

Exhibit No.:
Issues: Rate of Return
Witness: David Murray
Sponsoring Party: MoPSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2012-0174
Date Testimony Prepared: September 5, 2012

Filed
December 11, 2012
Data Center
Missouri Public
Service Commission

MISSOURI PUBLIC SERVICE COMMISSION

**REGULATORY REVIEW DIVISION
UTILITY SERVICES**

REBUTTAL TESTIMONY

OF

DAVID MURRAY

**KANSAS CITY POWER & LIGHT COMPANY
Great Plains Energy, Incorporated**

CASE NO. ER-2012-0174

Staff Exhibit No. 227 NP
Date 10/17/12 Reporter MM
File No. ER-2012-0174

Jefferson City, Missouri
September 2012

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NP

Staff Exhibit - 227

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DAVID MURRAY
KANSAS CITY POWER & LIGHT COMPANY
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1 REBUTTAL TESTIMONY

2 OF

3 DAVID MURRAY

4 KANSAS CITY POWER & LIGHT COMPANY

5 Great Plains Energy, Incorporated

6 CASE NO. ER-2012-0174

7 Q. Please state your name.

8 A. My name is David Murray.

9 Q. Are you the same David Murray who prepared the Rate-of-Return Section of
10 Staff's Cost of Service Report ("Staff Report")?

11 A. Yes, I am. I filed rate-of-return ("ROR") testimony on August 2, 2012. I also
12 filed ROR testimony in the KCP&L Greater Missouri Operations ("GMO") case,
13 Case No. ER-2012-0175.

14 Q. What is the purpose of your Rebuttal Testimony?

15 A. The purpose of my Rebuttal Testimony is to respond to the direct testimonies
16 of Samuel C. Hadaway, Michael Gorman and Matthew I. Kahal. Dr. Hadaway sponsors
17 ROR testimony on behalf of Kansas City Power & Light Company ("KCPL"). Mr. Gorman
18 sponsors ROR testimony on behalf of the Office of Public Counsel ("OPC"). Mr. Kahal
19 sponsors ROR testimony on behalf of the United States Department of Energy ("DOE").
20 I will address the issues surrounding KCPL's cost of common equity ("COE"), the
21 appropriate capital structure to use for ratemaking purposes, and the cost of debt to be
22 applied to KCPL's Missouri electric utility rate base for ratemaking purposes in this
23 proceeding.

1 EXECUTIVE SUMMARY

2 Q. Please explain why the Missouri Public Service Commission Staff's ("Staff")
3 recommended return on common equity ("ROE") is lower than those of Dr. Hadaway,
4 Mr. Gorman and Mr. Kahal.

5 A. Model inputs. All of the experts in this case use at least some similar
6 methodologies to estimate KCPL's COE and this is supposedly the premise for their
7 recommended ROEs. Staff gives primary weight to its multi-stage discounted cash flow
8 ("DCF") analysis; Dr. Hadaway gives primary weight to all of his various DCF analyses;
9 Mr. Kahal gives primary weight to his constant-growth DCF analysis; while Mr. Gorman
10 gives weight to his DCF and Risk Premium analyses. It is clear from a comparison of the
11 commonly-used DCF methodology that Staff's lower COE estimate is primarily driven by
12 Staff's position that investors do not project perpetual electric utility dividend growth based
13 on 5-year EPS annual compound growth rate estimates or GDP annual compound growth
14 rate estimates, but rather expect growth rates consistent with past industry performance and
15 that of an industry expected to maintain relatively high dividend payout ratios. Staff's
16 perpetual growth rate estimates are supported by empirical evidence, academic research and
17 practical investment analyses.

18 All the ROR witnesses used at least one version of the DCF to estimate the COE in
19 this case. Dr. Hadaway employed both the constant-growth DCF and the multi-stage DCF in
20 estimating the COE; Mr. Gorman also employed both the constant-growth DCF and the
21 multi-stage DCF in estimating the COE; while Mr. Kahal only used the constant-growth
22 DCF. Staff also used both the constant-growth DCF and multi-stage DCF, but Staff gave its
23 multi-stage DCF analysis primary weight in estimating the COE. As Staff will discuss in
24 more detail later in its testimony, Staff believes the constant-growth DCF methodology can

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1 yield reliable results, assuming the user applies growth rates consistent with long-term
2 industry fundamentals, which Staff believes are best estimated by analyzing long-term
3 historical experience with consideration of changes in the industry on a going-forward basis.
4 Staff does not believe a constant-growth DCF methodology using equity analysts' 5-year
5 EPS growth rate forecasts as the constant growth rate will yield reliable COE estimates
6 unless they coincidentally match a sustainable perpetual growth rate.

7 Although each witness employed various DCF methodologies, the primary factor that
8 causes varying COE results when applying DCF methodologies is the growth factor, whether
9 it is the constant-growth rate in a single-stage DCF or the varying growth rates in a
10 multi-stage DCF analysis. In the case of a multi-stage DCF analysis, the most critical stage
11 for estimating the COE is that of the final stage, in which a perpetual growth rate is assumed.
12 The perpetual growth rate often explains at least 75% of the COE estimate in multi-stage
13 models. Consequently, to the extent the Commission accepts the multi-stage DCF
14 methodology in estimating the COE, the main issue before the Commission would be a
15 finding on a reasonable perpetual growth rate.

16 Dr. Hadaway uses a perpetual growth rate of 5.8%, based on his self-determined
17 calculation of historical nominal GDP growth. Mr. Gorman relies upon a perpetual growth
18 rate of 4.9%, which apparently is based upon projected nominal GDP growth information
19 provided in the June 1, 2012 edition of *Blue Chip Financial Forecasts*. Staff used a
20 perpetual growth rate range of 3.0% to 4.0%, based upon long-term realized growth rates for
21 the electric utility industry, Staff's study of the information related to the utility industry's
22 contribution to aggregate GDP growth, and Staff's knowledge of perpetual growth rates used
23 by equity analysts in their own DCF analyses. Staff believes that its estimated growth rate is

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1 consistent, if not on the high end, of current expectations of future growth and should be
2 relied upon by the Commission in this proceeding.

