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**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: ER-2009-0090**

**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. ER-2009-0090**

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 recommendations offered by Missouri Public Service Commission Staff witness David  
9 Murray and Office of Public Counsel (OPC) witness Michael Gorman. In my analysis, I  
10 will respond to the other parties' rate of return recommendations and demonstrate that  
11 their recommendations are not consistent with current market turmoil or the higher  
12 capital costs that corporate borrowers are currently required to pay. I will also update my  
13 ROE analysis for current market costs and conditions.

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

15 **Q. What are the parties' ROE recommendations?**

16 A. Mr. Murray estimates an ROE range of 9.25 percent to 10.25 percent and recommends  
17 the midpoint of this range at 9.75 percent. Mr. Gorman recommends an ROE of 10.3  
18 percent. My updated analysis shows that GMO's current cost of equity is in the range of  
19 11.2 percent to 11.9 percent with a midpoint estimate of 11.55 percent, which is my

1 revised ROE recommendation. My updated results demonstrate that my initial ROE  
2 recommendation at 10.75 percent was extremely conservative and that the other parties'  
3 recommendations are well below GMO's current cost of equity capital.

4 **Q. Are the other parties' ROE recommendations consistent with current capital**  
5 **market conditions or within the reasonable range?**

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

21 The other parties seem to hold a mistaken belief that utility capital costs have not  
22 increased significantly over the past several months. This contention is simply wrong.  
23 While governmental policies and "flight to safety" issues have driven down short-term

1 interest rates for banks and rates on U.S. Treasury securities, corporate capital costs have  
2 increased.<sup>1</sup> I will show that GMO's required ROE has increased significantly and that the  
3 other parties have not reasonably included current capital market conditions in their  
4 recommendations.

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

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

15 **Q. If the other parties had more reasonably considered the recent market turmoil,**  
16 **what would the effect have been?**

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

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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 percent since November 2007. In this environment, many large financial institutions  
2 such as Countrywide Financial, Washington Mutual, the Federal Home Loan Mortgage  
3 Association, the Federal National Mortgage Association, Wachovia, Bear Sterns, and  
4 Merrill Lynch were unable to survive as independent institutions. Lehman Brothers was  
5 forced to file for bankruptcy. Other surviving institutions such as Citigroup, Goldman  
6 Sachs, American International Group, Morgan Stanley and others have required  
7 multibillion dollar capital infusions.

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

22 **Q. Can you be more specific regarding the impact of the credit crisis on the cost of**  
23 **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. Do Messrs. Murray and Gorman adequately incorporate these higher utility**  
9 **borrowing costs into their analyses?**

10 A. No. While they discuss market conditions and interest rates, they both present analyses  
11 and offer 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 29 and 44. Mr.  
14 Gorman similarly provides an outdated discussion of utility stock performance (through  
15 the first three quarters of 2008) and concludes that utilities are perceived as "safe haven  
16 investments." See Gorman Direct Testimony at 7. Such misdirected discussion is  
17 simply not consistent with the market conditions that utilities face. Based on these  
18 opinions, Mr. Murray and Mr. Gorman reject the portions of their analyses that reflect  
19 actual market conditions and resort to alternative analyses that better suit their opinions.  
20 The cost of raising capital for all corporations has increased dramatically over the past  
21 several months, and any reasonable cost of equity should reflect these effects.

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



1 A. There are several important implications. First, since equity must compete with debt for  
 2 investor dollars, and because equity is riskier than debt, an increase in corporate  
 3 borrowing costs will also cause an increase in the cost of equity. In addition, since  
 4 corporate bond yields are a direct input to the risk premium method of estimating the cost  
 5 of equity, higher corporate yields should result in higher risk premium-based estimates of  
 6 the cost of equity. Finally, as I will discuss in more detail below, widening corporate  
 7 interest rate spreads relative to Treasuries will cause understated ROE estimates in the  
 8 capital asset pricing model (CAPM). The other parties' failure to account for these  
 9 factors cause their ROE estimates to understate GMO's cost of equity.

10 **Q. How do the other parties' ROE recommendations compare to the rates of return**  
 11 **authorized by other state utility commissions around the country?**

12 A. They are generally lower, with Staff's recommendation substantially lower than the  
 13 average for any quarter over the past five years. Table 2 below shows the average rates  
 14 of return for each quarter over the past five years.

15 Table 2

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

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

1 Since 2004, equity risk premiums (the difference between allowed equity returns and  
2 utility interest rates) have ranged from 3.81 percent to 4.87 percent. At the low end of  
3 this risk premium range, based on average triple-B utility bond yields for the three  
4 months ended in February, the indicated cost of equity is 11.63 percent (7.82% triple-B  
5 bond yield + 3.81% risk premium = 11.63%). At the upper end of this risk premium  
6 range, with an allowed equity risk premium of 4.87 percent, the indicated cost of equity is  
7 12.69 percent (7.82% current triple-B bond yield + 4.87% risk premium = 12.69%).<sup>2</sup> In  
8 this environment, Mr. Murray and Mr. Gorman should have recommended substantially  
9 higher ROEs.

10 **Q. In their analyses, Mr. Murray and Mr. Gorman present CAPM estimates of ROE.  
11 Can you explain why the CAPM currently understates ROE and why their CAPM  
12 estimates should not be included?**

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

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

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

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

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

$$18 \text{ ROE} = R_f + \beta(R_m - R_f)$$

19 Under present market conditions, and as applied by the other parties in their CAPM  
20 analyses, two of the three CAPM inputs tend to understate ROE. The risk-free rate,  $R_f$ , is

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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 35-36 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 understated because, due to monetary policy and investors' flight to safety, the U.S.  
2 Treasury rates used for  $R_f$  are artificially low. The second input, the market risk premium  
3 ( $R_m - R_f$ ) is also severely understated. This is the case because the other parties' market  
4 risk premium estimates are based on historical data that cannot possibly reflect the  
5 current market turmoil. While there is no single objective source for measuring the  
6 widening equity risk premium phenomenon, the unprecedented risk spreads shown in  
7 Table 1 are indicative. Those rate spreads required on utility bonds relative to Treasuries  
8 are currently almost three times larger than previously existed. For the other parties' to  
9 apply the CAPM without any adjustment for current abnormal market conditions  
10 produces unreasonably low estimates of ROE. In this environment, CAPM estimates of  
11 ROE should be rejected and ROE should be determined from a combination of DCF and  
12 more traditional risk premium models.

