS Energy Corporation	CMS		63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%
DTE Energy Company	DTE		61.00%	61.75%	62.50%	63.25%	64.00%	63.50%	63.00%	62.50%	62.00%	61.50%	61.00%	61.00%	61.00%	61.00%	61.00%	61.00%
IDACORP, Inc.	IDA		53.00%	54.75%	56.50%	58.25%	60.00%	58.83%	57.67%	56.50%	55.33%	54.17%	53.00%	53.00%	53.00%	53.00%	53.00%	53.00%
NorthWestern Corporation	NWE		65.00%	63.50%	62.00%	60.50%	59.00%	60.00%	61.00%	62.00%	63.00%	64.00%	65.00%	65.00%	65.00%	65.00%	65.00%	65.00%
OGE Energy Corp.	OGE		64.00%	66.50%	69.00%	71.50%	74.00%	72.33%	70.67%	69.00%	67.33%	65.67%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
Otter Tail Corporation	OTTR		80.00%	75.75%	71.50%	67.25%	63.00%	65.83%	68.67%	71.50%	74.33%	77.17%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Pinnacle West Capital Corporation	PNW		64.00%	64.25%	64.50%	64.75%	65.00%	64.83%	64.67%	64.50%	64.33%	64.17%	64.00%	64.00%	64.00%	64.00%	64.00%	64.00%
PNM Resources, Inc.	PNM		51.00%	52.00%	53.00%	54.00%	55.00%	54.33%	53.67%	53.00%	52.33%	51.67%	51.00%	51.00%	51.00%	51.00%	51.00%	51.00%
Portland General Electric Company	POR		56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%
SCANA Corporation	SCG		59.00%	59.25%	59.50%	59.75%	60.00%	59.83%	59.67%	59.50%	59.33%	59.17%	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%
Xcel Energy Inc.	XEL		62.00%	62.25%	62.50%	62.75%	63.00%	62.83%	62.67%	62.50%	62.33%	62.17%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE		$2.32	$2.39	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$4.21	$96.99
Alliant Energy Corporation	LNT		$1.15	$1.22	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$2.42	$60.93
American Electric Power Company, Inc.	AEP		$2.41	$2.54	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$4.57	$110.41
Avista Corporation	AVA		$1.35	$1.39	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$2.64	$68.58
CMS Energy Corporation	CMS		$1.27	$1.35	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$2.73	$71.19
DTE Energy Company	DTE		$2.85	$3.04	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$5.65	$154.77
IDACORP, Inc.	IDA		$2.13	$2.28	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$3.83	$125.60
NorthWestern Corporation	NWE		$1.99	$2.05	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$4.01	$106.01
OGE Energy Corp.	OGE		$1.14	$1.23	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$2.09	$48.77
Otter Tail Corporation	OTTR		$1.32	$1.33	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$2.75	$53.35
Pinnacle West Capital Corporation	PNW		$2.61	$2.72	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$4.76	$123.44
PNM Resources, Inc.	PNM		$0.91	$1.00	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$2.19	$57.19
Portland General Electric Company	POR		$1.21	$1.29	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$2.55	$70.99
SCANA Corporation	SCG		$2.36	$2.48	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$4.57	$115.73
Xcel Energy Inc.	XEL		$1.37	$1.45	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$2.74	$70.12

