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Witness:	Samuel C. Hadaway
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Party:	KCP&L Greater Missouri Operations Company
Case No.:	ER-2010-0356
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-0356

SURREBUTTAL TESTIMONY

OF

SAMUEL C. HADAWAY

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
January 2011

SURREBUTTAL TESTIMONY

OF

SAMUEL C. HADAWAY

Case No. ER-2010-0356

I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

Q. Please state your name and business address.

A. My name is Samuel C. Hadaway. My business address is FINANCO, Inc., 3520 Executive Center Drive, Suite 124, Austin, Texas 78731.

Q. Are you the same Samuel C. Hadaway who prefiled direct and rebuttal testimony in this matter?

A. Yes. I previously filed direct and rebuttal testimony on behalf of KCP&L Greater Missouri Operations Company ("GMO" or "the Company") in this matter.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony, concerning the return on equity ("ROE"), filed by Missouri Public Service Staff ("Staff") witness David Murray and Michael P. Gorman on behalf of Ag Processing, Inc., Sedalia Industrial Energy Users Association, and the Federal Executive Agencies ("FEA") (collectively "Industrials"). To the extent that I have responded, in my rebuttal testimony, to the arguments set forth by Mr. Murray and Mr. Gorman, I will note my previous responses and not comment further on those arguments.

Q. Have the parties changed their initial ROE recommendations?

A. No. Staff continues to support an ROE range of 8.5 percent to 9.5 percent and the Industrials continue to support an ROE of 9.5 percent. As I explained in my rebuttal

testimony, the updated range from my DCF analysis is now 10.2 percent to 10.8 percent. Based on this updated analysis, the Company has reduced its requested ROE from 11.0 percent to 10.75 percent.

II. RESPONSE TO STAFF WITNESS MURRAY

Q. What is the primary focus of Mr. Murray's rebuttal testimony?

A. Mr. Murray correctly pointed out that I was expected to update my analysis in my rebuttal testimony. For this reason, he did not concentrate on the level of my initial ROE recommendation. Instead, he focused primarily on the differences in our long-term DCF growth rate sources.

Q. Did Mr. Murray's growth rate discussion add any new information to the debate about what the long-term DCF growth rate should be?

A. No. In his discussion, Mr. Murray's touts the two primary approaches he used to support a midpoint long-term growth rate of 3.5 percent. He says that he disagrees with my use of analysts' growth rates and GDP growth and claims that investors " … expect growth rates consistent with past industry performance … [and that] Staff's perpetual growth rates closely reflect those that are used by investors, financial advisors and equity analysts …." (Murray Rebuttal at 2, lines 13-16.)

Q. What is your response to Mr. Murray's growth rate contentions?

A. With respect to allowed rates of return in the regulatory process, both of Mr. Murray's preferred growth rate sources are questionable. They result in a 3.5 percent growth rate, which he uses to produce a 9.0 percent midpoint ROE recommendation (Murray Rebuttal at 22, lines 6-7). As I demonstrated in my rebuttal testimony, Mr. Murray's low ROE estimate is caused by his use of incorrect data in his long-term industry

growth rate calculations (Hadaway Rebuttal at 13-15 and Exhibit SCH2010-09). Additionally, in his rebuttal testimony, he attempts to misuse valuation data from "fairness opinions" and asset impairment tests to estimate investors' growth expectations. These are the very same kind of data from Mr. Murray's analysis that the Commission flatly rejected in the recent AmerenUE's recent rate proceeding, Case No. ER-2010-0036, Report and Order at 20). Mr. Murray's historical growth rate calculations are incorrect, and his use of analysts' and accountants' discount rates, which are often confidential and entirely unknown to the investingpublic, is inappropriate. As the Commission did in the AmerenUE case, it should reject Mr. Murray's inappropriate analysis .

