

Exhibit No.:
Issue: Cost of Capital; Capital Structure;
Return on Equity
Witness: Robert B. Hevert
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: Kansas City Power & Light Company
and KCP&L Greater Missouri
Operations Company
Case Nos.: ER-2018-0145 and ER-2018-0146
Date Testimony Prepared: September 4, 2018

MISSOURI PUBLIC SERVICE COMMISSION
CASE NOS.: ER-2018-0145 and ER-2018-0146

SURREBUTTAL TESTIMONY

OF

ROBERT B. HEVERT

ON BEHALF OF

**KANSAS CITY POWER & LIGHT COMPANY and
KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**Kansas City, Missouri
September 2018**

KCP&L Exhibit No. 132
Date 9-25-18 Reporter TJ
File No. ER 2018-0145 + 0146

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GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION
Beta Coefficient	A component of the CAPM that measures the risk of a given stock relative to the risk of the overall market.
Capital Asset Pricing Model (“CAPM”)	A risk premium-based model used to estimate the Cost of Equity, assuming the stock is added to a well-diversified portfolio. The CAPM assumes that investors are compensated for the time value of money (represented by the Risk-Free Rate), and risk (represented by the combination of the Beta Coefficient and the Market Risk Premium).
Constant Growth DCF Model	A form of the DCF model that assumes cash flows will grow at a constant rate, in perpetuity. The model simplifies to a form that expresses the Cost of Equity as the sum of the expected dividend yield and the expected growth rate.
Cost of Equity	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably.
Discounted Cash Flow (“DCF”) Model	A model used to estimate the Cost of Equity based on expected cash flows. The Cost of Equity equals the discount rate that sets the current market price equal to the present value of expected cash flows.
Dividend Yield	For a given stock, the current dividend divided by the current market price.
Gross Domestic Product (“GDP”)	The value of all finished goods and services produced within a country during a given period of time (usually measured annually). GDP includes public and private consumption, government expenditures, investments, and exports less imports.
Market Return	The expected return on the equity market, taken as a portfolio.
Market Risk Premium	The additional compensation required by investing in the equity market as a portfolio over the Risk-Free rate. The Market Risk Premium is a component of the CAPM.
Multi-Stage DCF Model	A form of the DCF model in which the rate of growth may change over different stages.
Proxy Group	A group of publicly traded companies used as the “proxy” for the subject company (in this case, KCP&L and GMO). Proxy companies are sometimes referred to as “Comparable Companies.”

TERM	DESCRIPTION
Return on Equity (“ROE”)	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably.
Risk-Free Rate	The rate of return on an asset with no risk of default.
Risk Premium	The additional compensation required by investors for taking on additional increments of risk. Risk Premium-based approaches are used in addition to the DCF and CAPM to estimate the Cost of Equity.
Terminal Growth	The expected rate of growth in the final, or terminal, stage of the Multi-Stage DCF model.
Treasury Inflation Protected Securities (“TIPS”)	Treasury securities that are indexed to inflation. The principal value of TIPS increase with inflation and decrease with deflation, as measured by the Consumer Price Index.
Treasury Yield	The return on Treasury securities; the yield on long-term Treasury bonds is considered to be a measure of the Risk-Free Rate.

SURREBUTTAL TESTIMONY

OF

ROBERT B. HEVERT

Case Nos. ER-2018-0145 and ER-2018-0146

1 **I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS**

2 **Q: Please state your name and business address.**

3 A: My name is Robert B. Hevert and my business address is ScottMadden, Inc., 1900 West
4 Park Drive, Suite 250, Westborough, MA 01581.

5 **Q: On whose behalf are you submitting this testimony?**

6 A: I am submitting this surrebuttal testimony (“Surrebuttal Testimony”) before the Missouri
7 Public Service Commission (“Commission”) on behalf of Kansas City Power & Light
8 Company (“KCP&L”) and KCP&L Greater Missouri Operations Company (“GMO”)
9 (collectively, the “Company”).

10 **Q: Are you the same Robert B. Hevert who filed Direct Testimony and Rebuttal**
11 **Testimony in in both ER-2018-0145 and ER-2018-0146?**

12 A: Yes, I filed Direct and Rebuttal testimony on behalf of KCP&L and GMO in those cases.

13 **Q: What is the purpose of your Surrebuttal Testimony?**

14 A: My Surrebuttal Testimony responds to the rebuttal testimonies of Mr. Jeffrey Smith on
15 behalf of the Commission Staff’s Utility Services Division (“Staff”) and Mr. Michael P.
16 Gorman on behalf of Midwest Energy Consumers Group (“MECG”). My analyses and
17 conclusions are supported by the data presented in Schedules RBH-26 and RBH-27, which
18 have been prepared by me or under my direction.

1 **Q: Have you updated your ROE analyses from those presented in your Rebuttal**
2 **Testimony?**

3 A: No, I have not. I continue to rely on the analyses provided in my Rebuttal Testimony,
4 which were updated based on market data through June 15, 2018.

5 **Q: Please summarize the key issues and recommendations addressed in your Rebuttal**
6 **Testimony.**

7 A: In my Direct Testimony and Rebuttal Testimony, I found the Company's Cost of Equity to
8 be within a range of 9.75 percent to 10.50 percent. For the reasons discussed throughout
9 my Surrebuttal Testimony, none of the arguments raised in Mr. Gorman's rebuttal
10 testimony has caused me to revise my recommendation. As such, I continue to conclude
11 that an ROE within a range of 9.75 percent to 10.50 percent is reasonable.

12 In addition, and as discussed in my Rebuttal Testimony, I continue to believe Mr.
13 Smith's proposed goodwill adjustment to GMO's capital structure is not appropriate.¹ As
14 such, I have not made any changes to GMO's proposed capital structure as presented in
15 Schedule RBH-19 in my Rebuttal Testimony.

II. RESPONSE TO TESTIMONY OF STAFF WITNESS SMITH

16 **Q: Please summarize Staff's recommendation regarding GMO's Capital Structure.**

17 A: Mr. Smith suggests it is appropriate to remove the goodwill balance of \$351.6 million from
18 the GMO's equity balance to calculate its ratemaking capital structure.

19 **Q: What is your response?**

20 A: As discussed in my Rebuttal Testimony, and in the rebuttal testimony of Company witness
21 Darrin Ives, only a portion of the approximately \$351 million claimed by Staff reflects the

¹ Rebuttal Testimony of Robert B. Hevert at 21.

1 goodwill related to GPE's acquisition of Aquila, Inc.² Although I agree an adjustment is
2 reasonable in this proceeding, Mr. Smith's proposed adjustment is too large.³

3 **Q: Mr. Smith suggests that you assumed the Cost of Debt for KCP&L was the same as**
4 **GMO.⁴ Is that correct?**

5 A: No, it is not. As shown in Schedule RBH-10, page 3 in my Direct Testimonies for KCP&L
6 and GMO, although the projected Cost of Debt was approximately the same for the two
7 companies (i.e., 5.06 percent), the Cost of Debt was calculated separately for each
8 company. That is, I did not assume the Cost of Debt was the same for KCP&L and GMO.
9 As shown in Schedule RBH-19, pages 2 and 4, based on actual information through June
10 30, 2018, the updated Cost of Debt values for KCP&L and GMO are consistent with Mr.
11 Smith's proposed rates.

III. RESPONSE TO MECG WITNESS GORMAN

12 **Q: Please summarize Mr. Gorman's criticisms of your Cost of Equity analyses.**

13 A: Mr. Gorman asserts my estimated ROE is overstated and should be rejected because: (1)
14 my Constant Growth DCF results are based on "unsustainably high" growth rates; (2) my
15 Multi-Stage DCF is based on an "unrealistic" Gross Domestic Product ("GDP") growth
16 estimate, a "manipulated" dividend payout ratio assumption, and an "unjustified" terminal
17 P/E ratio assumption; (3) my CAPM is based on inflated estimates of the Market Risk
18 Premium; and (4) my Bond Yield Plus Risk Premium is based on an inflated utility Equity

² *Ibid.* at 21.

