Exhibit No.:	
Witness:	Michael Gorman
Type of Exhibit:	Direct Testimony
Issue:	Return on Common Equity
Sponsoring Party:	Ag Processing, Inc.
Case No.:	HR-2005-0450

Before the Public Service Commission of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Steam Heat Service Provided to Customers in its L&P Missouri Service Area.	))))	Case No. HR-2005-0450

Direct Testimony and Schedules of

Michael Gorman

FILED[2]

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Missouri Public Service Commission

On behalf of

Ag Processing, Inc.

Project 8418
October 14, 2005

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

Exhibit No. 104
Case No(s). HR-2005-0450
Date -09-06 Rptr XF

Before the Public Service Commission
of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Steam Heat Service Provided to Customers in its L&P Missouri Service Area.	))))	Case No. HR-2005-0450

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Michael Gorman

Michael Gorman, being first duly sworn, on his oath states:

1. My name is Michael Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000. We have been retained by Ag Processing, Inc. in this proceeding on its behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. HR-2005-0450.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things they purport to show.

Michael Gorman

Subscribed and sworn to before this 12th day of October 2005.

CAROL SCHULZ
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Feb. 26, 2008

Notary Public

My Commission Expires February 26, 2008.

Before the Public Service Commission
of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Steam Heat Service Provided to Customers in its L&P Missouri Service Areas	))))	Case No. HR-2005-0450

Direct Testimony of Michael Gorman

Q **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A My name is Michael Gorman and my business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141-2000.

Q **WHAT IS YOUR OCCUPATION?**

A I am a consultant in the field of public utility regulation and a principal in the firm of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q **PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

A These are set forth in Appendix A.

Q **ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

A I am appearing on behalf of Ag Processing, Inc.

Q **WHAT IS THE SUBJECT OF YOUR TESTIMONY?**

A I will recommend a fair return on common equity and overall rate of return for Aquila St. Joe Light & Power Company Steam Operations (L&P).

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A I recommend the Missouri Public Service Commission ("MPSC" or the "Commission") award L&P a return on common equity of 9.8%.

My recommended return on equity for Aquila is based on a constant growth Discounted Cash Flow ("DCF"), a multi-stage growth DCF, Risk Premium ("RP") and Capital Asset Pricing Model ("CAPM") analyses. These analyses estimate a fair return on equity based on observable market information for a group of publicly traded electric utility companies that proxy Aquila's going forward investment risk.

I recommend an overall rate of return for L&P of 8.79%. My recommended overall rate of return is based on a forecasted capital structure, my recommended return on equity for each company, and the Companies' projected embedded cost of debt. I recommend the Commission award my estimated overall rate of return to the two utilities on its conditional acceptance of a forecasted capital structure that reflects the expected increase in Aquila's equity ratio, and decrease in its debt ratio, created through its plan to sell assets and use the proceeds to retire debt.

If Aquila fails to execute these transactions and retire debt, I recommend the Commission revisit Aquila's appropriate rate level and overall rate of return to ensure that rates do not provide Aquila an excessive return on actual equity invested in Missouri utility assets. For purposes of this conditional approval of my forecasted capital structure, I recommend the Commission direct Aquila to provide a time line for completing the assets sales and debt reduction, and to demonstrate that its improvement to its actual capital structure is reasonably consistent with the capital structure used to set rates in this proceeding.

I respond to Aquila witness Dr. Samuel Hadaway's proposed hypothetical capital structure for Aquila. Dr. Hadaway's proposed capital structure for Aquila contains an unreasonably high common equity ratio, and is not tied to reasonably projected improvements to Aquila's actual capital structure during the period rates determined in this proceeding will be in effect.

Finally, in my testimony I respond to Dr. Hadaway's recommended 11.5% return on equity, and demonstrate why he has significantly overstated the current market required return on equity. Indeed, the primary flaw in Dr. Hadaway's return on equity models is his exclusive use of his own projected yields on A-rated utility bonds, while completely ignoring today's current observable yield on these utility debt securities. Dr. Hadaway's A-rated yield projection is 120 basis points higher than the current observable yield. As discussed later, current observable utility bond yields are as a reliable projection of future yields as are economist forecasts. Hence, Dr. Hadaway's use of only projected yields significantly inflates his return on equity estimates, while diminishing his ability to provide an unbiased estimate of the utilities' return on equity in this proceeding.

Also, Dr. Hadaway inflates his DCF return estimates by relying on an historical GDP growth rate, rather than the current assessment of what GDP growth will be going forward. The primary difference between historical growth and projected growth is the expected inflation rate. The expected inflation rate going forward is much lower than in the past, thus Dr. Hadaway's use of a long-term historical GDP growth rate substantially inflates his DCF return estimates.

Q PLEASE SUMMARIZE AQUILA'S CURRENT CREDIT STANDING AND ACCESS TO CAPITAL.

A Aquila's credit standing is improving, albeit its credit rating is still below investment grade at B-. In September 2005, S&P placed Aquila's credit ratings on credit watch with positive implications. It noted that Aquila is in the process of liquidating assets in an effort to reduce debt. Indeed, S&P noted that Aquila had signed definitive agreements to sell four utility businesses for approximately $900 million. The sale of these businesses would reduce its outstanding debt by approximately 30%. S&P states that the asset sale would improve Aquila's liquidity position in two respects.

First, it will allow Aquila to retire some long-term debt maturities and mitigate intermediate refinancing risk. Second, since the utility asset sales are gas distribution utilities, the sale will eliminate working capital obligations (including gas procurement), which will improve Aquila's liquidity.

Also, S&P noted positively Aquila's debt reduction activities and its ability to put in place secured financing facilities for Aquila's planned participation in the IATAN 2 coal-fired generation project (*Standard & Poor's Research Update*: Ratings on Aquila are Placed on Credit Watch Positive, Reason Utility Business Sales, September 22, 2005).

PROJECTED INTEREST RATES AND CAPITAL MARKET COSTS

Q SHOULD THE COMMISSION FOLLOW THE LEAD OF DR. HADAWAY AND PLACE HEAVY RELIANCE ON PROJECTED INTEREST RATES AND FUTURE CAPITAL MARKET COSTS RELATIVE TO TODAY'S OBSERVABLE CAPITAL MARKET COSTS?

A No. While projected interest rates should be given some consideration, the determination of Aquila's cost of capital today should be based primarily on observable and verifiable actual current market costs. This is appropriate because projected changes to interest rates are highly uncertain and the accuracy is at best problematic. Indeed, this is clearly evident by a review of projected changes to interest rates made over the last five years, in comparison to how accurate these projections turned out to be. This analysis clearly illustrates that observable interest rates today are as accurate as are economists' consensus projections of future interest rates.

An analysis supporting this conclusion is illustrated on my Schedule MPG-1. On this schedule, under Columns 1 and 2, I show the actual market yield at the time a projection is made for Treasury bond yields two years in the future. In Column 1, I show the actual Treasury yield and, in Column 2, I show the projected yield two years out.

As shown in Columns 1 and 2, over the last five years Treasury yields were projected to increase relative to the current Treasury yields at the time of the projection. The projected yield change is shown on this Schedule under Column 5.

In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. Under Column 6, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown on this Schedule, over the last five years economists have consistently been projecting increases to interest rates. However, as demonstrated under Column 6, those yield projections have turned out to be overstated in virtually every case. Indeed, Treasury yields have actually decreased or remained flat over the last five years, rather than increase as the economists' projections indicated.

This review of the experience with projected interest rates clearly illustrates that interest rate projection accuracy is highly problematic. Indeed, current observable interest rates are just as likely a reasonable projection of future interest rates as are economists' projections. Accordingly, while I will use projected interest rates to provide some sense of the market's expectations of future capital market costs in my models, I will not use them exclusively. Rather, my analyses will be based on the combination of current observable interest rates and projected interest rates. Thus, my analyses will capture a return on equity range reflecting a broad range of potential actual capital market costs during the period rates determined in this proceeding will be in effect.

Q ARE THERE OTHER REASONS NOT TO PROVIDE EXCLUSIVE RELIANCE ON UNCERTAIN PROJECTED INCREASES TO INTEREST RATES?

A Yes. The ratemaking process in itself provides utility protection against the increasing cost of capital. Indeed, if Aquila's utility subsidiaries rates of return are set based on today's market cost of capital, and capital costs increase in the future, then the utilities are free to file for a rate change to reflect higher capital costs in the future when or if costs change. Hence, the regulatory mechanism itself provides utilities a hedge against increasing capital costs.

Depriving customers of today's low cost capital market environment is prejudicial and unreasonably tilts the regulatory balance in favor of investors. Consequently, Dr. Hadaway's exclusive use of projected interest rates, which reflect a dramatic increase over current observable and real interest rates today, must be rejected.

I. AQUILA'S PROPOSED CAPITAL STRUCTURE

Q WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN THIS PROCEEDING?

A Aquila's proposed capital structure, as supported by Dr. Hadaway, is shown below in Table 1.

TABLE 1

Aquila's Proposed Hypothetical Capital Structure (March 31, 2006)

Description	Percent of Total Capital
Common Equity	48.2%
Debt	51.8%
Total Financial Capital Structure	100.0%

Source: Schedule SCH-7.

Dr. Hadaway asserts that his proposed capital structure was designed to provide an equity and debt mix that is consistent with Standard & Poor's (S&P) bond rating criteria for an investment grade electric utility company with a BBB rating. Dr. Hadaway also states that his capital structure is consistent with the capital structure mix of his proxy group used to estimate Aquila's return on common equity.

Q WHAT IS AQUILA'S ACTUAL CAPITAL STRUCTURE?

A Dr. Hadaway shows Aquila's actual capital structure on his Schedule SCH-7, Page 1. As shown by Dr. Hadaway, Aquila's actual calendar year 2004 common equity ratio is

32.69%. This is identical to Value Line's stated common equity ratio for Aquila in 2004. As noted above, Aquila has recently entered contracts to sell four gas utilities for approximately $900 million. S&P expects the sale of those gas utilities to reduce Aquila's outstanding debt by approximately 30%. After these asset sales are completed, and Aquila uses the proceeds to reduce debt, Value Line projects its capital structure will strengthen considerably. As such, I have reflected these asset sales in my proposed capital structure for Aquila in this proceeding.

Q IS THE CAPITAL STRUCTURE DR. HADAWAY PROPOSES TO USE FOR AQUILA A REASONABLE ONE?

A No. Dr. Hadaway's capital structure has a common equity ratio that is unreasonably high for setting rates. Indeed, this common equity ratio is much higher than needed to produce credit metrics that are consistent with S&P's financial benchmarks for a BBB utility bond rating, and exceeds a reasonable projection of what Aquila's actual common equity ratios will be if it achieves the debt reductions enabled by the asset sales. Thus, his capital structure is not a reasonable forecast of Aquila's actual capital structure when the rates determined in this proceeding will be in effect.

