Exhibit No.:	
Issue:	*Rate of Return*
Witness:	*Steven G. Hill*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Direct Testimony*
Case No.:	*ER-2007-0002*
Date Testimony Prepared:	*December 15, 2006*

DIRECT TESTIMONY

OF

STEVEN G. HILL

ON BEHALF OF

THE MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY
d/b/a AMERENUE

CASE NO. ER-2007-0002

Jefferson City, Missouri
December 2006

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.	))))	Case Nos. ER-2007-0002

AFFIDAVIT OF STEPHEN G. HILL

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Stephen G. Hill, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 16 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Stephen G. Hill

Subscribed and sworn to before me this 13th day of December 2006.

Notary Public

TONI M. CHARLTON
Notary Public - State of Missouri
My Commission Expires December 28, 2008
Cole County
Commission #04474301

TONI M. CHARLTON NOTARY SEAL NOTARY PUBLIC STATE OF MISSOURI

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UNION ELECTRIC COMPANY

d/b/a AMEREN UE

CASE NO. ER-2007-0002

Q. PLEASE STATE YOUR NAME, OCCUPATION AND ADDRESS.

A. My name is Stephen G. Hill. I am self-employed as a financial consultant, and principal of Hill Associates, a consulting firm specializing in financial and economic issues in regulated industries. My business address is P.O. Box 587, Hurricane, West Virginia, 25526 (e-mail: sghill@compuserve.com).

Q. BRIEFLY, WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. After graduating with a Bachelor of Science degree in Chemical Engineering from Auburn University in Auburn, Alabama. I was awarded a scholarship to attend Tulane Graduate School of Business Administration at Tulane University in New Orleans, Louisiana. There I received a Master's Degree in Business Administration. I have been awarded the professional designation "Certified Rate of Return Analyst" by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. I have also been on the Board of Directors of that national organization for several years. A more detailed account of my educational background and occupational experience appears in Appendix A.

Q. HAVE YOU TESTIFIED BEFORE THIS OR OTHER REGULATORY COMMISSIONS?

A. Yes, I have appeared previously before this Commission. In addition, I have testified on cost of capital, corporate finance and capital market issues in more than 225

regulatory proceedings before the following regulatory bodies: the West Virginia Public Service Commission, the Pennsylvania Public Utilities Commission, the Oklahoma State Corporation Commission, the Public Utilities Commission of the State of California, the Texas Public Utilities Commission, the Maryland Public Service Commission, the Public Utilities Commission of the State of Minnesota, the Ohio Public Utilities Commission, the Insurance Commissioner of the State of Texas, the North Carolina Insurance Commissioner, the Rhode Island Public Utilities Commission, the City Council of Austin, Texas, the Texas Railroad Commission, the Arizona Corporation Commission, the South Carolina Public Service Commission, the Public Utilities Commission of the State of Hawaii, the New Mexico Corporation Commission, the State of Washington Utilities and Transportation Commission, the Georgia Public Service Commission, the Public Service Commission of Utah, the Illinois Commerce Commission, the Kansas Corporation Commission, the Indiana Utility Regulatory Commission, the Virginia Corporation Commission, the Montana Public Service Commission, the Public Service Commission of the State of Maine, the Public Service Commission of Wisconsin, the Vermont Public Service Board, the Federal Communications Commission and the Federal Energy Regulatory Commission. I have also testified before the West Virginia Air Pollution Control Commission regarding appropriate pollution control technology and its financial impact on the company under review and have been an advisor to the Arizona Corporation Commission on matters of utility finance.

Q. ON BEHALF OF WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of the Missouri Public Service Commission Staff (Staff).

EXECUTIVE SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In this testimony, I present the results of studies I have performed related to the establishment of an appropriate return on equity and overall cost of capital for the integrated electric and gas distribution utility operations of Union Electric Company, d/b/a AmerenUE (the Company), a subsidiary of Ameren Corporation (Ameren, the Parent).

Q. HAVE YOU PREPARED AND EXHIBIT IN SUPPORT OF YOUR TESTIMONY?

A. Yes, Exhibit_(SGH-1) consists of 12 Schedules, and provides the analytical support for the conclusions reached regarding the overall cost of capital for AmerenUE presented in the body of the testimony. This Exhibit was prepared by me and is correct to the best of my knowledge and belief. Also, I have provided three Appendices ("A" through "C"), which contain additional detail regarding certain aspects of my narrative testimony in this proceeding.

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND FINDINGS CONCERNING THE RATE OF RETURN THAT SHOULD BE UTILIZED IN SETTING RATES FOR AMERENUE'S ELECTRIC AND GAS UTILITY OPERATIONS IN THIS PROCEEDING.

A. My testimony is organized into four sections. First, I discuss factors that support the reasonableness of single-digit cost of capital estimates, including recent findings in the field of financial economics that are germane to the determination of the risk premium currently included in the cost of capital. Second, I review the current economic environment in which my equity return estimate is made. Third, I review the capital structure requested by AmerenUE for ratemaking purposes in comparison to capital structures employed by the

Company historically, as well as capital structures prevalent in the energy utility industry. From that review, I develop a capital structure appropriate for ratemaking purposes. Fourth, I evaluate the cost of equity capital for similar-risk utility operations using Discounted Cash Flow (DCF), Capital Asset Pricing Model (CAPM), Modified Earnings-Price Ratio (MEPR), and Market-to-Book Ratio (MTB) analyses.

I have estimated the equity capital cost of the Company's electric utility and gas distribution operations to fall in a range of 9.00% to 9.75%. Within that range, I estimate the equity cost of the Company's utility operations to be near the lower end of a reasonable range of equity costs due to AmerenUE's lower financial risk—9.25%. Applying that 9.25% equity capital cost to a capital structure containing 52.4% common equity, 2% preferred stock and 45.6% total debt, produces an overall cost of capital of 7.403% (Exhibit_(SGH-1), Schedule 12, p. 1). That overall cost of capital affords the Company an opportunity to achieve a pre-tax interest coverage level of 4.36 times. That level of pre-tax interest coverage is sufficient to support an "A" bond rating for a company with a business risk ranking of 5, line Ameren UE, according to Standard & Poor's.[1] Also, the overall return I recommend would afford the Company an opportunity to achieve cash flow metrics that would support a bond rating as high or higher than the Company's current "BBB" rating (see Exhibit__(SGH-1), Schedule 12, p. 2). Therefore, the capital structure and overall return I recommend is sufficient to support the Company's financial position and fulfills the requirement of providing the Company the opportunity to earn a return which is commensurate with the risk of the operation while maintaining the Company's ability to attract capital.

[1] Standard & Poor's, Ratings Direct, "Utility Financial Targets are Revised," June 18, 1999.

Q. WHY SHOULD THE COST OF CAPITAL SERVE AS A BASIS FOR THE PROPER ALLOWED RATE OF RETURN FOR A REGULATED FIRM?

A. The Supreme Court of the United States has established, as a guide to assessing an appropriate level of profitability for regulated operations, that investors in such firms are to be given an opportunity to earn returns that are sufficient to attract capital and are comparable to returns investors would expect in the unregulated sector for assuming the same degree of risk. The Bluefield and Hope cases provide the seminal decisions [Bluefield Water Works v. PSC, 262 US 679 (1923); FPC v. Hope Natural Gas Company, 320 US 591 (1944)]. These criteria were restated in the Permian Basin Area Rate Cases, 390 US 747 (1968). However, the Court also makes quite clear in Hope that regulation does not guarantee profitability and, in Permian Basin, that, while investor interests (profitability) are certainly pertinent to setting adequate rates, those interests do not exhaust the relevant considerations.

As a starting point in the rate-setting process, then, the cost of capital of a regulated firm represents the return investors could expect from other investments, while assuming no more and no less risk. Since financial theory holds that investors will not provide capital for a particular investment unless that investment is expected to yield the opportunity cost of capital, the correspondence of the cost of capital with the Court's guidelines for appropriate earnings is clear.

INVESTOR RETURN EXPECTATIONS

Q. UTILITY EQUITY RETURN AWARDS IN THE U.S. OVER THE PAST YEAR HAVE AVERAGED ABOUT 10.5%. YOUR EQUITY RETURN RECOMMENDATION FOR AMERENUE IS BELOW RECENT ALLOWED RETURN

AVERAGES. ARE THERE OBJECTIVE INDICATORS THAT SHOW YOUR ESTIMATE IS REASONABLE?

A. Yes, there is both theoretical and practical evidence, which shows that an equity return of 9.0% to 9.75% for an electric utility operation is not only reasonable, but may, in fact, be generous.

Compelling evidence that investor equity return expectations are likely to be below my estimate of the current cost of equity in this proceeding and far below average allowed returns for utilities is provided by the Company itself. In its 2005 S.E.C. Form 10-K, at pages 139 and 140, Ameren Corporation published data regarding the Company's pension plan and the expected return on the invested assets in that portfolio. The Company's published data indicate that it expects to earn an 8.5% return on its pension fund portfolio. The portfolio's composition was 62% equity investments and 38% debt and other (e.g., real estate) investments.

In response to Staff Data Request 158, the Company provided support from its pension fund actuaries (Towers Perrin) regarding the long-term equity return expectations that form the basis of the Company's expected retirement portfolio returns. The Company's response to DR 158 indicates that a reasonable expectation for a long-term return for common equities ranges from 8.4% to 10.6%, the mid-point of which is 9.5%. That equity return expectation is for common stocks, generally, not for utility stocks, which would have a lower equity return expectation due to their lower risk.

While the Company did not respond directly to Staff inquiries regarding the actual equity return expectation used to estimate the 8.5% long-term retirement portfolio return[2],

[2] See responses to 158, 158.1, and 158.2.

other utilities publish that data in their S.E.C. filings. For example, Northeast Utilities (one company included in my AmerenUE similar-risk sample group) indicates, at page 72 and 73 of its 2005 Annual Report, that its retirement portfolio expected long-term return is 8.75%, slightly higher than Ameren's long-term return expectation. Moreover, that utility company indicates that its long-term return expectation for the U.S. equity market is 9.25%.

The definition of the cost of equity capital for a firm is investors' expected long-term return. Ameren has a very large equity investment in the retirement portfolio it holds for its employees. The Company's long-term expected return on its common stock portfolio provides direct objective evidence regarding the cost of equity capital relative to the stock market, in general. That long-term equity return expectation for the common stocks in the Company's own pension fund is similar to the equity return I recommend in this proceeding for a utility operation with substantially lower operating risk than the stock market in general. Therefore, the Company's own investment return projections published in its S.E.C. filings, provide compelling evidence that, 1) my 9.0% to 9.75% equity cost estimate for utilities is reasonable, if not conservative and 2) the Company witnesses equity return recommendations (12.2%-Dr. Vander Weide and 11.5%-12.0%-Ms. McShane) are substantially inflated.

Q. ISN'T IT POSSIBLE THAT THE EQUITY RETURN PROJECTIONS FOR THE PARENT COMPANY'S PENSION FUND ARE LOW IN ORDER NOT TO EXAGGERATE THE FUTURE VALUE OF THAT FUND?

A. It is reasonable to believe that the Company would not want to use return expectations that are too high for its pension fund assets because that would exaggerate the expected future value of that fund. Moreover, if the assumed returns are continually over-estimated, the current funding requirement would be understated and the Company would be left with unfunded pension liabilities that could add unnecessarily to its financial risk profile.

However, it is also reasonable to believe that the Company would not want to underestimate the pension fund return estimates, because that would call for an unnecessarily high annual contribution every year to reach the future targeted amount of pension funds. An unnecessarily large annual pension expense would reduce the Company's bottom line. In addition, if ultimate returns turn out to be higher than predicted through under-estimating the portfolio return, the Company will, effectively, have pre-funded its pension requirements with funds that could have been put to other, more economically beneficial uses such as production or transmission facilities.

Therefore, because there are negatives associated with either over- or under-stating expected pension portfolio returns, we must assume that Company management seeks to accurately estimate its expected investment returns and actually believes that, over the long-term, the common equity return expectations for its pension fund investments are in the single-digit range, cited above.

Q. ARE THERE OTHER EXAMPLES OF INVESTOR-EXPECTED EQUITY RETURNS SIMILAR TO THOSE USED IN THE COMPANY'S PENSION FUND PLANNING?

A. Yes, there are examples in the capital marketplace and the financial media indicating that investor return requirements are quite modest. For example, a recent A.G. Edwards report on the gas utility industry, shows that market return expectations for gas utility stocks are well below 10%.[3] The report states that, for a sample of 16 large and small gas distributors, the median total return expectation (dividend yield plus expected growth—a DCF-type calculation) is 8.1% to 8.2%.

[3] A.G. Edwards. "Gas Utilities Quarterly Review," October 4, 2006.

Value Line publishes similar expected returns for the utilities used in my similar-risk sample group to estimate the cost of equity for AmerenUE. As part of the data array published for each of the companies it follows, Value Line publishes its expectations for a three- to five-year total return (dividends plus stock price change). For the electric utilities that I use to estimate the cost of equity in this proceeding, Value Line currently projects a three- to five-year total return expectation ranging from 0% to 9%. For the gas utilities used in my gas distributor sample group, Value Line projects an average total return ranging from 4% to 11%. The return expectations for energy utilities published by AG Edwards and Value Line are representative of the equity return expectations presented to investors today and are generally below my recommended return on common equity in this proceeding.

In addition, in a letter published in late 2004 by Public Utilities Fortnightly, a prominent electric industry analyst confirms that single-digit return expectations are reasonable for utility investments, and those expectations comport with recent economic research:

> Finally, let's get real about investor expectations, now that investors have begun to get real. Articles on the topic fill the financial journals. They feature variants on this theme: Over time the average equity investment produces an annual total return (dividends plus stock price appreciation) of 6.5 percent per year in real terms, the bulk of which comes from the dividend component. Add inflation expectations to that number, and you get an 8.5 to 9.5 percent return in nominal terms. The average back-to-basics utility yields about 5 to 6 percent and might grow 3 to 4 percent per year, which adds up to produce a total return expectation of 8 to 10 percent per year, not far from the return the journals posit for the market. (Hyman, Leonard, Senior Consultant, R.J. Rudden Associates, "Letters to the Editor, *Public Utilities Fortnightly*, August 2004, p. 10)

The "articles in the financial journals," to which the author of the preceding quote refers, relate to recent research involving the market risk premium. The market risk premium is the additional return above the risk-free rate of interest that investors expect to earn by

investing in stocks rather than risk-free U.S. Treasury securities. This recent academic research indicates that the market risk premium based on the often-cited Ibbotson historical data substantially overstates investor expectations for returns in the future.

Q. PLEASE EXPLAIN HOW CURRENT RESEARCH RELATED TO THE MARKET RISK PREMIUM SUPPORTS YOUR ESTIMATE OF THE COST OF EQUITY CAPITAL.

A. As noted above, the market risk premium is the difference between the return investors expect on stocks and the return they expect on bonds (often a risk-free rate of return like a U.S. Treasury bond). The "traditional" view, supported primarily by the earned return data over the past 80 years published by Ibbotson Associates[4], is based on the historical difference between the returns on stocks and the returns on bonds. That view assumes that the returns actually earned by investors over a long period of time are representative of the returns they expect to earn in the future.

For example, the Ibbotson data show that investors have earned a return of 12.3% on stocks and 5.8% on long-term Treasury bonds since 1926[5]. Therefore, based on those historical data, it is often assumed that investors require a risk premium in the future of 6.5% above the long-term risk-free rate to invest in stocks [12.3% - 5.8% = 6.5%]. With a current long-term T-Bond yield of 5%, that assumption indicates an investor expectation of an 11.5% return for the stock market in general [5% + 6.5% = 11.5%].

However, current research indicates that there are aspects of the Ibbotson data that, when examined, point not only to lower historical risk premiums than those reported by Ibbotson but also expected risk premiums that are much lower. One recent article that

[4] Ibbotson Associates is an investor service firm that publishes historical data related to the stock and bond markets from 1926 through the most recent year. The publications are updated each year.
[5] Ibbotson Associates, SBBI Valuation Edition, 2006 Yearbook, p. 28.

evaluates returns over the past 100 years in the U.S. as well as other established stock markets, "Risk and Return in the 20th and 21st Centuries," is authored by Dimson, March and Staunton. Those researchers summarize their findings this way:

> The single most important contemporary issue in finance is the equity risk premium. This drives future equity returns, and is the key determinant of the cost of capital. The risk premium—the expected reward for bearing the risk of investing in equities, rather than in low-risk investments such as bills or bonds—is usually estimated from historical data . . . The authors show that the historical equity risk premium has been lower than previously believed, and argue that the future risk premium is likely to be lower still. (Dimson, March, Staunton, "Risk and Return in the 20th and 21st Centuries," *Business Strategy Review*, 2000, Volume 11, Issue 2, pp. 1-18)

Dimson, et al, show that the Ibbotson historical data set, which measures return data from 1926 forward, suffers from survivor bias. Simply put, Ibbotson's data is based on the stock market results of only the successful stocks, i.e., those that were successful enough to be listed on a major U.S. exchange. The return data of the stocks that did not grow large enough to be listed on a stock exchange or data from markets or time periods that were difficult to measure are not included in the Ibbotson data—and Ibbotson's results are overstated for that reason. Dimson, et al, measure historical returns over a longer period than Ibbotson—100 years of data—and includes an analysis of the returns of stock markets in other countries, which gives a broader sample of investor opinion than Ibbotson's data.

Researching more data over a longer period of time, those authors come to the conclusion that over the past 100 years common stocks have earned an average arithmetic return that is 5.0% above Treasury bonds.[6] Ibbotson's return difference between stock and long-term bonds is 6.5%—150 basis points higher. However, Dimson, et al, argue further that historical results, alone, are not accurate measures of future returns expectations unless

[6] A market risk premium of 5% added to a current T-Bond yield of 5.2% would indicate an equity return expectation for common stocks of 10.2% (expected utility stock returns would be lower).

the abnormalities in the historical record that are unlikely to exist in the future are removed in order to project for the future. Taking those facts into account, the authors conclude that, "the key qualitative point is that [the expected risk premium] is lower than the raw historical risk premium."

There is other research on historical returns that uses even longer time periods than the 100-year span used by Dimson. In Stocks for the Long Run, A Guide to Selecting Markets for Long-term Growth (Irwin Professional Publishing, Chicago, IL, 1994, pp. 11-15), Professor Jeremy Siegel concludes that between 1802 and 1992, the return differential between stocks and long-term Treasuries ranged from 3.4% to 5.1%. Using the approximate mid-point, a 4% historical risk premium would indicate that investors could reasonably expect a stock market return of about 9% (5% long-term T-Bonds plus a 4% risk premium).

Therefore, recent academic research on the historical market risk premium, using longer time periods and a broader range of stock market data than the reported Ibbotson risk premiums, shows that Ibbotson's data overstate long-term historical market risk premiums. Moreover, that research indicates that the risk premium investors expect for the future—the prime determinant of today's equity return requirements—is lower than long-term historical experience would indicate.

Q. IS THERE OTHER RESEARCH REGARDING THE MARKET RISK PREMIUM THAT IS NOT BASED PURELY ON HISTORICAL EARNED RETURNS, AND WHICH SHOWS THE MARKET RISK PREMIUM TO BE SUBSTANTIALLY LOWER THAN THAT PUBLISHED BY IBBOTSON?

A. Yes, there is new research regarding the risk premium, which is not based on historical earned returns. That research indicates the Ibbotson data is skewed upward and that the forward-looking market risk premium is much lower. In 2003, widely respected

researchers Eugene Fama and Kenneth French published an article in *The Journal of Finance* focusing on the equity risk premium and measured (instead of the realized return) the expected return on the market less the expected return on bonds (the yield) over a long-term period as well as several sub-periods. Their research based on long-term historical expected returns indicates that the *expected* (i.e., forward-looking) risk premium is in the range of 2.6% to 4.3%.[7]

More recently, Graham and Harvey (Duke University), in conjunction with *CFO Magazine* have begun to regularly poll corporate financial officers regarding their expectations regarding the expected market risk premium. The most recent result of the quarterly poll (January 2006) indicates that the financial executives polled expect stock returns over the next ten years to be only 2.4% higher than bond returns. Since the survey was initiated (2000), the forward-looking market risk premium has ranged from about 2.5% to 4.5%. That means that corporate financial officers—individuals that are arguably well versed in capital markets—expect equity returns to range from 2.5% to 4.5% above ten-year US Treasury bonds. With current Treasury bond yields of approximately 5%, the Duke survey pegs investor equity return expectations ranging from about 7.5% to 9.5%. In comparison to that expected range of returns for the stock market in general, my equity return recommendation for AmerenUE's electric utility operations can only be characterized as generous.

Another survey approach to determining the market risk premium, was recently published by Professor Ivo Welch of Yale University.[8] The survey polled more than 500

[7] Fama, E., French, K., "The Equity Premium," *The Journal of Finance*, Vol. LVII, No. 2, April 2003, pp. 637-659.

[8] Welch, I. "The Equity Premium Consensus Forecast Revisited," School of Management at Yale University working paper, September 2001.

finance and economic professors regarding their expectations about the long-term market risk premium and stock market return. That survey indicated that the median risk premium expectation was 5%, and the median geometric long-term stock market return expectation was about 10%. A 10% expected return for the stock market generally would imply lower returns for utility operations.

Finally, even Roger Ibbotson, whose firm (Ibbotson Associates) is the largest purveyor of historical market return data, recently published a paper responding to some of the recent research suggesting lower forward-looking market risk premiums, which confirms that risk premium expectations for the future are below what they were in the past.[9] Ibbotson's projected risk premium of 3.97% to 5.90%, is about 1.25% lower than his own pure historical return averages indicate; and the long-term return for the stock market he projects using those risk premiums is 9.37%. Even though Ibbotson's projected return for the stock market is similar to my equity return estimate for AmerenUE in this case, it is important to understand that a) his forward-looking estimate is for the stock market as a whole, not for lower-risk utilities and b) his estimate is at the upper end of the spectrum produced by the current research on the market risk premium.

I have mentioned a few of the research articles regarding the market risk premium that have been published over the last few years. There have been many, and the vast majority of them indicate that the expected market risk premium is below that exhibited in the Ibbotson

[9] Ibbotson, R, Chen, P., "Long-Run Stock Returns: Participating in the Real Economy," *Financial Analysts Journal*, January/February 2003, pp. 88-89.

historical data.[10] That information, as well as the research cited above, indicate that my 9.25% equity return recommendation for the utility operations of AmerenUE in this proceeding is certainly reasonable and, if the new research regarding risk premiums is correct, may be too high.

Q. IF THE CURRENT EQUITY RETURN INVESTORS ACTUALLY EXPECT IS WELL BELOW 10%, HOW DO YOU EXPLAIN THE FACT THAT REGULATORS, ON AVERAGE, HAVE BEEN ALLOWING UTILITIES TO EARN EQUITY RETURNS OF ABOUT 10.5%?

A. I believe that regulatory commissioners, in general, are not aware of the significant new research regarding the market risk premium and the reduction of long-term investor return expectations. As that information becomes more widely known and understood, I would expect allowed returns to decline. In addition, DCF cost of equity estimates have tracked actual capital costs quite well, and equity return awards have been declining. However other evidence considered by regulators is based primarily on historical risk premium information, which, as noted above, substantially overstates current investor expectations. In that way, I believe those equity return awards are based on inaccurate risk premium information that tends to overstate the cost of capital.

Clearly, recent academic research supports and investment advisors project that over the long-term, investors' expected equity returns—and the cost of equity capital—are

[10] There is only one academic study that, to my knowledge, supports the Ibbotson historical risk premium data: Harris, Marston, Mishra and Obrien, "Ex Ante cost of Equity Estimates of the S&P 500 Firms: The Choice between Global and Domestic CAPM," *Financial Management*, Autumn 2003, pp. 51-66. However, that study reviewed a relatively short period of data (mid-80s to late 90s), which included the longest bull market in U.S. history, which is unlikely to be representative of long-term expectations for the future.

below 10%. I believe that, as long as capital costs remain relatively low, regulators will eventually follow their lead and continue to lower allowed returns.

