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MISSOURI PUBLIC SERVICE COMMISSION
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SURREBUTTAL TESTIMONY

OF

J. RANDALL WOOLRIDGE

KANSAS CITY POWER & LIGHT COMPANY

CASE NO. ER-2016-0285

Jefferson City, Missouri
January, 2017

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J. RANDALL WOOLRIDGE
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I. CAPITAL MARKET CONDITIONS

Q. IN HIS REBUTTAL TESTIMONY, MR. HEVERT AGAIN INDICATES THAT INTEREST RATES AND CAPITAL COSTS ARE ABOUT TO INCREASE IN MAGNITUDE. PLEASE RESPOND.

A. On pages 3-10 of his rebuttal testimony, Mr. Hevert cites credit spreads and interest rate trends and forecasts as support for a higher ROE. He claims that his ROE recommended range of 9.75% to 10.5% reflects current and expected market conditions, which includes higher interest rates and capital costs.

Q. PLEASE DISCUSS HIS CHART OF CREDIT SPREADS.

A. On page 4 of his rebuttal testimony, Mr. Hevert shows a chart of A-rated utility credit spreads over the past ten years. He claims that credit spreads are “... near their highest level since the year 2006” However, a review of that chart shows that these spreads have been in the 1.0% to 1.5% range since 2009, and they have trended downwards over the past year. They do not appear to be at an extremely high level at the present and the trend is down.

Q. PLEASE ADDRESS THE FEDERAL RESERVE’S DECISION TO RAISE THE FEDERAL FUNDS RATE IN DECEMBER 2016, AND THE IMPACT, IF ANY, OF THE U.S. PRESIDENTIAL ELECTION ON THE FEDERAL FUNDS RATE.

A. Long-term interest rates in the U.S. bottomed out in August 2016 and have increased since that time with improvements in the economy. Notable improvements include lower unemployment and improving economic growth and corporate earnings. Then came November 8, 2016, and financial markets moved significantly in the wake of the unexpected results in the U.S. presidential election. The stock market has gained almost 10% and the 30-year Treasury yield has increased about 50 basis points to its current level of about 3.0%.

1 These market adjustments reflect the expectation that the new administration will
2 make changes in fiscal, regulatory, and possibly monetary policies which could lead to
3 higher economic growth and inflation. As a result of these developments, the Federal
4 Reserve's decision at its December 13-14, 2016 meeting to raise its federal funds target rate
5 to 0.50 - .075 percent was broadly expected and there was no significant market reaction.

6 **Q. PLEASE DISCUSS THE FORECASTS OF HIGHER INTEREST**
7 **RATES AND CAPITAL COSTS.**

8 A. Mr. Hevert has used the interest rates forecasts of economists in his CAPM and
9 risk premium equity cost rate approaches and in his discussion of capital market conditions. In
10 my direct testimony, I highlighted that economists have consistently forecast higher interest
11 rates over the past decade, and they have consistently been wrong. On this issue,
12 I highlighted the following: (1) after the announcement of the end of Quantitative Easing III
13 ("QEIII") program in 2014, all the economists in Bloomberg's interest rate survey forecasted
14 interest rates would increase in 2014, and 100% of the economists were wrong;¹
15 (2) Bloomberg reported that the Federal Reserve Bank of New York has gone as far
16 as stopping use of interest rate estimates of professional forecasters in its interest rate model;²
17 (3) a study entitled "How Interest Rates Keep Making People on Wall Street Look
18 Like Fools," which evaluated economists' forecasts for the yield on ten-year Treasury bonds
19 at the beginning of the year for the last ten years,³ the results demonstrated that economists

¹ Ben Eisen, "Yes, 100% of economists were dead wrong about yields, *Market Watch*," October 22, 2014.

² Susanne Walker and Liz Capo McCormick, "Unstoppable \$100 Trillion Bond Market Renders Models Useless," *Bloomberg.com* (June 2, 2014). <http://www.bloomberg.com/news/2014-06-01/the-unstoppable-100-trillion-bond-market-renders-models-useless.html>.

³ Joe Weisenthal, "How Interest Rates Keep Making People on Wall Street Look Like Fools," *Bloomberg.com*, March 16, 2015. <http://www.bloomberg.com/news/articles/2015-03-16/how-interest-rates-keep-making-people-on-wall-street-look-like-fools>.