Q PLEASE EXPLAIN WHY DR. HADAWAY'S CAPITAL STRUCTURE CONTAINS MORE EQUITY THAN NECESSARY TO PRODUCE FINANCIAL CREDIT METRICS CONSISTENT WITH S&P'S BENCHMARKS FOR A BBB-RATED UTILITY COMPANY?

A Dr. Hadaway's proposed capital structure ostensibly develops a debt to total capital ratio at the midpoint of S&P's credit rating criteria for a minimum investment grade BBB electric utility, with a business profile score of 6.

S&P's long-term debt to total capitalization range for an investment grade electric utility with this business profile score is 48% to 58%.[1] In essence, Dr. Hadaway is choosing a point estimate that is approximately the midpoint of this benchmark range.

Q IS DR. HADAWAY'S USE OF A S&P BUSINESS PROFILE SCORE OF 6 REASONABLE?

A Yes. I will not take issue with Dr. Hadaway's use of a business profile score of 6 for two reasons. First, Aquila's system-wide business profile score is 8, which is more risky than a business profile score of 6. Aquila's higher business profile score is attributable to its higher risk non-regulated investments and unwinding restructuring activities, which are not related to the low risk, regulated utility operations in Missouri. Also, a business profile score of 6 is the same S&P rating assigned to Missouri utility operations for Kansas City Power & Light Company, and Empire District Electric Company, both of which have business profile scores from S&P of 6. Ameren's S&P business profile score is 5 (i.d).

Q IS DR. HADAWAY'S PROPOSED CAPITAL STRUCTURE COMPARABLE TO HIS PROXY GROUP OF ELECTRIC COMPANIES?

[1] Standard & Poor's, New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised, June 2, 2004.

A No. The average common equity ratio of Dr. Hadaway's proxy group as reported by Value Line is 48%. However, the average common equity ratio reported for this group by C.A. Turner is 45%. The C.A. Turner common equity ratio is more consistent with S&P's credit rating criteria because C.A. Turner reflects short-term debt in its calculation of common equity ratios, while Value Line considers only long-term debt in its total capitalization mix. Consequently, the debt leverage reflected in Dr. Hadaway's proposed capital structure is less than that of his proxy group.

Q WHAT CAPITAL STRUCTURE DO YOU RECOMMEND BE USED TO SET AQUILA'S OVERALL RATE OF RETURN?

A I recommend a capital structure with a 45% common equity ratio, and a 55% long-term debt ratio. This is very similar to the capital structure recommended by Dr. Hadaway, however I propose to use C.A. Turner's common equity ratio and not Value Line's.

Q WHY DO YOU BELIEVE YOUR PROPOSED CAPITAL STRUCTURE IS MORE REASONABLE THAN DR. HADAWAY'S PROPOSED CAPITAL STRUCTURE?

A My proposed capital structure is more reasonable because it more properly reflects the leverage risk reflective of a BBB bond rating, and is more compatible with the leverage risk of the proxy group relied on by Dr. Hadaway and by me to estimate Aquila's fair return on common equity. Most importantly, however, my proposed capital structure reasonably reflects Value Line's projected capital structure for Aquila after it executes its plan to sell its gas utility assets and use the proceeds to retire debt. Hence, my proposed capital structure is a better projection of Aquila's actual capital structure during the period rates determined in this proceeding will be in effect.

Hence, it properly balances the interests of Aquila's investors and its Missouri ratepayers.

Q WHY DO YOU BELIEVE YOUR PROPOSED CAPITAL STRUCTURE SUPPORTS MINIMUM INVESTMENT GRADE CREDIT RATING BENCHMARKS?

A S&P's business profile and credit rating benchmarks confirm this point. For an electric utility with a business profile score of 6, and a minimum investment grade bond rating of BBB, S&P states a utility should have a total debt ratio in the range of 48% to 58%. My proposed capital structure includes a 55% total debt ratio, which is within S&P's benchmark credit rating.

Q WHY DO YOU BELIEVE YOUR PROPOSED CAPITAL STRUCTURE IS A MORE REASONABLE FORECAST OF AQUILA'S ACTUAL CAPITAL STRUCTURE WHEN THE RATES DETERMINED IN THIS PROCEEDING ARE IN EFFECT?

A My proposed capital structure is more in line with Value Line's projected capital structure for Aquila during the next three to five years. Based on the expected debt reduction to be realized from the asset sales discussed above, Value Line is projecting Aquila's common equity ratio to rise from 32% in calendar year 2004 to 43% for calendar year 2006, and increase to 49.5% in the 2008 to 2010 time frame.

Use of a 45% common equity ratio then is reasonably consistent with Value Line's projections of Aquila's actual capital structure after the asset sales are completed and proceeds from those sales are used to reduce debt. Hence, this capital structure is more reflective of Aquila's actual capital structure cost during the period rates determined in this proceeding will be in effect.

Q **SHOULD THE COMMISSION ORDER AQUILA TO INFORM IT WHEN THE ASSET SALES TAKE PLACE, AND ASSURE IT THAT THE PROCEEDS FROM THOSE SALES WILL BE USED TO REDUCE DEBT AND STRENGTHEN ITS CAPITAL STRUCTURE?**

A Yes. I recommend that the Missouri Commission order Aquila to inform it of its progress in completing its utility asset sales and reducing debt to strengthen its capital structure and improve its credit rating. To the extent Aquila fails to meet these important asset sales and debt reduction targets, the Commission should adjust Aquila's Missouri rates to provide a fair return based on Aquila's actual common equity capital.

Q **WHAT OVERALL RATE OF RETURN DO YOU RECOMMEND FOR L&P IN THIS PROCEEDING?**

A As shown on Schedule MPG-2, I recommend the Commission set L&P's overall rate of return at 8.79%. These overall rates of return are based on my proposed capital structure, and my recommended return on equity for Aquila's Missouri utility operations of 9.8%.

II. <u>RETURN ON COMMON EQUITY</u>

Q **PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED COMPANY'S COST OF COMMON EQUITY.**

A In general, determining a fair cost of common equity for a regulated utility has been framed by two decisions of the U.S. Supreme Court, in <u>Bluefield Water Works & Improvement Co. v. Public Serv. Comm'n of West Virginia</u>, 26 U.S. 679 (1923) and <u>Federal Power Comm'n v. Hope Natural Gas Co.</u>, 320 U.S. 591 (1944).

These decisions identify the general standards to be considered in establishing the cost of common equity for a public utility. Those general standards are that the authorized return should: (1) be sufficient to maintain financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q PLEASE DESCRIBE WHAT IS MEANT BY "UTILITY'S COST OF COMMON EQUITY."

A The utility's cost of common equity is the return investors expect, or require, in order to make an investment. Investors expect to achieve their return requirement from receiving dividends and stock price appreciation.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST OF COMMON EQUITY FOR AQUILA.

A I have used several models based on financial theory to estimate Aquila's cost of common equity. These models are: 1) the constant growth discounted cash flow DCF model, 2) the bond yield plus equity risk premium model, and 3) a capital asset pricing model ("CAPM"). I have applied these models to a group of publicly traded utilities that I have determined represent the investment risk of an electric utility similar to Aquila. I discuss this comparable utility group below.

Q HOW DID YOU DEVELOP A DCF ANALYSIS AND RISK PREMIUM ESTIMATES FOR AQUILA?

A I relied on the same group of electric utility companies as used by Dr. Hadaway in his estimate of a fair return on equity for Aquila. As shown below, I believe this group is a reasonable risk proxy for a minimum investment grade electric utility company. As demonstrated on my Schedule MPG-3, this group has an average investment bond rating from S&P and Moody's of BBB+ and A3. It has a common equity ratio of 48% from Value Line, and a common equity ratio of 45% from C.A. Turner. Importantly, I have used this group to develop a targeted capital structure for Aquila for developing its overall rate of return. Hence, this proxy group's capital structure is consistent with the financial and operating risk reflected in my return on equity for Aquila and applied to that same capital structure.

III. DISCOUNTED CASH FLOW MODEL

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return (ROR) or cost of capital. This model is expressed mathematically as follows:

$$Po = \frac{D1}{(1+K)^1} + \frac{D2}{(1+K)^2} \; .\,.\,.\,. \; \frac{D\infty}{(1+K)\infty} \quad \text{where} \qquad \text{(Equation 1)}$$

Po= Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor required return, "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D1/Po + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D1 = Dividend in first year
Po = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the "constant growth" annual DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown under Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q WHAT STOCK PRICE AND DIVIDEND HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices over a 13-week period ending September 26, 2005. An average stock price is less susceptible to market price variations than is a spot price. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price is short enough to contain data that reasonably reflects current market expectations, but is not too short a period to be susceptible to market price variations that may not be reflective of the security's long-term value. Therefore, in my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and to capture sufficient data to smooth out aberrant market movements. I used the most recently paid quarterly dividend, as reported in the Value Line Investment Survey. This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D1 factor for use in Equation 2 above.

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR DCF MODEL?

A There are several methods one can use in order to estimate the expected growth in dividends. However, for purposes of determining the market required return on common equity, one must attempt to estimate what the consensus of investors believes the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to form individual investment decisions.

Security analysts' growth estimates have been shown to be more accurate predictors of future returns than growth rates derived from historical data[2/] because they are more reliable estimates, and assuming the market generally makes rational investment decisions, analysts' growth projections are the most likely growth estimates that are built into stock prices.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional security analysts' earnings growth estimates as a proxy for the investor consensus dividend growth rate expectations. I used the average of three sources of customer growth rate estimates, including Zack's Detailed Analyst Estimates, and Reuters First Call. All consensus analyst projections used were available on September 23, 2005, as reported on-line. Each consensus growth rate projection is based on a survey of security analysts. The consensus estimate is a simple arithmetic average or mean of surveyed analysts' earnings growth forecasts. A simple average of the growth forecast gives equal weight to all surveyed analysts' projections. It is problematic as to whether any particular analyst's forecast is most representative of general market expectations. Therefore, a simple average, or

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[2/] *See e.g.*, David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989.

arithmetic mean, analyst forecast is a good proxy for market consensus expectations. The growth rates I used in my DCF analysis are shown on Schedule MPG-4.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown on my Schedule MPG-5, my DCF return for my comparable group is 8.6%.

Q DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR DCF ANALYSIS?

A Yes. I believe the results of my constant growth DCF analysis, and a DCF analysis in general in today's marketplace, reflect rational investment financial metrics and reflect today's very low cost capital market. Therefore, the DCF results are reasonable.

Q WHY DO YOU BELIEVE YOUR DCF REFLECTS CONSERVATIVE GROWTH PROJECTIONS?

A The consensus analysts' growth rate for my comparable groups is 4.33%, which is reasonable for several factors. First, these growth rates are reasonably consistent with five-year projected GDP growth of 5.3%, and considerably higher than the five-year projected GDP inflation growth of 2.2%.[3]

Utilities' dividend growth cannot sustain a growth rate that exceeds the growth rate of the overall economy. The growth rate of the utility's service territory is the proxy for the sustainable long-term growth rate of earnings. Utilities invest in plant to meet sales growth, and sales growth in turn is tied to economic activity. Hence, nominal GDP growth is a proxy for the highest sustainable long-term growth rate of the utility.