³ *Ibid.* at 48.

⁴ Rebuttal Testimony of Jeffrey Smith at 8.

1 Risk Premium.⁵ For the reasons discussed below, I disagree with Mr. Gorman on those
2 points.

3 **A. Discounted Cash Flow Models**

4 **Q: Are the growth rates used in your constant growth discounted cash flow (“DCF”)**
5 **analysis “unsustainably high”?**

6 A: No, they are not. Mr. Gorman argues the consensus growth rates in my constant growth
7 DCF model (averaging 5.04 percent) are high relative to his estimate of projected GDP
8 growth.⁶ Although Mr. Gorman believes my Constant Growth DCF results should be
9 considered a “high-end” estimate of the Company’s Cost of Equity, those average estimates
10 (which range from 8.28 percent to 8.38 percent, see Schedule RBH-1) fall far below the
11 prevailing range of authorized returns, a measure that Mr. Gorman finds relevant, given
12 that his Risk Premium method is based on authorized ROEs.⁷ Consequently, I do not
13 believe the average Constant Growth DCF results reasonably can be seen as “high-end”
14 estimates.

15 **Q: Please respond to Mr. Gorman’s assertion that your Multi-Stage long-term growth**
16 **rate of 5.38 percent is inconsistent with other consensus estimates of long-term GDP**
17 **growth.**

18 A: The long-term growth rate of 5.38 percent in my multi-stage DCF analysis reflects growth
19 expectations over the long term, beginning in 2028, whereas Mr. Gorman’s consensus GDP
20 projections are current year projections over the coming five to ten years. Because there
21 are no consensus forecasts that begin in ten years, it is reasonable to assume that real growth

⁵ Rebuttal Testimony of Michael P. Gorman at 13.

⁶ *Ibid.* at 16.

⁷ See Schedules MPG-15 and MPG-16.

1 will revert to its long-term average over time. Further, the terminal growth rate reflects
2 expected growth in perpetuity and as such, the term of even the longest GDP forecast
3 considered by Mr. Gorman does not reflect the expected, perpetual nature of the terminal
4 growth required by the model.

5 In his Multi-Stage DCF analysis, Mr. Gorman cites to projections from the Energy
6 Information Administration, Congressional Budget Office, and other sources including the
7 Social Security Administration (“SSA”), and suggests that the terminal growth rate in my
8 Multi-Stage DCF analysis is too high.⁸ As discussed in my Direct Testimony, however,
9 my long-term growth estimate falls well within the “cases” SSA considers, including one
10 long-term estimate of 5.68 percent.⁹

11 Mr. Gorman’s 4.20 percent long-term sustainable growth rate conflicts with market
12 measures cited elsewhere in his direct testimony. For example, Mr. Gorman does not
13 consider long-term historical data to develop his terminal growth rate, yet he relies on long-
14 term historical data in his CAPM analyses in his Direct Testimony at 58-61. According to
15 Duff & Phelps (which provides the data Mr. Gorman relies on to estimate the historical
16 Market Risk Premia), the arithmetic average historical capital appreciation rate is 7.80
17 percent, which is substantially higher than Mr. Gorman’s 4.20 percent estimate of long-
18 term GDP growth.¹⁰ Aside from the inconsistency with his other analyses, Mr. Gorman’s
19 low growth rate has the effect of producing unduly low DCF estimates.

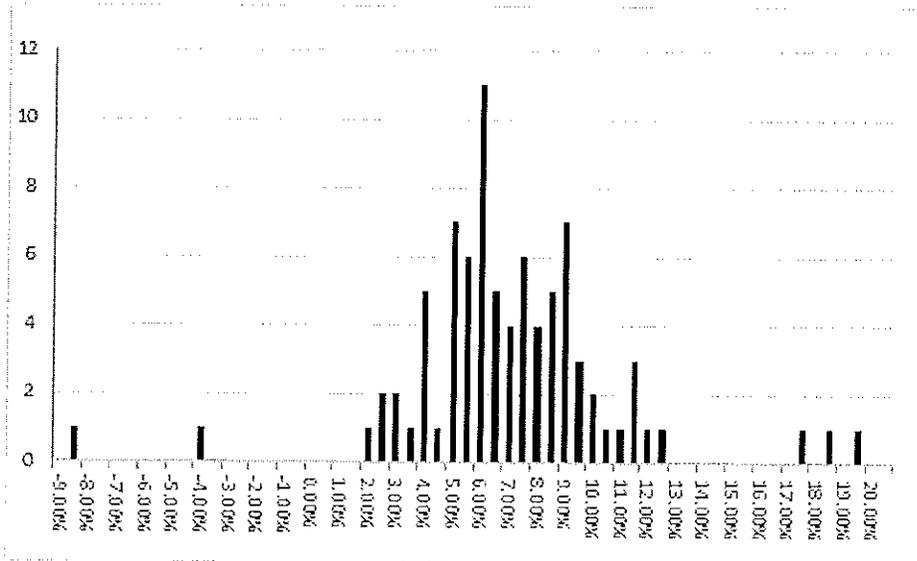
⁸ Direct Testimony of Michael P. Gorman at 47-49; Rebuttal Testimony of Michael P. Gorman at 19-20.

⁹ Tables V.B1 and V.B2 of the 2017 *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* includes “Low Cost” scenario assumptions of 2.90 percent and 2.70 percent for the GDP Price Index, and Real GDP Growth, respectively, over the period 2026 through 2090. Combined, those projections indicate nominal GDP growth of 5.68 percent. See Direct Testimony of Robert B. Hevert, at 31.

¹⁰ Duff & Phelps, *2018 Valuation Handbook: Guide to Cost of Capital* at 2-4. Even if we were to consider the geometric mean, the historical capital appreciation rate exceeds Mr. Gorman’s 4.20 percent estimate. Mr. Gorman notes on page 45 of his direct testimony that the long-term geometric average growth rate is 6.00 percent.

1 Historically, average annual GDP growth rates as low as 4.20 percent have been
 2 infrequent. When measured over five-year periods, average annual growth exceeded 4.20
 3 percent in 71 of 84 periods. The same conclusion holds when growth is measured over
 4 ten-year periods; the average annual growth rate was greater than 4.20 percent in 68 of 79
 5 periods (see Chart 1 and Chart 2 below).

6 **Chart 1: Average Annual GDP Growth Measured over Five-Year Periods¹¹**

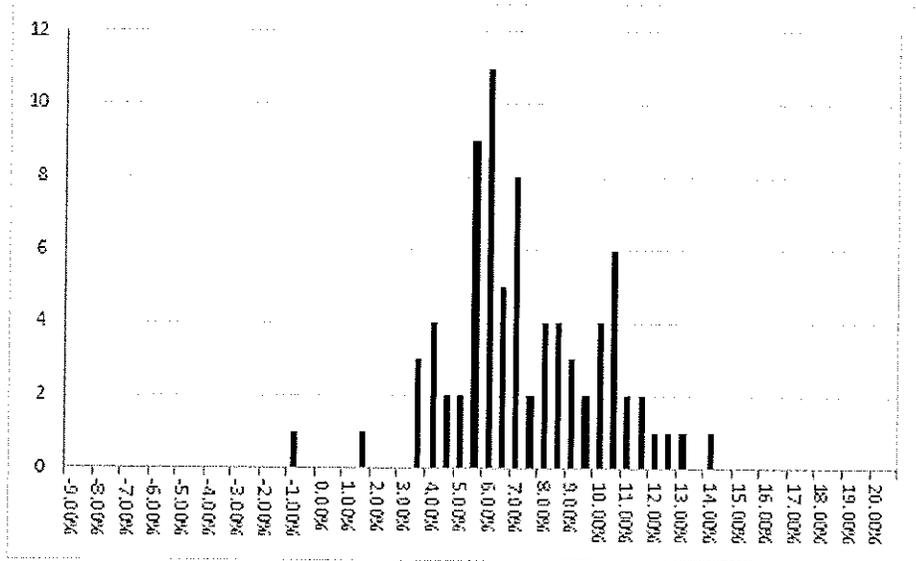


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¹¹ Source: Bureau of Economic Analysis.