3 Q. What proxy group does each witness use for purposes of his COE analyses?

4 A. Dr. Hadaway developed a proxy group of 22 electric utility companies for
5 purposes of his COE analysis. Both Mr. Gorman and Mr. Kahal adopted the proxy group
6 proposed by Dr. Hadaway. However, I used a more refined proxy group based on stricter
7 selection criteria.

8 Q. Why didn't you adopt Dr. Hadaway's proposed proxy group?

9 A. Although Dr. Hadaway's proxy group is larger than my proposed proxy
10 group, I believe a larger proxy group should not come at the expense of comparability.
11 Dr. Hadaway's proxy group contains companies that have significant non-regulated
12 operations, such as merchant generation operations. These operations are much riskier than
13 KCPL's regulated electric utility operations. However, because Dr. Hadaway does use such
14 a large proxy group, it appears that because some of the data are so widely disparate, this
15 cancels out some of the impacts of selecting companies for the proxy group that are not
16 predominately pure-play regulated electric utilities. Consequently, Staff will focus its
17 rebuttal testimony on other areas of Dr. Hadaway's testimony that cause him to estimate a
18 higher than reasonable COE for KCPL.

19 Q. Is there currently a difference in the capital structure recommendations of the
20 ROR experts?

21 A. Yes. Staff uses Great Plains Energy, Inc.'s ("GPE") actual capital structure as
22 of June 30, 2012, which is outside of the updated test year of March 31, 2012 but is within
23 the true-up period of August 31, 2012. Dr. Hadaway recommends the use of a pro-forma

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1 capital structure based on projected data through August 31, 2012. Mr. Gorman currently
2 recommends the use of GPE's actual capital structure as of March 31, 2012. Mr. Kahal does
3 not recommend a specific capital structure for purposes of his direct testimony, but for
4 purposes of presenting the impact of his 9.5% ROE on the ROR, he uses GPE's pro-forma
5 capital structure as of August 31, 2012. Fortunately, there is a true-up planned through
6 August 31, 2012 in this proceeding so it is possible that the parties can continue to discuss
7 the appropriate capital structure to use for the allowed ROR, even if we do not agree on the
8 recommended ROE.

9 **STAFF RESPONSE TO DR. HADAWAY'S RECOMMENDED ROE FOR KCPL**

10 **SUMMARY**

11 Q. Please summarize Dr. Hadaway's COE estimates and final recommended
12 ROE.

13 A. Dr. Hadaway's DCF COE estimates range from 10.00% to 10.40% and his
14 Risk Premium COE estimates range from 9.97% to 10.12% (see Table 6 on page 42 of
15 Dr. Hadaway's Direct Testimony). Dr. Hadaway recommends an ROE of 10.40%

16 Q. Does Dr. Hadaway apply his DCF analyses to a proxy group?

17 A. Yes.

18 Q. Although you are not focusing on Dr. Hadaway's proxy group for purposes of
19 your rebuttal testimony, can you please provide some examples of the companies
20 Dr. Hadaway should have excluded from his proxy group and explain why?

21 A. Yes. The following companies have significant non-regulated operations and
22 should be excluded from a proxy group that is developed for purposes of estimating the COE
23 for regulated electric utility operations: DTE Energy Company ("DTE"), Edison

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1 International, Hawaiian Electric Industries Inc. (“Hawaiian Electric”) and Vectren
2 Corporation (“Vectren”).

3 DTE’s operations consist of approximately 25% nonutility operations, which consist
4 of gas midstream, unconventional gas production, power and industrial projects, and energy
5 trading.¹ Edison International’s operations consist of a high-risk, merchant generation
6 subsidiary, Edison Mission Energy, which is causing a higher risk profile for Edison
7 International on a consolidated basis.² Hawaiian Electric has banking operations which
8 constitute 37% of Hawaiian Electric’s total consolidated net income.³ Vectren Corporation
9 has approximately 20% of EBITDA from a variety of non-regulated businesses, such as coal
10 mining, energy marketing, infrastructure services and energy services.⁴

11 Q. For purposes of the rest of your rebuttal testimony, will the impacts of your
12 criticisms apply to Dr. Hadaway’s selected proxy group?

13 A. Yes.

14 Q. Can you please explain your criticisms of Dr. Hadaway’s DCF analyses?

15 A. Yes. Dr. Hadaway’s DCF analyses consist of three variations of the DCF,
16 which Staff will identify as: (1) the “equity-analyst constant-growth DCF”, (2) the
17 “GDP constant-growth DCF”, and (3) the “GDP multi-stage DCF.” All of these variations
18 are heavily dependent on the constant growth rate(s) he uses to estimate the future growth in
19 the stock price of his comparable companies. Consequently, his DCF COE estimates are
20 very sensitive to the reasonableness of this growth rate.

¹ S&P Capital IQ, June 25, 2012.

² S&P Capital IQ, July 30, 2012.

³ S&P Capital IQ May 4, 2012.

⁴ S&P Capital IQ July 26, 2012.

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1 Q. Why should the Commission dismiss the results of Dr. Hadaway's
2 "equity-analyst constant-growth DCF", which uses a projected growth rate derived from
3 equity analysts' projected 5-year earnings per share ("EPS") growth rates?

4 A. In this version of the DCF, Dr. Hadaway assumes that his comparable
5 companies' stock prices will grow at the analysts' projected 5-year EPS growth rates
6 indefinitely into the future. EPS projections are intended to reflect expectations over a
7 5-year period. As a result, these growth rates are not sustainable into perpetuity and do not
8 reflect the long-term fundamentals of the electric utility industry.

9 Q. Why should the Commission not adopt Dr. Hadaway's "GDP constant-growth
10 DCF" analysis, in which he assumes that his comparable companies' stock prices will grow
11 indefinitely at a constant annual compound growth rate of 5.8%?