ECONOMIC ENVIRONMENT

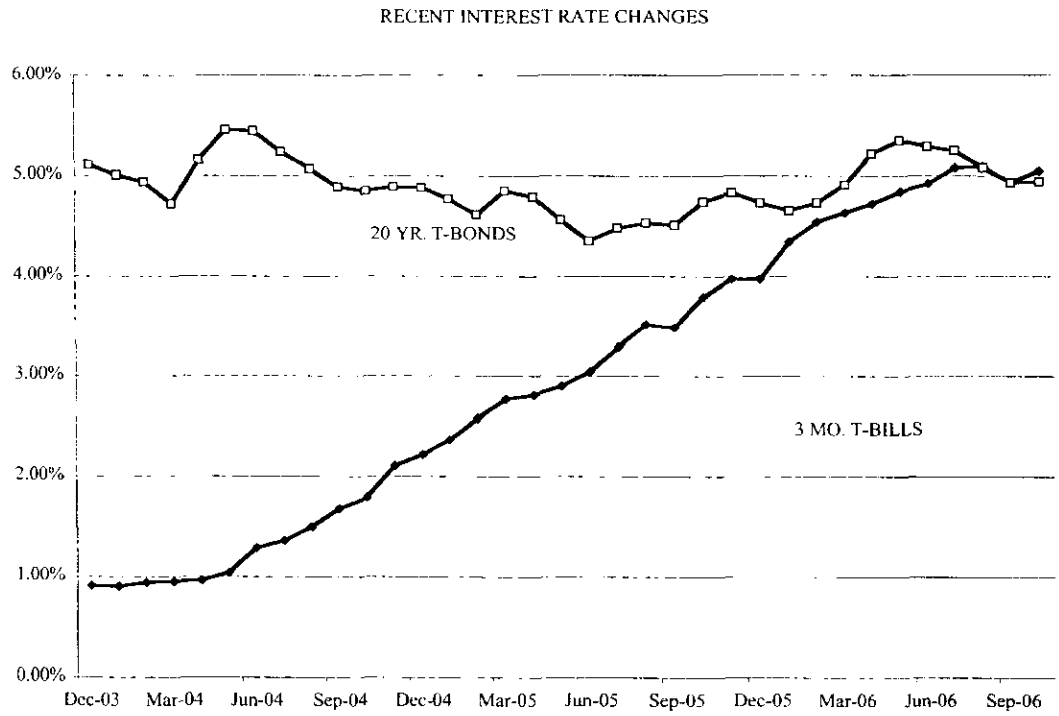
Q. WHY IS IT IMPORTANT TO REVIEW THE ECONOMIC ENVIRONMENT IN WHICH AN EQUITY COST ESTIMATE IS MADE?

A. The cost of equity capital is an expectational, or *ex ante*, concept. In seeking to estimate the cost of equity capital of a firm, it is necessary to gauge investor expectations with regard to the relative risk and return of that firm, as well as that for the particular risk-class of investments in which that firm resides. Because this exercise is, necessarily, based on understanding and accurately assessing investor expectations, a review of the larger economic environment within which the investor makes his or her decision is most important. Investor expectations regarding the strength of the U.S. economy, the direction of interest rates and the level of inflation (factors that are determinative of capital costs) are key building blocks in the investment decision. Those factors should be reviewed by the analyst and the regulatory body in order to assess accurately investors' required return—the cost of equity capital to the regulated firm.

Q. DOES THE OBJECTIVE EVIDENCE AVAILABLE IN THE CURRENT ECONOMIC ENVIRONMENT INDICATE THAT CAPITAL COSTS CONTINUE TO BE LOW?

A. Yes. First, the overall level of fixed-income capital costs has been relatively low for several years, and continues to be relatively low at the current time. Although, as shown in the chart below, there has been steady upward movement in *short-term* interest rate levels over the past two years as the Federal Reserve (the Fed) has raised the Federal Funds

rate, long-term interest rates have fluctuated in a range of 4.5% to 5.5% over the past two years. This indicates that even though the Fed has raised short-term interest rates and the spread between long-term and short-term treasuries is well below the historical average, investors are not convinced that the overall level of economic growth will be sufficient to warrant an increase in long-term interest rates and long-term capital cost rates. As a result long-term capital costs have not increased to a substantial extent, even though the Federal Reserve has dramatically increased short-term rates.



Data from Federal Reserve Statistical Release H.15

Another indication of the reason investors are willing to buy and hold stocks that offer what seem to be relatively low returns is shown in Exhibit__(SGH-1), Schedule 1, page 1, which depicts Moody's Baa-rated bond yields from 1984 through October 2006. Page 1, of Schedule 1, shows that interest rates over the past couple of years are very low relative to the

interest rate levels that existed in the mid-1980s, and are part of a general downward trend in capital costs begun in 2000.

Also, page 2, of Schedule 1, (Exhibit__(SGH-1)), which presents the year-average Moody's Baa-rated bond yields for each year over the past 37 years (1968-2006), shows that Baa-rated bond yields thus far in 2006, even with an increase from 2005 levels, are still below the bond yield levels seen in the U.S. in the late 1960s. Also, the most recent average Baa-rated utility bond yield, 6.26%[11], falls at the lower end of the range of interest rates that have existed over the past 30 years (See Schedule 1, page 2). Simply put, a fundamental reason that the current cost of common equity capital for electric and gas utility operations of 9.00% to 9.50% is reasonable is that long-term capital cost rates are as low as they have been in more than thirty years.

The above data indicate that capital costs, even with the recent credit tightening by the Federal Reserve Bank (the Fed), remain at low levels and generally support the reasonableness of relatively low equity capital costs.

Q. WHAT IS THE CURRENT EXPECTATION WITH REGARD TO THE ECONOMY AND INTEREST RATES?

A. As Value Line notes in its most recent Quarterly Review the current expectation is that the economy will expand at a more moderate pace during 2007, and inflation and interest rates will continue to be relatively moderate, allowing for "a gradual reduction in borrowing costs." The following excerpts from Value Line explain how a relatively low interest rate environment will be preserved:

> **Economic Growth:** As we noted, GDP growth slowed noticeably during the second quarter [Chart omitted]. This moderation was largely the result of a decline in residential construction [Chart omitted] and a

[11] Value Line *Selection & Opinion*, most recent six weekly editions (9/22/06-10/27/06, inclusive), 20/30-year Baa-rated utility bond yield averages.

> slowing in consumer spending [Chart omitted]. However, business equipment spending fell for the first time in over three years, with weakness focused on information processing (notably communications gear)....we believe that growth will stabilize in the area of 2.5%-3.0% over the next several quarters, as housing eases further and retail spending growth remains sluggish under pressure from high oil prices . . .

GDP growth of 3%, or slightly better, I sour forecast for 2008, with a step-up in growth, into the 3.5% range by 2009-2011.

> **Inflation**: The rate of inflation, so low for so long, has moved irregularly higher this year, under pressure from rising oil prices, the earlier surge in economic activity (which led to rising demand for raw materials and labor), and the unrelenting climb in medical, housing, and insurance costs....Now that economic growth is slowing, there is the expectation that we'll see a stabilization in the costs of production and some reduction in the rate of inflation. That turn of events, which may have started with July's generally benign inflation data, would take further pressure off of the Fed to tighten the monetary reigns [Chart omitted].
>
> **Interest Rates**: After having raised [short-term] interest rates at every Federal Open Market Committee meeting from June 2004 through June 2006, taking the Federal Funds rate up from 1.00% to 5.25% in the process, the nation's central bank voted to leave interest rates unchanged at its meeting in August 8th, citing the slowing pace of business activity and the likelihood that moderating GDP growth would reduce the risk of inflation . . .
>
> Assuming that economic growth and inflation both stabilize at modest levels by later this year, the Federal Reserve Board might well consider lowering interest rates in 2007. [Chart omitted]. (The Value Line Investment Survey, *Selection & Opinion*, August 25, 2006, pp. 962-964.)

In that most recent Quarterly Economic Review, cited above, Value Line projects long-term Treasury bond rates will average 5.4% through 2007 and 5.5% through 2008. The recent 20-year T-bond yield in October 2006, according to the Federal Reserve is 4.94% (Federal Reserve Statistical Release H.15, November 6, 2006). Therefore, the indicated expectation with regard to long-term interest rates is that they could move somewhat higher, but remain within a range near current levels.

Q. IS IT REASONABLE TO CONCLUDE THAT INVESTORS ARE AWARE OF THE EXPECTATIONS FOR SOMEWHAT HIGHER INTEREST RATES IN THE FUTURE, AND HAVE REACTED TO THAT NEWS?

A. Yes. A widely accepted tenet of modern finance is that U.S. capital markets are efficient in quickly assimilating into stock prices news that impacts stock valuation. Higher interest rates have been forecast for some time and, it is reasonable to believe, utility investors have incorporated that expectation into the stock prices they are willing to provide for utility stocks. Therefore, when estimating the cost of equity capital it is necessary to consider current interest rate levels, not projected levels, because current interest rates best represent investors' current expectations for the future. Just as it is standard procedure to use current market prices rather than prices projected sometime in the future in order to determine DCF-type equity cost estimates, the use of current bond yields rather than projected yields provides the best indication of investors' return expectations.

CAPITAL STRUCTURE

Q. WITH WHAT CAPITAL STRUCTURE DOES THE COMPANY REQUEST RATES BE SET IN THIS PROCEEDING?

A. Schedule LRN-E1-1, attached to Mr. Nickloy's Direct Testimony, presents AmerenUE's requested ratemaking capital structure. The Company has filed its rate request based on a capital structure consisting of 52.441% common equity, 2.040% preferred stock, 45.420% long-term debt and 0.099% short-term debt. That ratemaking capital structure is based on the Company's capital structure at March 31, 2006.

Q. Is the company's requested capital structure similar to the manner in which it has been capitalized recently?

A. No. According to data from the Company's Securities and Exchange Commission filings, AmerenUE was capitalized over the past five quarters with an average capital structure that consisted of approximately 49% common equity, 2% preferred stock, and 49% total debt. The Company's reported capital structure for each of the past five quarters is shown on page 1, of Schedule 2. More recently, and according to data presented by the Company to the financial community in its S.E.C. filings, over the most recent two quarters, AmerenUE was capitalized with approximately 45% common equity, 2% preferred stock and 53% total debt. Therefore, the manner in which the Company has been capitalized recently is different from the capital structure requested by the Company in this proceeding.

Q. WHY IS THE CAPITAL STRUCTURE REQUESTED BY THE COMPANY DIFFERENT FROM THAT REPORTED TO THE FINANCIAL COMMUNITY?

A. The Company has made adjustments to its common equity balances, which are relatively minor and will be discussed below. The Company also uses an amount of short-term debt for ratemaking purposes, which is netted against average CWIP balances—a standard regulatory practice in this jurisdiction. That adjustment creates a more substantial difference between the ratemaking and reported capital structures for AmerenUE. As shown on page 1, of Schedule 2, the Company's average short-term debt balance at 3/31/06 and 6/30/06 was approximately $400 Million, but the Company includes only $5 Million in its ratemaking capital structure (the difference is accounted for in the average CWIP balances).

Another difference between AmerenUE's ratemaking capital structure and its reported capital structure relates to facility leases. The difference between the long-term debt reported on the Company's financial statements at the end of the first quarter of 2006 ($2,942 Million) and the amount used to by Mr. Nickloy as a basis for his ratemaking capital structure

($2,614 Million, see Nickloy Schedule LRN-E2-1), approximately $320 Million, is due to the exclusion of the lease-related debt for ratemaking purposes.

Q. WHAT ARE THE RATE IMPLICATIONS OF THE CAPITAL STRUCTURE DIFFERENCES DUE TO SHORT-TERM DEBT?

A. Basing rates on the Company requested 52.44% common equity, rather than the common equity ratio including an average amount of short-term debt, adds approximately $24 Million to the electric and gas rates of AmerenUE's Missouri customers every year. Page 2, of Schedule 2, shows the Company's requested capital structure and cost rates at the top of the page. Assuming a combined State and Federal tax rate of 40%, the Company's requested capital structure implies a pre-tax overall cost of capital of 13.13%.

Using the Company's requested amounts of common equity, preferred stock and long-term debt in combination with a five-quarter average amount of short-term debt ($295 Million, see Schedule 2, page 1), produces a capital structure of 49.87% common equity, 1.94% preferred stock, 43.19% long-term debt and 5.00% short-term debt. That capital structure is shown in the bottom portion of Schedule 2, page 2. With that capital structure including an average amount of short-term debt and the Company's requested capital cost rates, the pre-tax overall return would be 12.74%. The difference in overall return (0.40%) multiplied by the Company-requested rate base ($6.06 Billion, see Company witness Weiss' Schedules GSW-G12 and GSW-E17), indicates that the ratemaking capital structure adjustment reducing the amount of short-term debt increases capital costs to Missouri ratepayers about $24 Million annually.

Q. YOU NOTED AT THE OUTSET OF YOUR DISCUSSION OF CAPITAL STRUCTURE THAT THE COMPANY HAS ALSO ADJUSTED ITS COMMON EQUITY BALANCES. DO YOU AGREE WITH ALL OF THOSE ADJUSTMENTS?

A. While I do not take issue in this proceeding with Mr. Nickloy's adjustments to common equity balances relating to its other comprehensive income balances or its investment in EEI, I believe the Company's adjustment to remove a negative balance of $6.5 Million related to its investment in Union Electric Development Corporation (UEDC) is in error. According to the Company's consolidating balance sheet, provided in response to Staff DR 150(d), the negative equity investment in UEDC is eliminated in consolidation. An additional adjustment to the consolidated equity balances to again "eliminate" the UEDC equity investment would be double-counting. Because the elimination of a negative balance adds to the total, the Company ratemaking common equity balance is overstated by $6.5 Million.

Q. MAKING THAT SLIGHT ADJUSTMENT TO AMERENUE'S COMMON EQUITY BALANCES AND ACCEPTING THE COMPANY'S TREATMENT OF LONG- AND SHORT-TERM DEBT, WHAT RATEMAKING CAPITAL STRUCTURE WOULD RESULT?

A. Page 3, of Schedule 2, shows that lowering the Company's common equity balance by about $6.5 Million and accepting the Company adjustment to its debt balances, AmerenUE's capital structure at March 31, 2006, consists of 52.39% Common Equity, 2.04% Preferred Stock, 45.47% Long-term Debt and 0.10% Short-term Debt. I will use that capital structure to determine an overall rate of return for ratemaking purposes in this proceeding.

Q. HOW DOES AMERENUE'S REGULATORY CAPITAL STRUCTURE COMPARE TO THAT UTILIZED IN THE ELECTRIC INDUSTRY TODAY?

A. AmerenUE's ratemaking capital structure contains more common equity than is used, on average, in the utility industry today. As shown on page 4, of Schedule 2, attached to my testimony, the average common equity ratio of the electric utility industry is 45%.

Dr. Vander Weide's Schedule JVW-1, shows his selected similar-risk sample group of electric companies. According to AUS Utility Reports, those companies have a current average common equity ratio of 45%. Company witness McShane's Schedule KCM-E3-2 lists her similar-risk electric sample. Those companies have an average common equity ratio of 44%. According to the same source, the electric utilities in my sample group have an average common equity ratio of 44.7%.

Ameren's ratemaking common equity ratio of about 52% of total capital, contains considerably more equity and less debt than any of the similar-risk electric utility sample groups used by the cost of capital witnesses in this proceeding and more common equity than is used on average in the electric industry today. For that reason, AmerenUE's financial risk should be considered to be relatively low.

Q. ARE THERE OTHER ISSUES RELATED TO THE COMPANY'S CAPITAL STRUCTURE THAT YOU WISH TO DISCUSS?

A. Yes. In response to Staff Data Request No. 149, the Company supplied embedded cost rates for preferred stock, long-term debt and short-term debt at the end of each of the past five quarters. The cost rate supplied for March 31, 2006, for long-term debt was different from that submitted by Mr. Nickloy in the Company's filing. It is my understanding that the cost rate filed with the Company's testimony was preliminary and the cost rate supplied with the data request response was accurate. I will use the data response cost rate in my determination of the Company's overall cost of capital.

Q. DOES THIS CONCLUDE YOUR DISCUSSION OF CAPITAL STRUCTURE?

A. Yes, it does.

METHODS OF EQUITY COST EVALUATION - DISCOUNTED CASH FLOW MODEL

Q. PLEASE DESCRIBE THE DISCOUNTED CASH FLOW (DCF) MODEL YOU USED TO ARRIVE AT AN ESTIMATE OF THE COST RATE OF COMMON EQUITY CAPITAL FOR AMERENUE IN THIS PROCEEDING.

A. The DCF model relies on the equivalence of the market price of the stock (P) with the present value of the cash flows investors expect from the stock, and assumes that the discount rate equals the cost of capital. The total return to the investor, which equals the required return and the cost of equity capital according to this theory, is the sum of the dividend yield and the expected growth rate in the dividend.

The theory is represented by the equation,

$$k = D/P + g, \qquad (1)$$

Where "k" is the equity capitalization rate (cost of equity, required return), "D/P" is the dividend yield (dividend divided by the stock price) and "g" is the expected sustainable growth rate.

Q. WHAT GROWTH RATE (g) DID YOU ADOPT IN DEVELOPING YOUR DCF COST OF COMMON EQUITY FOR THE COMPANY IN THIS PROCEEDING?

A. The growth rate variable in the traditional DCF model is quantified theoretically as the dividend growth rate investors expect to continue into the indefinite future. The DCF model is actually derived by 1) considering the dividend a growing perpetuity, that is, a payment to the stockholder which grows at a constant rate indefinitely, and 2) calculating the present value (the current stock price) of that perpetuity. The model also assumes that the company whose equity cost is to be measured exists in a steady state

environment, i.e., the payout ratio and the expected return are constant and the earnings, dividends, book value and stock price all grow at the same rate, forever. As with all mathematical models of real-world phenomena, the DCF theory does not exactly "track" reality. Payout ratios and expected equity returns do change over time. Therefore, in order to properly apply the DCF model to any real-world situation and, in this case, to find the long-term sustainable growth rate called for in the DCF theory, it is essential to understand the determinants of long-run expected dividend growth.

Q. CAN YOU PROVIDE AN EXAMPLE TO ILLUSTRATE THE DETERMINANTS OF LONG-RUN EXPECTED DIVIDEND GROWTH?

A. Yes, in Appendix B, I provide an example of the determinants of a sustainable growth rate on which to base a reliable DCF estimate. In addition, in Appendix B, I show how reliance on earnings or dividend growth rates alone, absent an examination of the underlying determinants of long-run dividend growth, can produce inaccurate DCF results.

Q. DID YOU USE A SUSTAINABLE GROWTH RATE APPROACH TO DEVELOP AN ESTIMATE OF THE EXPECTED GROWTH RATE FOR THE DCF MODEL?

A. While I have calculated both the historical and projected sustainable growth rate for a sample of utility firms with similar-risk operations, I have not relied solely on that type of growth rate analysis. In addition to a sustainable growth rate analysis, I have also utilized published data regarding both historical and projected growth rates in earnings, dividends, and book value for the sample group of utility companies. Through an examination of all of those data, which are available to and used by investors, I estimate investors' long-term internal growth rate expectations. To that long-term growth rate

estimate, I add any additional growth that is attributable to investors' expectations regarding the on-going sale of stock for each of the companies under review.

Q. WHY HAVE YOU USED THE TECHNIQUE OF ANALYZING THE MARKET DATA OF SEVERAL COMPANIES?

A. I have used the "similar sample group" approach to cost of capital analysis because it yields a more accurate determination of the cost of equity capital than does the analysis of the data of one individual company. Any form of analysis, in which the result is an estimate, such as growth in the DCF model, is subject to measurement error, i.e., error induced by the measurement of a particular parameter or by variations in the estimate of the technique chosen. When the technique is applied to only one observation (e.g., estimating the DCF growth rate for a single company) the estimate is referred to, statistically, as having "zero degrees of freedom." This means, simply, that there is no way of knowing if any observed change in the growth rate estimate is due to measurement error or to an actual change in the cost of capital. The degrees of freedom can be increased and exposure to measurement error reduced by applying any given estimation technique to a sample of companies rather than one single company. Therefore, by analyzing a group of firms with similar characteristics, the estimated value (the growth rate and the resultant cost of capital) is more likely to equal the "true" value for that type of operation.

Q. HOW WERE THE FIRMS SELECTED FOR YOUR ANALYSIS?

A. I have analyzed both electric and gas distribution utility firms. In selecting a sample of electric utility firms to analyze, I screened all the electric utilities followed by Value Line, because that investor service, in addition to providing a wealth of historical data, provides projected information, which is important in gauging investor expectations. I selected electric companies that had at least 70% of revenues from electric operations, did not

have a pending merger, did not have a recent dividend cut, had stable book values and a senior bond rating between "A" and "BBB-". The screening process for electric utilities is summarized on Schedule 3, attached to my testimony. The Companies selected for analysis are: Central Vermont Public Service (CV), FirstEnergy Corp. (FE), Northeast Utilities (NU), Progress Energy (PGN), Alliant Energy (LNT), Ameren Corp. (AEE), American Electric Power (AEP), Cleco Corp. (CNL), DPL, Inc. (DPL), Empire District Electric (DPL), Entergy Corp. (ETR), Hawaiian Electric (HE), PNM Resources (PNM), Pinnacle West Capital Corp. (PNW), and Unisource Energy (UNS).[12]

I analyzed the cost of equity of a group of gas distribution utilities, because the Company has gas utility operations as well as electric utility operations. In selecting a sample of gas distribution firms to analyze, I screened all the gas distribution firms followed by Value Line. I selected companies from that group that had a continuous financial history and had at least 60% of revenues generated by gas distribution operations.[13] In addition, I eliminated companies that were in the process of merging or being acquired, or companies that had recently omitted dividends. The data for the gas sample group were obtained from A.G. Edwards Gas Utilities Quarterly Review, October 4, 2006, the Value Line Investment Survey, *Ratings and Reports*, September 15, 2006, and A.U.S. Utility Reports, October 2006.

[12] In the Schedules accompanying this testimony, the sample group companies are referred to by their stock ticker symbols, shown in parentheses here.

[13] Many of the gas distributors have recently added energy merchant functions to their operations, lowering the percentage of revenues provided by regulated utility operations and increasing overall investment risk. Because almost 30% of revenues for this sample group is derived from unregulated operations the cost of equity for this group will tend to overstate that appropriate for a pure gas distribution utility operation.

The companies included in the similar-risk sample group in this proceeding are AGL Resources (ATG), Atmos Energy Corporation (ATO), Laclede Group (LG), New Jersey Resources (NJR), Nicor, Inc. (GAS), Northwest Natural Gas (NWNG), Piedmont Natural Gas Company (PNY), South Jersey Industries (SJI), Southwest Gas (SWX) and WGL Holdings (WGL).

Q. HOW HAVE YOU CALCULATED THE DCF GROWTH RATES FOR THE SAMPLE OF COMPARABLE COMPANIES?

A. Schedule 4, pages 1 through 8, shows the retention ratios, equity returns, sustainable growth rates, book values per share and number of shares outstanding for the comparable gas and electric companies for the past five years. Also included in the information presented in Schedule 4, are Value Line's projected 2006, 2007 and 2009-2011 values for equity return, retention ratio, book value growth rates and number of shares outstanding.

In evaluating these data, I first calculate the five-year average sustainable growth rate, which is the product of the earned return on equity (r) and the ratio of earnings retained within the firm (b). For example, Schedule 4, page 7, shows that the five-year average sustainable growth rate for Piedmont Natural Gas Co., Inc. (PNY) is 2.96%. The simple five-year average sustainable growth value is used as a benchmark against which I measure the company's most recent growth rate trends. Recent growth rate trends are more investor-influencing than are simple historical averages. Continuing to focus on PNY, we see that sustainable growth in 2005 was about 3.5%—above the average growth for the five-year period, indicating an increasing growth rate trend. By the 2009-2011 period, Value Line projects PNY's sustainable growth will reach a level that substantially exceeds the recent five-year average—4.3%. These forward-looking data indicate that investors expect PNY to

grow at a rate in the future greater than the growth rate that has existed, on average, over the past five years.

At this point I should note that, while the five-year projections are given consideration in estimating a proper growth rate because they are available to and are used by investors, they are not given sole consideration. Without reviewing all the data available to investors, both projected and historic, sole reliance on projected information may be misleading. Value Line readily acknowledges to its subscribers the subjectivity necessarily present in estimates of the future:

> We have greater confidence in our year-ahead ranking system, which is based on proven price and earnings momentum, than in 3- to 5-year projections. (Value Line Investment Survey, Selection and Opinion, June 7, 1991, p.854).

Another factor to consider is that PNY's book value growth is expected to increase at a 3.0% level over the next five years, after increasing at a 6.5% rate historically. This information would tend to moderate growth rate expectations. However, this company has been acquiring smaller gas companies in recent years and a declining growth trend in book value also indicates a reduction in acquisition activity. Also, as shown on Schedule 5, page 4, PNY's dividend growth rate, which was 5% historically, is expected to increase slightly to a 5.5% rate of growth in the future—indicating an expectation for relatively stable growth. Earnings growth rate data available from Value Line indicate that investors can expect a relatively similar growth rate in the future (6%) to that which has existed over the past five years (5%). However, Reuters and Zack's (investor advisory services that poll institutional analysts for growth earnings rate projections) project lower earnings growth rate for PNY—4.86% and 5.6%, respectively—over the next five years.

PNY's projected sustainable growth is approaching 5%, dividend growth has averaged about 5% and book value growth has been above 5% in the past but is projected to decline

below that level in the future. The average of Value Line's projected earnings, dividend and book value growth projections for this company is 4.8%. A long-term sustainable growth rate of 5.0% is a reasonable expectation for PNY.

Q. IS THE INTERNAL (b x r) GROWTH RATE THE FINAL GROWTH RATE YOU USE IN YOUR DCF ANALYSIS?

A. No. An investor's sustainable growth rate analysis does not end upon the determination of an internal growth rate from earnings retention. Investor expectations regarding growth from external sources (sales of stock) must also be considered and examined. For PNY, page 8, of Schedule 4, shows that the number of outstanding shares increased at a 4.25% rate over the most recent five-year period, due primarily to an equity issuance in 2004. Prior to that time the number of share outstanding grew at about a 1.7% rate. However, Value Line expects the number of shares outstanding to decline through the 2009-2011 period, bringing the share growth rate down to -1% rate by that time. An expectation of share growth of 0% is reasonable for this company.