[3] Blue Chip Economic Forecasts, October 10, 2005, at 15.

However, growth of utility companies has historically been tied to the growth rate of inflation. This is caused because utilities typically pay out a very high percentage of earnings as dividends, thus limiting the reinvestment of earnings and the growth to their company business platforms. The growth rate used in my DCF analysis is much higher than expected inflation rates, and nears the maximum sustainable growth estimate as proxied by the GDP growth factor. This clearly indicates a very strong and relatively high growth rate used in my DCF estimate.

Moreover, my projected growth rate of 4.33% is considerably higher than the historical growth rate the proxy group has achieved over the last five to ten years, and that projected over the next three to five years. As shown on Schedule MPG-6, the historical growth of my proxy group's dividend is substantially lower than the nominal GDP growth, and actually less than the projected inflation growth. Importantly, my use of a growth rate that exceeds the projected growth of inflation and is approaching the projected growth of nominal GDP growth and illustrates the conservative nature of this growth projection and the robust nature of the DCF results.

Q WHY DO YOU BELIEVE THE DCF YIELD REFLECTS CURRENT LOW COST CAPITAL MARKETS?

A The group's DCF yield is 4.31%. This yield is higher than current five-year Treasury bonds of 3.9%, and lower than the projected five-year Treasury note yield of 4.8%. Hence, the DCF yield reasonably reflects both current and projected interest rates.

Q WHY DO YOU BELIEVE YOUR DCF REFLECTS RATIONAL COMPANY FINANCIAL METRICS AND DIVIDEND EXPECTATIONS?

A The dividend fundamentals of companies included in my comparable groups show strong and consistent earnings strength in relation to dividends. This indicates that current and projected earnings support dividends and permit the continued predictable growth in dividends.

For example, my comparable groups have 2004 dividend payout ratios of approximately 72%, and dividend to book ratios of approximately 7.1%. The dividend payout ratio represents the percentage of earnings paid out as dividends. Traditionally, utility companies have paid out approximately 70% of their earnings as dividends. Value Line's projected dividend to book and payout ratio is 64% and 6.8%, respectively. Hence, payout ratios in the 64% area suggest that the companies' earnings will support dividends and retain earnings to produce earnings and dividend growth going forward.

Also, a dividend to book ratio of 6.8% indicates that these dividend payments are affordable in today's low capital cost environment. In essence, companies need to earn 6.8% on their book value in order to produce earnings to pay their dividends. With authorized returns dropping in response to significant declines in capital market costs, these low cost dividends will be supported in today's lower authorized equity returns.

IV. <u>RISK PREMIUM MODEL</u>

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher ROR to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends on common equity, or to guarantee returns on common equity investments. Therefore, common equity securities are considered to be more risky than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I estimated the difference between the required return on utility common equity investments and Treasury bonds. The difference between the required return on common equity and the bond yield is the risk premium. I estimated the risk premium on an annual basis for each year over the period 1986 through 2004 the common equity required returns were based on regulatory commission-authorized returns for electric utility companies. Authorized returns are typically based on expert witnesses' estimates of the contemporary investor required return.

The second equity risk premium method is based on the difference between regulatory commission authorized returns on common equity and contemporary A-rated utility bond yields. This time period was selected because over the period 1986 through 2004, public utility bond yields have consistently traded at a premium to book value. This is illustrated on my Schedule MPG-7, where the market to book ratio since 1986 for the electric utility industry was consistently above 1.0. Therefore, over this time period, regulatory authorized returns were sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized returns on common equity supported a utility's ability to issue additional common stock, without diluting existing shares. This is an indication that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown on Schedule MPG-8, the average indicated equity risk premium of authorized electric utility common equity returns over U.S. Treasury bond yields has been 4.96%. Of the 19 observations, 12 indicated risk premiums fall in the range of 4.4% to 5.7%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity using this methodology.

As shown on Schedule MPG-9, the average indicated authorized electric utility common equity returns over contemporary Moody's utility bond yields was 3.54% over the period 1986–2002. The equity risk premium estimates based on this analysis primarily fall in the range of 3.0% to 4.0% over this time period.

Q HOW DID YOU ESTIMATE AQUILA'S COST OF COMMON EQUITY WITH THIS MODEL?

A I added a projected long-term Treasury bond yield to my estimated equity risk premium over Treasury yields. Blue Chip Financial Forecasts projects the 20-year Treasury bond yields to be 5.2%, and a 10-year Treasury bond to be 5.5% (Blue Chip Financial Forecast, April 1, 2005 at 2). Using the projected 20-year bond yield of 5.2%, and an equity risk premium of 4.4% to 5.7%, produces an estimated common equity return in the range of 9.6% to 10.9%, with a mid-point estimate at 10.8%.

I next added my equity risk premium over utility bond yields to a current 13-week average yield on "A" rated utility bonds for the period ending September 16, 2005 of 5.79%. This current A" utility bond yield is developed on Schedule MPG-10. Adding the utility bond equity premium of 3.0% to 4.0% to a "Baa" rated bond yield of 5.8% produces a cost of equity in the range of 8.8% to 9.8%, with a mid-point of 9.3%.

My risk premium analyses produce a return estimate in the range of 9.3% to 10.3%, with a mid-point estimate of 9.8%.

V. CAPITAL ASSET PRICING MODEL

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market required ROR for a security is equal to the risk-free ROR, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$$Ri = Rf + Bi \times (Rm - Rf)$$ where:

Ri = Required return for stock i
Rf = Risk-free rate
Rm = Expected return for the market portfolio
Bi = Beta - Measure of the risk for stock;

The stock specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix and production limitations).

The risks that cannot be eliminated when held in diversified portfolio are nondiversifiable risks. Nondiversifiable risks are related to the market in general and are referred to as systematic risks. Risks that can be eliminated by diversification are regarded as nonsystematic risks. In a broad sense, systematic risks are market risks, and nonsystematic risks are business risks. The CAPM theory suggests that the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk that investors will be compensated for are systematic or nondiversifiable risks. The beta is a measure of the systematic or nondiversifiable risks.

Q **PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q **WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?**

A I used Blue Chip Financial Forecasts' projected 20-year Treasury bond yield of 5.2%. The current 20-year bond yield is 4.6% (Blue Chip Financial Forecast, September 1, 2005 at 2).

Q **WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?**

A Treasury securities are backed by the full faith and credit of the United States government. Therefore, long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. Therefore, a Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates are systematic or market risks. Consequently, for companies with betas less than one, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q **WHAT BETA DID YOU USE IN YOUR ANALYSIS?**

A I relied on the group average Value Line beta estimate for the comparable group of 0.78, as shown on my Schedule MPG-11. A group average beta is more reliable than a single company beta and will, therefore, produce a more reliable CAPM estimate. A group average beta has stronger statistical parameters that better describe the systematic risk of the group, than does an individual company beta For this reason, a group average beta will produce a more reliable return estimate.

I believe a beta estimate of 0.78 is a reasonable utility beta for the following reasons: the majority of the companies included in my comparable group have betas in the range of 0.60 to 0.75. Second, any of the companies that have betas greater than .75 have experienced financial difficulties associated with unregulated business activities. While these stock stresses were produced in the past and are reflected in historical betas, they are not reflective of these companies' risk going forward because many of these companies have scaled down or have eliminated much of their non-regulated business risk. Third, it is appropriate to use a beta that is reflective mostly of the low regulated risk of utility companies. Hence, a beta reflective of the majority of the companies in the group is best reflective of that low regulated risk.

Q HOW DID YOU DERIVE YOUR MARKET PREMIUM ESTIMATE?

A I derived two market premium estimates, a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

The Ibbotson and Associates' <u>Stocks, Bonds, Bills and Inflation 2005 Year Book</u> publication estimates the historical arithmetic average real market return over the period 1926-2004 as 9.2%. A current five-year consensus analyst inflation projection, as measured by the Consumer Price Index, is 2.4% (Blue Chip Financial Forecasts, October 10, 2005 at 15). Using these estimates, the expected market return is 11.8%. The market premium then is the difference between the 11.8% expected market return, and my 5.2% risk-free rate estimate, or 6.6%.

The historical estimate of the market risk premium was also estimated by Ibbotson and Associates in the <u>Stock, Bonds, Bills and Inflation, 2005 Year Book</u>. Over the period 1926 through 2004, Ibbotson's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 12.4%, and the total return on long-term Treasury bonds was 5.8%. The indicated equity risk premium is 6.6% (12.4% - 5.8% = 6.6%).

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown on Schedule MPG-12, based on the prospective and historical market risk premium estimate of 6.6%, the CAPM estimated return on equity is 10.3%.

VI. <u>RETURN ON EQUITY SUMMARY</u>

Q BASED ON THE RESULTS OF YOUR RATE OF RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR AQUILA?

A Based on my analyses, I estimate Aquila's current market cost of equity to be 9.8%.

TABLE 2

Return on Common Equity Summary

Description	Percent
Constant Growth DCF	8.7%
Risk Premium	9.8%
CAPM	10.3%

My recommended return on equity of 9.8% is at the mid-point of my estimated return on equity range for Aquila of 10.3% to 9.3%. The high end of my estimated range is based on my CAPM analysis, and the low end of my estimated range is based on the average of my DCF analyses and risk premium analyses.

VII. <u>FINANCIAL INTEGRITY</u>

Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AQUILA'S CURRENT BOND RATING FROM S&P?

A Yes. I have reached this conclusion by comparing the key credit rating financial ratios for L&P at my proposed capital structure and return on equity to S&P's benchmark financial ratios for an "A" rated utility and "BBB" rated utility with a business profile score of 6.

Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of the Company's <u>total</u> credit risk exposure. S&P publishes a matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P rates a utility's business risk based on a business profile score of 1, lowest risk, up to 10, highest risk. Integrated electric utilities typically have a business profile score from S&P of 4, 5 or 6.

S&P publishes ranges for three primary financial ratios that it uses as guidance in its credit review for utility companies. The three primary financial ratio benchmarks it relies on in its credit rating process include: (1) funds from operations ("FFO") to debt interest expense, (2) FFO to total debt, and (3) total debt to total capital.

Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on Aquila's cost of service for retail operations. While S&P would normally look at total Aquila Inc.'s consolidated financial ratios in its credit review process, my investigation in this proceeding is to judge the reasonableness of my proposed cost of capital for rate setting in Aquila's utility operations. Hence, I am attempting to determine whether the rate of return and cash flow generation opportunity reflected in my proposed utility rates for L&P will support target investment grade bond ratings and financial integrity.

Q DID YOU REFLECT THE DEPRECIATION EXPENSE ADJUSTMENTS PROPOSED BY YOUR COLLEAGUE, JAMES SELECKY?

A Yes. Mr. Selecky's depreciation expense adjustment was reflected in the calculation of the financial ratios.

Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR L&P.