1 consistently predict that interest rates will go higher, and interest rates have not fulfilled the
2 predictions; and (4) a study that tracked economists' forecasts for the yield on ten-year
3 Treasury bonds on an ongoing basis from 2010 until 2015.⁴ The results of this study, which
4 was entitled "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time,"
5 demonstrate how economists continually forecast that interest rates are going up, and they
6 do not.

7 **Q. WHAT DO YOU RECOMMEND THE COMMISSION DO**
8 **REGARDING THE FORECASTS OF HIGHER INTEREST RATES AND CAPITAL**
9 **COSTS?**

10 A. I suggest that the Commission set an equity cost rate based on current market
11 cost rate indicators and decline to speculate on the future direction of interest rates. As the
12 above studies indicate, economists are always predicting that interest rates are going up, and
13 yet they are almost always wrong. Obviously, investors are well aware of the consistently
14 wrong forecasts of higher interest rates and therefore place little weight on such forecasts.
15 Moreover, investors would not be buying long-term Treasury bonds or utility stocks at their
16 current yields if they expected interest rates to suddenly increase, thereby producing higher
17 yields and negative returns. For example, consider a utility that pays a dividend of \$2.00 with
18 a stock price of \$50.00. The current dividend yield is 4.0%. If, as Mr. Hevert suggests,
19 interest rates and required utility yields increase, the price of the utility stock would decline.
20 In the example above, if higher return requirements led the dividend yield to increase from
21 4.0% to 5.0% in the next year, the stock price would have to decline to \$40, which would be a

⁴ Akin Oyedele, "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time," *Business Insider*, July 18, 2015. <http://www.businessinsider.com/interest-rate-forecasts-are-wrong-most-of-the-time-2015-7>.

1 negative 20% return on the stock.⁵ Obviously, investors would not buy the utility stock with
2 an expected return of negative 20% due to higher dividend yield requirements.

3 In sum, it appears to be impossible to accurately forecast prices and rates that are
4 determined in the financial markets, such as interest rates, the stock market, and gold prices.
5 For interest rates, I have never seen a study that suggests one forecasting service is
6 consistently better than others or that interest rate forecasts are consistently better than just
7 assuming that the current interest rate will be the rate in the future. As discussed above,
8 investors would not be buying long-term Treasury bonds or utility stocks at their current
9 yields if they expected interest rates to suddenly increase, thereby producing higher yields and
10 negative returns.

11 **Q. FINALLY, PLEASE DISCUSS MR. HEVERT'S DISCUSSION OF GDP**
12 **GROWTH AT PAGE 10 OF HIS REBUTTAL TESTIMONY.**

13 A. Mr. Hevert highlights the third quarter GDP growth rate of 3.5% to suggest
14 that economic conditions have changed significantly. He uses that figure and expected
15 inflation of 2.05% to 2.1% to suggest a nominal GDP growth rate of 5.60% to 5.65%.
16 Figure 1 shows quarterly GDP growth rates for the last three years. The 3.5% growth rate is
17 the highest quarterly growth rate in over two years. The annual growth rate over the past four
18 quarters is at 1.7%. Using this figure, and expected inflation of 2.05% to 2.1%, indicates an
19 annual nominal GDP growth rate in the range of 3.8%.

⁵ In this example, for a stock with a \$2.00 dividend, a dividend yield 5.0% dividend yield would require a stock price of \$40 ($\$2.00/\$40 = 5.0\%$).

Figure 1
Quarterly Real GDP Growth Rates
Source: www.tradingeconomics.com



II. DCF ANALYSIS ISSUES

Q. IN HIS REBUTTAL TESTIMONY, MR. HEVERT RAISES A NUMBER OF ISSUES INVOLVING THE APPLICATION OF THE DCF MODEL IN THIS CASE. PLEASE RESPOND.

A. First, in my rebuttal testimony, I testified that the primary issues with Mr. Hevert's DCF analyses include: (1) Mr. Hevert has given very little weight to his constant-growth DCF results; (2) in his constant-growth and multi-stage growth DCF analyses, he has relied excessively on the overly optimistic and upwardly biased EPS growth rate forecasts of Wall Street analysts and *Value Line*; and (3) in his multi-stage DCF model, he has employed a terminal growth rate of 5.28% which is about 100 basis points above the projected long-term growth in U.S. GDP.