12 A. Dr. Hadaway's assumption that electric utility companies can and will grow at
13 the same rate as the economy is flawed. Staff discussed this at length in the Staff Report.
14 Staff will provide some additional information in its rebuttal testimony regarding the flaws of
15 this assumption in addition to a simple example that shows why this assumption defies logic
16 regarding basic risk and return principles. Even assuming *arguendo* that the expected
17 nominal GDP growth is a reasonable proxy for the perpetual growth rate of a regulated
18 electric utility company, his self-calculated growth rate of 5.8% does not represent investors'
19 expectations of potential future long-term domestic economic growth.

20 Q. Why should the Commission not adopt Dr. Hadaway's "GDP multi-stage
21 DCF" analysis, in which he assumes growth in dividends for the first five years based on
22 Value Line's dividend per share ("DPS") projections and then a perpetual growth rate based
23 on his self-calculated average annual nominal GDP growth of 5.8%?

1 A. This version of Dr. Hadaway's DCF analyses should be dismissed for the
2 same reason as his "GDP constant-growth DCF" analysis discussed above. Investors do not
3 expect regulated electric utility companies to grow in perpetuity at the same rate as the
4 overall economy.

5 EQUITY ANALYSTS' EPS ESTIMATES FOR CONSTANT GROWTH

6 Q. What is the primary reason that Dr. Hadaway's "equity-analyst
7 constant-growth DCF" COE estimate is unreliable?

8 A. Dr. Hadaway assumes that his proxy group can grow into perpetuity at an
9 unsustainable annual growth rate of 5.63%. It is not logical to expect electric utilities' DPS
10 to grow at a constant rate of 5.63% into the indefinite future. This growth rate is not only
11 above what is reasonable to expect for the regulated electric utility industry, but it is also
12 much higher than what investors expect for the growth in the overall economy.

13 While I do not believe the perpetual growth rate for the electric utility industry should
14 be equivalent to the expected growth in GDP, expected long-term growth in GDP does
15 influence expected growth for the electric utility industry. In this respect, an accurate
16 measure of GDP is relevant, but not determinative. Because the electric utility industry's
17 DPS, EPS and book value per share ("BVPS")⁵ have not grown anywhere near the same rate
18 as GDP in the past, it would take a leap of faith from investors to anticipate this higher rate of
19 growth when determining a fair price to pay for electric utility stocks.

⁵ Per share figures that are often analyzed to determine a sustainable long-term growth rate for the DCF methodology.

1 GDP AS A PROXY FOR ELECTRIC UTILITY INDUSTRY GROWTH

2 Q. In both his “GDP constant-growth DCF” and “GDP multi-stage DCF”
3 Dr. Hadaway assumes his proxy group will grow at the same rate of the economy. Why is
4 this assumption unreasonable?

5 A. The simplest way to illustrate the fallacy of Dr. Hadaway’s use of GDP
6 growth in his DCF analyses as a proxy for long-term growth of the regulated electric utility
7 industry is to consider the impact of the appropriate application of this logic to the S&P 500
8 index. Because the S&P 500 index is considered a proxy for the U.S. stock market, it
9 intuitively makes sense that the expected long-term growth of the S&P 500 may be consistent
10 with the expected growth in GDP. However, because on average, the companies in the
11 S&P 500 tend to have better growth prospects than the electric utility industry, the dividend
12 payout ratio and the dividend yield is lower than that of the electric utility industry. This
13 implies that the growth rate for the electric utility industry would have to be lower than an
14 aggregate growth rate, i.e. GDP, used for the U.S. market, i.e. the S&P 500. Adding
15 Dr. Hadaway’s expected GDP growth rate of 5.8% to the current S&P 500 dividend yield of
16 2.24% as of August 9, 2012,⁶ results in a COE estimate of 8.04%. Dr. Hadaway’s “GDP
17 constant-growth DCF” analysis of the electric utility industry results in an estimated cost of
18 equity of 10.20%. Considering that electric utilities stocks are approximately 30% less
19 volatile than the S&P 500, this illustrates how Dr. Hadaway’s methodologies defy even the
20 most basic risk and return principles of finance.

21 Q. Are there other reasons to be skeptical of Dr. Hadaway’s use of GDP growth
22 as a proxy for electric utility industry growth?

⁶ <http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usdof-p-us-l-->

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1 A. Yes. This assumption is often used for a company or an industry that is in its
2 “growth phase,” i.e., experiencing “supernormal” growth. In these cases, many finance
3 textbooks recommend that the perpetual growth rate be based on the expected growth in the
4 economy if, and only if, this approach is consistent with expected sustainable growth.⁷
5 However, as Staff discussed in the Staff Report, even the S&P 500 has not grown at the same
6 rate as GDP for the period 1947 through 2011. This is mainly attributed to the fact that
7 companies must issue stock to pursue growth opportunities, which causes a dilution to
8 existing shareholders. If the S&P 500 cannot grow at the same rate as GDP, then it is
9 completely irrational to believe that electric utilities can grow at the same rate as GDP,
10 considering that their dividend payout ratios are usually at least twice as high as the average
11 for the S&P 500.

12 Empirical evidence Staff provided in the Staff Report comparing GDP growth to
13 electric utility DPS, EPS, and BVPS growth clearly shows that electric utility per share
14 growth rates have been approximately *half* of the growth of the overall economy for long
15 historical periods. However, upon Staff’s further analysis of data provided by the Bureau of
16 Economic Analysis (“BEA”) regarding various industries’ contribution to aggregate nominal
17 GDP growth, Staff discovered that on an aggregate basis, there have been periods in which
18 the utility industry’s contribution to nominal GDP had been growing at a faster rate than
19 overall GDP, but there have also been instances in which it had been growing at a slower rate
20 than overall GDP. Perhaps of most interest is the fact that utility growth as a percentage of
21 GDP has been declining for approximately the last 20 years, which does not support the

⁷ John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, 2002, Association for Investment Management and Research.
Aswath Damodaran, *Investment Valuation: Tools and techniques for determining the value of any asset*, 1996, John Wiley & Sons, Inc.

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1 theory that aggregate utility growth would be expected to grow in the long-term at the same
2 rate as aggregate GDP growth.

3 Q. Why is it important to distinguish between aggregate growth rates and per
4 share growth rates when estimating the cost of capital and/or the value of a given utility
5 stock?