1

Chart 2: Average Annual GDP Growth Measured over Ten-Year Periods¹²



2

3 **Q: What is your response to Mr. Gorman’s assertion that your payout ratio assumption**
4 **is “unreasonable”?**

5 **A:** Mr. Gorman argues there is “no basis” to expect that the dividend payout ratio of the proxy
6 group will “converge to the same payout ratio.”¹³ However, there are several reasons why
7 management may adjust dividend payments in the near term, such as increases or decreases
8 in expected capital spending. Because we cannot say those factors will remain constant
9 forever, it is reasonable to assume that over time payout ratios will revert to their long-term
10 average.

11 Several of Mr. Gorman’s proxy companies recently have discussed target payout
12 ratios that are highly consistent with my 65.91 percent assumption. For example, in 2018
13 investor relations presentations, Alliant Energy, Duke Energy, NorthWestern Corporation,
14 and WEC Energy Group noted target payout ratios in the range of 60.00 percent to as high

¹² *Ibid.*

¹³ Rebuttal Testimony of Michael P. Gorman at 21.

1 as 75.00 percent.¹⁴ Because my projected payout ratio is consistent with both historical
2 experience and industry expectations, it is entirely appropriate.

3 **Q: Those issues aside, are the average Multi-Stage DCF results based on the terminal**
4 **growth rate, as proposed by Mr. Gorman's rebuttal testimony at page 25, reasonable**
5 **estimates of the Company's current Cost of Equity?**

6 A: No, they are not. As with the Constant Growth DCF estimates, average results of 8.01
7 percent to 8.13 percent are well below the range of returns currently authorized by state
8 regulatory commissions, on which Mr. Gorman relies.

9 **Q: Please respond to Mr. Gorman's criticism of your Terminal P/E Multi-Stage DCF**
10 **approach.**

11 A: The terminal P/E ratio is consistent with the fundamental assumptions underlying the
12 Constant Growth DCF method, in particular that the P/E ratio will remain constant in
13 perpetuity. Mr. Gorman cannot reasonably support the low Constant Growth DCF
14 estimates that result from relatively high P/E ratios and that weigh directly in his 9.30
15 percent ROE recommendation, while criticizing the same assumption in my Multi-Stage
16 DCF model.

¹⁴ Alliant Energy and NorthWestern Energy target payout ratios of 60.00 percent to 70.00 percent; Duke Energy targets a payout ratio of 70.00 percent to 75.00 percent; and WEC Energy Group targets a payout ratio of 65.00 percent to 70.00 percent. See Alliant Energy, Wells Fargo Fixed Income Investor Meetings, April 5, 2018; Duke Energy, Spring Update 2018, June 14, 2018; NorthWestern Energy, Investor Update, July 23-24, 2018; and WEC Energy Group, Investor Update, June 2018.

1 ***B. Capital Asset Pricing Model***

2 **Q: Please summarize Mr. Gorman’s criticisms of your Capital Asset Pricing Model**
3 **(“CAPM”) analysis.**

4 A: Mr. Gorman’s concern with my CAPM analysis lies primarily with my Market Risk
5 Premium (“MRP”) estimates.¹⁵ In particular, Mr. Gorman argues that my projected returns
6 on the market are “inflated,”¹⁶ and that there is a “mismatch” between my calculation of
7 the expected market return, and the projected Treasury yields used in my CAPM
8 analyses.¹⁷

9 **Q: What is your response to Mr. Gorman’s assertion that your expected market return**
10 **estimates are “inflated”?**

11 A: I disagree. The market return estimates presented in my Direct Testimony, which Mr.
12 Gorman asserts are “inflated,”¹⁸ represent the approximately 50th and 51st percentiles of the
13 actual returns observed from 1926 to 2017. Moreover, because market returns historically
14 have been volatile, my market return estimates are statistically indistinguishable from the
15 long-term arithmetic average market data on which Mr. Gorman relies.¹⁹

16 Mr. Gorman also argues the Market Risk Premia estimated from my projected
17 market returns are “inflated and not reliable.”²⁰ In response to that concern, I gathered the
18 annual Market Risk Premia reported by Duff & Phelps and produced a histogram of its
19 observations from 1926 through 2017 (Mr. Gorman also uses historical data to estimate the
20 MRP, as noted in his direct testimony at pages 58-61). The results of my analysis, which

¹⁵ Rebuttal Testimony of Michael P. Gorman at 25-26.

¹⁶ *Ibid.* at 27.

¹⁷ *Ibid.* at 26.

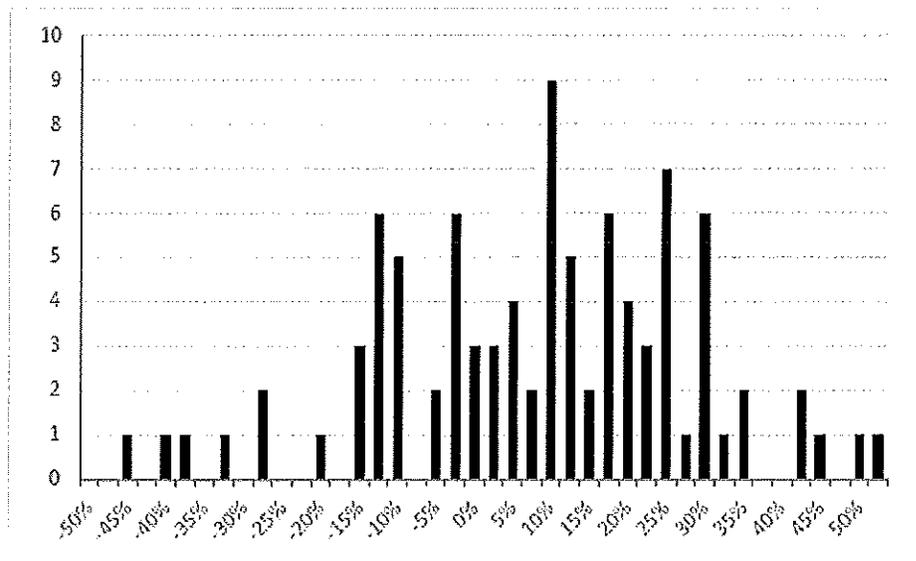
¹⁸ *Ibid.* at 27.

¹⁹ Source: Duff and Phelps, 2018 SBBI, Appendix A-1. Even if we were to look at the standard error, my estimate is well within one standard error of the long-term average.

²⁰ Rebuttal Testimony of Michael P. Gorman at 27.

1 are presented below in Chart 3, demonstrate MRPs of at least 11.89 percent (the high end
 2 of the range of the MRP estimates in my Direct Testimony) have occurred approximately
 3 half of the time.²¹

4 **Chart 3: Frequency Distribution of Observed Market Risk Premia,**
 5 **1926 - 2017²²**



6
 7 **Q: Mr. Gorman also suggests your expected market return is inflated because the**
 8 **expected growth rates exceed the historical rate of capital appreciation.²³ What is**
 9 **your response to Mr. Gorman on that point?**

10 **A: First, Mr. Gorman refers to an estimated capital appreciation range of 6.00 percent to 7.80**
 11 **percent for the period 1926-2017. To the extent either is meaningful in this context, it is**
 12 **the 7.80 percent arithmetic mean, which reflects uncertainty. The geometric mean (the**
 13 **6.00 percent rate) equates a beginning value to an ending value with no uncertainty**

²¹ An MRP of 11.89 percent (the high end of the range of the MRP estimates in my Rebuttal Testimony) represents approximately the 58th percentile.