1 In his rebuttal testimony, Mr. Hevert discusses a number of items regarding my
2 application of the DCF model. These include: (1) at page 13, he claims that I give too much
3 weight to my DCF results; (2) at pages 16-18, he takes issue with my proxy group; (3) at
4 pages 21-23, he takes issue with my calculation of sustainable growth; (4) at pages 23-26, he
5 again claims that the constant-growth DCF model is flawed because of the high P/E ratios for
6 utility stocks, (5) at pages 27-30, he takes issue with my assessment of analysts' long-term
7 EPS growth rates; (6) at page 30, he highlights management's earnings guidance for some
8 companies in his proxy group; (7) at page 31, he discusses my use of historical growth rates;
9 (8) at pages 32-33, he discusses a study that he performed which he says supports the claims
10 that analysts' EPS growth rates are highly correlated to utility equity cost rates; and (9) at
11 pages 33-35, he highlights issues addressed by analysts in their reports for AEP Corporation.
12 I will address these issues in order.

13 **Q. PLEASE DISCUSS MR. HEVERT'S COMMENTS OF THE WEIGHT**
14 **YOU GIVE YOUR DCF RESULTS.**

15 A. At page 13, Mr. Hevert claims that I give too much weight to my DCF results.
16 It is my experience that regulatory commissions have given primary weight to the DCF
17 model. As I discuss in my initial report, the constant-growth DCF model is especially
18 appropriate for utilities, due to their regulated status and the mature nature of their product life
19 cycle. In addition, the DCF measures investors' return requirements directly, using current
20 stock prices, dividends, and expected growth. The DCF growth rate normally prompts the
21 biggest debate, but there is much guidance available from different investment information
22 services. As with any model, the DCF model is based on simplifying assumption, but these
23 assumptions are much easier to refine than those used in the CAPM. With respect to the

1 CAPM, the equity cost rate results are highly dependent on the market risk premium. As I
2 indicated on page 11 of my initial report, Merton Miller, the 1990 Nobel Prize winner in
3 economics, has called the expected market return, which the market risk premium is
4 dependent on, one the biggest mysteries in all of finance. Furthermore, as I show in on page 5
5 of Exhibit JRW-11, published estimates of the market risk premium are all over the map and
6 range from 1.97% to over 7.0%. However, none of these estimates are as high as Mr. Hevert's
7 10.50% and 11.14%. Finally, as detailed in my rebuttal testimony, there are several problems
8 with Mr. Hevert's risk premium study, primarily, that it does not directly measure investors'
9 return requirements, but instead is a measure of commission decisions.

10 **Q. DO MR. HEVERT'S COMMENTS ON YOUR PROXY GROUP HAVE**
11 **ANY MERIT?**

12 A. No. First, he does not provide any evidence about how my group biases my
13 equity cost rate recommendation. Second, I have assessed the risk of my group, and his,
14 relative to the Company based on credit rating, and have demonstrated that the Company is a
15 little less risky. He has not done any such study. Third, Mr. Hevert does not mention that
16 I also used Mr. Hevert's proxy group in doing my analysis and making my recommendation
17 in this case.

18 **Q. PLEASE REVIEW YOUR SUSTAINABLE GROWTH CALCULATION.**

19 A. I have used internal sustainable growth as one of my thirteen measures of
20 growth for both the Electric and Hevert Proxy Groups. Sustainable growth includes:
21 (1) internal growth which is measured as the retention rate ("B") times the expected ROE
22 ("R") and is referred to as "B * R"; and (2) external growth which is measured as the growth
23 in the number of shares ("S") times the portion of the market-to-book ratio that exceeds

1 1.0 (“V”) and is referred to as “S * V.”⁶ I have relied upon internal growth because, of the
2 two measures, (1) internal growth is the predominant component of sustainable growth and
3 (2) external growth is speculative in that the calculation includes projections of a future
4 market-to-book ratio as well as future issues of stock. Mr. Hevert’s objection is that I only
5 used the B * R form of sustainable growth.

6 **Q. IS MR. HEVERT CORRECT IN HIS ASSERTION THAT YOU DID**
7 **NOT INCLUDE S * V GROWTH?**

8 A. No. Whereas I calculate sustainable as B * R as one of my DCF growth rate
9 measures, I have also used *Value Line’s* projected book value per share growth rate. This
10 growth rate calculation includes *Value Line’s* explicit estimate of sustainable growth, which
11 presumably includes B*R and S*V.