6 A. Because investors are determining the fair value of the stock, not the
7 company, the most relevant growth rate information is that on a per share basis. If a
8 company issues equity to fund capital investment, then this dilutes existing shareholder value
9 because earnings and dividends are spread over more shares. A prospective equity investor
10 does not assume that he/she will realize the aggregate growth of the company because of this
11 expected dilution.

12 Q. How much has dilution affected growth in per share figures for the proxy
13 group of electric utilities you selected for purposes of estimating a potential long-term
14 growth rate for your multi-stage DCF analysis?

15 A. The average growth rate in total dividends, total earnings and total book value
16 over the period 1969 through 1998 was approximately 7.75%, whereas the average growth
17 rate of this financial data on a per share basis for the same period was 3.59%. This is a
18 dilution factor of over 50% to the growth of the aggregate financial data.

19 Q. What about the dilution in just earnings?

20 A. The average rolling 10-year compound growth rate in total earnings was
21 7.80%, whereas the rolling 10-year compound growth rate in EPS was 3.62%. Again, this is
22 an over 50% dilution for purposes of per share growth, which is the focus of equity investors
23 and analysts.

1 Q. What would this imply about any methodology used to estimate the future
2 growth in utility per share figures?

3 A. An investor should reduce the aggregate growth rate projections by at least
4 50%.

5 Q. So, if one assumes that utility aggregate earnings can grow at the aggregate
6 GDP growth rate, what growth rate would be assumed on a per share basis?

7 A. A growth rate of approximately 2.50%, which is consistent with most
8 perpetual growth rates Staff has observed in investment analyses.

9 INVESTORS' GDP GROWTH EXPECTATIONS

10 Q. Assuming *arguendo* that electric utility companies can grow in perpetuity at
11 the same rate of expected GDP growth, do you believe investors expect GDP to grow at a
12 rate of 5.8% for the long-term?

13 A. No. Staff cited several sources in the Staff Report that indicate that the
14 expected long-term growth in nominal GDP is in the 4 to 5% range. Staff will provide these
15 again for convenience.

16 Several entities provide long-term GDP growth rate forecasts, such as the
17 Congressional Budget Office ("CBO"), the Federal Reserve, the Energy Information
18 Administration ("EIA"), and Blue Chip Financial Forecasts. In the Staff Report, Staff
19 provided long-term projected GDP information from the CBO, EIA, The Survey of
20 Professional Forecasters published by the Philadelphia Federal Reserve, The Federal Open
21 Market Committee ("FOMC"), and The Livingston Survey. The CBO projects an annual
22 compound growth rate in nominal GDP of approximately 4.90% through 2022; EIA projects
23 an annual compound growth rate of 4.4% for the period 2010 through 2035; The Survey of

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1 Professional Forecasters projects a 10-year annual compound growth rate in real GDP of
2 2.64%; The Livingston Survey projects an average annual compound growth rate of 2.7%
3 over the next ten years and the FOMC projects a central tendency long-term real GDP
4 growth of 2.3% to 2.6%. In each case in which the sources do not project a nominal GDP
5 growth rate, Staff recommended adding a GDP price deflator of 2.0%, which is the CBO's
6 prediction of long-term inflation and also the inflation rate which is targeted by the
7 Federal Reserve. The Staff Report did not include projections from the Blue Chip Financial
8 Forecasts because Staff does not subscribe to this publication. However, Mr. Gorman's
9 workpapers did include this data. Private economists surveyed by Blue Chip Economic
10 Forecasts project GDP growth rates to be approximately 5.1% over the period 2014 through
11 2018 and 4.7% for the period 2019 through 2023. Mr. Gorman indicated he used the average
12 of these two growth rates to arrive at a 4.9% growth rate. However, Staff believes it is more
13 appropriate to give more consideration to the projected growth in GDP in the later years.
14 Based on the various sources Staff reviewed, an estimated 5.0% average annual GDP growth
15 rate over the long-term is a more aggressive expectation, not to mention a 5.8% growth rate
16 is outside of even high-end projections. All the evidence Staff has provided shows that
17 regulated utilities' EPS and DPS do not and should not be expected to grow at the same rate
18 as the aggregate GDP growth rate. However, if the Commission does accept this theory, it
19 should at least be conservative and use the lower end of these projected GDP growth rates.
20 In the Staff Report, Staff recommended the Commission use the lower end of the range
21 (4.3%), which resulted in an 8.85% COE estimate using Staff's multi-stage DCF
22 methodology.⁸

⁸ Staff estimated the 4.3% growth rate based on an approximate additive methodology. If Staff had compounded real GDP growth and the inflation rate, the low-end growth rate would have been 4.35%.

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1 Q. How would an assumed 4.3% nominal GDP growth rate impact the results of
2 Dr. Hadaway's GDP constant-growth DCF analysis?

3 A. This would have resulted in a COE indication of 8.7% to 8.9%.

4 Q. How would an assumed 4.3% nominal GDP growth rate impact the results of
5 Dr. Hadaway's GDP multi-stage DCF analysis?

6 A. This would have resulted in a COE indication of 8.7%.

7 Q. Are you aware of any internal DCF analysis performed by GPE that uses CBO
8 projections to estimate long-term perpetual growth rates?

9 A. Yes. GPE's own 2011 goodwill impairment analysis, which requires an
10 estimate of the "fair value" of utility assets, used CBO projected real GDP and inflation data
11 as a proxy for perpetual growth in its own internal DCF analysis.

12 Q. Why does GPE use this source for its annual goodwill impairment tests?

13 A. According to KCPL witness, Darrin R. Ives in his September 27, 2010
14 deposition in Case No. ER-2010-0355, GPE considers CBO information to be "...one of the
15 best published views of go forward growth and inflation."⁹

16 Q. Did GPE use any of the other aforementioned sources in previous goodwill
17 impairment tests?

18 A. Yes. GPE used Blue Chip Economic Indicator data for purposes of estimating
19 future economic data for its 2008 goodwill impairment analysis.

