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Witness: Samuel C. Hadaway  
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Sponsoring Party: KCP&L Greater  
Missouri Operations  
Case No.: HR-2009-0092  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: HR-2009-0092**

**REBUTTAL TESTIMONY**

**OF**

**SAMUEL C. HADAWAY**

**ON BEHALF OF**

**KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**Kansas City, Missouri  
March 2009**

**REBUTTAL TESTIMONY**

**OF**

**SAMUEL C. HADAWAY**

**Case No. HR-2009-0092**

1 **I. Introduction and Purpose of Rebuttal Testimony**

2 **Q. Are you the same Samuel C. Hadaway who submitted Direct Testimony in this case**  
3 **on behalf of KCP&L Greater Missouri Operations Company (“GMO”) on or about**  
4 **September 5, 2008?**

5 A. Yes, I am.

6 **Q. What is the purpose of your Rebuttal Testimony?**

7 A. The purpose of my rebuttal testimony is to respond to the rate of return on equity (ROE)  
8 recommendation offered by Missouri Public Service Commission Staff witness David  
9 Murray. In my analysis, I will respond to Mr. Murray’s rate of return recommendation  
10 and demonstrate that his recommendation is not consistent with current market turmoil or  
11 the higher capital costs that corporate borrowers are currently required to pay. I will also  
12 update my ROE analysis for current market costs and conditions.

13 **II. Overview of Rate of Return Positions**

14 **Q. What is Mr. Murray’s ROE recommendation?**

15 A. Mr. Murray estimates an ROE range of 9.25 percent to 10.25 percent and recommends  
16 the midpoint of this range at 9.75 percent. My updated analysis shows that GMO's  
17 current cost of equity is in the range of 11.2 percent to 11.9 percent with a midpoint  
18 estimate of 11.55 percent, which is my revised ROE recommendation. My updated  
19 results demonstrate that my initial ROE recommendation at 10.75 percent was extremely

1 conservative and that Mr. Murray's recommendation is well below GMO's current cost of  
2 equity capital.

3 **Q. Is Mr. Murray's ROE recommendation consistent with current capital market**  
4 **conditions or within the reasonable range?**

5 A. No. His recommendation is far below GMO's cost of capital because it is based on  
6 flawed analysis and it does not reasonably reflect current market conditions. During the  
7 past several months, corporate capital costs have increased dramatically. Current  
8 borrowing costs for triple-B companies like GMO are more than 100 basis points higher  
9 than they were in 2007 when the Company's prior case was presented. In this  
10 environment, for Mr. Murray to offer essentially the same ROE as Staff supported (and  
11 the Commission rejected) in the prior KCP&L case borders on nonsense. While Mr.  
12 Murray's recommendation may fall within the Commission's historical benchmark for  
13 the range of reasonableness, based on ROEs from state regulators for the most recent 12  
14 months, at this point in time that historical benchmark obviously does not reflect the  
15 current economic crisis or the higher corporate capital costs that have resulted. In this  
16 environment, even before considering the technical merits of his ROE presentation, Mr.  
17 Murray's extremely low ROE recommendation is at face value unreasonable.

18 He seems to hold a mistaken belief that utility capital costs have not increased  
19 significantly over the past several months. This contention is simply wrong. While  
20 governmental policies and "flight to safety" issues have driven down short-term interest  
21 rates for banks and rates on U.S. Treasury securities, corporate capital costs have

1 increased.<sup>1</sup> I will show that GMO's required ROE has increased significantly and that  
2 Mr. Murray did not reasonably include current capital market conditions in his  
3 recommendation.

4 **Q. Are there specific capital market data that demonstrate the increases in corporate**  
5 **capital costs?**

6 A. Yes. Recent government efforts to stabilize the economy have had their major impact on  
7 borrowing costs for banks, not corporate borrowers. Providers of long-term capital for  
8 corporations now require higher, not lower, rates. Corporate interest rate "spreads" (the  
9 difference between corporate borrowing costs and rates on U.S. Treasury bonds) remain  
10 almost three times as large as they were before the credit crisis began. These wider  
11 spreads are signaling a clear increase in the price of risk, a cost that affects equity holders  
12 even more than debt holders. Although Mr. Murray discusses the economic crisis, he  
13 ignores this important capital market message in his cost of equity analysis.

14 **Q. If Mr. Murray had more reasonably considered the recent market turmoil, what**  
15 **would the effect have been?**

16 A. During the past several months, capital markets in the U.S. have been more turbulent than  
17 at any time since the 1930s. Extremely large daily swings in the stock market and  
18 unprecedented corporate interest rate spreads in the debt markets have resulted in near  
19 chaos. The S&P 500 and the Dow Jones Industrial Average have dipped by over 50  
20 percent since November 2007. In this environment, many large financial institutions

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<sup>1</sup> The term "flight to safety" refers to the tendency for investors, during periods of market turbulence, to remove money from more risky investments, such as corporate bonds and stocks, and to put the money into government securities such as Treasury bills and bonds. The effect causes a reduction in the supply of funds to corporations and an increase in funds invested in government securities. The result is wider "spreads" between corporate bond and government bond interest rates and higher capital costs for corporations.

1 such as Countrywide Financial, Washington Mutual, the Federal Home Loan Mortgage  
2 Association, the Federal National Mortgage Association, Wachovia, Bear Sterns, and  
3 Merrill Lynch were unable to survive as independent institutions. Lehman Brothers was  
4 forced to file for bankruptcy. Other surviving institutions such as Citigroup, Goldman  
5 Sachs, American International Group, Morgan Stanley and others have required  
6 multibillion dollar capital infusions.

7 The Federal government enacted emergency legislation (the \$700 billion  
8 Troubled Asset Relief Program) in October 2008 in an attempt to stabilize the economy.  
9 As part of that effort the government has increased federal deposit insurance, lent billions  
10 of dollars to financial institutions, purchased hundreds of billions of dollars in illiquid  
11 securities, guaranteed loans between financial institutions, and purchased equity in banks.  
12 In November 2008, the Federal Reserve pledged to pump another \$800 billion into ailing  
13 credit markets - \$600 billion to purchase federal government agency mortgage securities  
14 and, with support from the U.S. Treasury, the Federal Reserve will provide up to \$200  
15 billion in financing to investors buying securities tied to student loans, car loans, credit  
16 card debt and small business loans. In addition, President Obama has signed an  
17 additional \$789 billion economic package in hopes of providing further economic  
18 stimulus for the economy. There is no question that the economic and financial  
19 uncertainties generated by the credit crisis have significantly increased the risk premiums  
20 contained in public utility companies' cost of capital.

21 **Q. Can you be more specific regarding the impact of the credit crisis on the cost of**  
22 **capital of public utilities?**

1 A. Yes. The month-by-month interest rates paid by triple-B rated utilities and the U.S.  
2 Treasury over the past two years are presented in Schedule SCH-9, page 1. Those data  
3 are summarized below in Table 1. The dramatic increase in the spread between public  
4 utility bond yields and long-term Treasury yields are clearly shown in the most recent  
5 periods. On page 2 of Schedule SCH-9, I also provide the most recent Standard & Poor's  
6 (S&P) forecasts of economic conditions and interest rates for 2009.

**Table 1**  
**Long-Term Interest Rate Trends**

<b>Month</b>	<b>Triple-B Utility Rate</b>	<b>30-Year Treasury Rate</b>	<b>Triple-B Utility Spread</b>
Jan-07	6.16	4.85	1.31
Feb-07	6.10	4.82	1.28
Mar-07	6.10	4.72	1.38
Apr-07	6.24	4.87	1.37
May-07	6.23	4.90	1.33
Jun-07	6.54	5.20	1.34
Jul-07	6.49	5.11	1.38
Aug-07	6.51	4.93	1.58
Sep-07	6.45	4.79	1.66
Oct-07	6.36	4.77	1.59
Nov-07	6.27	4.52	1.75
Dec-07	6.51	4.53	1.98
Jan-08	6.35	4.33	2.02
Feb-08	6.60	4.52	2.08
Mar-08	6.68	4.39	2.29
Apr-08	6.81	4.44	2.37
May-08	6.79	4.60	2.19
Jun-08	6.93	4.69	2.24
Jul-08	6.97	4.57	2.40
Aug-08	6.98	4.50	2.48
Sep-08	7.15	4.27	2.88
Oct-08	8.58	4.17	4.41
Nov-08	8.98	4.00	4.98
Dec-08	8.11	2.87	5.24
Jan-09	7.90	3.13	4.77
Feb-09	7.44	3.59	3.85
<b>3-Mo Avg</b>	<b>7.82</b>	<b>3.20</b>	<b>4.62</b>

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

1 Three-month average is Dec. 2009-Feb. 2009.

2 The data in Table 1 vividly illustrate the market turmoil that has occurred. Although

3 interest rates for triple-B utilities have come down from the peaks reached in October and

4 November 2008, they remain well above the rates that existed prior to September 2008.

5 More important, continuing market turbulence has caused interest rate spreads to remain

1 extremely wide. The Federal Reserve's efforts to reduce short-term borrowing cost for  
2 banks (the Fed Funds rate) and lower rates on U.S. Treasury bonds have not had the same  
3 effect for corporate borrowers. In fact, increased risk aversion and market illiquidity  
4 have resulted in continuing significantly higher borrowing costs for corporations. While  
5 the effects of market turbulence may not be easily captured in financial models for  
6 estimating the rate of return, these higher borrowing costs should be considered explicitly  
7 in estimates of the cost of equity capital.