Projected Annual Data Investor Cash Flows			[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker		Initial Outflow	5/31/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE		($52.71)	$0.00	$1.36	$2.36	$2.46	$2.53	$2.61	$2.73	$2.85	$2.98	$3.12	$3.27	$3.42	$3.57	$3.72	$3.88	$4.04	$101.20
Alliant Energy Corporation	LNT		($32.61)	$0.00	$0.67	$1.18	$1.29	$1.37	$1.46	$1.55	$1.63	$1.72	$1.80	$1.88	$1.96	$2.05	$2.13	$2.22	$2.32	$63.35
American Electric Power Company, Inc.	AEP		($60.20)	$0.00	$1.41	$2.46	$2.67	$2.81	$2.96	$3.08	$3.20	$3.32	$3.45	$3.58	$3.71	$3.87	$4.03	$4.20	$4.38	$114.98
Avista Corporation	AVA		($36.62)	$0.00	$0.79	$1.38	$1.43	$1.48	$1.52	$1.61	$1.71	$1.82	$1.92	$2.03	$2.14	$2.23	$2.33	$2.43	$2.53	$71.22
CMS Energy Corporation	CMS		($38.00)	$0.00	$0.74	$1.31	$1.44	$1.53	$1.63	$1.74	$1.84	$1.94	$2.03	$2.13	$2.22	$2.31	$2.41	$2.51	$2.62	$73.92
DTE Energy Company	DTE		($83.96)	$0.00	$1.67	$2.92	$3.23	$3.44	$3.66	$3.82	$3.97	$4.13	$4.28	$4.44	$4.59	$4.78	$4.99	$5.20	$5.42	$160.42
IDACORP, Inc.	IDA		($69.33)	$0.00	$1.25	$2.17	$2.44	$2.60	$2.78	$2.83	$2.88	$2.93	$2.99	$3.05	$3.11	$3.24	$3.38	$3.52	$3.67	$129.43
NorthWestern Corporation	NWE		($56.25)	$0.00	$1.17	$2.04	$2.11	$2.17	$2.24	$2.39	$2.56	$2.73	$2.90	$3.08	$3.26	$3.40	$3.54	$3.69	$3.85	$110.02
OGE Energy Corp.	OGE		($27.27)	$0.00	$0.67	$1.16	$1.33	$1.43	$1.54	$1.57	$1.59	$1.62	$1.65	$1.67	$1.70	$1.77	$1.85	$1.92	$2.01	$50.86
Otter Tail Corporation	OTTR		($27.52)	$0.00	$0.78	$1.36	$1.33	$1.32	$1.32	$1.45	$1.60	$1.75	$1.91	$2.07	$2.24	$2.33	$2.43	$2.53	$2.64	$56.10
Pinnacle West Capital Corporation	PNW		($67.37)	$0.00	$1.53	$2.66	$2.84	$2.96	$3.09	$3.20	$3.32	$3.45	$3.58	$3.72	$3.87	$4.03	$4.21	$4.38	$4.57	$128.21
PNM Resources, Inc.	PNM		($30.47)	$0.00	$0.53	$0.95	$1.11	$1.23	$1.35	$1.44	$1.52	$1.60	$1.67	$1.73	$1.78	$1.86	$1.93	$2.02	$2.10	$59.38
Portland General Electric Company	POR		($37.99)	$0.00	$0.71	$1.25	$1.37	$1.45	$1.54	$1.63	$1.72	$1.81	$1.90	$1.98	$2.07	$2.16	$2.25	$2.34	$2.44	$73.54
SCANA Corporation	SCG		($62.73)	$0.00	$1.38	$2.41	$2.61	$2.75	$2.90	$3.03	$3.16	$3.30	$3.43	$3.57	$3.71	$3.87	$4.04	$4.21	$4.39	$120.30
Xcel Energy Inc.	XEL		($37.85)	$0.00	$0.80	$1.41	$1.53	$1.62	$1.72	$1.80	$1.89	$1.97	$2.06	$2.14	$2.23	$2.32	$2.42	$2.52	$2.63	$72.86

Ameren Missouri

Alternative Risk Premium Analysis Using A-Rated Utility Bond Yield Spreads

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9250
R Square	0.8556
Adjusted R Square	0.8452
Standard Error	0.0037
Observations	31

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.0022	0.0011	82.9234	1.72103E-12
Residual	28	0.0004	1.34031E-05		
Total	30	0.0026			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.0212	0.0060	-3.5101	0.0015	-0.0335	-0.0088
LN of 30-Yr Treasury	-0.0238	0.0019	-12.6283	4.42727E-13	-0.0277	-0.0200
A-Rated Spread	0.4505	0.1612	2.7939	0.0093	0.1202	0.7808

Intercept	-2.12%	
LN of 30-Yr Treasury	8.43%	=(-0.0238*LN(2.91%))
A-Rated Spread	0.54%	=(0.4505*1.19%)
Risk Premium	6.85%	
Current 30-Yr Treasury	2.91%	
Cost of Equity	9.76%	

Ameren Missouri

Alternative Risk Premium Analysis Using Baa-Rated Utility Bond Yield Spreads

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9207
R Square	0.8477
Adjusted R Square	0.8369
Standard Error	0.0038
Observations	31

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.0022	0.0011	77.9460	3.60023E-12
Residual	28	0.0004	1.41E-05		
Total	30	0.0026			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.0170	0.0058	-2.9321	0.0066	-0.0288	-0.0051
LN of 30-Yr Treasury	-0.0224	0.0020	-11.1430	8.38E-12	-0.0265	-0.0183
Baa-Rated Spread	0.3443	0.1409	2.4428	0.0211	0.0556	0.6330

Intercept	-1.70%	
LN of 30-Yr Treasury	7.93%	=(-0.0224*LN(2.91%))
Baa-Rated Spread	0.60%	=(0.3443*1.73%)
Risk Premium	6.83%	
Current 30-Yr Treasury	2.91%	
Cost of Equity	9.73%	