12 **Q. PLEASE DISCUSS MR. HEVERT’S CRITICISM OF THE CONSTANT-**
13 **GROWTH DCF MODEL DUE TO THE HIGH P/E RATIOS OF UTILITY**
14 **COMPANIES.**

15 A. At pages 11-12 and 23-26 of his rebuttal testimony, Mr. Hevert expresses
16 concerns with constant-growth DCF model results because of the high valuation and utility
17 Price / Earnings (“P/E”) ratios⁷ have increased and are above market averages. Mr. Hevert is
18 correct -- the valuation and P/E ratios of utility stocks have increased. However, in my initial
19 testimony, I highlighted a recent Moody’s article that indicated that the higher valuation of

⁶ The retention rate is the percent of earnings retained by a company and reinvested in the company’s asset base. The market to book ratio is the market value of a company’ equity (i.e., the stock price) dividend by the book value (the value on the balance sheet).

⁷ The Price / Earnings ratio is the ratio of the market price of a share of a company’s common stock to the annual earnings per share available for common shareholders.

1 utilities is justified because of the reduced risk of the utility industry, which has led to higher
2 P/E multiples.⁸ The article states that:

3 As utilities increasingly secure more up-front assurance for cost
4 recovery in their rate proceedings, we think regulators will
5 increasingly view the sector as less risky. The combination of
6 low capital costs, high equity market valuation multiples (which
7 are better than or on par with the broader market despite the
8 regulated utilities' low risk profile), and a transparent assurance
9 of cost recovery tend to support the case for lower authorized
10 returns, although utilities will argue they should rise, or at least
11 stay unchanged.⁹

12 Therefore, the higher P/E ratios of utility stocks are based on expectations of future
13 recognition of the reduction in utility risks and of the lower risk of utility stocks.

14 **Q. PLEASE ADDRESS MR. HEVERT'S COMMENTS IN HIS REBUTTAL**
15 **TESTIMONY ON THIS ISSUE.**

16 A. There are several noteworthy items. First, at pages 23-26 of his rebuttal
17 testimony, Mr. Hevert notes that in March 2015, Moody's observed the high valuations of
18 utilities, and Mr. Hevert claims that this was unlikely to persist. However, contrary to
19 Mr. Hevert's claims, over the past year utility stock valuations have indeed persisted and
20 these stocks have outperformed almost on par with the S&P 500. Second, Mr. Hevert claims
21 that the higher P/E multiples are not because of the cost-recovery mechanisms. This claim,
22 however, is contrary to Moody's statement that the higher valuations are due to lower risk,
23 citing the cost-recovery mechanisms as part of the reason for the lower risk.

24 **Q. PLEASE DISCUSS MR. HEVERT'S COMMENTS ON ANALYSTS'**
25 **LONG-TERM EPS GROWTH RATE FORECASTS.**

⁸ Moody's Investors Service, "Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles,"
March 10, 2015, p. 3.

⁹ Moody's Investors Service, "Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles,"
March 10, 2015.

1 A. As I discussed at length in my initial testimony, there are a number of studies
2 that have demonstrated that the long-term EPS growth rate forecasts of Wall Street analysts
3 are overly optimistic and upwardly biased.¹⁰ At pages 27-30 of his Rebuttal testimony,
4 Mr. Hevert attempts to refute this evidence in several ways: (1) he cites several published
5 studies to support the use on analysts' projections in the DCF model; and (2) he makes
6 general assertions that such a bias, if it existed, would be eliminated by changes in regulations
7 and reporting requirements.

8 **Q. PLEASE RESPOND TO MR. HEVERT'S ASSERTIONS.**

9 A. First, the articles cited by Mr. Hevert (by Vander Weide and Carleton (1988),
10 Harris (1986), Brigham, Shome, and Vinson (1985), and by Harris and Marston (1992)) are
11 all nearly thirty years old. This is does not reflect the current research on the topic. In my
12 direct testimony, I have cited a number of articles published since that time which highlight
13 the upward bias in analysts' EPS growth rate estimates. Second, the studies that I cite
14 demonstrate that the upward bias has continued despite changes in regulations and reporting
15 requirements. This is highlighted by a 2010 McKinsey study entitled "Equity Analysts:
16 Still Too Bullish," which involved a study of the accuracy on analysts long-term EPS growth
17 rate forecasts. The authors conclude that after a decade of stricter regulation, analysts'
18 long-term earnings forecasts continue to be excessively optimistic. They made the following
19 observation:¹¹

20 Alas, a recently completed update of our work only reinforces
21 this view—despite a series of rules and regulations, dating to
22 the last decade, that were intended to improve the quality of the
23 analysts' long-term earnings forecasts, restore investor

¹⁰ See Woolridge Report, footnote 23, p. 25.

