Exhibit No.:
Issues: Cost of Capital
Witness: Samuel C. Hadaway
Sponsoring Party: Aquila Networks-L&P
Case No.: HR-

Before the Public Service Commission
of the State of Missouri

Direct Testimony

of

Samuel C. Hadaway

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**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
DIRECT TESTIMONY OF SAMUEL C. HADAWAY
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-L&P
CASE NO. HR-_______**

I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

Q. Please state your name, occupation, and business address.

A. My name is Samuel C. Hadaway. I am a Principal in FINANCO, Inc., Financial Analysis Consultants, 3520 Executive Center Drive, Austin, Texas 78731.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Aquila, Inc. ("Aquila" or "Company") in this proceeding before the Missouri Public Service Commission ("Commission").

Q. Please state your educational background and describe your professional training and experience.

A. I have an economics degree from Southern Methodist University and MBA and Ph.D. degrees in finance from the University of Texas at Austin ("UT Austin"). I am presently an adjunct professor in the McCombs School of Business at UT Austin. I have taught economics and finance courses at several universities, and I have conducted research and directed graduate students writing in these areas. I was previously Director of the Economic Research Division at the Public Utility Commission of Texas ("PUC"), where I supervised the PUC finance, economics, and accounting staff and served as the PUC's chief financial witness in electric and telephone utility rate cases. In various utility conferences I have taught courses on cost of capital, capital structure, utility financial condition, and cost allocation and rate design methods. I have made presentations before the New

York Society of Security Analysts, the National Rate of Return Analysts Forum, and various other professional and legislative groups. I have served on the board of directors and as a vice president of the Financial Management Association.

A list of my publications and testimony I have given before various regulatory bodies and in state and federal courts is contained in my resume, which is included as Appendix A.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to estimate the market required rate of return on equity ("ROE") for Aquila's St. Joseph Light & Power Company ("LP") Missouri steam operations and to present and support the requested capital structure and overall rates of return for the Company's steam operations.

Q. Please describe the LP steam operations.

A. The steam operations of LP flow steam generated as a by-product from LP's power production plants to steam customers through a system built specifically to handle its distribution. Since electric power and steam are produced simultaneously by LP's power generating facilities, there should be no differentiation in the cost of capital or capital structure between the two businesses.

Q. What are you recommending as the cost of capital that should be adopted for LP's steam operations?

A. Because the products of steam and electricity for LP are sourced from the same investment in generation made by the Company, I am recommending the same allowed return and capital structure for both. In support of my recommendations for the steam operations, I am adopting the same analysis, conclusions and testimony as I filed for the LP electric operations. There is no differentiation in the level of risk between the two businesses and they should be entitled to earn the same rate of return. As in the LP electric case, I am therefore recommending that the Commission allow LP's steam operations to earn a return on equity of 11.5%, a cost of debt of 7.96% on a capital structure consisting of 48.2% equity and 51.2% debt. My Schedule SCH- 6a has been included to illustrate the "stand-alone" credit metrics for the LP steam operations with the same sensitivities to assumed rate relief as illustrated in Schedule SCH- 6 of my electric testimony.

Q. Please outline and describe the testimony you will present.

A. My testimony is divided into six sections. Following this introduction, in Section II, I present and explain the requested capital structure and overall rates of return for MPS/LP. In Section III, I discussion the concept of financial integrity and explain why it is a key element in the regulatory process. In Section IV, I review various methods for estimating the cost of equity capital. In this section, I discuss the discounted cash flow ("DCF") model as well as risk premium methods and other approaches often used to estimate the cost of capital. In Section V, I review general capital market costs and conditions and discuss recent developments in the electric utility industry that affect the cost of capital. In Section VI, I present the details of my cost of equity studies and provide a summary table of my ROE results.

Q. Please summarize your cost of equity studies and state your overall rate of return recommendation.

A. First, my recommendation is premised upon the fair rate of return principles established by the U.S. Supreme Court in *Federal Power Commission v. Hope Natural Gas Company*, 320 US 591, 603 (1944) and *Bluefield Waterworks v. Public Service Commission*, 262 US 679, 693 (1923). That is to say, the return authorized a utility by a regulatory body, such as the Commission, should be commensurate with returns on investments in other enterprises having corresponding risks. The return should also be sufficient to assure confidence in the financial integrity of the utility so as to maintain its credit and to attract capital so that it is able to properly discharge its public duties. Given these legal principles, I have used several methods to determine an appropriate ROE and overall rates of return for Aquila's Missouri operating divisions. These methods and the underlying economic models are applied to an investment grade company reference group of other similarly situated electric utilities.

Q. Please explain.

A. My ROE estimate is based on alternative versions of the DCF model and is confirmed by my risk premium analysis and my review of projected interest rates and economic conditions. The DCF model cannot be applied directly to Aquila because the Company does not presently pay dividends to its shareholders and, in any case, diverse "parent" Company financial data are not the appropriate basis for setting the required rates of return for the MPS/LP operating divisions. For this reason I apply the DCF model to a large sample reference group of investment grade electric utilities selected from the *Value Line Investment Survey*. To be included in my group, reference companies must have at least a BBB-/Baa3 bond rating; they must derive at least 70 percent of revenues from regulated utility sales; and they must have consistent financial records not affected by recent mergers or restructuring, and a consistent dividend record with no recent dividend cuts.

To test my DCF results, I also conduct a risk-premium analysis based on ROEs allowed by state regulators relative to Moody's utility debt costs. In this analysis, I also include S&P's forecasted higher interest rates for the coming year. S&P forecasts that long-term Government and corporate interest rates will increase by 80 to 100 basis points (0.80%-1.00%) by the 2nd Quarter of 2006. Under current economic, market, and electric utility industry conditions, the combination of the DCF and risk premium models tempered by consensus forecasts about future interest rates provides an appropriate approach for estimating MPS/LP's fair cost of equity capital.

Q. Should the reference group ROE be applied directly to MPS/LP?

A. No. The reference group is the appropriate starting for point for estimating ROE, but the reference group ROE is lower than the fair cost of equity for MPS/LP. This is so because MPS/LP faces considerably higher construction and operating risks than the average company in the reference group. Under these circumstances the Commission should add an ROE increment or adjustment to the reference group ROE to account for MPS/LP's higher risks.

Q. Why do you use this approach?

A. Again, as I have indicated and as I will discuss in more detail below, this approach of using a comparable reference group of investment grade utilities and adjusting for risk is consistent with the legal requirements of *Hope* and *Bluefield* and it is the appropriate method for determining a fair rate of return on MPS/LP equity capital. It is important to note that the risk adjustment is not related to Aquila's relatively weak financial condition that has resulted from the Company's financial losses. MPS/LP's specific risks and the need for the risk adjustment stem from the higher construction and operating requirements they face.

Q. Please explain.

A. In the assessment of a fair rate of return for MPS/LP, I have evaluated the specific circumstances of these operating divisions relative to my reference group of investment grade utilities. The two key additional risk factors for MPS/LP are the magnitude of their expected capital expenditure programs in Missouri and the additional operating risks they face. As shown in my Schedule SCH-1, page 1 of 3, MPS/LP capital expenditures over the next five years are expected to equal about 81 percent of their current net plant. For the average reference company, capital spending for the next five years is expected to be only 49 percent of net plant. MPS/LP's larger construction program increases their financing and regulatory risks and therefore should be reflected in a higher allowed rate of return. The Missouri expenditure program is discussed more fully in Company witness Jon Empson's testimony.

Q. Are there other risk factors for MPS/LP?

A. Yes. Other less easily quantified risk factors also include MPS/LP's smaller size and the heretofore existing prohibition against fuel and purchased power adjustment clauses in Missouri. This latter risk factor may have been mitigated by legislation recently enacted by the Missouri legislature. I say "may" because at the time of this testimony it is uncertain whether this legislation will become law and, if it becomes law, how it will be applied to MPS/LP in this case. In Schedule SCH-1, pages 2 and 3, I have listed the status of fuel and purchased power adjustment clauses for each reference company. That analysis shows that about two-thirds of the companies have adjustment clauses. Additionally, there is sound academic evidence to support a small company risk premium. Considering all of this, to reflect the higher risk factors for MPS/LP's operations, I have adjusted the ROE estimate from the reference group upward by 50 basis points.

Q. What DCF ROE range is indicated by your analysis?

A. My reference group analysis indicates a DCF ROE range of 10.6 percent to 11.1 percent. As I will explain in more detail later, results from the traditional constant growth DCF model fail to meet basic checks of reasonableness and, therefore, are not included in my recommended DCF range.

Q. Please explain.

A. Currently, the traditional constant growth DCF model does not reasonably reflect the market cost of equity because that model, as typically applied, depends on historically low dividend yields and pessimistic analysts' growth forecasts. These near-term circumstances do not reasonably reflect longer-term expectations for higher capital costs. My risk premium analysis, which serves as a check of reasonableness for the DCF results, demonstrates this fact. My basic risk premium analysis, based on allowed returns from other state regulators, indicates that an ROE of 11.0 percent is appropriate, with other risk premium approaches indicating ROEs as high as 11.8 percent.

Because recent historical data have a significant effect in the traditional constant growth DCF model and because recent data appear to represent historic lows in the economic cycle, those data should not be the primary basis for setting MPS/LP's allowed rate of return.

Q. What do you conclude from your analysis?

A. Based on the combination of quantitative model results and my review of current economic, market, and electric utility industry conditions, I estimate the reference group companies' fair cost of equity at 11.0 percent. This estimate is consistent with capital market trends and projections and is a reasonable estimate of capital costs that will prevail during the period that the rates from this case are in effect. To reflect the higher utility risk profile of MPS/LP as discussed previously, the ROE for the operating divisions should be increased by 50 basis points relative to the cost of equity for the reference group, which results in a requested ROE of 11.5 percent.

Q. What is the cost of debt that you have used for MPS/LP?

A. As shown on Schedule SCH-2, the cost of debt for the MPS and LP divisions are 6.7 percent and 7.96 percent, respectively. These figures result from the Company's internal capital assignment process whereby it assigns capital to its operating divisions on an "as needed basis." The cost of debt for each operating division reflects the average cost rates for issues assigned to each division as of December 31, 2004. All of the debt issues assigned to either division have been assigned at "investment grade" rates per the Company's ongoing policy to protect its ratepayers from the activities of its non-regulated businesses through its capital assignment process.

II. MPS/LP's CAPITAL STRUCTURE AND OVERALL RATE OF RETURN

Q. Please summarize the Company's requested capital structure and overall rate of return.

A. The following tables identify the requested capital structure components and the resulting overall rates of return:

Missouri Public Service

Capital Components	Ratio	Cost	Weighted Cost
Debt	51.8%	6.70%	3.47%
Common Equity	48.2%	11.50%	5.54%
TOTAL	100.00%		9.01%

St. Joseph Light & Power

Capital Components	Ratio	Cost	Weighted Cost
Debt	51.8%	7.96%	4.12%
Common Equity	48.2%	11.50%	5.54%
TOTAL	100.00%		9.67%

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

A. The Company is requesting a hypothetical capital structure based on the 2004 capital structure percentages of the investment grade 29-company reference group used to estimate ROE. This approach is appropriate because it comports with the *Hope* and *Bluefield* principles. That is to say, it matches the financial risk of the reference group to the estimated ROE and resulting overall rates of return for MPS/LP. It is also consistent with the Company's internal capital assignment process, which it has used to assign the appropriate levels and amounts of equity and debt to its utility operating divisions since 1987. Using this process, the Company has consistently assigned 47.5 percent equity and 52.5 percent debt to its electric utility operating divisions. As shown on my Schedule SCH-3, the reference group capital structure percentages support this level of capital assignment for the MPS/LP operations. As I will demonstrate below, this approach also produces an overall rate of return that is consistent with the lower end of the "optimal" utility capital structure range, with electric utility industry norms, and with minimum Standard & Poor's ("S&P") bond rating criteria for an investment grade bond rating.

Q. What are the key financial ratios that determine whether a company has an investment grade bond rating?

A. The most important ratios are a utility's capitalization percentages and its cash flow coverage of interest and debt requirements. Schedule SCH-4 contains S&P's bond rating criteria ratio guidelines for its three key financial ratios. To have a BBB bond rating, a utility with an operating risk profile of "6" is expected to have a funds from operations ("FFO") interest coverage ratio of 3.0 times. This means that net income plus non-cash expenses (such as depreciation) needs to be at least three times interest requirements.[1] Similarly, the FFO/Total Debt ratio is expected to be at least 18 percent for a BBB rating. This means that net income plus non-cash expenses must equal 18 percent of outstanding debt, or conversely that debt should not be larger than about five times FFO. The third key ratio is

[1] The "6" business position for MPS/LP is estimated from the assigned business position rankings of the other investor owned utilities in Missouri.

Total Debt/Total Capital. For a BBB bond rating, total debt should not exceed 58 percent.

Q. Are these financial ratios the only factors that may affect bond ratings?

A. No. While absolute levels of financial ratios are extremely important, the rating agencies also look at trends and target ratios as well as other more qualitative factors. In the current "back to basics" environment, realistic plans for reducing debt and improving capitalization ratios have become increasingly important. In this environment constructive regulatory support for improving a utility's financial condition is a key factor.

Q. How is the "optimal" capital structure for a utility measured?

A. In theory, the "optimal" capital structure is the mix of debt and equity that gives the lowest after-tax cost of capital. Although academic researchers have not produced a consensus about a generally optimal capital structure, within the electric utility industry an optimal capital structure range can be defined. This is so because industry norms for utilities are more consistent than in most other industries and industry norms play a very significant role in the utility bond rating process. Also, within given categories of utilities, companies are viewed by bond investors as close substitutes. In this environment, the cost of utility borrowing varies directly with the companies' capital structure percentages and other bond rating metrics. In my analysis, I use these bond rating criteria and the actual borrowing costs by bond rating category to demonstrate the optimal capital structure range.

Q. Please discuss the relationship between bond ratings and the cost of capital.

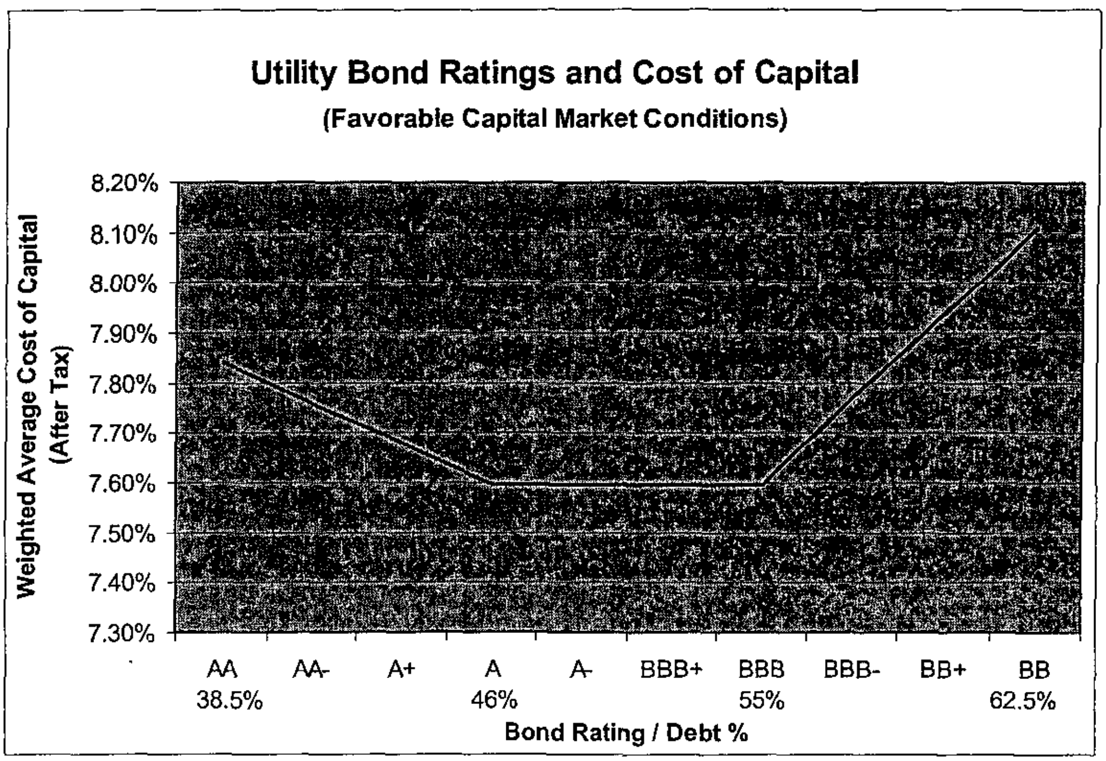
A. The relationship between bond ratings (risk) and the cost of capital is a fundamental capital market principle. Specific factors for each company, such as operating risks and debt and equity percentages (financial risk) determine a company's total risk. This combination of operating and financial risks ultimately determines the company's bond rating. For example, fully integrated utilities with generation, transmission, and distribution functions are considered operationally more risky than "wires only" transmission and distribution companies. These and other operating characteristics are reflected in S&P business profile rankings. In addition to operating risks, a company's additional financial risk depends on the amounts of debt and equity it uses to finance its assets. More debt and less equity, for any level of operating risk, will result in a lower bond rating and higher interest costs for debt.