Q. At pages 7-9 of his rebuttal testimony, Mr. Murray criticizes your use of growth in Gross Domestic Product ("GDP") to estimate investors' long-term growth expectations. How do you respond to these criticisms?

A. Mr. Murray's criticisms are misplaced. He begins with a would-be analogy, applying my GDP growth estimate to the S&P 500 index. He says that with a 6.0 percent growth rate and the S&P 2.08 percent dividend yield, the cost of common equity would be 8.08 percent (Murray Rebuttal at 8, line 4). While his math is correct, his logic is entirely wrong. The simple, constant growth DCF model, which Mr. Murray uses for this purpose, is difficult to apply to the S&P 500 index. Many of the companies in the index currently pay little or no dividends, but they have (relative to GDP) very high expected growth rates. Under these circumstances, the DCF model cannot be applied without assuming a multi-stage growth approach, or by assuming that current analysts' growth rates are expected to be blended, at some point in the

future, with lower perpetual growth rates and with, currently unknown, higher future dividend yields. A correct application of the DCF model to companies in the S&P 500 is much more complex than Mr. Murray's "GDP growth plus current yield" approach. His S&P 500 analogy is, therefore, a mismatch that provides no useful information.

Q. Do some regulatory economists use a DCF approach to estimate the S&P 500's expected return?

A. Yes. In jurisdictions where the capital asset pricing model ("CAPM") is heavily relied upon, a combination of current dividend yields and analysts' growth rates are used to estimate the required market risk premium. A recent example of this approach is found in testimony filed October 26, 2010 by the Illinois Commerce Commission Staff (Direct Testimony of Michael McNally, ICC Docket No. 10-467). In that analysis, the ICC Staff found an expected DCF return for the S&P 500 to be 12.74 percent (McNally at 28) and the indicated CAPM ROE to be 10.32 percent (McNally at 32).

Q. What other parts of Mr. Murray's GDP discussion do you disagree with?

A. I disagree with the second portion of Mr. Murray's GDP discussion, which appears on pages 8-9 of his rebuttal testimony. In this discussion, he mistakenly claims that GDP growth "… is often used for a company or an industry in its 'growth phase,' i.e., experiencing 'supernormal' growth." In fact, the opposite is true. In my direct testimony at page 39, I provided the following quotation from the well respected Brigham and Houston textbook:

> Expected growth rates vary somewhat among companies, but dividends for <u>mature firms</u> are often expected to grow in the future at

> about the same rate as nominal gross domestic product (real GDP plus inflation). On this basis, one might expect the dividend of an average, or "normal," company to grow at a rate of 5 to 8 percent a year. (Eugene F. Brigham and Joel F. Houston, *Fundamentals of Financial Management*, 11th Ed. 2007, page 298 [emphasis added].)

In addition to Mr. Murray's misstatements about "supernormal" growth versus expected growth for "mature" firms, he again refers to his flawed 1948-2000 historical growth rate study to support his contentions. He claims to demonstrate in his rebuttal Schedules 1 and 2 that utility growth relative to GDP has been steadily declining. Because the graphs in these schedules are based on the same, inconsistently reported data that Mr. Murray used in his direct testimony (see Hadaway Rebuttal at 14 and Schedule SCH2010-9), the trends he claims to identify are meaningless.

Q. On page 19, Mr. Murray criticizes your risk premium study. How do you respond to these criticisms?

A. As I explained in my rebuttal testimony, I currently discount the risk premium estimates, because they are based on artificially low interest rates that have resulted from the government's expansionary monetary policy. Nonetheless, Mr. Murray's criticisms of my analysis are misplaced. First, he says that my use of allowed ROE data to interpret the market's required rate of return is of questionable value. His opinion in this regard is exactly opposite of the Commission's opinion in the May 2010 AmerenUE Report and Order:

> The Commission mentions the average allowed return on equity not because the Commission should, or would slavishly follow the national average in awarding a return on equity to AmerenUE. However, AmerenUE must compete with other utilities all over the country for the same capital. Therefore, the average allowed return on equity provides a reasonableness test for the recommendations

> offered by the return on equity experts. (Case No. ER-2010-0036, Report and Order at 17, ¶ 12.)