For PNY, then there is no addition to the expected long-term growth as a result of issuing additional shares. However, that is not the case for many of the companies under study. As shown on pages 1 and 3, of Schedule 5, because the utilities under review are currently trading at a market price that is greater than book value, issuing additional shares will increase investors' growth rate expectations. Multiplying the expected growth rate in shares outstanding by (1-(Book Value/Market Value)), increases the average long-term DCF growth rate by about 50 basis points.

I have included the details of my growth rate analyses for PNY as an example of the methodology I use in determining the DCF growth rate for each company in the electric industry sample. A description of the growth rate analyses of each of the companies included

in my sample groups is set out in Appendix C. Schedule 5, pages 1 and 3 ,of Exhibit_(SGH-1) attached to this testimony shows the internal, external and resultant overall growth rates for the electric and gas distribution utility companies analyzed.

Q. HAVE YOU CHECKED THE REASONABLENESS OF YOUR GROWTH RATE ESTIMATES AGAINST OTHER, PUBLICLY AVAILABLE, GROWTH RATE DATA?

A. Yes. Pages 2 and 4, of Schedule 5, shows the results of my DCF growth rate analysis as well as 5-year historic and projected earnings, dividends and book value growth rates from Value Line, earnings growth rate projections from Reuters, the average of Value Line and Reuters growth rates and the 5-year historical compound growth rates for earnings, dividends and book value for each company under study.

My DCF growth rate estimate for all the electric utility companies included in my analysis is 5.35%. This figure is higher than Value Line's projected average growth rate in earnings, dividends and book value for those same companies (4.38%) and is well above the five-year historical average earnings, dividend and book value growth rate reported by Value Line for those companies (1.57%). My growth rate estimate for the electric companies under review is below the analysts' earnings growth rate projections—6.4% and 6.5% (Reuters and Zack's, respectively). Also, my growth rate estimate is well above the projected dividend growth rate of the sample companies, 3.77%.

For the gas distributor sample group, my DCF growth rate estimate is 5.40%. That estimate is above Value Line's projected average earnings, dividend and book value growth for those companies of 4.52%. My DCF growth rate projection for those companies is also greater than either Reuters or Zack's earnings growth projections (4.67% and 4.8%, respectively) for those companies. Finally my growth rate estimate, 5.40%, is substantially in

excess of Value Line's projected average dividend growth for those gas distributors included in my sample group—3.28%.

Q. DOES THIS CONCLUDE THE GROWTH RATE PORTION OF YOUR DCF ANALYSIS?

A. Yes, it does.

METHODS OF EQUITY COST EVALUATION – DIVIDEND YIELDS

Q. HOW HAVE YOU CALCULATED THE DIVIDEND YIELDS?

A. I have estimated the next quarterly dividend payment of each firm analyzed and annualized them for use in determining the dividend yield. If the quarterly dividend of any company was expected to be raised in the next quarter (4^{th} quarter 2006 or 1^{st} quarter of 2007), I increased the current quarterly dividend by (1+g). For the utility companies in the sample groups, a dividend adjustment was necessary for First Energy, Progress Energy, Alliant Energy, American Electric Power, DPL, Inc., Pinnacle West, Unisource Energy, AGL Resources, Atmos Energy, Northwest Natural Gas and South Jersey Industries.

The next quarter annualized dividends were divided by a recent daily closing average stock price to obtain the DCF dividend yields. I use the most recent six-week period to determine an average stock price in a DCF cost of equity determination because I believe that period of time is long enough to avoid daily fluctuations and recent enough so that the stock price captured during the study period is representative of current investor expectations.

Schedule 6 contains the market prices, annualized dividends and dividend yields of the utility companies under study. Schedule 6, page 1, indicates that the average dividend yield for the sample group of electric companies is 3.90%. The year-ahead dividend yield projection for the electric utility sample group published by Value Line is 3.83% (Value Line,

Summary & Index, October 27, 2006). By that measure, my dividend yield calculation is slightly higher, but still representative of investor expectations.

Page 2, of Schedule 6, shows that my dividend yield estimate for the gas distributors is 3.82%. That value also slightly exceeds Value Line's year-ahead dividend yield projection for those same gas companies—3.72%—indicating that my DCF equity cost estimate may be slightly overstated, but is representative of investor expectations.

Q. WHAT IS YOUR COST OF EQUITY CAPITAL ESTIMATE FOR THE ELECTRIC AND GAS UTILITY COMPANIES, UTILIZING THE DCF MODEL?

A. Schedule 7, page 1, shows that the average DCF cost of equity capital for the group of electric utilities is 9.26%. Page 2 of Schedule 7 shows that the average DCF cost of equity for the gas distributors is very similar—9.22%.

METHODS OF EQUITY COST EVALUATION - CAPITAL ASSET PRICING MODEL

Q. PLEASE DESCRIBE THE CAPITAL ASSET PRICING MODEL (CAPM) YOU USED TO ARRIVE AT AN ESTIMATE FOR THE COST RATE OF AMEREN-UE's EQUITY CAPITAL.

A. The CAPM states that the expected rate of return on a security is determined by a risk-free rate of return plus a risk premium, which is proportional to the non-diversifiable (systematic) risk of a security. Systematic risk refers to the risk associated with movements in the macro-economy (the economic "system") and, thus, cannot be eliminated through diversification by holding a portfolio of securities. The beta coefficient (β) is a statistical measure that attempts to quantify the non-diversifiable risk of the return on a particular

security against the returns inherent in general stock market fluctuations. The formula is expressed as follows:

$$k = r_f + \beta(r_m - r_f), \qquad (2)$$

Where "k" is the cost of equity capital of an individual security, "r_f" is the risk-free rate of return, "β" is the beta coefficient, "r_m" is the average market return and "$r_m - r_f$" is the market risk premium. The CAPM is used in my analysis, not as a primary cost of equity analysis, but as a check of the DCF cost of equity estimate. Although I believe the CAPM can be useful in testing the reasonableness of a cost of capital estimate, certain theoretical shortcomings of this model (when applied in cost of capital analysis) reduce its usefulness.

Q. CAN YOU EXPLAIN WHY THE CAPM ANALYSIS SHOULD BE APPLIED TO COST OF CAPITAL ESTIMATION WITH CAUTION?

A. Yes. The reasons why the CAPM should be used in cost of capital analysis with caution are set out below. It is important to understand that my caution with regard to the use of the CAPM in a cost of equity capital analysis does not indicate that the model is not a useful description of the capital markets. Rather, it recognizes that in the practical application of the CAPM to cost of capital analysis there are problems that can cause the results of that type of analysis to be less reliable than other, more widely accepted models such as the DCF.

The CAPM was originally designed as a point-in-time tool for selecting stock portfolios that matched a particular investor's risk/return preference. Its use in rate of return analysis to estimate multi-period return expectations for one stock or one type of stock, rather than a diversified portfolio of stocks, takes the model out of the context for which it was

intended. Also, questions regarding the fundamental applicability of the CAPM theory and the accuracy of beta have arisen recently in the financial literature.

For many years there has been much comment in the financial literature regarding the strength of the assumptions that underlie the CAPM and the inability to substantiate those assumptions through empirical analysis. Also, there are problems with the key CAPM risk measure, beta, that indicate that the CAPM analysis is not a reliable primary indicator of equity capital costs.

Cost of capital analysis is a decidedly forward-looking, or *ex-ante*, concept. Beta is not. The measurement of beta is derived with historical, or *ex-post*, information. Therefore, the beta of a particular company, because it is usually derived with five years of historical data, is slow to change to current (i.e., forward-looking) conditions, and some price abnormality that may have happened four years ago could substantially affect beta while, currently, being of little actual concern to investors. Moreover, this same shortcoming, which assumes past results mirror investor expectations for the future plagues the market risk premium in an historically-oriented CAPM. As I discussed in Section I of my testimony, recent studies indicate that investors' current market risk premium expectations are well below simple historical averages.

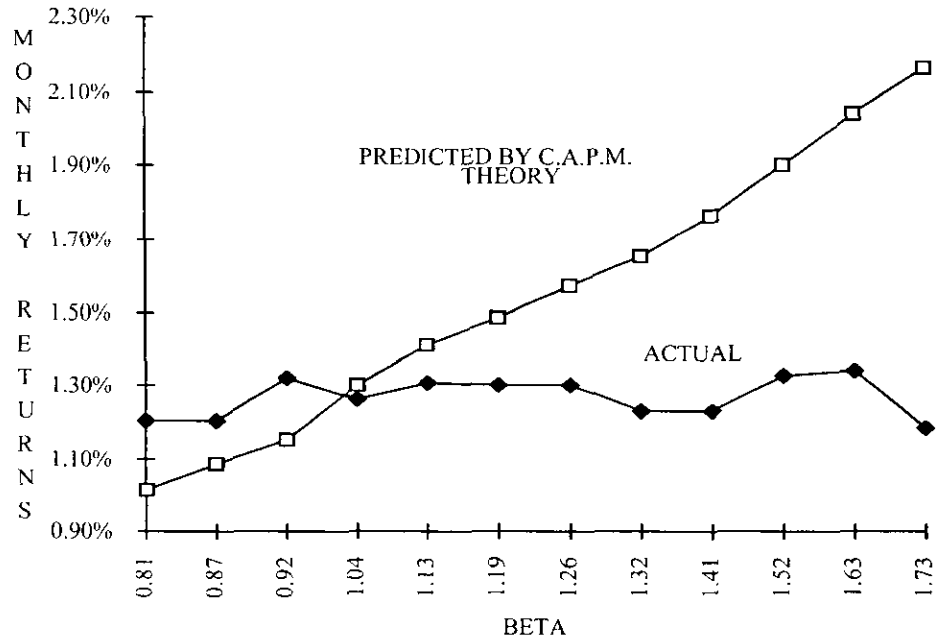
Also, an important study performed for the Center for Research in Security Prices at the University of Chicago Graduate School of Business shows that the assumed linear relationship between beta, risk and return (i.e., beta varies directly with risk and return) simply does not appear to exist in the marketplace. As Value Line reported in its Industry Review published in March of 1992:

Two of the most prestigious researchers in the financial community, Professors Eugene F. Fama and Kenneth R. French from the University of Chicago have challenged the

traditional relationship between Beta and return in a recent paper published by the Center for Research in Security Prices. In this study, the duo traced the performance of thousands of stocks over 50 years, but found no statistical support for the hypothesis that the relationship between volatility and return is significantly different from random. (Value Line Industry Review, March 13, 1992, p. 1-8.)

A graphical summary of the findings published in the 1992 Fama and French article regarding the efficacy of beta in the CAPM is shown below in Chart I:

CHART I.
MONTHLY STOCK RETURNS v. BETA
1963-1990



Graphing monthly returns against the average beta for the different stock groupings presented by Fama and French shows that the actual risk/return relationship that has existed over the 1963-1990 period (labeled "actual" in Chart I) is vastly different from that predicted by the CAPM theory. For example, Fama and French found that there was little difference in

the average monthly returns of stocks with high betas (beta = 1.73, monthly return = 1.18%) and stocks with low betas (beta = 0.81, monthly return = 1.20%), while the assumption embodied in the CAPM is that the returns for those types of stocks should be substantially different. These findings led the researchers to conclude:

> In short, our tests do not support the most basic prediction of the SLB [Sharpe-Litner-Black, CAPM] model, that average returns are positively related to market ßs. (Fama, French, "The Cross-Section of Expected Stock Returns," *Journal of Finance*, Vol. 47, No. 2 (June 1992), p. 428 p. 428)

There are other, more practical, problems with beta. For example, there are many purveyors of beta and betas are calculated in different ways. Although the theory calls for beta to be measured as the covariance of the returns of one stock against that of the market, some beta providers simply use stock price changes in lieu of changes in total return.[14] Also, while an historical period of monthly returns (or stock prices) over five years is common, some providers use shorter periods in order to get more current risk indications. The differences in the calculation techniques can lead to very different beta results. For example, the average Value Line beta of the electric utility sample group used in my testimony is 0.89. That beta is calculated based on stock price movements over a five-year period. For the same companies, the New York Stock Exchange (NYSE) publishes betas calculated using relative return variances over a three-year period, which average 0.69 for the same companies. That seemingly small difference in beta can make creates a very large variance in the CAPM equity cost estimate. Given a market risk premium ranging from 4% to 6.5%, causes an 80 to 130 basis point difference in the CAPM estimate of the cost of equity of those companies.

Fama and French have continued their investigation of the CAPM since their 1992 article and have postulated that a more accurate CAPM would use two additional risk

[14] Value Line, for example, uses historical market prices rather than the covariance of returns.

measures in addition to beta. However, it is important to note that while those authors tout the superiority of their three-factor CAPM to the single-beta CAPM on theoretical grounds, they recognize that there are significant problems with any type of asset pricing model when it comes to using the model to estimate the cost of equity capital. Most recently, Fama and French noted regarding the CAPM:

> The attraction of the CAPM is that is offers powerful and intuitively pleasing predictions about how to measure risk and the relation between expected return and risk. Unfortunately, the empirical record of the model is poor—poor enough to invalidate the way it is used in applications. The CAPM's empirical problems may reflect theoretical failings, the result of many simplifying assumptions. But they may also be caused by difficulties in implementing valid tests of the model....In the end, we argue that whether the model's problems reflect weaknesses in the theory or in its empirical implementation, the failure of the CAPM in empirical tests implies that most applications of the model are invalid. (Fama, E., French, K., "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, pp. 25-46)

While the recently published conclusions as to the imprecision of equity cost estimates produced by CAPM-type models does not negate the risk/return basis or the general theory of asset pricing, they do call for more accurate measures with which asset returns can be more reliably indexed. However, unless and until such indices are published and widely accepted in the marketplace, CAPM cost of equity capital estimates should be relegated to a supporting role or informational status. Therefore, I use the CAPM for informational purposes and do not rely on that methodology as a primary equity capital cost estimation technique.

Q. WHAT VALUE HAVE YOU CHOSEN FOR A RISK-FREE RATE OF RETURN IN YOUR CAPM ANALYSIS?

A. As the CAPM is designed, the risk-free rate is that rate of return investors can realize with certainty. The nearest analog in the investment spectrum is the 13-week U. S. Treasury Bill. However, T-Bills can be heavily influenced by Federal Reserve policy, as they

have been over the past three years. While longer-term Treasury bonds have equivalent default risk to T-Bills, those longer-term government securities carry maturity risk that the T-Bills do not have. When investors tie up their money for longer periods of time, as they do when purchasing a long-term Treasury, they must be compensated for future investment opportunities forgone as well as the potential for future changes in inflation. Investors are compensated for this increased investment risk by receiving a higher yield on T-Bonds. However, when T-Bills and T-Bonds exhibit a "normal" (historical average) spread of about 1.5% to 2%, the results of a CAPM analysis that matches a higher market risk premium with lower T-Bill yields or a lower market risk premium with higher T-Bond yields, are very similar.

As I noted in my previous discussion of the macro-economy, the Fed has acted vigorously during the past year or so to raise short-term interest rates. Over the most recent six-week period, T-Bills have produced an average yield of 4.95% and Treasury Bonds have yielded 4.83% (data from Value Line *Selection & Opinion*, six most recent weekly editions[15]). Those data indicate that, currently, there is an abnormally small yield differential between long- and short-term Treasury securities.

Q. DO YOU BELIEVE THE USE OF A LONG-TERM TREASURY BOND RATE IS APPROPRIATE IN THE CAPM?

A. In the current economic environment, the use of a long-term Treasury bond produces a more accurate estimate of investors' cost of equity. Although the selection of a long- or short-term Treasury security as the risk free rate of return to be used in the CAPM is

[15] Current T-Bill yield is six-week average yield from Value Line Selection & Opinion (9/22/06-10/27/06).

one of the areas of contention in applying the model in cost of capital analysis, the use of a normalized short-term T-Bill rate is the more prevalent in the literature. However, as noted above the T-Bill yield can be influenced by Federal Reserve policy, and, would produce inaccurate indications of the cost of equity, especially if the yield differential between T-Bonds and T-Bills is different from long-term averages as they are now.

For example, in 2004 when the Fed had pushed T-Bill rates below 2% and the yield differential between T-Bonds and T-Bills was unusually large, the results of a T-Bill-based CAPM for utilities were below bond yields and were not reliable. Recently, with the Fed pushing up short-term T-Bill yields resulting through credit tightening, combined with stable long-term yields, the yield differential between T-Bonds and T-Bills is effectively non-existent, which is well below long-term averages of about 1.8% to 2.1%. Therefore, the short-term CAPM will overstate the cost of equity. For purposes of analysis in this proceeding I will rely on the long-term Treasury bond yields for the risk-free rate in the CAPM. Also, along with those measures of the risk-free rate I use the corresponding measures of market risk premiums.

Q. WHAT HAVE YOU CHOSEN AS THE MARKET RISK PREMIUM FOR THE CAPM ANALYSIS?

A. In their 2006 edition of Stocks, Bonds, Bills and Inflation, R.G Ibbotson Associates indicates that the average market risk premium between stocks and T-Bonds over the 1926–2005 time period is 6.5% (based on an arithmetic average), and 4.9% (based on a geometric average). I have used these values to estimate the market risk premium in the CAPM analysis. The geometric mean is based on compound returns over time and the arithmetic mean is based on the average of single-period returns.

It is also important to note that, as I point out in Section I of my testimony, recent research in the field of financial economics has shown that the market risk premium data published by Ibbotson Associates—the earned return differentials that existed in the U.S. between 1926 and 2005—overstates investor-expected market risk premiums. The most recent research indicates that the return investors require over the risk-free rate ranges from 2.5% to 4.5% as opposed to the 4.9% to 6.5% estimate published by Ibbotson. Also Ibbotson, himself, has published a recent paper that indicates the forward-looking risk premium expectation ranges between 3.97% and 5.90%.[16] Therefore, the upper end of the CAPM cost of equity estimates, based on the historical Ibbotson data, should be considered to be higher than the current cost of common equity capital.

Q. SOME ANALYSTS ARGUE THAT THE USE OF GEOMETRIC MEANS IN COST OF CAPITAL ANALYSIS IS IMPROPER. WHY DO YOU BELIEVE IT IS REASONABLE TO USE THAT INFORMATION?

A. It is necessary to utilize a range of market risk premiums when applying a CAPM analysis because, as I note in Section I of my Direct Testimony, there is substantial new research that indicates the published Ibbotson historical data significantly overstate investors' expectations with regard to the market risk premium. Also, Ibbotson Associates, while stating a preference for the arithmetic market risk premium, also publish the geometric market risk premium and investors have equal access to those data. Therefore, it is reasonable to believe, under the assumption of informationally-efficient markets, that such data is impounded in stock prices.

[16] Ibbotson, R, Chen, P., "Long-Run Stock Returns: Participating in the Real Economy," *Financial Analysts Journal*, January/February 2003, pp. 88-89.

Also the "decision tree" rationale often used to support sole reliance on arithmetic means assumes that year-to-year returns are strictly independent results—each having no effect on the other. However, there is research that indicates such is not the case and that period-to-period returns are inter-dependent to some degree.[17] Therefore, the typical "decision tree" logic often used to support strict allegiance to an arithmetic market risk premium does not strictly apply.

In addition, there are data anomalies associated with arithmetic risk premiums. In order to calculate arithmetic risk premiums based on a market index like the S&P 500 or the NYSE, it is commonly assumed that those indexes are bought and sold each year without transaction costs or tax consequences. That is unrealistic. Also, the arithmetic market risk premium is period-specific. That is, the longer the assumed holding period the lower the arithmetic risk premium.

It is commonly assumed that the holding periods (the amount of time between buying and selling the market portfolio) is one year, however, there is no magic to that particular time-span, it is simply a common assumption in the calculation. If, for example, we assume that the holding period is two years instead of one, the arithmetic market risk premium declines. If that holding period increases to three years, the market risk premium based on the Ibbotson data declines again.[18]

In sum, the Ibbotson arithmetic mean is at the upper end of the current range of market risk premium estimates according to recent research, and even that measure declines as the holding period increases. Therefore consideration of a lower bound for the determination of a

[17] E. Fama and K. French, "Dividend Yields and Expected Stock Returns," *Journal of Financial Economics* (October 1988), pp. 3-26.

[18] Copeland, Koller, and Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed., McKinsey & Co., New York, 2006, pp. 218-221.

CAPM cost of equity (Ibbotson's geometric mean) is reasonable for the purposes of determining the cost of common equity capital for AmerenUE.

Q. WHAT VALUES HAVE YOU CHOSEN FOR THE BETA COEFFICIENTS IN THE CAPM ANALYSIS?

A. Value Line reports beta coefficients for all the stocks it follows. Value Line's beta is derived from a regression analysis between weekly percentage changes in the market price of a stock and weekly percentage changes in the New York Stock Exchange Composite Index over a period of five years. The average beta coefficient of the sample of electric companies is 0.89.

Value Line's betas for electric companies have increased to uncharacteristically high levels over the past year or so, with some electric utility betas exceeding that of the market in general. As I noted previously, Value Line's betas are based on market price movements and because utility stock price movements are normally less volatile than those of the market, electric utility betas have, for many years, been in the 0.60 to 0.80 range. Over the past year or so, with the uncertainty in the global political economy, the changes in the prices of utility stocks have been more dramatic than that of the market in general, and that unusual price volatility has raised Value Line's published betas. That volatility difference is shown in Chart A below, in addition to the fact that, over the past couple of years, utility stock prices have advanced at a greater relative rate than that of the market. That is not a normal circumstance that investors would expect to continue into the future.

Chart II.

Relative Volatility of Dow Jones Industrials and Utilities

Data from http://finance.yahoo.com, historical prices, (^DJI, ^DJU).

As a result, the Value Line betas, based on that historical price information would tend to overstate investors' long-term expectations regarding relative risk.

Q. IF THE IBBOTSON MARKET RISK PREMIUM DATA OVERSTATE THE EXPECTED MARKET RISK PREMIUM, AND RECENT VALUE LINE BETAS ALSO TEND TO EXAGGERATE THE CAPM RESULT, WHY DO YOU USE THOSE DATA IN YOUR CAPM ESTIMATE OF THE COST OF COMMON EQUITY CAPITAL?

A. I continue to utilize the historical Ibbotson data as well as Value Line betas in my CAPM analysis in order to be consistent with the manner in which I have traditionally used those data. I have been testifying on the subject of the cost of equity capital for more than twenty years and have consistently used the Ibbotson historical market risk premium data

and Value Line betas in my CAPM analyses, and choose not to deviate from that practice at this time.

However, it is my judgment that the electric utility betas published by Value Line overstate the relative risk of those companies and I expect that the Value Line betas will ultimately be self-correcting and decline as utility market price movements return to long-term averages relative to the stock market. Also, the new research on the market risk premium (including a paper from Ibbotson, himself) indicates that the market risk premium expected by investors is considerably lower than the risk premium contained in the Ibbotson historical data. While that information does not cause me to change my long-standing CAPM methodology of relying on the Ibbotson historical risk premium data, the current research on the topic of the market risk premium is important, deserves consideration and causes me to put considerably less weight on the higher end of my CAPM estimates.

Q. WHAT IS YOUR RECOMMENDED COST OF EQUITY CAPITAL FOR THE SAMPLE OF GAS DISTRIBUTORS AND ELECTRIC COMPANIES USING THE CAPITAL ASSET PRICING MODEL ANALYSIS?

A. Schedule 8, page 1, shows that the average Value Line beta coefficient for the group of electric companies under study is 0.89. The overall arithmetic average market risk premium of 6.5% would, upon the adoption of a 0.89 beta, become a sample group premium of 5.78% (0.89 x 6.5%). That non-specific risk premium added to the risk-free T-Bond rate of 4.83%, previously derived, yields a common equity cost rate estimate of 10.62%. Using the geometric market risk premium of 4.90% with the current T-Bond yield produces a CAPM estimate of 9.19%. Given the recent research on the market risk premium it is reasonable to believe that the CAPM result based on Ibbotson's historical geometric mean market risk

premium provides a more accurate estimate of investors' return requirements and the cost of equity capital.

METHODS OF EQUITY COST EVALUATION - MODIFIED EARNINGS-PRICE RATIO ANALYSIS

Q. PLEASE DESCRIBE THE MODIFIED EARNINGS-PRICE RATIO (MEPR) ANALYSIS OF THE COST OF COMMON EQUITY CAPITAL.

A. The earnings-price ratio is calculated simply as the expected earnings per share divided by the current market price. In cost of capital analysis, the earnings-price ratio (which is one portion of this analysis) can be useful in a corroborative sense, since it can be a good indicator of the proper range of equity costs when the market price of a stock is near its book value. When the market price of a stock is *above* its book value, the earnings-price ratio *understates* the cost of equity capital. Schedule 9 contains mathematical proof for this concept. The opposite is also true, i.e.; the earnings-price ratio *overstates* the cost of equity capital when the market price of a stock is *below* book value.