Q. Is there an "optimal" bond rating?

A. Yes, but the optimal bond rating at any point in time depends on both operating and financial risks, and on existing capital market conditions. During periods of low interest rates and stable market conditions, investors tend to accept lower bond ratings (higher risks) with a relatively small increment to required interest rates. The relative ease or stringency of market conditions can be measured by the spreads (differences) in interest rates among bond rating categories. When conditions are more settled, interest rate spreads are typically small, but when conditions are unsettled, spreads are much wider. For example, with the low rate environment during 2004, the average spread between Baa and A rated utility debt was only 24 basis points (the average interest rate for Baa bonds was 6.40

percent versus 6.16 percent for A-rated bonds)[2]. At other times under more stringent market conditions, spreads can be much wider. Under extreme conditions, such as those that existed in the early 1980s, there may be times when no triple-B rated debt can be issued at all.

The bond rating-cost of capital relationship is depicted in the graph below. The capital structure percentages for the bond ratings shown on the graph are from S&P's Utility Bond Rating Criteria for an average electric utility business risk profile of 5. The interest rate data are the average rates for 2004 for Moody's investment grade utility categories, with spreads estimated for non-investment grade categories and extrapolated within rating groups.



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[2] Moody's (Mergent) Bond Record, January, 2005 for investment grade interest rates. Reuters Corporate Spreads for Utilities, http://bondchannel.bridge.com/publicspreads?Utilities used to estimate non-investment grade rates.

Based on average interest rates for 2004, the lowest overall cost of capital occurred at debt percentages of between 46 percent and 55 percent, with resulting bond ratings between single-A and triple-B. For companies with higher debt percentages, the advantage of low cost debt and interest tax deductions were overcome by sharply rising interest costs for non-investment grade companies.

Q. What steps have been taken by Aquila to improve its financial condition?

A. Aquila has sold all of its non-domestic investments and it has eliminated most of its non-regulated activities and contracts. It has also recently announced plans for further asset sales to include about half of its domestic regulated utility holdings. I have attached as Schedule SCH-5, portions of the Company's April 1, 2005 presentation to analysts, which outlines the Company's ongoing sales plan. That plan centers on raising significant further amounts of cash through utility asset sales and using the cash to pay down as much as $700 million of existing debt. Depending on which specific assets are finally sold and the prices they bring, the asset sale strategy should significantly improve Aquila's balance sheet position and should provide much improved access to required capital for utility infrastructure investments.

As shown on Schedule SCH-5, the Company's plans to sell its current gas utility properties in Michigan, Minnesota, and Missouri and its electric utility properties in Colorado and Kansas as well as the St. Joseph Light & Power holdings in Missouri. Net utility plant at 12/31/2004 for these properties was $874 million. Aquila's remaining utility properties (gas holdings in Colorado, Kansas, Iowa, and Nebraska and Missouri electric holdings) had a 2004 net plant value of $1,209 million. The $874 million of utility properties listed for sale therefore represent the liquidation of 42 percent of Aquila's remaining domestic utility net assets. If successfully concluded, these measures should restore Aquila's financial condition and move its bond rating metrics significantly toward the Company's investment grade target.

Q. How did you evaluate the requested capital structure?

A. I considered the bond rating and optimal capital structure issues discussed above and I prepared an analysis of MPS/LP's financial condition under alternative assumed outcomes from this rate case. In that analysis, I compare MPS/LP's interest coverage ratios and debt ratios, under alternative rate case results, to the S&P bond rating criteria discussed previously. This comparison shows the implied bond ratings from each rate case alternative. The key result is that the requested hypothetical capital structure is essential for an investment grade bond rating. Rate case outcomes based on Aquila's consolidated corporate capital structure produce financial ratios well below those required for an investment grade rating. Such results are not consistent with using an investment grade reference group to estimate ROE or using investment grade debt costs to calculate the allowed overall rate of return. Such a mismatched approach would produce results that violate the *Hope* and *Bluefield* requirements.

Q. How is your capital structure analysis structured?

A. To prepare the analysis, I developed a model that calculates the key S&P ratios for alternative rate case outcomes. The results of my analysis are presented in Schedule SCH-6a. As shown on page 1 of Schedule SCH-6a, Case 1, using the

LP requested capital structure and ROE for the steam operations, produces investment grade financial indicators within the optimal bond rating range illustrated on page 13 of this testimony.

Case 2, which uses Aquila's consolidated capital structure, is shown on page 2 of Schedule SCH-6a. Although the scenario produces investment grade level metrics for both the FFO/Interest and FFO/LT Debt benchmarks, because the consolidated debt ratio is two levels below investment grade at a level consistent with a credit rating of single B, the LP steam operations do not come close to achieving investment grade metrics as group under this scenario. On page 3 of SCH-6a, in Case 3, I also demonstrate the bond rating indicators that would result if no rate increase were granted. Under this scenario, all the indicators fall substantially below investment grade. Clearly the results of either Case 2 (consolidated capital structure) or Case 3 (no rate increase) do not represent adequate financial integrity.

Q. Is it possible to evaluate the tradeoff between capital structure and ROE?

A. Yes. If, for example, Aquila's consolidated corporate capital structure is used for setting rates in this case, the ROE would have to be raised to account for the additional financial risk caused by higher financial leverage resulting from the increased debt. The tradeoff is measured in the overall rate of return.

Q. Please explain.

A. In Schedule SCH-7, I demonstrate the relationship between capital structure and ROE. In that analysis, the first panel shows the overall, tax-inclusive rate of return calculated from the 11.5 percent requested ROE and the reference group capital structure consisting of 48.2 percent equity and 51.8 percent debt. The overall, tax-inclusive rate of return for MPS, as shown on page 1 of Schedule SCH-7, is 12.47 percent.

In the second panel of Schedule SCH-7, I first recalculate the overall rate of return using Aquila's consolidated corporate capital structure with 32.7 percent equity and 67.3 percent debt. I then recalculate for the ROE that is required to keep the overall, tax-inclusive rate of return at the same 12.47 percent found previously in panel 1. To keep the overall return at 12.47 percent, the ROE must be increased to 15.0 percent. Page 2 of Schedule SCH-7, provides the same analysis using LP's higher cost of debt. The results are similar. In both cases the ROE must be increased from 11.5 percent to approximately 15 percent when more debt and less equity are used in the capital structure. These results are consistent with my previous capital structure discussion and with the fundamental financial principle of risk and return. In other words, ROE would have to be raised to about 15 percent to keep MPS/LP at the same revenue level if Aquila's consolidated capital structure is used.

III. REGULATORY FINANCIAL INTEGRITY ISSUES

Q. Please define the term "financial integrity" and discuss its role in the *regulatory process.*

A. "Financial integrity" does not have a precise textbook definition. It generally means that a company is creditworthy or financially sound, and that its credit is unimpaired. Companies with sound financial integrity are said to have access to capital at reasonable rates and on reasonable terms and conditions. Financial integrity may also be defined in terms of bond ratings: Companies with investment grade bond ratings (triple-B or above) have some degree of financial integrity; companies with bond ratings below investment grade may be impaired. Operationally, the meaning of financial integrity depends on the context in which the term is used.

In regulatory practice most discussions of financial integrity center on the requirements of *Hope* and *Bluefield*. The *Bluefield* decision in 1923 did not explicitly use the term financial integrity, but instead used the words "financial soundness" with respect to standards for rate of return:

> The return should be reasonably sufficient to assure confidence in the *financial soundness* of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. (emphasis supplied)

The *Hope Natural Gas* decision in 1944 reiterated the *Bluefield* rate of return standard and specifically used the term financial integrity:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses, but also for the capital costs of the business.... That return, moreover, should be sufficient to assure confidence in the *financial integrity* of the enterprise so as to maintain its credit and to attract capital....(emphasis supplied)

Regulatory economists and financial witnesses in regulatory proceedings routinely rely on the above noted passages. In most situations, "financial integrity" means that a utility's rates are adequate to support its access to capital on reasonable terms.

Q. Is there a link between financial integrity and the regulatory process?

A. Yes. Especially during periods of unsettled capital markets and when required construction budgets are large, the link between financial integrity and the regulatory process is clear. Financially weak utilities are often foreclosed from the most economical sources of financing. For example, utilities that fail to meet indenture earnings tests may be precluded from issuing first mortgage bonds and may be forced to use unsecured debentures or bank lines of credit. Debentures are typically rated at least one credit level lower than first mortgage bonds, with commensurately higher interest costs. Similarly, bank credit lines are typically more restrictive and administratively more expensive than higher grade forms of traditional utility financing. I discuss the direct costs of weak utility financial condition in more detail below.

Q. Does the financial integrity standard have a role in evaluating the overall reasonableness of a utility rate order?

A. Yes. Regulators have the responsibility to ensure that the overall effect of a rate order is just and reasonable to the utility and its customers. This required focus on the reasonableness of the "end result" of the rate setting process is reflected in Supreme Court decisions such as *Hope*, where Justice Douglas concluded:

> And when the Commission's order is challenged in the courts, the question is whether that order *"viewed in its entirety"* meets the requirements of the Act. Under the statutory standard of "just and reasonable" ... it is the *result reached* not the method employed which is controlling....320 U.S. at 602. (emphasis supplied)

Forty-five years later, the Supreme Court reaffirmed *Hope* in the *Duquesne Light Co.* decision:

> [I]t is not theory but the impact of the rate order which counts. If the *total effect* of the rate order cannot be said to be unreasonable,

> judicial inquiry ... is at an end. 109 S. Ct. at 617.(emphasis supplied) (quoting *Hope*)

In judging the "end result" or "total effect" of a rate order, it is the impact on the utility's financial integrity, balanced against the customers' interest in reasonable rates, that must be evaluated: "Rates which enable the company to operate successfully, to *maintain its financial integrity*, to attract capital, and to compensate its investors for the risk assumed certainly cannot be condemned as invalid...." (*Hope*. 320 U.S. at 605) (emphasis supplied). As the regulator weighs the possible disallowance of expenses essential to the provision of utility service, the manner in which that discretionary authority is used can very appropriately be affected by the end result of the decision on the utility's financial integrity.

Q. What is required to reverse the effects of poor financial condition?

A. The most important factor is a demonstrated commitment from the company and its regulators and a consistently improving trend in financial results. For this reason it typically takes a period of time to reestablish an investment grade bond rating. To re-obtain an investment grade rating and to convince lenders to provide capital at lower rates, a utility must demonstrate that its financial integrity has been restored and that the process going forward can be expected to provide stability. The mitigation of regulatory uncertainty and the provision of a consistent plan for financial improvement are key elements in this process.

Q. Does the electric utility industry's evolution toward competition affect financial integrity?

A. Yes. Financial integrity and the role of consistent regulatory policy are especially important as the industry moves toward deregulation. In a deregulated environment, increased business risk from less predictable revenues must be offset by less financial risk. This means that to maintain a given bond rating a utility must reduce its debt percentage of capital and improve its other financial ratios. Electric utilities generally are attempting to accomplish this objective by improved operating efficiencies and the repayment of debt. Legislative and regulatory provisions that enhance investor confidence are also important. As competition expands some utilities will face difficult choices concerning their own financial health, the level and quality of service they can provide, and a high level of vulnerability to unforeseen future circumstances. The continuing consolidation of the industry through mergers and, in some cases, the outright sale of utility service territory is a direct reflection of this dilemma.

Q. Please summarize your discussion of "financial integrity" and its role in the regulatory process.

A. The term "financial integrity" generally means sound financial condition, which provides reasonable access to capital markets. A company's level of financial soundness can be measured with basic financial statistics. To the extent that existing and projected measures of financial performance are adequate, financial integrity is reflected in investment grade bond ratings. Companies that cannot provide sound financial performance find their bond ratings lowered, their access to capital diminished, and their borrowing costs higher.

For regulated companies financial integrity goes beyond basic financial statistics, because the regulatory process itself has such a large potential effect on financial performance. Credit concerns sometimes arise and bond ratings drop based on a regulatory decision before any change is seen in a utility's financial statistics. Similarly, bond ratings are often maintained by the rating agencies without supporting financial statistics if it is believed that the regulatory process will allow improved financial performance in the future.

For companies with impaired financial integrity and non-investment grade bond ratings, access to capital is severely limited and financing costs are much higher. For such companies traditional sources of utility capital, such as long-term first mortgage bonds, are often unavailable. Particularly during periods of market stress, non-investment grade companies may have little access to capital at all. Also, even when capital is available, the much higher interest rates charged to non-investment grade companies may foreclose their refinancing opportunities and prevent their use of other favorable financing methods available to higher rated companies. All these factors demonstrate the importance of maintaining financial integrity and the key role that regulation plays in this process.

IV. ESTIMATING THE COST OF EQUITY

Q. What is the purpose of this section of your testimony?

A. The purpose of this section is to present a general definition of the "cost of equity" and to compare the strengths and weaknesses of several of the most widely used methods for estimating the cost of equity. Estimating the cost of equity is fundamentally a matter of informed judgment. The various models provide a concrete link to actual capital market data and assist with defining the various relationships that underlie the ROE estimation process.

Q. Please define the term "cost of equity capital" and provide an overview of the cost estimation process.

A. The cost of equity capital is the profit or rate of return that equity investors expect to receive. In concept it is no different than the cost of debt or the cost of preferred stock. The cost of equity is the rate of return that common stockholders expect, just as interest on bonds and dividends on preferred stock are the returns that investors in those securities expect. Equity investors expect a return on their capital commensurate with the risks they take and consistent with returns that might be available from other similar investments. Unlike returns from debt and preferred stocks, however, the equity return is not directly observable in advance and, therefore, it must be estimated or inferred from capital market data and trading activity.

An example helps to illustrate the cost of equity concept. Assume that an investor buys a share of common stock for $20 per share. If the stock's expected dividend during the coming year is $1.00, the expected dividend yield is 5 percent ($1.00 / $20 = 5.0 percent). If the stock price is also expected to increase to $21.20 after one year, this $1.20 expected gain adds an additional 6 percent to the expected total rate of return ($1.20 / $20 = 6 percent). Therefore, buying the stock at $20 per share, the investor expects a total return of 11 percent: 5 percent dividend yield, plus 6 percent price appreciation. In this example, the total expected rate of return at 11 percent is the appropriate measure of the cost of equity capital, because it is this rate of return that caused the investor to commit the $20 of equity capital in the first place. If the stock were riskier, or if expected returns from other investments were higher, investors would have required a higher rate of return from the stock, which would have resulted in a lower initial purchase price in market trading.

Each day, market rates of return and prices change to reflect new investor expectations and requirements. For example, when interest rates on bonds and savings accounts rise, utility stock prices usually fall. This is true, at least in part, because higher interest rates on these alternative investments make utility stocks relatively less attractive, which causes utility stock prices to decline in market trading. This competitive market adjustment process is quick and continuous, so that market prices generally reflect investor expectations and the relative attractiveness of one investment versus another. In this context, to estimate the cost of equity one must apply informed judgment about the relative risk of the Company in question and knowledge about the risk and expected rate of return characteristics of other available investments as well.