Additionally, Mr. Murray is incorrect in his criticism of my risk premium adjustment, which accounts for the inverse relationship between risk premiums and interest rate levels. My data, spanning the 1980-2010 timeframe, clearly demonstrate this inverse relationship (see Schedule SCH2010-12, page 3). During periods of high interest rates, regulators have allowed and investors have come to expect, lower risk premiums. Similarly, during periods of low interest rates, risk premiums tend to be expand. Mr. Murray's (and Mr. Gorman's) criticism of this fundamental relationship is simply a further effort to reduce ROE in lockstep with current artificially low interest rates. Finally, Mr. Murray is incorrect in his criticism of my use of projected interest rates. I use both actual and projected rates in my risk premium analysis because investors are fully aware of both. The risk premium approach is an effort to gauge the cost of equity by reviewing debt costs and the relationship between debt costs and the cost of equity. Interest rate forecasts are an integral part what investors expect and, therefore, such forecasts, along with existing actual interest rates, provide additional information about what investors expect their rate of return on equity to be. Mr. Murray's criticisms should be dismissed and his low ROE recommendation should be rejected.

III. RESPONSE TO INDUSTRIAL'S WITNESS GORMAN

Q. What are Mr. Gorman's principal criticisms of your ROE analysis and recommendation?

A. Mr. Gorman criticizes both my DCF and risk premium analyses. He claims that, in my DCF analysis, the long-term growth rate, based on expected GDP growth, is overstated. However, even with his "adjustments" to my DCF analysis, Mr. Gorman finds that the average DCF return is 10.0 percent (Gorman Rebuttal at 9, Table 3). With respect to my risk premium analysis, he attempts to refute the well documented fact that equity risk premiums are smaller when interest rates are high and larger when interest rates are low. Additionally, he applies current, artificially low interest rates to my risk premium data and obtains an "adjusted range" of 8.83 percent to 9.85 percent (Gorman Rebuttal at 14, line 11). I disagree with Mr. Gorman's adjustments to my DCF and risk premium analyses, and I will explain why his criticisms are not valid. I will also show that Mr. Gorman's recommendation to reduce ROE to account for the Company's IEC is inappropriate because all the comparable companies that he and I use to estimate ROE also have energy cost recovery mechanisms in place.

Q. What is the basis for Mr. Gorman's criticism of you DCF growth rates?

A. He offer two criticisms. First, he says that the analysts' growth rates I use in my constant growth DCF model (5.58% to 5.86%) are "not sustainable." He also argues that my GDP growth estimate (6.0%) is higher than current 5- and 10- year consensus estimates of GDP growth. When he replaces my growth rates with his, his analysis produces ROEs of 9.7 percent to 10.7 percent, which he averages to be 10.0 percent. Since his revisions to my analysis do not appear to change the analysts' growth rates, my response in this surrebuttal will focus on his much lower estimates of expected GDP growth.

Q. What causes Mr. Gorman's "consensus" estimates of future GDP growth to be so much lower than your long-term growth estimate?

A. Mr. Gorman demonstrates the differences in our GDP growth rate estimates in Table 2 on page 8 of his rebuttal testimony. My data show that real GDP growth (excluding inflation) is 2.9 percent. Mr. Gorman's 5-year consensus real growth rate is also 2.9 percent. His 10-year real growth rate is 2.5 percent. The difference in expected real GDP growth, therefore, does not account for a large part of the total difference between our GDP forecasts. The larger cause for our differences are the much lower projected inflation rates in Mr. Gorman's data. The expected inflation rates in his data are only 2.0 percent to 2.1 percent, whereas my estimate includes long-term inflation of 3.1 percent. The data in my direct testimony Schedule SCH-2010-4, show that over the past 60 years, the GDP price deflator increased by an average of 3.5 percent per year. Even the most recent 10-year periods have shown average increases of 2.3 percent per year. Mr. Gorman's inflation rates are lower than even those associated with recently depressed economic conditions, and they are not at all consistent with the longer-term historical inflation rates in the U.S. economy. To use such anomalous inflation rates to produce a low long-term growth rate in the DCF model, as Mr. Gorman has done, is inappropriate and should be disregarded.

