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Exhibit No.:
Issues: ROE
Witness: Samuel C. Hadaway
Sponsoring Party: Aquila Networks-MPS & L&P
Case No.: ER-2007-0004

Before the Public Service Commission
of the State of Missouri

Rebuttal Testimony

of

Samuel C. Hadaway

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REBUTTAL TESTIMONY OF SAMUEL C. HADAWAY
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
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INTRODUCTION AND PURPOSE OF TESTIMONY

Q. Please state your name and business address.

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

Q. Did you previously file Direct Testimony on behalf of Aquila, Inc., D/B/A Aquila Networks-MPS and Aquila Networks-L&P ("MPS/LP" or the "Company") in this proceeding?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the return on equity ("ROE") recommendations of Commission Staff witness David C. Parcell, Office of the Public Counsel ("OPC") witness Russell W. Trippensee, and Federal Executive Agencies/Sedalia Industrial Energy Users' Association/St. Joe Industrial Group ("FEA/Industrials") witness Michael Gorman. Additionally, I will explain why the Staff's capital structure position, rejecting the Company's capital assignment process but accepting the lower assigned interest rates that go with that process, is one-sided and illogical. I will also update my equity cost estimates.

RECOMMENDATIONS OF THE PARTIES

Q. What are the parties ROE recommendations?

A. The Company initially requested an ROE of 11.5 percent. With this rebuttal filing, the Company is reducing its requested ROE by a net of 25 basis points to 11.25 percent. This lower ROE reflects lower interest rates and interest rate forecasts that now exist as well as the Company's updated construction funding requirements. Staff witness Parcell recommends an ROE range of 9.0 percent to 10.25 percent, with a midpoint of 9.625 percent. OPC witness Trippensee does not quantify an ROE recommendation but encourages the Commission to reduce the allowed ROE if a fuel adjustment clause ("FAC") is adopted. FEA/Industrials witness Gorman recommends an ROE of 10.0 percent.

Q. What are the parties' capital structure and cost of debt recommendations?

A. The Company's requested capital structure is 52.5 percent debt and 47.5 percent equity. As I explained in my Direct Testimony, this capital structure is based on the Company's long-standing capital allocation process and is consistent with the capital structures of the comparable companies I used to estimate ROE. Staff witness Parcell accepts the Company's capital structure percentages and the cost rates for debt, but as a matter of policy Staff rejects the capital assignment process. FEA/Industrials witness Gorman also accepts the Company's proposed capital structure percentages, but he recommends a slightly lower cost of debt for MPS. OPC witness Trippensee does not offer a capital structure recommendation.

Q. How do Mr. Parcell's and Mr. Gorman's ROE recommendations compare with returns allowed by this Commission and by other regulators around the country?

A. They are both much lower than the returns recently allowed by this Commission. In its most recent Orders (December 21, 2006), the Commission found ROEs of 10.9 percent for The Empire District Electric Company (Case No. ER-2006-0315) and 11.25 percent for Kansas City Power & Light Company (Case No. ER-2006-0314). Mr. Parcell's and Mr. Gorman's recommendations are also lower than the average returns allowed by other state regulators around the country. For perspective, I have prepared in Table 1 below a summary of allowed electric utility ROEs for the past two years. The average ROE for 2005 was 10.54 percent. The average ROE for 2006 was 10.36 percent. These results show that Mr. Parcell's 9.625 percent and Mr. Gorman's 10.0 percent recommendations are below the mainstream of recently allowed ROEs. In the remainder of my rebuttal, I will demonstrate that Mr. Parcell and Mr. Gorman failed to apply reasonable assumptions and reasonable ROE estimation methods and failed to give reasonable consideration to MPS/LP's higher construction risks. In my analysis, I will show that they should not have recommended ROEs for MPS/LP that are far below this Commission's recent findings for other similarly situated utilities and below the national averages.

Q. How has this Commission said it would use evidence of the ROEs allowed by other state regulators in determining authorized ROEs?

A. The Commission has indicated that while it will not set ROEs in Missouri based on returns authorized by other commissions, it will consider the reasonableness of an ROE recommendation in light of the findings and decisions of other regulators. In the recent KCPL case, the Commission offered the following guidance:

> [T]here are some numbers that the Commission can use as guideposts in establishing an appropriate return on equity. In Missouri Gas Energy, the Commission stated that it does not believe that its return on equity finding should "unthinkingly mirror the national average." Nevertheless, the national average is an indicator of the capital market in which KCPL will have to compete for necessary capital. (Case No. ER-2006-0314 at 20-21.)

Such a reasonableness check in this proceeding is particularly important, given the low ROE recommendations of the other parties and the extensive capital requirements faced by MPS/LP.

Q. What zone of reasonableness is indicated by the Commission's procedures from the KCPL case?

A. In KCPL, the Commission established an ROE range by first averaging the ROEs allowed by other state regulators for the first three quarters of 2006. It then applied a 100 basis point band on either side of that average. The four quarterly averages for 2006 that are now available and the full-year average are shown in Table 1.

Table 1
Authorized Electric Utility Equity Returns

	2005	2006
1st Quarter	10.51%	10.38%
2nd Quarter	10.05%	10.69%
3rd Quarter	10.84%	10.06%
4th Quarter	10.75%	10.39%
Full Year	10.54%	10.36%

Source: *Regulatory Focus*, Regulatory Research Associates, Inc., Major Rate Case Decisions, January 31, 2007.

With a 100 basis point band on either side of the 2006 average, the indicated range is 9.36 percent to 11.36 percent. However, there were no reported electric cases with ROEs as low as 9.36 percent during 2006.[1]

Q. Given MPS/LP's construction requirements and need for access to substantial amounts of capital, how do you characterize the recommendations of the other parties?

A. They are inadequate.

Q. Please explain.

A. Although Mr. Gorman produces financial metrics that, if attained, might be equivalent to those required for an investment grade rating, he provides no consideration for MPS/LP's construction risks or the size of their required construction budget. Without such considerations, his financial integrity analysis is essentially an academic exercise. Similarly, Mr. Parcell offers an obsolete coverage ratio analysis to support his recommendations, but he makes no attempt to consider the Company's prospective condition going forward.[2] Mr. Trippensee provides no indication at all of what effect his recommendation might have. While Mr. Parcell and Mr. Gorman claim that their recommendations are adequate, a careful analysis of their recommendations shows that they are not adequate.

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[1] The lowest electric ROEs for 2006 were 9.55 percent and 9.60 percent applied in transmission and distribution cases in New York. The highest ROE was 11.90 percent for MidAmerican Energy in Iowa. (Regulatory Research Associates, January 31, 2007, pp. 6-7.)

[2] Mr. Parcell, in his Exhibit___(DCP-1), Schedule 15, presents a pre-tax coverage ratio calculation that would put MPS at the very bottom of triple-B coverage requirements. For LP, his coverage ratio falls below investment grade. In a note at the bottom of that schedule, Mr. Parcell acknowledges that his benchmarks reflect the 1999 levels cited by S&P and that since 2004, S&P has not used pre-tax coverage as one of its benchmarks.

Q. Has the Commission dealt with the maintenance of financial integrity recently in another case?

A. Yes. It is my understanding that in the Stipulation and Agreement entered into among KCPL and the intervening parties regarding KCPL's "Experimental Regulatory Plan" (Case No. EO-2005- 0329), the Commission approved the collection of an "additional amortization amount" by KCPL as necessary to preserve two out of three S&P credit ratios at a level no lower than the "lower level of the top third" of the BBB targets as set by S&P. This was done in recognition of KCPL's commitment to a heavy construction program over the course of the upcoming five year period.

Clearly, MPS/LP are also committed to a heavy construction program over the coming years, as described in Company witness Dennis Williams' Rebuttal Testimony. Allowing for the attainment of sound financial condition is of paramount importance for MPS/LP to be able to raise capital on terms comparable to that of its peer companies.