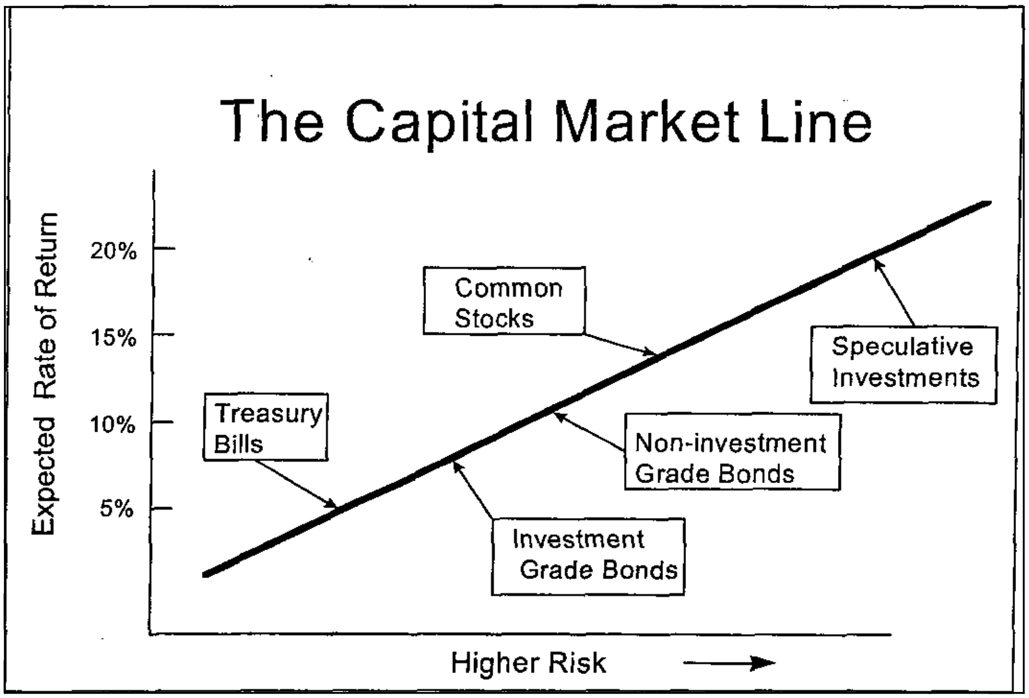
Q. How does the market account for risk differences among the various investments?

A. Risk-return tradeoffs among capital market investments have been the subject of extensive financial research. Literally dozens of textbooks and hundreds of academic articles have addressed the issue. Generally, such research confirms the common sense conclusion that investors will take additional risks only if they expect to receive a higher rate of return. Empirical tests consistently show that returns from low risk securities, such as U.S. Treasury bills, are the lowest; that returns from longer-term Treasury bonds and corporate bonds are increasingly higher as risks increase; and generally, returns from common stocks and other more risky investments are even higher. These observations provide a sound theoretical foundation for both the DCF and risk premium methods for estimating the cost of equity capital. These methods attempt to capture the well-founded risk-return principle and explicitly measure investors' rate of return requirements.

Q. Can you illustrate the capital market risk-return principle that you just described?

A. Yes. The following graph depicts the risk-return relationship that has become widely known as the Capital Market Line ("CML"). The CML offers a graphical representation of the capital market risk-return principle. The graph is not meant to illustrate the actual expected rate of return for any particular investment, but merely to illustrate in a general way the risk-return relationship.

Risk-Return Tradeoffs



As a continuum, the CML can be viewed as an available opportunity set for investors. Those investors with low risk tolerance or investment objectives that mandate a low risk profile should invest in assets depicted in the lower left-hand portion of the graph. Investments in this area, such as Treasury bills and short-maturity, high quality corporate commercial paper, offer a high degree of investor certainty. In nominal terms (before considering the potential effects of inflation), such assets are virtually risk-free.

Investment risks increase as one moves up and to the right along the CML. A higher degree of uncertainty exists about the level of investment value at any point in time and about the level of income payments that may be received. Among these investments, long-term bonds and preferred stocks, which offer priority claims to assets and income payments, are relatively low risk, but they are not risk-free. The market value of long-term bonds, even those issued by the U.S. Treasury, often fluctuates widely when government policies or other factors cause interest rates to change.

Farther up the CML continuum, common stocks are exposed to even more risk, depending on the nature of the underlying business and the financial strength of the issuing corporation. Common stock risks include market-wide factors, such as general changes in capital costs, as well as industry and company specific elements that may add further to the volatility of a given company's performance. As I will illustrate in my risk premium analysis, common stocks typically are more volatile (have higher risk) than high quality bond investments and, therefore, they reside above and to the right of bonds on the CML graph. Other more speculative investments, such as stock options and commodity futures contracts, offer even higher risks (and higher potential returns). The CML's depiction of the risk-return tradeoffs available in the capital markets provides a useful perspective for estimating investors' required rates of return.

Q. How is the fair rate of return in the regulatory process related to the estimated cost of equity capital?

A. As I have discussed previously, the regulatory process is guided by fair rate of return principles established in the U.S. Supreme Court cases, *Bluefield Waterworks* and *Hope Natural Gas*:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on

> investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. *Bluefield Waterworks & Imp. Co. v. West Virginia Public Service Commission*, 262 U.S. 679, 692-693 (1923).

> From the investor or company point of view, it is important that there be enough revenue not only for operating expenses, but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. *Federal Power Comm. v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944).

Based on these principles, the fair rate of return should closely parallel investor opportunity costs as discussed above. If a utility earns its market cost of equity, neither its stockholders nor its customers should be disadvantaged.

Q. What specific methods and capital market data are used to evaluate the cost of equity?

A. Given the requirement to find the required rate of return for companies with similar risk, models that employ market-based data for comparable utilities are the most widely used. The DCF model, and sometimes other models, applied to a reference group of investment grade utilities as I have done is the most appropriate for ensuring that the *Hope* and *Bluefield* standards are met. Specific modeling techniques typically fall into three groups: comparable earnings methods, risk premium methods, and DCF methods. Comparable earnings methods have evolved over time. The original comparable earnings methods were based on book accounting returns. This approach developed ROE estimates by reviewing accounting returns for unregulated companies thought to have risks similar to those of the regulated company in question. These methods generally have been rejected because they assume that the unregulated group is earning its actual cost of capital, and that its equity book value is the same as its market value. In most situations these assumptions are not valid and, therefore, accounting-based methods generally do not provide reliable cost of equity estimates.

More recent comparable earnings methods are based on historical stock market returns rather than book accounting returns. While this approach has some merit, it too has been criticized because there can be no assurance that historical returns actually reflect current or future market requirements. Also, in practical application, earned market returns tend to fluctuate widely from year to year. For these reasons, a current cost of equity estimate (based on the DCF model or a risk premium analysis) is usually required.

The second set of estimation techniques is grouped under the heading of risk premium methods. These methods begin with currently observable market returns, such as yields on government or corporate bonds, and add an increment to account for the additional equity risk. The capital asset pricing model ("CAPM") and arbitrage pricing theory ("APT") model are more sophisticated risk premium approaches. The CAPM and APT methods estimate the cost of equity directly by combining the "risk-free" government bond rate with explicit risk measures to determine the risk premium required by the market. Although these methods are widely used in academic cost of capital research, their additional data requirements and their potentially questionable underlying assumptions have detracted from their use in most regulatory jurisdictions. .

The DCF model is the most widely used approach in regulatory proceedings. Like the risk premium method, the DCF model has a sound basis in theory, and many argue that it has the additional advantage of simplicity. I will describe the DCF model in detail below, but in essence its estimate of ROE is simply the sum of the expected dividend yield and the expected long-term dividend (or price) growth rate. While dividend yields are readily available, long-term growth estimates are more difficult to obtain. Because the constant growth DCF model requires very long-term growth estimates (technically to infinity), some argue that its application is subjective and that more explicit multistage growth DCF models are preferred. In the final analysis, ROE estimates are subjective and should be based on sound, informed judgment. To accomplish this task, I apply several versions of the DCF and risk premium models, which results in an ROE range that I believe brackets the fair cost of equity capital.

Q. Please explain the DCF model.

A. The DCF model is predicated on the concept, or in fact the definition, that a stock's price represents the present value of all future cash flows expected from the stock. In the most general form, the model is expressed in the following formula:

$$P_0 = D_1/(1+k) + D_2/(1+k)^2 + \ldots + D_\infty/(1+k)^\infty \qquad (1)$$

where P_0 is today's stock price; D_1, D_2, etc. are all expected future dividends and k is the discount rate, or the investor's required rate of return on equity. Equation

(1) is a routine present value calculation with the difficult data requirement of estimating all future dividends. (As a practical matter, the present value of dividends expected in the very distant future is typically insignificant, and operationally the DCF model can be reasonably estimated by discounting a long, but finite dividend stream, or with the assumption that the stock will be sold for some estimated price in the future.)

Under the additional assumption that dividends are expected to grow at a constant rate "g," equation (1) can be solved for k and rearranged into the simple form:

$$k = D_1/P_0 + g \qquad (2)$$

Equation (2) is the familiar constant growth DCF model for cost of equity estimation, where D_1/P_0 is the expected dividend yield and g is the long-term expected dividend growth rate.

Under circumstances when growth rates are expected to fluctuate or when future growth rates are highly uncertain, the constant growth model may be questionable, and explicit changing growth estimates may be required. Although the DCF model itself is still valid (equation (1) is mathematically correct), under the assumption of fluctuating growth the simplified form of the model must be modified to capture market expectations accurately.

Q. How is the DCF model applied when the growth rates fluctuate?

A. When growth rates are expected to fluctuate, the more general version of the model represented in equation (1) should be solved explicitly over a finite "transition" period while uncertainty prevails. The constant growth version of the model can then be applied after the transition period, under the assumption that more stable conditions will prevail in the future. There are two alternatives for dealing with the nonconstant growth transition period.

Under the "Market Price" version of the DCF model, equation (1) is written in a slightly different form:

$$P_0 = D_1/(1+k) + D_2/(1+k)^2 + ... + P_T/(1+k)^T \qquad (3)$$

where the variables are the same as in equation (1) except that P_T is the estimated Market Price at the end of the transition period T. Under the assumption that constant growth resumes after the transition period, the price P_T is then expected to be based on constant growth assumptions. As with the general form of the DCF model in equation (1), in the Market Price approach the current stock price (P_0) is the present value of expected cash inflows, but the cash flows are comprised of dividends and an ultimate selling price for the stock. The estimated cost of equity, k, is just the rate of return that investors would expect if they bought the stock at today's price, held it and received dividends through the transition period (until period T), and then sold it for price P_T.

Under the "Multistage" growth DCF approach, equation (1) is expanded to incorporate two or more growth rate periods, with the assumption that a permanent constant growth rate can be estimated for some point in the future:

$$P_0 = D_0(1+g_1)/(1+k) + ... + D_0(1+g_2)^n/(1+k)^n +$$
$$... + D_0(1+g_T)^{(T+1)}/(k-g_T) \qquad (4)$$

where the variables are the same as in equation (1), but g_1 represents the growth rate for the first period, g_2 for a second period, and g_T for the period from year T (the end of the transition period) to infinity. The first two growth rates are estimates of fluctuating growth over "n" years (typically 5 or 10 years), and g_T is a constant growth rate assumed to prevail forever after year T.

Although less convenient for exposition purposes, the nonconstant growth models are based on the same valid capital market assumptions as the constant growth version. The nonconstant growth approach simply requires more explicit data inputs and more work to solve for the discount rate, k. Fortunately, the required data are generally available from investment and economic forecasting services, and computer algorithms can easily produce the required solutions. Both constant and nonconstant growth DCF analyses are presented in the following section.

Q. Please explain the risk premium methodology.

A. Risk premium methods are based on the assumption that equity securities are riskier than debt and, therefore, that equity investors require a higher rate of return. This basic premise is well supported by legal and economic distinctions between debt and equity securities, and it is widely accepted as a fundamental capital market principle. For example, debt holders' claims to the earnings and assets have priority over all claims of equity investors. The contractual interest on mortgage debt generally must be paid in full before any dividends can be paid to shareholders, and secured mortgage claims must be fully satisfied before any assets can be distributed to shareholders in bankruptcy. Also, the guaranteed, fixed-income nature of interest payments on debt makes year-to-year returns from bonds typically more stable than capital gains and dividend payments on stocks. All these factors support the proposition that stockholders are exposed to more risk and that shareholders should reasonably expect a positive equity risk premium.

Q. Are risk premium estimates of the cost of equity consistent with other current capital market costs?

A. Yes. The risk premium approach is especially useful because it is founded on current market interest rates, which are directly observable. This feature assures that risk premium estimates of the cost of equity begin with a sound basis, which is tied directly to current capital market costs.

Q. Is there similar consensus about how risk premium data should be employed?

A. No. In regulatory practice, there is often considerable debate about how risk premium data should be interpreted and used. Since the analyst's basic task is to gauge investors' required returns on long-term investments, some argue that the estimated equity spread should be based on the longest possible time period. Others argue that market relationships between debt and equity from several decades ago are irrelevant and that recent debt-equity observations should be given more weight in estimating investor requirements. There is no consensus on this issue. Since analysts cannot observe or measure investors' actual expectations, it is not possible to know exactly how such expectations are formed or, therefore, exactly what time period is most appropriate in a risk premium analysis.

The important question to answer is the following: "What rate of return should equity investors reasonably expect relative to returns currently available from long-term bonds?" The risk premium studies and analyses I discuss in Section IV address this question. My risk premium recommendation is based on an intermediate position that avoids some of the problems and concerns that have been expressed about both very long and very short periods of analysis with the risk premium model.

Q. Please summarize your discussion of cost of equity estimation techniques.

A. Estimating the cost of equity is a controversial issue in utility ratemaking. Because actual investor requirements are not directly observable, analysts have developed several methods to assist in the process. The comparable earnings method is the oldest but perhaps least reliable. Its use of accounting rates of return, or even historical market returns may or may not reflect current investor requirements. Differences in accounting methods among companies and issues of comparability also detract from this approach.

The DCF and market-based risk premium methods are more widely accepted in regulatory practice. I believe that a combination of the DCF model and a review of risk premium data provide the most reliable approach. While the DCF model requires judgment about future growth rates, the dividend yield portion of the model is straightforward, and the model's results are generally consistent with actual capital market behavior. For these reasons, I apply various versions of the DCF model to the reference company group, and I test the reasonableness of the DCF results by comparing to market-based risk premiums. I believe this approach is the most reliable was to assess the rate of return that investors expect from investment alternatives of similar risk as required by the *Hope* and *Bluefield* standards.

V. FUNDAMENTAL FACTORS THAT AFFECT THE COST OF EQUITY

Q. What is the purpose of this section of your testimony?

A. The purpose of this section is to review recent and future capital market costs and conditions as well as industry- and company-specific factors that should be reflected in the cost of equity estimate.

Q. What has been the recent experience in the U.S. capital markets?

A. Schedule SCH-8, page 1 provides a review of annual interest rates and rates of inflation in the U.S. economy over the past ten years. During that time period, inflation and capital market costs have declined and, generally, have been lower than rates that prevailed in the previous decade. Inflation, as measured by the Consumer Price Index, has remained at historically low levels not seen consistently since the early 1960s. Until early 2004, the uneven pace of economic recovery kept consumer price increases in check and resulted in the lowest interest rates in four decades. Since then, however, economic growth and concerns about renewed inflation have led to fluctuating interest rates. Estimates for the next 12 months are for continued economic growth and further interest rate increases.

Schedule SCH-8, page 2, provides a summary of Moody's Average Utility and Baa Utility Bond Yields. For the most recent three months ended March 2005, Moody's Average Utility Rate was 5.79 percent and the Baa Utility Rate was 5.90 percent.

Schedule SCH-8, page 3, provides S&P's *Economic Trends & Projections* for April 21, 2005. The forecast data show clear expectations for continuing economic growth, with growth in real Gross Domestic Product (GDP) for 2005 projected at 3.7 percent. This projected GDP growth rate compares to rates of less than 2 percent in 2001, 2.4 percent for 2002, and 3 percent for 2003. Consistent with sound economic conditions, S&P also forecasts that the unemployment rate will drop to 5.1 percent and that interest rates will rise an additional 80-100 basis points from current levels. The 10-year Treasury Note is projected to increase from its current level of about 4.3 percent to 5.3 percent by the 2nd quarter of 2006. Long-term Treasury Bonds are projected to increase from current levels of about 4.8 percent to 5.7 percent, and Corporate Bonds are projected to increase from current levels of about 5.3 percent to 6.2 percent. These increasing interest rate trends offer important perspective for judging the cost of capital in the present case.

Schedule SCH-8, page 4, provides economic and interest rate projections from *Value Line's* latest long-term forecast. For 2006, *Value Line*'s interest rate projections are similar to S&P's The *Value Line* forecasts also shows that rates are expected to continue increasing for the next several years.