²² Schedule RBH-26.

²³ Rebuttal Testimony of Michael P. Gorman, at 27.

1 regarding the path from one to the other. Because we are focused on forward-looking
2 estimates, which necessarily reflect uncertainty, the arithmetic average capital appreciation
3 rate is the appropriate measure.

4 Second, although Mr. Gorman refers to the long-term capital appreciation rate, he
5 does not refer to the long-term average “income” rate (the dividend yield) of 4.00 percent,
6 or consider that the current market dividend yield is about 2.00 percent.²⁴ Under the
7 “sustainable growth” model, the higher growth rates and lower dividend yields associated
8 with the current expected market return simply may mean that companies are retaining
9 more of their earnings. In that case, the sustainable growth method would produce growth
10 rates higher than the historical average. Consequently, Mr. Gorman’s observation at page
11 28 of his rebuttal testimony that current expected growth of 4.00 percent to 4.50 percent is
12 higher than historical growth does not demonstrate my estimates are unreasonable.

13 **Q: What is your response to Mr. Gorman’s concern that there is a “mismatch” between**
14 **the expected Market Return, and the projected Treasury yields in your CAPM**
15 **analysis?**

16 **A:** Mr. Gorman argues that there is an “error” in my calculations because the risk-free rate
17 used to calculate the market risk premium is not the same risk-free rate used in my CAPM
18 estimates based on the near-term projected Treasury yields.²⁵ That is, Mr. Gorman appears
19 to argue that the risk-free rate used to calculate the Market Risk Premium should be the
20 same as the risk-free rate term in the CAPM.²⁶

²⁴ Sources: Duff & Phelps 2018 Valuation Handbook, Guide to Cost of Capital, at 2-4; Bloomberg, Value Line.

²⁵ Rebuttal Testimony of Michael P. Gorman at 28.

²⁶ That is, Mr. Gorman argues that in my analyses the term “ r_f ” should be the same number in the CAPM equation:
 $k_e = r_f + \beta(r_m - r_f)$.

1 Despite his argument, Mr. Gorman's CAPM analysis relies on a calculation that is
2 comparable to mine. As Mr. Gorman explains, his long-term historical MRP estimate (6.10
3 percent) is the difference between the average market return (approximately 12.10 percent)
4 and the total return of long-term Government bonds (approximately 6.00 percent).²⁷ But
5 his CAPM estimate, which is presented in Schedule MPG-20, assumes a risk-free rate
6 component of 3.80 percent, not the 6.00 percent used in his MRP calculation. That is, Mr.
7 Gorman's CAPM estimate includes the same type of purported "mismatch" he claims is an
8 "error" on my part. Had he chosen to use the 6.00 percent risk free rate that is tied to the
9 12.10 percent market return, Mr. Gorman's CAPM estimate would have been 220 basis
10 points higher at 10.27 percent, and within my CAPM range.²⁸

11 **Q: At page 43 of his rebuttal testimony Mr. Gorman asserts that you "errantly**
12 **[disregard] current utility stock prices and dividend yields as proof of investor**
13 **expectations."²⁹ Is Mr. Gorman correct?**

14 **A:** No, he is not. As I clearly explained on page 23 of my Direct Testimony, my concern
15 related to the assumptions underlying the Constant Growth DCF model, and the extent to
16 which those assumptions were, or were not, consistent with the then-current market
17 environment. I did not suggest, nor have I suggested, that market prices somehow are not
18 "proof of investor expectations." My concern is with the model's assumptions, not the
19 prices applied to it.

20 In a similar fashion, Mr. Gorman suggests I somehow have been inconsistent by
21 looking to option prices to assess the market's views of the likelihood of interest increases,

²⁷ Direct Testimony of Michael P. Gorman at 59.

²⁸ 2.20% = 6.00% - 3.80%.

²⁹ [clarification added]

1 while expressing concern with the applicability of the Constant Growth DCF model to
2 prevailing market conditions.³⁰ I have not performed such an analysis in either my Direct
3 or Rebuttal Testimonies. That said, if Mr. Gorman's assertion that I mistrust utility stock
4 prices was correct, I would place no value on my CAPM analyses, which also rely on utility
5 stock prices.

6 **Q: At page 41 of his rebuttal testimony, Mr. Gorman argues that your consideration of**
7 **projected Treasury yields is "unreasonable" because you do not consider "the highly**
8 **likely outcome that current observable interest rates will prevail during the period in**
9 **which rates determined in this proceeding will be in effect." Is Mr. Gorman correct?**

10 **A:** No, he is not correct. Mr. Gorman argues that the "accuracy of forecasted interest rates is
11 problematic at best."³¹ He states that over the last several years, "observable current
12 interest rates have been a more accurate predictor of future interest rates than economists'
13 consensus projections."³²

14 However, Mr. Gorman's 9.30 percent ROE recommendation relies directly on the
15 economists' forecasts that he dismisses as "problematic" in my analyses. At page 55 of
16 his direct testimony, Mr. Gorman explains that his Risk Premium method, which represents
17 the high end of his recommended range, gives additional weight to his high-end results
18 (75.00 percent weight relative to 25.00 percent for his low-end results). Those results are
19 based on *Blue Chip's* projected Treasury yield of 3.80 percent, which reflects consensus
20 estimates prepared by economists. That projected 3.80 percent Treasury yield also is an
21 important component of Mr. Gorman's 9.20 percent CAPM result, which forms the upper

³⁰ Rebuttal Testimony of Michael P. Gorman at 43.

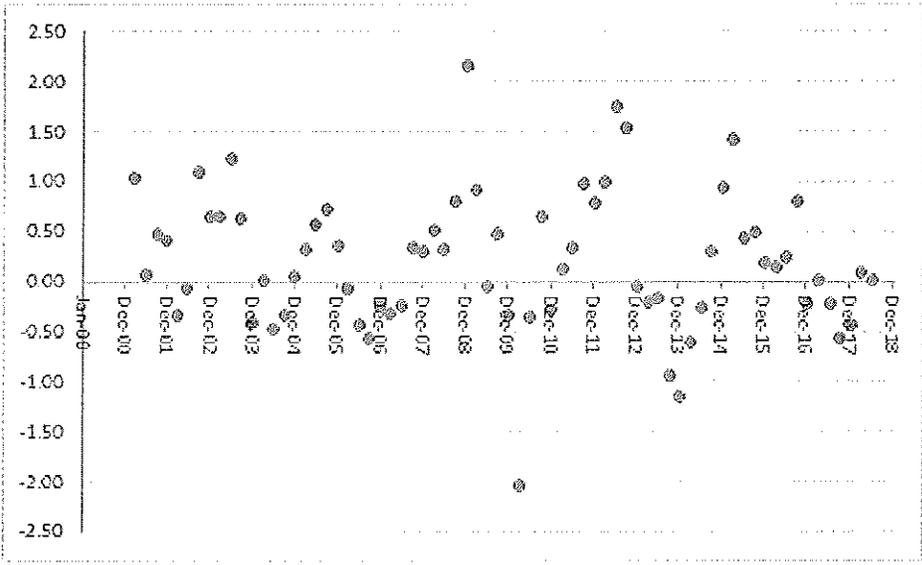
³¹ *Ibid.* at 41.

³² *Ibid.*

1 end of his range.³³ *Blue Chip* also is the source relied on in Schedule MPG-20, to which
2 Mr. Gorman refers in supporting his view that economists' projections are "problematic."