8 **Q. Did Mr. Murray adequately incorporate these higher utility borrowing costs into**  
9 **their analyses?**

10 A. No. While he discusses market conditions and interest rates, he presents analysis and  
11 offers opinions that effectively ignore actual market activity. Mr. Murray repeatedly  
12 states that the net effect of recent market turbulence and government interest rate policy  
13 has produced little change in the cost of capital. See Staff Report at 28 and 43. Such  
14 misdirected discussion is simply not consistent with the market conditions that utilities  
15 face. Based on this opinion, Mr. Murray rejects the portions of his analysis that reflect  
16 actual market conditions and resorts to an alternative analysis that better suits his  
17 opinions. The cost of raising capital for all corporations has increased dramatically over  
18 the past several months, and any reasonable cost of equity should reflect these effects.

19 **Q. What are the implications of higher corporate borrowing costs for GMO's cost of**  
20 **equity?**

21 A. There are several important implications. First, since equity must compete with debt for  
22 investor dollars, and because equity is riskier than debt, an increase in corporate  
23 borrowing costs will also cause an increase in the cost of equity. In addition, since



1 corporate bond yields are a direct input to the risk premium method of estimating the cost  
 2 of equity, higher corporate yields should result in higher risk premium-based estimates of  
 3 the cost of equity. Finally, as I will discuss in more detail below, widening corporate  
 4 interest rate spreads relative to Treasuries will cause understated ROE estimates in the  
 5 capital asset pricing model (CAPM). The Staff's failure to account for these factors  
 6 causes its ROE estimates to understate GMO's cost of equity.

7 **Q. How does Mr. Murray's ROE recommendation compare to the rates of return**  
 8 **authorized by other state utility commissions around the country?**

9 A. Mr. Murray's recommendation is substantially lower than the average for any quarter  
 10 over the past five years. Table 2 below shows the average rates of return for each quarter  
 11 over the past five years.

12 Table 2

	Authorized Electric Utility Equity Returns				
	2004	2005	2006	2007	2008
15 1 <sup>st</sup> Quarter	11.00%	10.51%	10.38%	10.27%	10.45%
16 2 <sup>nd</sup> Quarter	10.54%	10.05%	10.68%	10.27%	10.57%
17 3 <sup>rd</sup> Quarter	10.33%	10.84%	10.06%	10.02%	10.47%
18 4 <sup>th</sup> Quarter	10.91%	10.75%	10.39%	10.56%	10.33%
19 Full Year Average	10.75%	10.54%	10.36%	10.36%	10.46%
20 Average Utility					
21 Debt Cost	6.20%	5.67%	6.08%	6.11%	6.65%
22 Indicated Average					
23 Risk Premium	4.55%	4.87%	4.28%	4.25%	3.81%

24  
 25 Source: *Regulatory Focus*, Regulatory Research Associates, Inc., Major Rate Case  
 26 Decisions, January 12, 2009. Utility debt costs are the "average" public utility bond  
 27 yields as reported by Moody's.

28 Since 2004, equity risk premiums (the difference between allowed equity returns and  
 29 utility interest rates) have ranged from 3.81 percent to 4.87 percent. At the low end of  
 30 this risk premium range, based on average triple-B utility bond yields for the three  
 31 months ended in February, the indicated cost of equity is 11.63 percent (7.82% triple-B

1 bond yield + 3.81% risk premium = 11.63%). At the upper end of this risk premium  
2 range, with an allowed equity risk premium of 4.87 percent, the indicated cost of equity is  
3 12.69 percent (7.82% current triple-B bond yield + 4.87% risk premium = 12.69%).<sup>2</sup> In  
4 this environment, Mr. Murray should have recommended a substantially higher ROE.

5 **Q. In his analysis, Mr. Murray presents a CAPM estimate of ROE. Can you explain**  
6 **why the CAPM currently understates ROE and why CAPM estimates should not be**  
7 **included?**

8 **A.** Yes. The CAPM requires three inputs to estimate ROE:<sup>3</sup>

9 1) the risk-free interest rate ( $R_f$ );

10 2) the market risk premium for stocks relative to the risk-free rate ( $R_m - R_f$ ); and

11 3) a measure of market-related, or nondiversifiable, risk ( $\beta$  or beta).

12 The CAPM estimate of ROE is calculated from the following equation:

$$13 \quad ROE = R_f + \beta(R_m - R_f)$$

14 Under present market conditions, and as applied by Staff in its CAPM analyses, two of  
15 the three CAPM inputs tend to understate ROE. The risk-free rate,  $R_f$ , is understated  
16 because, due to monetary policy and investors' flight to safety, the U.S. Treasury rates  
17 used for  $R_f$  are artificially low. The second input, the market risk premium ( $R_m - R_f$ ) is  
18 also severely understated. This is the case because Staff's market risk premium estimates  
19 are based on historical data that cannot possibly reflect the current market turmoil. While  
20 there is no single objective source for measuring the widening equity risk premium

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<sup>2</sup> The triple-B bond yield is the average rate for the three-months ended February 2009 of Moody's triple-B utility bond index as shown previously in Table 1.

<sup>3</sup> While Mr. Murray acknowledges at pages 34-35 of the Staff Report that his CAPM estimates are below the reasonable range, he attempts to use his CAPM discussion to justify his rejection of higher constant growth DCF results.

1 phenomenon, the unprecedented risk spreads shown in Table 1 are indicative. Those rate  
2 spreads required on utility bonds relative to Treasuries are currently almost three times  
3 larger than previously existed. For Staff's to apply the CAPM without any adjustment  
4 for current abnormal market conditions produces unreasonably low estimates of ROE. In  
5 this environment, CAPM estimates of ROE should be rejected and ROE should be  
6 determined from a combination of DCF and more traditional risk premium models.

7 **III. Rebuttal of Staff Witness David Murray**

8 **Q. What is your general assessment of Mr. Murray's ROE testimony and**  
9 **recommendation?**

10 A. Mr. Murray's ROE recommendation is far below GMO's cost of equity capital. Although  
11 he discusses the ongoing economic crisis and concedes that equity risk premiums have  
12 increased, he concludes that these factors "...may have caused a slight increase in the  
13 cost of capital to utilities." See Staff Report at 21 (emphasis added). He then  
14 recommends an ROE of only 9.75 percent. As noted previously, this recommendation is  
15 lower than the average ROE granted by state regulators in any quarter for the past five  
16 years, a period of time that does not reflect the current economic crisis. It is also 100  
17 basis points lower than the 10.75 percent ROE this Commission set in KCP&L's 2007  
18 rate case when triple-B utility interest rates were more than 100 basis points lower than  
19 they are today. For Mr. Murray to acknowledge the market's increased risk aversion and  
20 the wider equity risk premiums that have resulted, but to recommend such a low ROE is,  
21 at best, inconsistent.

22 **Q. What is the basis for Mr. Murray's 9.75 percent ROE recommendation?**

1 A. His recommendation is based on the multi-stage DCF model that he presents in his  
2 Schedule 18. The average ROE from this analysis is 9.76 percent. From this result, he  
3 determines that a subjective ROE range of 9.25 percent to 10.25 percent is appropriate,  
4 and from this range he selects the midpoint of 9.75 percent.

5 **Q. How is his multi-stage DCF model structured?**

6 A. He applies a three-stage version of the DCF model to an eleven-company comparable  
7 group. Although I use a much larger group (which I believe is statistically more reliable),  
8 in this case Mr. Murray's comparable company selections do not appear to skew his  
9 results. He begins with annual dividends for 2008, and for a base stock price he uses the  
10 average of high and low prices for the four-month period ended January 31, 2008. He  
11 then applies three sets of growth rates in the three stages of his model. The growth rates  
12 for Stage 1 (years 1-5) are based on the analysts' estimates for each company as shown in  
13 his Schedule 13. The growth rates for Stage 2 (years 6-10) are a simple extrapolation  
14 between the rates in Stage 1 and Stage 3. The growth rate for Stage 3 (year 11 and  
15 beyond) is set at 3.1 percent for all companies. Mr. Murray discusses his 3.1 percent  
16 long-term growth rate on page 37 of the Staff Report. In that discussion, he states that his  
17 3.1 estimate is the sum of projected real growth in electricity consumption (0.9 percent)  
18 and projected long-term inflation (2.2 percent). From these inputs, he calculates ROE as  
19 the rate of return that investors would receive from the growing stream of dividends in  
20 the three stages of his model.

21 **Q. Do you disagree with the technical aspects of Mr. Murray's multi-stage DCF**  
22 **approach?**

1 A. No. While I disagree with his sole reliance on only one model and I disagree with his  
2 long-term growth rate input, the technical aspects of his calculations are correct. In fact,  
3 his three-stage approach is very similar to the two-stage model that I use as one of five  
4 approaches to estimate ROE.

5 **Q. Why do you disagree with Mr. Murray's long-term growth estimate?**

6 A. His long-term growth estimate is far too low because his method for calculating it is not  
7 consistent with the principles of the DCF model. The DCF model requires an estimate of  
8 the cash flows that investors expect to receive, and the growth rate in that model must  
9 reasonably reflect investor expectations. The resulting return from the expected cash  
10 flows must compensate investors for foregone consumption, for the risks that investors  
11 face, and for the effects of inflation. To the extent that the estimated growth rate leaves  
12 out any of these factors, it will understate investors' requirements.

13 Mr. Murray's approach fails because he considers only expected growth in  
14 electricity consumption plus the currently very low expected inflation rate published by  
15 the Congressional Budget Office. While growth in electricity consumption is one of the  
16 variables that investors may consider, many other factors such as growing new plant  
17 investment, the financial structure for new investment, and other fundamental business  
18 inputs must be considered as well. Also, as I demonstrated in Schedule SCH-6 of my  
19 direct testimony, the long-term inflation rate alone has exceeded 3 percent. Mr. Murray's  
20 3.1 percent total long-term growth rate simply is not consistent with the DCF model's  
21 long-term requirements.

22 **Q. Can you demonstrate the effect that Mr. Murray's growth rate has in his multi-**  
23 **stage model?**

1 A. Yes. His model is very sensitive to the long-term growth rate input. In Schedule SCH-  
2 10, I present alternative calculations of Mr. Murray's model using alternative long-term  
3 growth rate inputs. On the first page of the schedule, I reproduce the results he reported  
4 in his Schedule 18 using his 3.1 percent growth rate. On page 2 of Schedule SCH-10, I  
5 replace Mr. Murray's growth rate with my estimate of long-term GDP growth (6.2  
6 percent), which I provide in my current ROE update (Schedule SCH-11). With a growth  
7 rate of 6.2 percent, Mr. Murray's model produces an ROE of 11.91 percent. On page 3 of  
8 Schedule SCH-10, I provide one additional growth rate scenario based on the 6.0 percent  
9 growth rate the Commission used in its recent Report and Order in the AmerenUE rate  
10 case, No. ER-2008-0318, at page 21 (Jan. 27, 2009). As shown on page 3 of Schedule  
11 SCH-10, with a long-term growth rate of 6.0 percent, Mr. Murray's model produces an  
12 ROE of 11.77 percent. While I continue to disagree with many other aspects of Mr.  
13 Murray's testimony, these basic recalculations of his DCF model show that with more  
14 reasonable estimates of long-term growth his selected model would have produced a DCF  
15 range of 11.77 percent to 11.91 percent.

16 **IV. Update of ROE Analysis**

17 **Q. Have you updated your ROE analysis to take into account recent data and the**  
18 **current conditions in the capital markets?**

19 A. Yes. Consistent with my customary practice, I have updated my ROE analysis for  
20 current conditions using the same methodologies that I employed in my previous  
21 analysis.

22 **Q. What are the results of your updated DCF analyses?**

1 A. My updated DCF results are shown in Schedule SCH-12. The indicated DCF range is  
2 11.2 percent to 11.9 percent, with a midpoint of 11.55 percent, which is my revised  
3 recommendation.

4 **Q. What are the results of your updated bond yield plus risk premium analysis?**

5 A. My updated risk premium analysis is presented in Schedules SCH-13 and SCH-14.  
6 Based on projected triple-B utility interest rates for 2009, the risk premium analysis  
7 indicates an ROE of 11.14 percent. Based on the most recent three month's average  
8 triple-B rates, the risk premium ROE is 11.56 percent.

9 **Q. What do you conclude from your updated ROE analyses?**

10 A. My updated analyses show that GMO's current cost of equity capital is in the range of  
11 11.2 percent to 11.9 percent, with a midpoint estimate of 11.55 percent. The fact that my  
12 updated study produces this result confirms that my original recommendation of 10.75  
13 percent is extremely conservative and that Mr. Murray's recommendation, as discussed  
14 herein, is not reasonable.

15 **Q. Are you providing a CAPM analysis in your ROE update?**

16 A. No. As I explained previously, government monetary policies and recent flight to safety  
17 issues have pushed Treasury bond interest rates to artificially low levels, while  
18 simultaneously corporate capital costs have increased. In this environment, CAPM  
19 estimates understate the market cost of equity capital. The negatively skewed Treasury  
20 rates produce ROE estimates that are neither consistent with DCF estimates nor  
21 traditional risk premium estimates. For this reason, I do not include CAPM estimates in  
22 my ROE analysis.

1 **Q. In light of your revised ROE recommendation, please summarize the Company's**  
2 **requested capital structure and overall rate of return.**

3 A. The following table identifies the requested capital structure components and the  
4 resulting overall rate of return for St. Joseph Light & Power ("SJLP"):

<u>SJLP Steam</u>			
<b>Requested Capital Structure</b>			
Capital Components	Ratio	Cost	Weighted Cost
Debt	48.76%	7.76%	3.78%
Adj. Common Equity	51.24%	11.55%	5.92%
<u>TOTAL</u>	<u>100.00%</u>		<u>9.70%</u>

5  
6 **Q. What is the basis for the Company's requested capital structure and overall rate of**  
7 **return?**

8 A. GMO's requested capital structure is the actual Great Plains Energy capital structure as of  
9 the September 30, 2008 update excluding preferred stock. As addressed in the Rebuttal  
10 Testimony of GMO witness Michael W. Cline, the capital structure requested by GMO  
11 differs from Staff's recommendation. The cost of long-term debt is consistent with the  
12 Company's September 30, 2008 update and also differs from Staff's recommendation, as  
13 discussed in Mr. Cline's testimony. The cost of equity reflects my recommendation  
14 above.

15 **Q. Does that conclude your testimony?**

16 A. Yes, it does.





**Aquila Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**Long-Term Interest Rate Trends**

<b>Month</b>	<b>Triple-B Utility Rate</b>	<b>30-Year Treasury Rate</b>	<b>Triple-B Utility Spread</b>
Jan-07	6.16	4.85	1.31
Feb-07	6.10	4.82	1.28
Mar-07	6.10	4.72	1.38
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Jun-07	6.54	5.20	1.34
Jul-07	6.49	5.11	1.38
Aug-07	6.51	4.93	1.58
Sep-07	6.45	4.79	1.66
Oct-07	6.36	4.77	1.59
Nov-07	6.27	4.52	1.75
Dec-07	6.51	4.53	1.98
Jan-08	6.35	4.33	2.02
Feb-08	6.60	4.52	2.08
Mar-08	6.68	4.39	2.29
Apr-08	6.81	4.44	2.37
May-08	6.79	4.60	2.19
Jun-08	6.93	4.69	2.24
Jul-08	6.97	4.57	2.40
Aug-08	6.98	4.50	2.48
Sep-08	7.15	4.27	2.88
Oct-08	8.58	4.17	4.41
Nov-08	8.98	4.00	4.98
Dec-08	8.11	2.87	5.24
Jan-09	7.90	3.13	4.77
Feb-09	7.44	3.59	3.85
<b>3-Mo Avg</b>	<b>7.82</b>	<b>3.20</b>	<b>4.62</b>
<b>12-Mo Avg</b>	<b>7.44</b>	<b>4.10</b>	<b>3.34</b>

Sources: Mergent Bond Record (Utility Rates);  
www.federalreserve.gov (Treasury Rates).