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

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

16 A. Mr. Murray's ROE recommendation is far below GMO's cost of equity capital. Although  
17 he discusses the ongoing economic crisis and concedes that equity risk premiums have  
18 increased, he concludes that these factors "...may have caused a slight increase in the  
19 cost of capital to utilities." See Staff Report at 23 (emphasis added). He then  
20 recommends an ROE of only 9.75 percent. As noted previously, this recommendation is  
21 lower than the average ROE granted by state regulators in any quarter for the past five  
22 years, a period of time that does not reflect the current economic crisis. It is also 100  
23 basis points lower than the 10.75 percent ROE this Commission set in KCP&L's 2007

1 rate case when triple-B utility interest rates were more than 100 basis points lower than  
2 they are today. For Mr. Murray to acknowledge the market's increased risk aversion and  
3 the wider equity risk premiums that have resulted, but to recommend such a low ROE is,  
4 at best, inconsistent.

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

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

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

11 A. He applies a three-stage version of the DCF model to an eleven-company comparable  
12 group. Although Mr. Gorman and I use a much larger group (which I believe is  
13 statistically more reliable), in this case Mr. Murray's comparable company selections do  
14 not appear to skew his results. He begins with annual dividends for 2008, and for a base  
15 stock price he uses the average of high and low prices for the four-month period ended  
16 January 31, 2008. He then applies three sets of growth rates in the three stages of his  
17 model. The growth rates for Stage 1 (years 1-5) are based on the analysts' estimates for  
18 each company as shown in his Schedule 13. The growth rates for Stage 2 (years 6-10)  
19 are a simple extrapolation between the rates in Stage 1 and Stage 3. The growth rate for  
20 Stage 3 (year 11 and beyond) is set at 3.1 percent for all companies. Mr. Murray  
21 discusses his 3.1 percent long-term growth rate on page 38 of the Staff Report. In that  
22 discussion, he states that his 3.1 estimate is the sum of projected real growth in electricity  
23 consumption (0.9 percent) and projected long-term inflation (2.2 percent). From these

1 inputs, he calculates ROE as the rate of return that investors would receive from the  
2 growing stream of dividends in the three stages of his model.

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

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

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

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

17 Mr. Murray's approach fails because he considers only expected growth in  
18 electricity consumption plus the currently very low expected inflation rate published by  
19 the Congressional Budget Office. While growth in electricity consumption is one of the  
20 variables that investors may consider, many other factors such as growing new plant  
21 investment, the financial structure for new investment, and other fundamental business  
22 inputs must be considered as well. Also, as I demonstrated in Schedule SCH-6 of my  
23 direct testimony, the long-term inflation rate alone has exceeded 3 percent. Mr. Murray's

1 3.1 percent total long-term growth rate simply is not consistent with the DCF model's  
2 long-term requirements.

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

5 A. Yes. His model is very sensitive to the long-term growth rate input. In Schedule SCH-  
6 10, I present alternative calculations of Mr. Murray's model using alternative long-term  
7 growth rate inputs. On the first page of the schedule, I reproduce the results he reported  
8 in his Schedule 18 using his 3.1 percent growth rate. On page 2 of Schedule SCH-10, I  
9 replace his growth rate with Mr. Gorman's long-term growth rate estimate of 4.9 percent  
10 (Gorman Direct Testimony at 27). With a growth rate of 4.9 percent, Mr. Murray's  
11 model produces an ROE of 10.99 percent. On page 3 of Schedule SCH-10, I replace Mr.  
12 Murray's growth rate with my estimate of long-term GDP growth (6.2 percent), which I  
13 provide in my current ROE update (Schedule SCH-12). With a growth rate of 6.2  
14 percent, Mr. Murray's model produces an ROE of 11.91 percent. On page 4 of Schedule  
15 SCH-10, I provide one additional growth rate scenario based on the 6.0 percent growth  
16 rate the Commission used in its recent Report and Order in the AmerenUE rate case, No.  
17 ER-2008-0318, at page 21 (Jan. 27, 2009).<sup>4</sup> As shown on page 4 of Schedule SCH-10,  
18 with a long-term growth rate of 6.0 percent, Mr. Murray's model produces an ROE of  
19 11.77 percent. While I continue to disagree with many other aspects of Mr. Murray's

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<sup>4</sup> Mr. Gorman states that the Commission's preferred approach would currently produce a growth rate of 4.55 percent (Gorman Direct Testimony at 25). However, that estimate is highly suspect because it uses an inflation rate of only 1.08 percent. This indication is caused by current "flight to safety" anomalies in the Treasury bond market and the differing impact that those anomalies have had on nominal Treasury yields versus yields on the Treasury Inflation Protected Securities (TIPS) used in that analysis. In fact, there are no professional forecasts that I am aware of that project long-term inflation nearly as low as Mr. Gorman's 1.08 percent.

1 testimony, these basic recalculations of his DCF model show that with more reasonable  
2 estimates of long-term growth his selected model would have produced a DCF range of  
3 10.99 percent to 11.91 percent.

4 **IV. Rebuttal of OPC Witness Michael Gorman**

5 **Q. Please summarize Mr. Gorman's ROE recommendation?**

6 A. Mr. Gorman's recommendation is summarized in the following table (from Gorman  
7 Direct Testimony at page 41):

Description	Results
DCF	11.15%
Risk Premium	10.54%
CAPM	9.20%
Average	<u>10.30%</u>

8  
9 **Q. Does Mr. Gorman provide a more detailed analysis than is shown in Table 3?**

10 A. Yes. What cannot be seen in Table 3 are the individual model results that Mr. Gorman  
11 averages for his summary. A closer examination of all of his results shows that his  
12 averaging may have diluted the higher results and given disproportionate weight to lower  
13 results. All of Mr. Gorman's model results are shown in Table 4 below:

1

<b>Table 4</b>	
Gorman All-Inclusive ROE Summary	
Description	Results
Constant Growth DCF (Analysts Growth)	12.02%
Constant Growth DCF (Composite Long-Term Growth)	11.25%
Two-Stage Growth DCF Model	10.59%
Multi-Stage Growth DCF Model	10.75%
Risk Premium (Triple-B Bond)	11.47%
Risk Premium (Treasury Bond)	9.61%
CAPM (Current Market Risk Premium)	9.46%
CAPM (Historical Risk Premium)	<del>8.94%</del> Not reasonable
Average Excluding Outliers & Extreme Data	<u><b>10.74%</b></u>

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As Shown in Table 4, five of Mr. Gorman's eight models produce ROEs above 10.5 percent. His Historical CAPM produces a result of only 8.94 percent. This result should be removed because it is only 50 basis points above the 8.44 percent current cost of triple-B debt that Mr. Gorman uses in his risk premium analysis. When the remaining data are averaged the indicated ROE is 10.74 percent. Thus, by simply removing one unreasonably low estimate and considering all of Mr. Gorman's other models, the indicated ROE is significantly higher.