Q. What are the key factors currently affecting electric utility investments?

A. Although electric utilities are returning to their core businesses and are expected to see more stable results over the next several years, expectations for utility stocks are negative based on projections for higher interest rates. In its most recent edition covering electric utilities, *Value Line* reflected its concerns:

> **Investment Advice**
> Many of the utility stocks in this issue are trading at or near their 52-week highs. But if *Value Line's* projection of rising interest rates is on target, share prices of these equities may decline. Too, the industry's Timeliness rank remains near the bottom of all industries we follow. At this juncture, more attractive investments are available elsewhere. (*Value Line Investment Survey*, April 1, 2005, p. 695.)

Expectations for rising interest rates also make it more difficult to estimate utilities' cost of capital. In this environment of increased interest rates, the traditional DCF model does not produce reasonable cost of capital estimates.

Q. Is Aquila affected by these same market uncertainties and concerns?

A. Yes. To varying extents, all utilities are affected by market uncertainties and the changes affecting the energy industry. As Aquila's MPS/LP operating divisions have entered into a construction cycle over the next few years, the capital requirements for these divisions are projected to be $850-$900 million cumulatively from the end of 2004 through the year 2010. This level of expenditure will have the impact of increasing net plant by approximately 81 percent over this period, which is at a level that is significantly in excess of the reference company projected average over the same period. These construction needs are more fully described in the testimony of Aquila witness, Jon Empson. Demands to expand the transmission and distribution resources are also growing rapidly. This situation also drives increased capital investment needs. In this setting it is essential for MPS/LP to improve their financial condition and to have a sound utility earnings base to support their capital investment requirements.

Q. How do capital market concerns affect the cost of equity capital?

A. As I discussed previously in Section IV, equity investors respond to changing assessments of risk and financial prospects by changing the price they are willing to pay for a given security. When the risk perceptions increase or financial prospects decline, investors refuse to pay the previously existing market price for a company's securities, and market supply and demand forces then establish a new lower price. The lower market price typically translates into a higher cost of capital through a higher dividend yield requirement as well as the potential for increased capital gains if prospects improve. In addition to market losses for prior shareholders, the higher cost of capital is transmitted directly to the company by the need to issue more shares to raise any given amount of capital for future investment. The additional shares also impose additional future dividend requirements and reduce future earnings per share growth prospects.

VI. COST OF EQUITY CAPITAL FOR MPS/LP

Q. What is the purpose of this section of your testimony?

A. The purpose of this section is to present my quantitative studies of the cost of equity capital for MPS/LP and to discuss the details and results of my analyses.

Q. How are your studies organized?

A. In the first part of my analysis, I apply alternative versions of the constant growth DCF and multistage DCF model to a reference company group of electric utilities. For inclusion in the group, each company is required to have at least an investment grade bond rating, to have at least 70 percent of its revenues from regulated utility sales, to have consistent financial records not affected by recent mergers or restructuring, and to have a consistent dividend payment record with no recent dividend reductions or eliminations. Application of the minimum 70 percent regulated utility revenues filter results in a group *average* percentage of revenues from regulated utility sales of 86 percent, which helps to assure that non-regulated activities are not a significant influence for the group. The results of my DCF analyses are shown in Schedule SCH-9. In total, the DCF models produce an ROE range of 9.5 percent to 11.1 percent for the reference group of comparable companies. As discussed previously, the 9.5 percent result from the traditional constant growth DCF model is not consistent with risk premium checks of reasonableness or other consensus economic forecasts for higher interest rates. Therefore, I do not include that result in my estimated DCF range. The appropriate range from the remaining DCF models is 10.6 percent to 11.1 percent.

In the second part of my analysis, I develop and review cost of capital estimates based on the risk premium methodology. I present my risk premium study in Schedule 10. That analysis, based on allowed regulatory ROEs relative to contemporaneous utility debt costs, indicates that a cost of equity of 11.0 percent is appropriate. Other risk premium approaches indicate ROEs as high as 11.8 percent. Given current market and utility industry conditions, the risk premium approach adds useful perspective for judging investor requirements. Based on the DCF and risk premium results, and with consideration for current market, industry, and company-specific factors appropriate for the present case, I estimate the cost of equity for MPS/LP at 11.5 percent.

A. Discounted Cash Flow Analysis

Q. What stock prices are used in your DCF analyses?

A. My analysis is based on the average of high and low stock prices for each company for each of three recent months (January-March 2005). Although in theory either average or "spot" stock prices can be used in a DCF analysis, a reasonably current price consistent with present market conditions and with the other data employed in the analysis is most appropriate. Since the cost of equity is a current and forward-looking concept, the important issue is that the price should be representative of current market conditions and not unduly influenced by unusual or special circumstances.

Q. Please summarize the results of your reference company DCF analyses.

A. I apply three versions of the DCF model to estimate ROE. The traditional Constant Growth version of the DCF model produces an ROE estimate of only 9.5 percent. As shown in Schedule SCH-9, page 2 the average dividend yield in this model is about 4.5 percent and the average growth rate is 5.0 percent. The average growth rate is derived from traditional sources for estimating growth in the DCF model. Specifically, equal weight is given to (1) the sustainable growth "b times r" method, (2) Zacks' survey of individual company 5-year analysts' earnings estimates, (3) *Value Line's* projected 3-to-5 year earnings growth rate, and (4) long-term growth in nominal Gross Domestic Product (GDP). The "b times r" method and the analyst and *Value Line* earnings projections are significantly and negatively influenced by the uncertainties, discussed previously, that are currently affecting the industry. The "b times r," Zacks, and *Value Line* growth rates average only about 4.4 percent, which is only two-thirds of the 6.6 percent growth rate for long-term GDP. The 9.5 percent ROE estimate from the traditional constant growth DCF approach is not consistent with consensus economic projections for higher interest rates and is 1.5 percent to 2.3 percent below current risk premium checks of reasonableness. For these reasons, I do not include the traditional constant growth DCF result in my recommended ROE range.

The non-constant growth Two-Stage DCF model indicates an ROE of 10.6 percent to 10.7 percent. For stage one of this model (years 1 through 4), the growth rate is based on *Value Line's* projected dividends. The average growth rate for stage 1 of this model is only 3.35 percent. The growth rate for stage 2 is the nominal growth rate in GDP noted above. In combination with the 4.5 percent average dividend yield, the 10.6 percent to 10.7 percent ROE range from this model implies an overall growth expectation of 6.1 percent to 6.2 percent. This implied growth rate is based on the traditional yield plus growth DCF format (10.6 percent ROE = 4.5 percent yield + 6.1 percent growth; 10.7 percent ROE = 4.5 percent yield + 6.2 percent growth).

My third DCF model is based on the constant growth approach, but with the growth rate strictly proxied by the 6.6 percent long-term GDP growth rate. That model indicates an ROE of 11.1 percent. As discussed previously, based on expected further increases in market interest rates and other capital market costs, it is my judgment that the fair cost of equity range should be based on the Two-Stage growth DCF model and the Constant Growth model with long-term GDP used as a proxy for long-term investor growth rate expectations. Based on these two versions of the DCF model, the ROE range is 10.6 percent to 11.1 percent.

B. <u>Risk Premium Analysis</u>

Q. How is your risk premium study structured?

A. In my risk premium analysis, I compare authorized electric utility ROEs to contemporaneous long-term interest rates on utility bonds. The equity risk premium then is measured by the difference between the average authorized ROE and the average debt cost for each year. This calculation for the period, 1980-2004, is presented in Schedule SCH-10. The data show that risk premiums are smaller when interest rates are high and larger when interest rates are low. For example, in the early 1980s when utility interest rates exceeded fifteen percent, allowed equity risk premiums were generally less than two percent. In more recent years, with lower interest rates, allowed regulatory risk premiums have generally been in the three- to four-percent range.

The inverse relationship between risk premiums and interest rate levels is well documented in numerous, well-respected academic studies. (See, for example, Robert S. Harris and Felicia C. Marston, "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," Financial Management, Summer 1992.)

These studies typically use regression analysis or other statistical methods to predict or measure the risk premium relationship under varying interest rate conditions. In Schedule SCH-10, page 2, I present a regression analysis of the allowed annual equity risk premiums relative to interest rate levels. The regression coefficient of –42.18 percent confirms the inverse relationship between risk premiums and interest rates and indicates that risk premiums expand and contract by about fifty-eight percent of the change in interest rates. This means that when interest rates rise by one percentage point, the cost of equity increases by only 0.58 of a percentage point, because the risk premium declines by about 0.42 percentage points. Similarly, when interest rates decline by one percentage point, the cost of equity declines by only 0.58 of a percentage point. I use the –42.18 percent interest rate change coefficient in conjunction with current interest rates to establish the appropriate current equity risk premium. This calculation is shown in the lower portion of page 1 of Schedule SCH-10. When the resulting risk premium of 4.25 percent is added to the projected single-A utility debt cost of 6.7 percent, the indicated ROE is 11.0 percent (4.25% + 6.7% = 10.95%).

Q. How do the results of your risk premium studies compare to levels found in other risk premium studies?

A. My risk premium estimate is lower than those often found in other risk premium studies. From the most widely followed data published by Ibbotson Associates (Ibbotson Associates, *Stocks, Bonds, Bills and Inflation 2004 Yearbook)*, for the period 1926-2003, the indicated arithmetic mean risk premium for common stocks versus long-term corporate bonds is 6.2 percent. Under the more conservative assumption of geometric mean compounding, the Ibbotson risk premium is 4.5 percent. Ibbotson argues extensively for the arithmetic mean approach as the appropriate basis for estimating the cost of equity. Even with the more conservative geometric mean risk premium, Ibbotson's data indicate a single-A cost of equity of 11.2 percent (6.7 percent debt cost + 4.5 percent risk premium = 11.2 percent).

The Harris and Marston ("H&M") study noted above also provides specific equity risk premium estimates. Using analysts' growth estimates to estimate equity returns, H&M found equity risk premiums of 6.47 percent relative to U.S. Government bonds and 5.13 percent relative to yields on corporate debt. H&M's equity risk premium relative to corporate debt indicates a current single-A cost of equity of 11.8 percent (6.7 percent debt cost + 5.13 percent risk premium = 11.83 percent).

Q. Please summarize the results of your cost of equity analysis.

A. The following table summarizes my results:

Summary of Cost of Equity Estimates	
DCF Analysis	Indicated Cost
Constant Growth Model (traditional growth)*	9.5%
Constant Growth Model (GDP growth)	11.1%
Two-Stage Growth Model	10.6% - 10.7%
Estimated DCF Model Range	10.6% - 11.1%
Risk Premium Analysis	
Utility Debt + Risk Premium	
Risk Premium Analysis (6.7% + 4.25%)	11.0%
Ibbotson Risk Premium Analysis	
Risk Premium (6.7% + 4.5%)	11.2%
Harris-Marston Risk Premium	
Risk Premium (6.7% + 5.13%)	11.8%
Reference Group Cost of Equity Capital	11.0%

*Because the traditional Constant Growth DCF model result is more than 100 basis points below any of the other models that result fails a basic test of reasonableness and is therefore excluded from the estimated DCF range.

Q. How should these results be interpreted to determine the fair cost of equity for MPS/LP?

A. The reference group ROE should be adjusted upward by 50 basis points, to 11.5 percent, to account for MPS/LP's higher construction and operating risks. MPL/LP's required investments in Missouri over the next five years are expected to equal 81 percent of current net plant. This compares to average expected investments for the reference group companies equal to 49 percent of net plant. Also, continuing uncertainty with respect to the fuel and purchased power adjustment clause in Missouri and MPS/LP's smaller size further increase perceived operating risks. By considering these additional risk characteristics for MPS/LP in conjunction with the reference group estimated ROE, the Commission has a sound basis for setting a fair cost of equity that is consistent consensus economic projections and with the requirements of *Hope* and *Bluefield.*

Q. Does this conclude your direct testimony?

A. Yes.

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SUMMARY OF QUALIFICATIONS

- Principal, Financial Analysis Consultants (FINANCO, Inc.).
- Ph.D. in Finance and Econometrics.
- Extensive expert witness testimony in court and before regulatory agencies.
- Management of professional research staff in academic and regulatory organizations.
- Professional presentations before executive development groups, the National Rate of Return Analysts' Forum, and the New York Society of Security Analysts.
- Financial Management Association, Vice President for Practitioner Services.

EDUCATION

The University of Texas at Austin
Ph.D., Finance and Econometrics
January 1975

Dissertation: *An Evaluation of the Original and Recent Variants of the Capital Asset Pricing Model.*

The University of Texas at Austin
MBA, Finance
June 1973

Thesis: *The Pricing of Risk on the New York Stock Exchange.*

Southern Methodist University
BA, Economics
June 1969

Honors program. Departmental distinction.

OTHER EXPERIENCE

University of Texas at Austin
Adjunct Associate Professor
1985-1988, 2004-Present

Corporate Financial Management, Investments, and Integrative Finance Cases.

Texas State University San Marcos
Associate Professor of Finance
1983-1984, 2003-2004

Graduate and undergraduate courses in Financial Management, Managerial Economics, and Investment Analysis.

Public Utility Commission of Texas
Chief Economist and Director of Economic Research Division
August 1980-August 1983

Lead financial witness. Supervised Commission staff in research and testimony on rate of return, financial condition, and economic analysis.

Assistant Professor of Finance
Texas Tech University
July 1978-July 1980
University of Alabama
January 1975-June 1978

Member of graduate faculty. Conducted Ph.D. seminars and directed doctoral dissertations in capital market theory. Served as consultant to industry, church and governmental organizations.

FINANCIAL AND ECONOMIC TESTIMONY IN REGULATORY PROCEEDINGS (Client in parenthesis)

Cost of Money Testimony:

- Louisiana Public Service Commission, Docket No. U-23327, January 18, 2005 (Southwestern Electric Power Company, American Electric Power Company)
- Idaho Public Utilities Commission, Case No. PAC-E-05-1, January 14, 2005 (PacifiCorp)
- Arkansas Public Service Commission, Docket No. 04-121-U, December 3, 2004 (CenterPoint Arkla)
- Oregon Public Utility Commission, Case No. UE- , November 12, 2004 (PacifiCorp).
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- Texas PUC Docket No. 20292, May 1999 (Central Power and Light Co.)
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- Texas Department of Insurance, January 1996, (Independent Metropolitan Title Insurance Agents of Texas).
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ECONOMIC ANALYSIS AND TESTIMONY

Antitrust Litigation:

- Marginal Cost Analysis of Concrete Production/Predatory Pricing (Stiles)
- Analysis of Lost Business Opportunity due to denial of Waste Disposal Site Permit (Browning-Ferris Industries, Inc.).
- Analysis of Electric Power Transmission Costs in Purchased Power Dispute (City of College Station, Texas).

Contract Litigation:

- Analysis of Cogeneration Contract/Economic Viability Issues(Texas-New Mexico Power Company)
- Definition of Electric Sales/Franchise Fee Contract Dispute (Reliant Energy HL&P)
- Analysis of Purchased Power Agreement/Breach of Contract (Texas-New Mexico Power Company)
- Regulatory Commission Provisions in Franchise Fee Ordinance Dispute (Central Power & Light Company)
- Analysis of Economic Damages resulting from attempted Acquisition of Highway Construction Company (Dillingham Construction Corporation).
- Analysis of Economic Damages due to Contract Interference in Acquisition of Electric Utility Cooperative (PacifiCorp).
- Analysis of Economic Damages due to Patent Infringement of Boiler Cleaning Process (Dowell-Schlumberger/The Dow Chemical Company).

Lender Liability/Securities Litigation:

- ERISA Valuation of Retail Drug Store Chain (Sommers Drug Stores Company).
- Analysis of Lost Business Opportunities in Failed Businesses where Lenders Refused to Extend or Foreclosed Loans (FirstCity Bank Texas, McAllen State Bank, General Electric Credit Corporation).
- Usury and Punitive Damages Analysis based on Property Valuation in Failed Real Estate Venture (Tomen America, Inc.).

Personal Injury/Wrongful Death/Lost Earnings Capacity Litigation:

- Analysis of Lost Earnings Capacity and Punitive Damages due to Industrial Accident (Worsham, Forsythe and Wooldridge).
- Analysis of Lost Earnings Capacity due to Improper Termination (Lloyd Gosselink, Ryan & Fowler).
- Present Value Analysis of Lost Earnings and Future Medical Costs due to Medical Malpractice (Sierra Medical Center).