3 Second, although Mr. Gorman suggests that current yields are a "more accurate
4 predictor" of future yields, he has not indicated what that level of accuracy might be, or
5 how it figures in his conclusion. As Chart 4 (below) demonstrates, using the same quarterly
6 convention applied in Schedule MPG-R-4 (that is, comparing forecasts five quarters in the
7 future to the actual yields observed in those forecast quarters) shows actual yields were not
8 accurate predictors of future yields. In fact, through 2015 the forecast error generally was
9 positive, indicating that observed yields over-predicted actual yields.

10 **Chart 4: Forecast Error of Spot 30-Year Treasury Yields³⁴**



11 Those results make intuitive sense. During much of the review period (2000
12 through 2018), interest rates declined and, with the 2008/2009 recession, became the
13

³³ *Ibid.* at 62.

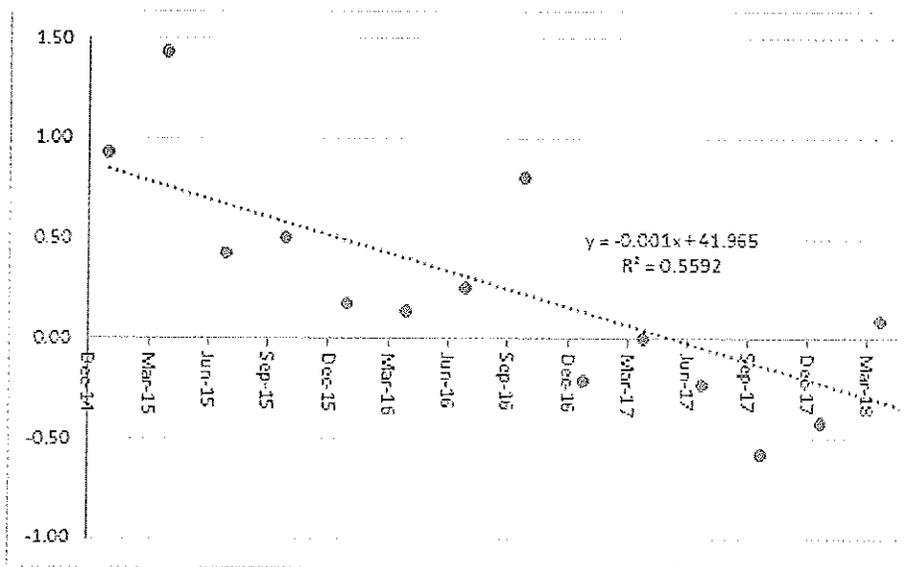
³⁴ Source: Bloomberg Professional

1 subject of Federal monetary policies specifically designed to keep them low. Because
2 yields fell during that time, prior quarters were likely to over-estimate future quarters.

3 Although interest yields had steadily declined between 2000 and 2015, as noted in
4 my Direct Testimony, in December 2015 the Federal Reserve began its process of
5 monetary policy normalization.³⁵ The effect of that change in policy and improving
6 economic conditions is shown in Chart 5 (below), which limits the review period to the
7 fifteen quarters from December 2014 through June 2018. As interest rates have begun to
8 increase, spot Treasury yields have begun to under-project future yields.

9 **Chart 5: Forecast Error of Spot 30-Year Treasury Yields**

10 **Since December 2014³⁶**



11
12 To the extent interest rates continue to increase, Mr. Gorman's suggested approach of using
13 spot yields as a measure of forecast yields will systematically under-estimate Treasury
14 yields, and therefore systematically bias downward his model results.

³⁵ Direct Testimony of Robert B. Hevert, at 52.

³⁶ Source: Bloomberg Professional

1 **Q: Do you have any further comments regarding Mr. Gorman’s criticisms of your use**
2 **of projected Treasury yields?**

3 A: Yes. Although he refers to “Mr. Hevert’s interest rate projections,”³⁷ I rely on the same
4 source (*Blue Chip Financial Forecasts*) that Mr. Gorman uses in his Risk Premium and
5 CAPM analyses. They are not my forecasts – they represent the consensus projections of
6 approximately 50 economists. Because *Blue Chip* provides that data on a commercial
7 basis, it is reasonable to assume that analysts other than Mr. Gorman and I rely on them.
8 Regardless of any forecast error, their commercial use makes those projections important
9 sources of information in determining the Company’s Cost of Equity.

10 **C. Bond Yield Plus Risk Premium**

11 **Q: Please summarize Mr. Gorman’s criticisms of your Bond Yield Plus Risk Premium**
12 **analysis.**

13 A: Mr. Gorman’s concern with my Bond Yield Plus Risk Premium analysis is what he
14 suggests is my “contention” of a “simplistic inverse relationship” between the Equity Risk
15 Premium and interest rates which he appears to claim is not supported by academic
16 research.³⁸ The relevant factor explaining changes in the Equity Risk Premiums, he argues,
17 is the change to equity risk relative to debt risk, not changes in interest rates alone. Mr.
18 Gorman further suggests the relationship between the Equity Risk Premium and interest
19 rates is weaker “in the current post-recession period.”³⁹

20 **Q: What is your response to Mr. Gorman’s concerns?**

21 A: Regarding the inverse relationship between the Equity Risk Premium and interest rates, as

³⁷ Rebuttal Testimony of Michael P. Gorman at 42.

³⁸ *Ibid.* at 30.

³⁹ *Ibid.*

1 stated in my Rebuttal Testimony, several academic studies support my findings.⁴⁰ Further,
2 Mr. Gorman's own data clearly demonstrate the inverse relationship between the two. Mr.
3 Gorman may disagree with the premise of my analysis but its empirical results - based on
4 his data - strongly support my position (*see* Schedule RBH-23 in my Rebuttal Testimony).

5 Regarding his analysis using my data over the 2010 to December 2017 period, Mr.
6 Gorman argues that because the "R-squared" is 45.10 percent, it indicates "there is not a
7 strong relationship" between the two variables.⁴¹ I disagree. The relevant question is
8 whether the relationship is statistically significant. As shown in Table 1, the T-statistics
9 for the intercept and the 30-year Treasury yield (the independent variable) both are highly
10 significant.⁴²

11 **Table 1: Regression Coefficients for Bond Yield Plus Risk Premium Analysis,**
12 **January 2010 - December 2017**

	Coefficient	T-Statistic	P-Value	Standard Error
Intercept	-0.011	-2.356	0.019	0.005
30-Year Treasury Yield	-0.022	-16.232	1.12E-43	0.001

13
14 **Q: Does Mr. Gorman rely on any data points that themselves have relatively low R-**
15 **Squares?**

16 **A:** Yes, he does. Mr. Gorman relies on Beta coefficients from Value Line in his CAPM
17 analysis, as shown on Schedule MPG-19. Using Value Line's method, I recalculated those
18 Beta coefficients to analyze the R-square measures for each proxy company.⁴³ As shown
19 in Table 2, the R-squared values of the Beta coefficients range from 0.047 to 0.181, with

⁴⁰ Rebuttal Testimony of Robert B. Hevert at 33, n. 93.

⁴¹ Rebuttal Testimony of Michael P. Gorman at 30 and 32.

⁴² A T-statistic higher than 2.00 (absolute value) indicates a statistically significant relationship at the 95.00 percent confidence level.

⁴³ Beta Coefficients were calculated based on 5 years of weekly return data and using the New York Stock Exchange as the market index.

1 an average of 0.103. In other words, Mr. Gorman relies on inputs to his CAPM model
 2 whose explanatory value is (on average) only about one-sixth of the explanatory value in
 3 my Risk Premium analysis, which Mr. Gorman suggests the Commission reject because
 4 “there is not a strong relationship.”