10

**Q. Is there any potential confusion between Mr. Gorman's discussion and his table presentation of his results?**

11

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A. Yes. Mr. Gorman calculates a constant growth DCF result of 12.02 percent. On page 18 of his testimony, he states that "the constant growth DCF model is currently producing an inflated DCF return and should not be used in the calculation of GMO's return on equity." However, in his summary table on page 32, he clearly included his constant growth DCF result in developing the final DCF average result.



1 **Q. What other general areas of disagreement do you have with Mr. Gorman's analysis**  
2 **and recommendations?**

3 A. Mr. Gorman's analysis is negatively biased by his input assumptions and his application  
4 of the models. While he applies a non-constant growth DCF model similar to one I use  
5 and includes GDP growth as an input, he uses relatively short-term GDP growth rate  
6 forecasts that are significantly dominated by recent historically low inflation. His GDP  
7 growth forecast is based on inflation estimates that are almost a full percentage point  
8 below longer-term historical averages. This is inconsistent with the long-term growth  
9 assumption that is fundamental to the DCF model.

10 In his risk premium analysis, he selects risk premiums that are not consistent with  
11 recent risk premium data. He selectively applies those risk premiums in a way that  
12 creates a mismatch of older risk premium data with current interest rates. Furthermore,  
13 he fails to include the well documented inverse relationship between risk premiums and  
14 interest rates, i.e., the tendency for risk premiums to widen when interest rates are low  
15 and to narrow when interest rates are high. Without this feature, his risk premium theory  
16 is not consistent with sound academic research, such as studies by Harris and Marston.  
17 This omission causes his risk premium estimates to be significantly understated.

18 His CAPM analysis produces an average ROE estimate of 9.20 percent, which is  
19 by far the lowest number in his summary table. As I have demonstrated previously,  
20 under current market conditions, the CAPM understates ROE. For these reasons, his  
21 CAPM results should have been rejected. Without CAPM, a more reasonable  
22 interpretation of Mr. Gorman's analysis indicates that he should have found an ROE in  
23 the 10.5 percent to 11.2 percent range.

1 Q. **What specific disagreements do you have with Mr. Gorman's two-stage and three-**  
2 **stage DCF analyses?**

3 A. Mr. Gorman uses analysts' forecasts in the first five years of his two-stage model and the  
4 GDP forecast for years six and later. In his three-stage (or multi-stage) model, he uses  
5 analysts' growth forecasts in the first five years and a GDP forecast for years eleven and  
6 later; in years six through ten, he interpolates growth in a linear fashion between the first  
7 and third stages. In all these models, his estimate of future GDP growth is too low. His  
8 forecasts are for five- and ten-year periods, as published by *Blue Chip Financial*  
9 *Forecasts*. See Gorman Direct Testimony at 25. The current Blue Chip consensus is low  
10 because it is based on assumed inflation rates of only about 2.0 percent, which is much  
11 lower than the long-term U.S. average inflation rate of over 3.0 percent. The currently  
12 depressed nature of economic forecasts detracts from Mr. Gorman's use of these forecasts  
13 to estimate long-term growth.

14 Q. **If Mr. Gorman had used your updated GDP growth forecast of 6.2 percent in his**  
15 **two-stage and multi-stage growth DCF analyses, what would his results have been?**

16 A. In Schedule SCH-12, I update my forecast of long-term GDP growth by including data  
17 through year-end 2008. My updated forecast of GDP growth is now 6.2 percent, as  
18 compared to the 6.5 percent rate included in my direct testimony. In Schedule SCH-11,  
19 page 2, I have reproduced Mr. Gorman's two-stage growth DCF Schedule (Schedule  
20 MPG-13) with the 6.2 percent growth rate substituted for his long-term GDP growth  
21 estimate. That revised analysis indicates an ROE of 11.64 percent.

1           On page 3 of Schedule SCH-11, I substitute my 6.2 percent long-term GDP  
2 growth rate into Mr. Gorman's multi-stage DCF analysis. That revised analysis indicates  
3 an ROE of 11.67 percent.

4 **Q. Please comment on Mr. Gorman's risk premium ROE analysis.**

5 A. His risk premium analysis is based on subjective and inappropriate selections from the  
6 data he presents, and it fails to include the well documented tendency for risk premiums  
7 to expand when interest rates are low. When his selectivity is removed and the analysis  
8 is modified to properly reflect wider risk premiums with lower interest rates, Mr.  
9 Gorman's risk premium analysis indicates a much higher ROE.

10 **Q. Please elaborate.**

11 A. His risk premium data are presented in Schedules MPG-15 through MPG-18. He  
12 discusses the analysis on pages 32-35 of his testimony. The analysis consists of two  
13 parts. In one approach he adds Government bond equity risk premiums of 5.21 percent  
14 and 6.01 percent to a projected 30-year Treasury bond yield of 4.00 percent. This  
15 produces an ROE range of 9.21 percent to 10.01 percent, with a midpoint of 9.61 percent.  
16 In his second approach, he adds utility bond risk premiums of 3.03 percent and 4.39  
17 percent to the recent triple-B utility bond yield of 8.44 percent. This produces ROE  
18 estimates of 11.47 percent to 12.83 percent. From these results, he concludes that an  
19 ROE of 10.54 percent is appropriate (midpoint of 9.61 percent and 11.47 percent).