20 Q. Did GPE provide a reason as to why it relied on the CBO projections in the
21 2009 study rather than the Blue Chip Economic Indicator consensus economic forecasts that
22 it had used in the 2008 study?

⁹ Darren Ives' September 27, 2010 Deposition, p. 69, ll. 9-11.

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1 A. No. In the same 2010 deposition taken of Mr. Ives, KCPL's Assistant
2 Controller at that time, and now Senior Director of Regulatory Affairs, he indicated he was
3 not sure why they switched sources and he indicated that he would not necessarily ascribe
4 more credibility to one over the other.¹⁰

5 Q. Why is this information pertinent to the estimation of the COE in this case?

6 A. Because it is Dr. Hadaway's position that investors rely on his calculations of
7 historical GDP growth to project growth rates in a DCF analysis rather than relying on the
8 previously mentioned sources. This assumption has a major impact on his COE estimate.
9 Even if Dr. Hadaway had relied on the more aggressive nominal GDP growth estimates from
10 the same sources GPE uses for its own internal DCF analyses, then his COE estimates would
11 be in the lower 9% range for both his "GDP constant-growth DCF" and his "GDP
12 multi-stage DCF" analysis.

13 Q. What perpetual growth rates did GPE use when estimating the fair value of its
14 utility assets using a DCF approach?

15 A. The perpetual growth rate used in GPE's most recent goodwill impairment
16 tests in 2011 was only ** ____ **.

17 Q. What was the basis for this perpetual growth rate?

18 A. This growth rate was determined by taking the sum of 75% of the CBO's
19 long-term projected inflation rate and 25% of the CBO's long-term projected real GDP
20 growth rate.

21 Q. Did the Company provide its logic for using these two growth factors as a
22 proxy for perpetual growth in valuing its utility assets?

¹⁰ Ives' September 27, 2010 Deposition in Case No. ER-2010-0355, p. 82, ll. 5-6.

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1 A. Yes. In response to Staff Data Request No. 209.1, the Company indicated the
2 following:

3 Real GDP is a measure of the value of the economy's output adjusted
4 for price inflation and is sometimes referred to as "constant" GDP.
5 Because real GDP is adjusted for the impact of price inflation, it
6 provides a view of the total output of goods and services, i.e. actual
7 economic production. The growth of Great Plains Energy's utility
8 business is driven by increases in actual economic production,
9 therefore, real GDP provides a proxy for potential growth. The
10 Company determined that in order to have as accurate of a future view
11 as possible it was important to look at both real economic growth (real
12 GDP) and price inflation (CPI) when determining the fair value of its
13 business units for purposes of the goodwill impairment test.
14

15 Q. Is the ** ____ ** growth rate supposed to be a proxy for real growth and
16 inflation growth?

17 A. I am not sure. This was not explained well in the Company's response to this
18 data request, but the fact that the Company would use such a widely divergent perpetual
19 growth rate for an internal valuation analysis compared to that assumed by its ROR witness
20 for estimating the cost of capital should cause doubt about the credibility of Dr. Hadaway's
21 aggressive growth rate estimates.

22 Q. Why would GPE use projected inflation rates for the perpetual growth rates?

23 A. Because according to the accounting principles governing the estimation
24 of a fair value, a company in a "steady-state" should not be expected to grow much
25 higher than expected inflation in perpetuity. In fact, in a document provided by KCPL
26 at the time of Staff's deposition of Mr. Ives in Case No. ER-2010-0355, Price Waterhouse
27 Coopers ("PwC") indicated the following about the reasonableness of perpetual growth rates:

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1 The terminal value represents the present value in the last year
2 of the projection period of all subsequent cash flows in
3 perpetuity. A long-term growth rate in excess of a projected
4 inflation rate should be viewed with skepticism and adequately
5 supported and explained in the valuation analysis.¹¹
6

7 A key assumption made for purposes of determining the residual value of a business
8 unit in the terminal year of the analysis is that the unit will grow at a constant rate into
9 perpetuity because the company has reached a state of maturity. Dr. Hadaway's assumed
10 perpetual growth rate is approximately three times that of expected inflation rates and
11 Dr. Hadaway's only support for this assumption are some generic academic references. In
12 the Staff Report, Staff provided an extensive amount of information that demonstrates that
13 practical and empirical evidence do not support this view.

14 RISK PREMIUM ANALYSES

15 Q. What are your primary concerns regarding Dr. Hadaway's risk
16 premium analyses?

17 A. Dr. Hadaway's risk premium analyses assumes that state 'commissions'
18 allowed ROE's represent the market-determined COE for electric utility companies. He
19 compounds the problem with this assumption by suggesting that the COE should be adjusted
20 due to his observation that allowed ROEs are negatively correlated with changes in utility
21 bond yields. While Staff believes it is safe to conclude that risk premiums are not constant
22 over time, Staff also believes that the use of actual or allowed ROE data to interpret the
23 market's required risk premium is of questionable value. For example, Eugene Fama and
24 Kenneth French concluded that *earned* ROEs over the period of 1950 through 2000 were not

¹¹ Document 3. B provided at Darren Ives' September 27, 2010 Deposition. P. 30, PriceWaterhouseCoopers
Dateline 2008-35: Nonfinancial Asset Impairment Considerations (Updated March 26, 2009).

1 consistent with *required* ROEs over the same period.¹² Fama and French arrived at this
2 conclusion by using the DCF method to compare the COE to the ROE over the same period.
3 Fama and French's conclusions are very similar to the issues discussed by Mr. Gorman when
4 he indicates that the returns achieved in the stock market for the period covered in the
5 Ibbotson and Associates' data reflects an abnormal appreciation of the price-to-earnings ratio
6 in the U.S. markets.

7 Dr. Hadaway also added his estimated risk premium to projected bond yields. This is
8 inappropriate because it is akin to using projected stock prices in a DCF analysis. A ROR
9 witness should not attempt to estimate where he thinks stock prices and bond yields will be in
10 the future, because then he is substituting his judgment for that of the market.

11 Staff's concerns notwithstanding, if the Commission desires to incorporate this
12 methodology in estimating a fair ROE, then Staff advises the Commission to use actual
13 utility bond yields and an unadjusted risk premium to estimate an "allowed ROE risk
14 premium" COE estimate.