REBUTTAL TO THE ANALYSIS AND RECOMMENDATIONS OF STAFF WITNESS DAVID C. PARCELL

Q. Please summarize your principal areas of disagreement with Mr. Parcell?

A. Relative to typical standards for estimating ROE, portions of Mr. Parcell's analysis are extreme and do not appear to fit the Commission's standards for acceptable ROE recommendations. Portions of his DCF analysis produce returns that are only slightly above the cost of debt and the validity of his comparable earnings analysis, which is based entirely on earned rates of return on book value,

is questionable. In his DCF analysis, for example, only one of his six calculations for either comparable group produces an ROE above 9.0 percent (Exhibit DCP-1, Schedule 8, page 4). Although Mr. Parcell attempts to prolong that analysis by injecting higher analysts' growth forecasts at the end of the analysis, (which itself produces an ROE of only 9.5 percent), such data maneuvers typically are not permitted. Similarly, he offers a selective interpretation of his comparable earnings ("CE") results that bears little relationship to the analysis he provides. His claim (at 31) that the CE analysis supports a ROE of 10 percent is simply unfounded.

Q. What are your specific criticisms of Mr. Parcell's DCF analysis?

A. I disagree with his singular reliance on the constant growth version of the DCF model. I disagree with his selection of only a five-company primary comparable group. And, I especially disagree with his use of historical growth rates and near-term analysts' grow rate forecasts. Each of these factors detracts from the reliability of Mr. Parcell's DCF estimates.

As I explained in my Direct Testimony, under present market conditions the constant growth DCF model, using traditional growth rate methodology, does not produce reasonable estimates of ROE. On their face, Mr. Parcell's DCF calculations that produce results in the 7 percent to 8 percent range, such as those found in his Schedule 8, are not legitimate estimates of ROE. Furthermore, for him to add one additional observation based on the higher analysts' growth rates for each company and then to conclude that "...a broad range of 8 percent to 9 1/2 percent represents the current cost of equity for Aquila" (Parcell at 24) is not

supported. He should simply have dismissed his constant DCF growth results as being unrepresentative of the current market cost of equity capital.

His small group approach is also wrong. Although Mr. Parcell also applies his methods to my 24-company comparable group, his selected primary reference group contains only five companies. Any calculation based on such a small group could easily be dominated by unusual data for one or two of the companies, as is the case in Mr. Parcell's CE analysis. For this reason, an extremely small comparable group may be statistically unreliable and unrepresentative of the subject company whose cost of capital is being estimated. For these reasons, most economists rely on larger comparable company groups.

Mr. Parcell's problems with the constant growth DCF model and his small sample are compounded by his growth rate estimates. Two of his five growth rate measures are based strictly on historical data and produce growth rate averages of only 1.1 percent to 3.5 percent. His prospective growth rates are based on 3-to-5 year projections from Value Line and First Call and produce a growth rate range of 2.5 percent to 4.9 percent. Mr. Parcell adds these growth rates to dividend yields of 4.3 percent to 4.6 percent and produces ROE estimates of 6.7 percent to 9.5 percent. Had he more realistically evaluated his results, Mr. Parcell should have seen that a longer-term, broader-based growth rate estimate, like the GDP growth forecast I provided in my Direct Testimony, should have been used.

Q. What are you criticisms of Mr. Parcell's CAPM analysis?

A. As I explained in my Direct Testimony, while the CAPM is widely used in academic research, its use in regulation is limited. This is because equally

qualified and credible witnesses may produce widely differing results depending on their selected inputs for the model. The risk-free rate can be either short-term, intermediate, or long-term; the market risk premium can be historical or forecasted, and it may be based on geometric or arithmetic averages; and the model's fundamental risk measure, "Beta," may be adjusted as done by Value Line or unadjusted as provided by other sources.

The selection of these inputs entirely determines the CAPM results. In this case, Mr. Parcell produces a CAPM range of 9.8 percent to 10.3 percent and Mr. Gorman produces a CAPM range of 10.2 percent to 10.6 percent, because they select different risk-free rates and different market risk premiums. Under current "inverted" yield curve conditions, either one would have produced ROEs of about 11.5 percent if they had selected short-term rather than long-term risk-free rates and risk premiums.[3] In addition to these data issues, the CAPM's fundamental risk-return relationship based on Beta has been challenged by well respected academic research.[4] Under these circumstances, CAPM estimates of ROE may provide little guidance for setting the market cost of equity capital in a proceeding like the present one.

Q. What are your criticisms of Mr. Parcell's comparable earnings analysis?

A. The general criticism of the CE method is that *returns on book equity* may bear no relationship to the market's required rate of return. For regulated utilities the

[3] Current Treasury bill rates are approximately 5 percent. The average of geometric and arithmetic risk premiums based on Treasury bills from Ibbotson's 2006 Yearbook is 7.6 percent. With an average beta coefficient of 0.85 similar to those used by both Mr. Parcell and Mr. Gorman, these data support a CAPM ROE of almost 11.5 percent (5.0% + 0.85 x 7.6% = 11.46%).

[4] See, for example, Eugene F. Fama and Kenneth R. French, "The Cross-Section of Expected Stock Returns," *The Journal of Finance*, June 1992.

argument can be made that book value and rate base are the same and, therefore, that CE methods have some validity. However, in today's markets with the industry's restructuring and consolidation and current market-to-book ratios significantly above one, the connection between market and book returns is tenuous at best. For this reason, the CE method provides little useful guidance for setting the allowed rate of return.

In addition, Mr. Parcell's application of the CE method and his interpretation of the results is highly questionable. In his primary CE analysis, he uses only five so-called comparable companies and attempts to show that their recent and prospective earned rates of return would support an ROE of 9.9 percent. The results of his small group analysis are seriously skewed by returns for the past five years of 4.3 percent to 6.2 percent for Empire District and 7.6 percent to 8.3 percent for PEPCO Holdings. In contrast, when Mr. Parcell applied the same analysis to my 24-company comparable group, he found an ROE of 10.6 percent. His historical longer-term analysis for both his group and mine indicated an ROE of 11.2 percent (Exhibit DCP-1, Schedule 11, page 1). If any weight is to be given to earned rates of return on book value, Mr. Parcell's CE results should be interpreted to support an ROE range of 10.6 percent to 11.2 percent.

Q. At page 3, Mr. Parcell rejects the Company's internal capital assignment process, but he uses the lower debt cost rates that result from that process. How do you characterize this position?

A. This position is neither logical nor consistent with Staff's previous positions on these issues.

Q. Please explain.

A. Mr. Parcell's position is illogical and unfair, and his use of the lower capital assignment debt costs is inconsistent with the Staff's position in prior Aquila cases. Although in the previous case (Case No. ER-2005-0436), the Staff did not accept the capital assignment capital structure, it applied its consolidated capital structure approach consistently by adjusting the cost of debt upward to match its capital structure position. In Case No. ER-2005-0436, the Company requested a cost of debt of 6.70 percent for MPS based on its capital assignment process. Staff, however, determined that with a consolidated capital structure that it should likewise use the Company's consolidated cost of debt, which it adjusted to reflect a cost of 7.281 percent. (See Direct Testimony of David Murray, Case No. ER-2005-0436, page 4.) Mr. Parcell's refusal to apply consistent methods in this case is indicative of his overall approach.

REBUTTAL TO FEA/INDUSTRIALS WITNESS MICHAEL GORMAN

Q. What are your principal areas of disagreement with Mr. Gorman's analysis and recommendations?

A. As a general assessment, Mr. Gorman's ROE recommendation is low because he consistently used assumptions that subtly skew his results toward the lower end of the range. Given MPS/LP's circumstances, such an approach is unnecessary and inappropriate. I will show specifically that in all three of his ROE models, his methods and assumptions improperly reduced the results. In his DCF analysis, he used only the constant growth version of the DCF model and in that model he used growth rates that are not consistent with that model's long-term

requirements. Although he now concedes that GDP growth may be "...a proxy for the highest sustainable long-term growth rate" (Gorman at 24, lines 7-8), he did not incorporate GDP growth into his analysis, and his discussion of GDP growth focuses on relatively short-term forecasts and low inflation rates that are not consistent with long-term averages.

In his bond yield plus risk premium analysis he now uses the same general approach that I use, based on allowed regulatory rates of return. However, in that analysis he fails to include the well documented tendency for risk premiums to widen when interest rates are low. Without this feature, his risk premium theory is not consistent with sound academic research, such as the Harris and Marston studies I discussed in my Direct Testimony. Also, with recent historically low interest rates, this omission causes his risk premium estimates to be significantly understated.