20 **Q. Why do you disagree with Mr. Gorman's Government bond equity risk premium**  
21 **approach?**

22 A. In this approach, he adds a risk premium of 5.61 percent to a Government bond yield of  
23 4.00 percent to reach a result of 9.61 percent. An examination of the data in Mr.

1 Gorman's Schedule MPG-16 reveals the flaw in this analysis. In essence, Mr. Gorman is  
2 mismatching historical data with current rates in a way that is not reasonable.

3 The last column in Schedule MPG-15 indicates that over the past 10 years the  
4 average "Indicated Risk Premium" has been 5.63 percent. This is very close to the 5.61  
5 percent risk premium that Mr. Gorman uses. However, the average Treasury Bond Yield  
6 over this ten year period has been 5.16 percent, much higher than the current rate of 4.00  
7 percent he uses. In fact, there is not a rate as low as 4.00 percent in all of Mr. Gorman's  
8 data. It is not reasonable for Mr. Gorman to apply a historical risk premium to currently  
9 low interest rate data without some adjustment to account for the relationship between  
10 interest rate levels and risk premiums. Later in this testimony, I will make the proper  
11 adjustment to Mr. Gorman's data to account for this relationship and show that his  
12 Treasury bond risk premium result should have been much higher.

13 **Q. Is Mr. Gorman's utility bond risk premium analysis more reasonable?**

14 **A.** Yes. His analysis in Schedule MPG-16 supports my point that risk premiums must match  
15 current interest rates. A review of the data in Schedule MPG-17 shows that in 1994  
16 interest rates were 8.31 percent and the risk premium was 3.03 percent. Both of these  
17 figures are very similar to the data Mr. Gorman used in his current utility bond risk  
18 premium analysis (8.44 percent triple-B interest rate and 3.03 percent risk premium).  
19 This corroborates the reasonableness of his utility bond risk premium analysis and of the  
20 11.47 percent ROE recommendation that results.

21 **Q. In your risk premium analysis from your direct testimony, you used a standard**  
22 **regression analysis to account for the inverse relationship between risk premiums**

1 **and interest rates. What do Mr. Gorman's risk premium data indicate when this**  
2 **approach is used?**

3 A. In Schedule SCH-11, pages 4-7, I have applied the standard regression analysis to  
4 calculate "interest rate adjustment" factors for his two risk premium studies. This  
5 approach properly takes into account the inverse relationship between equity risk  
6 premiums and interest rates. With this update Mr. Gorman's Treasury bond risk premium  
7 analysis indicates an ROE of 10.11 percent, as shown in pages 4-5 of Schedule SCH-11.  
8 For his utility bond risk premium analysis, the indicated ROE is 11.93 percent (pages 6-7  
9 of the same Schedule). These results further confirm that Mr. Gorman's risk premium  
10 data support a base ROE midpoint result of 11.02 percent.

11 **Q. Has Mr. Gorman previously recognized the inverse risk premium-interest rate**  
12 **relationship?**

13 A. Yes. In his testimony before the Texas Public Utility Commission in Docket No. 14965,  
14 page 15, lines 10-13, Mr. Gorman stated:

15 The results of my study indicate an inverse relationship between a bond's  
16 real return and the equity risk premium. This result is consistent with the  
17 findings of published studies which indicate equity risk premiums move  
18 inversely with interest rates.

19 Had Mr. Gorman made a similar adjustment in this case, his risk premium results would  
20 have indicated a considerably higher ROE than he recommends.

21 **V. Update of ROE Analysis**

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

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

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

5 A. My updated DCF results are shown in Schedule SCH-13. The indicated DCF range is  
6 11.2 percent to 11.9 percent, with a midpoint of 11.55 percent, which is my revised  
7 recommendation.

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

9 A. My updated risk premium analysis is presented in Schedules SCH-14 and SCH-15.  
10 Based on projected triple-B utility interest rates for 2009, the risk premium analysis  
11 indicates an ROE of 11.14 percent. Based on the most recent three month's average  
12 triple-B rates, the risk premium ROE is 11.56 percent.

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

14 A. My updated analyses show that GMO's current cost of equity capital is in the range of  
15 11.2 percent to 11.9 percent, with a midpoint estimate of 11.55 percent. The fact that my  
16 updated study produces this result confirms that my original recommendation of 10.75  
17 percent is extremely conservative and that the other parties' recommendations, as  
18 discussed herein, are not reasonable.

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

20 A. No. As I explained previously, government monetary policies and recent flight to safety  
21 issues have pushed Treasury bond interest rates to artificially low levels, while  
22 simultaneously corporate capital costs have increased. In this environment, CAPM  
23 estimates understate the market cost of equity capital. The negatively skewed Treasury

1 rates produce ROE estimates that are neither consistent with DCF estimates nor  
 2 traditional risk premium estimates. For this reason, I do not include CAPM estimates in  
 3 my ROE analysis.

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

6 A. The following table identifies the requested capital structure components and the  
 7 resulting overall rate of return for Missouri Public Service ("MPS") and St. Joseph Light  
 8 & Power ("SJLP"):

<u>MPS</u>			
<b>Requested Capital Structure</b>			
Capital Components	Ratio	Cost	Weighted Cost
Debt	48.76%	6.70%	3.27%
Adj. Common Equity	51.24%	11.55%	5.92%
<b>TOTAL</b>	<b>100.00%</b>		<b>9.19%</b>

<u>SJLP</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%
<b>TOTAL</b>	<b>100.00%</b>		<b>9.70%</b>

9  
 10 **Q. What is the basis for the Company's requested capital structure and overall rate of**  
 11 **return?**

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

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

2 **A. Yes, it does.**



**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Application of Aquila, Inc. dba            )  
KCP&L Greater Missouri Operations Company to            ) Case No. ER-2009-0090  
Modify Its Electric Tariffs to Effectuate a Rate Increase )

**AFFIDAVIT OF SAMUEL C. HADAWAY**

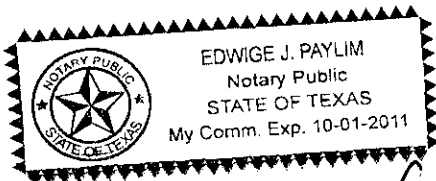
STATE OF TEXAS            )  
  ) ss  
COUNTY OF TRAVIS        )

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 KCP&L Greater Missouri Operations Company, to serve as an expert witness to provide cost of capital testimony on behalf of KCP&L Greater Missouri Operations Company.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of KCP&L Greater Missouri Operations Company consisting of twenty-three (23) pages and Schedule(s) SCH -9 through SCH -15, all of which 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 6 day of March 2009.