15 **STAFF RESPONSE TO MR. GORMAN'S RECOMMENDED ROE FOR KCPL**

16 Q. What is Mr. Gorman's recommended ROE for KCPL in this case?

17 A. His ROE recommendation in this case is 9.30% based on COE estimates
18 ranging from 9.10% to 9.50%.

19 Q. How did Mr. Gorman arrive at a recommended ROE of 9.30%?

20 A. Mr. Gorman chose the mid-point of his COE estimates from his DCF and risk
21 premium analyses. The high-end, 9.50%, COE estimate was based on the highest estimate
22 (9.46%) of three different DCF analyses he performed on Dr. Hadaway's proxy group.

¹² Eugene F. Fama and Kenneth R. French, "The Equity Premium," *The Journal of Finance*, (April 2002).

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1 His 9.10% COE estimate was based on his risk premium analysis. Mr. Gorman dismisses his
2 CAPM COE estimate of 8.40%.

3 Q. Why did Mr. Gorman dismiss his CAPM COE estimate?

4 A. He didn't explain this in much detail in his testimony.

5 Q. Do you believe COE estimates in the 8% range for regulated electric utilities
6 are realistic in the current capital and macroeconomic environment?

7 A. Absolutely. I even estimated the COE to be as low as the 7% range for
8 regulated electric utilities. However, I did not ultimately recommend an ROE based on this
9 lower COE estimate. I did explain that I believe this low of a COE is entirely plausible in
10 today's capital market environment and in fact is consistent with the COE used by equity
11 analysts for purposes of estimating a fair price to pay for regulated electric utility stocks.

12 Q. What are the primary causes of Mr. Gorman's higher DCF cost of equity
13 estimates compared to yours?

14 A. Mr. Gorman relies on DCF analyses that assume a long-term perpetual growth
15 rate in the range of 4.85% to 5.14%. Perpetual growth rates this high are not supported by
16 empirical evidence or practical investment analysis. Staff has **never** seen an investment
17 analyst assume this high of a perpetual growth rate for purposes of estimating the value of a
18 regulated electric utility stock. Staff provided examples in the Staff Report of the impact
19 such high growth assumptions would have on investors' estimated value of regulated electric
20 utility stocks.

21 Q. But don't your examples assume investors are using a COE below the allowed
22 ROEs granted by state commissions?

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1 A. Yes. This is exactly my point. Staff has seen numerous examples of
2 investment analyses which show that investors build in certain expected authorized ROE
3 outcomes for rate cases for purposes of cash flow modeling, but then they discount these
4 expected cash flows by their real required ROE, which is their COE.

5 Q. If allowed ROEs are set higher than the COE, then will this cause upwardly
6 biased COE estimates if an analyst makes this assumption for purposes of his risk premium
7 analysis?

8 A. Yes, and this is exactly the assumption Mr. Gorman makes for purposes of his
9 risk premium analysis, which is the basis for the lower end of his estimated COE range.
10 However, to the extent that the Commission believes it needs to allow ROEs similar to those
11 being authorized in other states, then this methodology may have appeal.

12 If the Commission decides to consider Mr. Gorman's methodology for purposes of
13 establishing an allowed ROE, then, for purposes of Mr. Gorman's first risk premium
14 analysis, I recommend the Commission use current 30-year T-bond yields rather than an
15 expected bond yield as Mr. Gorman proposes. Using current 30-year T-bond yields would
16 reduce Mr. Gorman's risk premium estimate by approximately 84 basis points, which would
17 cause his risk premium COE range to be 7.17% to 8.89%. Even using Mr. Gorman's
18 arbitrary weighting of 2/3 for the high end estimate and 1/3 weight to the low end estimate,
19 results in a COE estimate of 8.46%.

20 Mr. Gorman's second risk premium analysis compares allowed ROEs to 'A' rated
21 utility bond yields for the period 1986 through 2011. However, Mr. Gorman then adds this
22 risk premium to a 'Baa' bond yield to estimate the COE. When performing a risk premium
23 analysis it is proper to add the risk premium to the same bond category as was used to

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1 estimate the risk premium. If Mr. Gorman had used average 'Baa' utility bond yields, his
2 risk premium range would have been 2.71% to 4.36%, with a mid-point of 3.54%. Adding
3 this mid-point risk premium to the current 'Baa' bond yield of 4.95%, results in a COE
4 estimate of 8.49%.

5 Q. Considering the fact that there seems to be adequate support for Mr. Gorman
6 to estimate a COE in the 8% range, if Mr. Gorman believes the allowed ROE should be set
7 based on the COE, then why wouldn't he recommend a lower ROE?

8 A. I am not sure.

9 Q. Is Mr. Gorman the Office of Public Counsel's witness in this case?

10 A. Yes.

11 Q. What ROE does the consumer advocate witness in Kansas recommend for
12 KCPL's Kansas rate case?

13 A. The Kansas Citizen's Utility Ratepayer Board's ("CURB") ROR witness
14 recommended an 8.5% ROE in testimony filed on August 22, 2012, in the KCPL rate case in
15 that state, KCC Docket No. 12-KCPE-764-RTS.

16 Q. What ROE did the Staff of the Corporation Commission of Kansas
17 recommend?

18 A. 9.2%.

19 Q. Has it become more common for non-utility ROR witnesses to recommend
20 ROEs in the single-digits?

21 A. While Staff has not performed a specific survey to conclude this to be the
22 case, Staff is generally aware that this is becoming more common. The current
23 macroeconomic and capital market environment is resulting in extremely low costs of capital

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1 for low-risk investments, such as utility stocks. It would seem only fair to ratepayers to
2 allow this lower cost of capital to be passed on to ratepayers in the form of lower allowed
3 ROEs. There was a time when utility commissions authorized higher returns when the
4 economic conditions warranted, but those conditions simply don't exist at this time.

5 Q. If the Commission authorized an ROE for KCPL lower than that authorized
6 for KCPL by Kansas, would KCPL be more likely to invest in its utility assets in Kansas as
7 compared to its Missouri utility assets?