A The S&P financial metric calculations for L&P electric and steam regulated operations are developed on my Schedule MPG-13.

As shown on my Schedule MPG-13, based on an equity return of 9.8%, Aquila will be provided an opportunity to produce a Funds From Operations ("FFO") to debt interest expense of 3.1x. This FFO to interest coverage ratio is within S&P's benchmark ratio range for a BBB-rated utility company, with a business profile score of 6, of 4.2x to 3.0x.

Aquila's total debt ratio to total capital is 55%, and is within S&P's "BBB" rated utility range of 48% to 58%.

Finally, Aquila's retail operations FFO to total debt coverage at a 9.8% equity return would be 17.0%, which is toward the low end of S&P's financial metric range of 28% to 18% for a BBB-rated utility company.

Q WILL L&P'S CREDIT RATING FINANCIAL METRICS IMPROVE WITH THE PLANNED DEBT REDUCTIONS ANTICIPATED WITH PROCEEDS FROM THE SALE OF UTILITY ASSETS?

A Yes. L&P's embedded debt cost contains above-market, high cost debt. In particular, L&P's debt of 7.69% is well above current market costs of debt, which is now around 6%. Hence, with the capital structure improvement of Aquila Inc., it is likely that L&P's embedded debt costs will be brought down closer to current market levels. At that point, its credit rating financial metrics will improve relative to my estimated ratios because its debt interest expense will be reduced, thus increasing FFO coverage of total debt and debt interest obligations.

Accordingly, my calculations understate the potential strength of L&P's financial credit metrics during the period rates determined in this proceeding will be in effect at my proposed return on equity and recommended capital structure.

VIII. RESPONSE TO AQUILA WITNESS SAMUEL HADAWAY

Q WHAT RETURN ON COMMON EQUITY IS AQUILA PROPOSING FOR THIS PROCEEDING?

A Aquila is proposing to set rates based on a return on equity of 11.5%, which includes an upward adjustment of 50 basis points. Aquila's proposed return on equity is supported by its witness Dr. Samuel Hadaway's return on equity analysis. Dr. Hadaway recommends a return on equity for Aquila of 11.5% based on the approximate midpoint of his DCF range of 10.6% to 11.1% and the low-end of his risk premium analysis (11.0% to 11.8%). (Hadaway Direct Testimony at 45)

Q DO DR. HADAWAY'S METHODOLOGIES SUPPORT HIS 11.5% RETURN ON EQUITY RECOMMENDATION?

A No. As discussed below, an appropriate reflection of current market data in Dr. Hadaway's own analyses would produce model results that support a return on equity of less than 10.0%. This is discussed in more detail below.

Q FIRST, DO YOU HAVE ANY GENERAL COMMENTS CONCERNING DR. HADAWAY'S PROPOSED RETURN ON EQUITY FOR AQUILA IN THIS PROCEEDING?

A Yes. Dr. Hadaway is rejecting viable and legitimate cost of equity estimates simply because he believes them to be too low. Specifically, Dr. Hadaway places no reliance on his own constant growth DCF model results because he claims the number is too low. He suggests that this estimate is too low based on the results of his risk premium analyses. However, there is no support for this contention. An appropriate return on equity should be based on reasoned judgment, and complete analyses including DCF and risk premium studies.

It is inappropriate for Dr. Hadaway to simply reject the results of his constant growth DCF model, particularly since that model was overstated by the use of excessive projections of GDP growth. Further, reflecting appropriate growth rates would result in his multi-stage DCF model producing results similar to his constant growth DCF model. In both cases, Dr. Hadaway's own DCF analyses suggest a return on equity of 9.5% is appropriate for Aquila.

It is inappropriate for Dr. Hadaway to refuse to recognize the dramatic decline in capital costs in today's marketplace in arriving at a fair risk adjusted return for Aquila.

Q PLEASE DESCRIBE DR. HADAWAY'S METHODOLOGY SUPPORTING HIS RETURN ON COMMON EQUITY.

A Dr. Hadaway develops his return on common equity by conducting three versions of the Discounted Cash Flow analysis and a utility risk premium analysis, and evaluating risk premium analyses conducted by Ibbotson & Associates and a study published by Harris & Marston ("H&M"). The results of his ROE analysis are shown at Page 44 of Dr. Hadaway's testimony. I have summarized Dr. Hadaway's results below in Table 3 under Column 1. Under Column 2, I show the results of Dr. Hadaway's analyses adjusted for updated data and more reasonable application of the models.

As shown below in Table 3, using updated information, more reasonable estimates of gross domestic product growth, and a better proxy of estimates of a risk adjusted equity risk premium appropriate for Aquila, Dr. Hadaway's analyses would support a return on equity for Aquila of less than 10.0%. Each of Dr. Hadaway's cost of equity models will be discussed below.

TABLE 3

Summary of Hadaway's ROE Estimate

Description	Hadaway Results (1)	Adjusted Hadaway Results (2)
Constant Growth DCF – (Traditional)	9.5%	9.2%
Constant Growth – (GDP Growth)	11.1%	10.0%
Two-Stage Growth DCF	10.6 - 10.7%	9.8%
Estimated DCF Range	10.6 - 11.1%	9.6%
Risk Premium Utility	11.0%	10.0%
Ibbotson Risk Premium	11.2%	8.3%
Harris-Marston Risk Premium	11.8%	8.8%

Source: Hadaway Direct at 45.

Q PLEASE DESCRIBE DR. HADAWAY'S CONSTANT GROWTH DCF ANALYSIS.

A Dr. Hadaway's constant growth DCF analysis is shown on his Schedule SCH-9, Page 2 of 5. As shown on that schedule, Dr. Hadaway's constant growth DCF analysis is based on a recent price, an average of three growth rates: (1) Zack's; (2) Value Line; and (3) Dr. Hadaway's estimate of GDP growth.

Q IN WHAT WAY DID DR. HADAWAY OVERSTATE HIS CONSTANT GROWTH DCF ANALYSIS?

A Dr. Hadaway used a GDP growth rate of 6.6% as one of three growth rates. He states that the GDP growth is based on the achieved GDP growth over the last 10, 20, 30 and 40-year periods. Dr. Hadaway's projected GDP growth rate is unreasonable. Historical GDP growth over the last 20 and 40-year periods was strongly influenced by the actual inflation rate experienced over that time period. Over the last 20 and 40-year periods, GDP inflation has averaged 5.6% and 7.5%, respectively. The average GDP for these two periods is 6.6% and is the same rate used by Dr. Hadaway. Note, the average historical GDP growth over the last 10, 20, 30 and 40 years does not equal Dr. Hadaway's 6.6% GDP growth figure.

Projected GDP inflation is much lower than the historical inflation used by Dr. Hadaway in his GDP estimate. A comparison of Dr. Hadaway's historic and current economists' projections of GDP growth in the next five and ten years is shown below in Table 4. As evident in the table below, Dr. Hadaway's nominal GDP inflation factor of 6.6% reflects real GDP of 3.2% and an inflation GDP of 3.3%. Current economists' projections of nominal GDP include GDP inflation and real GDP expectations over the next five and ten years of 3.2%, and 2.2%, respectively.

As is clearly evident in the table below, Dr. Hadaway's historical GDP reflects historical inflation, which is much higher than, and not representative of, expected forward-looking inflation.

TABLE 4

GDP Projections

	GDP Inflation	Real GDP	Nominal GDP
Hadaway	**3.3%**	3.2%	6.6%
Current 5-Year Projection	**2.2%**	3.2%	5.5%
Current 10-Year Projection	**2.3%**	3.2%	5.5%

Source: Blue Chip Economic Forecast, October 10, 2005, and review of economic analyses.

Dr. Hadaway's 6.6% nominal GDP growth is not reflective of future investment expectations.

Q **HOW WOULD DR. HADAWAY'S DCF ANALYSES CHANGE IF A MARKET-BASED GDP GROWTH RATE IS INCLUDED IN HIS ANALYSIS?**

A As shown on Schedule MPG-14, I updated Dr. Hadaway's DCF analyses using a GDP growth rate of 5.5%. This is the consensus five-year projected growth rate to the GDP. Using this consensus projected GDP growth rate reduces his constant growth DCF result from 9.5% to 9.2%, his long-term GDP growth rate from 11.1% to 10.0%, and his two-stage growth DCF model from 10.7% to 9.8%. The average of these three DCF models is 9.7%, very similar to my recommended return of 9.8%.

Q PLEASE DESCRIBE DR. HADAWAY'S UTILITY RISK PREMIUM ANALYSIS.

A Dr. Hadaway's utility bond yield versus authorized return on common equity risk premium is shown on Schedule SCH-10, Page 1. As shown on this schedule, Dr. Hadaway compares the contemporary Moody's average bond yield for utility companies and the authorized regulatory commission return on common equity over the period 1980 through 2003. Based on this analysis, Dr. Hadaway estimates an average indicated equity risk premium over contemporary utility bond yields of 3.01%.

Dr. Hadaway then adjusts this average equity risk premium using a regression analysis based on an expectation that there is an ongoing inverse relationship between interest rates and equity risk premiums. Based on this regression analysis, Dr. Hadaway increases his equity risk premium from 3.01%, as reflected in his analysis, up to 4.25%. He then adds this inflated equity risk premium to a projected "A" bond yield of 6.7% to produce a return on equity of 11.0% for Aquila.

Q IS DR. HADAWAY'S UTILITY BOND RISK PREMIUM ANALYSIS REASONABLE?

A No. Dr. Hadaway has unreasonably attempted to create a forward-looking specific point risk premium estimate using this historical data This is not reasonable because the data and model are not this precise. For example, interest rate volatility and inflation uncertainty in the 1980s and early 1990s is not reasonably representative of interest rate volatility and inflation outlooks currently and going forward. Inflation volatility or uncertainty over this historical time period had an impact on utility bond yields, valuations and equity risk premiums. This inflation volatility, however, is not characteristic of the current economy or capital markets. The only reasonable interpretation of Dr. Hadaway's analysis is developing a general range of equity risk premiums.

Q IS IT APPROPRIATE TO USE ONLY FORECASTED INTEREST RATES IN A RISK PREMIUM ANALYSIS AS DR. HADAWAY HAS DONE?

A No. As indicated above, the accuracy of projecting interest rates is highly problematic. Indeed, while interest rates have been projected to increase over the last five years, those increased interest rate projections have turned out to be wrong and interest rates have either stayed flat or have declined. Accordingly, Dr. Hadaway's analysis should be performed based on current interest rates, with some consideration given to the possibility of increased interest rates.

In significant contrast, Dr. Hadaway has completely ignored current real interest rates observable today, and has relied only on his own estimate of a projected interest rate. Also importantly, Dr. Hadaway's projected interest rate is not transparently developed in his testimony, and the accuracy is highly questionable. Dr. Hadaway is projecting interest rates on A-rated utility bonds to increase from approximately 5.5% to 6.7%. This dramatic increase in interest rates is not consistent with consensus economists' projected increases to interest rates, and likely does not reflect overall market expectations.