# Economic Indicators

Seasonally Adjusted Annual Rates — Dollar Figures in Billions

	2008				2009				2010					
	2007	A2008	E2009	2007	A2008	E2009	2007	A4Q	1Q	2Q	3Q	4Q	1Q	
<b>Gross Domestic Product</b>														
GDP (current dollars)	\$13,807.6	\$14,280.7	\$14,065.7	4.8	3.4	(1.5)	\$14,294.5	\$14,412.8	\$14,264.6	\$14,128.3	\$14,011.8	\$14,018.2	\$14,104.7	\$14,241.3
Annual rate of increase (%)	4.8	3.4	(1.5)	-	-	-	4.1	3.4	(4.1)	(3.8)	(3.3)	0.2	2.5	3.9
Annual rate of increase—real GDP (%)	2.0	1.3	(2.5)	-	-	-	2.8	(0.5)	(3.8)	(5.8)	(3.3)	0.1	2.3	2.5
Annual rate of increase—GDP deflator (%)	2.7	2.2	1.0	-	-	-	1.1	3.9	(0.1)	1.7	0.0	0.1	0.2	1.4
<b>*Components of Real GDP</b>														
Personal consumption expenditures	\$8,252.8	\$8,276.2	\$8,181.8	2.8	0.3	(1.1)	\$8,341.3	\$8,260.6	\$8,186.9	\$8,122.1	\$8,130.9	\$8,197.9	\$8,276.3	\$8,341.8
% change	2.8	0.3	(1.1)	-	-	-	1.2	(3.8)	(3.5)	(3.1)	0.4	3.3	3.9	3.2
Durable goods	1,242.4	1,188.3	1,109.8	4.8	(4.4)	(6.6)	1,228.3	1,180.1	1,107.7	1,084.6	1,083.1	1,114.4	1,157.1	1,201.9
Non-durable goods	2,392.6	2,381.9	2,310.4	2.5	(0.4)	(3.0)	2,420.7	2,376.3	2,332.8	2,292.8	2,297.7	2,314.7	2,341.4	2,363.2
Services	4,646.2	4,714.8	4,746.8	2.6	1.5	0.7	4,712.1	4,711.3	4,731.6	4,723.5	4,732.7	4,754.8	4,776.1	4,788.8
Nonresidential fixed investment	1,383.0	1,408.2	1,193.3	4.9	1.8	(15.3)	1,431.8	1,425.7	1,352.2	1,287.8	1,210.8	1,146.2	1,128.6	1,142.4
% change	4.9	1.8	(15.3)	-	-	-	2.5	(1.7)	(19.1)	(17.7)	(21.9)	(19.7)	(6.0)	5.0
Producers durable equipment	1,078.9	1,047.2	893.6	1.7	(2.9)	(14.7)	1,074.7	1,054.0	971.5	934.2	894.4	871.0	874.7	896.8
Residential fixed investment	444.9	351.1	267.7	(18.1)	(21.1)	(23.7)	361.1	345.6	323.0	291.1	262.6	255.1	261.9	270.2
% change	(18.1)	(21.1)	(23.7)	-	-	-	(13.7)	(16.0)	(23.7)	(34.0)	(33.7)	(10.9)	11.0	13.3
Net change in business inventories	(2.5)	(2.1)	(88.3)	-	-	-	(50.6)	(29.6)	6.2	(94.1)	(113.0)	(86.1)	(60.0)	(30.5)
Gov't purchases of goods & services	2,012.1	2,071.0	2,119.5	2.1	2.9	2.3	2,058.9	2,088.1	2,097.7	2,094.2	2,113.3	2,129.7	2,140.9	2,138.5
Federal	752.9	797.7	836.9	1.6	6.0	4.9	785.0	810.8	822.3	820.4	832.3	842.9	852.1	856.2
State & local	1,259.0	1,274.3	1,284.7	2.3	1.2	0.8	1,274.4	1,278.7	1,277.2	1,275.6	1,283.0	1,289.0	1,291.3	1,285.0
Net exports	(546.5)	(388.2)	(305.1)	-	-	-	(381.3)	(353.1)	(356.4)	(266.0)	(274.5)	(317.5)	(362.5)	(403.6)
Exports	1,425.9	1,518.6	1,376.3	8.4	6.5	(9.4)	1,544.7	1,556.1	1,472.8	1,424.1	1,390.4	1,353.6	1,336.9	1,339.7
Imports	1,972.4	1,906.7	1,681.4	2.2	(3.3)	(11.8)	1,926.0	1,909.1	1,829.2	1,690.1	1,664.9	1,671.1	1,699.4	1,743.4
<b>**Income &amp; Profits</b>														
Personal income	\$11,663.3	\$12,099.1	\$12,194.4	6.1	3.7	0.8	\$12,152.2	\$12,159.4	\$12,124.1	\$12,082.2	\$12,247.0	\$12,199.7	\$12,248.9	\$12,328.2
Disposable personal income	10,170.5	10,637.0	10,869.4	5.5	4.6	2.2	10,806.0	10,690.7	10,625.9	10,684.5	10,869.8	10,937.0	10,986.1	10,972.7
Savings rate (%)	0.6	1.7	5.8	-	-	-	2.4	1.2	2.9	4.8	6.5	6.3	5.6	4.2
Corporate profits before taxes	1,886.3	1,613.4	1,380.9	0.7	(14.5)	(14.4)	1,750.0	1,693.7	1,259.0	1,355.0	1,337.8	1,385.8	1,445.0	1,569.9
Corporate profits after taxes	1,435.9	1,241.2	1,105.3	2.2	(13.6)	(10.9)	1,343.2	1,300.1	973.6	1,086.5	1,074.0	1,109.9	1,150.9	1,220.6
Earnings per share (S&P 500)	66.18	31.63	32.41	(18.8)	(52.2)	2.5	51.37	45.95	31.63	24.45	19.84	18.09	32.41	34.58
<b>†Prices &amp; Interest Rates</b>														
Consumer price index	2.9	3.8	(1.7)	-	-	-	5.0	6.7	(9.2)	(3.1)	(1.8)	0.2	1.4	2.7
Treasury bills	4.4	1.4	0.2	-	-	-	1.6	1.5	0.3	0.3	0.2	0.2	0.3	0.3
10-yr notes	4.6	3.7	3.0	-	-	-	3.9	3.9	3.3	2.7	2.9	3.1	3.4	3.9
30-yr bonds	4.8	4.3	3.7	-	-	-	4.6	4.4	3.7	3.8	3.5	3.7	3.9	4.3
New issue rate—corporate bonds	5.6	5.6	5.7	-	-	-	5.6	5.7	5.8	5.9	5.4	5.5	5.8	6.3
<b>Other Key Indicators</b>														
Housing starts (1,000 units SAAR)	1,340.7	902.4	545.4	(26.0)	(32.7)	(39.6)	1,025.0	875.7	656.0	510.0	496.6	544.6	630.4	721.0
Auto & truck sales (1,000,000 units)	16.1	13.1	10.3	(2.5)	(18.4)	(21.7)	14.1	12.9	10.3	9.6	9.7	10.4	11.4	12.9
Unemployment rate (%)	4.6	5.8	8.6	-	-	-	5.4	6.1	6.9	7.9	8.5	9.0	9.3	9.3
\$U.S. dollar	(5.6)	(4.4)	10.0	-	-	-	(6.0)	15.7	49.5	1.8	2.3	(0.9)	(1.4)	(2.8)

Note: Annual changes are from prior year and quarterly changes are from prior quarter. Figures may not add to totals because of rounding. A—Advance data. P—Preliminary. E—Estimated. R—Revised.  
\*2000 Chain-weighted dollars. \*\*Current dollars. †Trailing 4 quarters. ‡Average for period. §Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Revised Murray Multi-Stage Growth DCF Analysis

**Murray 3.10% Long-Term GDP Growth**

No.	Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Price P <sub>0</sub>	Dividend D <sub>0</sub>	First Stage Growth (EPS)	Second Stage Growth					Third Stage Growth (GDP)	Updated Cost of Equity
					Year 6	Year 7	Year 8	Year 9	Year 10		
1	Ameren	\$32.56	\$2.54	4.25%	4.06%	3.87%	3.68%	3.48%	3.29%	3.10%	<b>11.68%</b>
2	American Elec. Pwr.	\$30.80	\$1.64	5.19%	4.84%	4.49%	4.15%	3.80%	3.45%	3.10%	<b>9.32%</b>
3	Cleco Corporation	\$21.65	\$0.90	12.07%	10.58%	9.08%	7.59%	6.09%	4.60%	3.10%	<b>10.31%</b>
4	DPL	\$21.48	\$1.10	10.67%	9.41%	8.15%	6.89%	5.62%	4.36%	3.10%	<b>11.21%</b>
5	IDACORP	\$27.70	\$1.20	3.50%	3.43%	3.37%	3.30%	3.23%	3.17%	3.10%	<b>7.67%</b>
6	Northeast Utilities	\$22.23	\$0.83	10.16%	8.98%	7.81%	6.63%	5.45%	4.28%	3.10%	<b>8.98%</b>
7	PG&E Corp.	\$35.43	\$1.56	6.00%	5.52%	5.03%	4.55%	4.07%	3.58%	3.10%	<b>8.52%</b>
8	Pinnacle West	\$30.41	\$2.10	3.17%	3.16%	3.15%	3.14%	3.12%	3.11%	3.10%	<b>10.25%</b>
9	Progress Energy	\$38.74	\$2.46	5.33%	4.96%	4.59%	4.22%	3.84%	3.47%	3.10%	<b>10.55%</b>
10	Southern Company	\$34.92	\$1.66	5.55%	5.14%	4.73%	4.33%	3.92%	3.51%	3.10%	<b>8.79%</b>
11	Xcel Energy	\$17.85	\$0.94	7.33%	6.63%	5.92%	5.22%	4.51%	3.81%	3.10%	<b>10.06%</b>
	Average	\$28.52	\$1.54	6.66%	6.06%	5.47%	4.88%	4.29%	3.69%	3.10%	<b>9.76%</b>

Notes:

Columns 1-3: Murray Schedule 18.

Columns 4-8: Linear interpolation between columns 3 and 9.

Column 9: Murray Schedule 18.

Column 10: The internal rate of return implied by the price in column 1 and dividends for 150 periods. The initial dividend shown in column 2 is assumed to grow for the first five periods at the rate in column 3, then at the rate in columns 4-8 for years 6-10, than at the rate in column 9 for the remaining periods.

Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company  
Revised Murray Multi-Stage Growth DCF Analysis

**Gorman 4.90% Long-Term GDP Growth**

No.	Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Price P <sub>0</sub>	Dividend D <sub>0</sub>	First Stage Growth (EPS)	Second Stage Growth					Third Stage Growth (GDP)	Updated Cost of Equity
					Year 6	Year 7	Year 8	Year 9	Year 10		
1	Ameren	\$32.56	\$2.54	4.25%	4.36%	4.47%	4.58%	4.68%	4.79%	4.90%	<b>12.79%</b>
2	American Elec. Pwr.	\$30.80	\$1.64	5.19%	5.14%	5.09%	5.05%	5.00%	4.95%	4.90%	<b>10.58%</b>
3	Cleco Corporation	\$21.65	\$0.90	12.07%	10.88%	9.68%	8.49%	7.29%	6.10%	4.90%	<b>11.52%</b>
4	DPL	\$21.48	\$1.10	10.67%	9.71%	8.75%	7.79%	6.82%	5.86%	4.90%	<b>12.36%</b>
5	IDACORP	\$27.70	\$1.20	3.50%	3.73%	3.97%	4.20%	4.43%	4.67%	4.90%	<b>9.05%</b>
6	Northeast Utilities	\$22.23	\$0.83	10.16%	9.28%	8.41%	7.53%	6.65%	5.78%	4.90%	<b>10.27%</b>
7	PG&E Corp.	\$35.43	\$1.56	6.00%	5.82%	5.63%	5.45%	5.27%	5.08%	4.90%	<b>9.84%</b>
8	Pinnacle West	\$30.41	\$2.10	3.17%	3.46%	3.75%	4.04%	4.32%	4.61%	4.90%	<b>11.44%</b>
9	Progress Energy	\$38.74	\$2.46	5.33%	5.26%	5.19%	5.12%	5.04%	4.97%	4.90%	<b>11.73%</b>
10	Southern Company	\$34.92	\$1.66	5.55%	5.44%	5.33%	5.23%	5.12%	5.01%	4.90%	<b>10.08%</b>
11	Xcel Energy	\$17.85	\$0.94	7.33%	6.93%	6.52%	6.12%	5.71%	5.31%	4.90%	<b>11.27%</b>
	Average	\$28.52	\$1.54	6.66%	6.36%	6.07%	5.78%	5.49%	5.19%	4.90%	<b>10.99%</b>

Notes:

Columns 1-3: Murray Schedule 18.

Columns 4-8: Linear interpolation between columns 3 and 9.

Column 9: Gorman Schedule MPG-13.

Column 10: The internal rate of return implied by the price in column 1 and dividends for 150 periods. The initial dividend shown in column 2 is assumed to grow for the first five periods at the rate in column 3, then at the rate in columns 4-8 for years 6-10, than at the rate in column 9 for the remaining periods.

Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company  
Revised Murray Multi-Stage Growth DCF Analysis

Hadaway 6.20% Long-Term GDP Growth

No.	Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Price P <sub>0</sub>	Dividend D <sub>0</sub>	First Stage Growth (EPS)	Second Stage Growth					Third Stage Growth (GDP)	Updated Cost of Equity
					Year 6	Year 7	Year 8	Year 9	Year 10		
1	Ameren	\$32.56	\$2.54	4.25%	4.58%	4.90%	5.23%	5.55%	5.88%	6.20%	13.62%
2	American Elec. Pwr.	\$30.80	\$1.64	5.19%	5.36%	5.53%	5.70%	5.86%	6.03%	6.20%	11.52%
3	Cleco Corporation	\$21.65	\$0.90	12.07%	11.09%	10.11%	9.14%	8.16%	7.18%	6.20%	12.41%
4	DPL	\$21.48	\$1.10	10.67%	9.93%	9.18%	8.44%	7.69%	6.95%	6.20%	13.22%
5	IDACORP	\$27.70	\$1.20	3.50%	3.95%	4.40%	4.85%	5.30%	5.75%	6.20%	10.06%
6	Northeast Utilities	\$22.23	\$0.83	10.16%	9.50%	8.84%	8.18%	7.52%	6.86%	6.20%	11.23%
7	PG&E Corp.	\$35.43	\$1.56	6.00%	6.03%	6.07%	6.10%	6.13%	6.17%	6.20%	10.81%
8	Pinnacle West	\$30.41	\$2.10	3.17%	3.68%	4.18%	4.69%	5.19%	5.70%	6.20%	12.33%
9	Progress Energy	\$38.74	\$2.46	5.33%	5.48%	5.62%	5.77%	5.91%	6.06%	6.20%	12.61%
10	Southern Company	\$34.92	\$1.66	5.55%	5.66%	5.77%	5.88%	5.98%	6.09%	6.20%	11.05%
11	Xcel Energy	\$17.85	\$0.94	7.33%	7.14%	6.95%	6.77%	6.58%	6.39%	6.20%	12.18%
	Average	\$28.52	\$1.54	6.66%	6.58%	6.50%	6.43%	6.35%	6.28%	6.20%	11.91%

Notes:

Columns 1-3: Murray Schedule 18.

Columns 4-8: Linear interpolation between columns 3 and 9.

Column 9: Hadaway Schedule SCH-10.

Column 10: The internal rate of return implied by the price in column 1 and dividends for 150 periods. The initial dividend shown in column 2 is assumed to grow for the first five periods at the rate in column 3, then at the rate in columns 4-8 for years 6-10, than at the rate in column 9 for the remaining periods.

Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company  
Revised Murray Multi-Stage Growth DCF Analysis

**PSC Case No. ER-2008-0318 (Ameren) 6.00% Long-Term GDP Growth**

No.	Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Price P <sub>0</sub>	Dividend D <sub>0</sub>	First Stage Growth (EPS)	Second Stage Growth					Third Stage Growth (GDP)	Updated Cost of Equity
					Year 6	Year 7	Year 8	Year 9	Year 10		
1	Ameren	\$32.56	\$2.54	4.25%	4.54%	4.83%	5.13%	5.42%	5.71%	6.00%	<b>13.49%</b>
2	American Elec. Pwr.	\$30.80	\$1.64	5.19%	5.33%	5.46%	5.60%	5.73%	5.87%	6.00%	<b>11.37%</b>
3	Cleco Corporation	\$21.65	\$0.90	12.07%	11.06%	10.05%	9.04%	8.02%	7.01%	6.00%	<b>12.27%</b>
4	DPL	\$21.48	\$1.10	10.67%	9.89%	9.11%	8.34%	7.56%	6.78%	6.00%	<b>13.09%</b>
5	IDACORP	\$27.70	\$1.20	3.50%	3.92%	4.33%	4.75%	5.17%	5.58%	6.00%	<b>9.91%</b>
6	Northeast Utilities	\$22.23	\$0.83	10.16%	9.47%	8.77%	8.08%	7.39%	6.69%	6.00%	<b>11.08%</b>
7	PG&E Corp.	\$35.43	\$1.56	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	<b>10.66%</b>
8	Pinnacle West	\$30.41	\$2.10	3.17%	3.64%	4.11%	4.59%	5.06%	5.53%	6.00%	<b>12.20%</b>
9	Progress Energy	\$38.74	\$2.46	5.33%	5.44%	5.55%	5.67%	5.78%	5.89%	6.00%	<b>12.47%</b>
10	Southern Company	\$34.92	\$1.66	5.55%	5.63%	5.70%	5.78%	5.85%	5.93%	6.00%	<b>10.90%</b>
11	Xcel Energy	\$17.85	\$0.94	7.33%	7.11%	6.89%	6.67%	6.44%	6.22%	6.00%	<b>12.04%</b>
	Average	\$28.52	\$1.54	6.66%	6.55%	6.44%	6.33%	6.22%	6.11%	6.00%	<b>11.77%</b>

Notes:

Columns 1-3: Murray Schedule 18.

Columns 4-8: Linear interpolation between columns 3 and 9.

Column 9: Case No. ER-2008-0318 Final Order, page 21.

Column 10: The internal rate of return implied by the price in column 1 and dividends for 150 periods. The initial dividend shown in column 2 is assumed to grow for the first five periods at the rate in column 3, then at the rate in columns 4-8 for years 6-10, than at the rate in column 9 for the remaining periods.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**GDP Growth Rate Forecast**