8 A. In response to Staff Data Request No. 0505, the Company indicated the
9 following about such a possibility: "No, the Company does not make investment decisions
10 based on the respective authorized ROEs in Missouri and Kansas."

11 **STAFF RESPONSE TO MR. KAHAL'S RECOMMENDED ROE FOR KCPL**

12 Q. What is Mr. Kahal's recommended ROE in this case?

13 A. His recommended ROE is 9.50% based primarily on a constant-growth DCF
14 analysis of Dr. Hadaway's proxy group of companies. His DCF analysis produced a range of
15 COE estimates of 8.8% to 9.8%, with a 9.3% mid-point. Mr. Kahal did not indicate that he
16 chose to recommend an ROE higher than the mid-point because of any specific risk issues
17 related to KCPL as they compare to the proxy group.

18 Q. What is your primary concern with Mr. Kahal's constant-growth DCF
19 analysis?

20 A. Mr. Kahal decided to rely exclusively on equity analysts' 5-year EPS growth
21 rate forecasts to estimate a constant-growth rate range of 4.5% to 5.5%. As Staff explained
22 extensively in the Staff Report, Staff is not aware of any investment analyst that determines
23 the price to pay for a regulated utility stock price by making this naïve assumption. Staff has

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1 gone so far as to say it has **never** seen an investment analysis that makes this assumption and
2 Staff has reviewed a considerable amount of utility stock investment analysis over the past
3 several years. Staff also provided several examples of what the justified price of specific
4 utility stocks would be if this high of a growth rate of DPS in perpetuity were discounted by a
5 COE for the market as a whole (i.e., the S&P 500). Using these growth rates with more
6 reasonable COE estimates simply results in extraordinarily high stock price estimates as
7 compared to those estimated by professional equity analysts.

8 Q. Does a COE as low as 9.5% even with such high growth rates demonstrate the
9 significant decrease in the COE over the last couple of years?

10 A. Yes. Although Staff disagrees with the absolute value of Mr. Kahal's
11 estimate, Staff believes the Commission can evaluate the relative changes in constant-growth
12 DCF estimates from specific ROR witnesses for purpose of supporting a change in the
13 allowed ROE from the last rate case, Case No. ER-2010-0355.

14 Q. Did Mr. Kahal sponsor ROR testimony in the last rate case?

15 A. No.

16 Q. Did Mr. Gorman and Dr. Hadaway sponsor ROR testimony in the last rate
17 case?

18 A. Yes.

19 Q. Did Mr. Gorman and Dr. Hadaway provide a constant-growth DCF COE
20 estimate using equity analysts' 5-year EPS growth rates as a proxy for perpetual growth in
21 the last rate case?

22 A. Yes.

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1 Q. What was Mr. Gorman's constant-growth DCF COE estimate in the last case?

2 A. 10.33%.

3 Q. What is it in this case?

4 A. 9.5%.

5 Q. What was Dr. Hadaway's constant-growth DCF COE estimate in the last rate

6 case?

7 A. 10.6%.

8 Q. What is it in this case?

9 A. 10.0%.

10 Q. What is the range of the relative decrease in COE based purely on the

11 constant-growth DCF?

12 A. 60 to 83 basis points.

13 Q. If the Commission applied this decrease to its last allowed ROE for KCPL of

14 10.0%, what would the range be?

15 A. 9.17% to 9.40%.

16 **STAFF'S RESPONSE TO DR. HADAWAY'S, MR. GORMAN'S AND Mr. KAHAL'S**
17 **RECOMMENDED CAPITAL STRUCTURE FOR KCPL**

18 Q. Please summarize Dr. Hadaway's, Mr. Gorman's and Mr. Kahal's

19 recommended capital structure for KCPL.

20 A. Dr. Hadaway's recommended capital structure is based on GPE's projected

21 capital structure as of August 31, 2012, the agreed-upon true-up period in this case.

22 Mr. Gorman recommends GPE's actual capital structure as of March 31, 2012, which was

23 the agreed-upon update period for this case. Mr. Kahal has not taken a specific position on

24 capital structure at this point. Staff currently recommends using GPE's capital structure as of

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1 June 30, 2012, because this period, along with an adjustment for the July 2, 2012 retirement
2 of Aquila legacy debt, captures all known significant financing activities that have recently
3 occurred at GPE. Because Staff anticipates KCPL will be able to provide it with actual data
4 through August 31, 2012 in time for surrebuttal testimony in this case, Staff plans to update
5 its recommended capital structure at that time. Staff will also discuss in more detail in its
6 surrebuttal testimony any remaining differences between the parties on the recommended
7 capital structure for purposes of this case.

8 **STAFF'S RESPONSE TO DR. HADAWAY'S, MR. GORMAN'S AND MR. KAHAL'S**
9 **RECOMMENDED COST OF DEBT FOR KCPL**

10 Q. What is the basis for Dr. Hadaway's recommended embedded cost of debt of
11 6.635% for KCPL?

12 A. Dr. Hadaway recommends KCPL's estimated embedded cost of debt as of the
13 true-up period, August 31, 2012.¹³ This embedded cost of debt is based on KCPL's debt
14 issuances. GPE and KCP&L Greater Missouri Operations Company's ("GMO") debt
15 issuances are excluded from KCPL's embedded cost of debt.

16 Q. What is the basis for Mr. Gorman's recommended embedded cost of debt of
17 6.53% for KCPL?

18 A. Mr. Gorman recommends KCPL's embedded cost of debt of 6.53% as of the
19 update period, March 31, 2012, which was provided by the Company in response to Staff
20 Data Request No. 0251. This embedded cost of debt is based almost entirely on KCPL's
21 actual debt issuances with the exception of a slight allocation of \$227,220,000 of GPE debt.
22 Mr. Gorman did not make this explicit allocation of GPE debt. It was embedded in KCPL's
23 calculations provided in its response to Staff's data request.

¹³ See page 14 of Schedule SCH-2 attached to Hadaway's Direct Testimony.