¹¹ Marc H. Goedhart, Rishi Raj, and Abhishek Saxena, "Equity Analysts, Still Too Bullish," McKinsey on Finance, pp. 14-17, (Spring 2010) (emphasis added).

1 confidence in them, and prevent conflicts of interest. For
2 executives, many of whom go to great lengths to satisfy Wall
3 Street's expectations in their financial reporting and long-term
4 strategic moves, this is a cautionary tale worth remembering.
5 This pattern confirms our earlier findings that analysts typically
6 lag behind events in revising their forecasts to reflect new
7 economic conditions. When economic growth accelerates, the
8 size of the forecast error declines; when economic growth
9 slows, it increases. So as economic growth cycles up and down,
10 the actual earnings S&P 500 companies report occasionally
11 coincide with the analysts' forecasts, as they did, for example,
12 in 1988, from 1994 to 1997, and from 2003 to 2006. Moreover,
13 analysts have been persistently overoptimistic for the past 25
14 years, with estimates ranging from 10 to 12 percent a year,
15 compared with actual earnings growth of 6 percent. Over this
16 time frame, actual earnings growth surpassed forecasts in only
17 two instances, both during the earnings recovery following a
18 recession. On average, analysts' forecasts have been almost
19 100 percent too high.

20 This is the same observation made in a *Bloomberg Businessweek* article.¹² The author
21 concluded:

22 **The bottom line:** Despite reforms intended to improve Wall
23 Street research, stock analysts seem to be promoting an overly
24 rosy view of profit prospects.

25 **Q. HOW DOES THE UPWARD BIAS IMPACT MR. HEVERT'S**
26 **ESTIMATION OF THE COMPANY'S COST OF EQUITY?**

27 A. First, as discussed above, it is not appropriate to mechanically add analysts'
28 EPS growth rates to a dividend yield to obtain a DCF equity cost rate. As Mr. Hevert himself
29 recognized, measuring the cost of equity is not a mathematical exercise.

30 Second, Mr. Hevert has computed a market risk premium for his CAPM by applying
31 the DCF model to the S&P 500. Mr. Hevert has estimated an expected market return from
32 these approaches using Bloomberg and *Value Line* projected five-year EPS growth rate

¹² Roben Farzad, "For Analysts, Things Are Always Looking Up," *Bloomberg Businessweek* (June 10, 2010).

1 estimates as the DCF growth rate. In both cases, the projected long-term EPS growth rate is in
2 excess of 10%. As I highlighted in my initial testimony, this approach results in an overstated
3 market return because the +10% long-term EPS growth rates: (1) are the overly optimistic
4 projected growth rates of analysts; and (2) defies economic logic since long-term EPS growth
5 in the U.S. is directly related to GDP growth, with GDP growth providing an upward limit on
6 EPS growth.¹³ As a result, Mr. Hevert's application of the DCF model to the S&P 500 in the
7 determination of a CAPM market risk premium is not realistic and results in an overstated
8 equity rate.

9 **Q. ON PAGE 30 OF HIS REBUTTAL TESTIMONY, MR. HEVERT**
10 **DEFENDS THE EXCLUSIVE USE OF ANALYSTS' LONG-TERM EPS GOWTH**
11 **RATE FORECASTS BY COMPARING THEM TO MANAGEMENT LONG-TERM**
12 **EPS GROWTH RATE FORECASTS FOR NINE COMPANIES IN HIS PROXY**
13 **GROUP. PLEASE RESPOND.**

14 A. There are two issues. First, he does not compare the management earnings
15 growth forecasts for all of the companies in his proxy group, but only for nine companies.
16 Second, a recent study found that management long-term earnings per share growth rate
17 forecasts, just as those of Wall Street analysts, are upwardly biased and overly optimistic.¹⁴

18 **Q. HAVE YOU EMPLOYED HISTORIC GROWTH RATES IN**
19 **DEVELOPING YOUR DCF GROWTH RATE?**

20 A. No. I did review historical growth rates, since most data available to investors
21 is historical. However, as discussed in my testimony, in arriving at my DCF growth rates,

¹³ Bradford Cornell, "Economic Growth and Equity Investing," *Financial Analysts Journal* (January-February, 2010), p. 63.

¹⁴ L. Faurel, T. Haight, and A. Simon, "Management Long Term Earnings Growth Forecasts," Working Paper, Loyola Marymount University, October, 2015.