Q DOES DR. HADAWAY'S RISK PREMIUM ANALYSIS SUPPORT A RETURN ON EQUITY OF 11.0% IN THIS PROCEEDING?

A No. His equity risk premium estimate of 4.25% is overstated and he applies this inflated premium to an inflated "A" rated utility bond yield. If Dr. Hadaway's inflated equity risk premium were applied to the current cost of a A-rated utility bond of 5.5%, it would produce an indicated return on equity for Aquila of less than 9.75%. This is a similar result produced by my risk premium analysis.

Hence, Dr. Hadaway's projection indicates that "A" utility bond yields would increase between the time he filed his testimony and the time rates in this proceeding would go into effect. However, interest rates on "A" utility bonds have actually declined during this time period. Consequently, it is appropriate to give significant weight to actual observable current actual yields on A-rated utility bonds when developing a return on equity for Aquila. Such an analysis indicates a 9.75% return on equity.

Q **DID DR. HADAWAY PERFORM ANY TESTS OF HIS RISK PREMIUM ANALYSIS RESULTS?**

A Yes. Dr. Hadaway compared his utility risk premium analysis to studies performed by Ibbotson & Associates and H&M. Dr. Hadaway states that Ibbotson & Associates studied the return on common stocks versus corporate bonds for the period 1926 through 2003. The Ibbotson study found that the arithmetic mean risk premium was 6.2%, and the geometric mean return was 4.5%. He states that using the geometric mean return and a debt cost of 4.5%, would produce an indicated equity return of 11.2%. (Hadaway Direct at 44-45).

Dr. Hadaway discusses the H&M study stating that it looked at the equity premium over U.S. Government bonds of 6.47%, and the equity risk premium of common stocks over corporate bonds to be 5.13%. Dr. Hadaway finds that the H&M study would support an equity risk premium over an A-rated corporate debt of 11.83% (6.7% debt cost and 5.13% risk premium), id. at 45.

Q DO THE INDICATED RISK PREMIUM RESULTS FROM THE IBBOTSON & ASSOCIATES AND H&M STUDIES SUPPORT A RETURN ON COMMON EQUITY FOR AQUILA OF 11.8% AND 11.2% AS ESTIMATED BY DR. HADAWAY?

A No. The Ibbotson & Associates and H&M studies are based on common equity returns and equity risk premiums for the overall market. Both of these studies are based on the returns for the S&P 500. Dr. Hadaway did not, and cannot, show that the S&P 500 is risk comparable to Aquila's as a regulated electric utility.

In fact, it is widely recognized that electric utility risk is considerably lower than that of the overall market. This is evident by a review of the beta coefficients measured by Value Line for utility companies. As I noted above with respect to my CAPM analysis, utility company stock market risk is approximately 78% of that of the overall market. Hence, while the equity risk premiums derived from these two studies may be appropriate for the overall market, they overstate significantly a reasonable equity risk premium for a low risk regulated electric utility such as Aquila. Therefore, Dr. Hadaway's use of the Ibbotson and H&M studies' equity risk premiums to produce a return on common equity for Aquila is unreasonable and should be rejected.

Q CAN THE RISK PREMIUM STUDIES PUBLISHED BY IBBOTSON AND H&M BE USED TO DEVELOP A COMMON EQUITY ESTIMATE FOR AQUILA?

A Only generally. By recognizing Aquila's much lower risk than that of the overall market, the equity risk premiums developed by Ibbotson and H&M, of 4.5%, and 5.13%, should be adjusted by a factor of approximately 78%. This 78% represents the current estimate of a utility beta as published by the Value Line Investment Survey. Using a 78% adjustment factor to reflect Aquila's higher than market risk, these studies' equity risk premiums adjusted for the lower risk would be reduced to

3.5% (4.5% * 78%) in the case of Ibbotson, and 4.0% (5.13% * 78%) in the case of H&M. Comparing a 3.5% and 4.0% equity risk premium to the current cost of "A" rated electric utility bond of 5.5% would indicate a return on common equity of 9.0% to 9.5%.

Q DO YOU HAVE ANY COMMENTS ON DR. HADAWAY'S PROPOSAL TO INCREASE AQUILA'S AUTHORIZED RETURN ON EQUITY BY 50 BASIS POINTS TO REFLECT HIS ASSESSMENT OF A HIGHER UTILITY RISK PROFILE FOR L&P?

A Yes. Dr. Hadaway implies that L&P has greater utility risk than industry risk due to their capital expenditure programs, small size and prohibition against fuel and purchased power adjustment clauses in Missouri. Dr. Hadaway's proposal to provide this significant increase to the authorized return on equity should be rejected.

L&P's risk of capital expenditures is adequately covered by providing a return on equity that will ensure their financial integrity and acceptable bond ratings during the period rates determined in this proceeding will be in effect. Hence, as I demonstrate above, my return on equity and recommended capital structure will provide L&P with the opportunity to produce financial ratio credit metrics consistent with an investment grade bond rating, and hence will provide it with reasonable access to capital during construction programs. Hence, L&P's construction risk is not extraordinary and does not warrant Dr. Hadaway's extreme ROE adder.

Second, Dr. Hadaway's assessment of the small company risk is not persuasive because Missouri's regulation mitigates small company risk for regulated operations. While competitive small companies have greater risk than competitive large companies because there is greater uncertainty about management's ability to operate the companies, to create sales revenue to support operations and to attract and retain customers. L&P does not have typical small company risks because it is a regulated service provider in Missouri. Hence, franchised service territories and regulation that sets rates equal to costs mitigate L&P's small company risks.

Finally, Missouri has recently passed Senate Bill 179, which provides the Commission the authority to implement fuel adjustment mechanisms. Hence, my understanding of the prohibition on fuel adjustment mechanisms no longer exists. Therefore, L&P's regulatory risk has diminished considerably. This lower regulatory risk should be reflected in reduced returns on equity.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes.

Qualifications of Michael Gorman

Q **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A Michael P. Gorman. My business mailing address is P. O. Box 412000, 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

Q **PLEASE STATE YOUR OCCUPATION.**

A I am a consultant in the field of public utility regulation with Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q **PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.**

A In 1983 I received a Bachelors of Science Degree in Electrical Engineering from Southern Illinois University, and in 1986, I received a Masters Degree in Business Administration with a concentration in Finance from the University of Illinois at Springfield. I have also completed several graduate level economics courses.

In August of 1983, I accepted an analyst position with the Illinois Commerce Commission ("ICC"). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central dispatch, avoided cost of energy, annual system production costs, and working capital. In October of 1986, I was promoted to the position of Senior Analyst. In this position, I assumed the additional responsibilities of technical leader on projects, and my areas of responsibility were expanded to include utility financial modeling and financial analyses.

In 1987, I was promoted to Director of the Financial Analysis Department. In this position, I was responsible for all financial analyses conducted by the staff. Among other things, I conducted analyses and sponsored testimony before the ICC on rate of return, financial integrity, financial modeling and related issues. I also supervised the development of all Staff analyses and testimony on these same issues. In addition, I supervised the Staff's review and recommendations to the Commission concerning utility plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. In April 1995 the firm of Brubaker & Associates, Inc. ("BAI") was formed. It includes most of the former DBA principals and Staff. Since 1990, I have performed various analyses and sponsored testimony on cost of capital, cost/benefits of utility mergers and acquisitions, utility reorganizations, level of operating expenses and rate base, cost of service studies, and analyses relating industrial jobs and economic development. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have also analyzed commodity pricing indices and forward pricing methods for third party supply agreements. Continuing, I have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona; Chicago, Illinois; Corpus Christi, Texas; and Plano, Texas.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service and other issues before the regulatory commissions in Arizona, Delaware, Georgia, Illinois, Indiana, Iowa, Michigan, Missouri, New Mexico, New Jersey, Oklahoma, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta and Nova Scotia, Canada I have also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate setting position reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, Georgia district.

Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the designation of Chartered Financial Analyst ("CFA") from the Association for Investment Management and Research ("AIMR"). The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting, economics, fixed income and equity valuation and professional and ethical conduct. I am a member of AIMR's Financial Analyst Society.

MPG:cs/8418/77065

Aquila Missouri

Accuracy of Interest Rate Forecasts

(Long-Term Treasury Bond Yields - Projected Vs. Actual)

		Publication Data			Actual Yield	Analysis	
Line	Date	Current Yield	Projected Yield	For Quarter	in Projected Quarter	Projected Yield Change	Actual Yield Change
		(1)	(2)	(3)	(4)	(5)	(6)
1	Dec-00	5.8%	5.8%	1Q, 02	5.6%	0.0%	-0.2%
2	Mar-01	5.7%	5.6%	2Q, 02	5.8%	-0.1%	0.1%
3	Jun-01	5.4%	5.8%	3Q, 02	5.2%	0.4%	-0.2%
4	Sep-01	5.7%	5.9%	4Q, 02	5.1%	0.2%	-0.6%
5	Dec-01	5.5%	5.7%	1Q, 03	4.9%	0.2%	-0.6%
6	Mar-02	5.3%	5.9%	2Q, 03	4.7%	0.6%	-0.6%
7	Jun-02	5.6%	6.2%	3Q, 03	5.2%	0.6%	-0.4%
8	Sep-02	5.8%	5.9%	4Q, 03	5.2%	0.1%	-0.6%
9	Dec-02	5.2%	5.7%	1Q, 04	4.9%	0.5%	-0.3%
10	Mar-03	5.1%	5.7%	2Q, 04	5.4%	0.6%	0.3%
11	Jun-03	5.0%	5.4%	3Q, 04	5.1%	0.4%	0.1%
12	Sep-03	4.7%	5.8%	4Q, 04	4.9%	1.1%	0.2%
13	Dec-03	5.2%	5.9%	1Q, 05	4.8%	0.7%	-0.4%
14	Mar-04	5.2%	5.9%	2Q, 05	4.6%	0.7%	-0.6%
15	Jun-04	4.9%	6.2%	3Q, 05	4.5%	1.3%	-0.4%
16	Jul-04	5.4%	6.3%	4Q, 05			
17	Aug-04	5.4%	6.1%	4Q, 05			
18	Sep-04	5.4%	6.0%	4Q, 05			
19	Oct-04	5.1%	5.8%	1Q, 06			
20	Nov-04	5.1%	5.7%	1Q, 06			
21	Dec-04	5.1%	5.8%	1Q, 06			
22	Jan-05	4.9%	5.8%	2Q, 06			
23	Feb-05	4.9%	5.8%	2Q, 06			
24	Mar-05	4.9%	5.6%	2Q, 06			
25	Apr-05	4.7%	5.7%	3Q, 06			
26	May-05	4.8%	5.6%	3Q, 06			
27	Jun-05	4.8%	5.5%	3Q, 06			
28	Jul-05	4.6%	5.3%	4Q, 06			
29	Aug-05	4.6%	5.2%	4Q, 06			
30	Sep-05	4.6%	5.2%	4Q, 06			

Source:
Blue Chip Financial Forecasts, Various Dates.

Aquila Missouri

Overall Rate of Return

St. Joseph Light & Power Company

Line	Discription	Weight (1)	Cost (2)	Weighted Cost (3)
1	Total Debt	55.0%	7.96%	4.38%
2	Common Equity	45.0%	9.80%	4.41%
3	**Total**	**100.0%**		**8.79%**

Misouri Public Service Company

Line	Discription	Weight (1)	Cost (2)	Weighted Cost (3)
4	Total Debt	55.0%	6.70%	3.68%
5	Common Equity	45.0%	9.80%	4.41%
6	**Total**	**100.0%**		**8.09%**

Source:
Debt Cost Per Schedule SCH-2.

Aquila Missouri

Comparable Group

Line	Electric Utility	Bond Ratings (1)	Bond Ratings (2)	Business Profile Rating[3] (3)	2004 Common Equity Ratios Value Line[2] (4)	2004 Common Equity Ratios C.A. Turner[1] (5)
1	Alliant Energy	A-	A2	6	50%	46%
2	Ameren Corp.	A-	A2	6	53%	52%
3	American Electric Power	BBB	Baa1	6	43%	41%
4	CH Energy	A	A2	3	59%	59%
5	Cent. Vermount P.S.	BBB	NR	6	60%	59%
6	Cinergy	BBB-	Baa3	6	49%	45%
7	Cleco Corp.	BBB+	Baa1	6	53%	51%
8	Consolidated Edison	A	A1	2	51%	47%
9	DTE Enrgy	BBB+	Baa2	6	42%	39%
10	Duquesne Light	BBB+	Baa1	5	36%	36%
11	Empire District	A-	Baa1	6	49%	47%
12	Energy East Corp.	BBB+	A3	3	41%	41%
13	Entergy Corp.	A-	Baa2	6	53%	47%
14	Exelon Corp.	A-	A2	7	44%	41%
15	FPL Group, Inc.	A	Aa3	6	49%	46%
16	FirstEnergy Corp.	BBB-	Baa1	6	45%	43%
17	Green Mountain	BBB	Baa1	5	53%	55%
18	Hawaiian Electric	BBB+	Baa2	6	51%	29%
19	MGE Energy	AA-	Aa3	4	63%	58%
20	NiSource Inc.	BBB	Baa2	4	49%	44%
21	NSTAR	A	A1	1	40%	33%
22	Pinnacle West Capital	BBB	Baa1	6	53%	48%
23	Progress Energy	BBB	A2	6	44%	42%
24	Puget Energy, Inc.	BBB	Baa2	4	39%	39%
25	SCANA Corp.	A-	A1	4	43%	41%
26	Southern Co.	A+	A1	4	44%	41%
27	Vectren Corp.	A	A3	4	52%	46%
28	Westar Energy	BBB	Baa3	5	45%	40%
29	Xcel Energy, Inc.	A-	A3	5	44%	42%
30	**Average**	**BBB+**	**A3**	**5**	**48%**	**45%**
31	Aquila	B-	B2	8	48%[4]	

Sources:
[1] C.A. Turner Utility Report; September, 2005.
[2] The Value Line Investment Survey, July 1, August 12, September 2, 2005.
[3] U.S. Utilities and Power Ranking List, March 05, 2005.
[4] Schedule SCH-7, page 2 of 2.

Aquila Missouri

Growth Rate Estimates

Line	Electric Utility	Zacks Estimated Growth %[1] (1)	Number of Estimates (2)	Reuters Estimated Growth %[2] (3)	Number of Estimates (4)	Thomson Estimated Growth %[3] (5)	Number of Estimates (6)	AVG of Growth Rates (7)
1	Alliant Energy	4.00%	2	4.00%	3	3.25%	4	3.75%
2	Ameren Corp.	4.92%	6	5.67%	6	4.07%	7	4.89%
3	American Electric Power	3.06%	8	3.56%	10	3.43%	9	3.35%
4	CH Energy	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	Cent. Vermount P.S.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Cinergy	4.50%	10	5.00%	8	4.40%	5	4.63%
7	Cleco Corp.	4.00%	1	3.50%	2	3.50%	2	3.67%
8	Consolidated Edison	3.25%	8	3.06%	10	2.95%	8	3.09%
9	DTE Enrgy	4.60%	5	4.33%	3	5.60%	5	4.84%
10	Duquesne Light	5.00%	1	3.33%	3	3.00%	1	3.78%
11	Empire District	5.00%	1	2.50%	2	2.00%	2	3.17%
12	Energy East Corp.	4.50%	2	4.00%	5	3.75%	4	4.08%
13	Entergy Corp.	7.15%	9	6.93%	7	6.63%	8	6.90%
14	Exelon Corp.	6.89%	9	7.68%	11	6.63%	8	7.07%
15	FPL Group, Inc.	5.46%	13	5.56%	9	4.75%	8	5.26%
16	FirstEnergy Corp.	4.33%	6	4.75%	8	4.63%	8	4.57%
17	Green Mountain	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Hawaiian Electric	3.50%	3	2.63%	4	3.10%	5	3.08%
19	MGE Energy	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	NiSource Inc.	4.25%	8	3.60%	10	3.50%	8	3.78%
21	NSTAR	4.75%	4	4.25%	4	4.25%	4	4.42%
22	Pinnacle West Capital	5.20%	5	4.60%	5	4.50%	4	4.77%
23	Progress Energy	4.06%	8	3.35%	11	3.76%	9	3.72%
24	Puget Energy, Inc.	4.80%	5	4.57%	7	4.00%	4	4.46%
25	SCANA Corp.	4.67%	6	4.40%	5	4.40%	5	4.49%
26	Southern Co.	4.50%	12	4.54%	12	4.80%	10	4.61%
27	Vectren Corp.	4.60%	5	5.40%	5	3.67%	3	4.56%
28	Westar Energy	4.00%	2	3.40%	4	3.20%	3	3.53%
29	Xcel Energy, Inc.	4.20%	5	4.00%	7	3.20%	5	3.80%
30	**AVERAGE**	**4.61%**	**6**	**4.34%**	**6**	**4.04%**	**6**	**4.33%**

Sources:
[1] www.zacksadvisor.com, Detailed Research on September 23, 2005.
[2] www.investor.reuters.com, Earnings Estimates on September 23, 2005.
[3] http://ec.thomsonfn.com, Earnings Estimates on September 23, 2005.

Aquila Missouri

Constant Growth DCF Model

Line	Electric Utility	13-Week AVG Stock Price[1] (1)	AVG (%) Growth (2)	Annual Dividend[2] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	Alliant Energy	$ 29.17	3.75%	$ 1.05	3.74%	7.49%
2	Ameren Corp.	$ 55.13	4.89%	$ 2.54	4.83%	9.72%
3	American Electric Power	$ 37.86	3.35%	$ 1.40	3.82%	7.17%
4	CH Energy	$ 47.78	N/A	$ 2.16	N/A	N/A
5	Cent. Vermount P.S.	$ 18.83	N/A	$ 0.92	N/A	N/A
6	Cinergy	$ 44.03	4.63%	$ 1.92	4.56%	9.20%
7	Cleco Corp.	$ 22.53	3.67%	$ 0.90	4.14%	7.81%
8	Consolidated Edison	$ 47.56	3.09%	$ 2.28	4.94%	8.03%
9	DTE Enrgy	$ 46.46	4.84%	$ 2.06	4.65%	9.49%
10	Duquesne Light	$ 18.46	3.78%	$ 1.00	5.62%	9.40%
11	Empire District	$ 23.72	3.17%	$ 1.28	5.57%	8.73%
12	Energy East Corp.	$ 27.14	4.08%	$ 1.10	4.22%	8.30%
13	Entergy Corp.	$ 75.88	6.90%	$ 2.16	3.04%	9.95%
14	Exelon Corp.	$ 53.06	7.07%	$ 1.60	3.23%	10.30%
15	FPL Group, Inc.	$ 43.33	5.26%	$ 1.42	3.45%	8.71%
16	FirstEnergy Corp.	$ 50.11	4.57%	$ 1.65	3.45%	8.02%
17	Green Mountain	$ 30.06	N/A	$ 1.00	N/A	N/A
18	Hawaiian Electric	$ 27.16	3.08%	$ 1.24	4.71%	7.78%
19	MGE Energy	$ 36.69	N/A	$ 1.37	N/A	N/A
20	NiSource Inc.	$ 24.14	3.78%	$ 0.92	3.96%	7.74%
21	NSTAR	$ 30.00	4.42%	$ 1.16	4.04%	8.45%
22	Pinnacle West Capital	$ 44.99	4.77%	$ 1.90	4.42%	9.19%
23	Progress Energy	$ 44.12	3.72%	$ 2.36	5.55%	9.27%
24	Puget Energy, Inc.	$ 23.19	4.46%	$ 1.00	4.50%	8.96%
25	SCANA Corp.	$ 42.13	4.49%	$ 1.56	3.87%	8.36%
26	Southern Co.	$ 34.89	4.61%	$ 1.49	4.47%	9.09%
27	Vectren Corp.	$ 28.27	4.56%	$ 1.18	4.36%	8.92%
28	Westar Energy	$ 24.01	3.53%	$ 0.92	3.97%	7.50%
29	Xcel Energy, Inc.	$ 19.30	3.80%	$ 0.86	4.63%	8.43%
30	**AVERAGE**	**$ 36.21**	**4.33%**	**$ 1.46**	**4.31%**	**8.6%**

Sources:
[1] http://finance.yahoo.com, Historical Prices.
[2] The Value Line Investment Survey, July 1, August 12, September 2, 2005.