[Signature]  
Notary Public

My commission expires: 10/01/11

**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
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>
<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

	2007				2008				E2009				E2010			
	2007	A2008	E2009	2007	A2008	E2009	2007	3Q	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  
Summary of Updated Gorman ROE Results

	(1)	(2)
	<b>Summary of Results</b>	
	Gorman Initial ROE	<b>Updated ROE</b>
<b>DCF Models</b>		
<b>Constant Growth DCF (Analysts' Growth)</b>	12.02%	<b>12.02%</b>
<b>Constant Growth DCF (Composite Growth)</b>	11.25%	<b>11.25%</b>
<b>Two-Stage DCF</b>	10.59%	<b>11.64%</b>
<b>Multi-Stage DCF</b>	10.75%	<b>11.67%</b>
<b>Average DCF</b>	11.15%	<b>11.65%</b>
<b>Risk Premium Average</b>	10.54%	<b>11.02%</b>
<b>CAPM</b>	9.20%	<b>NA</b>
<b>ROE (Average DCF, Risk Premium, CAPM)</b>	10.30%	<b>NA</b>
<b>ROE (excluding CAPM)</b>	10.85%	<b>11.33%</b>

## Notes:

Column 1: Gorman, pages 32 and 42.

Column 2: Constant Growth and Composite Growth DCF results not changed; see page 2 of this Exhibit for updated Multi-Stage DCF result; see page 3 of this Exhibit for updated Risk Premium result; CAPM results are not reliable and are excluded as discussed in my testimony.



Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company  
Gorman Two-Stage Growth DCF Analysis (with Long-Term GDP Growth)

No.	Company	(1) Price P <sub>0</sub>	(2) Dividend D <sub>0</sub>	(3) First Stage Growth (EPS)	(4) Second Stage Growth (GDP)	(5) Updated Cost of Equity
1	ALLETE	\$32.61	\$1.72	5.75%	6.20%	<b>11.69%</b>
2	Alliant Energy Co.	\$29.23	\$1.40	5.55%	6.20%	<b>11.14%</b>
3	Ameren	\$32.44	\$2.54	4.75%	6.20%	<b>14.03%</b>
4	American Elec. Pwr.	\$31.09	\$1.64	5.15%	6.20%	<b>11.55%</b>
5	Avista Corp.	\$18.51	\$0.72	7.75%	6.20%	<b>10.61%</b>
6	Cent. Vermont P.S.	\$20.44	\$0.92	NA	6.20%	<b>NA</b>
7	Cleco Corporation	\$21.91	\$0.90	14.30%	6.20%	<b>12.29%</b>
8	Con. Edison	\$39.73	\$2.34	2.67%	6.20%	<b>11.57%</b>
9	DTE Energy Co.	\$35.31	\$2.12	4.75%	6.20%	<b>12.19%</b>
10	Edison Internat.	\$32.40	\$1.22	7.00%	6.20%	<b>10.33%</b>
11	Empire District	\$17.48	\$1.28	NA	6.20%	<b>NA</b>
12	Entergy Corp.	\$80.93	\$3.00	9.88%	6.20%	<b>10.80%</b>
13	FPL Group, Inc.	\$47.22	\$1.78	9.67%	6.20%	<b>10.84%</b>
14	FirstEnergy	\$51.96	\$2.20	8.34%	6.20%	<b>11.12%</b>
15	Hawaiian Electric	\$24.10	\$1.24	3.75%	6.20%	<b>11.11%</b>
16	IDACORP	\$28.26	\$1.20	5.50%	6.20%	<b>10.56%</b>
17	NiSource	\$11.61	\$0.92	2.75%	6.20%	<b>13.48%</b>
18	Northeast Utilities	\$22.71	\$0.85	9.25%	6.20%	<b>10.72%</b>
19	NSTAR	\$33.86	\$1.40	6.70%	6.20%	<b>10.68%</b>
20	PG&E Corp.	\$36.76	\$1.56	7.25%	6.20%	<b>10.91%</b>
21	Pinnacle West	\$30.54	\$2.10	5.00%	6.20%	<b>13.14%</b>
22	Portland General	\$18.46	\$0.98	5.90%	6.20%	<b>11.76%</b>
23	Progress Energy	\$38.62	\$2.46	4.94%	6.20%	<b>12.61%</b>
24	Southern Co.	\$35.49	\$1.68	5.50%	6.20%	<b>11.07%</b>
25	Teco Energy, Inc.	\$12.23	\$0.80	8.18%	6.20%	<b>13.73%</b>
26	UIL Holdings Co.	\$29.86	\$1.73	7.00%	6.20%	<b>12.56%</b>
27	Vectren Corp.	\$25.13	\$1.34	6.20%	6.20%	<b>11.86%</b>
28	Westar Energy	\$19.20	\$1.16	5.00%	6.20%	<b>12.30%</b>
29	Wisconsin Energy	\$41.52	\$1.08	9.50%	6.20%	<b>9.35%</b>
30	Xcel Energy Inc.	\$17.90	\$0.95	6.90%	6.20%	<b>12.00%</b>
	Average	\$30.58	\$1.51	6.60%	6.20%	<b>11.64%</b>

Notes:

Columns 1-3: Gorman Schedule MPG-13.

Column 4: Hadaway Schedule SCH-12.

Column 5: 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 column 4 for the remaining periods.

Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company  
Gorman Multi-Stage Growth DCF Analysis (with Long-Term GDP Growth)

No.	Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Price	Dividend	First Stage	Second Stage Growth					Third	Updated
		P <sub>0</sub>	D <sub>0</sub>	Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Stage	Cost of
		(EPS)							(GDP)	Equity	
1	ALLETE	\$32.61	\$1.72	5.75%	5.83%	5.90%	5.98%	6.05%	6.13%	6.20%	11.65%
2	Alliant Energy Co.	\$29.23	\$1.40	5.55%	5.66%	5.77%	5.88%	5.98%	6.09%	6.20%	11.08%
3	Ameren	\$32.44	\$2.54	4.75%	4.99%	5.23%	5.48%	5.72%	5.96%	6.20%	13.86%
4	American Elec. Pwr.	\$31.09	\$1.64	5.15%	5.33%	5.50%	5.68%	5.85%	6.03%	6.20%	11.45%
5	Avista Corp.	\$18.51	\$0.72	7.75%	7.49%	7.23%	6.98%	6.72%	6.46%	6.20%	10.73%
6	Cent. Vermont P.S.	\$20.44	\$0.92	NA	NA	NA	NA	NA	NA	6.20%	NA
7	Cleco Corporation	\$21.91	\$0.90	14.30%	12.95%	11.60%	10.25%	8.90%	7.55%	6.20%	13.12%
8	Con. Edison	\$39.73	\$2.34	2.67%	3.26%	3.85%	4.44%	5.02%	5.61%	6.20%	11.24%
9	DTE Energy Co.	\$35.31	\$2.12	4.75%	4.99%	5.23%	5.48%	5.72%	5.96%	6.20%	12.05%
10	Edison Internat.	\$32.40	\$1.22	7.00%	6.87%	6.73%	6.60%	6.47%	6.33%	6.20%	10.39%
11	Empire District	\$17.48	\$1.28	NA	NA	NA	NA	NA	NA	6.20%	NA
12	Entergy Corp.	\$80.93	\$3.00	9.88%	9.27%	8.65%	8.04%	7.43%	6.81%	6.20%	11.11%
13	FPL Group, Inc.	\$47.22	\$1.78	9.67%	9.09%	8.51%	7.94%	7.36%	6.78%	6.20%	11.13%
14	FirstEnergy	\$51.96	\$2.20	8.34%	7.98%	7.63%	7.27%	6.91%	6.56%	6.20%	11.31%
15	Hawaiian Electric	\$24.10	\$1.24	3.75%	4.16%	4.57%	4.98%	5.38%	5.79%	6.20%	10.89%
16	IDACORP	\$28.26	\$1.20	5.50%	5.62%	5.73%	5.85%	5.97%	6.08%	6.20%	10.51%
17	NiSource	\$11.61	\$0.92	2.75%	3.33%	3.90%	4.48%	5.05%	5.63%	6.20%	13.10%
18	Northeast Utilities	\$22.71	\$0.85	9.25%	8.74%	8.23%	7.73%	7.22%	6.71%	6.20%	10.98%
19	NSTAR	\$33.86	\$1.40	6.70%	6.62%	6.53%	6.45%	6.37%	6.28%	6.20%	10.72%
20	PG&E Corp.	\$36.76	\$1.56	7.25%	7.08%	6.90%	6.73%	6.55%	6.38%	6.20%	11.00%
21	Pinnacle West	\$30.54	\$2.10	5.00%	5.20%	5.40%	5.60%	5.80%	6.00%	6.20%	13.01%
22	Portland General	\$18.46	\$0.98	5.90%	5.95%	6.00%	6.05%	6.10%	6.15%	6.20%	11.74%
23	Progress Energy	\$38.62	\$2.46	4.94%	5.15%	5.36%	5.57%	5.78%	5.99%	6.20%	12.48%
24	Southern Co.	\$35.49	\$1.68	5.50%	5.62%	5.73%	5.85%	5.97%	6.08%	6.20%	11.01%
25	Teco Energy, Inc.	\$12.23	\$0.80	8.18%	7.85%	7.52%	7.19%	6.86%	6.53%	6.20%	13.96%
26	UIL Holdings Co.	\$29.86	\$1.73	7.00%	6.87%	6.73%	6.60%	6.47%	6.33%	6.20%	12.65%
27	Vectren Corp.	\$25.13	\$1.34	6.20%	6.20%	6.20%	6.20%	6.20%	6.20%	6.20%	11.86%
28	Westar Energy	\$19.20	\$1.16	5.00%	5.20%	5.40%	5.60%	5.80%	6.00%	6.20%	12.18%
29	Wisconsin Energy	\$41.52	\$1.08	9.50%	8.95%	8.40%	7.85%	7.30%	6.75%	6.20%	9.57%
30	Xcel Energy Inc.	\$17.90	\$0.95	6.90%	6.78%	6.67%	6.55%	6.43%	6.32%	6.20%	12.07%
	Average	\$30.58	\$1.51	6.60%	6.54%	6.47%	6.40%	6.33%	6.27%	6.20%	11.67%

Notes:

Columns 1-3: Gorman Schedule MPG-13.

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

Column 9: Hadaway Schedule SCH-12.

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**  
Update of Gorman Risk Premium Analysis - Treasury Bond

	(1) TREASURY BOND YIELD	(2) AUTHORIZED ELECTRIC RETURNS	(3) INDICATED RISK PREMIUM
1986	7.78%	13.93%	6.15%
1987	8.59%	12.99%	4.40%
1988	8.96%	12.79%	3.83%
1989	8.45%	12.97%	4.52%
1990	8.61%	12.70%	4.09%
1991	8.14%	12.55%	4.41%
1992	7.67%	12.09%	4.42%
1993	6.59%	11.41%	4.82%
1994	7.37%	11.34%	3.97%
1995	6.88%	11.55%	4.67%
1996	6.71%	11.39%	4.68%
1997	6.61%	11.40%	4.79%
1998	5.58%	11.66%	6.08%
1999	5.87%	10.77%	4.90%
2000	5.94%	11.43%	5.49%
2001	5.49%	11.09%	5.60%
2002	5.43%	11.16%	5.73%
2003	4.96%	10.97%	6.01%
2004	5.05%	10.75%	5.70%
2005	4.65%	10.54%	5.89%
2006	4.91%	10.36%	5.45%
2007	4.84%	10.36%	5.52%
Sep-08	4.48%	10.51%	6.03%
<b>AVERAGE</b>	<b>6.50%</b>	<b>11.60%</b>	<b>5.09%</b>