1 I used the overall range of the projected growth rate indicators, and gave primary weight to
2 the projected EPS growth rate of Wall Street analysts. In doing so, I recognized that:
3 (1) analysts' growth rate forecasts have a significant impact on investors' expectations; and
4 (2) the scientific evidence on analysts' long-term EPS growth rate forecasts indicates that
5 these forecasts are overly optimistic and upwardly biased. My goal was to harmonize
6 investors' expectations with likely market conditions in the current rate-effective period.

7 **Q. AT PAGE 32 OF HIS REBUTTAL TESTIMONY, MR. HEVERT HAS**
8 **DEFENDED THE USE OF ANALYSTS' EPS FORECASTS IN HIS DCF MODEL BY**
9 **RECREATING A STUDY ON P/E RATIOS AND ALTERNATIVE GROWTH**
10 **RATES.**

11 A. In the recreated study, Mr. Hevert performs a linear regression of a company's
12 stock price to earnings ratio (P/E) on the projected EPS, DPS, BVPS, and sustainable growth,
13 both individually and with all variables.

14 **Q. ARE THERE ERRORS IN MR. HEVERT'S STUDY?**

15 A. Yes. The primary error in the study is that the regression model is mis-
16 specified. The mis-specification results from the fact that Mr. Hevert did not actually employ
17 a DCF model and estimate an equity cost rate. Instead, he used a "linear approximation."¹⁵
18 He did not measure the cost of equity, but instead his model only uses different
19 expected growth rate measures. In addition, he did not include the dividend yield or a risk
20 measure, both of which may impact the cost of equity and therefore the P/E ratio relative
21 expected growth.

¹⁵ By linear approximation, he does not actually include the cost of equity capital in the regression, but only uses different growth rate measures. Therefore, the cost of equity is not part of the analysis and hence no associations or conclusions can be made regarding analysts' projected EPS growth rates and the cost of equity.

1 **Q. AT PAGE 32 OF HIS REBUTTAL TESTIMONY, MR. HEVERT**
2 **CLAIMS THAT YOUR DCF EQUITY COST RATE APPROACH IS SUBJECTIVE.**
3 **PLEASE RESPOND.**

4 A. On page 32 of his rebuttal testimony, Mr. Hevert claims that the inputs for my
5 constant growth DCF model are subjective and that my results cannot be replicated. Such
6 could be said of most of the financial data in this case. In his rebuttal testimony, Mr. Hevert
7 himself has, in fact, recognized that the estimation of the cost of equity capital is not a
8 “mathematical exercise,” and that the estimation process requires “reasoned judgment” in
9 determining the appropriate use of empirical results.¹⁶

10 Estimating the cost of equity capital requires a degree of subjectivity in the selection
11 of models, the inputs for the models, and the measurement of the inputs for the model. I have
12 used the DCF and CAPM models, which are the two most generally accepted models to
13 estimate an equity cost rate.

14 In using the DCF model, the biggest issue is the expected growth rate. Investors have
15 many sources of financial information that go into developing their expectations of the future,
16 and the vast majority of this information is historic data. In estimating an expected growth
17 rate, I established an expected growth rate range after reviewing thirteen different historic and
18 projected measure of growth, and gave primary weight to analysts’ Earnings Per Share
19 (“EPS”) growth rate forecasts. For my two proxy groups, I reviewed the overall range of the
20 projected growth rate indicators (3.8% to 5.2% for the Electric Proxy Group, and 3.6% to
21 5.4% for the Hevert Proxy Group),¹⁷ and giving more weight to the projected EPS growth rate

¹⁶ Hevert Rebuttal Testimony, p. 11-12.

¹⁷ These values, and the sources for the data from which they come, are presented for each company in the Electric and Hevert Proxy Group on Exhibit JRW-10, pages 4 to 6, in my initial report.

1 of Wall Street analysts, I used a growth rate of 5.0% and 5.3% for the two groups. I also note
2 that this figure is on the higher end of my range. In arriving at this growth rate figure,
3 I recognized that: (1) most data provided to investors is historic; (2) analysts' growth rate
4 forecasts have a significant impact on investors' expectations; and (3) it is well known that the
5 long-term EPS growth rate forecasts of financial analysts are overly optimistic and upwardly
6 biased. Guided by this judgment, I used the numbers on the higher end of the range of growth
7 rate indicators from my two proxy groups, because, in the DCF context, those numbers
8 seemed to best fit investors' current expectations. In contrast to this approach, Mr. Hevert
9 mechanically added four different measures of projected growth to his dividend yields.

10 It should also be noted that the earnings growth values I use in my DCF analysis
11 (5.0% and 5.3%) are within the range of earnings growth means and medians that Mr. Hevert
12 reports on Schedule RBH-1 in his DCF analysis, which show average earnings growth of
13 5.29%.

14 **Q. HOW DOES SUBJECTIVITY AFFECT THE INPUTS INTO**
15 **MR. HEVERT'S CAPM ANALYSIS?**

16 A. Mr. Hevert's CAPM derives from his own subjective study of analysts' EPS
17 growth rate projections. For the CAPM, the biggest issue is the market risk premium
18 ("MRP"). As I explained in my initial testimony, the estimation and the measurement of the
19 MRP is the biggest mystery in finance. As I highlight in my initial testimony, there are three
20 procedures for estimating a MRP – historic returns, surveys, and expected return models.
21 I have used a MRP of 5.5%, which: (1) factors in all three approaches to estimating an equity
22 premium; and (2) employs the results of over thirty studies of the MRP. As I testified in my
23 initial report, my MRP reflects the market risk premiums: (1) determined in recent academic

1 studies by leading finance scholars; (2) employed by leading investment banks and
2 management consulting firms; and (3) found in surveys of companies, financial forecasters,
3 financial analysts, and corporate CFOs. Contrary to this approach, Mr. Hevert conducts his
4 own study using analysts' EPS growth rate projections to compute an expected market return
5 and MRP. His MRPs of 10.50% and 11.14% are larger than any MRPs discovered in any
6 published academic or professional study or survey. This is because he mechanically
7 computes an expected market return using the upwardly biased EPS growth rate forecasts of
8 financial analysts. These EPS growth rate projections and the resulting expected market
9 returns and MRPs include unrealistic assumptions regarding future economic and earnings
10 growth and stock returns.

11 **Q. PLEASE PROVIDE FURTHER INSIGHT INTO THE SUBJECTIVITY**
12 **EMPLOYED BY MR. HEVERT IN ARRIVING AT HIS ROE RECOMMENDATION.**

13 A. In Exhibit JRW-13 of my testimony, I provided a summary of Mr. Hevert's
14 equity cost rate results. These include the constant-growth DCF, the multi-stage DCF, and the
15 CAPM and risk premium approaches. Since Mr. Hevert uses different measures of the
16 dividend yield, the CAPM market risk premium, and the 30-Year Treasury rate, it appears
17 there are many different studies. Nonetheless, Mr. Hevert derives forty-five different ROEs
18 figures, ranging from 8.25% to 11.62%. Clearly, for Mr. Hevert to decide, from this wide
19 range of numbers, that the right ROE for the Company is in the range of 9.75% to 10.50%, he
20 is employing a high degree of subjectivity.

21 **Q. BETWEEN PAGES 33-35 MR. HEVERT PROVIDES A LIST OF**
22 **ITEMS ASKED BY WALL STREET ANALYSTS ON A JANUARY 28, 2016, AEP**
23 **CONFERENCE CALL. DOES THIS LIST CHANGE YOUR OPINION REGARDING**

1 **ANALYSTS' LONG-TERM EPS GROWTH RATES?**

2 A. No. The items addressed by analysts on conference calls either directly, or
3 indirectly, influence either current or future earnings and therefore are included in analysts'
4 forecasts of near-term and long-term EPS. That being said, and previously highlighted, the
5 scientific evidence on analysts' long-term EPS growth rate forecasts are overly optimistic and
6 upwardly biased.

7 **III. MR. HEVERT'S ASSERTION THAT DR. WOOLRIDGE'S ROE**
8 **RECOMMENDATION IS UNREASONABLE**

9 **Q. PLEASE ADDRESS MR. HEVERT'S COMMENTS REGARDING**
10 **YOUR ROE RECOMMENDATION FOR THE COMPANY.**

11 A. Mr. Hevert implies that my ROE recommendation of 8.65% is inadequate and
12 incompatible with prevailing conditions.

13 **Q. HOW DO YOU RESPOND TO THESE STATEMENTS?**

14 A. My ROE recommendation reflects the low capital costs in the markets today.
15 With interest rates at low levels and stock prices near record highs, capital costs are still at
16 very low. In addition, as I indicated in my initial testimony, there are a number of reasons
17 why an 8.65% return on equity is appropriate and fair for the Company in this case:

18 1. I have employed a capital structure, which has a slightly higher common
19 equity ratio and therefore slightly lower financial risk than the capital structures of the
20 two proxy groups.

21 2. As shown in Exhibits JRW-2 and JRW-3, capital costs for utilities, as
22 indicated by long-term bond yields, are still at low levels. In addition, given low

1 inflationary expectations and slow global economic growth, interest rates are likely to
2 remain at low levels for some time.

3 3. As shown in Exhibit JRW-8, the electric utility industry is among the lowest
4 risk industries in the U.S. as measured by beta. As such, the cost of equity capital for
5 this industry is amongst the lowest in the U.S., according to the CAPM.

6 4. The investment risk of the Company, as indicated by the Company's S&P
7 and Moody's issuer credit ratings of BBB+ and Baa1, is in line with the average issuer
8 credit ratings of the Electric and Hevert Proxy Group.

9 5. As discussed above, the average authorized ROEs for electric utilities from
10 state regulatory commissions have gradually decreased in recent years. While my
11 recommendation is below the average authorized ROE, it is my opinion that these
12 authorized ROEs have lagged behind capital market cost rates.

13 **Q. HAS MR. HEVERT INDICATED THAT YOUR 8.65% FAILS TO**
14 **MEET HOPE AND BLUEFIELD STANDARDS?**

15 A. No.

16 **Q. PLEASE DISCUSS YOUR RECOMMENDATION IN LIGHT OF A**
17 **RECENT MOODY'S PUBLICATION.**

18 A. Moody's indicates that with the lower authorized ROEs, electric and gas
19 companies are earning ROEs of 9.0% to 10.0%, but this is not impairing their credit profiles
20 and is not deterring them from raising record amounts of capital.¹⁸

21 The credit profiles of US regulated utilities will remain intact
22 over the next few years despite our expectation that regulators

¹⁸ Moody's Investors Service, "Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles,"
March 10, 2015.

1 will continue to trim the sector's profitability by lowering its
2 authorized returns on equity (ROE). Persistently low interest
3 rates and a comprehensive suite of cost recovery mechanisms
4 ensure a low business risk profile for utilities, prompting
5 regulators to scrutinize their profitability, which is defined as
6 the ratio of net income to book equity. We view cash flow
7 measures as a more important rating driver than authorized
8 ROEs, and we note that regulators can lower authorized ROEs
9 without hurting cash flow, for instance by targeting
10 depreciation, or through special rate structures.

11 **Q. CAN YOU PROVIDE ANY OTHER EVIDENCE ON THE ADEQUACY**
12 **OF YOUR ROE RECOMMENDATION?**

13 A. Yes. Staff witness David Murray informed me of Goldman Sachs' cost of
14 equity estimates for the electric utility industry when it advised GPE on the Westar Energy
15 transaction. Goldman Sachs' May 29, 2016, presentation to the GPE Board entitled "Project
16 Wizard: Presentation to the Board of Directors of Prairie." On page 28 of the presentation,
17 Goldman Sachs provided a valuation of Westar in which they used a risk-free interest rate of
18 **

19 _____ .** As such, this shows that my equity cost rate
20 recommendation of 8.65% is a much better assessment (albeit, higher) of the parameters used
21 by Wall Street in valuing companies.

22 **Q. DOES THIS COMPLETE YOUR SURREBUTTAL TESTIMONY?**

23 A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

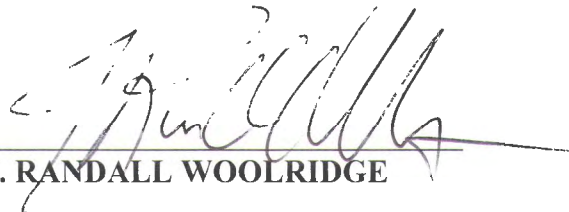
In the Matter of Kansas City Power & Light)
Company's Request for Authority to) Case No. ER-2016-0285
Implement A General Rate Increase for)
Electric Service)

AFFIDAVIT OF J. RANDALL WOOLRIDGE

COMMONWEALTH OF PENNSYLVANIA)
)) ss.
COUNTY OF CENTRE)

COMES NOW J. RANDALL WOOLRIDGE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Surrebuttal Testimony; and that the same is true and correct according to his best knowledge and belief.

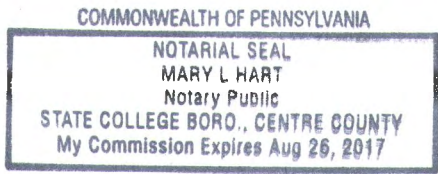
Further the Affiant sayeth not.



J. RANDALL WOOLRIDGE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Centre, Commonwealth of Pennsylvania, at my office in State College, PA, on this 25th day of January, 2017.





Notary Public