Under current market conditions, the utilities under study have an average market-to-book ratios ranging from 1.82 (electrics) to 1.90 (gas distributors) and, therefore, the average earnings-price ratio alone will understate the cost of equity for the sample groups. However, I do not use the earnings-price ratio alone as an indicator of equity capital cost rates. Because of the relationship among the earnings-price ratio, the market-to-book ratio and the investor-expected return on equity described mathematically in Schedule 9, I have modified the earnings-price ratio analysis by including expected returns on equity for the companies under study. It is that modified analysis that I will use to assist in estimating an appropriate range of equity capital costs in this proceeding.

Q. PLEASE EXPLAIN THE RELATIONSHIP AMONG THE EARNINGS-PRICE RATIO, THE EXPECTED RETURN ON EQUITY, AND THE MARKET-TO-BOOK RATIO.

A. When the expected return (ROE) approximates the cost of equity, the market price of the utility approximates its book value and the earnings-price ratio provides an accurate estimate of the cost of equity. As the investor-expected return on equity for a utility (ROE) begins to exceed the investor-required return (the cost of equity capital), the market price of the firm will tend to exceed its book value. As shown in Schedule 9, when the market price exceeds book value, the earnings-price ratio understates the cost of equity capital.

If the cost of equity capital doesn't change and expected returns (ROE) move higher, the market price continues to move higher than book value and the earnings-price ratio continues to decline below the cost of capital. In other words, the earnings-price ratio and the expected ROE tend to "orbit" around the cost of equity capital. When market prices are near book value, both parameters approximate the cost of equity. If the market-to-book ratio increases due to differences between the cost of capital and expected returns, the expected ROE moves higher than the cost of capital and the earnings-price ratio moves lower than the cost of equity capital. The reverse happens when market-to-book ratios decline below 1.0. In that instance, expected ROEs are lower than the cost of equity capital and earnings-price ratios are higher. The key to this analysis is that the "locus" of the expected ROE and the earnings-price ratio is the cost of common equity capital.

These relationships represent general tendencies but are useful in corroborating other cost of capital methodologies. The Federal Energy Regulatory Commission, in its generic rate of return hearings, found this technique useful and indicated that under the circumstances of market-to-book ratios exceeding unity, the cost of equity is bounded above by the expected

equity return and below by the earnings-price ratio (e.g., 50 Fed Reg, 1985, p. 21822; 51 Fed Reg, 1986, pp. 361, 362; 37 FERC ¶ 61,287). The mid-point of these two parameters, therefore, produces an estimate of the cost of equity capital which, when market-to-book ratios are different from unity, provides a corroborative estimate of the cost of common equity.

Q. WHAT ARE THE RESULTS OF YOUR EARNINGS-PRICE RATIO ANALYSIS OF THE COST OF EQUITY FOR THE SAMPLE GROUP?

A. Schedule 10, shows the Reuters projected 2007 per share earnings for each of the firms in the sample groups. Recent average market prices (the same market prices used in my DCF analysis), and Value Line's projected return on equity for 2007 and 2009-2011 for each of the companies are also shown.

The average earnings-price ratio for the electric sample group, 6.58%, is below the cost of equity for those companies due to the fact that their average market-to-book ratio is currently above unity (average electric utility M/B = 1.82). The sample electric companies' 2007 expected book equity return averages 10.63%. For the electric sample group, then, the mid-point of the earnings-price ratio and the current equity return is 8.60%.

Schedule 10, page 1, also shows that the average expected book equity return for the electric utilities over the next three- to five-year period declines slightly to 10.17%. The midpoint of the long-term projected return on book equity (10.17%) and the current earnings-price ratio (6.58%) is 8.37%. That longer-term analysis provides another forward-looking estimate of the equity capital cost rate of electric utility firms. The results of this MEPR analysis indicate that the DCF equity cost estimate previously derived may be overstated (i.e., too high).

Page 2, of Schedule 10, shows that the MEPR analysis for the gas distributors. Those utility companies have higher expected returns (11.17% and 11.33%), higher average market-to-book ratios (1.90) and a lower average earnings-price ratio (5.92%) than the electric companies shown on page 1, of Schedule 10, in accordance with the theory set out in Schedule 9. The MEPR equity cost estimate, however, is quite similar to that for the electrics, ranging from 8.54% to 8.62%.

METHODS OF EQUITY COST EVALUATION - MARKET-TO-BOOK RATIO ANALYSIS

Q. PLEASE DESCRIBE YOUR MARKET-TO-BOOK (MTB) ANALYSIS OF THE COST OF COMMON EQUITY CAPITAL FOR THE SAMPLE GROUPS.

A. This technique of analysis is a derivative of the DCF model that attempts to adjust the capital cost derived with regard to inequalities that might exist in the market-to-book ratio. This method is derived algebraically from the DCF model and, therefore, cannot be considered a strictly independent check of that method. However, the MTB analysis is useful in a corroborative sense. The MTB seeks to determine the cost of equity using market-determined parameters in a format different from that employed in the DCF analysis. In the DCF analysis, the available data is "smoothed" to identify investors' long-term sustainable expectations. The MTB analysis, while based on the DCF theory, relies instead on point-in-time data projected one year and five years into the future and, thus, offers a practical corroborative check on the traditional DCF. The MTB formula is derived as follows:

Solving for "P" from Equation (1), the standard DCF model, we have

$$P = D/(k-g). \qquad (3)$$

But the dividend (D) is equal to the earnings (E) times the earnings payout ratio, or one minus the retention ratio (b), or

$$D = E(1-b). \qquad (4)$$

Substituting Equation (4) into Equation (3), we have

$$P = \frac{E(1-b)}{k-g} . \qquad (5)$$

The earnings (E) are equal to the return on equity (r) times the book value of that equity (B). Making that substitution into Equation (5), we have

$$P = \frac{rB(1-b)}{k-g} . \qquad (6)$$

Dividing both sides of Equation (6) by the book value (B) and noting from Equation (iii) in Appendix B that g = br+sv,

$$\frac{P}{B} = \frac{r(1-b)}{k-br-sv} . \qquad (7)$$

Finally, solving Equation (7) for the cost of equity capital (k) yields the MTB formula:

$$k = \frac{r(1-b)}{P/B} + br + sv. \qquad (8)$$

Equation (8) indicates that the cost of equity capital equals the expected return on equity multiplied by the payout ratio, divided by the market-to-book ratio plus growth. Schedule 11, shows the results of applying Equation (8) to the defined parameters for the electric utility firms in the comparable sample. For the electric utility sample group, page 1,

of Schedule 11, utilizes current year (2006) data for the MTB analysis while page 2, utilizes Value Line's 2009-2011 projections.

The MTB cost of equity for the sample of electric utility firms, recognizing a current average market-to-book ratio of 1.82 is 9.22% using the current year data and 9.07% using projected three- to five-year data. Those point-in-time estimates are slightly below, but tend to confirm my DCF equity cost estimate. For the gas distributors, pages 3 and 4, of Schedule 11, shows MTB equity cost estimates of 8.87% and 9.14%.

METHODS OF EQUITY COST EVALUATION - SUMMARY

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR EQUITY CAPITAL COST ANALYSES FOR THE SAMPLE GROUP OF SIMILAR-RISK ELECTRIC AND GAS DISTRIBUTION UTILITY COMPANIES.

A. My analysis of the cost of common equity capital for the sample group of electric and gas distribution utility companies is summarized in the table below.

METHOD	Electric Utility Companies	Gas Distribution Companies
DCF	9.26%	9.22%
CAPM	9.19%/10.62%	9.00%/10.36%
MEPR	8.37%/8.60%	8.54%/8.62%
MTB	9.07%/9.22%	8.87%/9.14%

For both of the utility sample groups, the DCF results are approximately 9.25%. In addition, the corroborating cost of equity indications (MEPR, MTB and CAPM) indicate that the DCF result is reasonable. Averaging the lowest and highest results of all the corroborative analyses for the electric companies produces an equity cost range of 8.88% to

9.48%, with a mid-point of 9.18%, 8 basis points below the DCF result. For the gas utilities, the average of the lowest and highest corroborative equity cost estimates range from 8.80% to 9.37%, the mid-point of which is 9.09%, about 13 basis points below the DCF result.

Therefore, weighing all the evidence presented herein, my best estimate of the cost of equity capital for a company like AmerenUE, facing similar risks as this group of electric and gas distribution utilities, ranges from 9.00% to 9.75%, with a mid-point of 9.375%.

Q. ARE THERE OTHER FACTORS TO BE CONSIDERED BEFORE DETERMINING A POINT-ESTIMATE FOR AMEREN-UE WITHIN A REASONABLE RANGE FOR SIMILAR-RISK FIRMS?

A. Yes. First, the electric sample group companies have similar operating risk to AmerenUE. The average S&P business risk score of my sample of electric utilities is 6—slightly higher than for AmerenUE (5). Therefore, on that basis alone, there would be no reason to adjust the equity return from the mid-point of a reasonable range. However, because the capital structure I recommend for ratesetting purposes contains considerably more common equity and less debt than average for the sample group, AmerenUE, prospectively will have less financial risk than the sample group and should be awarded an equity return below the mid-point of a reasonable range. In this instance, I believe an equity return of 9.25%, modestly below the mid-point of a reasonable range of equity cost for similar-risk firms, would be reasonable for ratemaking purposes.

Q. DOES YOUR 9.25% EQUITY COST ESTIMATE INCLUDE AN INCREMENT FOR FLOTATION COSTS?

A. No, it does not.

Q. CAN YOU PLEASE EXPLAIN WHY AN EXPLICIT ADJUSTMENT TO THE COST OF EQUITY CAPITAL FOR FLOTATION COSTS IS UNNECESSARY?

A. An explicit adjustment to "account for" flotation costs is unnecessary for several reasons. First, it is often said that flotation costs associated with common stock issues are exactly like flotation costs associated with bonds. That is not a correct statement because bonds have a fixed cost and common stock does not. Moreover, even if it were true, the current relationship between the electric utility sample group's stock price and its book value would indicate a flotation cost reduction to the market-based cost of equity, not an increase.

When a bond is issued at a price that exceeds its face (book) value, and that difference between market price and the book value is greater than the flotation costs incurred during the issuance, the embedded cost of that debt (the cost to the company) is *lower* than the coupon rate of that debt.

In the current economic environment for the electric utility common stocks studied to determine the cost of equity in this proceeding, those stocks are selling at a market price 69% above book value. (Exhibit__(SGH-1), Schedule 4, p. 1) The difference between the market price of electric utility stocks and book value dwarfs any issuance expense the companies might incur. If common equity flotation costs were exactly like flotation costs with bonds and if an explicit adjustment to the cost of common equity were, therefore necessary, then the adjustment should be downward, not upward.

Second, flotation cost adjustments are usually predicated on the prevention of the dilution of stockholder investment. However, the reduction of the book value of stockholder investment due to issuance expenses can occur only when the utility's stock is selling at a market price at or below its book value. As noted, the companies under review are selling at a substantial premium to book value. Therefore, every time a new share of that stock is sold, existing shareholders realize an *increase* in the per share book value of their investment. No dilution occurs, even without any explicit flotation cost allowance.

Third, the vast majority of the issuance expenses incurred in any public stock offering are "underwriter's fees" or "discounts". Underwriter's discounts are not out-of-pocket expenses for the issuing company. On a per share basis, they represent only the difference between the price the underwriter receives from the public and the price the utility receives from the underwriter for its stock. As a result, underwriter's fees are not an expense incurred by the issuing utility and recovery of such "costs" should not be included in rates.

In addition, the amount of the underwriter's fees are prominently displayed on the front page of every stock offering prospectus and, as a result, the investors who participate in those offerings (e.g., brokerage firms) are quite aware that a portion of the price they pay does not go to the company but goes, instead, to the underwriters. By electing to buy the stock with that understanding, those investors have effectively accounted for those issuance costs in their risk-return framework by paying the offering price. Therefore, they do not need any additional adjustments to the allowed return of the regulated firm to "account" for those costs.

Fourth, my DCF growth rate analysis includes an upward adjustment to equity capital costs which accounts for investor expectations regarding stock sales at market prices in excess of book value, and any further explicit adjustment for issuance expenses related to increases in stock outstanding is unnecessary.

Fifth, research has shown that a specific adjustment for issuance expenses is unnecessary[19]. There are other transaction costs which, when properly considered, eliminate the need for an explicit issuance expense adjustment to equity capital costs. The transaction cost that is improperly ignored by the advocates of issuance expense adjustments is brokerage fees. Issuance expenses occur with an initial issue of stock in a primary market offering.

[19] "A Note on Transaction Costs and the Cost of Common Equity for a Public Utility," Habr, D., National Regulatory Research Institute Quarterly Bulletin, January 1988, pp. 95-103

Brokerage fees occur in the much larger secondary market where pre-existing shares are traded daily. Brokerage fees tend to increase the price of the stock to the investor to levels above that reported in the Wall Street Journal, i.e., the market price analysts use in a DCF analysis. Therefore, if brokerage fees were included in a DCF cost of capital estimate they would raise the effective market price, lower the dividend yield and lower the investors' required return. If one considers transaction costs that, supposedly, raise the required return (issuance expenses), then a symmetrical treatment would require that costs that lower the required return (brokerage fees) should also be considered. As shown by the research noted above, those transaction costs essentially offset each other and no specific equity capital cost adjustment is warranted.

Q. WHAT IS THE OVERALL COST OF CAPITAL FOR AMEREN-UE's INTEGRATED UTILITY OPERATIONS, BASED ON AN ALLOWED EQUITY RETURN OF 9.25%?

A. Page 1, of Schedule 12, attached to my testimony shows that an equity return of 9.25%, operating through an appropriate ratemaking capital structure of 52.39% common equity, 2.04% preferred stock, 45.47% long-term debt and 0.10% short-term debt, and the Company's embedded capital cost rates, produces an overall return of 7.403% for AmerenUE. Schedule 12, page 1, also shows that a 7.403% overall cost of capital affords the Company an opportunity to achieve a pre-tax interest coverage level of 4.36 times.

While Standard and Poor's now relies more on cash flow bond rating benchmarks than on pre-tax interest coverages, for a utility with a business position of 5 like Ameren UE, S&P indicates that pre-tax interest coverages between 3.5x and 4.3x are sufficient to achieve an "A" bond rating. By that measure, the return I recommend would tend to improve the Company's current financial position and its current "BBB" bond rating. Therefore, the

equity return I recommend fulfills the legal requirement of Hope and Bluefield of providing the Company the opportunity to earn a return which is commensurate with the risk of the operation and serves to support and maintain the Company's ability to attract capital.

Q. YOU NOTE THAT STANDARD AND POOR'S NOW FOCUSES MORE ON CASH FLOW METRICS. HAVE YOU ALSO EXAMINED WHAT CASH FLOW COVERAGES YOUR OVERALL RETURN RECOMMENDATION WOULD ENGENDER?

A. Yes. Page 2, of Schedule 12, shows that, based on my recommended 9.25% return on equity, an overall return of 7.403% and Staff's rate base and depreciation recommendations, Ameren UE would achieve current bond rating benchmarks that put the Company at an "A-" or "BBB+" bond rating.

The Funds From Operations (FFO) to interest ratio (FFO/interest) produced by my recommendation for Ameren UE is 5.0x. For a utility with a business ranking of 5, S&P's benchmarks indicate that an FFO/interest coverage ranging from 3.8x to 4.5x could attain an "A" bond rating. Given that the Company's current bond rating is "BBB," by this measure, the return I recommend provides an opportunity for the Company to improve its financial position.

As shown on page 2, of Schedule 12, in calculating the FFO for AmerenUE, I have multiplied my recommended weighted equity return (4.864%) by the Staff's recommended rate base for the Company's gas and electric utility operations. Added to that are Staff's ratemaking estimates for the Company's depreciation and amortization, and the deferred tax expenses that existed in the test year. Interest expense is calculated by multiplying the weighted debt cost of all of the Company's long- and short-term debt (not the lower

ratemaking amounts) by Staff's recommended rate base.[20] Adding that amount to FFO and dividing the total by the interest expense provides the FFO/interest coverage benchmark of 5.0x for AmerenUE.

Another benchmark that S&P uses is debt-to-capital. Page 2, of Schedule 12, also indicates that the debt-to-total capital ratio for AmerenUE is 49.14%. That debt-to-capital ratio includes all of the Company's debt outstanding, on average, over the past five quarters (including lease debt and short-term debt). S&P indicates that for an "A" rating a company with a business position of "5" should have a total debt to capital ratio ranging from 42% to 50%; and for a "BBB" bond rating that ratio can range from 50% to 60%. With this metric, AmerenUE's 49% debt-to-capital ratio is on the borderline between "A" and "BBB."

Finally, S&P also indicates that, for a utility with a business risk profile of 5, a FFO/total debt ratio of 15% to 22% is appropriate for a "BBB" bond rating and a FFO/total debt ratio of 22% to 30% is the benchmark for an "A" rating. My recommendation in this proceeding affords the Company an opportunity to achieve an FFO/total debt ratio of 21%, again on the borderline between "A" and "BBB."

In summary, the Company's current bond rating is "BBB" by Standard & Poor's and my return recommendation will enable the Company to maintain or improve its bond rating, according to the benchmark analysis based on the portion of the Company's operations under review in this proceeding. Therefore, the overall cost of capital recommendation in this proceeding affords the Company an opportunity to maintain its financial position and, on that basis, fulfills the requirements of Hope and Bluefield.

Q. YOU'VE PROVIDED AN ANALYSIS OF FINANCIAL BOND RATING

[20] The interest expense calculated in this manner is $140 Million, and could be considered a conservative (high) estimate because AmerenUE's annual interest expense over the past three years have averaged about $110 Million. (Ameren S.E.C. Form 10-K, p. 78)

BENCHMARKS. CAN THE DETERMINATION OF A BOND RATING BE REDUCED TO SIMPLE NUMERICAL RATIOS?

A. No. The bond rating process is quite complex and depends on a number of factors, not only a few financial ratios. Bond rating agencies first analyze qualitative factors that enable them to assess the business risk of the firm. Those factors include the nature of the company's service territory (economic profile), customer mix, regulation, operational history, regulated/unregulated mix, and management quality. That analysis allows the bond rating agency to be able to asses the reliability of the cash flows the company will generate, a prime determinant in its business risk.

Following its assessment of business risk the bond rating agency reviews financial benchmarks. However, these are guidelines, not absolutes. For example, as I noted above, for a utility of average risk, S&P indicates a FFO/interest coverage ratio ranging from 3.8x to 4.5x would be sufficient to achieve an "A" bond rating. However, Moody's, which, until recently, has not even published any sort of numerical bond rating guidelines, indicates that an FFO/interest coverage ratio of 3.0x to 6.0x is appropriate for an "A" bond rating. Regarding the usefulness of quantitative bond rating benchmarks, Moody's notes:

However, the importance of ratio analysis can be overstated. No two companies look exactly alike from a qualitative assessment standpoint and each company we rate is constantly changing. It is impossible to assign an accurate credit rating on the basis of financial ratio analysis alone, even less so on the basis of any one ratio. Therefore, Moody's does not have any specific "hurdle rate" to explain which ratio will make the difference between any two rating categories. (Moody's Investors Service, Global Credit Research, "Rating Methodology: Global Regulated Electric Utilities," March 2005, p. 8)

Q. THE COMPANY'S BOND RATINGS WERE RECENTLY REDUCED BY ONE OF THE THREE RATING AGENCIES. WITH STRONG FINANCIAL METRICS THAT ACTUALLY SUPPORT HIGHER RATINGS, WHY WERE AMEREN-UE's RATINGS REDUCED?

A. In response to Staff Data Request No. 153, the Company supplied the most recent bond rating reports on AmerenUE from Standard & Poor's, Moody's and Fitch. First, it is important to note that there is some disparity in the ratings. Moody's rates AmerenUE's senior debt at "A2" and its corporate credit, or overall, rating at "A3." The rating outlook is "stable." Standard & Poor's finds no difference between AmerenUE's senior secured bond rating and its corporate credit rating and has recently lowered the Company's corporate credit rating to "BBB" from "BBB+".

Second, while Moody's and Standard & Poor's evaluate AmerenUE's credit differently, those bond rating agencies agree that one risk facing the Company relates to regulatory/political difficulties in Illinois, in combination with the fact that the parent company, Ameren, has unrestricted access to cash flows generated by AmerenUE. As Moody's noted at mid-year:

Ameren's Illinois utility subsidiaries are attempting to implement plans for power procurement and are expecting material rate increases beginning in 2007. The Governor, Attorney General and some legislators have strongly opposed these increases and legislation has been introduced to extend the existing rate freeze in the state through 2010, which would have sever negative impact [on] the financial condition of these utilities. Legislation has also been proposed to phase in these higher rates and to issue securitized bonds to recover the deferred amounts, which Ameren supports, although what plan is ultimately implemented will not be known until the next legislative session in November.

Parent company Ameren may ultimately need to rely more on Union Electric and its unregulated operations for a larger share of cash flow and upstreamed dividends if cash flow is reduced at its Illinois utilities. (Moody's Investor Service, Credit Opinion: Union Electric Company, July 27, 2006, p. 3, Company response to Staff DR No. 153)

More recently, Standard and Poor's rationalized its bond rating reductions as follows:

> In Standard & Poor's opinion, the active engagement of high level politically influential individuals in the debate increases the likelihood of [rate freeze] legislation, which, absent relief, would inevitably lead to the Illinois utilities' insolvency. In the extreme, bankruptcy filings could occur sooner rather than later. The ratings on the Illinois utilities have been lowered to "BBB-" and remain on CreditWatch with negative implications to reflect the fact that depending on developments, credit quality would deteriorate rapidly. (S&P, Ratings Direct, Research Update: Ameren and Units Downgraded Due to Potential Rate Freeze Extension in Illinois, Still on Watch, October 5, 2006, Company response to Staff DR No. 153)

Therefore, it appears that the most recent bond rating action at AmerenUE is related to the potential for financial deterioration in Illinois, combined with the fact that the parent company may have to rely more heavily on cash flows from AmerenUE for financial support.

Q. IS IT UNUSUAL THAT THE BOND RATINGS OF A UTILITY SUBSIDIARY ARE LINKED TO THE FINANCIAL WELL-BEING OF ITS PARENT HOLDING COMPANY?

A. No. In a publication discussing ways to make a utility subsidiary more bankruptcy-remote, Standard & Poor's noted in 1999:

> Standard and Poor's takes the general position that the rating of an otherwise financial healthy, wholly owned subsidiary is constrained by the rating of its weaker parent. The basis for this position is that a weak parent has both the ability and the incentive to siphon assets out of its financially healthy subsidiary and to burden it with liabilities during times of financial stress. The weak parent might also have an economic incentive to filing the subsidiary into bankruptcy—if the parent itself were forced into bankruptcy—regardless of the subsidiary's "stand-alone" strength. Experience suggests that insolvent corporations will often jointly file with their subsidiaries—even those

> subsidiaries not themselves experiencing financial difficulty. (Standard & Poor's Ratings Direct, Ring-Fencing a Subsidiary, October 19, 1999, p. 1)

That position has remained consistent, as evidenced in an article published by S&P this year:

> Often, an integrated utility is a part of a larger holding company structure that also owns other businesses, frequently unregulated electricity generation. This fact does not alter how we analyze the utility, but it may affect the ultimate rating outcome due to any credit drag that the unregulated activities may have on the utility. Such considerations include the freedom and practice of management with respect to shifting cash resources among subsidiaries and the presence of ring-fencing mechanisms that may protect the utility. (Standard & Poor's Ratings Direct, "Assessing U.S. Vertically Integrated Utilities' Business Risk Drivers," October 3, 2006. p. 1)

In the case of Ameren, the current risks posed to AmerenUE currently derive primarily from the potential financial deterioration of it sister electric companies, not Amerens' unregulated generation operations. Nevertheless, the bond rating agencies concern with regard to AmerenUE's financial risks are related to the ability of its parent to "siphon assets out of its financially healthy subsidiary."

Q. ARE THERE STEPS THAT CAN BE TAKEN TO INSULATE A REGULATED SUBSIDIARY FROM THE FINANCIAL RISK IMPOSED BY A WEAKER PARENT COMPANY?

A. Yes. The methods used to protect the financial status of subsidiaries in the event of financial distress at the parent are, in today's terminology, called ring-fencing. It is important to understand that even though ring-fencing has proven to be effective in protecting regulated subsidiaries from financial problems at the parent company level, there is no guarantee of financial separation:

> In Fitch's view, ring-fencing techniques rarely provide total insulation of a U.S. utility from problems relating to an insolvent parent. Furthermore, even if affiliates are segregated in numerous ways, the

> presence of a single important unifier, such as a large intercompany loan or an intercompany supply contract critical to continuing operations, may nullify all other ring-fencing efforts. (Fitch Ratings, Corporate Finance, Rating Linkage Within U.S. Utility Groups: Ring-Fencing Mechanisms, Utilities, Holding Companies and Affiliates, April 8, 2003, p. 1)

Q. WHAT ARE THE INTER-COMPANY ARRANGEMENTS THAT CONSTITUTE RING-FENCING?

A. The inter-company structures that work to separate the financial risks of affiliated firms include legal separation through the creation of a separate subsidiary with its own financial records, restriction of the ability of the parent to use the subsidiary's assets to collateralize any loans to other affiliates, restrictions on cash transfers from the subsidiary to the parent, and the creation of a "limited purpose entity" between the parent and subsidiary with an independent director to prevent the parent from forcing the subsidiary into bankruptcy without the consent of the independent director. Standard & Poor's makes clear that it considers the creation of a special purpose entity central in the separation of financial risk between holding company and subsidiary:

As noted above, parent/subsidiary linkage is prompted, in part, by two concerns:

- That a healthy subsidiary's assets may be consolidated with those of its insolvent parent: and
- That the parent will have the ability to cause the subsidiary to file itself into bankruptcy, despite the fact that the subsidiary is not itself experiencing financial difficulty. Ensuring that the subsidiary is a limited-purpose operating entity, somewhat similar to the "special purpose entity" (SPE) found in a securitization, may mitigate this bankruptcy risk.