	Nominal GDP	% Change	GDP Price Deflator	% Change	CPI	% Change
1948	275.2		16.6		24.1	
1949	265.2	-3.6%	16.3	-2.0%	23.6	-1.8%
1950	313.4	18.2%	17.0	4.2%	25.0	5.8%
1951	348.0	11.0%	17.9	5.6%	26.5	6.0%
1952	371.4	6.7%	18.2	1.5%	26.7	0.9%
1953	375.9	1.2%	18.3	0.8%	26.9	0.6%
1954	389.5	3.6%	18.5	0.9%	26.8	-0.4%
1955	426.0	9.4%	19.0	2.7%	26.9	0.4%
1956	448.1	5.2%	19.6	3.3%	27.6	2.8%
1957	461.5	3.0%	20.1	2.7%	28.5	3.0%
1958	485.0	5.1%	20.7	2.6%	29.0	1.8%
1959	513.2	5.8%	20.8	0.9%	29.4	1.5%
1960	523.6	2.0%	21.1	1.5%	29.8	1.4%
1961	562.5	7.4%	21.4	1.1%	30.0	0.7%
1962	593.3	5.5%	21.7	1.3%	30.4	1.2%
1963	633.5	6.8%	22.0	1.4%	30.9	1.6%
1964	675.6	6.6%	22.3	1.5%	31.3	1.2%
1965	747.5	10.6%	22.7	2.0%	31.9	1.9%
1966	807.1	8.0%	23.5	3.5%	32.9	3.4%
1967	852.8	5.7%	24.2	3.1%	34.0	3.3%
1968	936.3	9.8%	25.4	4.6%	35.6	4.7%
1969	1004.6	7.3%	26.7	5.2%	37.7	5.9%
1970	1052.9	4.8%	28.0	5.0%	39.8	5.6%
1971	1151.7	9.4%	29.3	4.7%	41.1	3.3%
1972	1287.0	11.7%	30.7	4.5%	42.5	3.4%
1973	1432.3	11.3%	32.8	6.8%	46.3	8.9%
1974	1553.4	8.5%	36.2	10.6%	51.9	12.1%
1975	1714.6	10.4%	39.0	7.6%	55.6	7.1%
1976	1885.3	10.0%	41.1	5.5%	58.4	5.0%
1977	2111.6	12.0%	43.9	6.6%	62.3	6.7%
1978	2417.0	14.5%	47.0	7.3%	67.9	9.0%
1979	2660.5	10.1%	51.1	8.7%	76.9	13.3%
1980	2916.9	9.6%	56.1	9.7%	86.4	12.4%
1981	3196.4	9.6%	60.7	8.3%	94.1	8.9%
1982	3314.4	3.7%	63.9	5.2%	97.7	3.8%
1983	3690.4	11.3%	66.0	3.4%	101.4	3.8%
1984	4036.3	9.4%	68.4	3.6%	105.5	4.0%
1985	4321.8	7.1%	70.3	2.8%	109.5	3.8%
1986	4546.1	5.2%	71.9	2.3%	110.8	1.2%
1987	4886.3	7.5%	74.0	2.9%	115.6	4.3%
1988	5253.7	7.5%	76.7	3.7%	120.7	4.4%
1989	5584.3	6.3%	79.4	3.5%	126.3	4.6%
1990	5848.8	4.7%	82.6	4.1%	134.2	6.3%
1991	6095.8	4.2%	85.2	3.1%	138.2	3.0%
1992	6484.3	6.4%	87.0	2.1%	142.3	3.0%
1993	6800.2	4.9%	89.0	2.3%	146.3	2.8%
1994	7232.2	6.4%	91.0	2.1%	150.1	2.6%
1995	7522.5	4.0%	92.7	2.0%	153.9	2.5%
1996	8000.4	6.4%	94.5	1.9%	159.1	3.4%
1997	8471.2	5.9%	95.8	1.5%	161.8	1.7%
1998	8953.8	5.7%	96.9	1.1%	164.4	1.6%
1999	9519.5	6.3%	98.4	1.5%	168.8	2.7%
2000	9953.6	4.6%	100.7	2.3%	174.6	3.4%
2001	10226.3	2.7%	103.2	2.5%	177.4	1.6%
2002	10591.1	3.6%	104.9	1.7%	181.8	2.5%
2003	11219.5	5.9%	107.2	2.2%	185.5	2.0%
2004	11948.5	6.5%	110.7	3.2%	191.7	3.3%
2005	12696.4	6.3%	114.5	3.5%	198.2	3.4%
2006	13370.1	5.3%	117.7	2.8%	203.3	2.6%
2007	14031.2	4.9%	120.7	2.6%	211.7	4.1%
2008	14264.6	1.7%	123.0	1.8%	211.5	-0.1%
10-Year Average		4.8%		2.4%		2.6%
20-Year Average		5.1%		2.4%		2.9%
30-Year Average		6.1%		3.3%		3.9%
40-Year Average		7.1%		4.1%		4.6%
50-Year Average		7.0%		3.7%		4.1%
60-Year Average		6.9%		3.4%		3.7%
Average of Periods		6.2%		3.2%		3.6%

Source: St. Louis Federal Reserve Bank, [www.research.stlouisfed.org](http://www.research.stlouisfed.org)



**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**Discounted Cash Flow Analysis**  
**Summary Of DCF Model Results**

Company	Constant Growth DCF Model Analysts' Growth Rates	Constant Growth DCF Model Long-Term GDP Growth	Low Near-Term Growth Two-Stage Growth DCF Model
1 ALLETE	12.0%	11.7%	11.2%
2 Alliant Energy Co.	10.8%	11.3%	11.7%
3 Ameren	12.4%	13.9%	12.8%
4 American Elec. Pwr.	10.4%	11.5%	11.3%
5 Avista Corp.	11.7%	10.4%	11.3%
6 Cent. Vermont P.S.	12.6%	10.6%	9.9%
7 Cleco Corporation	17.4%	10.5%	11.9%
8 Con. Edison	8.2%	12.1%	11.3%
9 DTE Energy Co.	11.0%	12.4%	12.3%
10 Edison Internat.	10.5%	10.1%	9.9%
11 Empire District	15.4%	13.6%	13.0%
12 Entergy Corp.	12.2%	9.9%	9.6%
13 FPL Group, Inc.	13.4%	10.1%	10.0%
14 FirstEnergy	13.6%	10.9%	11.1%
15 Hawaiian Electric	9.8%	11.4%	10.8%
16 IDACORP	9.5%	10.4%	9.7%
17 Northeast Utilities	13.9%	10.0%	10.2%
18 NSTAR	11.4%	10.7%	10.7%
19 PG&E Corp.	11.6%	10.7%	10.8%
20 Pinnacle West	10.4%	13.0%	12.2%
21 Portland General	11.9%	11.7%	11.7%
22 Progress Energy	11.6%	12.6%	11.8%
23 Southern Co.	10.3%	11.1%	10.9%
24 Teco Energy, Inc.	15.3%	13.1%	12.6%
25 UIL Holdings Co.	11.0%	12.1%	11.2%
26 Vectren Corp.	10.9%	11.4%	11.0%
27 Westar Energy	10.5%	12.6%	12.1%
28 Wisconsin Energy	12.0%	9.4%	10.0%
29 Xcel Energy Inc.	12.3%	11.6%	11.1%
<b>GROUP AVERAGE</b>	<b>11.9%</b>	<b>11.4%</b>	<b>11.2%</b>
<b>GROUP MEDIAN</b>	<b>11.6%</b>	<b>11.4%</b>	<b>11.2%</b>

Sources: Value Line Investment Survey, Electric Utility (East), Nov 28, 2008; (Central), Dec 26, 2008; (West), Feb 6, 2009.

NiSource is excluded from the group because it is not now considered an electric utility by Value Line.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**Constant Growth DCF Model**  
**Analysts' Growth Rates**

Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Recent Price(P0)	Next Year's Dividend		Value Line	Analysts' Estimated Growth			ROE K=Div Yld+G (Cols 3+7)
		Div(D1)	Yield		Zacks	Thomson	Average Growth (Cols 4-6)	
1 ALLETE	32.15	1.76	5.47%	NA	6.50%	6.50%	6.50%	12.0%
2 Alliant Energy Co.	29.17	1.50	5.14%	6.00%	5.00%	6.10%	5.70%	10.8%
3 Ameren	32.85	2.54	7.73%	4.50%	5.50%	4.00%	4.67%	12.4%
4 American Elec. Pwr.	31.20	1.66	5.32%	5.00%	5.50%	4.84%	5.11%	10.4%
5 Avista Corp.	18.54	0.78	4.21%	9.00%	8.70%	4.67%	7.46%	11.7%
6 Cent. Vermont P.S.	20.78	0.92	4.43%	7.50%	NA	8.90%	8.20%	12.6%
7 Cleco Corporation	21.95	0.95	4.33%	10.50%	15.00%	13.63%	13.04%	17.4%
8 Con. Edison	39.95	2.36	5.91%	1.00%	3.30%	2.61%	2.30%	8.2%
9 DTE Energy Co.	35.22	2.18	6.19%	5.00%	6.00%	3.50%	4.83%	11.0%
10 Edison Internat.	31.97	1.25	3.91%	6.00%	7.00%	6.83%	6.61%	10.5%
11 Empire District	17.34	1.28	7.38%	10.00%	NA	6.00%	8.00%	15.4%
12 Entergy Corp.	80.78	3.00	3.71%	7.50%	8.50%	9.42%	8.47%	12.2%
13 FPL Group, Inc.	47.87	1.88	3.93%	9.50%	9.20%	9.62%	9.44%	13.4%
14 FirstEnergy	51.87	2.45	4.72%	10.00%	7.70%	9.00%	8.90%	13.6%
15 Hawaiian Electric	23.99	1.24	5.17%	5.00%	4.50%	4.50%	4.67%	9.8%
16 IDACORP	28.83	1.20	4.16%	5.00%	6.00%	5.00%	5.33%	9.5%
17 Northeast Utilities	23.03	0.88	3.82%	12.00%	9.80%	8.32%	10.04%	13.9%
18 NSTAR	34.13	1.53	4.48%	7.50%	7.20%	6.00%	6.90%	11.4%
19 PG&E Corp.	36.95	1.68	4.55%	7.00%	7.10%	7.00%	7.03%	11.6%
20 Pinnacle West	31.08	2.10	6.76%	1.00%	5.50%	4.33%	3.61%	10.4%
21 Portland General	18.30	1.01	5.52%	7.00%	6.30%	5.92%	6.41%	11.9%
22 Progress Energy	38.62	2.48	6.42%	5.00%	4.90%	5.65%	5.18%	11.6%
23 Southern Co.	35.40	1.73	4.89%	5.50%	5.00%	5.59%	5.36%	10.3%
24 Teco Energy, Inc.	11.90	0.82	6.89%	7.50%	10.40%	7.44%	8.45%	15.3%
25 UIL Holdings Co.	29.09	1.73	5.95%	4.00%	6.40%	4.80%	5.07%	11.0%
26 Vectren Corp.	25.82	1.35	5.23%	5.00%	6.40%	5.67%	5.69%	10.9%
27 Westar Energy	19.47	1.24	6.37%	2.00%	6.00%	4.45%	4.15%	10.5%
28 Wisconsin Energy	42.06	1.35	3.21%	8.00%	9.00%	9.49%	8.83%	12.0%
29 Xcel Energy Inc.	18.06	0.97	5.37%	7.50%	6.50%	6.90%	6.97%	12.3%
GROUP AVERAGE	31.32	1.58	5.21%	6.45%	7.00%	6.44%	6.65%	11.9%
GROUP MEDIAN			5.17%					11.6%

Sources: Value Line Investment Survey, Electric Utility (East), Nov 28, 2008; (Central), Dec 26, 2008; (West), Feb 6, 2009.

NiSource is excluded from the group because it is not now considered an electric utility by Value Line.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**quila, Inc., d/b/a KCP&L Greater Missouri Operations Compar**  
**Constant Growth DCF Model**  
**Long-Term GDP Growth**

	(9)	(10)	(11)	(12)	(13)
Company	Next			GDP Growth	ROE K=Div Yld+G (Cols 11+12)
	Recent Price(P0)	Year's Div(D1)	Dividend Yield		
1 ALLETE	32.15	1.76	5.47%	6.20%	11.7%
2 Alliant Energy Co.	29.17	1.50	5.14%	6.20%	11.3%
3 Ameren	32.85	2.54	7.73%	6.20%	13.9%
4 American Elec. Pwr.	31.20	1.66	5.32%	6.20%	11.5%
5 Avista Corp.	18.54	0.78	4.21%	6.20%	10.4%
6 Cent. Vermont P.S.	20.78	0.92	4.43%	6.20%	10.6%
7 Cleco Corporation	21.95	0.95	4.33%	6.20%	10.5%
8 Con. Edison	39.95	2.36	5.91%	6.20%	12.1%
9 DTE Energy Co.	35.22	2.18	6.19%	6.20%	12.4%
10 Edison Internat.	31.97	1.25	3.91%	6.20%	10.1%
11 Empire District	17.34	1.28	7.38%	6.20%	13.6%
12 Entergy Corp.	80.78	3.00	3.71%	6.20%	9.9%
13 FPL Group, Inc.	47.87	1.88	3.93%	6.20%	10.1%
14 FirstEnergy	51.87	2.45	4.72%	6.20%	10.9%
15 Hawaiian Electric	23.99	1.24	5.17%	6.20%	11.4%
16 IDACORP	28.83	1.20	4.16%	6.20%	10.4%
17 Northeast Utilities	23.03	0.88	3.82%	6.20%	10.0%
18 NSTAR	34.13	1.53	4.48%	6.20%	10.7%
19 PG&E Corp.	36.95	1.68	4.55%	6.20%	10.7%
20 Pinnacle West	31.08	2.10	6.76%	6.20%	13.0%
21 Portland General	18.30	1.01	5.52%	6.20%	11.7%
22 Progress Energy	38.62	2.48	6.42%	6.20%	12.6%
23 Southern Co.	35.40	1.73	4.89%	6.20%	11.1%
24 Teco Energy, Inc.	11.90	0.82	6.89%	6.20%	13.1%
25 UIL Holdings Co.	29.09	1.73	5.95%	6.20%	12.1%
26 Vectren Corp.	25.82	1.35	5.23%	6.20%	11.4%
27 Westar Energy	19.47	1.24	6.37%	6.20%	12.6%
28 Wisconsin Energy	42.06	1.35	3.21%	6.20%	9.4%
29 Xcel Energy Inc.	18.06	0.97	5.37%	6.20%	11.6%
GROUP AVERAGE	31.32	1.58	5.21%	6.20%	11.4%
GROUP MEDIAN			5.17%		11.4%

Sources: Value Line Investment Survey, Electric Utility (East), Nov 28, 2008; (Central), Dec 26, 2008; (West), Feb 6, 2009.

NiSource is excluded from the group because it is not now considered an electric utility by Value Line.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**Low Near-Term Growth**  
**Two-Stage Growth DCF Model**

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Company	Next	2012	Annual	CASH FLOWS							ROE=Internal Rate of Return (Yrs 0-150)
	Year's Div	Div	Change to 2012	Recent Price	Year 1 Div	Year 2 Div	Year 3 Div	Year 4 Div	Year 5 Div	Year 5-150 Div Growth	
1 ALLETE	1.76	1.90	0.05	-32.15	1.76	1.81	1.85	1.90	2.02	6.20%	11.2%
2 Alliant Energy Co.	1.50	1.92	0.14	-29.17	1.50	1.64	1.78	1.92	2.04	6.20%	11.7%
3 Ameren	2.54	2.54	0.00	-32.85	2.54	2.54	2.54	2.54	2.70	6.20%	12.8%
4 American Elec. Pwr.	1.66	1.90	0.08	-31.20	1.66	1.74	1.82	1.90	2.02	6.20%	11.3%
5 Avista Corp.	0.78	1.15	0.12	-18.54	0.78	0.90	1.03	1.15	1.22	6.20%	11.3%
6 Cent. Vermont P.S.	0.92	0.92	0.00	-20.78	0.92	0.92	0.92	0.92	0.98	6.20%	9.9%
7 Cleco Corporation	0.95	1.55	0.20	-21.95	0.95	1.15	1.35	1.55	1.65	6.20%	11.9%
8 Con. Edison	2.36	2.42	0.02	-39.95	2.36	2.38	2.40	2.42	2.57	6.20%	11.3%
9 DTE Energy Co.	2.18	2.55	0.12	-35.22	2.18	2.30	2.43	2.55	2.71	6.20%	12.3%
10 Edison Internat.	1.25	1.40	0.05	-31.97	1.25	1.30	1.35	1.40	1.49	6.20%	9.9%
11 Empire District	1.28	1.40	0.04	-17.34	1.28	1.32	1.36	1.40	1.49	6.20%	13.0%
12 Entergy Corp.	3.00	3.30	0.10	-80.78	3.00	3.10	3.20	3.30	3.50	6.20%	9.6%
13 FPL Group, Inc.	1.88	2.20	0.11	-47.87	1.88	1.99	2.09	2.20	2.34	6.20%	10.0%
14 FirstEnergy	2.45	3.05	0.20	-51.87	2.45	2.65	2.85	3.05	3.24	6.20%	11.1%
15 Hawaiian Electric	1.24	1.30	0.02	-23.99	1.24	1.26	1.28	1.30	1.38	6.20%	10.8%
16 IDACORP	1.20	1.20	0.00	-28.83	1.20	1.20	1.20	1.20	1.27	6.20%	9.7%
17 Northeast Utilities	0.88	1.10	0.07	-23.03	0.88	0.95	1.03	1.10	1.17	6.20%	10.2%
18 NSTAR	1.53	1.85	0.11	-34.13	1.53	1.64	1.74	1.85	1.96	6.20%	10.7%
19 PG&E Corp.	1.68	2.04	0.12	-36.95	1.68	1.80	1.92	2.04	2.17	6.20%	10.8%
20 Pinnacle West	2.10	2.20	0.03	-31.08	2.10	2.13	2.17	2.20	2.34	6.20%	12.2%
21 Portland General	1.01	1.20	0.06	-18.30	1.01	1.07	1.14	1.20	1.27	6.20%	11.7%
22 Progress Energy	2.48	2.54	0.02	-38.62	2.48	2.50	2.52	2.54	2.70	6.20%	11.8%
23 Southern Co.	1.73	2.00	0.09	-35.40	1.73	1.82	1.91	2.00	2.12	6.20%	10.9%
24 Teco Energy, Inc.	0.82	0.90	0.03	-11.90	0.82	0.85	0.87	0.90	0.96	6.20%	12.6%
25 UIL Holdings Co.	1.73	1.73	0.00	-29.09	1.73	1.73	1.73	1.73	1.84	6.20%	11.2%
26 Vectren Corp.	1.35	1.47	0.04	-25.82	1.35	1.39	1.43	1.47	1.56	6.20%	11.0%
27 Westar Energy	1.24	1.36	0.04	-19.47	1.24	1.28	1.32	1.36	1.44	6.20%	12.1%
28 Wisconsin Energy	1.35	1.95	0.20	-42.06	1.35	1.55	1.75	1.95	2.07	6.20%	10.0%
29 Xcel Energy Inc.	0.97	1.06	0.03	-18.06	0.97	1.00	1.03	1.06	1.13	6.20%	11.1%
GROUP AVERAGE											11.2%
GROUP MEDIAN											11.2%

Sources: Value Line Investment Survey, Electric Utility (East), Nov 28, 2008; (Central), Dec 26, 2008; (West), Feb 6, 2009.

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NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
**Discounted Cash Flow Analysis**  
**Column Descriptions**

Column 1: Three-month Average Price per Share (Nov 2008-Jan 2009)	Column 13: Column 11 Plus Column 12
Column 2: Estimated 2009 Dividends per Share from Value Line	Column 14: See Column 2
Column 3: Column 2 Divided by Column 1	Column 15: Estimated 2012 Dividends per Share from Value Line
Column 4: "Est'd 05-07 to 11-13" Earnings Growth Reported by Value Line	Column 16: (Column 15 Minus Column 14) Divided by Three
Column 5: "Next 5 Years" Company Growth Estimate as Reported by Zacks.com	Column 17: See Column 1
Column 6: "Next 5 Years (per annum) Growth Estimate Reported by Thomson Financial Network (at Yahoo Finance)	Column 18: See Column 14
Column 7: Average of Columns 4-6	Column 19: Column 18 Plus Column 16
Column 8: Column 3 Plus Column 7	Column 20: Column 19 Plus Column 19
Column 9: See Column 1	Column 21: Column 20 Plus Column 16
Column 10: See Column 2	Column 22: Column 21 Increased by the Growth Rate Shown in Column 23
Column 11: Column 10 Divided by Column 9	Column 23: See Column 12
Column 12: Average of GDP Growth During the Last 10 year, 20 year, 30 year, 40 year, 50 year, and 60 year growth periods. See Schedule SCH-11	Column 24: The Internal Rate of Return of the Cash Flows in Columns 17-22 along with the Dividends for the Years 6-150 Implied by the Growth Rates shown in Column 23

## Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company

### Risk Premium Analysis

(Based on Projected Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
1984	14.03%	15.32%	1.29%
1985	12.29%	15.20%	2.91%
1986	9.46%	13.93%	4.47%
1987	9.98%	12.99%	3.01%
1988	10.45%	12.79%	2.34%
1989	9.66%	12.97%	3.31%
1990	9.76%	12.70%	2.94%
1991	9.21%	12.55%	3.34%
1992	8.57%	12.09%	3.52%
1993	7.56%	11.41%	3.85%
1994	8.30%	11.34%	3.04%
1995	7.91%	11.55%	3.64%
1996	7.74%	11.39%	3.65%
1997	7.63%	11.40%	3.77%
1998	7.00%	11.66%	4.66%
1999	7.55%	10.77%	3.22%
2000	8.14%	11.43%	3.29%
2001	7.72%	11.09%	3.37%
2002	7.53%	11.16%	3.63%
2003	6.61%	10.97%	4.36%
2004	6.20%	10.75%	4.55%
2005	5.67%	10.54%	4.87%
2006	6.08%	10.36%	4.28%
2007	6.11%	10.36%	4.25%
2008	6.65%	10.46%	3.81%
AVERAGE	9.15%	12.34%	3.19%

#### **INDICATED COST OF EQUITY**

PROJECTED TRIPLE-B UTILITY BOND YIELD*	7.10%
MOODY'S AVG ANNUAL YIELD DURING STUDY	9.15%
INTEREST RATE DIFFERENCE	<u>-2.05%</u>

INTEREST RATE CHANGE COEFFICIENT	<u>-41.34%</u>
ADJUSTMENT TO AVG RISK PREMIUM	0.85%

BASIC RISK PREMIUM	3.19%
INTEREST RATE ADJUSTMENT	0.85%
EQUITY RISK PREMIUM	<u>4.04%</u>

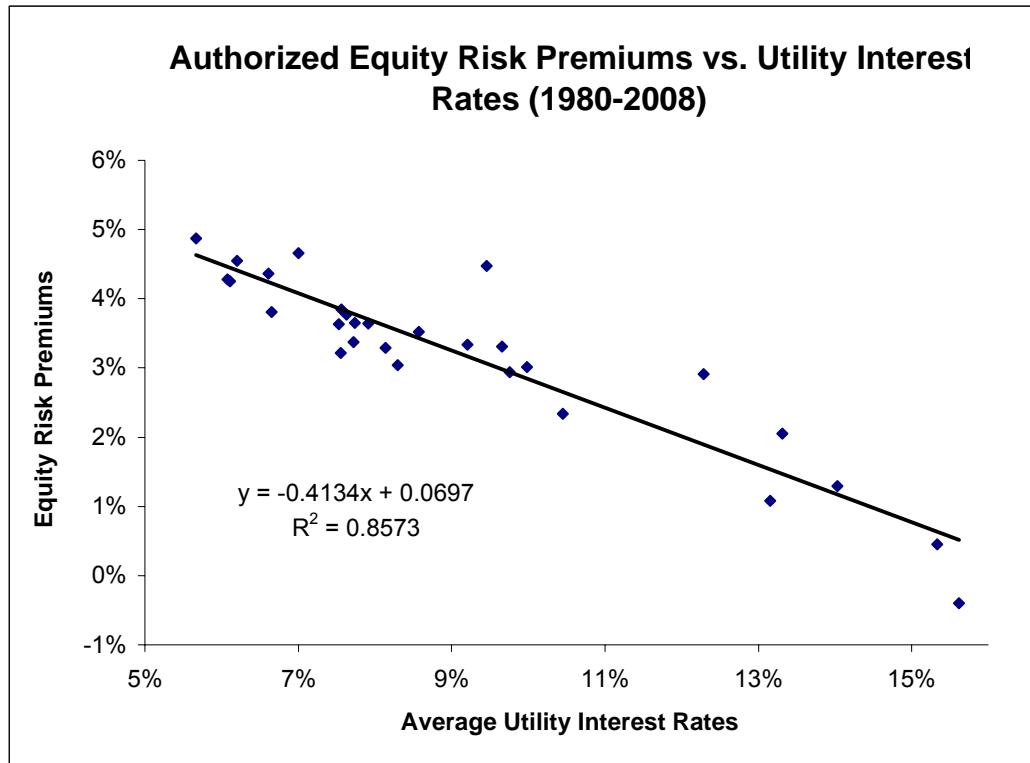
PROJECTED TRIPLE-B UTILITY BOND YIELD*	7.10%
<b>INDICATED EQUITY RETURN</b>	<b><u>11.14%</u></b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Projected triple-B bond yield is 462 basis points over projected long-term Treasury bond rate of 3.7% from Schedule SCH-9, p. 2. The triple-B spread is for the three months ended Feb 2009 from Exhibit 9, p. 1.

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Risk Premium Analysis



## Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company

### Risk Premium Analysis

(Based on Current Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
1984	14.03%	15.32%	1.29%
1985	12.29%	15.20%	2.91%
1986	9.46%	13.93%	4.47%
1987	9.98%	12.99%	3.01%
1988	10.45%	12.79%	2.34%
1989	9.66%	12.97%	3.31%
1990	9.76%	12.70%	2.94%
1991	9.21%	12.55%	3.34%
1992	8.57%	12.09%	3.52%
1993	7.56%	11.41%	3.85%
1994	8.30%	11.34%	3.04%
1995	7.91%	11.55%	3.64%
1996	7.74%	11.39%	3.65%
1997	7.63%	11.40%	3.77%
1998	7.00%	11.66%	4.66%
1999	7.55%	10.77%	3.22%
2000	8.14%	11.43%	3.29%
2001	7.72%	11.09%	3.37%
2002	7.53%	11.16%	3.63%
2003	6.61%	10.97%	4.36%
2004	6.20%	10.75%	4.55%
2005	5.67%	10.54%	4.87%
2006	6.08%	10.36%	4.28%
2007	6.11%	10.36%	4.25%
2008	6.65%	10.46%	3.81%
AVERAGE	9.15%	12.34%	3.19%

#### **INDICATED COST OF EQUITY**

CURRENT TRIPLE-B UTILITY BOND YIELD*	7.82%
MOODY'S AVG ANNUAL YIELD DURING STUDY	9.15%
INTEREST RATE DIFFERENCE	<u>-1.33%</u>

INTEREST RATE CHANGE COEFFICIENT	<u>-41.34%</u>
ADJUSTMENT TO AVG RISK PREMIUM	0.55%

BASIC RISK PREMIUM	3.19%
INTEREST RATE ADJUSTMENT	0.55%
EQUITY RISK PREMIUM	<u>3.74%</u>

CURRENT TRIPLE-B UTILITY BOND YIELD*	7.82%
<b>INDICATED EQUITY RETURN</b>	<b><u>11.56%</u></b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Current triple-B utility bond yield is three month average of Moody's Triple-B Public Utility Bond Yields through February 2009 from Schedule SCH-9, p. 1.



**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Risk Premium Analysis