Q. What is the basis for Mr. Gorman's criticism of your risk premium analysis?

A. Mr. Gorman summarizes his risk premium critique on page 10, lines 8-11 of his rebuttal. In that testimony, he says that my risk premiums are unreasonable because I used forecasted utility bond yields and I adjusted the average equity risk premium to account for changes in nominal interest rates.

Q. What is your response to these criticisms?

A. As noted previously, because risk premium estimates are artificially affected by current government monetary policy, such estimates understate the cost of equity. For this reason, my ROE recommendation relies on the DCF model estimates. However, these factors notwithstanding, Mr. Gorman's statements about how a risk premium analysis should be performed are not correct and his "adjustments" to my analysis should be disregarded.

Although I agree with Mr. Gorman that recent interest rate forecasts have been difficult, it is not otherwise clear why he says that risk premium estimates of ROE should not consider projected interest rates. In fact, in his direct testimony, Mr. Gorman presents a risk premium analysis in which he uses the very same projected government bond interest rates (Gorman Direct at 33, lines 17-18) that he is now criticizing. Also, Mr. Gorman fails to mention that in my risk premium analysis I also presented results based on actual current interest rates. His critique in this regard is one-sided and does not provide useful information for evaluating the risk premium issue.

Q. On page 12, lines 15-16 of his rebuttal, Mr. Gorman also says that a "… simplistic inverse relationship between equity risk premiums and interest rates is not supported by academic research." Is his conclusion in this regard correct?

A. Apparently, the accuracy of his statement depends on his definition of "simplistic." There is no question that the articles he cites in footnote 3 on page 12 of his rebuttal discuss causes for changes in equity risk premiums. However, there is also clear

evidence in those articles and other similar academic work that risk premiums are smaller when interest rates are high and larger when interest rates are low. In fact, Mr. Gorman's statement that smaller risk premiums in the 1980s were likely attributable to more volatile interest rates at that time (Gorman Rebuttal at 13, lines 1-6) has turned out to be wrong.

To demonstrate this fact, in Schedule SCH2010-13, I provide a comparison of interest rate volatility for the early 1980s, mentioned by Mr. Gorman, and two additional periods, including the most recent three years since the beginning of the financial crisis in 2008. These data, summarized in Table 1 below, show clearly that smaller risk premiums are not caused by higher interest rate volatility, but that they are directly associated with higher interest rates.

Table 1
Changes in Equity Risk Premiums

Time Period	(1) Average Interest Rate	(2) Volatility*	(3) Average Equity Risk Premium**
1981-1983 Baa Utilities	15.75%	8.60%	0.70%
1999-2001 Baa Utilities	8.09%	3.87%	3.29%
2008-2010 Baa Utilities	6.77%	13.08%	4.26%

*Coefficient of Variation, Schedule SCH2010-13.
**Schedule SCH2010-12.

In the early 1980s, interest rates were indeed high and volatile. Prior to the 2008 financial crisis, the early 1980's were viewed as the most volatile interest rate period in modern history. However, as shown in column (2) of Table 1 above, the volatility of Baa interest rates since 2008 has been much higher than existed even in the early

1980s. More important, with respect to Mr. Gorman's arguments about what has caused changes in risk premiums, risk premiums have been much larger during the more recent lower interest rate time periods. His refusal to accept the well documented inverse relationship between equity risk premiums and interest rate levels is further refuted by these data. Mr. Gorman's "adjusted" results from my risk premium data should be disregarded.