While the SPE is, strictly speaking, a creature of securitization, its operating asset analogues are found in the limited-purpose operating entities employed in industrial-based or

project-financed transactions. In the context of a 'ring-fenced' transaction, Standard & Poor's expects that such limited-purpose entity will:

- Be 'single-purpose';
- Incur no additional debt (beyond that sized into the rating and necessary for routine business purposes. Such as trade debt and ordinary working-capital facilities to prestated levels);
- Not merge or consolidate with a lower-rated entity;
- Not dissolve; and
- Have an 'independent director.'

In the context of a 'ring-fenced' transactions, the operative feature is the independent director. (Standard & Poor's Ratings Direct, Ring-Fencing a Subsidiary, October 19, 1999, pp. 1, 2)

Ring-fencing does not have to be set up within the corporate structure. Financial protection of the regulated subsidiary can be assisted by regulatory oversight, as Moody's notes:

The degree of notching (i.e., the rating differential) between entities in a single family of companies depends upon the degree of insulation that exists between regulated and unregulated entities. If the regulatory framework or regulatory practice established that there is substantial risk-fencing type insulation for the regulated entity, there may be three or more notches of rating differential between the regulated and the unregulated entities. If there is little or no ring-fencing, there will usually be only a one- or two-notch differential between the unregulated entity (in most cases a holding company) and the regulated entity (in most cases an operating company).

Regulatory ring-fencing for utilities may include minimum equity requirements, limitations on the movement of funds from regulated entities to unregulated entities, and prohibitions against credit support by regulated entities for unregulated entities. This may exist by statute, but most typically takes the form of rules that are established by the regulator. (Moody's Investors Service, Global Credit Research, "Rating Methodology: Global Regulated Electric Utilities." March 2005, p. 12)

Q. DOES AMEREN-UE HAVE RING-FENCING MEASURES IN PLACE?

A. Clearly, the bond rating agencies do not believe that AmerenUE is protected from financial distress at the parent company by either inter-corporate or by regulatory ring-fencing. Both Moody's and Standard & Poor's have referenced financial difficulties at Ameren possibly putting financial stress on AmerenUE. Also, S&P awards AmerenUE the exact same corporate credit rating as its parent, Ameren; and Moody's has AmerenUE only one notch higher than its parent (A3 v. Baa1, respectively). AmerenUE's bond rating risks are, effectively, those of its parent.

Q. HOW IS THE INFORMATION REGARDING THE LINKAGE OF AMEREN-UE's BOND RATING WITH THAT OF ITS PARENT OF INTEREST IN THIS RATE PROCEEDING?

A. It has been my experience that when bond ratings are reduced (for whatever reason), utility representatives rely on such events as prime facie evidence of the need for higher rates. That may or may not be the case in this proceeding. Nevertheless, I believe it is important for the Commission to understand the context of the recent bond rating downgrade by one of the rating agencies, i.e., that it relates to the potential financial weakness of non-jurisdictional operating companies—other regulated subsidiaries owned by Ameren, not the Missouri operations of AmerenUE.

Moreover, the financial risk imparted by potential rate freezes in other jurisdictions, which is now passed on to AmerenUE through parent company control of inter-corporate cash flows, can be substantially reduced. There are both regulatory and corporate structure mechanisms that can be implemented that would tend to boost AmerenUE's bond ratings by protecting the Company from financial distress at the parent level. While I am not making specific recommendations in that regard in this proceeding, it is important for the Commission to understand that there are solutions to AmerenUE's recent bond rating reduction other than increased rates.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY, MR. HILL?

A. Yes, it does.

APPENDIX A

EDUCATION AND EMPLOYMENT HISTORY
OF
STEPHEN G. HILL

EDUCATION

Auburn University - Auburn, Alabama - Bachelor of Science in Chemical Engineering (1971); Honors - member Tau Beta Pi national engineering honorary society, Dean's list, candidate for outstanding engineering graduate; Organizations - Engineering Council, American Institute of Chemical Engineers

Tulane University - New Orleans, Louisiana - Masters in Business Administration (1973); concentration: Finance; awarded scholarship; Organizations - member MBA curriculum committee, Vice-President of student body, academic affairs

Continuing Education - NARUC Regulatory Studies Program at Michigan State University

EMPLOYMENT

West Virginia Air Pollution Control Commission (1975)
Position: Engineer ; Responsibility: Overseeing the compliance of all chemical companies in the State with the pollution guidelines set forth in the Clean Air Act.

West Virginia Public Service Commission-Consumer Advocate (1982)
Position: Rate of Return Analyst ; Responsibility: All rate of return research and testimony promulgated by the Consumer Advocate; also, testimony on engineering issues, when necessary.

Hill Associates (1989)
Position: Principal; Responsibility: Expert testimony regarding financial and economic issue in regulated industries.

PUBLICATIONS

"The Market Risk Premium and the Proper Interpretation of Historical Data," Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, Volume I, pp. 245-255.
"Use of the Discounted Cash Flow Has Not Been Invalidated," Public Utilities Fortnightly, March 31, 1988, pp. 35-38.

MEMBERSHIPS

American Institute of Chemical Engineers; Society of Utility and Regulatory Financial Analysts (Certified Rate of Return Analyst, Member of the Board of Directors)

APPENDIX B

Q. PLEASE PROVIDE AN EXAMPLE WHICH DESCRIBES THE DETERMINANTS OF LONG-TERM SUSTAINABLE GROWTH.

A. Assume that a hypothetical regulated firm had a first period common equity or book value per share of $10, the investor-expected return on that equity was 10% and the stated company policy was to pay out 60% of earnings in dividends. The first period earnings per share are expected to be $1.00 ($10/share book equity x 10% equity return) and the expected dividend is $0.60. The amount of earnings not paid out to shareholders ($0.40), the retained earnings, raises the book value of the equity to $10.40 in the second period. The table below continues the hypothetical for a five year period and illustrates the underlying determinants of growth.

TABLE A.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.25	$11.70	4.00%
EQUITY RETURN	10%	10%	10%	10%	10%	-
EARNINGS/SH.	$1.00	$1.040	$1.082	$1.125	$1.170	4.00%
PAYOUT RATIO	0.60	0.60	0.60	0.60	0.60	-
DIVIDENDS/SH.	$0.60	$0.624	$0.649	$0.675	$0.702	4.00%

We see that under steady-state conditions, the earnings, dividends and book value all grow at the same rate. Moreover, the key to this growth is the amount of earnings retained or reinvested in the firm and the return on that new portion of equity. If we let "b" equal the retention ratio of the firm (1 – the payout ratio) and let "r" equal the firm's expected return on equity, the DCF growth rate "g" (also referred to as the internal or sustainable growth rate) is equal to their product, or

$$g = br. \qquad \text{(i)}$$

Professor Myron Gordon, who developed the Discounted Cash Flow technique and first introduced it into the regulatory arena, has determined that Equation (i) embodies the

underlying fundamentals of growth and, therefore, is a primary measure of growth to be used in the DCF model. Professor Gordon's research also indicates that analysts' growth rate projections are useful in estimating investors' expected sustainable growth.

I should note here that the above hypothetical does not allow for the existence of external sources of equity financing, i.e., sales of common stock. Stock financing will cause investors to expect additional growth if the company is expected to issue new shares at a market price that exceeds book value. The excess of market over book would inure to current shareholders, increasing their per share equity value. Therefore, if the company is expected to continue to issue stock at a price that exceeds book value, the shareholders would continue to expect their book value to increase and would add that growth expectation to that stemming from earnings retention or internal growth. Conversely, if a company were expected to issue new equity at a price below book value, that would have a negative effect on shareholder's current growth rate expectations. In such a situation, shareholders would perceive an overall growth rate less than that produced by internal sources (retained earnings). Finally, with little or no expected equity financing or a market-to-book ratio near unity, investors would expect the sustainable growth rate for the company to equal that derived from Equation (i), "g = br." Dr. Gordon[1] identifies the growth rate which includes both expected internal and external financing as:

$$g = br + sv, \qquad \text{(ii)}$$

where,

g = DCF expected growth rate,
r = return on equity,
b = retention ratio,
v = fraction of new common stock sold that accrues to the current shareholder,
s = funds raised from the sale of stock as a fraction of existing equity.

[1]Gordon, M.J., The Cost of Capital to a Public Utility, MSU Public Utilities Studies, East Lansing, Michigan, 1974, pp., 30–33.

Additionally,

$$v = 1 - BV/MP, \qquad \text{(iii)}$$

where,

MP = market price,
BV = book value.

I have used Equation (iii) as the basis for my examination of the investor expected long-term growth rate (g) in this proceeding.

Q. IN YOUR PREVIOUS EXAMPLE, EARNINGS AND DIVIDENDS GREW AT THE SAME RATE (br) AS DID BOOK VALUE. WOULD THE GROWTH RATE IN EARNINGS OR DIVIDENDS, THEREFORE, BE SUITABLE FOR DETERMINING THE DCF GROWTH RATE ?

A. No, not necessarily. Rates of growth derived from earnings or dividends alone can be unreliable due to extraneous influences on those parameters such as changes in the expected rate of return on common equity or changes in the payout ratio. That is why it is necessary to examine the underlying determinants of growth through the use of a sustainable growth rate analysis.

If we take the hypothetical example previously stated and assume that, in year three, the expected return on equity rises to 15%, the resultant growth rate for earnings and dividends far exceeds that which the company could sustain indefinitely. The potential error in using those growth rates to estimate "g" is illustrated in the following table.

TABLE B.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.47	$12.157	5.00%
EQUITY RETURN	10%	10%	15%	15%	15%	10.67%
EARNINGS/SH.	$1.00	$1.040	$1.623	$1.720	$1.824	16.20%
PAYOUT RATIO	0.60	0.60	0.60	0.60	0.60	-
DIVIDENDS/SH.	$0.60	$0.624	$0.974	$1.032	$1.094	16.20%

What has happened is a shift in steady-state growth paths. For years one and two, the sustainable rate of growth (g=br) is 4.00%, just as in the previous hypothetical. Then, in the last three years, the sustainable growth rate increases to 6.00% (g=br = 0.4x15%). If the regulated firm were expected to continue to earn a 15% return on equity and retain 40% of its earnings, then a growth rate of 6.0% would be a reasonable estimate of the long-term sustainable growth rate. However, the compound annual growth rate for dividends and earnings exceeds 16% which is the result only of an increased equity return rather than the intrinsic ability of the firm to grow continuously at a 16% annual rate. Clearly, this type of estimate of future growth cannot be used with any reliability at all. In the case of the hypothetical, to utilize a 16% growth rate in a DCF model would be to expect the company's return on common equity to increase by 50% every five years into the indefinite future. This would be a ridiculous forecast for any regulated firm and underscores the importance of utilizing the underlying fundamentals of growth in the DCF model.

It can also be demonstrated that a change in our hypothetical regulated firm's payout ratio makes the past rate of growth in dividends an unreliable basis for predicting "g". If we assume our regulated firm consistently earns its expected equity return (10%) but in the third year, changes its payout ratio from 60% to 80% of earnings, the results are shown in the table below.

TABLE C.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.036	$11.26	3.01%
EQUITY RETURN	10%	10%	10%	10%	10%	-
EARNINGS/SH.	$1.00	$1.040	$1.082	$1.104	$1.126	3.01%
PAYOUT RATIO	0.60	0.60	0.80	0.80	0.80	7.46%
DIVIDENDS/SH.	$0.60	$0.624	$0.866	$0.833	$0.900	10.67%

What we see here is that, although the company has registered a high dividend growth rate (10.67%), it is, again, not at all representative of the growth that could be sustained indefinitely, as called for in the DCF model. In actuality, the sustainable growth rate has declined from 4.0% the first two years to only 2.0% ($g=br = 0.2x10\%$) during the last three years due to the increased payout ratio. To utilize a 10% growth rate in a DCF analysis of this hypothetical regulated firm would 1) assume the payout ratio of the firm would continue to increase 33% every five years into the indefinite future, 2) lead to the highly implausible result that the firm intends to consistently pay out more in dividends than it earns and 3) grossly overstate the cost of equity capital.

APPENDIX C
SAMPLE COMPANY GROWTH RATE ANALYSES

ELECTRIC UTILITIES

CV – Central Vermont Public Service - CV's sustainable growth rate has averaged 2.28% over the most recent five year period (2001-2005), excluding the most recent year in which the results are not meaningful. Value Line expects CV's sustainable growth to rise above that historical growth rate level and reach 3.25% by the 2009-2011 period. CV's book value growth rate is expected to be 1% over the next five years. Book value increased at a 2.5% rate of growth over the past five years. CV's earnings per share are projected to increase at a 9.5% (Value Line) rate (Reuters and Zack's do not publish growth rate expectations for this company). Value Line's projected earnings growth is affected by CV's very low earnings in 2005, which forms the basis of the earnings growth calculation and is abnormally low. Looking at a longer-term period, from 2003 to 2010 (the mid-point of Value Line's projected period) the average earnings growth rate for CV would be about 3%. Over the past five years, CV's earnings growth was only 1% and its dividends increased at only a 0.5% rate. Investors can reasonably expect long-term sustainable growth rate in the future to be higher than the past; a growth rate of **4.0%** is reasonable for CV.

Regarding share growth, CV's shares outstanding increased at a 1.41% rate over the past five years. The growth the number of shares is projected by Value Line to decline dramatically through the 2009-11 period due to a stock buy-back program initiated in 2006 and financed by the sale of one of the company's unregulated subsidiaries. However, between 2006 and the 2009-11 period shares outstanding are expected to increase. An expectation of share growth of **1%** for this company is reasonable.

FE – FirstEnergy Corp. - FE's sustainable growth rate averaged 3.15% over the five-year historical period, with negative results in 2003. Absent those recent results, the company's historical sustainable growth was about 4%. Value Line projects that the internal growth will increase through 2009-11, will bring sustainable growth to 5.9%. FE's book value, which increased at a 6% rate during the most recent five years, is expected to continue at that rate in the future. FE's earnings per share are projected to increase at 11.5% (Value Line) to 5.71% (Reuters), and 5.7% (Zack's) rates, indicating the variability of that growth rate measure. Value Line's projections are largely a function of it's three-year averaging technique, which includes FE's 2003 results in which it paid out more in dividends that it took in earnings, thereby depressing the base year average and causing the projected earnings to overstate long-term expectations. FE's dividends are expected to grow at a 5% rate, similar to other investor services' earnings growth expectations. Historically FE's earnings grew at a 0% rate, according to Value Line, (compound growth indicates 5.7% earnings growth), and its dividends showed 2.5% growth over the past five years. The projected sustainable growth, earnings and book value growth rate data indicate that investors can expect the growth from FE in the future to be higher than that which has existed in the past. Investors can reasonably expect a sustainable growth rate of **5.75%** for FE.

Regarding share growth, FE's shares outstanding showed a 2.6% increase over the past five years. However, FE's growth rate in shares outstanding is expected to fall to about a -1% rate of increase through 2009-11, and Value Line indicates a stock buy-back may be in the offing for this company. Those projections indicate that future share growth will be below past averages. An expectation of share growth of **0%** for this company is reasonable.

NU – Northeast Utilities – NU's sustainable growth rate has averaged 3.14% over the most recent five-year period, with a declining trend. Value Line expects NU's sustainable growth to be approximately 3% by the 2009-2011 period. NU's book value growth rate is expected to be 0.5% over the next five years, down from the 3% rate of growth experienced over the past five years, and below sustainable growth projections. Also, NU's earnings per share are projected to increase at 6.5% according to Value Line, 7.8% (Reuters), and 8.7% (Zack's). Historically, NU's earnings showed no growth, according to Value Line. On a five-year compound return basis, NU's earnings had negative growth. Value Line also projects a 6.5% growth in dividends, following the restoration of this company's dividend in 1999. The average projected dividend, earnings and book value growth for NU is 4.5%. Largely due to Value Line's dividend growth projection, investors can reasonably expect a sustainable growth rate in the future of **6.0%** for NU.

Regarding share growth, NU's shares outstanding grew at approximately a 0.3% rate over the past five years. The number of shares is expected to grow at a 3.75% rate through 2009-11. An expectation of share growth of **1.5%** for this company is reasonable.

PGN- Progress Energy- PGN's sustainable growth rate has averaged 3.28% over the most recent five-year period. Value Line expects PGN's sustainable growth to decline to a growth rate level of 1.1% by the 2009-2011 period. PGN's book value growth rate is also expected to decline to 1.5% over the next five years, well below the 6.5% rate of growth experienced over the past five years, pointing to lower growth. Also, PGN's earnings per share are projected to increase at -1.5% (Value Line) to 3.83% (Reuters), to 3.6% (Zack's) rate—bracketing the indicated projected internal growth rate. Also, PGN's dividends are expected to grow at a 1.5%, above earnings growth rate expectations and below historical dividend growth of 3%. Over the past five years PGN earnings grew at a 4.5% rate, according to Value Line's three-year base calculation methodology. Investors can reasonably expect a sustainable growth rate in the future of **3.0%** for PGN.

Regarding share growth, PGN's shares outstanding increased at approximately a 3.6% rate over the past five years. The number of shares outstanding in 2009-2011 is expected to show about a 0.7% increase from 2004 levels. That increase will leave the total number of shares at a lower level than existed in 2000. An expectation of share growth of **1.5%** for this company is reasonable.

LNT – Alliant Energy - LNT's sustainable growth rate has averaged 2.13% over the most recent five year period, with an increasing trend and sub-par results in 2002. VL expects LNT's sustainable growth to be 3.75% by the 2009-2011 period. LNT's book value growth rate is expected to be 4.5% over the next five years, above the –2.5%

rate of growth experienced over the past five years. Also, LNT's earnings per share are projected to increase at 4.5% (VL), 4.33% (Reuters) and 4.0% (Zack's). Dividends are expected to grow at 6%. Over the past five years, LNT's earnings growth was -1% while its dividends decreased at a 12% rate, due to a dividend cut in 2003. Investors can reasonably expect a sustainable growth rate in the future of **5.0%** for LNT.

Regarding share growth, LNT's shares outstanding increased at approximately a 6.88% rate over the past five years. The number of shares outstanding in 2009-2011 is expected to increase at a –0.2% rate. An expectation of share growth of **2%** for this company is reasonable.

AEE – Ameren Corp. - AEE's sustainable growth rate has averaged 1.79% over the most recent five year period (2001-2005), with a declining trend. Value Line expects AEE's sustainable growth to improve over recent low growth rate levels and reach 2.2% by the 2009-2011 period. AEE's book value growth rate also shows a decline in the future, and is expected to be 3% over the next five years—below the 5% rate of growth experienced over the past five years, but above internal growth projections. Also, AEE's earnings per share are projected to increase at a 1.5% (Value Line) rate. Reuters and Zacks project 8% and 6% earnings growth for AEE, respectively. AEE's dividends are expected to show no growth over the next five years, after growing at a 0% rate the previous five years, according to Value Line. Over the past five years, AEE's earnings growth was 0.5%. Based on projected earnings and book value growth, investors can reasonably expect long-term sustainable growth rate in the future to be higher than the internal growth projections published by Value Line; a growth rate of **4.0%** is reasonable for AEE.

Regarding share growth, AEE's shares outstanding increased at a 10.35% rate over the past five years due to a series of equity issuances. The growth the number of shares is projected by Value Line to increase at about a 1.1% rate between 2004 and the 2009-11 period. An expectation of share growth of **2.5%** for this company is reasonable.

AEP – American Electric Power - AEP's sustainable growth rate averaged 4.16% over the most recent five-year period, with an increasing trend. VL projects, by the 2009-11 period, sustainable growth will approximate 5.25%. AEP's projected book value also indicates increased growth -- book value grew at a –3.5% rate during the most recent five years and is expected to rise at a 6% rate in the future, according to Value Line. Value Line projects a rate of earnings increase for AEP of 5%, while Reuters projects 4.36% and Zack's projects 3.9%--all of those estimates are below sustainable growth projections. Dividends are expected to grow at a 4% rate, moderating long-term growth expectations slightly. Historically AEP's earnings grew at an 3.5% rate. Therefore investors can reasonably expect a long-term sustainable growth rate of **4.75%.**

Regarding share growth, AEP's shares outstanding grew at a 5% rate over the past five years. The five-year average level of share growth is expected to decrease at approximately 0.3% annually through 2009-11. An expectation of share growth of **1%** for this company is reasonable.

CNL – Cleco Corp. - CNL's sustainable growth rate averaged 4.56% for the five-year period, with the results in the most recent years below that average. Value Line expects sustainable growth to continue at about a 4.1% level through the 2009-11 period. CNL's book value growth is expected to increase at an 8.5% rate, well above the historical level of 4%, due to the building of a new power plant. CNL's earnings per share is projected to show 4.5% growth over the next five years, and its dividends are expected to show 2% growth, according to Value Line (Reuters & Zacks project 8% earnings growth). Historically CNL's earnings increased at a 1% rate and its dividends increased at a 2% rate of growth, according to Value Line. These data indicate that future growth will be above prior growth rate averages. Investors can reasonably expect sustainable growth from CNL to be below past averages, a sustainable internal growth rate of **4.75%** is a reasonable expectation for this company.

Regarding share growth, CNL's shares outstanding grew at approximately a 2.7% rate over the past five years. The growth in the number of shares is expected by Value Line to be 6.3% through 2009-11. An expectation of share growth of **4%** for this company is reasonable.

DPL – DPL, Inc.- DPL's sustainable growth rate has averaged 4.40% over the most recent five-year period, with a declining trend. Value Line expects DPL's sustainable growth to increase to approximately 6.6% by the 2009-2011 period. DPL's book value growth rate is expected to be 3.5% over the next five years, up substantially from the -1% rate of growth experienced over the past five years, but well below sustainable growth projections. Also, DPL's earnings per share are projected to increase at a rate of from 5.5% (Value Line), to 5% (Reuters), to 7% (Zack's). Over the past five years, DPL's earnings growth was -1% according to Value Line. Historically, dividends grew at only a 0.5% rate, and Value Line expects that rate to increase to 3.5% over the next five years. Investors can reasonably expect a higher sustainable growth over the long term — **6.0%** for DPL is reasonable.

Regarding share growth, DPL's shares outstanding increased at a 0.2% rate over the past five years. The number of shares is expected to decline at a 1.2% rate through 2009-11. An expectation of share growth of **–0.25%** for this company is reasonable.

EDE – Empire District Electric - EDE's sustainable internal growth rate averaged –2% over the five-year historical period, with several negative growth years. Value Line projects EDE's sustainable growth to rise to a level of 2.8% through 2009-11—a substantial improvement over historical results. EDE's book value growth rate is expected to continue in the future at 2.5%, slightly higher than the historical level of 2%. However, EDE's earnings per share are projected to increase at 9.5% to according to Value Line, while the analysts' surveyed by Reuters project earnings growth at 6%, a relatively wide differential. EDE's dividends are expected to remain at a constant level over the next five years (i.e., showing 0% growth), and moderating long-term growth expectations. Sustainable growth has been relatively inconsistent for this company, historically and is expected to trend upward in the future. Dividend growth has been non-existent, but the company has continued to pay its dividend. Also, Value Line's earnings growth projection is skewed upward by their inclusion of the

company's poor 2004 earnings in is "base" three-year period. From 2003 through the mid-point of the 2009-2011 period, Value Line's projected earnings per share indicate a 4% growth rate. Investors can reasonably expect a sustainable growth rate of **3.0%** from EDE.

Regarding share growth, EDE's shares outstanding grew at about a 7% rate over the past five years, due primarily to a large equity issuance in 2002. The level of share growth is expected by Value Line to decline somewhat to 4.8% through 2009-11. An expectation of share growth of **5%** for this company is reasonable.

ETR – Entergy Corp. - ETR's internal sustainable growth rate has averaged 5.94% over the most recent five year period (2001-2005). Sustainable growth is expected to decline to about 5.25% by the 2009-2011 period. Also, ETR's book value growth rate is expected to be 5.5% over the next five years—an increase from the 4.5% rate of growth experienced over the past five years—pointing to relatively stable growth expectations for the future. ETR's earnings per share are projected to increase at a rate of from 5% (Value Line) to 8.5% (Zack's) to 8.7% (Reuters). ETR's dividends are expected to grow at a high 6% growth rate, supporting higher sustainable growth expectations. Over the past five years, ETR's earnings grew at a 10% rate according to Value Line (8% on a compound growth basis) while its dividends showed 7.5% growth. These data indicate that investors can reasonably expect a sustainable growth rate in the future below past averages, however earnings growth projections are above historical sustainable growth. Therefore, **6.0%** is a reasonable long-term growth expectation for ETR.