Aquila Missouri

GDP Growth Rates

Line	Gas Utility	Dividend Growth Past 5 Yrs[1]	Dividend Growth Past 10 Yrs[1]	Dividend Growth 3-5 Yrs Projection[1]	Inflation 5 Yr CPI[2]	Inflation 10 Yr CPI[2]	Inflation 3-5 Yrs CPI[2]	Nominal GDP Past 5 Yrs[1]	Nominal GDP Past 10 Yrs[1]
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Alliant Energy	-7.5%	-3.5%	-1.0%					
2	Ameren Corp.	N/A	-99.0%	N/A					
3	American Electric Power	-5.5%	-2.5%	-2.0%					
4	CH Energy	N/A	0.5%	0.5%					
5	Cent. Vermount P.S.	0.5%	-4.5%	0.5%					
6	Cinergy	5.0%	1.0%	2.0%					
7	Cleco Corp.	2.0%	2.5%	N/A					
8	Consolidated Edison	1.0%	1.5%	1.0%					
9	DTE Enrgy	N/A	N/A	0.5%					
10	Duquesne Light	-5.5%	0.5%	-1.5%					
11	Empire District	N/A	N/A	N/A					
12	Energy East Corp.	5.5%	-0.5%	5.0%					
13	Entergy Corp.	1.5%	N/A	11.0%					
14	Exelon Corp.	N/A	N/A	11.0%					
15	FPL Group, Inc.	4.0%	-0.5%	10.5%					
16	FirstEnergy Corp.	2.0%	1.0%	3.5%					
17	Green Mountain	-6.5%	-10.0%	10.0%					
18	Hawaiian Electric	N/A	1.0%	N/A					
19	MGE Energy	1.0%	1.0%	0.5%					
20	NiSource Inc.	1.5%	4.5%	0.5%					
21	NSTAR	2.5%	2.5%	3.5%					
22	Pinnacle West Capital	7.0%	17.5%	5.0%					
23	Progress Energy	3.0%	3.0%	2.0%					
24	Puget Energy, Inc.	-10.5%	-5.0%	1.0%					
25	SCANA Corp.	-1.0%	N/A	5.5%					
26	Southern Co.	1.0%	2.0%	3.5%					
27	Vectren Corp.	3.0%	N/A	3.5%					
28	Wstar Energy	-15.0%	-7.0%	2.5%					
29	Xcel Energy, Inc.	-9.0%	NMF	2.5%					
30	**Average**	**-0.9%**	**-4.3%**	**3.2%**	**2.6%**	**2.5%**	**2.50%**	**4.9%**	**5.2%**

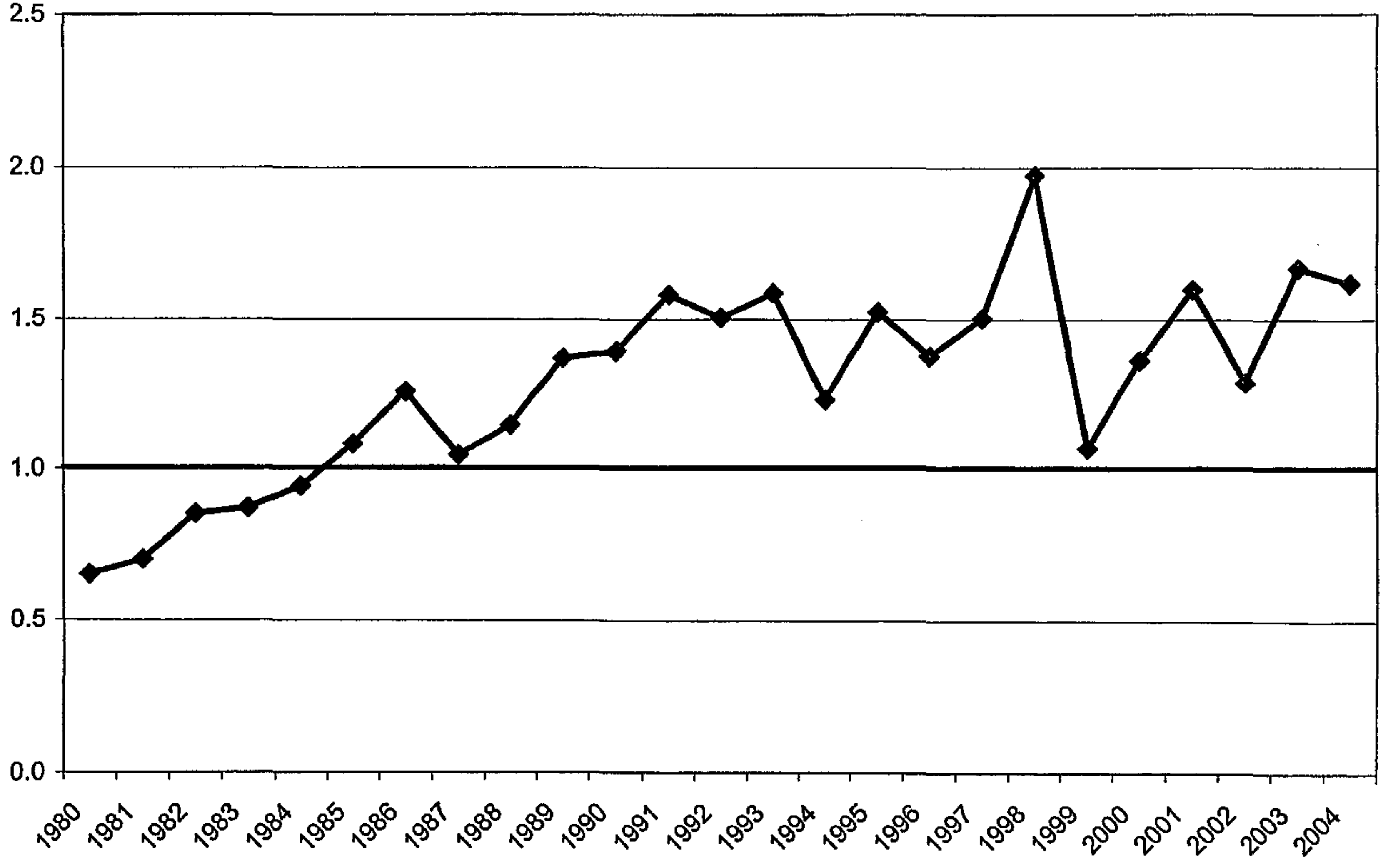
Sources:

[1]The Value Line Investment Survey, July 1, August 12, September 2, 2005.

[2]Value Line Investment Survey, July 7, 2000 and June 3, 2005.

Schedule MPG-6

Aquilla Missouri
Common Stock Market/Book Ratio



Sources:
2002-2005: C.A. Turner Utility Reports.
1980 - 2000: Mergent Public Utility Manual, 2003; at a15, and a17.

Schedule MPG-7

Aquila Missouri

Equity Risk Premium - Treasury Bond

Line	Date	Treasury Bond Yield[1] (1)	Authorized Electric Returns[2] (2)	Indicated Risk Premium (3)
1	1986	7.78%	13.93%	6.15%
2	1987	8.59%	12.99%	4.40%
3	1988	8.96%	12.79%	3.83%
4	1989	8.45%	12.97%	4.52%
5	1990	8.61%	12.70%	4.09%
6	1991	8.14%	12.55%	4.41%
7	1992	7.67%	12.09%	4.42%
8	1993	6.59%	11.41%	4.82%
9	1994	7.37%	11.34%	3.97%
10	1995	6.88%	11.55%	4.67%
11	1996	6.71%	11.39%	4.68%
12	1997	6.61%	11.40%	4.79%
13	1998	5.58%	11.66%	6.08%
14	1999	5.87%	10.77%	4.90%
15	2000	5.94%	11.43%	5.49%
16	2001	5.49%	11.09%	5.60%
17	2002	5.42%	11.16%	5.74%
18	2003	5.02%	10.97%	5.95%
19	2004	5.05%	10.73%	5.68%
20	**Average**	**6.88%**	**11.84%**	**4.96%**

Sources:
[1] Economic Report of the President, January, 2001 and the St. Louis Federal Reserve Bank Website.
[2] Regulatory Research Associates, Inc., Regulatory Focus, Jan.90-Dec.04.

Aquila Missouri

Equity Risk Premium - Utility Bond

Line	Date	Average "A" Rating Utility Bond Yield[1] (1)	Authorized Electric Returns[2] (2)	Indicated Risk Premium (3)
1	1986	9.58%	13.93%	4.35%
2	1987	10.10%	12.99%	2.89%
3	1988	10.49%	12.79%	2.30%
4	1989	9.77%	12.97%	3.20%
5	1990	9.86%	12.70%	2.84%
6	1991	9.36%	12.55%	3.19%
7	1992	8.69%	12.09%	3.40%
8	1993	7.59%	11.41%	3.82%
9	1994	8.31%	11.34%	3.03%
10	1995	7.89%	11.55%	3.66%
11	1996	7.75%	11.39%	3.64%
12	1997	7.60%	11.40%	3.80%
13	1998	7.04%	11.66%	4.62%
14	1999	7.62%	10.77%	3.15%
15	2000	8.24%	11.43%	3.19%
16	2001	7.78%	11.09%	3.31%
17	2002	7.36%	11.16%	3.80%
18	2003	6.57%	10.97%	4.40%
19	2004	6.01%	10.73%	4.72%
20	**Average**	**8.30%**	**11.84%**	**3.54%**

Sources:
[1] Mergent Public Utility Manual, Mergent weekly News Reports, 2003.
[2] Regulatory Research Associates, Inc., Regulatory Focus, Jan.90-Dec.04.

Aquila Missouri

Series "A" Utility Bond Yields

Line	Date	"A" Rating Utility Bond Yield (1)	"Baa" Rating Utility Bond Yield (2)
1	09/16/05	5.61%	5.93%
2	09/09/05	5.45%	5.77%
3	09/02/05	5.40%	5.72%
4	08/26/05	5.42%	5.73%
5	08/19/05	5.46%	5.77%
6	08/12/05	5.48%	5.79%
7	08/05/05	5.63%	5.92%
8	07/29/05	5.53%	5.82%
9	07/22/05	5.52%	5.83%
10	07/15/05	5.53%	5.79%
11	07/08/05	5.50%	5.79%
12	07/01/05	5.44%	5.73%
13	06/24/05	5.34%	5.65%
14	**Average**	**5.49%**	**5.79%**

Source:
www.moodys.com, Bond Yields and Key Indicators.

Aquila Missouri

Comparable Group Beta

Line	Electric Utility	Value Line Beta (1)
1	Alliant Energy	0.85
2	Ameren Corp.	0.75
3	American Electric Power	1.15
4	CH Energy	0.80
5	Cent. Vermount P.S.	0.50
6	Cinergy	0.85
7	Cleco Corp.	1.15
8	Consolidated Edison	0.60
9	DTE Enrgy	0.70
10	Duquesne Light	0.85
11	Empire District	0.70
12	Energy East Corp.	0.80
13	Entergy Corp.	0.75
14	Exelon Corp.	0.75
15	FPL Group, Inc.	0.75
16	FirstEnergy Corp.	0.75
17	Green Mountain	0.60
18	Hawaiian Electric	0.70
19	MGE Energy	0.65
20	NiSource Inc.	0.80
21	NSTAR	0.70
22	Pinnacle West Capital	0.85
23	Progress Energy	0.85
24	Puget Energy, Inc.	0.80
25	SCANA Corp.	0.75
26	Southern Co.	0.65
27	Vectren Corp.	0.80
28	Wstar Energy	0.85
29	Xcel Energy, Inc.	0.80
30	**AVERAGE**	**0.78**

Sources:
The Value Line Investment Survey, July 1, August 12, September 2, 2005.

Aquila Missouri

CAPM Return Estimate

Line	Description	Historical Premium (1)
1	Risk Free Rate[1]	5.2%
2	Risk Premium[2]	6.6%
3	Beta[3]	0.78
4	CAPM	10.3%
		Prospective Premium (1)
5	Risk Free Rate[1]	5.2%
6	Risk Premium[2]	6.6%
7	Beta[3]	0.78
8	CAPM	10.3%
9	**CAPM Average**	**10.3%**

Sources:

[1] Blue Chip Financial Forcasts; September 1, 2005, at pp.2.