**INDICATED COST OF EQUITY**

PROJECTED TREASURY BOND YIELD*	4.00%
MOODY'S AVG ANNUAL YIELD DURING STUDY	6.50%
INTEREST RATE DIFFERENCE	-2.50%
INTEREST RATE CHANGE COEFFICIENT	-40.51%
ADJUSTMENT TO AVG RISK PREMIUM	1.01%
BASIC RISK PREMIUM	5.09%
INTEREST RATE ADJUSTMENT	1.01%
EQUITY RISK PREMIUM	6.11%
PROJECTED TREASURY BOND YIELD*	4.00%
<b>INDICATED EQUITY RETURN</b>	<b>10.11%</b>

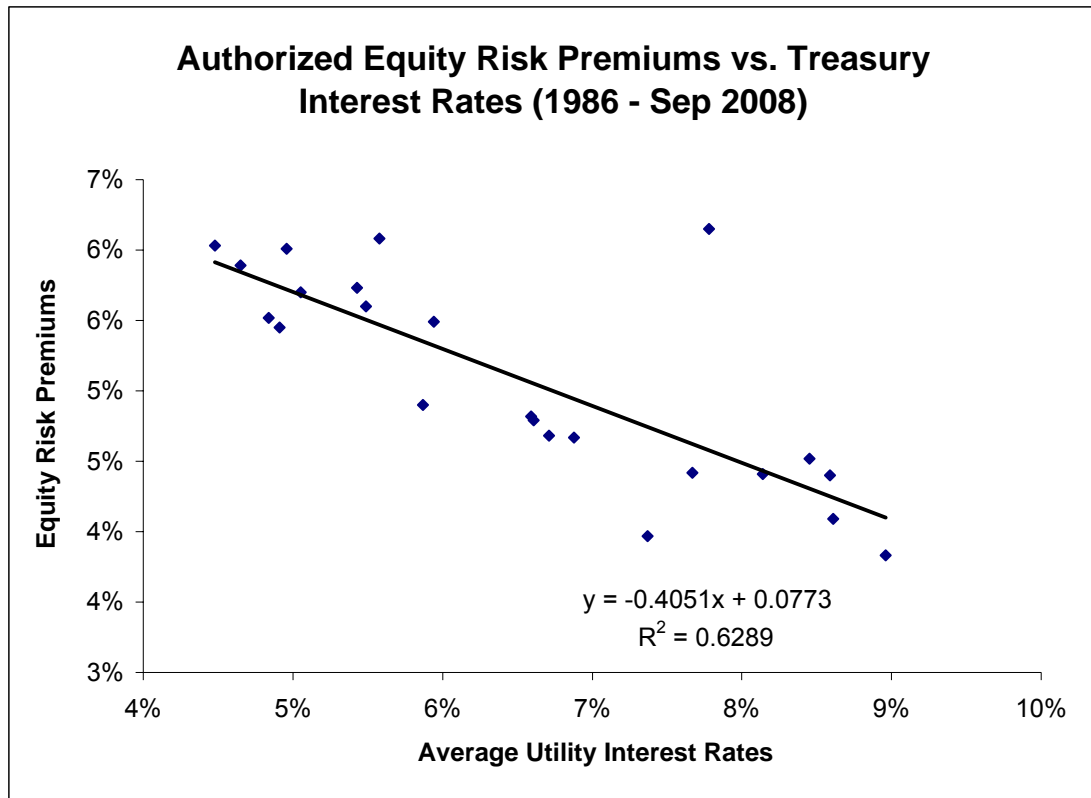
Notes:

Columns 1-3: Gorman Schedule MPG-16.

\*Gorman page 35 for Projected Treasury Bond Yield .

See regression data on next page for derivation of "Interest Rate Change Coefficient."

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Update of Gorman Risk Premium Analysis - Treasury Bond



**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Update of Gorman Risk Premium Analysis - Utility Bond

	(1) MOODY'S "A" RATED PUBLIC UTILITY BOND YIELD	(2) AUTHORIZED ELECTRIC RETURNS	(3) INDICATED RISK PREMIUM
1986	9.58%	13.93%	4.35%
1987	10.10%	12.99%	2.89%
1988	10.49%	12.79%	2.30%
1989	9.77%	12.97%	3.20%
1990	9.86%	12.70%	2.84%
1991	9.36%	12.55%	3.19%
1992	8.69%	12.09%	3.40%
1993	7.59%	11.41%	3.82%
1994	8.31%	11.34%	3.03%
1995	7.89%	11.55%	3.66%
1996	7.75%	11.39%	3.64%
1997	7.60%	11.40%	3.80%
1998	7.04%	11.66%	4.62%
1999	7.62%	10.77%	3.15%
2000	8.24%	11.43%	3.19%
2001	7.76%	11.09%	3.33%
2002	7.37%	11.16%	3.79%
2003	6.58%	10.97%	4.39%
2004	6.16%	10.75%	4.59%
2005	5.65%	10.54%	4.89%
2006	6.07%	10.36%	4.29%
2007	6.07%	10.36%	4.29%
Sep-08	6.29%	10.51%	4.22%
<b>AVERAGE</b>	<b>7.91%</b>	<b>11.60%</b>	<b>3.69%</b>