Product Warranty/Liability Litigation:

- Analysis of Lost Profits due to Equipment Failure in Cogeneration Facility (WF Energy/Travelers Insurance Company).
- Analysis of Economic Damages due to Grain Elevator Explosion (Degesch Chemical Company).
- Analysis of Economic Damages due to failure of Plastic Pipe Water Lines (Western Plastics, Inc.)
- Analysis of Rail Car Repair and Maintenance Costs in Product Warranty Dispute (Youngstown Steel Door Company).

Property Tax Litigation:

- Evaluation of Electric Utility Distribution System (Jasper-Newton Electric Cooperative).
- Evaluations of Electric Utility Generating Plants (West Texas Utilities Company).

Various Valuations of Closely Held Businesses in Domestic Affairs Proceedings and for Federal Estate Tax Planning Purposes.

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"Fundamentals of Financial Analysis and Project Evaluation," Central and South West Companies, April, May, and June 1997.

"Fundamentals of Financial Management and Valuation," West Texas Utilities Company, November 1995.

"Financial Modeling: Testing the Reasonableness of Regulatory Results," University of Texas Center for Legal and Regulatory Studies Conference, June 1991.

"Estimating the Cost of Equity Capital," University of Texas at Austin Utilities Conference, June 1989, June 1990.

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Aquila Missouri
Capital Spending Relative to Net Plant
($millions unless otherwise noted)

No.	Reference Company	2004 Net Plant	Common Shares Outstanding 2005	2006	2007-2010	Capital Spending Per Share 2005	2006	2007-2010	Total Capital Spending 2005 -2010	Spending % of 2004 Net Plant
1	Alliant Energy Co.	4,805	117.6	119.2	124.0	5.45	5.15	19.40	3,660	**76.2%**
2	Ameren	11,085	196.0	199.0	208.0	3.30	3.25	12.60	3,914	**35.3%**
3	American Elec. Pwr.	22,790	389.0	389.0	389.0	6.90	7.70	23.00	14,626	**64.2%**
4	CH Energy Group	745	15.8	15.8	15.0	4.10	4.10	17.00	385	**51.6%**
5	Cent. Vermont P.S.	290	12.5	12.7	13.0	1.45	1.40	5.60	109	**37.5%**
6	CINERGY	9,930	200.0	202.7	209.8	4.70	4.65	4.50	2,827	**28.5%**
7	Cleco Corporation	1,060	49.3	49.5	50.3	1.40	1.40	6.00	440	**41.5%**
8	Con. Edison	15,830	244.6	247.0	254.2	6.55	6.50	23.60	9,207	**58.2%**
9	DTE Energy Co.	10,491	176.0	172.0	164.0	5.95	5.80	28.00	6,637	**63.3%**
10	Duquesne Light	1,465	78.0	85.5	88.5	3.55	3.20	4.00	905	**61.7%**
11	Empire District	857	26.0	26.3	27.2	2.65	3.25	10.00	426	**49.8%**
12	Energy East Corp.	5,825	148.0	149.0	152.0	2.30	2.05	8.00	1,862	**32.0%**
13	Entergy Corp.	18,900	215.0	216.0	216.0	7.00	5.55	18.60	6,721	**35.6%**
14	Exelon Corp.	21,482	665.0	665.0	665.0	2.85	2.85	11.40	11,372	**52.9%**
15	FPL Group, Inc.	20,605	392.6	396.0	405.6	4.50	4.10	12.80	8,582	**41.6%**
16	FirstEnergy	13,478	329.8	329.8	329.8	3.30	3.60	12.00	6,234	**46.3%**
17	Green Mtn. Power	235	5.2	5.3	5.4	3.85	3.80	11.20	101	**42.8%**
18	Hawaiian Electric	2,395	81.0	81.0	81.8	2.45	2.45	9.00	1,133	**47.3%**
19	MGE Energy, Inc.	607	20.4	20.4	20.4	4.55	4.00	9.00	358	**58.9%**
20	NiSource Inc.	9,385	272.0	273.0	276.0	2.30	2.20	9.00	3,710	**39.5%**
21	NSTAR	3,580	53.6	54.0	54.0	7.45	5.80	18.00	1,685	**47.1%**
22	Pinnacle West	7,620	91.6	91.6	91.6	8.85	8.85	28.40	4,223	**55.4%**
23	Progress Energy	14,615	250.0	252.0	258.0	5.25	4.80	18.60	7,321	**50.1%**
24	Puget Energy, Inc.	4,135	100.5	100.5	102.0	3.90	3.90	14.00	2,212	**53.5%**
25	SCANA Corp.	6,762	114.3	116.0	122.0	3.25	4.25	14.00	2,572	**38.0%**
26	Southern Co.	28,975	750.0	760.0	780.0	3.00	3.20	12.00	14,042	**48.5%**
27	Vectren Corp.	2,130	76.2	76.5	77.4	2.95	3.05	12.40	1,418	**66.6%**
28	Westar Energy	3,911	86.4	86.8	88.0	2.45	2.90	12.80	1,590	**40.6%**
29	Xcel Energy Inc.	14,085	402.5	402.5	434.0	3.10	3.10	13.00	8,138	**57.8%**
	Average									**49.0%**
	Aquila-MPS/LP Operations	1,082							874	**80.8%**

Source: Value Line Investment Survey, Electric Utility (East), Mar 4, 2005; (Central), Apr 1, 2005; (West), Feb 11, 2005

Aquila Missouri
Reference Company Adjustment Clauses
May 2005

No.	Reference Company	Operating Company By Jurisdiction	Adjustment Clause?	Comment
1	**Alliant Energy Co.**	Interstate Power & Light (IA)	**Yes**	Energy Adjustment Clauses are modified monthly based on forecasted energy costs (fuel & purchased power) for two months.
		Wisconsin Power & Light (WI)	**Yes**	Fuel clause effective outside of +/- 3% bandwidth
2	**Ameren**	CIPSCO, CILCO, Ill. Pwr (IL)	**No**	No fuel adjustment clauses in IL or MO
		Union Electric (MO)	**No**	
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	**CINERGY**	Cincinnati G&E (OH)	**No**	Rates frozen under rate stabilization plan
		PSI Energy (IN)	**Yes**	Traditional fuel & purch power adjustment clause
7	**Cleco Corporation**	CLECO Power (LA)	**Yes**	Traditional fuel & purch power adjustment clause
8	**Con. Edison Co.**	Con. Ed., Orange & Rockland (NY)	**Yes**	Traditional fuel & purch power adjustment clause
9	**DTE Energy Co.**	Detroit Edison (MI)	**Yes**	Power Supply Cost Rec clause resumed in Dec 2003
10	**Duquesne Light**	Duquesne Light (PA)	**No**	Rates deregulated
11	**Empire District**	Empire District Electric Co. (MO)	**No**	No fuel adjustment clauses in MO
12	**Energy East Corp.**	Central Maine Power (ME)	**Yes**	Traditional fuel & purch power adjustment clause
		Rochester G&E, NYSEG (NY)	**Yes**	Electric Supply Reconciliation mechanism
13	**Entergy Corp.**	Energy Arkansas (AR)	**Yes**	Traditional fuel & purch power adjustment clause
		Entergy Gulf States (TX)	**Yes**	Traditional fuel & purch power adjustment clause
		Entergy Gulf States, LA, NO (LA)	**Yes**	Traditional fuel & purch power adjustment clause
		Entergy Mississippi (MS)	**Yes**	Traditional fuel & purch power adjustment clause
14	**Exelon Corp.**	Commonwealth Edison (IL)	**No**	Rate caps
		PECO Energy (PA)	**No**	Rate caps

Aquila Missouri
Reference Company Adjustment Clauses (cont'd)

No.	Reference Company	Operating Company By Jurisdiction	Adjustment Clause?	Comment
15	**FPL Group, Inc.**	Florida P&L (FL)	**Yes**	Traditional fuel & purch power adjustment clause
16	**FirstEnergy**	Ohio Edison, Clev. El, Tol Ed (OH)	**No**	Rate caps
		Penn Pwr, Met Ed, Penn Elec (PA)	**No**	Rate caps
		Jersey Central (NJ)	**Yes**	Deferred pass-throughs
17	**Green Mtn. Power**	Green Mt. Power (VT)	**No**	No fuel adjustment clause in VT
18	**Hawaiian Electric**	Hawaiian Electric (HI)	**Yes**	Traditional fuel & purch power adjustment clause
19	**MGE Energy, Inc.**	Madison G&E (WI)	**Yes**	Fuel clause effective outside of +/- 3% bandwidth
20	**NiSource Inc.**	NIPSCO (IN)	**Yes**	Traditional fuel & purch power adjustment clause
21	**NSTAR**	Boston Edison, Comm Elec, Cambridge Elec (MA)	**Yes**	All electricity supply costs recovered, through deferral mechanism if necessary
22	**Pinnacle West**	APS (AZ)	**Yes**	Power supply adjuster part of rate settlement
23	**Progress Energy**	Progress Energy Carolina (NC)	**Yes**	Traditional fuel & purch power adjustment clause
		Progress Energy Florida (FL)	**Yes**	Traditional fuel & purch power adjustment clause
24	**Puget Energy, Inc.**	Puget Sound Energy (WA)	**Yes**	Power Cost Adjustment
25	**SCANA Corp.**	South Carolina E&G (SC)	**Yes**	Traditional fuel & purch power adjustment clause
26	**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
27	**Vectren Corp.**	Southern Indiana G&E (IN)	**Yes**	Traditional fuel & purch power adjustment clause
28	**Westar Energy**	Westar Energy	**No**	Fuel & PP addressed in context of general rate case
29	**Xcel Energy Inc.**	NSP-Minnesota (MN)	**Yes**	Traditional fuel & purch power adjustment clause
		NSP-Wisconsin (WI)	**Yes**	Fuel clause effective outside of +/- 3% bandwidth
		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	**19**	
		Comparable Cos w/o Trackers	**7**	
		Comparable Cos with both	**3**	
		Total Comparable Cos	**29**	

Source: Company 10-K's

Aquila Missouri
Weighted Average Cost of Debt: MPS
December 2004

Assigned Debt	Effective Rate	224001-103 MPD Gas	224001-122 MPD Elec Dist	224001-121 MPD Elec Trans	224001-123 MPG	MPS Total	MO Electric Assigned Debt	MO Electric Annual Interest	MO Electric Weighted Avg Cost of Debt
15 Yr 9.03%, Due 12/1/05 Effective Rate 9.312%	9.312%	0	3,574,203	6,314,033	1,800,288	11,688,524	11,688,524	1,088,435	
30 Yr 8.27%, Due 11/15/21 Effective Rate 8.502%	8.502%	2,280,000	12,771,000	3,494,000	7,755,000	26,300,000	24,020,000	2,042,180	
15 Yr 8.2%, Due 1/15/07 Effective Rate 8.284%	8.284%	1,643,000	9,629,000	2,517,000	2,756,000	16,545,000	14,902,000	1,234,482	
30 Yr 8.0%, Due 3/1/23 Effective Rate 8.129%	8.129%	4,703,000	7,421,000	1,452,000	3,224,000	16,800,000	12,097,000	983,365	
Sr 6.70%, Due 10/15/06 Effective Rate 6.745%	6.745%	8,245,084	35,619,752	12,208,967	10,967,712	67,041,515	58,796,431	3,965,819	
Sr 11.875% (downgrade 14.875%), Due 7/1/12 Effective Rate 5.35% (10/01/04)	5.350%	1,263,000	69,954,461	16,976,000	21,133,500	109,326,961	108,063,961	5,781,422	
Wamego 96, Due 3/1/26 Effective Rate 1.698%	1.698%	685,000	2,921,000	1,050,000	2,644,000	7,300,000	6,615,000	112,323	
Environ Improve, Due 5/1/28 Effective Rate 1.688%	1.688%	0	0	0	5,000,000	5,000,000	5,000,000	84,400	
Sanwa Bank Loan, Due 12/9/09 Effective Rate 7.02%	7.020%	0	0	0	3,862,102	3,862,102	3,862,102	271,120	
Sr 11.875% (downgrade 14.875%), Due 7/1/12 Effective Rate 6.05% (7/15/04)	6.050%	5,086,000	59,655,000	121,000	6,395,000	71,257,000	66,171,000	4,003,346	
Sr 7.625%, Due 11/15/09 Effective Rate 7.742%	7.742%	2,767,916	10,591,084	6,800,000	24,600,000	44,759,000	41,991,084	3,250,950	
Sr 7.95% (downgrade 9.95%), Due 2/1/11 Effective Rate 8.01%	8.010%		17,863,000			17,863,000	17,863,000	1,430,826	
Sr 7.625%, Due 11/15/09 Effective Rate 7.742%	7.742%				9,174,000	9,174,000	9,174,000	710,251	
30 Yr 8.27%, Due 11/15/21 Effective Rate 8.502%	8.502%				134,962	134,962	134,962	11,474	
Sr 7.95% (downgrade 9.95%), Due 2/1/11 Effective Rate 8.01%	8.010%				38,029,038	38,029,038	38,029,038	3,046,126	
30 Yr 8.0%, Due 3/1/23 Effective Rate 8.129%	8.129%				462,000	462,000	462,000	37,556	
Total		26,673,000	229,999,500	50,933,000	137,937,602	445,543,102	418,870,102	28,054,075	6.698%

Aquila Missouri
Weighted Average Cost of Debt: SJLP
December 2004

Assigned Debt	Gas 224001-103 SJD	Electric 224001-122 SJD	Generation 224001-123 SJG	Transmission 224001-121 SJLP	SJLP Total	SJLP Electric Assigned Debt	SJLP Electric Annual Interest	SJLP Electric Weighted Avg Cost of Debt
Poll Cntrl Bonds 5.85%, Due 2/1/13 Effective Rate 6.467%	-	-	5,600,000	-	5,600,000	5,600,000	362,152	
20 Yr MTN 7.13%, Due 11/29/13 Effective Rate 7.373%		1,000,000	-	-	1,000,000	1,000,000	73,730	
20 Yr MTN 7.16%, Due 11/29/13 Effective Rate 7.404%	1,300,000	6,000,000	1,700,000	-	9,000,000	7,700,000	570,108	
30 Yr MTN 7.17%, Due 12/1/23 Effective Rate 7.414%		7,000,000	-	-	7,000,000	7,000,000	518,980	
30 Yr MTN 7.33%, Due 11/30/23 Effective Rate 7.579%		-	3,000,000	-	3,000,000	3,000,000	227,370	
10 Yr MTN 8.36%, Due 3/15/05 Effective Rate 8.421%	2,000,000	-	18,000,000	-	20,000,000	18,000,000	1,515,780	
Sr 7.625%, Due 11/15/09 Effective Rate 7.742%		60,600,000	23,600,000	2,700,000	86,900,000	86,900,000	6,727,798	
Sr 7.95% (downgrade 9.95%), Due 2/1/11 Effective Rate 8.01%		1,661,000			1,661,000	1,661,000	133,046	
Total	3,300,000	76,261,000	51,900,000	2,700,000	134,161,000	130,861,000	10,128,964	
9.44% FMB, Due 2/1/2021 Effective Rate 9.487%	Debt on SJD books - assumes 100% Electric					19,125,000	1,814,346	
						149,986,000	11,943,310	7.963%