[2] SBBI; 2004 at pp. 33 & 118.

[3] The Value Line Investment Survey, July 1, August 12, September 2, 2005.

St. Joseph Light & Power Company and STEAM

S&P Credit Rating Financial Ratios at ROE of 9.8%

Line	Discription	Ratio at 9.8% Equity Return (1)	S&P "BBB" Rating (BP: 6) Benchmark (3)	Reference (4)
1	Rate Base (Electric & Steam)	$ 194,053,686		Schedule SCH-6 and SCH-6a, Page 1of 3.
2	Weighted Common Return	4.41%		Page 2; Line 3, Col. 3.
3	Income to Common	$ 8,557,768		Line1 x Line 2.
4	Depreciation & Ammortization (Electric & Steam)	$ 9,960,161		Schedule SCH-6 and SCH-6a, Page 1of 3. Less: Electric adj. of $2.003 Million and Steam adj. of $357,214
6	Deferred Income Tax (Electric & Steam)	$ (486,298)		Schedule SCH-6 and SCH-6a, Page 1of 3.
7	Funds from Operations (FFO)	$ 18,031,631		Sum of Line 3 though 6.
8	Weighted Interest Rate	4.38%		Page 2; Line 1, Col. 3.
9	Interest Expense	$ 8,498,872		Line 1 x Line 8.
10	FFO Plus Interest	$ 26,530,503		Line 7 + Line 9.
11	FFO Interest Coverage	3.1x	4.2x - 3.0x	Line 10 / Line 9.
12	Total Debt Ratio	55%	48% - 58%	Page 2; Line 1, Col. 1.
13	FFO to Total Debt	17%	28% - 18%	Line 7 / (Line 1 x Line 12)

Source:
* Standard and Poors. New Business Profile Scores Assigned to U.S. Utility and Power Companies; Financial Guidelines Revised; June 2, 2004.

St. Joseph Light & Power Company: STEAM

Rate of Return at 9.8% ROE

Line	Discription	Weight (1)	Cost (2)	Weighted Cost (3)
1	Total Debt	55.0%	7.96%	4.38%
2	Common Equity	45.0%	9.80%	4.41%
3	**Total**	**100.0%**		**8.79%**

Source:
Debt Cost Per Schedule SCH-2.

Aquila Missouri

Discounted Cash Flow Analysis
Traditional Constant Growth DCF Model

Line	Utility	Stock Price (P0) (1)	Next Year's Dlv (D1) (2)	Dividend Yield (3)	2009 DPS (4)	2009 EPS (5)	Retention Rate (B) (6)	2009 BVPS (7)	ROE (R) (8)	BxR Growth (9)	Zacks (10)	Value Line (11)	GDP (12)	Average Growth (13)	ROE (14)
1	Alliant Energy	27.20	1.14	4.19%	1.32	2.10	37.14%	26.30	7.98%	2.97%	4.00%	3.00%	5.50%	3.87%	8.1%
2	Ameren Corp.	49.95	2.54	5.09%	2.54	3.15	19.37%	33.85	9.31%	1.80%	3.90%	0.50%	5.50%	2.93%	8.0%
3	American Electric Power	34.00	1.44	4.24%	1.60	3.00	46.67%	27.75	10.81%	5.05%	3.40%	0.50%	5.50%	3.61%	7.8%
4	CH Energy	46.53	2.16	4.64%	2.20	3.00	26.67%	33.50	8.96%	2.39%	N/A	1.50%	5.50%	3.13%	7.8%
5	Cent. Vermount P.S.	22.71	0.96	4.23%	1.08	2.00	46.00%	21.30	9.39%	4.32%	N/A	6.50%	5.50%	5.44%	9.7%
6	Cinergy	40.57	1.96	4.83%	2.08	3.15	33.97%	28.65	10.99%	3.73%	4.60%	5.50%	5.50%	4.83%	9.7%
7	Cleco Corp.	20.36	0.90	4.42%	0.90	1.50	40.00%	13.75	10.91%	4.36%	4.00%	0.50%	5.50%	3.59%	8.0%
8	Consolidated Edison	43.00	2.30	5.35%	2.36	2.95	20.00%	32.60	9.05%	1.81%	3.00%	N/A	5.50%	3.44%	8.8%
9	DTE Enrgy	44.14	2.06	4.67%	2.10	4.75	55.79%	40.75	11.66%	6.50%	4.00%	7.00%	5.50%	5.75%	10.4%
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%	5.50%	5.61%	11.0%
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%	5.50%	5.34%	11.0%
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%	5.50%	4.01%	8.7%
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%	5.50%	5.92%	9.4%
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%	5.50%	6.26%	10.0%
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%	5.50%	4.72%	8.7%
16	FirstEnergy Corp.	40.27	1.72	4.27%	2.00	4.00	50.00%	35.00	11.43%	5.71%	4.10%	8.50%	5.50%	5.95%	10.2%
17	Green Mountain	29.12	1.08	3.71%	1.32	2.45	46.12%	23.60	10.38%	4.79%	N/A	3.50%	5.50%	4.60%	8.3%
18	Hawaiian Electric	27.47	1.26	4.59%	1.32	2.10	37.14%	17.57	11.95%	4.44%	3.60%	4.30%	5.50%	4.51%	9.1%
19	MGE Energy	35.06	1.38	3.94%	1.44	2.45	41.22%	18.85	13.00%	5.36%	N/A	6.00%	5.50%	5.62%	9.6%
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%	5.50%	4.52%	8.8%
21	NSTAR	55.65	2.42	4.35%	2.70	4.25	36.47%	34.25	12.41%	4.53%	4.80%	3.50%	5.50%	4.58%	8.9%
22	Pinnacle West Capital	42.43	1.99	4.69%	2.23	3.20	30.31%	36.88	8.68%	2.63%	5.20%	3.90%	5.50%	4.31%	9.0%
23	Progress Energy	43.30	2.44	5.64%	2.50	3.20	21.88%	35.65	8.98%	1.96%	3.70%	N/A	5.50%	3.72%	9.4%
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%	5.50%	6.24%	10.7%
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%	5.50%	4.91%	9.2%
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%	5.50%	4.70%	9.3%
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%	5.50%	4.84%	9.4%
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%	5.50%	4.71%	9.0%
29	Xcel Energy, Inc.	17.65	0.93	5.27%	1.11	1.58	29.75%	15.17	10.42%	3.10%	3.90%	4.00%	5.50%	4.12%	9.4%
30	**Group Average**	**34.67**	**1.56**	**4.54%**	**1.71**	**2.74**	**36.56%**	**25.82**	**10.79%**	**4.00%**	**4.54%**	**4.76%**	**5.50%**	**4.68%**	**9.2%**
31	**Group Median**			**4.47%**											**9.2%**

Source:
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Aquila Missouri

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

Line	Utility	Next Year's Div (D_1) (20)	2009 DPS (21)	Annual Change to 2008 (22)	Stock Price (P0) (23)	Year 1 Div (24)	Year 2 Div (25)	Year 3 Div (26)	Year 4 Div (27)	Year 5 Div (28)	ROE = IRR (30)
1	Alliant Energy	1.14	1.32	6.00%	-27.2	1.14	1.20	1.26	1.32	1.39	9.6%
2	Ameren Corp.	2.54	2.54	0.00%	-49.95	2.54	2.54	2.54	2.54	2.68	9.9%
3	American Electric Power	1.44	1.60	5.33%	-34	1.44	1.49	1.55	1.60	1.69	9.5%
4	CH Energy	2.16	2.20	1.33%	-46.53	2.16	2.17	2.19	2.20	2.32	9.6%
5	Cent. Vermount P.S.	0.96	1.08	4.00%	-22.71	0.96	1.00	1.04	1.08	1.14	9.5%
6	Cinergy	1.96	2.08	4.00%	-40.57	1.96	2.00	2.04	2.08	2.19	9.9%
7	Cleco Corp.	0.9	0.90	0.00%	-20.36	0.90	0.90	0.90	0.90	0.95	9.3%
8	Consolidated Edison	2.3	2.36	2.00%	-43	2.30	2.32	2.34	2.36	2.49	10.2%
9	DTE Enrgy	2.06	2.10	1.33%	-44.14	2.06	2.07	2.09	2.10	2.22	9.6%
10	Duquesne Light	1	1.04	1.33%	-18.49	1.00	1.01	1.03	1.04	1.10	10.3%
11	Empire District	1.28	1.28	0.00%	-22.74	1.28	1.28	1.28	1.28	1.35	10.4%
12	Energy East Corp.	1.21	1.45	8.00%	-26.02	1.21	1.29	1.37	1.45	1.53	10.2%
13	Entergy Corp.	2.41	3.01	20.00%	-68.78	2.41	2.61	2.81	3.01	3.18	9.2%
14	Exelon Corp.	1.68	1.92	8.00%	-44.44	1.68	1.76	1.84	1.92	2.03	9.2%
15	FPL Group, Inc.	1.54	1.90	12.00%	-38.77	1.54	1.66	1.78	1.90	2.00	9.6%
16	FirstEnergy Corp.	1.72	2.00	9.33%	-40.27	1.72	1.81	1.91	2.00	2.11	9.7%
17	Green Mountain	1.08	1.32	8.00%	-29.12	1.08	1.16	1.24	1.32	1.39	9.3%
18	Hawaiian Electric	1.26	1.32	2.00%	-27.47	1.26	1.28	1.30	1.32	1.39	9.6%
19	MGE Energy	1.38	1.44	2.00%	-35.06	1.38	1.40	1.42	1.44	1.52	9.0%
20	NiSource Inc.	0.96	1.10	4.67%	-22.55	0.96	1.01	1.05	1.10	1.16	9.6%
21	NSTAR	2.42	2.70	9.33%	-55.65	2.42	2.51	2.61	2.70	2.85	9.6%
22	Pinnacle West Capital	1.99	2.23	8.00%	-42.43	1.99	2.07	2.15	2.23	2.35	10.0%
23	Progress Energy	2.44	2.50	2.00%	-43.3	2.44	2.46	2.48	2.50	2.64	10.5%
24	Puget Energy, Inc.	1.04	1.16	4.00%	-23.28	1.04	1.08	1.12	1.16	1.22	9.7%
25	SCANA Corp.	1.66	1.90	8.00%	-38.55	1.66	1.74	1.82	1.90	2.00	9.7%
26	Southern Co.	1.52	1.70	6.00%	-32.7	1.52	1.58	1.64	1.70	1.79	9.9%
27	Vectren Corp.	1.23	1.35	4.00%	-26.9	1.23	1.27	1.31	1.35	1.42	9.8%
28	Westar Energy	0.98	1.10	4.00%	-22.72	0.98	1.02	1.06	1.10	1.16	9.6%
29	Xcel Energy, Inc.	0.93	1.11	6.00%	-17.65	0.93	0.99	1.05	1.11	1.17	10.8%
30	Group Average	1.56	1.71	5.20%	-34.67						9.8%
31	Group Median										9.6%

Source:
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