Regarding share growth, ETR's shares outstanding grew at a –1.5% rate over the past five years. The number of shares outstanding is projected by Value Line to continue to increase at approximately a 0.8% rate through 2009-11. An expectation of share growth of **0%** for this company is reasonable.

HE – Hawaiian Electric - HE's sustainable growth rate has averaged 1.97% over the most recent five year period (2001-2005), with lower growth in the most recent year, indicating a decreasing trend. However, Value Line expects HE's sustainable growth to increase from that historical growth rate level to reach 3.2% by the 2009-2011 period. Also, HE's book value growth rate is expected to be 2.5% over the next five years, down from the 3% rate of growth experienced over the past five years. HE's earnings per share are projected to increase at a 3% (Value Line) to 8% (Zack's) to 4% (Reuters) rate, again showing substantial variability in that measure. The company's dividends are expected to show 0% growth over the next five years. Over the past five years, HE's earnings grew at a 1% rate while its dividends showed no increase. Investors can reasonably expect a sustainable growth rate in the future of **3.5%** for HE.

Regarding share growth, HE's shares outstanding grew at a 3.27% rate over the past five years. The number of shares is projected by Value Line to show a 0.25% rate of increase through the 2009-11 period. An expectation of share growth of **1%** for this company is reasonable.

PNM Resources – PNM - PNM's sustainable growth rate has averaged 5.37% over the most recent five year period with a declining trend. Value Line expects PNM's

sustainable growth to fall below that historical average growth rate level to about 3.6% by the 2009-2011 period. PNM's book value growth rate is expected to be 4% over the next five years, similar to the 4.5% rate of growth experienced over the past five years. Those data indicate stable growth. Also, PNM's earnings per share are projected to increase at a 5.5% (Value Line) to 8.3% (Zacks) to 11.45% (Reuters) rate. Its dividends are expected to grow at 8.5%, increasing long-term growth rate expectations. Over the past five years, PNM's earnings growth was -1% while its dividends increased at a 5% rate. Investors can reasonably expect a sustainable growth rate in the future of **5.75%** for PNM.

Regarding share growth, PNM's shares outstanding increased at a 4% rate over the past five years. The number of shares outstanding in 2009-2011 is expected to increase at about a 1.5% rate from 2005 levels. An expectation of share growth of **2%** for this company is reasonable.

Pinnacle West – PNW - PNW's sustainable growth rate has averaged 3.22% over the most recent five-year period with a downward trend. Value Line expects PNW's sustainable growth to fall below that historical average growth rate level to 2.84% by the 2009-2011 period. PNW's book value growth rate is expected to be 3.5% over the next five years, just below to the 4% rate of growth experienced over the past five years, indicating relatively stable growth expectations for this firm. PNW's earnings per share are projected to increase at a 6% (Value Line), to 6.1% (Reuters), to 6.8% (Zack's) rate—all well above the projected internal growth rate. PNW's dividends are expected to grow at a 5% rate, supporting higher long-term growth rate expectations. Over the past five years, PNW's earnings growth was –4.5% while its dividends increased at a 6.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **5.0%** for PNW.

Regarding share growth, PNW's shares outstanding increased at approximately a 4% rate over the past five years due to a share issuance in 2002. The number of shares outstanding in 2009-2011 is expected to show a 0% increase from 2005 levels. An expectation of share growth of **1%** for this company is reasonable.

UNS – Unisource Energy - UNS's sustainable growth rate has averaged 5.29% over the most recent five-year period. Value Line expects UNS's sustainable growth to decline below that historical growth rate level, to about 3.5%, by the 2009-2011 period. UNS's book value growth rate is expected to be 5% over the next five years, below the very high 12% rate of growth experienced over the past five years UNS's earnings per share are projected to increase at a rate of 7% (Value Line). Zack's and Reuters do not report projected earnings growth for this company. Its dividends are expected to grow more rapidly, at a 9.5% rate—catching up from an historical growth rate of 0%. Over the past five years, UNS's earnings growth was 5%. Investors can reasonably expect a sustainable growth rate in the future to be similar to that of the past and **5.75%** is reasonable for UNS.

Regarding share growth, UNS's shares outstanding increased at approximately a 1% rate over the past five years. That rate of increase is expected to decline in the future to a 1.2% rate through 2009-2011. An expectation of share growth of **1%** for this company is reasonable.

GAS DISTRIBUTORS

ATG - AGL Resources - ATG's sustainable growth rate has averaged 5.49% over the most recent five year period (2001-2005). VL expects ATG's sustainable growth to fall below that historical growth rate level and to reach 4.88% by the 2009-2011 period. ATG's book value growth rate is expected to be 6% over the next five years, a decrease from the 8.5% rate of growth experienced over the past five years. Also, ATG's earnings per share are projected to increase at a 4.66% (Reuters), 4.5% (Zack's) to 4% (VL) rate— below historical growth and similar to the projected sustainable growth rate—and its dividends are expected to show 6.5% annual growth over the next five years. Over the past five years, ATG's earnings showed 13.50% growth (as the company acquired other large distribution operations and expanded its energy trading business), while its dividends increased at only a 2% rate. Investors can reasonably expect a sustainable growth rate in the future of **5.0%** for ATG.

Regarding share growth, ATG's shares outstanding increased at approximately a 9% rate over the past five years, due to merger activity. The number of shares is projected by VL to increase at about a 0.1% rate between 2005 and the 2009-11 period. An expectation of share growth of **1%** for this company is reasonable.

ATO – Atmos Energy Corp - ATO's sustainable growth rate averaged only about 2,2% for the five-year historical period. Value Line projects increasing growth in 2006 and 2007, and then a rise by the 2009-11 period to a level near 4.8%, through an increasing ROE and earnings retention. However, ATO's book value growth during the most recent five years (8.5%) is expected to moderate to a 5% rate in the future. ATO's earnings per share are projected to increase at a 7% (VL) to 5% (Reuters) to 5.5% (Zack's) rate, but its dividends are expected to grow at only a 2% rate, moderating long-term growth expectations. Value Line's earnings growth rate expectation is due, largely, to the inclusion of 2004's poor results in the "base period" earnings measurement and, as a result, would not represent investors' expectations for a sustainable growth rate. Historically ATO's earnings have shown 6.5% growth, while its dividends increased at a 2.0% rate. Investors can reasonably expect a sustainable growth rate higher than that established historically, but not as high as the earnings growth projected by Value Line; **4.5%** is a reasonable expectation for this company.

Regarding share growth, ATO's shares outstanding grew at approximately an 18% rate over the past five years due to merger activity. The number of shares is expected to grow at approximately a 4.5% rate through 2009-11. An expectation of share growth of **5%** for this company is reasonable.

LG – Laclede Group - LG's sustainable growth rate has averaged 1.8% over the most recent five year period, with much higher growth in the most recent year—indicating an upward trend. VL expects LG's sustainable growth to rise above that historical growth rate level and reach 3.8% by the 2009-2011 period. LG's book value growth rate is expected to be 7.5% over the next five years, up from the 2.5% rate of growth experienced over the past five years. Also, LG's earnings per share are projected to increase at 5% rate, according to Value Line—above the indicated sustainable growth

rate. However, its dividends are expected to grow at 2%. Over the past five years, LG's earnings growth was 4.5% while its dividends increased at a 0.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **4.5%** for LG.

Regarding share growth, LG's shares outstanding increased at approximately a 2.9% rate over the past five years, with equity issuances recently. The number of shares outstanding in 2009-2011 is expected to have increased at a rate of 2.5% from 2005 levels. An expectation of share growth of **2.5%** for this company is reasonable.

GAS – Nicor, Inc. - GAS's sustainable growth rate averaged 3.98% over the five-year historical period with a decreasing trend. VL projects sustainable growth through 2009-11 near historical averages, 3.6%. GAS's book value, which increased at a 1% rate during the most recent five years, is expected to increase to a 3.0% rate in the future, above historic rates and near the sustainable growth projection. GAS's earnings per share are projected to increase at 4% (VL) 3.25% (Reuters) rate and 2.5% (Zack's). Its dividends are expected to grow at a 1.5% rate, moderating long-term growth expectations. Historically GAS's earnings grew at a –3.5% rate, according to Value Line and its dividends showed 3.5% growth. The projected sustainable growth, earnings and book value growth rate data indicate that investors can expect the growth from GAS to be lower in the future than has existed in the past. Investors can reasonably expect a sustainable growth rate of **4.0%** for GAS.

Regarding share growth, GAS's shares outstanding showed a –0.1% increase over the past five years. Further, GAS's growth rate in shares outstanding is expected to rise at about a 0.3% rate of increase through 2009-11. An expectation of share growth of **0.25%** for this company is reasonable.

NWN - Northwest Natural Gas - NWN's sustainable growth rate averaged 2.84% for the five-year period, with the results in the most recent year exceeding the average. VL expects sustainable growth to rise to about a 4.25% level through the 2009-11 period. NWN's book value growth is expected to continue to increase at a 3.5%, equal to the historical level of 3.5%. NWN's earnings per share growth is projected to increase at 7% (VL) to 5.3% (Reuters) to 4.9% (Zack's). VL projects its dividends are expected to grow at a 4.0% rate. Historically NWN's earnings and dividends increased at 5% and 1% rates, respectively, according to Value Line. Investors can reasonably expect sustainable growth from NWN to exceed past averages, a sustainable internal growth rate of **4.5%** is reasonable for this company.

Regarding share growth, NWN's shares outstanding grew at a 2.2% rate over the past five years. The growth in the number of shares is expected by VL to be 0.3% through 2009-11. An expectation of share growth of **1.0%** for this company is reasonable.

PNY - Piedmont Natural Gas - PNY's sustainable internal growth rate averaged 2.96% over the five-year historical period, but was above that level in the two most recent years, indicating an increasing trend. VL projects PNY's sustainable growth to rise to a level of approximately 4.3% through 2009-11. Also, PNY's book value

growth rate is expected to continue in the future at 3.0%, below the historical level of 6.5%, pointing to moderating growth for this company. PNY's earnings per share are projected to increase at 6% (VL) to 5.6% (Zack's), to 4.86% (Reuters), while its dividends are expected to grow at a 5.5% rate, approximating to the historical rate. Sustainable growth has been relatively consistent for this company and is expected to trend upward somewhat in the future to above the 4% level. Dividend growth has been consistent at about 5%, therefore, investors can reasonably expect a sustainable growth rate of **5%**, from PNY.

Regarding share growth, PNY's shares outstanding grew at about a 4.25% rate over the past five years, due to a large equity issuance in 2004. Prior to that time share growth was about 1.7% annually. The level of share growth is expected by VL to decline at a 1.1% rate through 2009-11. An expectation of share growth of **0%** for this company is reasonable.

SJI – South Jersey Industries - SJI's internal sustainable growth rate has averaged 5.31% over the most recent five-year period (2001-2005), with results in 2005 above the historical growth rate level, indicating an increasing trend. That higher level of growth is expected to be maintained and to reach 6.6% by the 2009-2011 period. SJI's book value growth rate is expected to be 6% over the next five years—down from the 13% rate of growth experienced over the past five years (the product of acquisitions). SJI's earnings per share are projected to increase at 7% (VL) to 6% (Zack's & Reuters, respectively), while its dividends are also expected to grow at 6%. Over the past five years, SJI's earnings grew at a 11.5% rate while its dividends showed a 2.5% increase. Investors can reasonably expect a sustainable growth rate in the future to be higher than past averages, **6%** is reasonable for SJI.

Regarding share growth, SJI's shares outstanding grew at a 5% rate over the past five years. The number of shares outstanding is projected by VL to rise at approximately a 1.3% rate through 2009-11. An expectation of share growth of **1.5%** for this company is reasonable.

SWX – Southwest Gas - SWX's sustainable growth rate averaged 2.37% over the five-year historical period with an increasing trend. VL projects that the retention ratio and ROE will rise through 2009-11, bringing sustainable growth near 6%. SWX's book value, which increased at a 3% rate during the most recent five years, is expected to increase slightly to a 4% rate in the future, below the sustainable growth projection. SWX's earnings per share are projected to increase at a 9% (VL) 4.75% (Reuters) and 6% (Zack's). Its dividends are expected to grow at a 0% rate, moderating long-term growth expectations. Historically SWX's earnings grew at a -0.5% rate, according to Value Line and its dividends showed 0% growth. The projected sustainable growth and earnings growth rate data indicate that investors can expect the growth from SWX to be higher in the future than has existed in the past, however those expectations are moderated by the decline in book value growth and the stagnant dividend. Investors can reasonably expect a sustainable growth rate of **5.5%** for SWX.

Regarding share growth, SWX's shares outstanding showed a 4.8% increase over the past five years. Further, SWX's growth rate in shares outstanding is expected

to rise at about a 2.8% rate of increase through 2009-11. An expectation of share growth of **3%** for this company is reasonable.

WGL – WGL Holdings - WGL's sustainable growth rate has averaged 3.52% over the most recent five year period, with an increasing trend. VL expects WGL's sustainable growth to rise above that historical growth rate level to 4.1% by the 2009-2011 period. WGL's book value growth rate is expected to be 3.5% over the next five years, above the 3% rate of growth experienced over the past five years. WGL's earnings per share are projected to increase at a 1.5% (VL) 3.57% (Reuters) to 3.7% (Zack's). However, like the other gas distributors, its dividends are expected to grow at only 2%. Over the past five years, WGL's earnings growth was 6% while its dividends increased at a 1.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **3.75%** for WGL.

Regarding share growth, WGL's shares outstanding increased at approximately a 0.5% rate over the past five years. That rate of increase is expected to be maintained in the future with number of shares outstanding in 2009-2011 is expected to grow at a similar rate. An expectation of share growth of **0.5%** for this company is reasonable.

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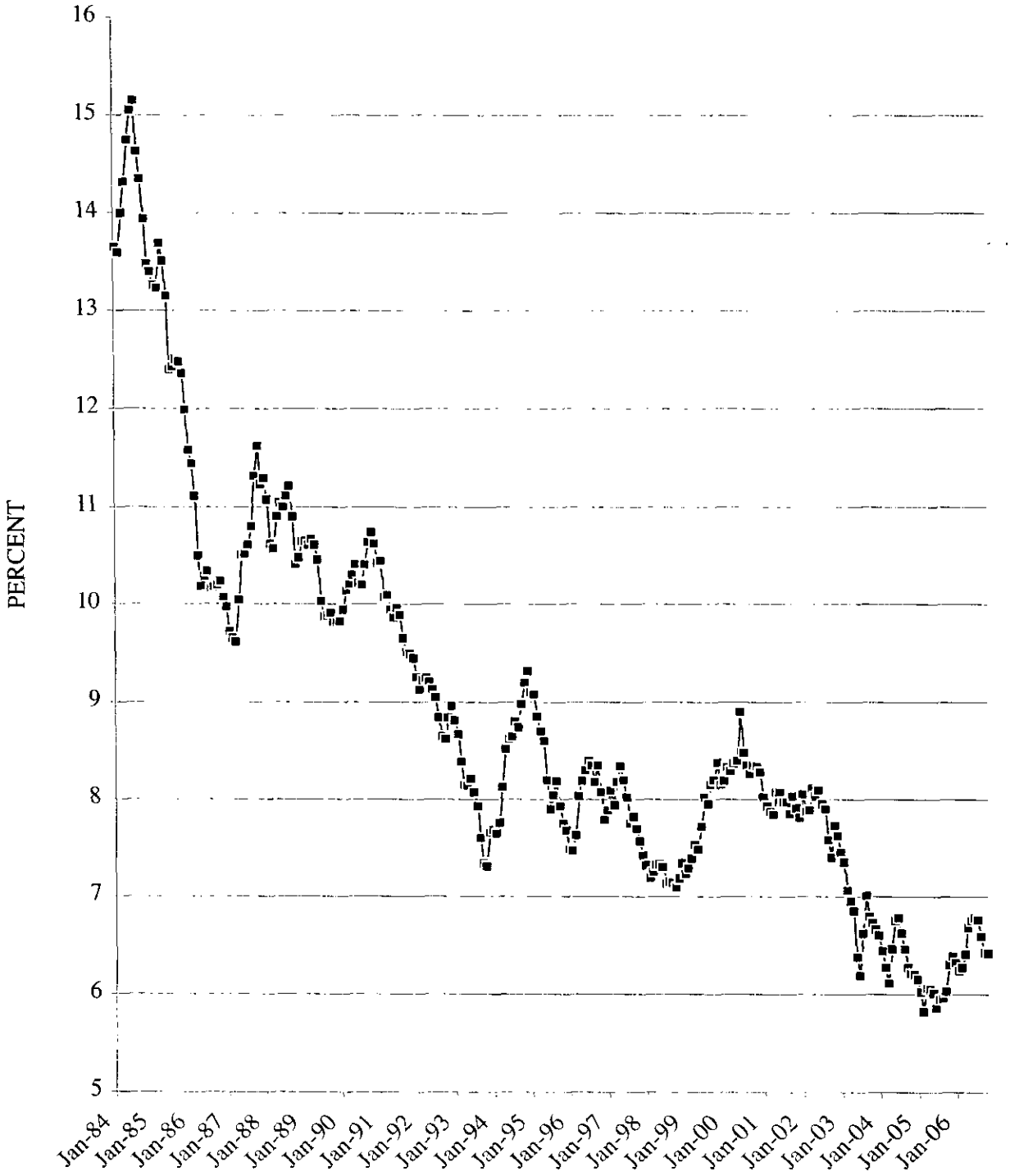
MOODY'S BAA BOND YIELDS

1984-2006



Data from Federal Reserve Release H.15.

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MOODY'S BAA BOND YIELDS
1968-2005

Data from Federal Reserve Release H.15.

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HISTORICAL CAPITAL STRUCTURE

AMOUNT (000,000)

Type of Capital	Jun-05 [1]	Sep-05 [2]	Dec-05 [3]	Mar-06 [4]	Jun-06 [5]	**Average [6]**
1) Common Equity	$2,873.0	$2,959.0	$2,903.0	$2,909.0	$2,956	**$2,920**
2) Preferred Stock	$113.0	$113.0	$113.0	$113.0	$113.0	**$113**
3) Long-term Debt	$2,146.0	$2,445.0	$2,702.0	$2,942.0	$2,942	**$2,635**
4) Short-term Debt	$520.0	$81.0	$80.0	$446.0	$346	**$295**
5) TOTAL	$5,652.0	$5,598.0	$5,798.0	$6,410.0	$6,357.0	**$5,963**

PERCENTAGE

Type of Capital	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	**5 Quarter Average**
6) Common Equity	50.83%	52.86%	50.07%	45.38%	46.50%	**48.97%**
7) Preferred Stock	2.00%	2.02%	1.95%	1.76%	1.78%	**1.90%**
8) Long-term Debt	37.97%	43.68%	46.60%	45.90%	46.28%	**44.20%**
9) Short-term Debt	9.20%	1.45%	1.38%	6.96%	5.44%	**4.94%**
10) TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	**49.14%**

Data from Company response to Staff DR-148.

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ANNUAL COST OF CAPITAL STRUCTURE DIFFERENCES

RATE CASE CAPITAL STRUCTURE

Type of Capital	Percent [1]	Cost Rate [2]	Wt. Average Cost Rate [3]=[1]x[2]	Pre-tax Wt. Av. Cost Rate* [4]=[3]/[1-40%]
1) Common Equity	52.44%	12.00%	6.29%	10.49%
2) Preferred Stock	2.04%	5.19%	0.11%	0.18%
3) Long-term Debt	45.42%	5.43%	2.46%	2.46%
4) Short-term Debt	0.10%	5.11%	0.01%	0.01%
	100.00%			**13.13%**

CAPITAL STRUCTURE INCLUDING AVERAGE SHORT-TERM DEBT

Type of Capital	Percent [1]	Cost Rate [2]	Wt. Average Cost Rate [3]=[1]x[2]	Pre-tax Wt. Av. Cost Rate* [4]=[3]/[1-40%]
5) Common Equity	49.87%	12.00%	5.98%	9.97%
6) Preferred Stock	1.90%	5.19%	0.10%	0.16%
7) Long-term Debt	43.19%	5.43%	2.34%	2.34%
8) Short-term Debt	5.00%	5.11%	0.26%	0.26%
	100.00%			**12.74%**

OVERALL COST OF CAPITAL DIFFERENCE = **0.40%**

COMPANY REQUESTED GAS AND ELECTRIC RATE BASE = **$6.06 Billion**

ANNUAL RATE IMPACT OF CAPITAL STRUCTURE DIFFERENCE = **$24,062,340**

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RATEMAKNG CAPITAL STRUCTURE

Type of Capital	AMOUNT	PERCENT	COST RATE*	WT. AVG. COST RATE
Common Equity	$2,937,526,169	52.39%	-	-
Preferred Stock	$114,502,040	2.04%	5.19%	0.11%
Long-term Debt	$2,549,853,256	45.47%	5.38%	2.45%
Short-term Debt	$5,575,653	0.10%	5.11%	0.01%
Totals	$5,607,457,118	100.00%		

*Cost rates at 3/31/06 from Company response to Staff DR No. 149, except for short-term debt, which is the cost rate in June 2006, taken from Nickloy Direct, p. 7.

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ELECTRIC UTILITY INDUSTRY COMMON EQUITY RATIOS

ELECTRIC COMPANIES	EQUITY RATIO
Allegheny Energy	31%
ALLETE	61%
American Electric Power	45%
Central Vermont P.S.	63%
Cleco Corporation	52%
DPL, Inc.	35%
Duquesne Light Holdings	35%
Edison International	39%
El Paso Electric Co.	48%
Empire District Electric	46%
FirstEnergy Corp.	45%
FPL Group	44%
Great Plains Energy	48%
Green Mountain Power	56%
Hawaiian Electric Industries	37%
IDACORP	49%
Maine & Maritimes Corp.	49%
OGE Energy	51%
Otter Tail Power	59%
Pinnacle West Capital Corp.	48%
Progerss Energy	41%
Southern Co.	42%
TXU Corp.	NM
UIL Holdings	50%
Westar Energy	48%
INDUSTRY AVERAGE	**45%**

COMBINATION GAS & ELECTRIC COMPANIES	EQUITY RATIO
AES Corp.	NM
Alliant Energy	54%
Ameren Corp.	50%
Aquilla	40%
Avista Corp.	44%
Black Hills Corporation	51%
CenterPoint Energy	NM
CH Energy Group	57%
CMS Energy Corp.	22%
Consolidated Edison	47%
Constellation Energy	44%
Dominion Resources	38%
DTE Energy Company	43%
Duke Energy	49%
Energy East Corp.	42%
Entergy Corp.	46%
Excelon Corp.	39%
Florida Pub. Utilities	46%
MDU Resources	61%
MGE Resources	55%
NiSource Inc.	45%
Northeast Utilities	43%
Northwestern Corp.	52%
NSTAR	33%
Pepco Holdings	41%
PG&E Corp.	42%
PNM Resources	38%
PPL Corp.	40%
Public Service Ent. Group	34%
Puget Energy	44%
SCANA Corp.	43%
SEMPRA Energy	54%
Sierra Pacific Resources	32%
TECO Energy	29%
UniSource Energy	32%
Unitil Corp.	38%
Vectren Corp.	44%
Wisconsin Energy Corp.	42%
WPS Resources	47%
Xcel Energy Inc.	43%

Data from AUS Utility Reports, June 2006, pp. 8, 12.