Finally, in his CAPM analysis, he focuses only on long-term Treasury bonds as the risk-free asset. While this approach may be appropriate at times, under present "inverted" yield curve conditions, the approach produces lower CAPM estimates than applying intermediate or short-term Treasuries would have produced. Additionally, Mr. Gorman effectively rejected the results of his own CAPM analysis as applied to my group of comparable companies. After he found that that analysis produced an ROE of 10.6 percent, he simply excluded it from his recommended range. When Mr. Gorman's assumptions are replaced with a more balanced approach and when MPS/LP's construction risks are considered, it is clear that Mr. Gorman's ROE results should have been much higher.

Q. Why are your respective DCF results different?

A. The differences stem from two primary reasons. First, Mr. Gorman applied only the constant growth version of the DCF model. I evaluated three versions of the model and ultimately rejected the constant growth version because it failed to meet basic risk premium tests of reason. Mr. Gorman derives his growth rates in Schedule MPG-5 by averaging three surveys of analysts' five-year growth projections (Zacks, Reuters, and Thomson). Since essentially the same analysts are included in these surveys, the average results are not materially different from one another and any one of the surveys would have produced about the same low DCF results. Although Mr. Gorman discusses two-, five-, and ten-year GDP growth forecasts (at 23-24), he does not include those forecasts in his growth rate averages. Furthermore, he states that those forecasts assume inflation rates of only 2.1 percent to 2.2 percent, which are much lower than the long-term U.S. average inflation rate of 3.1 percent.[5] In effect he gave no weight to overall economic growth or to any other long-term growth rate forecasts. As I stated earlier, this oversight is particularly problematic since his DCF analysis is entirely restricted to the constant growth version of the DCF model. In that model a basic assumption is that the growth term "g" must equal investors' expectations for the very long-term future. Under current market conditions, these methods understate ROE.

[5] Ibbotson Associates, 2006 Year Book, page. 31. U.S. inflation rates for 2004, 2005, and 2006 were 3.3 percent, 3.4 percent, and 2.5 percent, respectively (Bureau of Labor Statistics, News, January 18, 2006, p. 2.)

Q. If Mr. Gorman had used your GDP-based growth forecast of 6.6 percent in his DCF analysis, what would his results have been?

A. In Rebuttal Schedule SCH-12, I have reproduced Mr. Gorman's summary DCF exhibit (Schedule MPG-6, page 1 of 2) with the 6.6 percent growth rate substituted for his growth rate range. With an average dividend yield of 4.1 percent for Mr. Gorman's comparable group, the estimated ROE is 10.7 percent (4.14% dividend yield plus 6.6% growth = 10.74% ROE).

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

A. His risk premium analysis appears to be based on somewhat subjective selections from the data he presents, and it fails to include the well documented tendency for risk premiums to expand when interest rates are low. When a more objective view of the data is taken and when the analysis reflects wider risk premiums with lower interest rates, Mr. Gorman's risk premium data indicate a considerably higher ROE.

Q. Please elaborate.

A. Mr. Gorman presents his risk premium data in Schedules MPG-9 through MPG-12 and discusses the analysis on pages 26-29 of his testimony. The analysis consists of two parts. In one approach he adds a Government bond equity risk premium of 5.2 percent to a projected 20-year Treasury bond yield of 5.0%. This produces an ROE estimate of 10.2 percent. In his second approach, he adds a utility bond risk of 3.7 percent to the recent Baa utility bond yield of 6.12 percent. This produces an ROE estimate of 9.8 percent. From these two results, he concludes that a 10 percent ROE is appropriate.

Q. Why do you say that Mr. Gorman's approach is subjective?

A. On page 27, at lines 8-14, Mr. Gorman explains that 15 of his 21 Treasury bond risk premium observations range between 4.4 percent and 5.9 percent. From this range he selects the approximate midpoint of 5.2 percent for his Treasury bond risk premium analysis. In the following paragraph, at lines 15-19, he says that his utility bond risk premiums "...primarily fall in the range of 3.0% to 4.4%...." From this range he selects the midpoint of 3.7 percent.

Q. How would you describe Mr. Gorman's risk premium selections?

A. They are not reasonable.

Q. Why do you say that?

A. Without closer inspection, his selections might appear reasonable. In fact, they are not. What Mr. Gorman fails to explain is that, with the lower interest rates since 2000, in his own risk premium data there is *not one* Government bond risk premium as low as his recommended 5.2 percent. Indeed, Mr. Gorman excludes from his subjective range the one observation in 2003 when the Treasury bond yield was closest to the 5.0 percent Government bond rate he finally applies. In 2003, the Treasury bond rate was 5.02 percent and, based on an average allowed ROE of 10.97 percent, the indicated risk premium was 5.95 percent. Mr. Gorman excludes this risk premium from his range. Similarly, in 2005 when Treasury rates dropped to 4.65 percent, the risk premium was 5.89 percent and the average ROE was 10.54 percent. Without any further analysis, these data show that the ROEs should have been in the 10.5 percent to 11.0 percent range.

Q. Is there a similar problem with Mr. Gorman's utility bond risk premium analysis?

A. Yes. Mr. Gorman's Schedule MPG-10 shows that, to find a risk premium as low as his 3.7 percent, one must revert to 2001 when A-rated utility bonds yielded 7.78 percent. The effect of Mr. Gorman's improper omission of the inverse risk premium-interest rate relationship can be seen further by comparing the 8.16 percent average utility interest rate over his 21-year analysis (Schedule MPG-10) to the 6.12 percent current Baa rate he uses to estimate ROE (Schedule MPG-12). Based on an 8.16 percent average utility interest rate, the average risk premium was 3.64 percent from his 21-year study. During the only years in that analysis when interest rates were as low as 6.12 percent (2004-2006), the average risk premium was 4.6 percent. Had Mr. Gorman simply used this more recent risk premium for consistency with his low 6.12 percent utility interest rate, he would have found an ROE of 10.72 percent (10.72% = 6.12% + 4.60%). These comparisons show that Mr. Gorman's risk premium data support an ROE range of 10.5 percent to 11.0 percent.

Q. In your risk premium analysis from your Direct Testimony, you used a standard regression analysis to account for the inverse relationship between risk premiums and interest rates. What do Mr. Gorman's risk premium data indicate when this approach is used?

A. In Rebuttal Schedule SCH-13, I have applied the standard regression analysis to calculate "interest rate adjustment" factors for his two risk premium studies. This approach properly takes into account the inverse relationship between equity risk

premiums and interest rates. With this correction, Mr. Gorman's Treasury bond risk premium analysis indicates an ROE of 10.70 percent. For his utility bond risk premium analysis, the indicated ROE is 10.52 percent. These results further confirm that Mr. Gorman's risk premium data support a base ROE in the range of 10.5 percent to 11.0 percent.

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

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

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

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

Q. Please explain your criticisms of Mr. Gorman's CAPM analysis.

A. Mr. Gorman's CAPM analysis produces an ROE range of 10.2 percent to 10.6 percent (Schedule MPG-15). The 10.2 percent estimate is based on his nine-company group and the 10.6 percent estimate is based on my 24-company group (Gorman at 34-35). The difference between the two estimates is that the average Beta risk coefficient for Mr. Gorman's group is 0.80 and for my group 0.85. Although Mr. Gorman and I could debate his risk-free rate and market risk premium selections at length, the 40 basis point difference in the results for our "comparable" groups is telling. MPS/LP clearly are not in the lower risk portion of the utility industry, and in his final analysis, Mr. Gorman gave no weight to the

10.6 percent CAPM estimate from my group. This is simply a further indication of the subtle downward bias that persists in his analysis and recommendations.

REBUTTAL TO OPC WITNESS RUSSELL W. TRIPPENSEE

Q. Why should the Commission reject Mr. Trippensee's recommendation to reduce ROE if a fuel and purchased power adjustment clause is adopted?

A. Mr. Trippensee's recommendation should be rejected because most of the companies used to estimate ROE already have fuel and purchased power cost recovery adjustment clauses. In this context, my analysis and cost of capital estimate explicitly assumes that an FAC will be adopted. In Rebuttal Schedule SCH-14, I present a survey of the comparable companies' status. That survey, based on the companies' 10-Ks, shows that all but 6 of the 24 companies have cost recovery mechanisms. In this context, if MPS/LP are granted an FAC, they will simply be like the comparable group companies. If the Company's request is denied, MPS/LP will be even more risky than the comparable group and the cost of capital will be understated. For these reasons, Mr. Trippensee's recommendation should be rejected.

ROE UPDATE

Q. Has your ROE recommendation changed since you filed your Direct Testimony in this case?

A. Yes. As I noted previously, the Company's requested ROE has been reduced by 25 basis points from its original filing. This net 25 basis point reduction consists of two parts. First, in Rebuttal Schedules SCH-15 and SCH-16, I provide updates of my initial DCF and risk premium analyses. In these schedules, the DCF

analysis indicates a reasonable ROE range of 10.5 percent to 10.9 percent. The risk premium analysis indicates an ROE of 10.72 percent. Based on these results, I estimate the current base cost of equity for the comparable group at 10.75 percent. Additionally, as explained in the Rebuttal Testimony of Company witness Dennis Williams, the Company has also updated its construction requirements through 2012. In Rebuttal Schedule SCH-17, I have used this information to update my comparison of the Company's construction requirements relative to the comparable group. That analysis shows that the Company's six-year construction expenditures as a percentage of net plant is 118.2 percent. For the comparable group the average is 60.9 percent. Based on this increase in the absolute and relative size of MPS/LP's construction program, I have increased the requested construction risk adder from 25 basis points to 50 basis points. Therefore, the net change in the requested ROE is a reduction of 25 basis points to 11.25 percent.

COST OF DEBT AND OVERALL RATE OF RETURN

Q. Are you sponsoring the cost of debt being requested by MPS and LP in this proceeding?

A. No. The cost of debt for each MPS and LP, respectively, is being sponsored by Company witness, Rich Winterman, who will also describe the Company's capital assignment process in his rebuttal testimony.

Q. What is the overall rate of return being requested by each MPS and LP, respectively, allowing for the change in your recommended ROE to 11.25%

and in the cost of debt for each operating division being sponsored by Mr. Winterman?

A. In Rebuttal Schedule SCH-18, I have computed the weighted average cost of capital using the 47.5% equity/52.5% debt capital structure being requested by the company as well as the aforementioned cost components. The overall rate of return being requested for MPS is 8.844% and for LP is 9.385%.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

Aquila Missouri

Gorman DCF Analysis with Reasonable Long-Term Growth

Line	Electric Utility	13-Week AVG Stock Price	AVG (%) Growth (1)	Annual Dividend	Adjusted Yield	Constant Growth DCF
1	Ameren Corp.	53.76	6.60%	2.54	5.04%	11.64%
2	DTE Energy	46.05	6.60%	2.06	4.77%	11.37%
3	FirstEnergy Corp.	59.23	6.60%	1.80	3.24%	9.84%
4	IDACORP, Inc.	39.13	6.60%	1.20	3.27%	9.87%
5	NiSource Inc.	23.51	6.60%	0.92	4.17%	10.77%
6	OGE Energy	38.79	6.60%	1.33	3.66%	10.26%
7	Pinnacle West Capital	48.18	6.60%	2.00	4.43%	11.03%
8	Puget Energy Inc.	24.30	6.60%	1.00	4.39%	10.99%
9	Xcel Energy Inc.	22.24	6.60%	0.89	4.27%	10.87%
10	Average	39.47	6.60%	1.53	4.14%	10.[illegible]%

(1) Forecasted long-term GDP growth.

Aquila Missouri

Update of Gorman Risk Premium Analysis - Treasury Bond

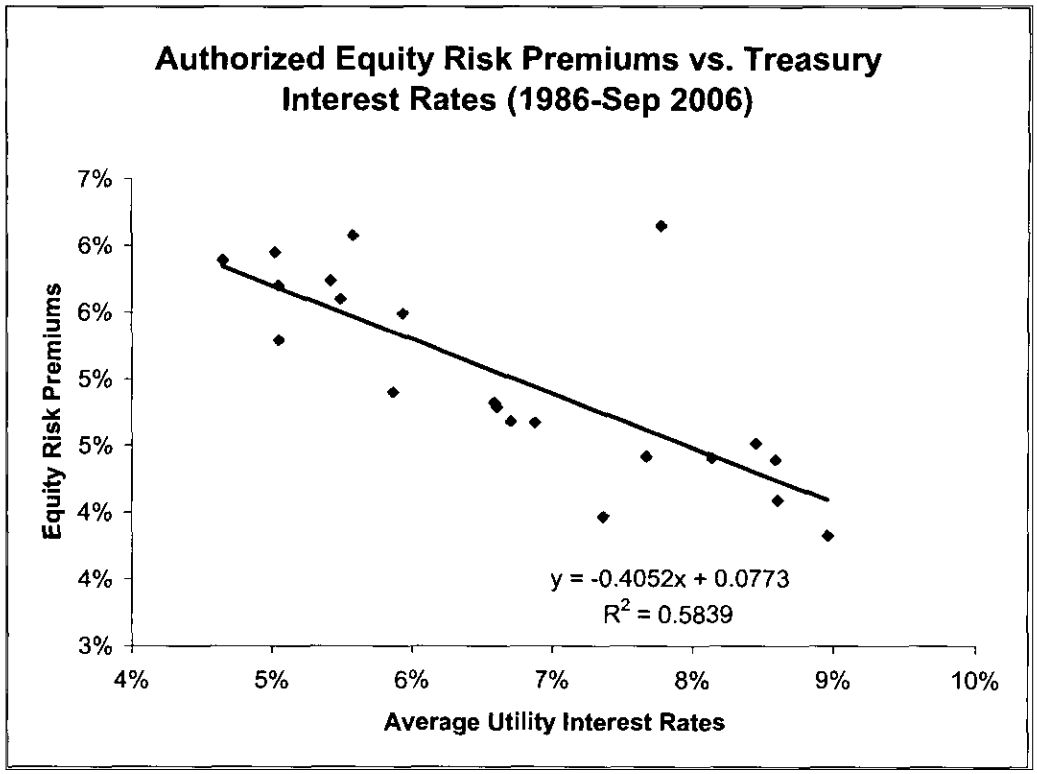
	TREASURY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1986	7.78%	13.93%	6.15%
1987	8.59%	12.99%	4.40%
1988	8.96%	12.79%	3.83%
1989	8.45%	12.97%	4.52%
1990	8.61%	12.70%	4.09%
1991	8.14%	12.55%	4.41%
1992	7.67%	12.09%	4.42%
1993	6.59%	11.41%	4.82%
1994	7.37%	11.34%	3.97%
1995	6.88%	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	5.42%	11.16%	5.74%
2003	5.02%	10.97%	5.95%
2004	5.05%	10.75%	5.70%
2005	4.65%	10.54%	5.89%
Sep-06	5.05%	10.34%	5.29%
AVERAGE	6.69%	11.71%	5.02%

INDICATED COST OF EQUITY	
GORMAN TREASURY BOND YIELD	5.00%
MOODY'S AVG ANNUAL YIELD DURING STUDY	6.69%
INTEREST RATE DIFFERENCE	-1.69%
INTEREST RATE CHANGE COEFFICIENT	-40.52%
ADUSTMENT TO AVG RISK PREMIUM	0.68%
BASIC RISK PREMIUM	5.02%
INTEREST RATE ADJUSTMENT	0.68%
EQUITY RISK PREMIUM	5.70%
GORMAN TREASURY BOND YIELD	5.00%
INDICATED EQUITY RETURN	**10.70%**

Source:
Gorman Schedule MPG-9; Gorman Direct, page 28, lines 16-22 for base Treasury bond yield.