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1 Q. Does Mr. Kahal make an explicit recommendation for KCPL's embedded cost
2 of debt?

3 A. No. Although Mr. Kahal uses KCPL's projected embedded cost of debt of
4 6.635% for purposes of providing an overall ROR, it appears he is reserving the right to
5 recommend some other cost of debt in subsequent rounds of testimony.

6 Q. Why do you disagree with the embedded costs of debt recommended by
7 Dr. Hadaway and Mr. Gorman?

8 A. Because these embedded costs of debt do not give consideration to the fact
9 that the management of KCPL's debt issuances is being impacted by financing decisions
10 made by GPE for purposes of financing GMO's operations.

11 Q. What do you mean?

12 A. GPE has issued three separate debt issuances on behalf of GMO and each of
13 these debt issuances are of shorter tenors than debt KCPL issued during the same period.
14 This causes KCPL to incur higher debt costs and GMO to incur lower debt costs, even
15 though KCPL has and is providing the credit support to allow GPE to issue this debt on
16 behalf of GMO. Staff discusses this issue extensively in the Staff Report at page 32, line 9
17 through page 33, line 14 and at page 34, line 12 through page 37, line 11.

18 Q. What seems to be the most equitable means in which to rectify this situation?

19 A. Staff proposes the Commission authorize an embedded cost of debt for KCPL
20 and GMO based on GPE's consolidated cost of debt, after making adjustments to the holding
21 company debt issued on behalf of GMO.

22 Q. Did you make those adjustments in the Staff Report?

23 A. Yes.

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1 Q. How did you make those adjustments?

2 A. I used the average bond yield for a 'BBB' rated bond for the month in which
3 the GPE bond was issued. I matched the tenor of the GPE bond with the tenor of the average
4 yield for the month in which GPE issued the bond.

5 Q. Have you received any information from the Company since the Staff Report
6 was filed that provides an alternative means in which to adjust these yields?

7 A. Yes. In response to Staff Data Request No. 0454, KCPL provided a pricing
8 sheet Scotia Capital provided to KCPL when KCPL was considering issuing \$400 million of
9 debt in 2011.

10 Q. What was Scotia Capital's indication of an expected coupon if KCPL issued
11 30-year unsecured debt?

12 A. 5.95%.

13 Q. What coupon did KCPL ultimately end up receiving on its 30-year unsecured
14 debt?

15 A. 5.30%.

16 Q. When did KCPL issue the 30-year unsecured debt?

17 A. September 2011.

18 Q. When did GPE issue the two 10-year unsecured debt issuances you adjusted
19 for purposes your consolidated cost of debt recommendation in the Staff Report?

20 A. May 2011 and March 2012 so these debt issuances shoulder the debt KCPL
21 issued.

22 Q. What was the indicative coupon Scotia Capital provided to KCPL for a
23 10-year unsecured debt issuance?

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1 A. 4.45%.

2 Q. If GMO were able to issue debt on its own and continued to have a 'BBB'
3 credit rating as Aquila did before its non-regulated operations caused a deterioration in its
4 credit rating, wouldn't it be reasonable to believe GMO could be realizing debt costs similar
5 to that of KCPL?

6 A. Yes.

7 Q. Considering the fact that Scotia Capital overestimated the coupon for KCPL's
8 30-year unsecured debt by 65 basis points, isn't it safe to assume that its indicative coupon
9 for 10-year unsecured debt was overestimated as well?

10 A. Yes. Although it is difficult to know that it would have been overestimated by
11 the same amount as the 30-year note, it would seem to be safe to assume that if KCPL had
12 issued 10-year unsecured debt, it would have been at a coupon close to 4.00%.

13 Q. If you assume these two GPE debt issues could have been issued by an entity
14 with a credit rating proper for GMO's low business risk, then what would GPE's
15 consolidated embedded cost of debt be based on the 4.00% coupons?

16 A. 6.142%.

17 Q. Does Staff support either adjustment mechanism?

18 A. Yes and Staff is open to suggestions to other methodologies for adjustment as
19 long as there is some adjustment considered.

20 **SUMMARY AND CONCLUSIONS**

21 Q. Please summarize the conclusions of your Rebuttal Testimony.

22 A. My conclusions are:

23 1. There is no practical or empirical evidence that supports the use of
24 GDP as a proxy for perpetual growth in electric utility industry;

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- 1 2. Equity analysts' 5-year EPS growth estimates are not intended to be
2 used as a proxy for constant-growth in a single-stage DCF analysis.
3 This growth rate is a 5-year projected growth rate for EPS and
4 historical experience has shown that it is highly unlikely that the
5 current 5-year projections are achievable and/or sustainable
6 into perpetuity;
- 7 3. GPE relies on the same sources Staff relied on for projected GDP
8 information, it did not rely on Dr. Hadaway's projected economic
9 information;
- 10 4. Both Dr. Hadaway's Risk Premium analysis and Mr. Gorman's
11 Risk Premium and CAPM analysis inappropriately use projected
12 bond yields;
- 13 5. Staff will further evaluate GPE's capital structure through the true-up
14 period of August 31, 2012, as actual data becomes available;
- 15 6. The other ROR witnesses did not consider the negative effect GPE's
16 debt financing decisions are having on KCPL's embedded cost of debt.
17 This should be considered because absent KCPL's affiliation with
18 GPE's other operations, KCPL would manage its debt costs and
19 profile on a stand-alone basis.
- 20 Q. Does this conclude your Rebuttal Testimony?
- 21 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

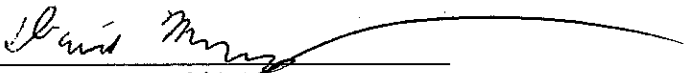
In the Matter of Kansas City Power & Light)
Company's Request for Authority to)
Implement A General Rate Increase for)
Electric Service)

Case No. ER-2012-0174

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

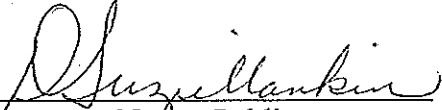
David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 29 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.



David Murray

Subscribed and sworn to before me this 5th day of September, 2012.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071



Notary Public