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ELECTRIC UTILITY SAMPLE GROUP SELECTION

	Company Name	Revenues % Electric	Pending Merger?	Recent Div. Cut?	Generation Assets?	Stable Book Value?	Bond Rating S&P	Bond Rating Moody's	Selected
	SCREEN	≥70%	no	no	yes	yes	A to BBB-		
EAST									
e	Allegheny Energy	83	no	yes	yes	no	BBB-	Baa3	
e+g	CH Energy	52	no	no	yes	yes	BBB-	Baa3	
e	Central Vermont P. S.	100	no	no	yes	yes	BBB	-	√
e+g	Consolidated Edison	64	no	no	no	yes	A	A1	
e+g	Constellation Energy	11	no	no	yes	yes	BBB+		
e+g	Dominion Resources	31	no	no	yes	yes	BBB+	Baa1	
e+g	Duke Energy	47	yes	no	yes	yes	BBB	Baa1	
e	Duquesne Light Holdings	79	yes	yes	no	no	BBB+	Baa1	
e+g	Energy East Corp.	56	no	no	yes	yes	BBB+	A3	
e+g	Excelon Corp.	88	yes	no	yes	yes	BBB+	A3	
e	FPL Group	77	no	no	yes	yes	A	Aa3	
e	FirstEnergy Corp.	80	no	no	yes	yes	BBB	Baa1	√
e	Green Mountain Power	100	yes	no	yes	yes	BBB	Baa1	
e+g	Northeast Utilities	71	no	no	yes	yes	BBB	Baa1	√
e+g	NSTAR	79	no	no	no	yes	A+	A1	
e+g	PPL Corporation	68	no	no	yes	no	BBB+	Baa1	
e+g	Pepco Holdings, Inc.	79	no	no	no	no	A-	A3	
e	Progress Energy	80	no	no	yes	yes	BBB	A3	√
e+g	Public Service Ent. Gp.	62	yes	no	yes	yes	A-	A3	
e+g	SCANA Corp.	39	no	no	yes	yes	A-	A1	
e	Southern Company	98	no	no	yes	yes	A	A2	*
e+g	TECO Energy	58	no	yes	yes	no	BBB-	Baa2	
e	UIL Holdings Corp.	73	no	no	no	yes	-	Baa2	
CENTRAL									
e	ALLETE	80	no	no	yes	no	A	Baa1	
e+g	Alliant Energy	71	no	no	yes	yes	A-	A2	√
e+g	Ameren Corp.	79	no	no	yes	yes	BBB	Baa2	√
e	American Eelectric Power	95	no	no	yes	yes	BBB	Baa1	√
e+g	Aquila, Inc.	68	no	yes	yes	yes	B	B2	
e+g	CMS Energy Corp.	44	no	yes	yes	no	BBB-	Baa3	
e+g	CenterPoint Energy	17	no	no	no	no	BBB	Baa2	
e	Cleco Corporation	96	no	no	yes	yes	BBB	Baa1	√
e	DPL Inc.	100	no	no	yes	yes	BBB	-	√
e+g	DTE Energy	57	no	no	yes	yes	BBB+	A3	
e	Empire District Electric	93	no	no	yes	yes	BBB+	Baa1	√
e+g	Entergy Corp.	81	no	no	yes	yes	BBB-	Baa2	√
e	Great Plains Energy	44	no	no	yes	yes	BBB	A2	
e+g	MGE Energy	60	no	no	yes	yes	AA-	Aa3	
e+g	NiSource Inc.	16	no	yes	yes	yes	BBB	Baa2	
e	OGE Energy Corp.	34	no	no	yes	yes	BBB+	Baa2	
e	Otter Tail Corp.	29	no	no	yes	yes	BBB+	A3	
e	TXU Corp.	22	no	yes	no	no	BBB-	Baa2	
e+g	Vectren Corp.	20	no	no	yes	yes	A	A3	
e+g	WPS Resources	14	no	yes	yes	yes	A+	Aa2	
e	Westar Energy	114	no	yes	yes	no	BB+	Baa3	
e+g	Wisconsisn Energy	62	no	no	yes	yes	A-	A1	
WEST									
e+g	Avista Corp.	49	no	no	yes	yes	BBB-	Baa3	
e+g	Black Hills Corp.	22	no	no	yes	yes	BBB	Baa1	
e	Edison International	81	no	yes	yes	no	BBB+	A3	
e	El Paso Electric	98	no	yes	yes	yes	BBB	Baa2	
e	Hawaiian Electric	83	no	no	yes	yes	BBB	Baa2	√
e	IDACORP, Inc.	98	no	yes	yes	yes	A-	A3	
e+g	MDU Resources Group	5	no	no	yes	yes	A-	A2	
e+g	PG&E Corp.	71	no	yes	yes	no	BBB	Baa1	
e+g	PNM Resources	78	no	no	yes	yes	BBB	Baa2	√
e	Pinnacle West Capital	75	no	no	yes	yes	BBB-	Baa1	√
e+g	Puget Energy, Inc.	61	no	no	yes	yes	BBB	Baa2	
e+g	Sempra Energy	43	no	no	yes	yes	A+	A1	
e+g	Sierra Pacific Resources	94	no	yes	yes	no	BB	Ba1	
e+g	UniSource Energy	86	yes	no	yes	yes	BBB-	Baa3	√
e+g	Xcel Energy, Inc.	75	no	yes	yes	no	A-	A3	

e= electric company; e+g=combination electric and gas company

Data from Value Line Ratings and Reports, August 11, September 1, and 29, 2006 ; AUS Utility Reports, October 2006.

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
CV	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.0538	05.8%	0.31%	15.81	11.61	
2002	0.4286	09.3%	3.99%	16.83	11.74	
2003	0.3759	08.1%	3.04%	17.89	11.81	
2004	0.2640	06.8%	1.80%	18.49	12.19	
2005	-10.5000	nmf	nmf	17.70	12.28	
AVERAGE GROWTH			2.28%	2.50%		1.41%
2006	0.1636	07.0%	1.15%		10.30	-16.12%
2007	0.3429	08.0%	2.74%		10.50	-0.50%
2009-2011	0.4065	08.0%	3.25%	1.00%	10.70	-2.72%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
FE	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.4718	08.9%	4.20%	24.86	297.64	
2002	0.4094	10.5%	4.30%	23.92	297.64	
2003	-0.0204	05.4%	-0.11%	25.13	329.84	
2004	0.3105	10.6%	3.29%	26.04	329.84	
2005	0.3979	10.2%	4.06%	27.86	329.84	
AVERAGE GROWTH			3.15%	6.00%		2.60%
2006	0.5147	13.5%	6.95%		319.24	-3.21%
2007	0.5150	13.0%	6.70%		317.84	-1.84%
2009-2011	0.4889	12.0%	5.87%	6.00%	317.84	-0.74%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
NU	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.6715	08.5%	5.71%	16.27	130.13	
2002	0.5093	06.3%	3.21%	17.33	127.56	
2003	0.5323	06.9%	3.67%	17.73	127.70	
2004	0.3077	05.1%	1.57%	17.80	129.03	
2005	0.3061	05.1%	1.56%	18.46	131.59	
AVERAGE GROWTH			3.14%	3.00%		0.28%
2006	0.3652	08.0%	2.92%		124.20	-5.62%
2007	0.4222	08.0%	3.38%		155.20	8.60%
2009-2011	0.3800	08.0%	3.04%	0.50%	158.20	3.75%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
PGN	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.3761	11.5%	nmf	27.45	218.73	
2002	0.4323	12.1%	5.23%	28.73	232.43	
2003	0.3372	10.9%	3.68%	30.26	246.00	
2004	0.2516	09.9%	2.49%	30.9	247.00	
2005	0.1905	09.0%	1.71%	31.9	252.00	
AVERAGE GROWTH			3.28%	6.50%		3.60%
2006	0.0431	08.0%	0.35%		254.00	0.79%
2007	0.0717	08.0%	0.57%		256.00	0.79%
2009-2011	0.1310	08.5%	1.11%	1.50%	261.00	0.70%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
LNT	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.1736	09.8%	1.70%	21.39	89.68	
2002	-0.6949	05.8%	-4.03%	19.89	92.30	
2003	0.3631	06.7%	2.43%	21.37	110.96	
2004	0.4486	08.2%	3.68%	22.13	115.74	
2005	0.5249	13.1%	6.88%	20.85	117.04	
AVERAGE GROWTH			2.13%	-2.50%		6.88%
2006	0.5000	10.5%	5.25%		115.00	-1.74%
2007	0.4681	09.5%	4.45%		113.00	-1.74%
2009-2011	0.4163	09.0%	3.75%	4.50%	116.00	-0.18%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
AEE	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2551	14.0%	3.57%	24.26	138.05	
2002	0.0451	09.9%	0.45%	24.93	154.10	
2003	0.1911	11.6%	2.22%	26.73	162.90	
2004	0.0993	09.1%	0.90%	29.71	195.20	
2005	0.1885	09.7%	1.83%	31.09	204.70	
AVERAGE GROWTH			1.79%	5.00%		10.35%
2006	0.1533	09.5%	1.46%		207.20	1.22%
2007	0.2063	10.0%	2.06%		209.80	1.24%
2009-2011	0.2303	09.5%	2.19%	3.00%	216.80	1.16%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
AEP	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2661	12.8%	3.41%	25.54	322.24	
2002	0.1608	13.7%	2.20%	20.85	338.84	
2003	0.3478	12.4%	4.31%	19.93	395.02	
2004	0.4636	12.2%	5.66%	21.32	395.86	
2005	0.4621	11.3%	5.22%	23.08	393.72	
AVERAGE GROWTH			4.16%	-3.50%		5.14%
2006	0.4714	11.5%	5.42%		394.00	0.07%
2007	0.4386	11.0%	4.82%		396.00	0.29%
2009-2011	0.4571	11.5%	5.26%	6.00%	400.00	0.32%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
CNL	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.4238	14.6%	6.19%	10.69	44.96	
2002	0.4079	13.1%	5.34%	11.77	47.04	
2003	0.2857	12.5%	3.57%	10.09	47.18	
2004	0.3182	11.9%	3.79%	10.83	49.62	
2005	0.3662	10.7%	3.92%	13.69	49.99	
AVERAGE GROWTH			4.56%	4.00%		2.69%
2006	0.3077	08.0%	2.46%		54.25	8.52%
2007	0.3571	08.5%	3.04%		62.00	11.37%
2009-2011	0.4286	09.5%	4.07%	8.50%	68.00	6.35%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
DPL	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.4598	27.8%	12.78%	6.31	126.50	
2002	-0.3056	10.8%	-3.30%	6.38	126.50	
2003	0.1376	14.6%	2.01%	7.13	126.50	
2004	0.4696	20.7%	9.72%	8.25	126.50	
2005	0.0680	11.9%	0.81%	8.14	127.53	
AVERAGE GROWTH			4.40%	-1.00%		0.20%
2006	0.3103	26.5%	8.22%		112.00	-12.18%
2007	0.3882	26.0%	10.09%		112.00	-6.29%
2009-2011	0.3556	18.5%	6.58%	3.50%	120.00	-1.21%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
EDE	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	-1.1695	03.9%	-4.56%	13.58	19.76	
2002	-0.0756	07.8%	-0.59%	14.59	22.57	
2003	0.0078	07.8%	0.06%	15.17	24.98	
2004	-0.4884	05.8%	-2.83%	14.76	25.70	
2005	-0.3913	06.0%	-2.35%	15.08	26.08	
AVERAGE GROWTH			-2.05%	2.00%		7.18%
2006	-0.0667	07.0%	-0.47%		30.15	15.61%
2007	0.1467	09.0%	1.32%		31.20	9.38%
2009-2011	0.2686	10.5%	2.82%	2.50%	33.00	4.82%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
ETR	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.5844	09.3%	5.44%	33.78	220.73	
2002	0.6359	10.9%	6.93%	35.24	222.42	
2003	0.5664	09.8%	5.55%	38.02	228.90	
2004	0.5191	11.0%	5.71%	38.26	216.83	
2005	0.5091	11.9%	6.06%	35.71	207.50	
AVERAGE GROWTH			5.94%	4.50%		-1.53%
2006	0.5304	11.5%	6.10%		208.20	0.34%
2007	0.5500	11.5%	6.33%		208.60	0.26%
2009-2011	0.5019	10.5%	5.27%	5.50%	215.80	0.79%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
HE	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2250	11.6%	2.61%	13.06	71.20	
2002	0.2346	11.3%	2.65%	14.21	73.62	
2003	0.2152	10.8%	2.32%	14.36	75.84	
2004	0.0882	08.9%	0.79%	15.01	80.69	
2005	0.1507	09.7%	1.46%	15.02	80.98	
AVERAGE GROWTH			1.97%	3.00%		3.27%
2006	0.1733	10.0%	1.73%		81.20	0.27%
2007	0.2000	10.0%	2.00%		81.40	0.26%
2009-2011	0.2914	11.0%	3.21%	2.50%	82.00	0.25%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
PNM	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.7969	15.4%	12.27%	17.25	58.68	
2002	0.4673	06.5%	3.04%	16.60	58.68	
2003	0.4696	06.3%	2.96%	17.84	60.39	
2004	0.5594	08.0%	4.48%	18.19	60.46	
2005	0.5031	08.2%	4.13%	18.70	68.79	
AVERAGE GROWTH			5.37%	4.50%		4.05%
2006	0.4788	08.5%	4.07%		68.80	0.01%
2007	0.4743	08.5%	4.03%		70.80	1.45%
2009-2011	0.4211	08.5%	3.58%	4.00%	74.00	1.47%

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GAS DISTRIBUTORS

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
ATG	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2800	12.3%	3.44%	12.19	55.10	
2002	0.4066	14.5%	5.90%	12.52	56.70	
2003	0.4663	14.0%	6.53%	14.66	64.50	
2004	0.4956	11.0%	5.45%	18.06	76.70	
2005	0.4758	12.9%	6.14%	19.29	77.70	
AVERAGE GROWTH			5.49%	8.50%		8.97%
2006	0.4340	13.0%	5.64%		77.90	0.26%
2007	0.4148	12.5%	5.19%		78.00	-0.50%
2009-2011	0.4068	12.0%	4.88%	6.00%	78.30	0.15%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
ATO	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2109	09.6%	2.02%	14.31	40.79	
2002	0.1862	10.4%	1.94%	13.75	41.68	
2003	0.2982	09.3%	2.77%	16.66	51.48	
2004	0.2278	07.6%	1.73%	18.05	62.80	
2005	0.2791	08.5%	2.37%	19.90	80.54	
AVERAGE GROWTH			2.17%	8.50%		18.54%
2006	0.3000	09.0%	2.70%		82.00	1.81%
2007	0.3436	09.0%	3.09%		84.00	2.13%
2009-2011	0.4600	10.5%	4.83%	5.00%	100.00	4.42%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
LG	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.1677	10.5%	1.76%	15.26	18.88	
2002	-0.1356	07.8%	-1.06%	15.07	18.96	
2003	0.2637	11.6%	3.06%	15.65	19.11	
2004	0.2582	10.1%	2.61%	16.96	20.98	
2005	0.2789	10.9%	3.04%	17.31	21.17	
AVERAGE GROWTH			1.88%	2.50%		2.90%
2006	0.3488	11.0%	3.84%		21.50	1.56%
2007	0.3349	10.5%	3.52%		21.50	0.78%
2009-2011	0.4000	09.5%	3.80%	7.50%	24.00	2.54%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
GAS	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.4153	18.7%	7.77%	16.39	44.40	
2002	0.3611	17.5%	6.32%	16.55	44.01	
2003	0.1185	12.3%	1.46%	17.13	44.04	
2004	0.1622	13.1%	2.12%	16.99	44.10	
2005	0.1806	12.5%	2.26%	18.36	44.18	
AVERAGE GROWTH			3.98%	1.50%		-0.12%
2006	0.2408	13.0%	3.13%		44.50	0.72%
2007	0.2320	12.5%	2.90%		44.60	0.47%
2009-2011	0.2786	13.0%	3.62%	3.00%	44.90	0.32%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
NWN	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.3351	10.2%	3.42%	18.56	25.23	
2002	0.2222	08.5%	1.89%	18.88	25.59	
2003	0.2784	09.0%	2.51%	19.52	25.94	
2004	0.3011	08.9%	2.68%	20.64	27.55	
2005	0.3744	09.9%	3.71%	21.28	27.58	
AVERAGE GROWTH			2.84%	3.50%		2.25%
2006	0.3784	10.0%	3.78%		27.75	0.62%
2007	0.4083	10.5%	4.29%		27.80	0.40%
2009-2011	0.4035	10.5%	4.24%	3.50%	28.00	0.30%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
PNY	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2475	11.7%	2.90%	8.63	64.93	
2002	0.1579	10.6%	1.67%	8.91	66.18	
2003	0.2613	11.8%	3.08%	9.36	67.31	
2004	0.3228	11.1%	3.58%	11.15	76.67	
2005	0.3106	11.5%	3.57%	11.53	76.70	
AVERAGE GROWTH			2.96%	6.50%		4.25%
2006	0.2615	12.0%	3.14%		75.00	-2.22%
2007	0.2857	12.5%	3.57%		74.50	-1.44%
2009-2011	0.3314	13.0%	4.31%	3.00%	72.50	-1.12%

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COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
SJI	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.3565	12.8%	4.56%	7.81	23.72	
2002	0.3852	12.5%	4.82%	9.67	24.41	
2003	0.4307	11.6%	5.00%	11.26	26.46	
2004	0.4810	12.5%	6.01%	12.41	27.76	
2005	0.4971	12.4%	6.16%	13.50	28.98	
AVERAGE GROWTH			5.31%	13.00%		5.13%
2006	0.5027	13.0%	6.54%		29.20	0.76%
2007	0.5077	13.0%	6.60%		29.60	1.06%
2009-2011	0.5106	13.0%	6.64%	6.00%	31.00	1.36%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
SWX	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.2870	06.6%	1.89%	17.27	32.49	
2002	0.2931	06.5%	1.91%	17.91	33.29	
2003	0.2743	06.1%	1.67%	18.42	34.23	
2004	0.5060	08.3%	4.20%	19.18	36.79	
2005	0.3440	06.4%	2.20%	19.10	39.33	
AVERAGE GROWTH			2.37%	3.00%		4.89%
2006	0.5568	09.5%	5.29%		41.50	5.52%
2007	0.5795	10.0%	5.79%		43.00	4.56%
2009-2011	0.6356	09.5%	6.04%	4.00%	45.00	2.73%

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
WGL	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2001	0.3298	11.2%	3.69%	16.24	48.54	
2002	-0.1140	07.2%	-0.82%	15.78	48.56	
2003	0.4435	14.0%	6.21%	16.25	48.83	
2004	0.3434	11.7%	4.02%	16.95	48.67	
2005	0.3744	12.0%	4.49%	17.8	48.65	
AVERAGE GROWTH			3.52%	3.00%		0.06%
2006	0.2703	10.0%	2.70%		48.70	0.10%
2007	0.2923	10.0%	2.92%		48.70	0.05%
2009-2011	0.3702	11.0%	4.07%	3.50%	48.80	0.06%

Data from Value Line Ratings & Reports, September 15, 2006.

AMEREN-UE

DCF GROWTH RATES
ELECTRIC UTILITIES

COMPANY	br	+	sv=g*(1-(1/(M/B)))	=	g
CV	4.00%	+	1.00% (1 - (1/ 1.28)))	=	4.22%
FE	5.75%	+	0.00% (1 - (1/ 2.00)))	=	5.75%
NU	6.00%	+	1.50% (1 - (1/ 1.47)))	=	6.48%
PGN	3.00%	+	1.50% (1 - (1/ 1.40)))	=	3.43%
LNT	5.00%	+	2.00% (1 - (1/ 1.63)))	=	5.78%
AEE	4.00%	+	2.50% (1 - (1/ 1.68)))	=	5.01%
AEP	4.75%	+	1.00% (1 - (1/ 1.59)))	=	5.12%
CNL	4.75%	+	4.00% (1 - (1/ 1.71)))	=	6.40%
DPL	6.00%	+	-0.25% (1 - (1/ 4.69)))	=	5.80%
EDE	3.00%	+	5.00% (1 - (1/ 1.46)))	=	4.57%
ETR	6.00%	+	0.00% (1 - (1/ 2.05)))	=	6.00%
HE	3.50%	+	1.00% (1 - (1/ 1.82)))	=	3.95%
PNM	5.75%	+	2.00% (1 - (1/ 1.44)))	=	6.36%
PNW	5.00%	+	1.00% (1 - (1/ 1.30)))	=	5.23%
UNS	5.75%	+	1.00% (1 - (1/ 1.82)))	=	6.20%

Average Market-to-Book Ratio = 1.82

CV	=	Central Vermont P. S.
FE	=	FirstEnergy Corp.
NU	=	Northeast Utilities
PGN	=	Progress Energy
LNT	=	Alliant Energy
AEE	=	Ameren Corp.
AEP	=	American Electric Power
CNL	=	Cleco Corporation
DPL	=	DPL, Inc.
EDE	=	Empire District Electric
ETR	=	Entergy Corp.
HE	=	Hawaiian Electric
PNM	=	PNM Resources
PNW	=	Pinnacle West Capital
UNS	=	Unisource Energy

g*= expected growth in number of shares outstanding

AMEREN-UE

GROWTH RATE COMPARISON
ELECTRIC UTILITIES

	DCF	Value Line Projected			Reuters	Value Line Historic			Reuters & VL	5-yr Compound Hist.		
COMPANY	Growth	EPS	DPS	BVPS	EPS	EPS	DPS	BVPS	AVGS.	EPS	DPS	BVPS
CV	4.22%	9.50%	-1.00%	1.00%	n/a	1.00%	0.50%	2.50%	2.25%	3.41%	0.89%	2.05%
FE	5.75%	11.50%	5.00%	6.00%	5.71%	0.00%	2.50%	6.00%	5.24%	5.72%	3.94%	2.99%
NU	6.48%	6.50%	6.50%	0.50%	7.80%	0.00%	nmf	3.00%	4.05%	-3.44%	10.16%	-0.02%
PGN	3.43%	-1.50%	1.50%	1.50%	3.83%	4.50%	3.00%	6.50%	2.76%	-5.76%	2.66%	3.21%
LNT	5.78%	4.50%	6.00%	4.50%	4.33%	-1.00%	-12.50%	-2.50%	0.48%	-1.01%	-10.48%	1.20%
AEE	5.01%	1.50%	0.00%	3.00%	8.00%	0.50%	0.00%	5.00%	2.57%	-2.53%	0.00%	5.53%
AEP	5.12%	5.00%	4.00%	6.00%	4.36%	3.50%	-9.00%	-3.50%	1.48%	-3.06%	-9.22%	-0.91%
CNL	6.40%	4.50%	2.00%	8.50%	8.00%	1.00%	2.00%	4.00%	4.29%	-2.95%	0.68%	7.01%
DPL	5.80%	5.50%	3.50%	3.50%	5.00%	-1.00%	0.50%	-1.00%	2.29%	-3.58%	1.25%	-1.33%
EDE	4.57%	9.50%	0.00%	2.50%	6.00%	-5.00%	0.00%	2.00%	2.14%	15.26%	0.00%	3.07%
ETR	6.00%	5.00%	6.00%	5.50%	8.71%	10.00%	7.50%	4.50%	6.74%	8.35%	11.03%	3.36%
HE	3.95%	3.00%	0.00%	2.50%	4.08%	1.00%	0.00%	3.00%	1.94%	-1.28%	0.00%	2.95%
PNM	6.36%	5.50%	8.50%	4.00%	11.45%	-1.00%	5.00%	4.50%	5.42%	-8.76%	10.17%	2.48%
PNW	5.23%	6.00%	5.00%	3.50%	6.10%	-4.50%	6.50%	4.00%	3.80%	-4.00%	5.82%	3.83%
UNS	6.20%	7.00%	9.50%	5.00%	n/a	5.00%	0.00%	12.00%	6.42%	0.11%	16.00%	8.20%
		5.53%	3.77%	3.83%		0.93%	0.43%	3.33%		-0.23%	2.86%	2.91%
AVERAGES	5.35%		4.38%		6.41%		1.57%		3.46%		1.84%	

Zack's growth rates: CV-n/a, FE-5.7%, NU-8.7%, PGN-3.6%, LNT-4.0%, AEE-6.1%, AEP-3.9%, CNL-8%, DPL-7.0%, EDE-n/a, ETR-8.5%, HE-8%, PNM-8.3%, PNW-6.8%, and UNS-n/a. Zack's average earnings growth = 6.5%.

AMEREN-UE

DCF GROWTH RATES
GAS DISTRIBUTORS

COMPANY	br	+	sv=g*(1-(1/(M/B)))	=	g
ATG	5.00%	+	1.00% (1 - (1/ 1.79))	=	5.44%
ATO	4.50%	+	5.00% (1 - (1/ 1.43))	=	6.01%
LG	4.50%	+	2.50% (1 - (1/ 1.69))	=	5.52%
GAS	4.00%	+	0.25% (1 - (1/ 2.33))	=	4.14%
NWN	4.50%	+	1.00% (1 - (1/ 1.82))	=	4.95%
PNY	5.00%	+	0.00% (1 - (1/ 2.41))	=	5.00%
SJI	6.00%	+	1.50% (1 - (1/ 2.12))	=	6.79%
SWX	5.50%	+	3.00% (1 - (1/ 1.76))	=	6.80%
WGL	3.75%	+	0.50% (1 - (1/ 1.78))	=	3.97%

Average Market-to-Book Ratio = 1.90

ATG	=	AGL Resources
ATO	=	Atmos Energy Corporation
LG	=	Laclede Group
GAS	=	NICOR
NWN	=	Northwest Natural Gas Co.
PNY	=	Piedmont Natual Gas Company
SJI	=	South Jersey Industries, Inc.
SWX	=	Southwest Gas
WGL	=	WGL Holdlings

g*= expected growth in number of shares outstanding

AMEREN-UE

GROWTH RATE COMPARISON
GAS DISTRIBUTORS

	DCF	Value Line Projected			Reuters	Value Line Historic			Reuters & VL	5-yr Compound Hist.		
COMPANY	Growth	EPS	DPS	BVPS	EPS	EPS	DPS	BVPS	AVGS.	EPS	DPS	BVPS
ATG	5.44%	4.50%	6.50%	6.00%	4.66%	13.50%	2.00%	8.50%	6.52%	12.05%	6.79%	10.85%
ATO	6.01%	7.00%	2.00%	5.00%	4.96%	6.50%	2.00%	8.50%	5.14%	4.13%	1.67%	7.40%
LG	5.52%	5.00%	2.00%	7.50%	n/a	4.50%	0.50%	2.50%	3.67%	5.96%	0.88%	5.24%
GAS	4.14%	4.00%	1.50%	3.00%	3.25%	-3.50%	3.50%	1.50%	1.89%	-4.03%	1.11%	2.89%
NWN	4.95%	7.00%	4.00%	3.50%	5.33%	5.00%	1.00%	3.50%	4.19%	3.38%	2.00%	3.55%
PNY	5.00%	6.00%	5.50%	3.00%	4.86%	5.00%	5.00%	6.50%	5.12%	5.18%	4.78%	4.68%
SJI	6.79%	7.00%	6.00%	6.00%	6.00%	11.50%	2.50%	13.00%	7.43%	9.98%	4.45%	12.86%
SWX	6.80%	9.00%	0.00%	4.00%	4.75%	-0.50%	0.00%	3.00%	2.89%	9.98%	0.00%	2.46%
WGL	3.97%	1.50%	2.00%	3.50%	3.57%	6.00%	1.50%	3.00%	3.01%	-0.32%	1.39%	1.91%
		5.67%	3.28%	4.61%		5.33%	2.00%	5.56%		5.14%	2.56%	5.76%
AVERAGES	5.40%		4.52%		4.67%		4.30%		4.43%		4.49%	

Zack's Earnings Growth Projections: ATG-4.5%, ATO-5.5%,LG-n/a, GAS-2.50%, NWN-4.9%,
PNY-5.6%, SJI-6%, SWX-6.0%, WGL-3.7%; Average = 4.84%.