Aquila Missouri

Update of Gorman Risk Premium Analysis - Treasury Bond



Aquila Missouri

Update of Gorman Risk Premium Analysis - Utility Bond

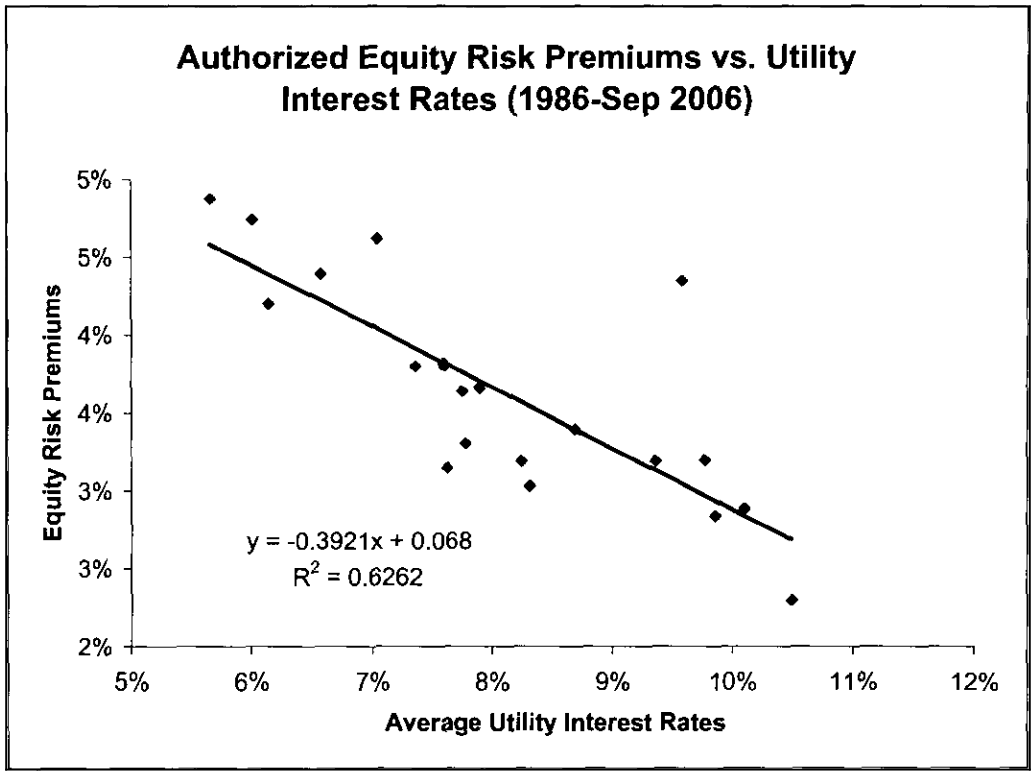
	MOODY'S "A" RATED PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1986	9.58%	13.93%	4.35%
1987	10.10%	12.99%	2.89%
1988	10.49%	12.79%	2.30%
1989	9.77%	12.97%	3.20%
1990	9.86%	12.70%	2.84%
1991	9.36%	12.55%	3.19%
1992	8.69%	12.09%	3.40%
1993	7.59%	11.41%	3.82%
1994	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	7.78%	11.09%	3.31%
2002	7.36%	11.16%	3.80%
2003	6.57%	10.97%	4.40%
2004	6.01%	10.75%	4.74%
2005	5.66%	10.54%	4.88%
Sep-06	6.14%	10.34%	4.20%
AVERAGE	8.07%	11.71%	3.64%

INDICATED COST OF EQUITY	
GORMAN "Baa" UTILITY BOND YIELD	6.12%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.07%
INTEREST RATE DIFFERENCE	-1.95%
INTEREST RATE CHANGE COEFFICIENT	-39.21%
ADUSTMENT TO AVG RISK PREMIUM	0.76%
BASIC RISK PREMIUM	3.64%
INTEREST RATE ADJUSTMENT	0.76%
EQUITY RISK PREMIUM	4.40%
GORMAN "Baa" UTILITY BOND YIELD	6.12%
INDICATED EQUITY RETURN	**10.52%**

Source:
Gorman Schedules MPG-10 & MPG-12

Aquila Missouri

Update of Gorman Risk Premium Analysis - Utility Bond



Aquila Missouri

Comparable Company Adjustment Clauses

No.	Reference Company	Operating Company By Jurisdiction	Adjustment Clause?	Comment
1	**Alliant Energy Co.**	Interstate Power & Light (IA)	**Yes**	Traditional fuel & purch power adjustment clause
		Wisconsin Power & Light (WI)	**Yes**	Fuel clause effective outside of monitoring ranges
2	**Ameren**	CIPSCO, CILCO, Ill. Pwr (IL)	**Pending**	Recovery allowed 1/2/07, under legal challenges
		Union Electric (MO)	**Pending**	Enabled in MO July 2005; rules expected 2006
3	**American Elec. Pwr.**	Columbus South, Ohio Pwr (OH)	**No**	Rates frozen under rate stabilization plan
		Public Svc. Co. of Oklahoma (OK)	**Yes**	Traditional fuel & purch power adjustment clause
		AEP Texas Central, North (TX)	**n/a**	Retail service provided through unaffiliated REPs
		SWEPCO (TX)	**Yes**	Traditional fuel & purch power adjustment clause
		Indiana Michigan Pwr Co. (IN)	**No**	Pending extension of fuel clause rate caps
		Appalachian Pwr Co. (VA)	**Yes**	Traditional fuel & purch power adjustment clause
		Kentucky Pwr Co. (KY)	**Yes**	Traditional fuel & purch power adjustment clause
4	**CH Energy Group**	Central Hudson G&E (NY)	**Yes**	Traditional fuel & purch power adjustment clause
5	**Cent. Vermont P.S.**	Cent. Vermont P.S. (VT)	**No**	No fuel adjustment clause in VT
6	**Con. Edison Co.**	Con. Ed., Orange & Rockland (NY)	**Yes**	Traditional fuel & purch power adjustment clause
7	**DTE Energy Co.**	Detroit Edison (MI)	**Yes**	Power Supply Cost Recovery mechanism
8	**Duquesne Light**	Duquesne Light (PA)	**No**	POLR rates fixed
9	**Empire District**	Empire District Electric Co. (MO)	**No**	Enabled in MO legislation, July 2005; but not granted by MPSC.
10	**Energy East Corp.**	Central Maine Power (ME)	**Yes**	Traditional fuel & purch power adjustment clause
		Rochester G&E, NYSEG (NY)	**Yes**	Traditional fuel & purch power adjustment clause
11	**Green Mtn. Power**	Green Mt. Power (VT)	**No**	No fuel adjustment clause in VT
12	**Hawaiian Electric**	Hawaiian Electric (HI)	**Yes**	Traditional fuel & purch power adjustment clause
13	**MGE Energy, Inc.**	Madison G&E (WI)	**Yes**	Fuel clause effective outside of monitoring ranges
14	**NiSource Inc.**	NIPSCO (IN)	**Yes**	Traditional fuel & purch power adjustment clause
15	**Northeast Utilities**	Connecticut Light & Power (CT)	**n/a**	T&D utility allowed to recover all supply costs
		Western Mass. Electric Co. (MA)	**n/a**	T&D utility allowed to recover all supply costs
		Public Service Co. of NH (NH)	**Yes**	Co. files periodically for new energy services (ES) rate to recover generation and PP costs
16	**NSTAR**	Boston Edison, Comm Elec, Cambridge Elec (MA)	**Yes**	Traditional fuel & purch power adjustment clause

Aquila Missouri

Comparable Company Adjustment Clauses (cont'd)

No.	Reference Company	Operating Company By Jurisdiction	Adjustment Clause?	Comment
17	**Pinnacle West**	APS (AZ)	**Yes**	Power Supply Adjustor mechanism
18	**PPL Corporation**	PPL Electric Utilities (PA)	**No**	Contracts, risk mgt programs to manage fuel risk
19	**Progress Energy**	Progress Energy Carolina (NC)	**Yes**	Traditional fuel & purch power adjustment clause
		Progress Energy Florida (FL)	**Yes**	Traditional fuel & purch power adjustment clause
20	**Puget Energy, Inc.**	Puget Sound Energy (WA)	**Yes**	Power Cost Adjustment mechanism
21	**SCANA Corp.**	South Carolina E&G (SC)	**Yes**	Traditional fuel & purch power adjustment clause
22	**Southern Co.**	Alabama Power (AL)	**Yes**	Traditional fuel & purch power adjustment clause
		Georgia Power, Sav Pwr (GA)	**Yes**	Traditional fuel & purch power adjustment clause
		Gulf Power (FL)	**Yes**	Traditional fuel & purch power adjustment clause
		Mississippi Power (MS)	**Yes**	Traditional fuel & purch power adjustment clause
23	**Vectren Corp.**	Southern Indiana G&E (IN)	**Yes**	Traditional fuel & purch power adjustment clause
24	**Xcel Energy Inc.**	NSP-Minnesota (MN)	**Yes**	Traditional fuel & purch power adjustment clause
		NSP-Wisconsin (WI)	**Yes**	Fuel clause effective outside of monitoring ranges
		PSC Colorado (CO)	**Yes**	Through Electric Commodity Adjustment
		Southwestern Public Service (TX)	**Yes**	Traditional fuel & purch power adjustment clause
	Summary of Results	Comparable Cos with Trackers	**18**	
		Comparable Cos w/o Trackers	**6**	
		Total Comparable Cos	**24**	