Schedule SCH-8

Aquila Missouri
Comparable Company Capital Structure

	Company	YE 2004 Common Equity Ratio	YE 2004 Long-Term Debt Ratio	YE 2004 Preferred Stock Ratio	*Value Line* 08-10 Estimate Common Equity Ratio	*Value Line* 08-10 Estimate Long-Term Debt Ratio	*Value Line* 08-10 Estimate Preferred Stock Ratio
1	Alliant Energy Co.	50.5%	44.5%	5.0%	55.0%	40.5%	4.5%
2	Ameren	53.0%	45.0%	2.0%	52.5%	46.0%	1.5%
3	American Elec. Pwr.	43.5%	55.9%	0.6%	47.5%	52.0%	0.5%
4	CH Energy Group	59.1%	38.3%	2.6%	58.0%	39.5%	2.5%
5	Cent. Vermont P.S.	60.0%	36.0%	4.0%	65.0%	33.0%	2.0%
6	CINERGY	49.0%	50.3%	0.7%	53.0%	46.5%	0.5%
7	Cleco Corporation	53.0%	44.5%	2.5%	46.5%	51.5%	2.0%
8	Con. Edison	51.0%	47.5%	1.5%	51.5%	47.5%	1.0%
9	DTE Energy Co.	42.8%	57.2%	0.0%	50.5%	49.5%	0.0%
10	Duquesne Light	35.5%	56.0%	8.5%	45.0%	48.0%	7.0%
11	Empire District	48.7%	51.3%	0.0%	52.5%	47.5%	0.0%
12	Energy East Corp.	40.5%	58.5%	1.0%	46.5%	52.5%	1.0%
13	Entergy Corp.	53.0%	45.0%	2.0%	56.5%	41.5%	2.0%
14	Exelon Corp.	43.5%	56.1%	0.4%	54.0%	46.0%	0.0%
15	FPL Group, Inc.	48.5%	51.5%	0.0%	54.5%	45.5%	0.0%
16	FirstEnergy	45.6%	53.1%	1.3%	55.5%	43.5%	1.0%
17	Green Mtn. Power	52.0%	48.0%	0.0%	50.5%	49.5%	0.0%
18	Hawaiian Electric	52.0%	46.5%	1.5%	55.5%	43.0%	1.5%
19	MGE Energy, Inc.	62.6%	37.4%	0.0%	65.0%	35.0%	0.0%
20	NiSource Inc.	49.3%	49.8%	0.9%	51.0%	48.5%	0.5%
21	NSTAR	40.0%	58.5%	1.5%	53.5%	45.5%	1.0%
22	Pinnacle West	50.0%	50.0%	0.0%	53.0%	47.0%	0.0%
23	Progress Energy	44.5%	55.0%	0.5%	49.5%	50.0%	0.5%
24	Puget Energy, Inc.	42.5%	57.5%	0.0%	48.5%	51.5%	0.0%
25	SCANA Corp.	42.6%	55.4%	2.0%	53.0%	45.5%	1.5%
26	Southern Co.	44.0%	53.5%	2.5%	49.5%	49.0%	1.5%
27	Vectren Corp.	50.5%	49.5%	0.0%	55.5%	44.5%	0.0%
28	Westar Energy	45.5%	53.8%	0.7%	51.0%	48.5%	0.5%
29	Xcel Energy Inc.	44.5%	54.5%	1.0%	51.0%	48.0%	1.0%
	Average	48.2%	50.3%	1.5%	52.8%	46.1%	1.2%

Source: Value Line Investment Survey, Electric Utility (East), Mar 4, 2005; (Central), Apr 1, 2005; (West), Feb 11, 2005

AQUILA MISSOURI

BOND RATINGS CRITERIA
RATIO GUIDELINES

STANDARD & POOR'S
(Business Profile 6)

Ratio	Bond Rating			
	AA	A	BBB	BB
FFO Interest Coverage*	5.2-6.0x	4.2-5.2x	3.0-4.2x	2.0-3.0x
FFO/Total Debt	35-45%	28-35%	18-28%	12-18%
Total Debt/ Total Capital	32-40%	40-48%	48-58%	58-62%

*Flow of Funds from Operations (FFO) is net income from continuing operations plus non-cash items such as deprecation, amortization, and deferred income taxes.

SOURCE: *Standard & Poor's Rating Criteria*, October 28, 2004.

AQUILA MISSOURI

Rate Base Investment – To Meet Customer Needs

($ Millions)	Over the Next 5 Years[1]
Iatan2	$ 250
Environmental	120
South Harper	150
Other – Generation, Transmission, & Electric and Gas Distribution	130
Total	**$ $650**

[1]Schedule represents capital expenditures in excess of annual depreciation range of $140 – 150 million.

Maturing and Callable Debt – Through 2007

Maturities: ($ Millions)	
9.03% Series due December 1, 2005	$ 19.1
6.70% Series due October 15, 2006	85.9
8.20% Series due January 15, 2007	36.9
	141.9
Debt with Call Features:	
QUIBS	$ 287.5
Term Loan	220.0
8.00% Series due March 1, 20023	51.5
	559.0
Total	**$ 700.9**

Utility Statistics

Not Held for Sale ($Millions)	12/31/2004 Net Plant	**Potential Divestitures**	12/31/2004 Net Plant
Missouri Electric	$ 859.4	Michigan Gas	$ 148.1
Colorado Gas	41.0	Minnesota Gas	151.9
Iowa Gas	111.0	Missouri Gas	48.2
Kansas Gas	81.5	Colorado Electric	130.5
Nebraska Gas	115.9	Kansas Electric	203.7
		SJL&P	191.5
Total	**$ 1,208.8**	**Total**	**$ 874.0**

Aquila Future Repositioning Plans, March 14, 2005.

Aquila Missouri
Financial Ratio Analysis
($millions unless otherwise noted)

Case 1: Comparable Group Equity Ratio, 11.50% ROE

Revenue Requirement	**SJLP Retail Jurisdictional**	**MPS Retail Jurisdictional**	**Steam Jurisdictional**
Rate Base	187,577,582	833,641,918	6,476,104
ROE	11.50%	11.50%	11.50%
Equity Ratio	48.20%	48.20%	48.20%
Debt Ratio	51.80%	51.80%	51.80%
Cost of Debt	7.963%	6.698%	7.963%
Income Tax Rate	38.39%	38.39%	38.39%
WACC	9.67%	9.01%	9.67%
Net Operating Income (NOI) Requirement	18,134,689	75,132,511	626,099
NOI Available	12,250,718	23,272,286	(2,332,126)
Additional NOI Needed	5,883,971	51,860,225	2,958,225
Additional Current Tax Required	3,666,380	32,314,787	1,843,309
Additional Gross Revenue Requirement	9,550,351	84,175,012	4,801,534
Funds from Operations (FFO)/Total Debt			
Net Income Requested	10,397,425	46,208,772	358,970
Regulatory Disallowances (after-tax)	0	0	
Depreciation & Amortization	11,696,560	50,755,320	623,997
Deferred Taxes & ITC	(482,295)	(789,138)	(4,003)
Funds from Operations (FFO)	21,611,690	96,174,954	978,964
Long-Term Debt	97,165,187	431,826,514	3,354,622
FFO/Total Debt	22.24%	22.27%	29.18%
Implied S&P Bond Rating (Business Position: 6)	*BBB*	*BBB*	*A*
Funds from Operations (FFO) Interest Coverage			
Funds from Operations (FFO)	21,611,690	96,174,954	978,964
Interest Expense	7,737,264	28,923,740	267,129
FFO Interest Coverage	3.79	4.33	4.66
Implied S&P Bond Rating (Business Position: 6)	*BBB*	*A*	*A*
Total Debt/Total Capital			
Total Debt/Total Capital	51.80%	51.80%	51.80%
Implied S&P Bond Rating (Business Position: 6)	*BBB*	*BBB*	*BBB*

Aquila Missouri
Financial Ratio Analysis
($millions unless otherwise noted)

Case 2: Aquila Consolidated Equity Ratio, 11.50% ROE

Revenue Requirement	SJLP Retail Jurisdictional	MPS Retail Jurisdictional	Steam Jurisdictional
Rate Base	187,577,582	833,641,918	6,476,104
ROE	11.50%	11.50%	11.50%
Equity Ratio	32.69%	32.69%	32.69%
Debt Ratio	67.31%	67.31%	67.31%
Cost of Debt	7.963%	6.700%	7.963%
Income Tax Rate	38.39%	38.39%	38.39%
WACC	9.12%	8.27%	9.12%
Net Operating Income (NOI) Requirement	17,105,660	68,934,851	590,572
NOI Available	13,140,067	26,601,192	(2,299,385)
Additional NOI Needed	3,965,593	42,333,659	2,889,957
Additional Current Tax Required	2,471,013	26,378,659	1,800,770
Additional Gross Revenue Requirement	6,436,606	68,712,317	4,690,727
Funds from Operations (FFO)/Total Debt			
Net Income Requested	7,051,698	31,339,517	243,459
Regulatory Disallowances (after-tax)	0	0	0
Depreciation & Amortization	11,696,560	50,755,320	623,997
Deferred Taxes & ITC	(482,295)	(789,138)	(4,003)
Funds from Operations (FFO)	18,265,963	81,305,699	863,453
Long-Term Debt	126,258,470	561,124,375	4,359,066
FFO/Total Debt	14.47%	14.49%	19.81%
Implied S&P Bond Rating (Business Position: 6)	*BB*	*BB*	*BBB*
Funds from Operations (FFO) Interest Coverage			
Funds from Operations (FFO)	18,265,963	81,305,699	863,453
Interest Expense	10,053,962	37,595,333	347,112
FFO Interest Coverage	2.82	3.16	3.49
Implied S&P Bond Rating (Business Position: 6)	*BB*	*BBB*	*BBB*
Total Debt/Total Capital			
Total Debt/Total Capital	67.31%	67.31%	67.31%
Implied S&P Bond Rating (Business Position: 6)	*B*	*B*	*B*

Aquila Missouri
Financial Ratio Analysis
($millions unless otherwise noted)

Case 3: Aquila Consolidated Equity Ratio, No Rate Increase

Revenue Requirement	**SJLP Retail Jurisdictional**	**MPS Retail Jurisdictional**	**Steam Jurisdictional**
Rate Base	187,577,582	833,641,918	6,476,104
ROE	11.50%	11.50%	11.50%
Equity Ratio	32.69%	32.69%	32.69%
Debt Ratio	67.31%	67.31%	67.31%
Cost of Debt	7.963%	6.700%	7.963%
Income Tax Rate	38.39%	38.39%	38.39%
WACC	9.12%	8.27%	9.12%
Net Operating Income (NOI) Requirement	17,105,660	68,934,851	590,572
NOI Available	13,140,067	26,601,192	(2,299,385)
Additional NOI Needed	3,965,593	42,333,659	2,889,957
Additional Current Tax Required	2,471,013	26,378,659	1,800,770
Additional Gross Revenue Requirement	6,436,606	68,712,317	4,690,727
Funds from Operations (FFO)/Total Debt			
Net Income Requested	7,051,698	31,339,517	243,459
Regulatory Disallowances (after-tax)	(3,965,593)	(42,333,659)	(2,889,957)
Depreciation & Amortization	11,696,560	50,755,320	623,997
Deferred Taxes & ITC	(482,295)	(789,138)	(4,003)
Funds from Operations (FFO)	14,300,370	38,972,041	(2,026,504)
Long-Term Debt	126,258,470	561,124,375	4,359,066
FFO/Total Debt	11.33%	6.95%	-46.49%
Implied S&P Bond Rating (Business Position: 6)	*B*	*B*	*B*
Funds from Operations (FFO) Interest Coverage			
Funds from Operations (FFO)	14,300,370	38,972,041	(2,026,504)
Interest Expense	10,053,962	37,595,333	347,112
FFO Interest Coverage	2.42	2.04	(4.84)
Implied S&P Bond Rating (Business Position: 6)	*BB*	*BB*	*B*
Total Debt/Total Capital			
Total Debt/Total Capital	67.31%	67.31%	67.31%
Implied S&P Bond Rating (Business Position: 6)	*B*	*B*	*B*

Aquila Missouri
Capital Structure-ROE Tradeoff
Misssouri Public Service Cost of Debt

Case 1: Company Case As-Filed

Capital Component	Percent	Cost Rate	Weighted Cost	Tax Inclusive Cost
Debt	51.80%	6.70%	3.47%	3.47%
Equity	48.20%	11.50%	5.54%	9.00%
	100.00%		9.01%	**12.47%**

Case 2: Consolidated Capital Structure; Adjusted ROE to Yield Equivalent Tax-Inclusive Rate of Return

	Percent	Cost Rate	Weighted Cost	Tax Inclusive Cost
Debt	67.31%	6.70%	4.51%	4.51%
Equity	32.69%	**15.00%**	4.91%	7.96%
	100.00%		9.41%	**12.47%**

Note: Tax rate = 38.39%

Aquila Missouri
Capital Structure-ROE Tradeoff
St. Joseph Light & Power Cost of Debt

Case 1: Company Case As-Filed

Capital Component	Percent	Cost Rate	Weighted Cost	Tax Inclusive Cost
Debt	51.80%	7.96%	4.12%	4.12%
Equity	48.20%	11.50%	5.54%	9.00%
	100.00%		9.67%	**13.12%**

Case 2: Consolidated Capital Structure; Adjusted ROE to Yield Equivalent Tax-Inclusive Rate of Return

	Percent	Cost Rate	Weighted Cost	Tax Inclusive Cost
Debt	67.31%	7.96%	5.36%	5.36%
Equity	32.69%	**14.63%**	4.78%	7.76%
	100.00%		10.14%	**13.12%**

Note: Tax rate = 38.39%

Aquila Missouri
Historical Capital Market Costs

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Prime Rate	8.8%	8.3%	8.4%	8.4%	8.0%	9.2%	6.9%	4.7%	4.1%	4.3%
Consumer Price Index	2.8%	2.9%	2.3%	1.6%	2.2%	3.4%	2.8%	1.6%	2.3%	2.7%
Long-Term Treasuries	6.9%	6.7%	6.6%	5.6%	5.9%	5.9%	5.5%	5.4%	5.0%	5.1%
Moody's Avg Utility Debt	7.9%	7.7%	7.6%	7.0%	7.6%	8.1%	7.7%	7.5%	6.6%	6.2%
Moody's A Utility Debt	7.9%	7.8%	7.6%	7.0%	7.6%	8.2%	7.8%	7.4%	6.6%	6.2%

SOURCES:
Prime Interest Rate - Federal Reserve Bank of St. Louis website
Consumer Price Index - Federal Reserve Bank of St. Louis website
Long-Term Treasuries - Federal Reserve Bank of St. Louis website
Moody's Average Utility Debt - Moody's (Mergent) Bond Record
Moody's Baa Utility Debt - Moody's (Mergent) Bond Record

Aquila Missouri

Three-Month Average Moody's Utility Bond Yields

MONTH	MOODY'S Baa UTILITY BOND YIELD	MOODY'S AVERAGE UTILITY BOND YIELD
Jan-05	5.95%	5.93%
Feb-05	5.76%	5.64%
Mar-05	5.99%	5.81%
AVERAGE	5.90%	5.79%

Source: Mergent Bond Record

Economic Indicators

Seasonally Adjusted Annual Rates — Dollar Figures in Billions

			Annual % Change				2004		E2005				E2006	
2004	E2005	E2006	2004	E2005	E2006		3Q	R4Q	1Q	2Q	3Q	4Q	1Q	2Q
						Gross Domestic Product								
$11,735.0	$12,467.0	$13,129.0	6.6	6.2	5.3	GDP (current dollars)	$11,815.0	$11,995.0	$12,207.0	$12,395.0	$12,558.0	$12,706.0	$12,882.0	$13,062.0
6.6	6.2	5.3	-	-	-	Annual rate of increase (%)	5.5	6.2	7.3	6.3	5.4	4.8	5.7	5.7
4.4	3.7	3.0	-	-	-	Annual rate of increase–real GDP (%)	4.0	3.9	4.1	3.8	3.3	2.4	3.3	3.4
2.2	2.4	2.2	-	-	-	Annual rate of increase–GDP deflator (%)	1.4	2.3	2.8	2.4	2.0	2.3	2.3	2.2
						***Components of Real GDP**								
$7,633.0	$7,895.0	$8,116.0	3.8	3.4	2.8	Personal consumption expenditures	$7,668.0	$7,747.0	$7,816.0	$7,866.0	$7,921.0	$7,978.0	$8,030.0	$8,092.0
3.8	3.4	2.8	-	-	-	% change	5.1	4.2	3.6	2.6	2.9	2.9	2.7	3.1
1,099.3	1,137.1	1,170.1	6.7	3.4	2.9	Durable goods	1,118.3	1,129.0	1,125.9	1,129.1	1,138.8	1,154.6	1,155.5	1,167.2
2,208.5	2,304.1	2,366.6	4.6	4.3	2.7	Nondurable goods	2,213.2	2,245.3	2,283.7	2,293.3	2,312.5	2,326.7	2,343.2	2,359.8
4,338.3	4,468.8	4,594.6	2.8	3.0	2.8	Services	4,352.5	4,389.2	4,421.0	4,457.2	4,484.5	4,512.4	4,546.0	4,580.4
1,228.6	1,360.0	1,461.6	10.6	10.7	7.5	Nonresidential fixed investment	1,245.3	1,288.3	1,313.9	1,342.6	1,377.7	1,405.7	1,429.6	1,455.4
10.6	10.7	7.5	-	-	-	% change	13.0	14.5	8.2	9.0	10.9	8.4	7.0	7.4
998.6	1,125.1	1,201.0	13.6	12.7	6.8	Producers durable equipment	1,015.6	1,059.5	1,086.1	1,115.5	1,140.7	1,158.2	1,173.7	1,193.3
551.5	565.4	538.0	9.7	2.5	(4.9)	Residental fixed investment	556.7	561.2	569.2	575.7	565.3	551.5	546.8	540.9
9.7	2.5	(4.9)	-	-	-	% change	1.5	3.3	5.8	4.6	(7.0)	(9.4)	(3.4)	(4.2)
45.7	46.0	41.1	-	-	-	Net change in business inventories	34.5	47.2	61.5	48.5	41.4	32.5	41.8	43.0
1,946.6	1,991.3	2,033.7	2.0	2.3	2.1	Gov't purchases of goods & services	1,949.9	1,954.0	1,968.9	1,983.0	2,000.5	2,012.7	2,022.1	2,031.4
721.7	747.9	761.2	4.7	3.6	1.8	Federal	726.6	728.8	737.4	745.3	752.1	757.0	758.9	760.6
1,224.8	1,243.3	1,272.3	0.4	1.5	2.3	State & local	1,223.2	1,225.1	1,231.4	1,237.6	1,248.4	1,255.7	1,263.0	1,270.8
(583.7)	(624.9)	(602.4)	-	-	-	Net exports	(583.2)	(621.1)	(641.6)	(620.9)	(617.8)	(619.1)	(614.6)	(606.8)
1,120.3	1,194.6	1,295.7	8.6	6.6	8.5	Exports	1,131.1	1,140.0	1,160.4	1,181.2	1,205.8	1,231.0	1,255.5	1,280.2
1,704.0	1,819.4	1,898.1	9.9	6.8	4.3	Imports	1,714.3	1,761.2	1,801.9	1,802.1	1,823.6	1,850.2	1,870.2	1,886.9
						****Income & Profits**								
$9,673.0	$10,222.0	$10,840.0	5.6	5.7	6.1	Personal income	$9,700.0	$9,954.0	$9,997.0	$10,155.0	$10,297.0	$10,437.0	$10,615.0	$10,771.0
8,634.0	9,074.0	9,573.0	5.8	5.1	5.5	Disposable personal income	8,652.0	8,884.0	8,913.0	9,032.0	9,125.0	9,228.0	9,383.0	9,515.0
1.2	0.4	0.8	-	-	-	Savings rate (%)	0.7	1.6	0.5	0.5	0.4	0.2	0.7	0.8
985.4	1,408.9	1,361.4	12.7	43.0	(3.4)	Corporate profits before taxes	932.8	1,057.9	1,418.0	1,438.7	1,408.1	1,370.8	1,347.8	1,370.1
716.1	1,061.8	1,008.9	12.0	48.3	(5.0)	Corporate profits after taxes	679.5	762.1	1,072.3	1,084.9	1,059.9	1,030.0	1,000.4	1,015.7
58.40	67.60	74.80	20.2	15.2	11.0	‡Earnings per share (S&P 500)	57.86	58.60	60.40	62.10	65.40	67.40	70.50	73.00
						†Prices & Interest Rates								
2.7	2.7	2.0	-	-	-	Consumer price index	1.6	3.6	2.4	3.1	1.5	2.6	1.6	2.1
1.4	3.2	4.2	-	-	-	Treasury bills	1.5	2.0	2.5	2.9	3.4	3.9	4.2	4.2
4.3	4.7	5.3	-	-	-	10-yr notes	4.3	4.2	4.3	4.5	4.8	5.1	5.3	5.3
5.1	5.1	5.8	-	-	-	30-yr bonds	5.2	4.9	4.7	4.9	5.2	5.5	5.7	5.7
5.6	5.7	6.3	-	-	-	New issue rate–corporate bonds	5.6	5.5	5.3	5.5	5.7	6.1	6.2	6.2
						Other Key Indicators								
1,950.0	1,970.0	1,790.0	5.4	1.2	(9.6)	Housing starts (1,000 units SAAR)	1,970.0	1,980.0	2,150.0	2,000.0	1,880.0	1,860.0	1,820.0	1,790.0
16.8	16.8	17.0	0.9	0.0	1.5	Auto & truck sales (1,000,000 units)	17.1	17.0	16.4	16.8	16.9	17.1	17.0	17.0
5.5	5.1	5.1	-	-	-	Unemployment rate (%)	5.4	5.4	5.3	5.1	5.0	5.0	5.0	5.0
(8.2)	(7.2)	(6.1)	-	-	-	§U.S. dollar	(6.8)	(19.8)	(2.9)	(4.9)	(9.0)	(6.1)	(6.6)	(5.1)

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. *1996 Chain-weighted dollars. **Current dollars. ‡Trailing 4 quarters. †Average for period. §Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.

Value Line Forecast for the U.S. Economy

	ACTUAL				ESTIMATED					
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GROSS DOMESTIC PRODUCT AND ITS COMPONENTS (2000 CHAIN WEIGHTED $) BILLIONS OF DOLLARS										
Final Sales	9760	9921	10063	10380	*10790*	*11161*	*11530*	*11899*	*12291*	*12709*
Total Consumption	6739	6910	7123	7356	*7635*	*7891*	*8128*	*8372*	*8615*	*8856*
Nonresidential Fixed Investment	1232	1180	1076	1111	*1226*	*1342*	*1435*	*1543*	*1659*	*1791*
Structures	313	306	252	237	*240*	*249*	*269*	*283*	*300*	*318*
Equipment & Software	919	874	826	879	*997*	*1109*	*1164*	*1245*	*1339*	*1446*
Residential Fixed Investment	447	448	470	511	*560*	*560*	*537*	*526*	*532*	*542*
Exports	1096	1037	1012	1032	*1115*	*1181*	*1304*	*1448*	*1600*	*1752*
Imports	1476	1436	1484	1550	*1702*	*1801*	*1873*	*1958*	*2046*	*2148*
Federal Government	579	601	647	690	*722*	*744*	*758*	*764*	*771*	*777*
State & Local Governments	1143	1179	1211	1220	*1225*	*1240*	*1263*	*1284*	*1306*	*1329*
Gross Domestic Product	9817	10128	10487	11004	*11728*	*12366*	*12994*	*13689*	*14449*	*15264*
Real GDP (2000 Chain Weighted $)	9817	9891	10075	10381	*10837*	*11218*	*11589*	*11983*	*12390*	*12824*
PRICES AND WAGES-ANNUAL RATES OF CHANGE										
GDP Deflator	2.2	2.4	1.7	1.8	*2.1*	*1.7*	*1.8*	*1.8*	*1.9*	*2.0*
CPI-All Urban Consumers	3.4	2.8	1.6	2.3	*2.7*	*2.3*	*2.4*	*2.4*	*2.5*	*2.5*
PPI-Finished Goods	3.7	2.0	-1.3	3.2	*3.6*	*2.0*	*1.7*	*1.5*	*1.6*	*1.8*
Employment Cost Index—Total Comp.	4.6	4.1	3.8	4.0	*3.8*	*3.6*	*3.7*	*3.8*	*3.8*	*4.0*
Productivity	2.7	2.2	4.9	4.5	*4.0*	*1.9*	*2.2*	*2.5*	*2.7*	*2.8*
PRODUCTION AND OTHER KEY MEASURES										
Industrial Prod. (% Change)	4.4	-3.4	-0.6	0.0	*4.1*	*3.1*	*3.0*	*3.5*	*3.8*	*4.0*
Factory Operating Rate (%)	81.1	75.4	73.9	73.7	*76.7*	*78.3*	*78.7*	*79.0*	*79.5*	*80.0*
Nonfarm Inven. Chg. (2000 Chain Weighted $)	57.8	-31.8	13.5	-1.1	*41.7*	*50.0*	*35.0*	*45.0*	*50.0*	*55.0*
Housing Starts (Mill. Units)	1.57	1.60	1.71	1.85	*1.95*	*1.88*	*1.75*	*1.73*	*1.72*	*1.70*
Existing House Sales (Mill. Units)	5.16	5.29	5.59	6.10	*6.61*	*6.36*	*6.10*	*6.00*	*5.90*	*5.80*
Total Light Vehicle Sales (Mill. Units)	17.4	17.1	16.8	16.6	*16.8*	*16.9*	*17.0*	*17.3*	*17.5*	*17.7*
National Unemployment Rate (%)	4.0	4.8	5.8	6.0	*5.5*	*5.2*	*5.2*	*5.2*	*5.3*	*5.3*
Federal Budget Surplus (Unified, FY, $Bill)	236.9	127.3	-157.8	-377.0	*-412.0*	*-350.0*	*-315.0*	*-300.0*	*-295.0*	*-270.0*
Price of Oil ($Bbl., U.S. Refiners' Cost)	28.21	22.95	24.00	28.60	*37.03*	*41.00*	*33.50*	*32.25*	*31.75*	*31.75*
MONEY AND INTEREST RATES										
3-Month Treasury Bill Rate (%)	5.8	3.4	1.6	1.0	*1.4*	*3.0*	*3.4*	*3.5*	*3.7*	*3.8*
Federal Funds Rate (%)	6.2	3.9	1.7	1.1	*1.4*	*2.9*	*3.6*	*3.8*	*4.0*	*4.3*
10-Year Treasury Note Rate (%)	6.0	5.0	4.6	4.0	*4.3*	*4.6*	*5.1*	*5.4*	*5.5*	*5.7*
Long-Term Treasury Bond Rate (%)	5.9	5.5	5.4	5.0	*5.1*	*5.1*	*5.7*	*6.0*	*6.1*	*6.3*
AAA Corporate Bond Rate (%)	7.6	7.1	6.5	5.7	*5.6*	*5.7*	*6.2*	*6.5*	*6.6*	*6.8*
Prime Rate (%)	9.2	6.9	4.7	4.1	*4.3*	*5.9*	*6.3*	*6.5*	*7.0*	*7.5*
INCOMES										
Personal Income (% Change)	8.0	3.5	1.8	3.2	*5.4*	*4.1*	*5.0*	*5.3*	*5.6*	*5.8*
Real Disp. Inc. (% Change)	4.8	1.9	3.1	2.3	*3.4*	*2.8*	*3.8*	*3.5*	*3.3*	*3.3*
Personal Savings Rate (%)	2.4	1.8	2.0	1.4	*1.0*	*0.5*	*0.5*	*0.8*	*1.0*	*1.3*
Pretax Corporate Profits ($Bill)	773.0	708.0	758.0	874.0	*973.0*	*1235.0*	*1321.0*	*1427.0*	*1541.0*	*1680.0*
Aftertax Corporate Profits ($Bill)	508.0	504.0	574.0	640.0	*709.0*	*803.0*	*859.0*	*928.0*	*1002.0*	*1092.0*
Yr-to-Yr % Change	-1.7	-0.9	14.0	11.4	*10.8*	*13.2*	*7.0*	*8.0*	*8.0*	*9.0*
COMPOSITION OF REAL GDP-ANNUAL RATES OF CHANGE										
Gross Domestic Product	3.7	0.8	1.9	3.0	*4.4*	*3.5*	*3.3*	*3.4*	*3.4*	*3.5*
Final Sales	3.8	1.6	1.4	3.2	*4.0*	*3.4*	*3.3*	*3.2*	*3.3*	*3.4*
Total Consumption	4.7	2.5	3.1	3.3	*3.8*	*3.4*	*3.0*	*3.0*	*2.9*	*2.8*
Nonresidential Fixed Investment	8.7	-4.2	-8.8	3.3	*10.3*	*9.5*	*7.0*	*7.5*	*7.5*	*8.0*
Structures	6.8	-2.2	-17.6	-5.6	*1.0*	*4.1*	*8.0*	*5.0*	*6.0*	*6.0*
Equipment & Software	9.4	-4.9	-5.5	6.4	*13.4*	*11.2*	*5.0*	*7.0*	*7.5*	*8.0*
Residential Fixed Investment	0.7	0.2	4.9	8.7	*9.5*	*0.0*	*-4.0*	*-2.0*	*1.0*	*2.0*
Exports	8.7	-5.4	-2.4	2.0	*8.1*	*5.9*	*10.4*	*11.0*	*10.5*	*9.5*
Imports	13.2	-2.7	3.3	4.4	*9.8*	*5.9*	*4.0*	*4.5*	*4.5*	*5.0*
Federal Government	0.9	3.8	7.7	6.6	*4.6*	*3.1*	*1.8*	*0.9*	*0.8*	*0.8*
State & Local Governments	2.7	3.1	2.7	0.7	*0.4*	*1.3*	*1.8*	*1.7*	*1.7*	*1.8*

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%	10.8%	10.6%
2 Ameren	8.3%	11.7%	10.9%
3 American Elec. Pwr.	8.1%	10.8%	10.5%
4 CH Energy Group	8.1%	11.2%	10.5%
5 Cent. Vermont P.S.	10.0%	10.8%	10.5%
6 CINERGY	9.9%	11.4%	10.9%
7 Cleco Corporation	8.3%	11.0%	10.3%
8 Con. Edison	9.2%	11.9%	11.2%
9 DTE Energy Co.	10.7%	11.3%	10.6%
10 Duquesne Light	11.3%	12.0%	11.3%
11 Empire District	11.2%	12.2%	11.3%
12 Energy East Corp.	8.9%	11.3%	11.2%
13 Entergy Corp.	9.7%	10.1%	10.2%
14 Exelon Corp.	10.3%	10.4%	10.2%
15 FPL Group, Inc.	9.0%	10.6%	10.6%
16 FirstEnergy	10.5%	10.9%	10.7%
17 Green Mtn. Power	8.7%	10.3%	10.3%
18 Hawaiian Electric	9.4%	11.2%	10.6%
19 MGE Energy, Inc.	9.9%	10.5%	10.0%
20 NiSource Inc.	9.1%	10.9%	10.6%
21 NSTAR	9.2%	10.9%	10.6%
22 Pinnacle West	9.3%	11.3%	11.0%
23 Progress Energy	9.7%	12.2%	11.4%
24 Puget Energy, Inc.	11.0%	11.1%	10.7%
25 SCANA Corp.	9.5%	10.9%	10.7%
26 Southern Co.	9.6%	11.2%	10.9%
27 Vectren Corp.	9.7%	11.2%	10.8%
28 Westar Energy	9.3%	10.9%	10.6%
29 Xcel Energy Inc.	9.7%	11.9%	11.8%
GROUP AVERAGE	9.5%	11.1%	10.7%
GROUP MEDIAN	9.5%	11.1%	10.6%

Aquila Missouri
Discounted Cash Flow Analysis
Traditional Constant Growth DCF Model

Company	(1) Recent Price(P0)	(2) Next Year's Div(D1)	(3) Dividend Yield	(4) DPS	(5) EPS	(6) Retention Rate (B)	(7) NBV	(8) ROE (R)	(9) B*R Growth	(10) Zacks	(11) Value Line	(12) GDP Growth	(13) Average Growth (Cols 9-12)	(14) ROE K=Div Yld+G (Cols 3+13)
				Projected Growth Rate Analysis										
				Year 2009 "BR" Growth Rate Calculation										
1 Alliant Energy Co.	27.20	1.14	4.19%	1.32	2.10	37.14%	26.30	7.98%	2.97%	4.00%	3.00%	6.60%	4.14%	8.3%
2 Ameren	49.95	2.54	5.09%	2.54	3.15	19.37%	33.85	9.31%	1.80%	3.90%	0.50%	6.60%	3.20%	8.3%
3 American Elec. Pwr.	34.00	1.44	4.24%	1.60	3.00	46.67%	27.75	10.81%	5.05%	3.40%	0.50%	6.60%	3.89%	8.1%
4 CH Energy Group	46.53	2.16	4.64%	2.20	3.00	26.67%	33.50	8.96%	2.39%	NA	1.50%	6.60%	3.50%	8.1%
5 Cent. Vermont P.S.	22.71	0.96	4.23%	1.08	2.00	46.00%	21.30	9.39%	4.32%	NA	6.50%	6.60%	5.81%	10.0%
6 CINERGY	40.57	1.96	4.83%	2.08	3.15	33.97%	28.65	10.99%	3.73%	4.60%	5.50%	6.60%	5.11%	9.9%
7 Cleco Corporation	20.36	0.90	4.42%	0.90	1.50	40.00%	13.75	10.91%	4.36%	4.00%	0.50%	6.60%	3.87%	8.3%
8 Con. Edison	43.00	2.30	5.35%	2.36	2.95	20.00%	32.60	9.05%	1.81%	3.00%	NA	6.60%	3.80%	9.2%
9 DTE Energy Co.	44.14	2.06	4.67%	2.10	4.75	55.79%	40.75	11.66%	6.50%	4.00%	7.00%	6.60%	6.03%	10.7%
10 Duquesne Light	18.49	1.00	5.41%	1.04	1.45	28.28%	10.45	13.88%	3.92%	5.00%	8.00%	6.60%	5.88%	11.3%
11 Empire District	22.74	1.28	5.63%	1.28	1.75	26.86%	16.50	10.61%	2.85%	5.00%	8.00%	6.60%	5.61%	11.2%
12 Energy East Corp.	26.02	1.21	4.65%	1.45	2.00	27.50%	21.50	9.30%	2.56%	5.00%	3.00%	6.60%	4.29%	8.9%
13 Entergy Corp.	68.78	2.41	3.50%	3.01	5.40	44.26%	49.80	10.84%	4.80%	6.90%	6.50%	6.60%	6.20%	9.7%
14 Exelon Corp.	44.44	1.68	3.78%	1.92	3.60	46.67%	21.95	16.40%	7.65%	5.40%	6.50%	6.60%	6.54%	10.3%
15 FPL Group, Inc.	38.77	1.54	3.97%	1.90	2.95	35.59%	26.45	11.15%	3.97%	5.40%	4.00%	6.60%	4.99%	9.0%
16 FirstEnergy	40.27	1.72	4.27%	2.00	4.00	50.00%	35.00	11.43%	5.71%	4.10%	8.50%	6.60%	6.23%	10.5%
17 Green Mtn. Power	29.12	1.08	3.71%	1.32	2.45	46.12%	23.60	10.38%	4.79%	NA	3.50%	6.60%	4.96%	8.7%
18 Hawaiian Electric	27.47	1.26	4.59%	1.32	2.10	37.14%	17.57	11.95%	4.44%	3.80%	4.30%	6.60%	4.79%	9.4%
19 MGE Energy, Inc.	35.06	1.38	3.94%	1.44	2.45	41.22%	18.85	13.00%	5.36%	NA	6.00%	6.60%	5.99%	9.9%
20 NiSource Inc.	22.55	0.96	4.26%	1.10	2.00	45.00%	21.50	9.30%	4.19%	4.40%	4.00%	6.60%	4.80%	9.1%
21 NSTAR	55.65	2.42	4.35%	2.70	4.25	36.47%	34.25	12.41%	4.53%	4.80%	3.50%	6.60%	4.86%	9.2%
22 Pinnacle West	42.43	1.99	4.69%	2.23	3.20	30.31%	36.88	8.68%	2.63%	5.20%	3.90%	6.60%	4.58%	9.3%
23 Progress Energy	43.30	2.44	5.63%	2.50	3.20	21.88%	35.65	8.98%	1.96%	3.70%	NA	6.60%	4.09%	9.7%
24 Puget Energy, Inc.	23.28	1.04	4.47%	1.16	2.15	46.05%	20.80	10.34%	4.76%	5.00%	9.70%	6.60%	6.51%	11.0%
25 SCANA Corp.	38.55	1.66	4.31%	1.90	3.25	41.54%	29.00	11.21%	4.66%	4.50%	5.00%	6.60%	5.19%	9.5%
26 Southern Co.	32.70	1.52	4.65%	1.70	2.50	32.00%	18.65	13.40%	4.29%	4.50%	4.50%	6.60%	4.97%	9.6%
27 Vectren Corp.	26.90	1.23	4.57%	1.35	1.95	30.77%	17.25	11.30%	3.48%	5.90%	4.50%	6.60%	5.12%	9.7%
28 Westar Energy	22.72	0.98	4.31%	1.10	1.75	37.14%	19.45	9.00%	3.34%	4.00%	6.00%	6.60%	4.99%	9.3%
29 Xcel Energy Inc.	17.65	0.93	5.27%	1.11	1.58	29.89%	15.17	10.44%	3.12%	3.90%	4.00%	6.60%	4.41%	9.7%
GROUP AVERAGE	35.81	1.59	4.54%	1.75	2.85	37.11%	26.74	10.83%	4.00%	4.54%	4.76%	6.60%	4.98%	9.5%
GROUP MEDIAN			4.47%											9.5%

Sources: Value Line Investment Survey, Electric Utility (East), Mar 4, 2005; (Central), Apr 1, 2005; (West), Feb 11, 2005

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

Company	(15) Recent Price(P0)	(16) Next Year's Div(D1)	(17) Dividend Yield	(18) GDP Growth	(19) ROE K=Div Yld+G *(Cols 17+18)*
1 Alliant Energy Co.	27.20	1.14	4.19%	6.60%	10.8%
2 Ameren	49.95	2.54	5.09%	6.60%	11.7%
3 American Elec. Pwr.	34.00	1.44	4.24%	6.60%	10.8%
4 CH Energy Group	46.53	2.16	4.64%	6.60%	11.2%
5 Cent. Vermont P.S.	22.71	0.96	4.23%	6.60%	10.8%
6 CINERGY	40.57	1.96	4.83%	6.60%	11.4%
7 Cleco Corporation	20.36	0.90	4.42%	6.60%	11.0%
8 Con. Edison	43.00	2.30	5.35%	6.60%	11.9%
9 DTE Energy Co.	44.14	2.06	4.67%	6.60%	11.3%
10 Duquesne Light	18.49	1.00	5.41%	6.60%	12.0%
11 Empire District	22.74	1.28	5.63%	6.60%	12.2%
12 Energy East Corp.	26.02	1.21	4.65%	6.60%	11.3%
13 Entergy Corp.	68.78	2.41	3.50%	6.60%	10.1%
14 Exelon Corp.	44.44	1.68	3.78%	6.60%	10.4%
15 FPL Group, Inc.	38.77	1.54	3.97%	6.60%	10.6%
16 FirstEnergy	40.27	1.72	4.27%	6.60%	10.9%
17 Green Mtn. Power	29.12	1.08	3.71%	6.60%	10.3%
18 Hawaiian Electric	27.47	1.26	4.59%	6.60%	11.2%
19 MGE Energy, Inc.	35.06	1.38	3.94%	6.60%	10.5%
20 NiSource Inc.	22.55	0.96	4.26%	6.60%	10.9%
21 NSTAR	55.65	2.42	4.35%	6.60%	10.9%
22 Pinnacle West	42.43	1.99	4.69%	6.60%	11.3%
23 Progress Energy	43.30	2.44	5.63%	6.60%	12.2%
24 Puget Energy, Inc.	23.28	1.04	4.47%	6.60%	11.1%
25 SCANA Corp.	38.55	1.66	4.31%	6.60%	10.9%
26 Southern Co.	32.70	1.52	4.65%	6.60%	11.2%
27 Vectren Corp.	26.90	1.23	4.57%	6.60%	11.2%
28 Westar Energy	22.72	0.98	4.31%	6.60%	10.9%
29 Xcel Energy Inc.	17.65	0.93	5.27%	6.60%	11.9%
GROUP AVERAGE	35.81	1.59	4.54%	6.60%	11.1%
GROUP MEDIAN			4.47%		11.1%

Sources: Value Line Investment Survey, Electric Utility (East), Mar 4, 2005; (Central), Apr 1, 2005; (West), Feb 11, 2005
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	2009 Div	Annual Change to 2009	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 ([illegible])
1	Alliant Energy Co.	1.14	1.32	0.06	-27.20	1.14	1.20	1.26	1.32	1.41	6.60%	10.6%
2	Ameren	2.54	2.54	0.00	-49.95	2.54	2.54	2.54	2.54	2.71	6.60%	10.9%
3	American Elec. Pwr.	1.44	1.60	0.05	-34.00	1.44	1.49	1.55	1.60	1.71	6.60%	10.5%
4	CH Energy Group	2.16	2.20	0.01	-46.53	2.16	2.17	2.19	2.20	2.35	6.60%	10.5%
5	Cent. Vermont P.S.	0.96	1.08	0.04	-22.71	0.96	1.00	1.04	1.08	1.15	6.60%	10.5%
6	CINERGY	1.96	2.08	0.04	-40.57	1.96	2.00	2.04	2.08	2.22	6.60%	10.9%
7	Cleco Corporation	0.90	0.90	0.00	-20.36	0.90	0.90	0.90	0.90	0.96	6.60%	10.3%
8	Con. Edison	2.30	2.36	0.02	-43.00	2.30	2.32	2.34	2.36	2.52	6.60%	11.2%
9	DTE Energy Co.	2.06	2.10	0.01	-44.14	2.06	2.07	2.09	2.10	2.24	6.60%	10.6%
10	Duquesne Light	1.00	1.04	0.01	-18.49	1.00	1.01	1.03	1.04	1.11	6.60%	11.3%
11	Empire District	1.28	1.28	0.00	-22.74	1.28	1.28	1.28	1.28	1.36	6.60%	11.3%
12	Energy East Corp.	1.21	1.45	0.08	-26.02	1.21	1.29	1.37	1.45	1.55	6.60%	11.2%
13	Entergy Corp.	2.41	3.01	0.20	-68.78	2.41	2.61	2.81	3.01	3.21	6.60%	10.2%
14	Exelon Corp.	1.68	1.92	0.08	-44.44	1.68	1.76	1.84	1.92	2.05	6.60%	10.2%
15	FPL Group, Inc.	1.54	1.90	0.12	-38.77	1.54	1.66	1.78	1.90	2.03	6.60%	10.6%
16	FirstEnergy	1.72	2.00	0.09	-40.27	1.72	1.81	1.91	2.00	2.13	6.60%	10.7%
17	Green Mtn. Power	1.08	1.32	0.08	-29.12	1.08	1.16	1.24	1.32	1.41	6.60%	10.3%
18	Hawaiian Electric	1.26	1.32	0.02	-27.47	1.26	1.28	1.30	1.32	1.41	6.60%	10.6%
19	MGE Energy, Inc.	1.38	1.44	0.02	-35.06	1.38	1.40	1.42	1.44	1.54	6.60%	10.0%
20	NiSource Inc.	0.96	1.10	0.05	-22.55	0.96	1.01	1.05	1.10	1.17	6.60%	10.6%
21	NSTAR	2.42	2.70	0.09	-55.65	2.42	2.51	2.61	2.70	2.88	6.60%	10.6%
22	Pinnacle West	1.99	2.23	0.08	-42.43	1.99	2.07	2.15	2.23	2.38	6.60%	11.0%
23	Progress Energy	2.44	2.50	0.02	-43.30	2.44	2.46	2.48	2.50	2.67	6.60%	11.4%
24	Puget Energy, Inc.	1.04	1.16	0.04	-23.28	1.04	1.08	1.12	1.16	1.24	6.60%	10.7%
25	SCANA Corp.	1.66	1.90	0.08	-38.55	1.66	1.74	1.82	1.90	2.03	6.60%	10.7%
26	Southern Co.	1.52	1.70	0.06	-32.70	1.52	1.58	1.64	1.70	1.81	6.60%	10.9%
27	Vectren Corp.	1.23	1.35	0.04	-26.90	1.23	1.27	1.31	1.35	1.44	6.60%	10.8%
28	Westar Energy	0.98	1.10	0.04	-22.72	0.98	1.02	1.06	1.10	1.17	6.60%	10.6%
29	Xcel Energy Inc.	0.93	1.11	0.06	-17.65	0.93	0.99	1.05	1.11	1.18	6.60%	11.8%
	GROUP AVERAGE	1.59	1.75	0.05	-35.81							10.7%
	GROUP MEDIAN											10.6%

Sources: Value Line Investment Survey, Electric Utility (East), Mar 4, 2005; (Central), Apr 1, 2005; (West), Feb 11, 2005

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 (Jan-Mar 2005)

Column 2: Estimated 2006 Dividends per Share from Value Line

Column 3: Column 2 Divided by Column 1

Column 4: Estimated 2009 Dividends per Share from Value Line

Column 5: Estimated 2009 Earnings per Share from Value Line

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

Column 7: Estimated 2009 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 02-04 To 08-10" Earnings Growth as Reported by Value Line.

Column 12: Average of GDP Growth During the Last 10 year, 20 year, 30 year, and 40 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 Average Growth Rate shown at the Bottom of 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 Average Growth Rate shown at the Bottom of 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%	10.73%	4.53%
AVERAGE	9.63%	12.64%	3.01%

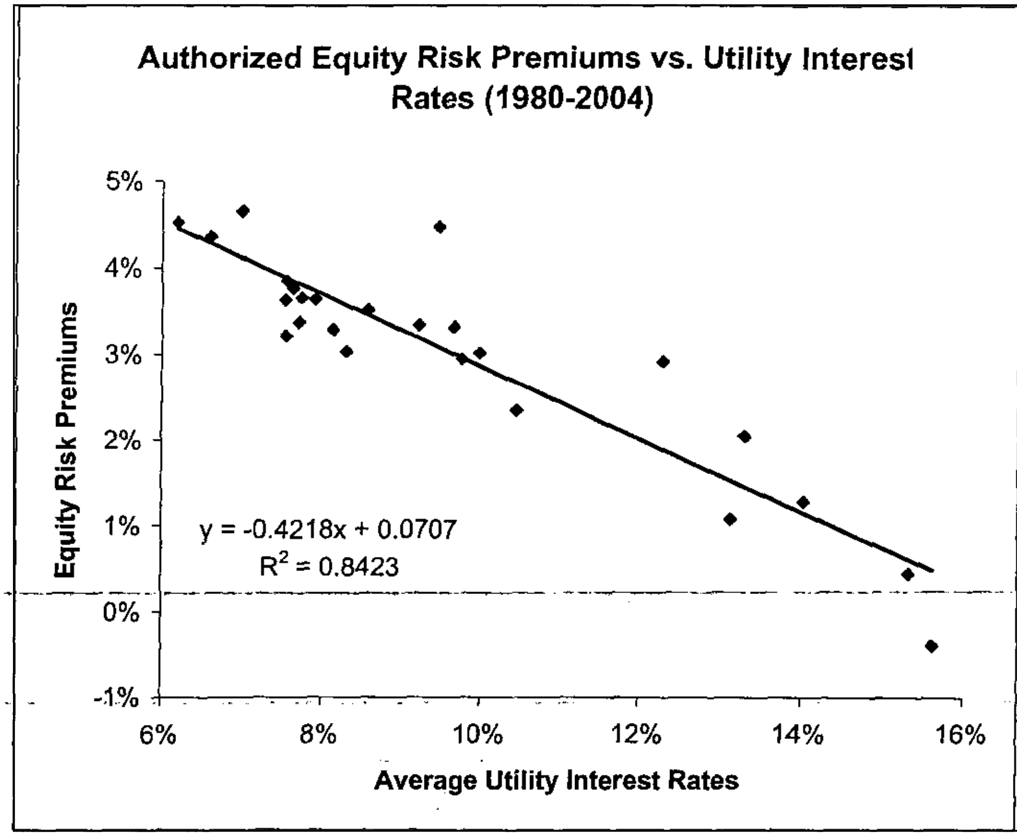
INDICATED COST OF EQUITY

PROJECTED AVG UTILITY BOND YIELD	6.70%
MOODY'S AVG ANNUAL YIELD DURING STUDY	9.63%
INTEREST RATE DIFFERENCE	-2.93%
INTEREST RATE CHANGE COEFFICIENT	-42.18%
ADUSTMENT TO AVG RISK PREMIUM	1.24%
BASIC RISK PREMIUM	3.01%
INTEREST RATE ADJUSTMENT	1.24%
EQUITY RISK PREMIUM	4.25%
PROJECTED AVG UTILITY BOND YIELD	6.70%
INDICATED EQUITY RETURN	**10.95%**

Sources:
(1) Moody's Investors Service
(2) Regulatory Focus, Regulatory Research Associates, Inc.

Aquila Missouri

Risk Premium Analysis



BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Aquila, Inc. d/b/a Aquila Networks-L&P, for authority to file tariffs Increasing steam rates for the service provided To customers in the Aquila Networks-L&P area	))))	Case No. HR-________

Travis County)
) 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 "Direct 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 18th day of May, 2005.

SHIRLEY FRASHER
My Commission Expires
March 3, 2008

Shirley Frasher
Notary Public

My Commission expires:

March 3, 2008