5 **Table 2: Value Line Based Beta Coefficients and R-squared measures⁴⁴**

Company	Reported Beta Coefficient	Calculated Beta Coefficient	Calculated R-Squared Measure
ALLETE, Inc.	0.75	0.67	0.119
Alliant Energy Corporation	0.70	0.62	0.096
Ameren Corporation	0.65	0.61	0.084
American Electric Power Company, Inc.	0.65	0.62	0.094
Black Hills Corporation	0.90	0.75	0.123
CMS Energy Corporation	0.65	0.57	0.066
DTE Energy Company	0.65	0.63	0.108
Duke Energy Corporation	0.60	0.52	0.047
El Paso Electric Company	0.75	0.71	0.130
Hawaiian Electric Industries, Inc.	0.65	0.61	0.077
IDACORP, Inc.	0.70	0.71	0.140
NorthWestern Corporation	0.65	0.64	0.108
OGE Energy Corp.	0.95	0.76	0.173
Otter Tail Corporation	0.85	0.82	0.181
Pinnacle West Capital Corporation	0.65	0.64	0.106
PNM Resources, Inc.	0.70	0.68	0.100
Portland General Electric Company	0.65	0.61	0.082
WEC Energy Group, Inc.	0.60	0.57	0.065
XCEL Energy Inc.	0.60	0.55	0.063
Average	0.70	0.65	0.103

6

⁴⁴ Source: Schedule MPG-19 and Bloomberg Professional Services. Calculated Beta coefficients are not rounded.

1 **Q: Did you perform any additional analyses to address Mr. Gorman’s concern regarding**
2 **the effect of expected market volatility and other interest rate environments on your**
3 **Bond Yield Plus Risk Premium results?**

4 A: Yes, I did. As discussed in my Direct Testimony, I performed an additional analysis to
5 specifically include the effect of equity market volatility and credit spreads (*see* Schedule
6 RBH-7). As with my original Bond Yield Plus Risk Premium analysis, I defined the Risk
7 Premium as the dependent variable, and the prevailing 30-year Treasury yield as an
8 independent variable. I then included two additional explanatory variables: (1) the VIX,
9 and (2) the credit spread between the 30-year Treasury yield and the Moody’s A Utility
10 Index (as a measure of incremental risk). In both instances, the statistically significant
11 inverse relationship between Treasury yields and the Risk Premium remained, and the
12 resulting ROE estimates were generally consistent with those of my original Bond Yield
13 Plus Risk Premium analysis.⁴⁵

14 Lastly, I note that applying Mr. Gorman’s assumed 3.80 percent 30-year Treasury
15 yield to the alternative Bond Yield Plus Risk Premium Analysis produces a more
16 reasonable ROE estimate of 9.63 percent relative to Mr. Gorman’s 9.30 percent
17 recommendation.⁴⁶

⁴⁵ See Schedule RBH-7.

⁴⁶ Mr. Gorman uses a 3.80 percent projected Treasury yield in his risk premium analysis. See Direct Testimony of Michael P. Gorman at 55.

1 *D. Business Risks and Other Considerations*

2 **Q: Mr. Gorman also argues your assessment of the relationship between corporate and**
3 **utility bond yields “is not useful.”⁴⁷ What is your response to Mr. Gorman on that**
4 **point?**

5 **A:** In my Direct Testimony I examined the relationship between debt yields on A-rated utility,
6 and corporate debt. That analysis found essentially no difference between the two,
7 indicating that investors do not require lower returns for utilities (relative to their corporate
8 counterparts).⁴⁸ Mr. Gorman argues my analysis is “not useful in observing whether
9 current market valuations suggest that utility costs of capital are lower than non-regulated
10 or corporate bond issuances.”⁴⁹ He goes on to state that “the question is not whether the
11 yield spreads of corporate and utility bonds can be predicted,” but “whether or not there is
12 an observable difference in the current yields of A-rated utility bonds relative to those of
13 A-rated corporate bonds.”⁵⁰

14 If Mr. Gorman’s question is whether there is a meaningful difference between the
15 utility and corporate yields, the data contained in Schedule MPG-17 to his Direct
16 Testimony demonstrates there is not. The average difference over the 39 years presented
17 in that Schedule is one basis point, with a standard deviation of 22 basis points. That is,
18 there is virtually no difference in yields between corporate and utility Baa-rated debt yields.
19 Although Mr. Gorman’s Schedule MPG-17 also provides the difference between Aaa-rated
20 corporate debt and A-rated utility debt, that comparison is not very useful (there is a full
21 letter grade difference in ratings).

⁴⁷ Rebuttal Testimony of Michael P. Gorman at 44.

⁴⁸ Direct Testimony of Robert B. Hevert at 59-60.

⁴⁹ Rebuttal Testimony of Michael P. Gorman at 44.

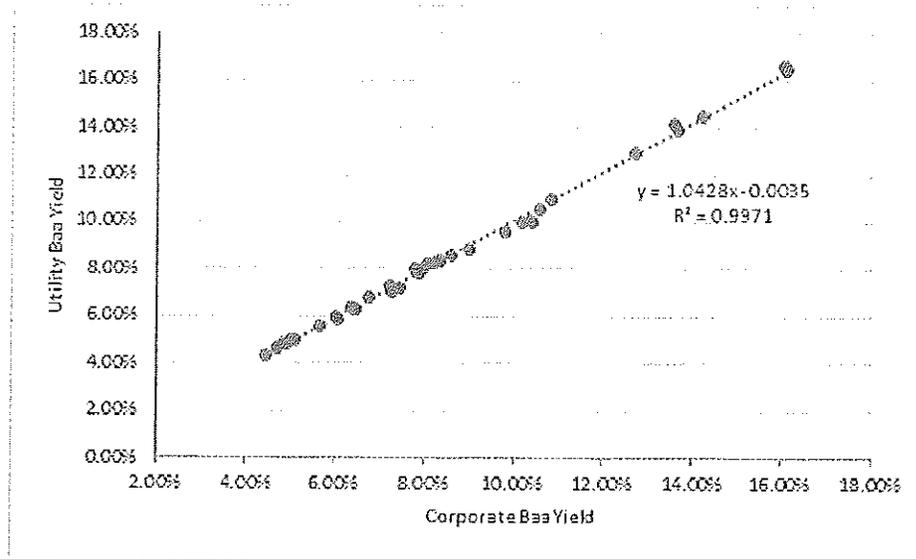
⁵⁰ *Ibid.*

1 The data underlying Mr. Gorman's Figure 2 in his rebuttal testimony at page 45,
2 which compares A-rated utility debt to A-rated corporate debt likewise tells us there is no
3 meaningful difference between the two. There, the average difference is only about three
4 basis points, with a standard deviation of about five basis points. Contrary to Mr. Gorman's
5 position, his data indicates there is no reason to believe utility yields have been below those
6 of similarly-rated corporate securities.

7 As to Mr. Gorman's view that reviewing the relationship between yields is "not
8 useful," I disagree. If corporate bonds were the riskier alternative, the increase in corporate
9 yields would be greater than the increase in utility bond yields. Based on the Baa-rated
10 corporate and utility bond data contained in Schedule MPG-17, the slope coefficient is
11 essentially 1.00, and the intercept coefficient is zero. That is, as shown on Chart 6 below,
12 the two move in lock-step. One is not more variable than the other. That is the same
13 conclusion drawn from Chart 7 at page 60 of my Direct Testimony. This data shows there
14 is no statistical difference between the yields on similarly-rated utility and corporate debt.
15 Consequently, there is no reason to conclude that the relationship between the two supports
16 Mr. Gorman's unduly low ROE recommendation.