Source: Company 10-K's

Aquila Missouri
Discounted Cash Flow Analysis
Summary Of DCF Model Results

Company	Traditional Constant Growth DCF Model	Constant Growth DCF Model Long-Term GDP Growth	Low Near-Term Growth Two-Stage Growth DCF Model
1 Alliant Energy Co.	8.3%	9.9%	9.9%
2 Ameren	8.6%	11.3%	10.5%
3 American Elec. Pwr.	9.6%	10.5%	10.6%
4 CH Energy Group	8.3%	10.7%	10.1%
5 Cent. Vermont P.S.	10.8%	10.7%	10.0%
6 Con. Edison	8.4%	11.4%	10.7%
7 DTE Energy Co.	8.9%	11.2%	10.8%
8 Duquesne Light	10.4%	11.6%	10.8%
9 Empire District	11.7%	12.0%	11.1%
10 Energy East Corp.	9.4%	11.5%	11.3%
11 Green Mtn. Power	8.2%	10.1%	10.3%
12 Hawaiian Electric	9.3%	11.1%	10.4%
13 MGE Energy, Inc.	10.1%	10.7%	10.1%
14 NiSource Inc.	8.1%	10.5%	10.1%
15 Northeast Utilities	9.9%	9.6%	9.5%
16 NSTAR	10.2%	10.4%	10.5%
17 Pinnacle West	10.3%	11.0%	10.7%
18 PPL Corporation	12.6%	10.0%	10.8%
19 Progress Energy	9.0%	11.8%	11.1%
20 Puget Energy, Inc.	9.5%	10.7%	10.3%
21 SCANA Corp.	9.0%	10.8%	10.4%
22 Southern Co.	9.1%	11.0%	10.7%
23 Vectren Corp.	8.6%	11.1%	10.7%
24 Xcel Energy Inc.	9.4%	10.8%	10.7%
GROUP AVERAGE	9.5%	10.9%	10.5%
GROUP MEDIAN	9.4%	10.8%	10.6%

Sources: Value Line Investment Survey, Electric Utility (East), Dec 1, 2006; (Central), Dec 29, 2006; (West), Nov 10, 2006.

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

Aquila Missouri
Discounted Cash Flow Analysis
Traditional Constant Growth DCF Model

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
				Projected Growth Rate Analysis										
				Year 2010 "BR" Growth Rate Calculation									Average	ROE
Company	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	DPS	EPS	Retention Rate (B)	NBV	ROE (R)	B*R Growth	Zacks	Value Line	GDP Growth	Growth *(Cols 9-12)*	K=Div Yld+G *(Cols 3+13)*
1 Alliant Energy Co.	38.37	1.27	3.31%	1.57	2.60	39.62%	26.10	9.96%	3.95%	4.00%	5.50%	6.60%	5.01%	8.3%
2 Ameren	53.97	2.54	4.71%	2.54	3.20	20.63%	34.65	9.24%	1.90%	6.10%	1.00%	6.60%	3.90%	8.6%
3 American Elec. Pwr.	40.95	1.59	3.88%	2.00	3.75	46.67%	30.25	12.40%	5.79%	3.90%	6.50%	6.60%	5.70%	9.6%
4 CH Energy Group	52.40	2.16	4.12%	2.20	3.25	32.31%	35.50	9.15%	2.96%	NA	3.00%	6.60%	4.19%	8.3%
5 Cent. Vermont P.S.	22.37	0.92	4.11%	0.92	1.60	42.50%	19.65	8.14%	3.46%	NA	10.00%	6.60%	6.69%	10.8%
6 Con. Edison	47.96	2.32	4.84%	2.38	3.05	21.97%	33.65	9.06%	1.99%	3.70%	2.00%	6.60%	3.57%	8.4%
7 DTE Energy Co.	46.06	2.14	4.65%	2.32	3.50	33.71%	36.25	9.66%	3.26%	4.30%	3.00%	6.60%	4.29%	8.9%
8 Duquesne Light	19.89	1.00	5.03%	1.00	1.50	33.33%	11.00	13.64%	4.55%	NA	5.00%	6.60%	5.38%	10.4%
9 Empire District	23.70	1.28	5.40%	1.28	1.75	26.86%	17.00	10.29%	2.76%	NA	9.50%	6.60%	6.29%	11.7%
10 Energy East Corp.	24.48	1.21	4.94%	1.40	2.00	30.00%	21.25	9.41%	2.82%	4.50%	4.00%	6.60%	4.48%	9.4%
11 Green Mtn. Power	33.74	1.18	3.50%	1.54	2.55	39.61%	25.35	10.06%	3.98%	NA	3.50%	6.60%	4.69%	8.2%
12 Hawaiian Electric	27.41	1.24	4.52%	1.24	1.75	29.14%	17.00	10.29%	3.00%	6.50%	3.00%	6.60%	4.78%	9.3%
13 MGE Energy, Inc.	34.19	1.40	4.10%	1.44	2.45	41.22%	18.95	12.93%	5.33%	NA	6.00%	6.60%	5.98%	10.1%
14 NiSource Inc.	23.58	0.92	3.90%	1.00	1.75	42.86%	21.00	8.33%	3.57%	3.30%	3.50%	6.60%	4.24%	8.1%
15 Northeast Utilities	26.32	0.78	2.96%	0.93	1.70	45.29%	19.55	8.70%	3.94%	8.70%	8.50%	6.60%	6.93%	9.9%
16 NSTAR	34.79	1.33	3.82%	1.65	2.75	40.00%	19.00	14.47%	5.79%	5.80%	7.50%	6.60%	6.42%	10.2%
17 Pinnacle West	48.41	2.13	4.40%	2.43	3.70	34.32%	41.05	9.01%	3.09%	6.80%	7.00%	6.60%	5.87%	10.3%
18 PPL Corporation	35.07	1.20	3.42%	1.80	3.50	48.57%	17.00	20.59%	10.00%	9.20%	11.00%	6.60%	9.20%	12.6%
19 Progress Energy	47.01	2.46	5.23%	2.52	2.90	13.10%	33.95	8.54%	1.12%	3.60%	NA	6.60%	3.77%	9.0%
20 Puget Energy, Inc.	24.31	1.00	4.11%	1.10	1.75	37.14%	21.25	8.24%	3.06%	7.00%	5.00%	6.60%	5.41%	9.5%
21 SCANA Corp.	41.02	1.72	4.19%	1.90	3.25	41.54%	29.25	11.11%	4.62%	4.70%	3.50%	6.60%	4.85%	9.0%
22 Southern Co.	36.13	1.60	4.43%	1.80	2.50	28.00%	18.25	13.70%	3.84%	4.70%	3.50%	6.60%	4.66%	9.1%
23 Vectren Corp.	28.32	1.27	4.48%	1.39	1.90	26.84%	17.40	10.92%	2.93%	4.00%	3.00%	6.60%	4.13%	8.6%
24 Xcel Energy Inc.	22.31	0.93	4.17%	1.10	1.75	37.14%	16.00	10.94%	4.06%	4.30%	6.00%	6.60%	5.24%	9.4%
GROUP AVERAGE	34.70	1.48	4.26%						3.82%	5.28%	5.24%	6.60%	5.24%	9.5%
GROUP MEDIAN			4.18%											9.4%

Sources: Value Line Investment Survey, Electric Utility (East), Dec 1, 2006; (Central), Dec 29, 2006; (West), Nov 10, 2006.

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

Aquila Missouri
Discounted Cash Flow Analysis
Constant Growth DCF Model
Long-Term GDP Growth

	(15)	(16)	(17)	(18)	(19)
Company	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	GDP Growth	ROE K=Div Yld+G *(Cols 17+18)*
1 Alliant Energy Co.	38.37	1.27	3.31%	6.60%	9.9%
2 Ameren	53.97	2.54	4.71%	6.60%	11.3%
3 American Elec. Pwr.	40.95	1.59	3.88%	6.60%	10.5%
4 CH Energy Group	52.40	2.16	4.12%	6.60%	10.7%
5 Cent. Vermont P.S.	22.37	0.92	4.11%	6.60%	10.7%
6 Con. Edison	47.96	2.32	4.84%	6.60%	11.4%
7 DTE Energy Co.	46.06	2.14	4.65%	6.60%	11.2%
8 Duquesne Light	19.89	1.00	5.03%	6.60%	11.6%
9 Empire District	23.70	1.28	5.40%	6.60%	12.0%
10 Energy East Corp.	24.48	1.21	4.94%	6.60%	11.5%
11 Green Mtn. Power	33.74	1.18	3.50%	6.60%	10.1%
12 Hawaiian Electric	27.41	1.24	4.52%	6.60%	11.1%
13 MGE Energy, Inc.	34.19	1.40	4.10%	6.60%	10.7%
14 NiSource Inc.	23.58	0.92	3.90%	6.60%	10.5%
15 Northeast Utilities	26.32	0.78	2.96%	6.60%	9.6%
16 NSTAR	34.79	1.33	3.82%	6.60%	10.4%
17 Pinnacle West	48.41	2.13	4.40%	6.60%	11.0%
18 PPL Corporation	35.07	1.20	3.42%	6.60%	10.0%
19 Progress Energy	47.01	2.46	5.23%	6.60%	11.8%
20 Puget Energy, Inc.	24.31	1.00	4.11%	6.60%	10.7%
21 SCANA Corp.	41.02	1.72	4.19%	6.60%	10.8%
22 Southern Co.	36.13	1.60	4.43%	6.60%	11.0%
23 Vectren Corp.	28.32	1.27	4.48%	6.60%	11.1%
24 Xcel Energy Inc.	22.31	0.93	4.17%	6.60%	10.8%
GROUP AVERAGE	34.70	1.48	4.26%	6.60%	10.9%
GROUP MEDIAN			4.18%		10.8%

Sources: Value Line Investment Survey, Electric Utility (East), Dec 1, 2006; (Central), Dec 29, 2006; (West), Nov 10, 2006.

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

Aquila Missouri
Discounted Cash Flow Analysis
Low Near-Term Growth
Two-Stage Growth DCF Model

	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
				CASH FLOWS							
Company	Next Year's Div	2010 Div	Annual Change to 2010	Recent Price	Year 1 Div	Year 2 Div	Year 3 Div	Year 4 Div	Year 5 Div	Year 5-150 Div Growth	ROE=Internal Rate of Return *(Yrs 0-150)*
1 Alliant Energy Co.	1.27	1.57	0.10	38.37	1.27	1.37	1.47	1.57	1.67	6.60%	9.9%
2 Ameren	2.54	2.54	0.00	53.97	2.54	2.54	2.54	2.54	2.71	6.60%	10.5%
3 American Elec. Pwr.	1.59	2.00	0.14	40.95	1.59	1.73	1.86	2.00	2.13	6.60%	10.6%
4 CH Energy Group	2.16	2.20	0.01	52.40	2.16	2.17	2.19	2.20	2.35	6.60%	10.1%
5 Cent. Vermont P.S.	0.92	0.92	0.00	22.37	0.92	0.92	0.92	0.92	0.98	6.60%	10.0%
6 Con. Edison	2.32	2.38	0.02	47.96	2.32	2.34	2.36	2.38	2.54	6.60%	10.7%
7 DTE Energy Co.	2.14	2.32	0.06	46.06	2.14	2.20	2.26	2.32	2.47	6.60%	10.8%
8 Duquesne Light	1.00	1.00	0.00	19.89	1.00	1.00	1.00	1.00	1.07	6.60%	10.8%
9 Empire District	1.28	1.28	0.00	23.70	1.28	1.28	1.28	1.28	1.36	6.60%	11.1%
10 Energy East Corp.	1.21	1.40	0.06	24.48	1.21	1.27	1.34	1.40	1.49	6.60%	11.3%
11 Green Mtn. Power	1.18	1.54	0.12	33.74	1.18	1.30	1.42	1.54	1.64	6.60%	10.3%
12 Hawaiian Electric	1.24	1.24	0.00	27.41	1.24	1.24	1.24	1.24	1.32	6.60%	10.4%
13 MGE Energy, Inc.	1.40	1.44	0.01	34.19	1.40	1.41	1.43	1.44	1.54	6.60%	10.1%
14 NiSource Inc.	0.92	1.00	0.03	23.58	0.92	0.95	0.97	1.00	1.07	6.60%	10.1%
15 Northeast Utilities	0.78	0.93	0.05	26.32	0.78	0.83	0.88	0.93	0.99	6.60%	9.5%
16 NSTAR	1.33	1.65	0.11	34.79	1.33	1.44	1.54	1.65	1.76	6.60%	10.5%
17 Pinnacle West	2.13	2.43	0.10	48.41	2.13	2.23	2.33	2.43	2.59	6.60%	10.7%
18 PPL Corporation	1.20	1.80	0.20	35.07	1.20	1.40	1.60	1.80	1.92	6.60%	10.8%
19 Progress Energy	2.46	2.52	0.02	47.01	2.46	2.48	2.50	2.52	2.69	6.60%	11.1%
20 Puget Energy, Inc.	1.00	1.10	0.03	24.31	1.00	1.03	1.07	1.10	1.17	6.60%	10.3%
21 SCANA Corp.	1.72	1.90	0.06	41.02	1.72	1.78	1.84	1.90	2.03	6.60%	10.4%
22 Southern Co.	1.60	1.80	0.07	36.13	1.60	1.67	1.73	1.80	1.92	6.60%	10.7%
23 Vectren Corp.	1.27	1.39	0.04	28.32	1.27	1.31	1.35	1.39	1.48	6.60%	10.7%
24 Xcel Energy Inc.	0.93	1.10	0.06	22.31	0.93	0.99	1.04	1.10	1.17	6.60%	10.7%
GROUP AVERAGE											10.5%
GROUP MEDIAN											10.6%

Sources: Value Line Investment Survey, Electric Utility (East), Dec 1, 2006; (Central), Dec 29, 2006; (West), Nov 10, 2006.

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

Aquila Missouri
Discounted Cash Flow Analysis
DCF Analysis Column Descriptions

Column 1: Three-month Average Price per Share (Oct 2006-Dec 2006)

Column 2: Estimated 2007 Dividends per Share from Value Line

Column 3: Column 2 Divided by Column 1

Column 4: Estimated 2010 Dividends per Share from Value Line

Column 5: Estimated 2010 Earnings per Share from Value Line

Column 6: One Minus (Column 4 Divided by Column 5)

Column 7: Estimated 2010 Net Book Value per Share from Value Line

Column 8: Column 5 Divided by Column 7

Column 9: Column 6 Multiplied by Column 8

Column 10: "Next 5 Years" Company Growth Estimate as Reported by Zacks.com

Column 11: "Est'd 03-05 to 09-11" Earnings Growth Reported by Value Line.

Column 12: Average of GDP Growth During the Last 10 year, 20 year, 30 year, 40 year, 50 year, and 58 year growth periods.

Column 13: Average of Columns 9-12

Column 14: Column 3 Plus Column 13

Column 15: See Column 1

Column 16: See Column 2

Column 17: Column 16 Divided by Column 15

Column 18: See Column 12

Column 19: Column 17 Plus Column 18

Column 20: See Column 2

Column 21: See Column 4

Column 22: (Column 21 Minus Column 20) Divided by Three

Column 23: See Column 1

Column 24: See Column 20

Column 25: Column 24 Plus Column 22

Column 26: Column 25 Plus Column 22

Column 27: Column 26 Plus Column 22

Column 28: Column 27 Increased by the Growth Rate Shown in Column 29

Column 29: See Column 12

Column 30: The Internal Rate of Return of the Cash Flows in Columns 23-28 along with the Dividends for the Years 6-150 Implied by the Growth Rates shown in Column 29

Aquila Missouri

Risk Premium Analysis

	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%
Sep-06	6.02%	10.34%	4.32%
AVERAGE	9.35%	12.48%	3.13%

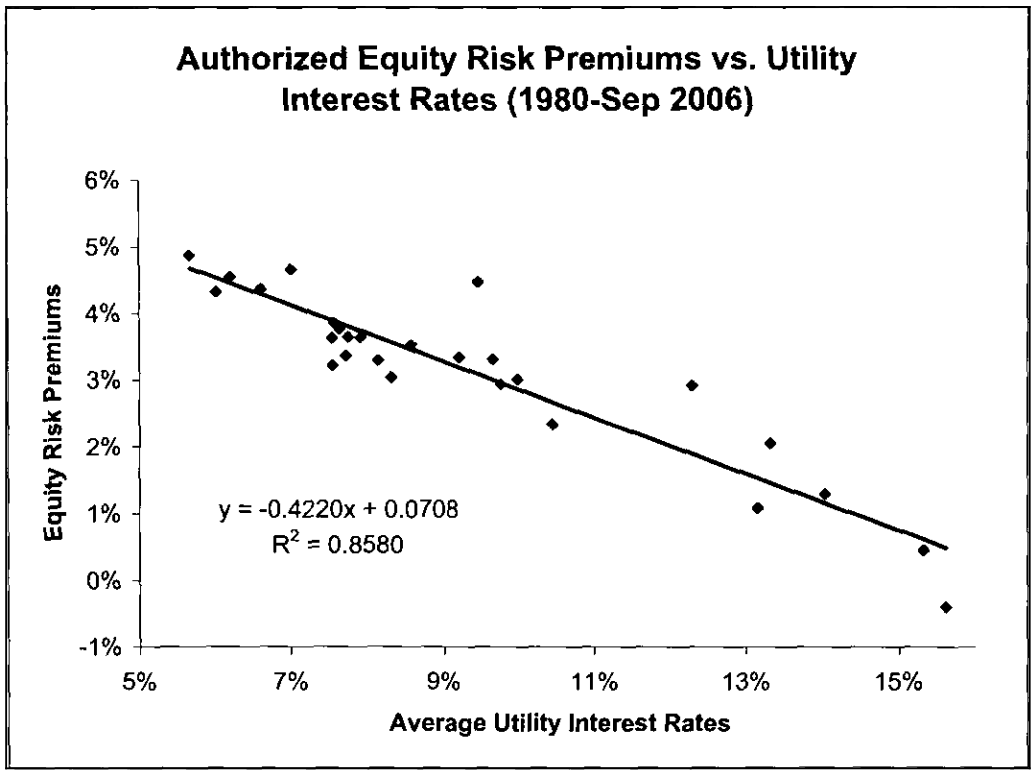
INDICATED COST OF EQUITY	
PROJECTED TRIPLE-B UTILITY BOND YIELD*	6.30%
MOODY'S AVG ANNUAL YIELD DURING STUDY	9.35%
INTEREST RATE DIFFERENCE	-3.05%
INTEREST RATE CHANGE COEFFICIENT	-42.20%
ADUSTMENT TO AVG RISK PREMIUM	1.29%
BASIC RISK PREMIUM	3.13%
INTEREST RATE ADJUSTMENT	1.29%
EQUITY RISK PREMIUM	4.42%
PROJECTED TRIPLE-B UTILITY BOND YIELD*	6.30%
INDICATED EQUITY RETURN	**10.72%**

Sources:

(1) Moody's Investors Service

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

Aquila Missouri
Risk Premium Analysis



Schedule SCH-17

Aqua Missouri

Capital Spending Relative to Net Plant

($millions unless otherwise noted)

No.	Reference Company	2005 Net Plant	Common Shares Outstanding 2006	2007	2008-2011	Capital Spending Per Share 2006	2007	2008-2011	Total Capital Spending 2006 -2011	Relative to Net Plant
1	Alliant Energy Co.	4,866	115.0	113.0	116.0	4.15	5.30	4.30	3,071	63.1%
2	Ameren	13,572	207.2	209.8	216.8	5.90	9.05	5.55	7,934	58.5%
3	American Elec. Pwr.	24,284	396.0	398.0	404.0	9.50	9.05	7.75	19,888	81.9%
4	CH Energy Group	780	15.8	15.8	15.0	5.15	5.10	5.25	477	61.1%
5	Cent. Vermont P.S.	301	10.3	10.5	10.7	3.95	2.40	2.35	166	55.3%
6	Con. Edison	17,112	255.0	257.0	263.0	7.20	7.15	5.70	9,670	56.5%
7	DTE Energy Co.	10,830	177.0	177.0	168.0	8.45	7.40	7.75	8,013	74.0%
8	Duquesne Light	1,542	87.8	88.5	90.0	2.45	1.75	1.00	730	47.3%
9	Empire District	896	30.3	31.3	33.0	3.90	4.85	3.00	666	74.3%
10	Energy East Corp.	5,784	147.8	147.8	147.8	3.00	2.70	2.50	2,320	40.1%
11	Green Mtn. Power	237	5.3	5.4	5.5	4.30	3.75	2.75	103	43.6%
12	Hawaiian Electric	2,543	81.2	81.4	82.0	2.65	2.25	1.50	890	35.0%
13	MGE Energy, Inc.	668	20.7	20.7	20.7	3.95	4.00	4.00	496	74.2%
14	NiSource Inc.	9,554	273.0	273.5	275.0	2.35	2.40	2.25	3,773	39.5%
15	Northeast Utilities	6,417	154.2	155.2	158.2	5.85	5.80	4.40	4,587	71.5%
16	NSTAR	3,702	106.8	106.8	106.8	3.65	3.35	2.75	1,923	51.9%
17	Pinnacle West	7,577	99.6	99.6	100.0	8.90	8.60	8.00	4,943	65.2%
18	PPL Corporation	10,916	381.0	382.0	371.0	3.60	4.05	3.00	7,371	67.5%
19	Progress Energy	14,442	254.0	256.0	261.0	6.95	6.75	6.50	10,279	71.2%
20	Puget Energy, Inc.	4,631	116.4	117.0	123.5	7.50	4.35	4.75	3,728	80.5%
21	SCANA Corp.	6,734	117.0	117.0	117.0	4.10	3.50	4.00	2,761	41.0%
22	Southern Co.	29,480	747.0	753.0	770.0	4.15	4.65	3.75	18,152	61.6%
23	Vectren Corp.	2,252	76.2	76.3	76.6	4.90	4.65	3.55	1,816	80.6%
24	Xcel Energy Inc.	14,696	406.0	427.0	440.0	4.00	4.15	3.50	9,556	65.0%
	Average									**60.9%**
	Aquila-MPS/LP 2005 Net Plant	1,297				2006-2011 Capital Spending			1,203	**92.8%**
	Aquila-MPS/LP 2006 Net Plant	1,333				2007-2012 Capital Spending			1,576	**118.2%**

Source: Value Line Investment Survey, Electric Utility (East), Dec 1, 2006; (Central), Dec 29, 2006; (West), Nov 10, 2006.

AQUILA MISSOURI
WEIGHTED COST OF CAPITAL

MPS

	%	Cost	Weighted Cost
COMMON EQUITY	47.5%	11.250%	5.344%
LONG TERM DEBT	52.5%	6.668%	3.501%
Total	100.0%		8.844%

LP

	%	Cost	Weighted Cost
COMMON EQUITY	47.5%	11.250%	5.344%
LONG TERM DEBT	52.5%	7.698%	4.041%
Total	100.0%		9.385%

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Aquila, Inc. d/b/a Aquila Networks-MPS and Aquila Networks-L&P, for authority to file tariffs increasing electric rates for the service provided to customers in the Aquila Networks-MPS and Aquila Networks-L&P area	))))))	Case No. ER-2007-0004

County of Travis)
) ss
State of Texas)

AFFIDAVIT OF SAMUEL C. HADAWAY

Samuel C. Hadaway, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Samuel C. Hadaway;" that said testimony was prepared by him and under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge, information, and belief.

Samuel C. Hadaway
Samuel C. Hadaway

Subscribed and sworn to before me this 16th day of February, 2007.

CYNTHIA PIERCE
Notary Public
STATE OF TEXAS
My Comm. Exp. 06-12-2010

Notary Public

My Commission expires:

6-12-10