**INDICATED COST OF EQUITY**

CURRENT "Baa" UTILITY BOND YIELD*	8.44%
MOODY'S AVG ANNUAL YIELD DURING STUDY	7.91%
INTEREST RATE DIFFERENCE	0.53%

INTEREST RATE CHANGE COEFFICIENT	-38.03%
ADJUSTMENT TO AVG RISK PREMIUM	-0.20%

BASIC RISK PREMIUM	3.69%
INTEREST RATE ADJUSTMENT	-0.20%
EQUITY RISK PREMIUM	3.49%

CURRENT "Baa" UTILITY BOND YIELD*	8.44%
<b>INDICATED EQUITY RETURN</b>	<b>11.93%</b>

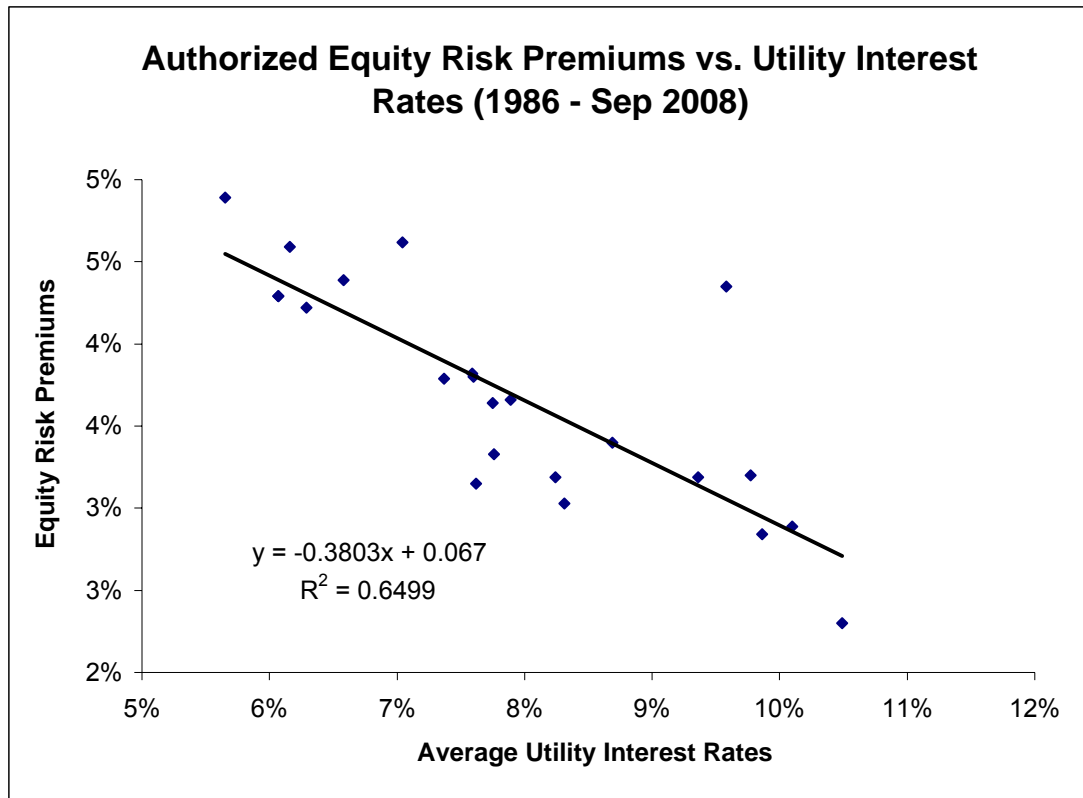
Source:

Columns 1-3: Gorman Schedule MPG-16.

\*Gorman page 36 for Current "Baa" Utility Bond Yield.

See regression data on next page for derivation of "Interest Rate Change Coefficient."

**Aquila, Inc., d/b/a KCP&L Greater Missouri Operations Company**  
Update of Gorman Risk Premium Analysis - Utility Bond



**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%
GROUP AVERAGE	11.9%	11.4%	11.2%
GROUP MEDIAN	11.6%	11.4%	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**  
**Constant Growth DCF Model**  
**Analysts' Growth Rates**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Company	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	Analysts' Estimated Growth			Average Growth (Cols 4-6)	ROE K=Div Yld+G (Cols 3+7)
				Value Line	Zacks	Thomson		
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.

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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.

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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**  
**Low Near-Term Growth**  
**Two-Stage Growth DCF Model**

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Company	Next	Annual	Change to 2012	CASH FLOWS							ROE=Internal Rate of Return (Yrs 0-150)
	Year's Div	2012 Div		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-12	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	<u>0.85%</u>
EQUITY RISK PREMIUM	<u>4.04%</u>

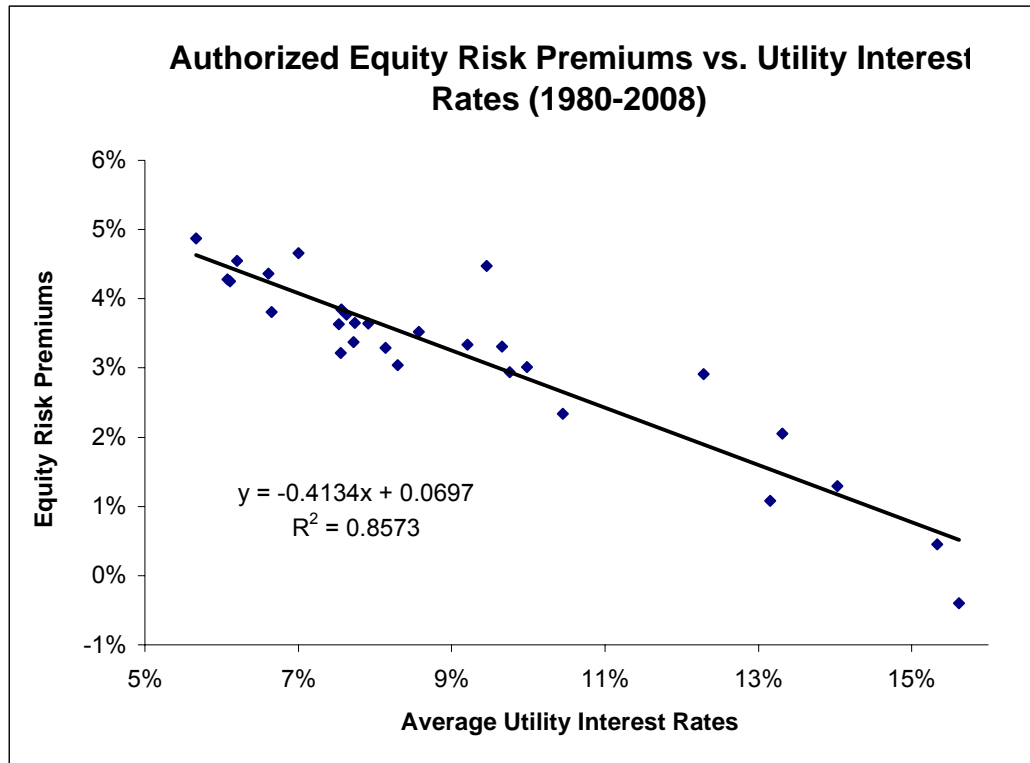
PROJECTED TRIPLE-B UTILITY BOND YIELD*	7.10%
<b>INDICATED EQUITY RETURN</b>	<b><u>11.14%</u></b>

(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