Q. Does that conclude your testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of KCP&L Greater Missouri Operations Company to Modify Its Electric Tariffs to Effectuate a Rate Increase	)))	Docket No. ER-2010-0356

AFFIDAVIT OF SAMUEL C. HADAWAY

STATE OF TEXAS)
) **ss**
COUNTY OF TRAVIS)

Samuel C. Hadaway, being first duly sworn on his oath, states:

1. My name is Samuel C. Hadaway. I am employed by FINANCO, Inc. in Austin, Texas. I have been retained by Great Plains Energy, Inc., the parent company of Kansas City Power & Light Company, to serve as an expert witness to provide cost of capital testimony on behalf of Kansas City Power & Light Company.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of KCP&L Greater Missouri Operations Company consisting of eleven (11) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Samuel C. Hadaway
Samuel C. Hadaway

Subscribed and sworn before me this 31st day of December, 2010.

ARLENE STANFORD
Notary Public, State of Texas
My Commission Expires
March 03, 2014

Arlene Stanford
Notary Public

My commission expires: 3-3-14

KCP&L Greater Missouri Operations Company
Interest Rate Volatility

30-Year Treasury Bond Interest Rates

Jan-81	12.14%	Jan-99	5.16%	Jan-08	4.33%
Feb-81	12.80%	Feb-99	5.37%	Feb-08	4.52%
Mar-81	12.69%	Mar-99	5.58%	Mar-08	4.39%
Apr-81	13.20%	Apr-99	5.55%	Apr-08	4.44%
May-81	13.60%	May-99	5.81%	May-08	4.60%
Jun-81	12.96%	Jun-99	6.04%	Jun-08	4.69%
Jul-81	13.59%	Jul-99	5.98%	Jul-08	4.57%
Aug-81	14.17%	Aug-99	6.07%	Aug-08	4.50%
Sep-81	14.67%	Sep-99	6.07%	Sep-08	4.27%
Oct-81	14.68%	Oct-99	6.26%	Oct-08	4.17%
Nov-81	13.35%	Nov-99	6.15%	Nov-08	4.00%
Dec-81	13.45%	Dec-99	6.35%	Dec-08	2.87%
Jan-82	14.22%	Jan-00	6.63%	Jan-09	3.13%
Feb-82	14.22%	Feb-00	6.23%	Feb-09	3.59%
Mar-82	13.53%	Mar-00	6.05%	Mar-09	3.64%
Apr-82	13.37%	Apr-00	5.85%	Apr-09	3.76%
May-82	13.24%	May-00	6.15%	May-09	4.23%
Jun-82	13.92%	Jun-00	5.93%	Jun-09	4.52%
Jul-82	13.55%	Jul-00	5.85%	Jul-09	4.41%
Aug-82	12.77%	Aug-00	5.72%	Aug-09	4.37%
Sep-82	12.07%	Sep-00	5.83%	Sep-09	4.19%
Oct-82	11.17%	Oct-00	5.80%	Oct-09	4.19%
Nov-82	10.54%	Nov-00	5.78%	Nov-09	4.31%
Dec-82	10.54%	Dec-00	5.49%	Dec-09	4.49%
Jan-83	10.63%	Jan-01	5.54%	Jan-10	4.60%
Feb-83	10.88%	Feb-01	5.45%	Feb-10	4.62%
Mar-83	10.63%	Mar-01	5.34%	Mar-10	4.64%
Apr-83	10.48%	Apr-01	5.65%	Apr-10	4.69%
May-83	10.53%	May-01	5.78%	May-10	4.29%
Jun-83	10.93%	Jun-01	5.67%	Jun-10	4.13%
Jul-83	11.40%	Jul-01	5.61%	Jul-10	3.99%
Aug-83	11.82%	Aug-01	5.48%	Aug-10	3.80%
Sep-83	11.63%	Sep-01	5.48%	Sep-10	3.77%
Oct-83	11.58%	Oct-01	5.32%	Oct-10	3.87%
Nov-83	11.75%	Nov-01	5.12%	Nov-10	4.19%
Dec-83	11.88%	Dec-01	5.48%	Dec-10	n/a
Standard Deviation	1.34%		0.35%		0.43%
Average	12.46%		5.77%		4.19%
Coefficient of Variation	10.73%		6.01%		10.21%

Source: U.S. Federal Reserve System.
http://www.federalreserve.gov/releases/h15/data.htm

KCP&L Greater Missouri Operations Company
Interest Rate Volatility

Baa Utility Bond Interest Rates

Jan-81	15.30%	Jan-99	7.30%	Jan-08	6.35%
Feb-81	15.86%	Feb-99	7.41%	Feb-08	6.60%
Mar-81	15.83%	Mar-99	7.55%	Mar-08	6.68%
Apr-81	16.14%	Apr-99	7.51%	Apr-08	6.81%
May-81	16.66%	May-99	7.74%	May-08	6.79%
Jun-81	16.30%	Jun-99	8.03%	Jun-08	6.93%
Jul-81	16.98%	Jul-99	7.97%	Jul-08	6.97%
Aug-81	17.19%	Aug-99	8.16%	Aug-08	6.98%
Sep-81	17.76%	Sep-99	8.19%	Sep-08	7.15%
Oct-81	17.71%	Oct-99	8.32%	Oct-08	8.58%
Nov-81	16.49%	Nov-99	8.12%	Nov-08	8.98%
Dec-81	17.02%	Dec-99	8.28%	Dec-08	8.11%
Jan-82	17.83%	Jan-00	8.40%	Jan-09	7.90%
Feb-82	17.83%	Feb-00	8.33%	Feb-09	7.74%
Mar-82	17.16%	Mar-00	8.40%	Mar-09	8.00%
Apr-82	17.00%	Apr-00	8.40%	Apr-09	8.03%
May-82	16.68%	May-00	8.86%	May-09	7.76%
Jun-82	17.21%	Jun-00	8.47%	Jun-09	7.30%
Jul-82	17.09%	Jul-00	8.33%	Jul-09	6.87%
Aug-82	16.37%	Aug-00	8.25%	Aug-09	6.36%
Sep-82	15.68%	Sep-00	8.32%	Sep-09	6.12%
Oct-82	15.10%	Oct-00	8.29%	Oct-09	6.14%
Nov-82	14.81%	Nov-00	8.25%	Nov-09	6.18%
Dec-82	14.69%	Dec-00	8.01%	Dec-09	6.26%
Jan-83	14.56%	Jan-01	7.99%	Jan-10	6.16%
Feb-83	14.61%	Feb-01	7.94%	Feb-10	6.25%
Mar-83	14.33%	Mar-01	7.85%	Mar-10	6.22%
Apr-83	14.07%	Apr-01	8.06%	Apr-10	6.19%
May-83	14.05%	May-01	8.11%	May-10	5.97%
Jun-83	14.16%	Jun-01	8.02%	Jun-10	6.18%
Jul-83	14.01%	Jul-01	8.05%	Jul-10	5.98%
Aug-83	14.21%	Aug-01	7.95%	Aug-10	5.55%
Sep-83	14.10%	Sep-01	8.12%	Sep-10	5.53%
Oct-83	13.95%	Oct-01	8.02%	Oct-10	5.62%
Nov-83	14.12%	Nov-01	7.96%	Nov-10	5.85%
Dec-83	14.23%	Dec-01	8.27%	Dec-10	n/a
Standard Deviation	1.35%		0.31%		0.89%
Average	15.75%		8.09%		6.77%
Coefficient of Variation	8.60%		3.87%		13.08%

Source: Moody's Public Utility Manual (1981-1983).
Mergent Bond Record (1999-2001, 2008-2010).