1

Chart 6: Corporate vs. Utility Baa-Rated Debt Yields⁵¹



2

3

Regarding Mr. Gorman's assertion that the analysis is being used to "predict" corporate or utility bond yields, he is incorrect. The analysis is used to explain changes in utility bond yields as a function of changes in corporate bond yields. My analysis is similar to the calculation of "raw" Beta coefficients, in which changes in one variable (company-specific returns) are modeled as a function of changes in another variable (market returns). It is not meant to "predict" yields. It simply demonstrates that, contrary to Mr. Gorman's assertion, debt investors see utility debt as risky as comparably-rated corporate debt.

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10 **Q: Do you believe that credit ratings are an appropriate measure to determine the equity risk of the Company relative to the proxy group?**

11

12 **A:** Although I agree that in general credit ratings (and therefore credit spreads) are directionally related to the Cost of Equity, I do not agree changes in one are a direct measure of changes in the other. Debt and equity are entirely different securities with different risk/return characteristics, different lives, and different investors. Debt investors

13

14

15

⁵¹ Source: Schedule MPG-17.

1 have a contractual, senior claim on cash flows not available to equity investors and, as
2 such, equity investors bear the residual risk of ownership. Moreover, because the life of
3 debt is finite, debt investors' exposure to business and financial risk likewise is finite. In
4 contrast, equity is perpetual and, equity investors are exposed to residual risk in perpetuity.
5 Because debt and equity are distinct securities with different risk and return profiles, debt
6 and equity investors themselves have different risk tolerances and return requirements. As
7 such, any inferences drawn from differences in credit ratings regarding the Companies'
8 Cost of Equity should be drawn with caution.

9 A visible measure of the distinction of the risks to which debt and equity investors
10 are exposed is the difference in their respective Beta coefficients. Mr. Gorman reports an
11 average Beta coefficient of 0.70 for his proxy group.⁵² Duff & Phelps notes that as of
12 December 2017, the Beta coefficient for A-rated debt was 0.04,⁵³ far below the equity Beta
13 coefficient assumed by Mr. Gorman. In fact, a debt Beta coefficient of 0.47 is associated
14 with B-rated debt, which is considered below investment grade.⁵⁴ Those differences are a
15 clear indication that the risks assumed by debt investors are far different than those
16 assumed by equity investors.

17 Further, Mr. Gorman has not shown that differences in credit ratings are direct
18 measures of differences in the Cost of Equity. For example, the rank correlation between
19 Mr. Gorman's DCF estimates and his proxy companies' credit ratings is less than 6.00
20 percent, suggesting essentially no relationship between the two.⁵⁵ Consequently, any

⁵² Schedule MPG-19.

⁵³ Duff & Phelps 2018 Valuation Handbook, John Wiley & Sons, Inc., 2018, at 5-18.

⁵⁴ *Ibid.* Debt Beta coefficients for BBB-rated companies were 0.19.

⁵⁵ Schedule RBH-27.

1 inferences Mr. Gorman draws from differences in credit ratings are tenuous and should be
2 viewed with considerable caution.

3 **Q: Mr. Gorman recommends at pages 3 and 45-46 of his rebuttal testimony that the**
4 **Commission authorize a Return on Equity no higher than 9.30 percent based on the**
5 **merger settlement agreement that Great Plains Energy Incorporated, Westar**
6 **Energy, Inc. and KCP&L entered into with various parties, which was approved by**
7 **the Kansas Corporation Commission (“KCC”). Is that settlement a relevant**
8 **consideration?**

9 A: No, it is not. Initially, it must be recognized that the KCC stated in its Order Approving
10 Merger that the “recommended ROE is merely a promise by the Signatories to recommend
11 a 9.3%” and that the KCC “is under no obligation to utilize any specific ROE in a future
12 rate case.”⁵⁶ Furthermore, as Mr. Ives describes in his Surrebuttal Testimony, there are
13 other differences between Kansas and Missouri, as well as differences between the merger
14 settlement agreements in each state that make the Kansas settlement irrelevant to this
15 general rate case proceeding.

16 The most relevant benchmark is this Commission’s decision in the Spire Missouri
17 gas rate cases, in which a Return on Equity of 9.80 percent was found to be “fair and
18 reasonable” in its Report and Order issued in February 2018, and its Amended Report and
19 Order issued in March. The Commission found that a 9.80 percent ROE was “consistent
20 with the national average, the growing economy, and the anticipated increasing interest
21 rates.”⁵⁷

⁵⁶ Order Approving Merger, ¶ 69 at p. 33, In re Application of Great Plains Energy Inc., Kansas City Power & Light Co., and Westar Energy, Inc. for Approval of Merger, No. 18-KCPE-095-MER (May 24, 2018).

⁵⁷ Report and Order at 34, In re Laclede Gas Company’s Request to Increase its Revenues for Gas Service, No. GR-2017-0215 and -0216 (Feb. 21, 2018), *as modified*, Amended Report and Order at 35 (Mar. 7, 2018).

IV. CONCLUSIONS AND RECOMMENDATION

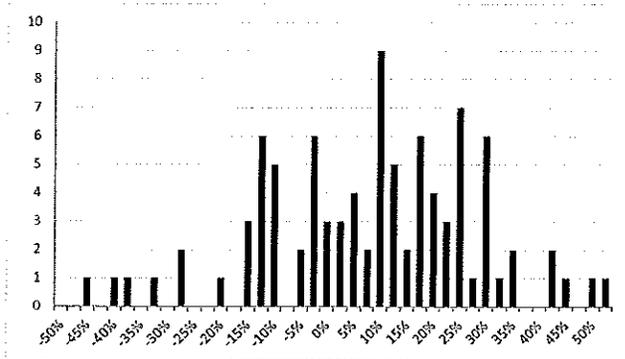
1 Q: Please briefly summarize your Surrebuttal Testimony.

2 A: In my Direct Testimony and Rebuttal Testimony, I concluded that a reasonable range of
3 ROE estimates is from 9.75 percent to 10.50 percent. For the reasons discussed throughout
4 my Surrebuttal Testimony, none of the arguments raised in Mr. Gorman's rebuttal
5 testimony has caused me to revise my recommendation. As such, I continue to conclude
6 that an ROE within a range of 9.75 percent to 10.50 percent is reasonable. In addition, I
7 also continue to believe the Company's proposed capital structure is reasonable, and that
8 Mr. Smith's goodwill adjustment is too large.

9 Q: Does this conclude your Surrebuttal Testimony?

10 A: Yes, it does.

Frequency Distribution of Market Risk Premium, 1926 - 2017



Large Company Stocks Total Returns		Long-Term Government Bond Income Returns		MRP		MRP		
Year	Jan-Dec*	Jan-Dec*	Jan-Dec*	Jan-Dec*	Bin	Frequency	Cumulative %	
1926	0.1162	0.0373	0.0789	-50.00%	0	0.0%		
1927	0.3749	0.0341	0.3408	-47.50%	0	0.0%		
1928	0.4361	0.0322	0.4039	-45.00%	1	1.1%		
1929	-0.0842	0.0347	-0.1189	-42.50%	0	1.1%		
1930	-0.2490	0.0332	-0.2822	-40.00%	1	2.2%		
1931	-0.4334	0.0333	-0.4667	-37.50%	1	3.3%		
1932	-0.0819	0.0369	-0.1188	-35.00%	0	3.3%		
1933	0.5399	0.0312	0.5087	-32.50%	1	4.3%		
1934	-0.0144	0.0318	-0.0462	-30.00%	0	4.3%		
1935	0.4767	0.0281	0.4486	-27.50%	2	6.5%		
1936	0.3392	0.0277	0.3115	-25.00%	0	6.5%		
1937	-0.3503	0.0266	-0.3769	-22.50%	0	6.5%		
1938	0.3112	0.0264	0.2848	-20.00%	1	7.6%		
1939	-0.0041	0.0240	-0.0281	-17.50%	0	7.6%		
1940	-0.0978	0.0223	-0.1201	-15.00%	3	10.9%		
1941	-0.1159	0.0194	-0.1353	-12.50%	6	17.4%		
1942	0.2034	0.0246	0.1788	-10.00%	5	22.8%		
1943	0.2590	0.0244	0.2346	-7.50%	0	22.8%		
1944	0.1975	0.0246	0.1729	-5.00%	2	25.0%		
1945	0.3644	0.0234	0.3410	-2.50%	6	31.5%		
1946	-0.0807	0.0204	-0.1011	0.00%	3	34.8%		
1947	0.0571	0.0213	0.0358	2.50%	3	38.0%		
1948	0.0550	0.0240	0.0310	5.00%	4	42.4%		
1949	0.1879	0.0225	0.1654	7.50%	2	44.6%		
1950	0.3171	0.0212	0.2959	10.00%	9	54.3%		
1951	0.2402	0.0238	0.2164	12.50%	5	59.8%		
1952	0.1837	0.0266	0.1571	15.00%	2	62.0%		
1953	-0.0099	0.0284	-0.0383	17.50%	6	68.5%		
1954	0.5262	0.0279	0.4983	20.00%	4	72.8%		
1955	0.3156	0.0275	0.2881	22.50%	3	76.1%		
1956	0.0656	0.0299	0.0357	25.00%	7	83.7%		
1957	-0.1078	0.0344	-0.1422	27.50%	1	84.8%		
1958	0.4336	0.0327	0.4009	30.00%	6	91.3%		
1959	0.1196	0.0401	0.0795	32.50%	1	92.4%		
1960	0.0047	0.0426	-0.0379	35.00%	2	94.6%		
1961	0.2689	0.0383	0.2306	37.50%	0	94.6%		
1962	-0.0873	0.0400	-0.1273	40.00%	0	94.6%		
1963	0.2280	0.0389	0.1891	42.50%	2	96.7%		
1964	0.1648	0.0415	0.1233	45.00%	1	97.8%		
1965	0.1245	0.0419	0.0826	47.50%	0	97.8%		
1966	-0.1006	0.0449	-0.1455	50.00%	1	98.9%		
1967	0.2398	0.0459	0.1939	51.00%	1	100.0%		
1968	0.1106	0.0550	0.0556					
1969	-0.0850	0.0595	-0.1445					
1970	0.0386	0.0674	-0.0288					
1971	0.1430	0.0632	0.0798					
1972	0.1899	0.0587	0.1312					
1973	-0.1469	0.0651	-0.2120					
1974	-0.2647	0.0727	-0.3374					
1975	0.3723	0.0799	0.2924					
1976	0.2393	0.0789	0.1604					
1977	-0.0716	0.0714	-0.1430					
1978	0.0657	0.0790	-0.0133					
1979	0.1861	0.0886	0.0975					
1980	0.3250	0.0997	0.2253					

Count:	92	
Highest MRP from Direct	Rank	
11.89%	57.70%	
Historical Market Return		
Hevert	% Rank	Occurrence
13.78%	49.60%	46
14.67%	51.00%	45
		92

	Large Company Stocks Total Returns	Long-Term Government Bond Income Returns	MRP
1981	-0.0492	0.1155	-0.1647
1982	0.2155	0.1350	0.0805
1983	0.2256	0.1038	0.1218
1984	0.0627	0.1174	-0.0547
1985	0.3173	0.1125	0.2048
1986	0.1867	0.0898	0.0969
1987	0.0525	0.0792	-0.0267
1988	0.1661	0.0897	0.0764
1989	0.3169	0.0881	0.2288
1990	-0.0310	0.0819	-0.1129
1991	0.3047	0.0822	0.2225
1992	0.0762	0.0726	0.0036
1993	0.1008	0.0717	0.0291
1994	0.0132	0.0659	-0.0527
1995	0.3758	0.0760	0.2998
1996	0.2296	0.0618	0.1678
1997	0.3336	0.0664	0.2672
1998	0.2858	0.0583	0.2275
1999	0.2104	0.0557	0.1547
2000	-0.0910	0.0650	-0.1560
2001	-0.1189	0.0553	-0.1742
2002	-0.2210	0.0559	-0.2769
2003	0.2888	0.0480	0.2388
2004	0.1088	0.0502	0.0586
2005	0.0491	0.0469	0.0022
2006	0.1579	0.0468	0.1111
2007	0.0549	0.0486	0.0063
2008	-0.3700	0.0445	-0.4145
2009	0.2646	0.0347	0.2299
2010	0.1506	0.0425	0.1081
2011	0.0211	0.0382	-0.0171
2012	0.1600	0.0246	0.1354
2013	0.3239	0.0288	0.2951
2014	0.1369	0.0341	0.1028
2015	0.0138	0.0247	-0.0109
2016	0.1196	0.0230	0.0966
2017	0.2183	0.0267	0.1916
Average	0.1206	0.0499	0.0707
Std. Dev.	0.1980	0.0263	0.1990

Source: Duff & Phelps, 2018 SBBI, Appendix A-1, A-7

Correlation between credit rating and Gorman DCF Results

	Sustainable Growth Constant Growth DCF	Analyst Constant Growth DCF	S&P Rating	Moody Rating	S&P Rating No.	Moody Rating No.	S&P Rating	Moody Rating	Assigned Rating No.
ALLETE, Inc.	7.91%	9.67%	BBB+	A3	9	8	AAA		1
Alliant Energy Corporation	8.05%	9.27%	A-	Baa1	8	9	AAA-	Aaa	2
Ameren Corporation	8.07%	9.95%	BBB+	Baa1	9	9	AA+	Aa1	3
American Electric Power Company, Inc.	8.91%	9.56%	A-	Baa1	8	9	AA	Aa2	4
Black Hills Corporation	9.04%	8.02%	BBB	Baa2	10	10	AA-	Aa3	5
CMS Energy Corporation	10.35%	10.25%	BBB+	Baa1	9	9	A+	A1	6
DTE Energy Company	9.64%	9.44%	BBB+	Baa1	9	9	A	A2	7
Duke Energy Corporation	6.76%	8.93%	A-	Baa1	8	9	A-	A3	8
El Paso Electric Company	6.37%	7.88%	BBB	Baa1	10	9	BBB+	Baa1	9
Hawaiian Electric Industries, Inc.	8.04%	11.68%	BBB-	N/A	11	N/A	BBB	Baa2	10
IDACORP, Inc.	6.03%	6.50%	BBB	Baa1	10	9	BBB-	Baa3	11
NorthWestern Corporation	7.91%	7.11%	BBB	Baa2	10	10	BB+	Ba1	12
OGE Energy Corp.	7.14%	9.10%	A-	A3	8	8	BB	Ba2	13
Otter Tail Corporation	10.46%	11.74%	BBB	Baa2	10	10	BB-	Ba3	14
Pinnacle West Capital Corporation	7.63%	8.07%	A-	A3	8	8	B+	B1	15
PNM Resources, Inc.	7.29%	7.95%	BBB+	Baa3	9	11	B	B2	16
Portland General Electric Company	6.62%	6.28%	BBB	A3	10	8	B-	B3	17
WEC Energy Group, Inc.	8.02%	8.35%	A-	A3	8	8	CCC+	Caa1	18
Xcel Energy Inc.	8.13%	9.35%	A-	A3	8	8	CCC	Caa2	19
							CCC-	Caa3	20
							CC+	Ca	21
							CC		22
							CC-		23
							C+		24
Rank Correlation									
Analyst Constant Growth DCF vs. S&P Rating:			0.1%						
Sustainable Growth Constant Growth DCF vs. S&P Rating:			0.0%						
Analyst Constant Growth DCF vs. Moody's Rating:			0.1%						
Sustainable Growth Constant Growth DCF vs. Moody's Rating:			5.8%						
Average:			1.5%						

Notes:

Source: Schedules MPG-6, MPG-8, MPG-11