AMEREN-UE

STOCK PRICE, DIVIDENDS, YIELDS
ELECTRIC UTILITIES

COMPANY	AVG. STOCK PRICE 9/19/06-10/30/06 (PER SHARE)		ANNUALIZED DIVIDEND (PER SHARE)	DIVIDEND YIELD
CV	$22.33		$0.92	4.12%
FE	$57.54	*	$1.90	3.31%
NU	$23.89		$0.75	3.15%
PGN	$45.08	*	$2.50	5.55%
LNT	$37.08	*	$1.22	3.29%
AEE	$53.37		$2.54	4.76%
AEP	$38.79	*	$1.56	4.01%
CNL	$25.58		$0.90	3.52%
DPL	$27.65	*	$1.06	3.83%
EDE	$23.01		$1.28	5.56%
ETR	$81.69		$2.16	2.64%
HE	$27.41		$1.24	4.52%
PNM	$28.12		$0.88	3.13%
PNW	$46.39	*	$2.10	4.54%
UNS	$34.30	*	$0.89	2.60%
			AVERAGE	**3.90%**

* Dividend increased by (1+g), derived on Schedule 5.

AMEREN-UE

STOCK PRICE, DIVIDENDS, YIELDS
GAS DISTRIBUTORS

COMPANY	AVG. STOCK PRICE 9/19/06-10/30/06 (PER SHARE)		ANNUALIZED DIVIDEND (PER SHARE)	DIVIDEND YIELD
ATG	$36.61	*	$1.56	4.26%
ATO	$29.26	*	$1.34	4.57%
LG	$33.22		$1.42	4.27%
GAS	$44.10		$1.86	4.22%
NWN	$40.18	*	$1.45	3.60%
PNY	$26.14		$0.96	3.67%
SJI	$30.35	*	$0.96	3.17%
SWX	$34.33		$0.82	2.39%
WGL	$31.81		$1.35	4.25%
			AVERAGE	**3.82%**

* Dividend increased by (1+g), derived on Schedule 5.

AMEREN-UE

DCF COST OF EQUITY CAPITAL
ELECTRIC UTILITIES

COMPANY	DIVIDEND YIELD Schedule 6	GROWTH RATE Schedule 5	DCF COST OF EQUITY CAPITAL
CV	4.12%	4.22%	8.34%
FE	3.31%	5.75%	9.06%
NU	3.15%	6.48%	9.63%
PGN	5.55%	3.43%	8.98%
LNT	3.29%	5.78%	9.06%
AEE	4.76%	5.01%	9.77%
AEP	4.01%	5.12%	9.13%
CNL	3.52%	6.40%	9.92%
DPL	3.83%	5.80%	9.63%
EDE	5.56%	4.57%	10.13%
ETR	2.64%	6.00%	8.64%
HE	4.52%	3.95%	8.47%
PNM	3.13%	6.36%	9.49%
PNW	4.54%	5.23%	9.77%
UNS	2.60%	6.20%	8.80%
		AVERAGE	**9.26%**
		STANDARD DEVIATION	**0.55%**

AMEREN-UE

DCF COST OF EQUITY CAPITAL
GAS DISTRIBUTORS

COMPANY	DIVIDEND YIELD Schedule 6	GROWTH RATE Schedule 5	DCF COST OF EQUITY CAPITAL
ATG	4.26%	5.44%	9.71%
ATO	4.57%	6.01%	10.57%
LG	4.27%	5.52%	9.79%
GAS	4.22%	4.14%	8.36%
NWN	3.60%	4.95%	8.55%
PNY	3.67%	5.00%	8.67%
SJI	3.17%	6.79%	9.96%
SWX	2.39%	6.80%	9.18%
WGL	4.25%	3.97%	8.22%
		AVERAGE	**9.22%**
		STANDARD DEVIATION	**0.82%**

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CAPM COST OF EQUITY CAPITAL
ELECTRIC UTILITIES

$$\mathbf{k = rf + B\ (rm - rf)}$$

[rf]* = 4.83%
[rm - rf]† = 4.90% (geometric mean)
[rm - rf]† = 6.50% (arithmetic mean)
average beta (Value Line) = 0.89

Value Line Beta

k = 4.83% + 0.89 (4.90%/6.50%)
k = 4.83% + 4.36%/5.78%
k = 9.19% /10.62%

*Current T-Bond yields, six-week average yield from Value Line Selection & Opinion (9/22/06-10/27/06)
†Geometric and arithmetric market risk premiums from Ibbotson Associates 2006 SBBI Yearbook, p. 28.

AMEREN-UE

CAPM COST OF EQUITY CAPITAL
GAS DISTRIBUTORS

k = rf + B (rm - rf)

[rf]* = 4.83%
[rm - rf]† = 4.9% [geometric mean]
[rm - rf]† = 6.5% [arithmetic mean]
average beta (Value Line) = 0.85

k = 4.83% + 0.85 (4.90%/6.50%)
k = 4.83% + 4.17%/65.52%
k = 9.00% /10.36%

*Current T-Bond yields, six-week average yield from Value Line Selection & Opinion (9/22/06-10/30/06)
†Geometric and arithmetric market risk premiums from Ibbotson Associates 2006 SBBI Yearbook, p. 28.

AMEREN-UE
PROOF

If market price exceeds book value,
the market-to-book ratio is greater than 1.0,
and the earnings-price ratio understates the cost of capital.

MP = market price
BV = book value
i = cost of equity capital
r = earned return
E = earnings

1. At $MP = BV$, $i = r = \frac{E}{MP}$.
2. $E = rBV$.
3. Then, $\frac{E}{MP} = \frac{rBV}{MP}$.
4. When $BV < MP$, i.e., $\frac{BV}{MP} < 1$, then,
   a. $\frac{E}{MP} < r$, since $\frac{E}{MP} = \frac{rBV}{MP} < r$, because $\frac{BV}{MP} < 1$;
   b. $i < r$, since at $\frac{BV}{MP} = 1$, $i = \frac{E}{MP} = \frac{rBV}{MP}$, but if $\frac{BV}{MP} < 1$, then $i < r$; and
   c. $\frac{E}{MP} < i$, since at $\frac{BV}{MP} = 1$, $i = \frac{E}{MP} = \frac{rBV}{MP}$, but if $\frac{BV}{MP} < 1$, then $\frac{E}{MP} < i$, because,
      1) $\frac{BV}{MP} < 1$, through MP increasing, and, if so, $\frac{E}{MP}$ decreases, therefore, $\frac{E}{MP} < i$, or
      2) $\frac{BV}{MP} < 1$, through BV decreasing, and, if so, given $E = rBV$, $\frac{E}{MP}$ decreases, therefore, $\frac{E}{MP} < i$.
5. Ergo, $\frac{E}{MP} < i < r$, the earnings-price ratio is lower than the cost of capital, which is lower than the earned return.

AMEREN-UE

MODIFIED EARNINGS-PRICE RATIO ANALYSIS
ELECTRIC UTILITIES

COMPANY	Reuters* 2007 Earnings (Per Share)	Market Price (Per share)	Earnings-Price Ratio	Current R.O.E. 2007	Projected R.O.E. 2009-2011
CV	$1.40	$22.33	6.27%	8.00%	8.00%
FE	$4.15	$57.54	7.21%	13.00%	12.00%
NU	$1.35	$23.89	5.65%	8.00%	8.00%
PGN	$2.65	$45.08	5.88%	8.00%	8.50%
LNT	$2.52	$37.08	6.80%	9.50%	9.00%
AEE	$3.98	$53.37	7.46%	10.00%	9.50%
AEP	$2.92	$38.79	7.53%	11.00%	11.50%
CNL	$1.43	$25.58	5.59%	8.50%	9.50%
DPL	$1.70	$27.65	6.15%	26.00%	18.50%
EDE	$1.38	$23.01	6.00%	9.00%	10.50%
ETR	$5.59	$81.69	6.84%	11.50%	10.50%
HE	$1.79	$27.41	6.53%	10.00%	11.00%
PNM	$2.02	$28.12	7.18%	8.50%	8.50%
PNW	$3.31	$46.39	7.14%	9.00%	9.00%
UNS	$2.20	$34.30	6.41%	9.50%	8.50%
		AVERAGE	6.58%	10.63%	
		CURRENT M.E.P.R.		**8.60%**	
		AVERAGE	6.58%		10.17%
		PROJECTED M.E.P.R.		**8.37%**	

AMEREN-UE

MODIFIED EARNINGS-PRICE RATIO ANALYSIS
GAS DISTRIBUTORS

COMPANY	Reuter's 2007 EARNINGS (Per Share)	MARKET PRICE (Per share)	EARNINGS-PRICE RATIO	CURRENT R.O.E. 2006	PROJECTED R.O.E. 2009-2011
ATG	$2.69	$36.61	7.35%	13.00%	12.00%
ATO	$1.97	$29.26	6.73%	9.00%	10.50%
LG	$1.19	$33.22	3.58%	11.00%	9.50%
GAS	$2.51	$44.10	5.69%	13.00%	13.00%
NWN	$2.36	$40.18	5.87%	10.00%	10.50%
PNY	$1.42	$26.14	5.43%	12.00%	13.00%
SJI	$1.95	$30.35	6.43%	13.00%	13.00%
SWX	$2.09	$34.33	6.09%	9.50%	9.50%
WGL	$1.93	$31.81	6.07%	10.00%	11.00%
		AVERAGE	5.92%	11.17%	
		CURRENT M.E.P.R.	**8.54%**		
		AVERAGE	5.92%		11.33%
		PROJECTED M.E.P.R.		**8.62%**	

AMEREN-UE

MARKET-TO-BOOK RATIO ANALYSIS
ELECTRIC UTILITIES

$k = R.O.E.(1-b)/(M/B) + g$
[2006]

COMPANY								MARKET-TO-BOOK COST OF EQUITY
CV	k= 7.0%	(1-	0.1636	)/ 1.28	+	4.22%	=	8.80%
FE	k= 13.5%	(1-	0.5147	)/ 2.00	+	5.75%	=	9.03%
NU	k= 8.0%	(1-	0.3652	)/ 1.47	+	6.48%	=	9.93%
PGN	k= 8.0%	(1-	0.0431	)/ 1.40	+	3.43%	=	8.89%
LNT	k= 10.5%	(1-	0.5000	)/ 1.63	+	5.78%	=	8.99%
AEE	k= 9.5%	(1-	0.1533	)/ 1.68	+	5.01%	=	9.80%
AEP	k= 11.5%	(1-	0.4714	)/ 1.59	+	5.12%	=	8.94%
CNL	k= 8.0%	(1-	0.3077	)/ 1.71	+	6.40%	=	9.65%
DPL	k= 26.5%	(1-	0.3103	)/ 4.69	+	5.80%	=	9.70%
EDE	k= 7.0%	(1-	-0.0667	)/ 1.46	+	4.57%	=	9.69%
ETR	k= 11.5%	(1-	0.5304	)/ 2.05	+	6.00%	=	8.63%
HE	k= 10.0%	(1-	0.1733	)/ 1.82	+	3.95%	=	8.50%
PNM	k= 8.5%	(1-	0.4788	)/ 1.44	+	6.36%	=	9.44%
PNW	k= 8.5%	(1-	0.3233	)/ 1.30	+	5.23%	=	9.64%
UNS	k= 9.5%	(1-	0.5333	)/ 1.82	+	6.20%	=	8.63%
							AVERAGE	**9.22%**
							STANDARD DEVIATION	**0.49%**

Note: Equity returns and retention ratios based on Value Line current year projections.

AMEREN-UE

MARKET-TO-BOOK RATIO ANALYSIS
ELECTRIC UTILITIES

k = R.O.E.(1-b)/(M/B) + g
[2009-2011]

COMPANY								MARKET-TO-BOOK COST OF EQUITY
CV	k= 8.0%	(1- 0.4065)/	1.28	+	4.22%	=		7.94%
FE	k= 12.0%	(1- 0.4889)/	2.00	+	5.75%	=		8.82%
NU	k= 8.0%	(1- 0.3800)/	1.47	+	6.48%	=		9.85%
PGN	k= 8.5%	(1- 0.1310)/	1.40	+	3.43%	=		8.70%
LNT	k= 9.0%	(1- 0.4163)/	1.63	+	5.78%	=		8.99%
AEE	k= 9.5%	(1- 0.2303)/	1.68	+	5.01%	=		9.36%
AEP	k= 11.5%	(1- 0.4571)/	1.59	+	5.12%	=		9.05%
CNL	k= 9.5%	(1- 0.4286)/	1.71	+	6.40%	=		9.59%
DPL	k= 18.5%	(1- 0.3556)/	4.69	+	5.80%	=		8.35%
EDE	k= 10.5%	(1- 0.2686)/	1.46	+	4.57%	=		9.84%
ETR	k= 10.5%	(1- 0.5019)/	2.05	+	6.00%	=		8.55%
HE	k= 11.0%	(1- 0.2914)/	1.82	+	3.95%	=		8.24%
PNM	k= 8.5%	(1- 0.4211)/	1.44	+	6.36%	=		9.78%
PNW	k= 9.0%	(1- 0.3155)/	1.30	+	5.23%	=		9.96%
UNS	k= 8.5%	(1- 0.4051)/	1.82	+	6.20%	=		8.97%
							AVERAGE	**9.07%**
							STANDARD DEVIATION	**0.64%**

Note: Equity returns and retention ratios based on Value Line three- to five-year projections.

AMEREN-UE

MARKET-TO-BOOK RATIO ANALYSIS
GAS DISTRIBUTORS

$k = R.O.E.(1-b)/(M/B) + g$
[2006]

COMPANY								MARKET-TO-BOOK COST OF EQUITY
ATG	k= 13.0%	(1-	0.4340)/	1.79	+	5.44%	=	9.54%
ATO	k= 09.0%	(1-	0.3000)/	1.43	+	6.01%	=	10.41%
LG	k= 11.0%	(1-	0.3488)/	1.69	+	5.52%	=	9.77%
GAS	k= 13.0%	(1-	0.2408)/	2.33	+	4.14%	=	8.37%
NWN	k= 10.0%	(1-	0.3784)/	1.82	+	4.95%	=	8.37%
PNY	k= 12.0%	(1-	0.2615)/	2.41	+	5.00%	=	8.68%
SJI	k= 13.0%	(1-	0.5027)/	2.12	+	6.79%	=	9.84%
SWX	k= 09.5%	(1-	0.5568)/	1.76	+	6.80%	=	9.19%
WGL	k= 10.0%	(1-	0.2703)/	1.78	+	3.97%	=	8.06%
							AVERAGE	**9.14%**
							STANDARD DEVIATION	**0.81%**

Note: Equity returns and retention ratios based on Value Line current year projections.

AMEREN-UE

MARKET-TO-BOOK RATIO ANALYSIS
GAS DISTRIBUTORS

$k = R.O.E.(1-b)/(M/B) + g$
[2009-2011]

COMPANY								MARKET-TO-BOOK COST OF EQUITY
ATG	k= 12.0%	(1-	0.4068	)/ 1.79	+	5.44%	=	9.41%
ATO	k= 10.5%	(1-	0.4600	)/ 1.43	+	6.01%	=	9.97%
LG	k= 09.5%	(1-	0.4000	)/ 1.69	+	5.52%	=	8.90%
GAS	k= 13.0%	(1-	0.2786	)/ 2.33	+	4.14%	=	8.16%
NWN	k= 10.5%	(1-	0.4035	)/ 1.82	+	4.95%	=	8.40%
PNY	k= 13.0%	(1-	0.3314	)/ 2.41	+	5.00%	=	8.61%
SJI	k= 13.0%	(1-	0.5106	)/ 2.12	+	6.79%	=	9.79%
SWX	k= 09.5%	(1-	0.6356	)/ 1.76	+	6.80%	=	8.76%
WGL	k= 11.0%	(1-	0.3702	)/ 1.78	+	3.97%	=	7.86%
							AVERAGE	**8.87%**
							STANDARD DEVIATION	**0.72%**

Note: Equity returns and retention ratios based on Value Line three- to five-year projections.

AMEREN-UE
OVERALL COST OF CAPITAL

Type of Capital	PERCENT [1]	COST RATE [2]	WT. AVG. COST RATE [3]=[1]x[2]
1) Common Equity	52.39%	9.250%	4.846%
2) Preferred Stock	2.04%	5.190%	0.106%
3) Long-term Debt	45.47%	5.380%	2.446%
4) Short-term Debt	0.10%	5.110%	0.005%
Totals	100.00%		**7.403%**

PRE-TAX INTEREST COVERAGE* = 4.36x

*Assuming the Company experiences, prospectively, a combined income tax rate of 40%, the pre-tax overall return would be 10.70% [7.40%-(2.45%)=4.95% /(1-40%) = 8.25%+(2.45%)]. That pre-tax overall return (10.7%), divided by the weighted cost of debt (2.45%), indicates a pre-tax interest coverage level of 4.36 times.

AMEREN-UE
BOND RATING BENCHMARK ESTIMATE
BASED ON STAFF RECOMMENDED 9.25% ROE

	Description		Reference
1	Rate Base	$5,400,000,000	Staff Cost of Service Schedule 1, lines 21 and 29
2	Wt. Return on Equity	4.864%	Hill Schedule 12, p. 1, line 1, column 3
3	Income to Common	$262,656,000	Line 1 x line 2.
4	Depreciation & Amort.	$284,600,000	Staff Cost of Service Schedule 9, lines 21 and 72
5	Deferred Income Tax	$12,500,000	Test Year Current (net of ITC Amort.)
6	Funds From Operations	$559,756,000	Line 4 + line 4 + line 5
7	Weighted Interest Rate	2.599%	Hill Schedule 2, p. 2, column 3, lines 7 and 8.
8	Interest Expense	$140,368,750	Line 1 x line 7.
9	FFO + Interest	$700,124,750	Line 6 + line 8.
10	**FFO Interest Coverage**	**5.0**	Line 9 ÷ line 8.
11	**Debt Ratio**	**49.14%**	Hill Schedule 2, p. 1, Column 6, lines 8 and 9.
12	**FFO to Total Debt**	**21%**	Line 6 ÷ (Line 1 x line 11)

	S&P "A" Rating Bus. Pos. = 5	S&P "BBB" Rating Bus. Pos. = 5
FFO Interest Coverage	3.8x-4.5x	2.8x-3.8x
Debt Ratio	42%-50%	50%-60%
FFO to Total Debt	22%-30%	15%-22%

Standard & Poor's, "New Business Profile Scores Assigned to U.S. Utility and Power Companies; Financial guidelines Revised," June 2, 2004.

Item No.	Expense Checklist	Supervisor			BFS		
		Yes	No	N/A	Yes	No	N/A
1	Out-of-state trip(s) approved? (approved form required)			X			
2	In-state trip(s) approved?	X					
	MEALS						
3	Early departure before 6:00 a.m.? **(code C required)**			X			
4	Late arrival after 7:00 p.m.? **(code C required)**	X					
5	Employee in 12-hour travel status? **(code S required)**			X			
6	Within appropriate **CONUS** meal allowance for all in-state business locations? **(itemized receipts required)**	X					
7	Within appropriate **CONUS** meal allowance for all out-state business locations? **(itemized receipts required)**			X			
8	Meals purchased for others? (code U, itemized receipt, names of individuals and business purpose of meals required)			X			
9	Meal(s) provided? (code H, receipt & explanation required if provided meals are not used)			X			
	LODGING						
10	Lodging direct billed as required? (code A)	X					
11	In-state lodging paid by employee? (approved exception request, original receipt, explanation if state tax is claimed required)			X			
12	Out-state lodging paid by employee? (original receipt required)			X			
13	CONUS or single/govt. rate identified on hotel folio?	X					
14	No lodging charged to state? (code I)			X			
	METHOD OF TRANSPORTATION						
15	State vehicle available			X			
16	State vehicle used (code F)			X			
17	< 84 miles per day-personal car allowed @ full rate			X			
18	>= 84 miles per day state car is required-personal car used, fleet rate allowed (request to use personal vehicle required)			X			
19	No state vehicle available (email confirmation required-JC staff only)			X			
20	<150 miles per day-personal car allowed @ full rate (Trip Optimizer not required)	X					
21	>=150 miles per day-rental car required (Code R & Trip Optimizer required).			X			
22	Personal car used in lieu of rental-reimbursement is cost of rental shown on Trip Optimizer (code V and Trip Optimizer required, amount claimed in Misc. column)	X					
23	Rental car used (Code R-Yellow copy of rental agreement and Trip Optimizer required)			X			
24	Airport travel - personal vehicle (code T), current mileage rate allowed			X			
25	Ride share (code J)			X			
26	Airfare - direct billed? (code D)			X			
27	Airfare - paid by employee? **(receipt required)**			X			
28	Personal vehicle in lieu of airfare? **(code G required)**			X			
29	Travel to/from airport provided by family member/friend-airport within 50 miles of domicile (current mileage rate allowed)			X			
30	Airport travel via airport transportation service - Tiger Express, Mo-X or other surface carrier (receipt required)			X			
31	Amtrak, MetroLink or other rail service used-claimed in Bus.RR column (receipts required)			X			
	MISCELLANEOUS						
32	Telephone calls **("state business" notation required)**			X			
33	Tips for provided meals, taxi, shuttle, parking, turnpike, toll roads, car wash, baggage tips, etc? (receipts required for all but tips)			X			
34	Copies, faxes, postage, emergency supplies, conference registration, gasoline for state vehicle, etc? (receipts required)			X			
	SUPERVISOR BEFORE YOU INITIAL EXPENSE REPORT:						
35	Are original receipts, supporting documentation, conference agenda and out-of-state travel form (if applicable) attached in the order incurred and in duplicate? **(required)**	X					
36	Are miscellaneous expenses explained and itemized? **(required)**	X					
37	Is expense report coded by utility type? **(required)**	X					
38	Are information codes noted as required?	X					
39	Are in-state and/or out-state totals correct?	X					
40	Is employee's vendor number noted? **(required)**	X					

Utility codes

E-Electric	H-Heating
G-Gas	T-Telecommunications
W-Water	GS-Gas Safety
S-Sewer	A-All Other

Information codes

(A) Lodging direct billed
(B) Weekend work necessary
(C) Early departure/late arrival **(required code)**
(D) Airfare direct billed
(E) Worked state holiday
(F) State vehicle
(G) Surface transportation not to exceed lowest available coach fare of $_____ **(required code)**
(H) Meal(s) provided
(I) No lodging charged to state
(J) Ride share
(K) Trip began in previous reporting period
(L) Expenses beyond end of month included to complete business trip
(M) Expenses from previous month included to complete business trip
(N) Expenses not previously claimed
(O) Personal vehicle used-not claiming mileage
(P) Residence is closer than official domicile
(Q) No further expenses anticipated for remainder of the month
(R) Rental car used - Trip Optimizer attached
(S) 12-hour travel status **(required code)**
(T) Personal Vehicle - airport travel
(U) Meals purchased for others
(V) Personal vehicle used in lieu of rental - cost of rental claimed
(W) CONUS lodging rate inadequate-explanation attached

Codes X through Z may be used as necessary.

Easy Guide to Automobile Travel ***Trip Optimizer Required**

State vehicles should be used if available.

< 84 miles per day - state car may be used or personal vehicle may be used at current full mileage reimbursement rate.

> = 84 miles per day - state vehicle is required. If personal vehicle is used, reimbursement rate is the current fleet rate (exception request is required).

If no state vehicle is available:

< 150 miles per day - personal vehicle may be used at current full mileage reimbursement rate.

> = 150 miles per day * - rental car required. If personal vehicle is used, reimbursement will be the cost of the rental (claimed in miscellaneous column) and a Trip Optimizer is required.

Standard mileage (one-way)

Jefferson City-St. Louis Airport	125
Jefferson City-St. Louis Office	122
Jefferson City-KCI	190
Jefferson City-Kansas City Office	155
Jefferson City-Columbia Airport	27

Claimant's name: Cary Featherstone_____

Expense report period: November 2006_____

Supervisor's initials/date: _____

***** Supervisor must initial both copies of expense report *****

******* BUDGET & FISCAL SERVICES DEPARTMENT USE ONLY *******

____ **Approved / Date** _____ ____ **Rejected / Date** _____ **Item no.**_____**(see explanation below)**

Explanation of rejection: