Treasury notes, a reasonable estimate of the risk-free rate is 5.5-6.0%.

**Q. Please explain how you estimated the required market risk premium.**

A. The required market equity risk premium can be developed (1) from an analysis of achieved market risk premiums and (2) from estimates of prospective market risk premiums. With respect to the latter, the discounted cash flow model can be used to estimate the cost of equity, where the expected return is comprised of the dividend yield plus investor expectations of longer-term growth based on prevailing capital market conditions. The estimated equity risk premiums are obtained by subtracting the corresponding government bond yield from the estimated cost of equity.

My estimation of the required market risk premium began with the analysis of achieved equity risk premiums in the U.S. market. In principle, as noted in Section III, when historic risk premiums are used as a basis for estimating the expected risk premium, arithmetic averages should be used. Further, income returns on government bonds should be used as the best estimate of what bond investors expected when the bonds were purchased.

Average equity risk premiums were calculated for two historic periods: 1926-2001 and 1947 to 2001. The 1926 to 2001 period represents the longest period over which the seminal Ibbotson Associates data are available. The average data for the post-World War II period (1947 to 2001) were also calculated, because the end of World War II marked significant changes in the economic structure which remain relevant today.

The key structural changes that have occurred since the end of World War II are:

1. The globalization of the economy, which has been facilitated by the reduction in trade barriers of which GATT (1947) was a key driver;
2. The exertion of the independence of the Federal Reserve commencing in 1951, and its focus on promoting domestic economic stability, which has been instrumental in tempering economic cyclicality;
3. Demographic changes, specifically suburbanization and the rise of the middle class, which have impacted on the patterns of consumption;
4. Transition from a predominately manufacturing to a service-oriented economy;
5. Technological change, particularly in the areas of telecommunications and computerization, which have facilitated both market globalization and rising productivity.

The experienced risk premiums for the two periods are as follows:

| **1926 to 2001** | **1947 to 2001** |
|---|---|
| 7.5% | 7.6% |

Source: Schedule 11.

**Q. The preceding historic average risk premiums reflect differentials between equity market returns and income returns on a notional 20-year**

**government security. How would you adjust the historic risk premiums for the fact that you are using a 10-year Treasury note as the risk-free rate?**

A. Since 1993, the average spread between 10- and 20-year Treasuries has been approximately 40 basis points.[78]

The addition of 40 basis points to the achieved historic equity market risk premiums based on a 20-year bond would approximate the historic average equity market risk premium over 10-year Treasury notes. The long-term average risk premium in relation to a 10-year Treasury note would then be in the range of 7.9% to 8.0%.

**Q. Please discuss why you also estimate the forward-looking risk premium.**

A. The experienced market risk premium may converge with investor expectations over the longer-term, but the application of a current interest rate to a longer-term average may be unrepresentative of investor expectations in a specific capital market environment. To illustrate, the following table separates the 1926 to 2001 risk premium into periods characterized by different economic conditions. The averages indicate that market risk premiums declined when inflation was rising, gradually increased as inflation and inflation fears fell and have been relatively high during periods of moderate inflation and relatively stable interest rates. The results suggest that investors are likely to anticipate higher equity risk premiums in periods of steady growth, low inflation and low interest rates. Thus, forward looking estimates should capture those expectations.

[78] The 20-year constant maturity yield reported by the Department of the Treasury since 1993 is based on outstanding Treasury bonds with approximately 20 years remaining to maturity. The Treasury discontinued issuing a 20-year bond in 1986.

## TABLE 15

| U.S. RISK PREMIUMS (1926-2001) | | | | | | |
|---|---|---|---|---|---|---|
| **Period** | **Description** | **Stock Returns** | **Bond Income Returns** | **CPI Growth** | **GDP Growth** | **Risk Premium:** |
| 1926-1939 | Pre-War, Market Crash, Deflation | 9.8% | 3.1% | -1.6% | 1.3% a/ | 6.8% |
| 1940-1951 | Growth and Inflation, Early Post World War II | 13.2 | 2.3 | 5.5 | 6.3 | 10.9 |
| 1952-1967 | Steady Low Inflation, Robust Growth | 14.8 | 3.6 | 1.6 | 3.8 | 11.2 |
| 1968-1982 | Rising Inflation, Interest Rates, Stagflation | 8.4 | 7.9 | 7.4 | 2.7 | 0.5 |
| 1983-1991 | Falling Nominal and Real Interest Rates, Moderately High/Steady Inflation | 17.8 | 9.4 | 3.9 | 3.5 | 8.4 |
| 1992-2001 | Low Inflation and Interest Rates, Moderate/Steady Growth | 14.1 | 6.5 | 2.7 | 3.4 | 7.6 |

a/ 1930-1939

Source: Stocks, Bonds, Bills and Inflation: 2001 Yearbook, Ibbotson Associates; Economic Indicators, prepared by the Council of Economic Advisors, various issues.

The forward looking market premium may be determined by application of the discounted cash flow (DCF) model to the S&P 500. To estimate the DCF cost for the S&P 500, the I/B/E/S consensus of analysts' forecasts of normalized earnings growth for the companies in the market index was used as a proxy for investor expectations of long-term growth. To illustrate, the fourth quarter 2001 dividend yield for the S&P 500 was 1.4%. Consensus forecasts for five-year normalized earnings growth rates available for companies in the S&P 500 index show an expected growth rate of 14.6% (4Q 2001). The resulting DCF cost is 16.0% (Schedule 12). At a forecast 10-year Treasury yield of 5.5% to 6.0%, the forward looking estimate of the market risk premium would be 10.0% to 10.5%.

Rather than focus on a "spot" differential, the analysis was extended to cover a full business cycle (approximately 1992 to 2001), which encompasses a relatively

low interest rate/inflation environment. Monthly DCF costs of equity were estimated for the S&P 500 as the sum of the month-end dividend yield and the respective I/B/E/S five-year normalized earnings growth projections (as a proxy for longer-term growth). The monthly risk premium was then calculated as the differential between the DCF cost and the month-end yield on 10-year Treasury notes.

The table below summarizes the results:

**TABLE 16**

| | Expected Market Return | 10-Year Treasury Note Yield | Expected Risk Premium |
|---|---|---|---|
| 1992-2001 | 15.8% | 6.1% | 9.6% |
| 1997-2001 | 16.9% | 5.6% | 11.2% |
| 1999-2001 | 17.9% | 5.6% | 12.2% |

Source: Schedule 12.

The above table generally indicates an increase in the expected return for the market over the decade, driven by the increase in expected earnings growth (from 12% in the fourth quarter of 1995 to over 18% in the third quarter 2000). Despite the recent decline in corporate profits, the longer-term forecasts of earnings growth remained higher at the end of 2001 than in the first half of the decade (over 14% in December 2001). The increase in the expected market return over the decade is consistent with the salutary effect of lower interest rates on profitability and the experienced (and expected) technology-driven increases in productivity.

Focusing on the expected equity market returns over the past 10 years (approximately 15.8%) in relation to the expected 10-year Treasury yield of 5.5% to 6.0%, the indicated forward-looking risk premium is in the range of 9.8% to 10.3%.

**Q. What is your estimate of the required equity market risk premium?**

A. Giving primary weight to the historic data, but recognizing the higher expected return relative to historic averages indicated by the DCF approach, the market risk premium (in relation to the 10-year Treasury) is approximately 8.25% to 8.5%.

**Q. With respect to the beta, what have been the most recent Value Line betas for your sample of electric utilities?**

A. The most recent Value Line betas were approximately 0.52 (see Schedule 13).

**Q. Is a beta of 0.52 a reasonable measure of the relative non-diversifiable risk of your sample of electric utilities?**

A. No. Similar to Mr. Bible's sample of electric utilities, the Value Line betas of my proxy sample averaged 0.70 from 1986 to 1997, before declining to approximately 0.65 in 1998 and then to a range of 0.48 to 0.53 in 1999 to 2001 (Schedule 13). As discussed in Section II, the decline in betas since the beginning of 1998 can be attributed to extreme movements in the equity markets which have depressed calculated utility betas, not to a decline in electric utility risk.

**Q. Do you have evidence from your sample that supports this conclusion?**

A. Yes. I prepared the table below, which is similar to the one I prepared for Mr. Bible's comparable electric utilities. The table includes the medians of various risk measures for my sample of electric utilities before and after the observed decline in beta. The data do not support the conclusion that the risk of my proxy sample of electric utilities has declined since 1997.

**TABLE 17**

| | Value Line Risk Measures | | | S & P Risk Measures | |
|---|---|---|---|---|---|
| | Earnings Predictability | Financial Strength | Safety | Business Profile | Bond Rating |
| 1996 | 90 | A | 2 | n/a | A+ |
| 1997 | 90 | A | 2 | 5 | A+ |
| 1998 | 85 | A | 2 | n/a | A |
| 1999 | 85 | A | 2 | 5 | A |
| 2000 | 85 | A/B++ | 2 | 5 | A |
| 2001 | 83 | B++ | 2 | 5 | A |

Source: Schedule 14.

**Q. In light of this analysis, what is your estimate of the forward-looking beta for your sample of electric utilities?**

A. A beta of 0.70, equal to the typical sample beta prior to the recent market extremes, is a reasonable forward-looking relative risk adjustment.

**Q. Please provide your CAPM results for the sample based on your estimated values for the model inputs.**

A. The CAPM result is in the approximate range of 11.5% to 11.75%, or specifically:

| | | |
|---|---|---|
| Cost of Equity | = | Risk-Free Rate + Beta (Market Risk Premium) |
| 11.4-11.8% | = | 5.5-6.0% + 0.70 (8.25-8.5%) |

**Q. What does the 11.5% to 11.75% CAPM result represent?**

A. Similar to the DCF result, the 11.5% to 11.75% cost determined by reference to the CAPM test is a market-derived cost, which measures the return investors

expect on the market value of their equity investments. As with the DCF test, the next step in applying the CAPM is to recognize the disparity between market and book value. At a minimum, the utility needs to be permitted to recover all flotation costs associated with equity financing, to be in a position to raise equity capital without dilution of book value, and to provide a cushion against unanticipated market conditions. A minimum allowance for financing flexibility is 50 basis points (See Appendix C). The addition of a 50 basis point allowance for financing flexibility results in a return on equity of 12.0% to 12.25%.

**Q. What is the indicated return on equity if the CAPM result is instead translated to a fair return on book equity using the long-run market/book ratio, as you did when you applied the DCF test?**

A. The CAPM result that is compatible with a longer-run market/book ratio of 1.50 is in the range of approximately 13.75% to 14.0%.[79]

## COMPARABLE EARNINGS

**Q. Please discuss the conceptual underpinnings of the comparable earnings test.**

A. The comparable earnings test provides a measure of the fair return based on the concept of opportunity cost. Specifically, the test is derived from the premise that capital should not be committed to a venture unless it can earn a return commensurate with that available prospectively in alternative ventures of comparable risk. Since regulation is intended to be a surrogate for competition, the opportunity cost principle

[79] To illustrate:

$$\frac{1.50\,(11.75\%)}{1 + (.50\,(1.50 - 1.0))} = 14.1\%$$

entails permitting utilities the opportunity to earn a return commensurate with the levels achievable by competitive firms of similar risk. The comparable earnings test, which measures returns, in relation to book value, is the only test that can be directly applied to the equity component of an original cost rate base without an adjustment to correct for the discrepancy between book values and current market values.

The concept that regulation is a surrogate for competition implies that the regulatory application of a fair return to an original cost rate base should result in a value to investors commensurate with that of similar risk competitive ventures. The fact that a return is applied to an original cost rate base does not mean that the original cost of the assets is the appropriate measure of their fair market value. The comparable earnings standard, as well as the principle of fairness, suggests that, if competitive industrial firms of similar risk are able to maintain the value of their assets considerably above book value, the return allowed to utilities should likewise not foreclose them from maintaining the value of their assets as reflected in current stock prices.

**Q. Should you apply the comparable earnings test to utilities, rather than to competitive firms?**

A. No. Application of the test to utilities would be completely circular. The achieved returns of utilities have been in large measure a function of allowed returns. In contrast, the earnings of competitive firms represent returns available to alternative investments independent of the regulatory process.

**Q. What are the principal issues arising in the application of the comparable earnings test?**

A. The principal issues in the application of the comparable earnings test are:

(1) The criteria for selection of a sample of industrials of reasonably comparable risk to utilities.

(2) The appropriate time period over which returns are to be measured in order to estimate prospective returns.

(3) The need for an adjustment to the "raw" comparable earnings results to reflect the differential risk of utilities relative to the selected industrials.

**Q. Please discuss your application of the comparable earnings test.**

A. I applied the comparable earnings test to a sample of low risk competitive industrials, for which I then estimated the achievable returns. Subsequently, I estimated the risk differential between the sample of industrials and the proxy sample of electric utilities. Based on that differential, I reduced the industrial returns to a level compatible with the lower risk of the electric utility sample.

**Q. Please discuss the selection process you used in applying the comparable earnings test.**

A. The selection process starts with the recognition that industrials are generally exposed to higher business risk, but lower financial risk, than utilities. The selection of industrials focuses on total investment risk, i.e., the combined business and financial risks. The comparable earnings test is based on the premise that industrials' higher business risks can be offset by a more conservative capital structure, thus permitting selection of industrial samples of reasonably comparable investment risk to utilities.

Utilities are generally characterized by relatively low volatility with respect to both earnings and stock market performance. Since consumer-oriented industries, due to their demand characteristics, are likely to exhibit relatively greater stability than other industries (e.g., extractive industries), the initial universe selection was limited to consumer-oriented industries (SIC codes 2000-3999 and 5000-5999).[80]

From this universe, firms were selected with book data available since 1991, market data available since December 1995 and with common equity of at least $250 million in 2000 and non-negative common equity throughout the period. This initial screen yielded 553 companies. Eliminating all companies incorporated outside of the United States left 490 firms. Next, companies with a Value Line Safety Rank of 2 were selected, reducing the number of companies to 64. A Safety Rank of 2 is equivalent to the average Safety Rank of the eight company electric utility sample selected for the DCF analysis (see Schedule 7).

From this group, 13 companies whose 1991 to 2000 average returns were above or below one standard deviation from the average were eliminated in order to exclude companies whose earnings are either extraordinarily profitable or chronically depressed. The remaining 51 companies were then arrayed in ascending order of Value Line beta. Companies with betas of one or higher were eliminated.[81] The final sample contains 34 companies, which are listed on Schedule 15.

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[80] The major industrials represented by these SIC codes are: Food and Kindred Products, Tobacco Products, Textiles, Lumber and Wood Products, Paper Products, Petroleum Refining, Chemicals, Rubber, Plastics, Glass, Concrete, Primary Metals, Fabricated Metals, Industrial/Commercial Machinery, Transportation Equipment, Computer and Electronic Equipment, Measuring Equipment, Wholesale and Retail Operations for both durable and non-durable goods.

[81] Enron was eliminated from the final sample because its Global Industry Classification Standard (GICS) sub-industry code defined it as a utility.

**Q. What are the industrial sample risk characteristics relative to those of electric utilities?**

A. The sample has the following risk characteristics, compared to the sample of electric utilities:

**TABLE 19**

| | Industrials (Median) | Electrics (Median) |
|---|---|---|
| S&P Debt Ratings | A- | A |
| Value Line Risk Measures: | | |
| Safety Rank | 2 | 2 |
| Earnings Predictability | 88 | 83 |
| Financial Strength | A | B++ |
| Beta | 0.80 | 0.53 |

Source: Schedules 7 and 15.

Although the individual values for the electric utilities and industrials are not identical, they are similar enough so that the returns for the industrials can be used as a point of departure.

**Q. Over what period did you measure the industrials' returns?**

A. The measurement of returns for competitive industrials is, in large part, historical. The test, however, is intended, as are all tests used to estimate the fair return, to be prospective in nature. Therefore, the returns earned in the past should be analyzed in the context of the longer-term outlook for the economy to determine the reasonableness of relying on past returns as a proxy for the future. Since returns on

equity tend to be cyclical, the returns should be measured over an entire business cycle, in order to give fair representation to years of expansion and decline.

The forward looking nature of the estimate of the fair return requires selection of a cycle which is reasonably representative of prospective economic conditions. The past business cycle (measured from point to point), covering the period 1991 to 2000, meets those criteria. That cycle was characterized by an inflation rate (2.2% based on the GDP Price Index) and real economic growth rate (3.4%) (Schedule 5) that are quite close to the most recent consensus estimates for longer-term (10-year) inflation and growth (2.2% inflation measured by the GDP Price Index; 3.3% expected growth in real GDP).

The achieved returns of the 34 companies for 1991 to 2000 are as follows:

**TABLE 20**

| | |
|---|---|
| Average | 18.1% |
| Median | 18.0% |
| Average of Annual Medians | 18.5% |

Source: Schedule 16.

The results indicate that a low risk industrial in the consumer-oriented industries may be expected to earn a return of no less than 18.0%.

**Q. Are the historic returns on equity of the sample compatible with the forecast returns on equity for the same company?**

A. Yes. Value Line provides forecasts of the return on equity for each of these firms. The most recent Value Line forecasts[82] indicate returns on equity in the range of 18.3% to 20.9% (based on the sample median and average) for the period 2004 to 2007 (Schedule 16).

**Q. Given the higher recent betas of the industrials compared to those of electric utilities, how have you recognized the industrials' higher risk?**

A. The returns of the industrials were adjusted for the lower risk of an electric utility by applying the ratio of their respective betas to that portion of the book return in excess of the risk-free rate. Using my mid-point forecast yield of 5.75% on 10-year Treasury notes, the recent median electric utility beta of 0.53, and the median industrial beta of 0.80 (Schedules 7 and 15), I lowered the industrial returns as follows:[83]

$$.53/.80\ (18.3\% - 5.75\%) + 5.75\% = 14.0\%$$

The risk-adjusted return on book equity of 14.0% represents a fair return on original cost book equity for AmerenUE. The 13.75% to 14.0% return on equity is an opportunity cost, i.e., a return compatible with providing a utility an opportunity to earn a return on original cost book value commensurate with those achievable by competitive firms of similar investment risk.

[82] Issues dated between December 2001 and March 2002.

[83] The adjustment effectively relies on the assumptions underpinning the Capital Asset Pricing Model. In this estimate, no allowance was made for the recent depressed level of utility betas (inasmuch as the impact of the recent market volatility on the calculated betas of the sample of the specific sample of low risk industrials was not tested.)

**Q. Why are the results of the comparable earnings test relevant if the sample itself is not precisely of the same risk as the electric utilities?**

A. There is no legal or economic requirement that the sample of competitive firms be equal in risk to the regulated company. What is required is the differences in risk be recognized through appropriate adjustments to the returns of the competitive firms so that the resulting return is compatible with the risk profile of the regulated firm. Those risk differences have indeed been recognized.

Since the objective of regulation is to simulate competition, it is critical that the determination of a fair return explicitly consider the returns achievable by competitive firms on a risk-adjusted basis. This avoids the circularity which a focus on only other regulated companies entails and ensures that the objective of regulation is achieved.

## 11. FAIR RETURN FOR AMERENUE

**Q. Please summarize the cost of equity estimates of your various tests.**

A. The test results, as applied to the sample of electric utilities, is as follows:

**TABLE 21**

| | |
|---|---|
| Discounted Cash Flow | 11.5% to 13.5% |
| CAPM | 12.0% to 14.0% |
| Comparable Earnings | 14.0% |

**Q. Based on the three test results above, what is a reasonable return on equity for AmerenUE?**

A. In my opinion, the allowed return on equity for AmerenUE should be set at no less than 12.0%. A reasonable return on equity should be viewed as falling within a range of 12.0% to 14.0%.

**Q. Based on your recommended range of returns, AmerenUE has included a return on equity of 12.5% in its revenue requirement. What is the indicated return on rate base?**

A. The return on rate base is set out below:

**TABLE 22**

| Component | Proportion | Cost Rate | Weighted Cost |
|---|---|---|---|
| Debt | 37.40% | 6.82% | 2.55% |
| Preferred Shares | 3.52% | 5.72% | 0.20% |
| Common Equity | 59.08% | 12.5% | 7.38% |
| | | **Return on Rate Base** | 10.13% |

The proportions of the capital structure and embedded cost rates for debt and preferred shares are identical to those filed by Staff witness Bible.

## 12. AMERENUE'S PROPOSED ALTERNATIVE REGULATION PLAN INCLUDES A SHARING GRID WHICH ASSURES SHAREHOLDER RETURNS WILL NOT BE EXCESSIVE

**Q. Please comment on the reasonableness of AmerenUE's proposed Alternative Regulation Plan.**

A. In this proceeding AmerenUE is proposing a new Alternative Regulation Plan ("Alt. Reg. Plan") in lieu of rates based on its actual revenue requirement. That

proposal includes an initial rate reduction, with sharing of earnings with customers in subsequent years of the proposed term of the Alt. Reg. Plan.

The following table sets out the sharing grid and demonstrates what AmerenUE's ROE would actually be if it were able to earn at the top of each tier of the sharing grid.

**TABLE 23**

**Performance Dividend**

| **UE-Missouri Electric ROE** (before Performance Dividend) | **Sharing Credit** (given to customers) | **Total Funding of Dollar More and the Ameren CDC** (Divided equally between the Dollar More Program and the Ameren CDC.) |
|---|---|---|
| 10.5% to 12.5% ROE ("Baseline Sharing Band") | • $15 million | • $2 million |
| 12.5% to 15% ROE | • all of the above, plus 50% of earnings between 12.5% and the actual ROE (up to an ROE of 15%) | • all of the above, plus 5% of earnings between 12.5% and the actual ROE (up to an ROE of 15%) |
| 15% to 16% ROE | • all of the above, plus 80% of earnings between 15% and the actual ROE (up to an ROE of 16%) | • all of the above, plus 10% of earnings between 15% and the actual ROE (up to an ROE of 16%) |
| Above 16% ROE | • all of the above, plus 90% of earnings above 16% ROE | • all of the above, plus 10% of earnings above 16% ROE |

There are no rules or formulae that can be applied to determine the reasonableness of the specific components of the grid. Nevertheless, the following provides various perspectives on their reasonableness.

First, it is worth noting that Ameren's revenue requirement includes a return on equity of 12.5%. Nevertheless, the Alt. Reg. Plan proposes to begin sharing with customers at an ROE of 10.5%, a level below that which would be AmerenUE's requested return on equity under a traditional cost of service application. This provides significant added benefits to customers. At the same time, the sharing grid still allows AmerenUE to reach the earnings level consistent with return on equity within my recommended range of 12.0% to 14.0%.

Second, the potential actual returns resulting from the proposed sharing grids can be compared to those under other existing plans. For example, the North Dakota Commission recently approved plans for Northern States Power ("NSP") and Otter Tail Power that included an allowed return of 12.0% with 50/50 sharing above 13.0%. Under AmerenUE's proposed Alt. Reg. Plan, its effective ROE would be capped at 13.4%. If NSP earned 14.0% before sharing, its effective return on equity would be 13.5%. Under AmerenUE's proposed plan, the same pre-sharing 14% ROE would result in a return of only 12.8%, thus providing customers with a materially larger share of actual earnings. Table II in Section III of my testimony also shows that UE's proposed sharing grid is well within the parameters of what other state commissions have found to be just and reasonable, and, in fact, benefits customers to a greater extent than the preponderance of those plans.

Third, the maximum ROE of 13.4% is similar to the Value Line long-term forecast median ROE (13.0%) for the Central U.S. electric utility companies (excluding Ameren) and slightly below the 13.5% ROE forecast for the upper 50% of those companies (Schedule 4).

Fourth, the maximum ROE AmerenUE could earn is over 7 percentage points less than the Value Line forecast average (simple) return of the S&P Industrials Composite (13.4% versus 20.6%) over the 2004 to 2007 period.

Fifth, AmerenUE's proposed maximum ROE is lower than the 14% upper end of the range of ROEs which I have estimated to be fair and reasonable.

These various observations and comparisons indicate that the returns achievable by AmerenUE under its proposed plan will not exceed levels that are just and reasonable.

**Q. Does this conclude your testimony?**

A. Yes it does.

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

| | | |
|---|---|---|
| The Staff of the Missouri Public Service Commission, Complainant, | ) | |
| vs. | ) | Case No. EC-2002-1 |
| Union Electric Company, d/b/a AmerenUE, Respondent. | ) | |

**AFFIDAVIT OF KATHLEEN C. McSHANE**

**STATE OF MARYLAND** )
) **ss**
**CITY OF BETHESDA** )

Kathleen C. McShane, being first duly sworn on her oath, states:

1. My name is Kathleen C. McShane. I work in Bethesda, Maryland, and I am employed at Foster Associates, Inc.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 117 pages; Schedules 1-17, consisting of 21 pages; Appendix A, consisting of 7 pages; Appendix B, consisting of 5 pages; and Appendix C, consisting of 4 pages, all of which has been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

Kathleen C. McShane

Subscribed and sworn to before me this 6th day of May, 2002.

Patricia J. Bradley
Notary Public

My commission expires:

My Commission Expires
10/14/02

# EXECUTIVE SUMMARY

**Kathleen C. McShane**

***Senior Vice President and Treasurer of Foster Associates, Inc., an economic consulting firm, who has testified on cost of capital in over 100 cases in Federal, State, Provincial, and Territorial regulatory jurisdictions in U.S. and Canada***

* * * * * * * * * *

My evidence critiques the opinions offered by the Staff concerning the appropriate return on equity for AmerenUE, shows that the Staff has failed to meet its burden of proof on this critical issue, and provides an independent estimate of a just and reasonable return on equity for AmerenUE. My conclusions are as follows:

- Estimation of a fair return in a critical task that requires informed judgment and consideration of all facts.
  - The rate of return on common equity is one of the most important elements of the revenue requirement, and should be approached with the high degree of thought and analysis that it merits.
  - The estimation of a fair return is not produced by a simple arithmetic formula, but requires the use of multiple tests applied to samples of comparable companies, followed by the application of expert judgment to the results.
  - A fair and reasonable return falls within a range; the allowed return should be set within that range, based on the application of the multiple criteria that govern what is fair and reasonable.

- Staff's testimony in this case underestimates the fair return on equity for AmerenUE by approximately 3 percentage points.
    - Staff recommends a return (8.91% to 9.91%, with a mid-point of 9.41%) which is neither fair nor reasonable, and is unsupported by the body of analysis which actually has been presented by Mr. Bible.
    - Mr. Bible's recommendation is based solely on a discounted cash flow ("DCF") result applied to Ameren Corp. No competent analyst would base the cost of equity on a single test applied to a single company. In addition, application of the DCF test to the subject company, particularly one which is regulated, is entirely circular. Its results are a function of the return the regulator is expected to allow. That is the same return the analyst is supposed to be estimating.
    - By averaging historic growth rates with analysts' consensus forecasts of future growth rates (which already take into account historic rates), Mr. Bible's DCF test calculation gives excessive weight to historic growth rates in what is supposed to be an effort to estimate future investor growth expectation. Replacement of Mr. Bible's average historic and forecast growth rates with only the forecast growth rates increases his DCF return on equity results by between 1.25 to 3 percentage points.
    - Mr. Bible's risk premium analysis of Ameren erroneously replaces, relative to past Staff practice, utility bond yields with government bond yields. Correction for this error increases the risk premium return on equity result by 0.7 percentage points.

- Mr. Bible's Capital Asset Pricing Model utilizes a risk-free rate, a market risk premium and relative risk factors (betas) which significantly understate AmerenUE's required equity return. Replacement of the unreasonably low inputs with appropriate values increases his CAPM return on equity results by 1.9 to 4.5 percentage points.
- Mr. Bible opted not to apply a risk premium test to his comparable sample. Inclusion of that analysis adds a further test result that is 2.7 percentage points above his return on equity recommendation.
- Corrections for these errors and omissions in the Staff's testimony raises the rate of return on equity to a range of 11.8% to 12.8% when equal weight is given to each of the test results for Ameren Corporation and Mr. Bible's sample of comparable companies. That return is 2.2 to 3.4 percentage points higher than the mid-point of the Staff's recommendation as shown in the table below.

| Test | Mr. Bible's Results | Corrected Results | Correction |
|---|---|---|---|
| DCF – Ameren | 8.91% to 9.91% | 11.2% | Use analysts' growth forecasts |
| Risk Premium – Ameren | 11.87% | 12.53% | Use utility bond yields |
| CAPM – Ameren | 9.34% to 9.40% | 11.2% to 13.9% | Use reasonable risk-free rate, correct market risk premium and beta |
| DCF – Comparables | 9.75% | 12.8% | Use analysts' growth forecasts |
| Risk Premium – Comparables | -- | 12.1% | Apply test to sample companies |
| CAPM - Comparables | 9.46% to 9.52% | 11.2% to 13.9% | Use reasonable risk-free rate, correct market risk premium and beta |
| **Average** | **9.9% to 10.1%** | **11.8% to 12.8%** | |
| **BIBLE RECOMMENDATION** | **8.91% to 9.91%** | | |

- My independent analysis of the fair return in this case shows that a fair return for AmerenUE is in the range of 12% to 14%.
  - The analysis is based on the results of multiple tests applied to samples of comparable companies. Such an approach is required because no single test can be expected to provide the "correct" answer. More importantly, the ability of any single test applied to one individual company to obtain the "right" answer would be pure happenstance.
  - My DCF test, applied to a sample of eight comparable electric utilities (including Ameren Corporation), using analysts' consensus growth

forecasts, results in an estimated cost of equity (on market value) of 11.0% to 11.3%.

- My CAPM return on equity results, applied to the same sample of electric utilities, and using a reasonable estimate of the beta, is 11.5% to 11.75%.
- Both the DCF and CAPM results are market rates, that is, derived from market values and applicable to the market value of investments. However, regulatory convention applies that return to the book value. The further the market value of a company's equity is above its book value, the greater the extent to which a current DCF or CAPM cost of equity understates the fair return on book equity. Simply put, the application of the market return arising from the DCF and CAPM tests to the book value of equity under current market conditions is wrong. Unless the market-derived cost of equity estimates recognize the significant deviation between current market value and book value, the application of those tests will, by definition, significantly understate the return (in dollar terms) on original cost book value that investors require. When the market-value derived expected returns on equity are translated into fair returns on book value, the resulting required returns on equity are:

| | |
|---|---|
| DCF | 11.5% to 13.5% |
| CAPM | 12.0% to 14.0% |

- My comparable earnings test applied to unregulated companies indicates a fair return in the range of 13.75% to 14.0%. The comparable earnings test estimates the opportunity cost of equity; that is, the returns available from

alternative investments of comparable risk. It is the only test that directly measures the fair return in the same manner in which the allowed return is applied: to book value. It is also the only test that explicitly recognizes that utilities do not operate in a utility-only capital market. Utilities have to compete with other types of companies for capital. Therefore, their equity returns also need to be comparable, on a risk-adjusted basis, to those of unregulated companies.

- The sharing grid in AmerenUE's proposed alternative regulation plan will assure reasonable returns.
  - AmerenUE's proposed alternative regulation plan includes a sharing grid which assures that shareholder returns will not be excessive. The proposed grid begins sharing at returns below what would be a fair and reasonable return under traditional cost of service ratemaking.
  - The sharing grid allows for returns in line with those under similar plans approved by other state regulators.
  - The maximum achievable return is compatible with ROEs forecast for other Central U.S. electric utilities.
  - The maximum achievable return is well below the average ROE forecast for competitive industrials.

In summary, Staff has recommended a return on equity for AmerenUE which is clearly inadequate, and, as the testimony of Professor Morin explains, is not based on substantial and competent evidence. A return on equity of 9.41% does not approach meeting the standards that govern a fair and reasonable return, which is reflected by the

fact, as illustrated in Schedule 17 of my testimony, that this proposed return is significantly outside the range of returns that has been allowed in other jurisdictions. Correction of the Staff's estimates for various errors and omissions brings the results to a level (11.8% to 12.8%) which lies within the range of reasonableness. My own analysis, which supports a return on equity in the range of 12.0% to 14.0%, confirms the validity of the Staff's corrected results.

# APPENDIX B
# QUALIFICATIONS OF
# KATHLEEN C. McSHANE

Kathleen McShane is a Senior Vice President and senior consultant with Foster Associates, Inc., where she has been employed since 1981. She holds an M.B.A. degree in Finance from the University of Florida, and M.A. and B.A. degrees from the University of Rhode Island. She is also a Chartered Financial Analyst.

Ms. McShane worked for the University of Florida and its Public Utility Research Center, functioning as a research and teaching assistant, before joining Foster Associates. She taught both undergraduate and graduate classes in financial management and assisted in the preparation of a financial management textbook.

At Foster Associates, Ms. McShane has worked in the areas of financial analysis, energy economics and cost allocation. Ms. McShane has presented testimony in more than 100 proceedings on rate of return and capital structure before federal, state, provincial and territorial regulatory boards, on behalf of U.S. and Canadian telephone companies, gas pipelines and distributors, and electric utilities. These testimonies include the assessment of the impact of business risk factors (e.g., competition, rate design, contractual arrangements), on capital structure and equity return requirements. Ms. McShane has also provided consulting services for numerous U.S. and Canadian companies on financial and regulatory issues, including financing, dividend policy, corporate structure, cost of capital, automatic adjustments for return on equity, and form of regulation (including performance-based regulation).

Ms. McShane was principal author of a study on the applicability of alternative incentive regulation proposals to Canadian gas pipelines. She was instrumental in the design and preparation of a study of the profitability of 25 major U.S. gas pipelines, in which she developed estimates of rate base, capital structure, profit margins, unit costs of providing services, and various measures of return on investment. In a study prepared for the Canadian Ministry of Energy, Ms. McShane analyzed Federal regulation of U.S. pipelines, including trends in rate

design and rate structures. Ms. McShane has also co-managed market demand studies, focusing on demand for Canadian gas in U.S. markets. Other studies performed by Ms. McShane include a comparison of municipal and privately owned gas utilities, an analysis of the appropriate capitalization and financing for a new gas pipeline, risk/return analyses of proposed water and gas distribution companies and an independent power project, pros and cons of performance-based regulation, and a study on pricing of a competitive product for the U.S. Postal Service. She has also conducted seminars on cost of capital for regulated utilities, with focus on the Canadian regulatory arena.

## Publications and Papers

- "Marketing Canadian Natural Gas in the U.S.", (co-authored with Dr. William G. Foster), published by the IAEE in *Proceedings: Fifth Annual North American Meeting*, 1983.

- "Canadian Gas Exports: Impact of Competitive Pricing on Demand", (co-authored with Dr. William G. Foster), presented to A.G.A.'s Gas Price Elasticity Seminar, February 1986.

- "Market-Oriented Sales Rates and Transportation Services of U.S. Natural Gas Distribution Companies", (co-authored with Dr. William G. Foster), published by the IAEE in *Papers and Proceedings of the Eighth Annual North American Conference*, May 1987.

- "Incentive Regulation" An Alternative to Assessing LDC Performance", (co-authored with Dr. William G. Foster), presented at the Natural Gas Conference, Chicago, Illinois sponsored by the Center for Regulatory Studies, May 1993.

- Atlanta Gas Light's Unbundling Proposal;: More Unbundling Required?" presented at the 24th Annual Rate Symposium, Kansas City, Missouri, sponsored by several Commissions and Universities, April 1998.

- "The Effects of Unbundling on a Utility's Risk Profile and Rate of Return", (co-authored with Owen Edmondson, Vice President of ATCO Electric), presented at the Unbundling Rates Conference, New Orleans, Louisiana sponsored by Infocast, January 2000.

## Expert Testimony/Opinions

## on

## Rate of Return & Capital Structure

| | |
|---|---|
| Alberta Natural Gas | 1994 |
| Alberta Power/ATCO Electric | 1989, 1991, 1993, 1995, 1998, 1999, 2000 |
| AltaGas Utilities | 2000 |
| Ameren (Central Illinois Public Service & Union Electric) | 2000 (3 cases) |
| ATCO Gas | 2000 |
| ATCO Pipelines | 2000 |
| BC Gas | 1992, 1994 |
| Bell Canada | 1987, 1993 |
| Benchmark Utility Cost of Equity (British Columbia) | 1999 |
| Canadian Western Natural Gas | 1989, 1998, 1999 |
| Centra Gas B.C. | 1992, 1995, 1996 |
| Centra Gas Ontario | 1990, 1991, 1993, 1994, 1996 |
| Consumers Gas | 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2001 |
| Dow Pool A Joint Venture | 1992 |
| Edmonton Water/EPCOR Water Services | 1994, 2000 |
| Enbridge Gas New Brunswick | 2000 |
| Gas Company of Hawaii | 2000 |
| Gaz Metropolitain | 1988 |
| Gazifère | 1993, 1994, 1995, 1996, 1997, 1998 |
| HydroOne/Ontario Hydro Services Corp. | 1999, 2000 |
| Laclede Gas Company | 1998, 1999, 2001, 2002 |
| Maritimes NRG (Nova Scotia) and (New Brunswick) | 1999 |
| Multi-Pipeline Cost of Capital Hearing (National Energy Board) | 1994 |
| Natural Resource Gas | 1994, 1997 |

| | |
|---|---|
| Newfoundland & Labrador Hydro | 2001 |
| Newfoundland Power | 1998 |
| Newfoundland Telephone | 1992 |
| Northwestel, Inc. | 2000 |
| Northwestern Utilities | 1987, 1990 |
| Northwest Territories Power Corp. | 1990, 1992, 1993, 1995, 2001 |
| Nova Scotia Power Inc. | 2001 |
| Ozark Gas Transmission | 2000 |
| Pacific Northern Gas | 1990, 1991, 1994, 1997, 1999, 2001 |
| St. Lawrence Gas | 1997 |
| Southern Union Gas | 1990, 1991, 1993 |
| Stentor | 1997 |
| Tecumseh Gas Storage | 1989, 1990 |
| Telus Québec | 2001 |
| TransCanada PipeLines | 1988, 1989, 1991 (2 cases), 1992, 1993 |
| TransGas and SaskEnergy LDC | 1995 |
| Trans Québec & Maritimes Pipeline | 1987 |
| Union Gas | 1988, 1989, 1990, 1992, 1994, 1996, 1998, 2001 |
| Westcoast Energy | 1989, 1990, 1992 (2 cases), 1993 |
| West Kootenay Power/Utilicorp United Networks (B.C.) | 1995, 1999, 2001 |
| Yukon Electric Co. Ltd./Yukon Energy | 1991, 1993 |

## Expert Testimony/Opinions

## on

## Other Issues

| Client | Issue | Date |
|---|---|---|
| Gaz Metro/<br>Province of Québec | Cost Allocation/<br>Incremental vs. Rolled-In Tolling | 1984 |
| Canadian Western Natural Gas | Cash Working Capital/<br>Compounding Effect | 1989 |
| Maritime Electric | Form of Regulation | 1995 |
| Enbridge Consumers Gas | Principles of Cost Allocation | 1998 |
| Enbridge Consumers Gas | Unbundling/Regulatory Compact | 1998 |
| Gazifère Inc. | Cash Working Capital | 2000 |
| Maritime Electric | Subsidies | 2000 |
| ATCO Electric | Carrying Costs on Deferral Account | 2001 |
| Newfoundland & Labrador Hydro | Rate Base, Cash Working Capital | 2001 |

# APPENDIX C

# ADJUSTMENT FOR FINANCING FLEXIBILITY

The equity risk premium test result represents a return which conceptually, if applied to the book value of equity, would cause the utility market/book ratio to equal 1.0. This cost needs to be adjusted to permit the utility a certain degree of financing flexibility and integrity.

The adjustment for financing flexibility, or alternatively the flotation cost allowance, is intended to serve two distinct but related purposes: first, to permit a company to recover all costs associated with issuing additional stock as required to meet its obligation to serve, at not less than book value per share, and thus without harming (diluting) the investment of existing shareholders, and second, to position the company at all times such that if it needs to issue additional equity to meet its obligation to serve, it can do so without harm to its existing shareholders.

The adjustment should at a minimum include:

(1) Financing costs, or out-of-pocket issue expenses. These comprise primarily administrative costs and the underwriters' fee. In 2001, Ameren issued 5 million common shares to the public at $39.50, and incurred an underwriting discount of $1.38/share, plus out-of-pocket expenses for printing, legal expenses, etc. of $0.10/share, for a total of $1.48 per share. In relation to net proceeds per share of approximately $38.02, the resulting pre-tax out-of-pocket financing cost is 3.9%. An analysis of electric utility issues covered by EBASCO from 1991-1994 indicated an identical average. [1] A more recent survey of issues during

[1] EBASCO Services, Inc., *Analysis of Public Utility Financing*, various issues, 1991-1994; series discontinued subsequent to 1994.

2001-2002 (12 electric utility issues) shows an average cost per share of 3.85%. On balance, the after-tax cost (at a 38% tax rate) is approximately 2.4%.

(2) An allowance for market pressure, i.e., the tendency for the price of the stock to fall as an additional supply of stock is introduced into the market, of approximately 2-3 percent of the market price.

The article entitled "Total Flotation Costs for Electric Company Equity Issues", by Victor M. Borun and Susan L. Malley, *Public Utilities Fortnightly*, (February 20, 1986), summarizes various studies which were performed using utility data, as well as presents the results, of a study covering 641 electric utility issues. The various studies provide support for a market pressure adjustment of 2-3%.

Further estimates of market pressure were made by reference to the Ameren issue and the sample of 12 electric issues in 2001-2002. The market pressure was estimated as follows:

(a) The percentage change in the price of the utility shares was calculated between the time of the announcement of the issue and the pricing of the issue.

(b) The percentage change in the S&P price index was calculated between the time of the announcement of the issue and the pricing of the issue.

(c) The expected change in the issuing utility's stock price absent an equity issue was then calculated. The expected change (absent an equity issue) from date of announcement to the date of pricing was estimated as 70% of the change in the S&P index, based on a representative electric utility beta factor of 0.70.

(d) The market pressure was then estimated as the actual percentage change in the utility stock price from date of announcement to pricing date less 70% of the change in S&P 500 index over the same period.

The market pressure for the Ameren issue was 5.7%; the average market pressure for the sample of 12 electric utility issues was 3.4% (median of 3.9%).

Conceptually, the measurement of market pressure should be made by reference to the change in market price from the time of the announcement of the sale of additional equity to the time of the sale of this equity, with due regard to the trend of market prices in this period. However, the anticipation of raising equity may precede the announcement, particularly for utilities, so that the market may already reflect (partly, or entirely) the impact of dilution at the time of the announcement. It may then appear that there is no market pressure, when in fact it is merely not statistically measurable. To capture the impact of market pressure, it is therefore necessary to rely on a large number of observations. Moreover, since the flotation cost allowance is essentially a composite figure which is designed to recover flotation costs associated with past and future issues of various sizes, measurement of the market pressure component by reference to a large sample of issues of many relative sizes is appropriate. Based on the data above, a reasonable estimate of market pressure is in the range of 3-4%.

The sum of the first two elements (approximately 6%) comprises an estimate of the minimum allowance required to afford a utility some financing flexibility. Specifically, it is the minimum amount required which will permit a company to recover all costs associated with issuing additional stock as required to meet its obligation to serve, at not less than book value per share, and thus without harming (diluting) the investment of existing shareholders, as well as, to position the company at all times such that if it needs to issue additional equity to meet its obligation to serve, it can do so without harm to its existing shareholders.

This total gives no consideration to the fairness principle, which would recognize that competitive industrials have, in periods of moderate inflation, consistently been able to maintain the real value of their assets, as evidenced by market/book ratios significantly in excess of 1.0. Utilities should not be precluded from achieving a level of financial integrity that gives some recognition to the tendency for industrial market values to equate to replacement costs and thus produce market/original cost book values significantly in excess of 1.0. This is not only a fairness argument, but an economic argument, inasmuch as it is the role of regulation to simulate competition, under which long-run market value should equate to the replacement cost of the productive capacity. The argument is even stronger when regulated utilities are also exposed to competition with other regulated utilities or alternative energy service providers. Hence, an adjustment of 6.0% in the context of original cost regulation is conservative.

A 6.0% flotation cost adjustment is approximately equivalent to an adjustment sufficient to permit a utility to maintain a market/book ratio of 1.06. The DCF formula provides a means of adjusting the market-derived cost to arrive at the book return required for a market/book ratio of 1.06 (see Schedule 10 for derivation):

$$\text{Return on Book Equity} = \frac{\text{Market/Book Ratio x Market-Derived Cost}}{1 + [\text{earnings retention rate } (M/B - 1)]}$$

To achieve a market/book ratio of 1.06, based on the electric utilities' historic dividend payout ratio of 75% (retention rate of 25%) and a market-derived DCF cost of capital of 11.25%, the required return is 11.75%.

$$11.75\% = \frac{1.06\ (11.25\%)}{1 + [.25\ (1.06 - 1.0)]}$$

Hence, a minimum adjustment for financing flexibility, equal to the difference between 11.75% and 11.25%, is approximately 50 basis points.

## HISTORIC VALUE LINE BETAS FOR
## BIBLE'S SAMPLE OF THREE ELECTRIC UTILITIES AND AMEREN

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 |
|---|---|---|---|---|---|---|---|---|
| AMEREN CORP 1/ | 0.70 | 0.85 | 0.75 | 0.80 | 0.80 | 0.70 | 0.65 | 0.65 |
| ALLEGHENY ENERGY 2/ | 0.70 | 0.65 | 0.70 | 0.70 | 0.65 | 0.65 | 0.65 | 0.60 |
| ALLIANT ENERGY 3/ | 0.70 | 0.75 | 0.60 | 0.60 | 0.60 | 0.60 | 0.65 | 0.60 |
| CINERGY CORP 4/ | 0.70 | 0.80 | 0.75 | 0.75 | 0.75 | 0.70 | 0.65 | 0.65 |
| **Average** | **0.70** | **0.76** | **0.70** | **0.71** | **0.70** | **0.66** | **0.65** | **0.63** |
| **Median** | **0.70** | **0.78** | **0.73** | **0.73** | **0.70** | **0.68** | **0.65** | **0.63** |

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| AMEREN CORP 1/ | 0.65 | 0.70 | 0.75 | 0.70 | 0.55 | 0.50 | 0.55 | 0.55 |
| ALLEGHENY ENERGY 2/ | 0.65 | 0.70 | 0.70 | 0.75 | 0.70 | 0.60 | 0.60 | 0.60 |
| ALLIANT ENERGY 3/ | 0.75 | 0.75 | 0.75 | 0.70 | nmf | nmf | 0.55 | 0.55 |
| CINERGY CORP 4/ | 0.70 | 0.80 | 0.85 | 0.85 | 0.60 | 0.55 | 0.60 | 0.55 |
| **Average** | **0.69** | **0.74** | **0.76** | **0.75** | **0.62** | **0.55** | **0.58** | **0.56** |
| **Median** | **0.68** | **0.73** | **0.75** | **0.73** | **0.60** | **0.55** | **0.58** | **0.55** |

Notes:

1/ Ameren beta through 1997 is that for Union Electric.

2/ Allegheny Energy beta through 1996 is that for Allegheny Power System.

3/ Alliant Energy beta through 1997 is that for Wisconsin Power & Light or WPL Holdings and in 1998 is that for Interstate Energy d/b/a Alliant.

4/ Cinergy beta through 1994 is that for Cincinnati Gas and Electric.

Source: Value Line Investment Survey

EBETA4

**Value Line and S&P Risk Measures**
**for Bible's Sample of Three Electric Utilities and Ameren**

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|
| **Value Line** | | | | | | |
| Earnings Predictability | | | | | | |
| AMEREN CORP 1/ | 95 | 95 | 90 | 85 | 85 | 85 |
| ALLEGHENY ENERGY 2/ | 100 | 95 | 85 | 85 | 85 | 65 |
| ALLIANT ENERGY 3/ | 80 | 75 | nmf | nmf | nmf | 55 |
| CINERGY CORP 4/ | 55 | 55 | 55 | 55 | 55 | 65 |
| **Median** | **88** | **85** | **85** | **85** | **85** | **65** |
| Financial Strength | | | | | | |
| AMEREN CORP 1/ | A+ | A+ | A+ | A+ | A+ | A+ |
| ALLEGHENY ENERGY 2/ | A+ | A | A | A | A | A |
| ALLIANT ENERGY 3/ | A+ | A+ | B++ | B++ | B++ | B++ |
| CINERGY CORP 4/ | B++ | A | A | A | A | A |
| **Median** | **A+** | **A+ / A** | **A** | **A** | **A** | **A** |
| Safety Rank | | | | | | |
| AMEREN CORP 1/ | 1 | 1 | 1 | 1 | 1 | 1 |
| ALLEGHENY ENERGY 2/ | 2 | 1 | 1 | 1 | 1 | 1 |
| ALLIANT ENERGY 3/ | 1 | 1 | 2 | 2 | 2 | 2 |
| CINERGY CORP 4/ | 2 | 2 | 2 | 2 | 2 | 2 |
| **Median** | **2** | **1** | **2** | **2** | **2** | **2** |
| **Standard & Poor's** | | | | | | |
| Business Profile | | | | | | |
| AMEREN CORP 1/ | na | 5 | na | 4 | 5 | 5 |
| ALLEGHENY ENERGY 2/ | na | 4 | na | 5 | 5 | 5 |
| ALLIANT ENERGY 3/ | na | 4 | na | 4 | 5 | 5 |
| CINERGY CORP 4/ | na | 4 | na | 5 | 5 | 5 |
| **Median** | **n/a** | **4** | **n/a** | **5** | **5** | **5** |
| Bond Rating | | | | | | |
| AMEREN CORP 1/ | AA- | AA- | A+ | A+ | A+ | A+ |
| ALLEGHENY ENERGY 2/ | A+ | AA | A | A+ | A+ | A- |
| ALLIANT ENERGY 3/ | AA | AA | AA- | AA- | A+ | A- |
| CINERGY CORP 4/ | A- | BBB+ | BBB+ | BBB+ | BBB+ | BBB+ |
| **Median** | **AA- / A+** | **AA/AA-** | **A+ / A** | **A+** | **A+** | **A-** |

Notes:

1/ Ameren data through 1997 is that for Union Electric.

2/ Allegheny Energy data through 1996 is that for Allegheny Power System.

3/ Alliant Energy data through 1997 is that for Wisconsin Power & Light or WPL Holdings and in 1998 is that for Interstate Energy d/b/a Alliant

4/ Cinergy data through 1994 is that for Cincinnati Gas and Electric.

Source: Standard & Poor's Research Insight; Annual Reports to Shareholders;Value Line Investment Survey; Standard & Poor's Utilities and Perspectives.

ELECRST4

# Risk Premium Cost of Equity Estimates

| | Cost of Common Equity | | AA Rated Moody's Public Utility Bonds (Average January 2002) | | Equity Risk Premium (1/92 - 12/01) |
|---|---|---|---|---|---|
| Ameren | 12.53 | = | 7.28 | + | 5.25 |
| Comparables | | | | | |
| Allegheny Energy | 12.78 | = | 7.28 | + | 5.50 |
| Alliant Energy | 10.56 | = | 7.28 | + | 3.28 |
| Cinergy Corp | 13.09 | = | 7.28 | + | 5.81 |
| Average of 3 Comparables | 12.1 | | | | |
| All Company Average | 12.2 | | | | |

Sources: Value Line Investment Survey; Mergent Bond Record

## Ameren Risk Premium Analysis Using "Aa" Rated Moody's Utility Bonds

| Date | Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] | Date | AEE's Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] |
|---|---|---|---|---|---|---|---|
| 01/31/1992 | 13.5 | 8.63 | 4.87 | 01/31/1997 | 13.0 | 7.68 | 5.32 |
| 02/29/1992 | 13.5 | 8.76 | 4.74 | 02/28/1997 | 13.0 | 7.60 | 5.40 |
| 03/31/1992 | 13.5 | 8.82 | 4.68 | 03/31/1997 | 13.0 | 7.84 | 5.16 |
| 04/30/1992 | 13.0 | 8.76 | 4.24 | 04/30/1997 | 12.5 | 8.00 | 4.50 |
| 05/31/1992 | 13.0 | 8.69 | 4.31 | 05/31/1997 | 12.5 | 7.85 | 4.65 |
| 06/30/1992 | 13.0 | 8.63 | 4.37 | 06/30/1997 | 12.5 | 7.68 | 4.82 |
| 07/31/1992 | 13.0 | 8.45 | 4.55 | 07/31/1997 | 13.0 | 7.43 | 5.57 |
| 08/31/1992 | 13.0 | 8.30 | 4.70 | 08/31/1997 | 13.0 | 7.46 | 5.54 |
| 09/30/1992 | 13.0 | 8.28 | 4.72 | 09/30/1997 | 13.0 | 7.43 | 5.57 |
| 10/31/1992 | 12.5 | 8.42 | 4.08 | 10/31/1997 | 13.0 | 7.28 | 5.72 |
| 11/30/1992 | 12.5 | 8.51 | 3.99 | 11/30/1997 | 13.0 | 7.15 | 5.85 |
| 12/31/1992 | 12.5 | 8.32 | 4.18 | 12/31/1997 | 13.0 | 7.07 | 5.93 |
| 01/31/1993 | 13.0 | 8.14 | 4.86 | 01/31/1998 | 12.5 | 6.94 | 5.56 |
| 02/28/1993 | 13.0 | 7.92 | 5.08 | 02/28/1998 | 12.5 | 6.99 | 5.51 |
| 03/31/1993 | 13.0 | 7.76 | 5.24 | 03/31/1998 | 12.5 | 7.04 | 5.46 |
| 04/30/1993 | 12.5 | 7.64 | 4.86 | 04/30/1998 | 12.0 | 7.02 | 4.98 |
| 05/31/1993 | 12.5 | 7.64 | 4.86 | 05/31/1998 | 12.0 | 7.02 | 4.98 |
| 06/30/1993 | 12.5 | 7.54 | 4.96 | 06/30/1998 | 12.0 | 6.91 | 5.09 |
| 07/31/1993 | 12.5 | 7.38 | 5.12 | 07/31/1998 | 11.5 | 6.91 | 4.59 |
| 08/31/1993 | 12.5 | 7.07 | 5.43 | 08/31/1998 | 11.5 | 6.87 | 4.63 |
| 09/30/1993 | 12.5 | 6.89 | 5.61 | 09/30/1998 | 11.5 | 6.78 | 4.72 |
| 10/31/1993 | 13.5 | 6.89 | 6.61 | 10/31/1998 | 12.0 | 6.79 | 5.21 |
| 11/30/1993 | 13.5 | 7.17 | 6.33 | 11/30/1998 | 12.0 | 6.89 | 5.11 |
| 12/31/1993 | 13.5 | 7.18 | 6.32 | 12/31/1998 | 12.0 | 6.78 | 5.22 |
| 01/31/1994 | 13.5 | 7.18 | 6.32 | 01/31/1999 | 13.0 | 6.82 | 6.18 |
| 02/28/1994 | 13.5 | 7.34 | 6.16 | 02/28/1999 | 13.0 | 6.94 | 6.06 |
| 03/31/1994 | 13.5 | 7.74 | 5.76 | 03/31/1999 | 13.0 | 7.11 | 5.89 |
| 04/30/1994 | 13.5 | 8.12 | 5.38 | 04/30/1999 | 13.0 | 7.11 | 5.89 |
| 05/31/1994 | 13.5 | 8.24 | 5.26 | 05/31/1999 | 13.0 | 7.38 | 5.62 |
| 06/30/1994 | 13.5 | 8.21 | 5.29 | 06/30/1999 | 13.0 | 7.67 | 5.33 |
| 07/31/1994 | 13.0 | 8.38 | 4.62 | 07/31/1999 | 13.0 | 7.62 | 5.38 |
| 08/31/1994 | 13.0 | 8.32 | 4.68 | 08/31/1999 | 13.0 | 7.82 | 5.18 |
| 09/30/1994 | 13.0 | 8.56 | 4.44 | 09/30/1999 | 13.0 | 7.82 | 5.18 |
| 10/31/1994 | 13.5 | 8.78 | 4.72 | 10/31/1999 | 13.0 | 7.96 | 5.04 |
| 11/30/1994 | 13.5 | 8.90 | 4.60 | 11/30/1999 | 13.0 | 7.82 | 5.18 |
| 12/31/1994 | 13.5 | 8.69 | 4.81 | 12/31/1999 | 13.0 | 8.00 | 5.00 |
| 01/31/1995 | 12.5 | 8.66 | 3.84 | 01/31/2000 | 13.5 | 8.17 | 5.33 |
| 02/28/1995 | 12.5 | 8.45 | 4.05 | 02/29/2000 | 13.5 | 7.99 | 5.51 |
| 03/31/1995 | 12.5 | 8.29 | 4.21 | 03/31/2000 | 13.5 | 7.99 | 5.51 |
| 04/30/1995 | 12.5 | 8.17 | 4.33 | 04/30/2000 | 13.5 | 8.00 | 5.50 |
| 05/31/1995 | 12.5 | 7.80 | 4.70 | 05/31/2000 | 13.5 | 8.44 | 5.06 |
| 06/30/1995 | 12.5 | 7.49 | 5.01 | 06/30/2000 | 13.5 | 8.10 | 5.40 |
| 07/31/1995 | 12.0 | 7.60 | 4.40 | 07/31/2000 | 13.5 | 8.10 | 5.40 |
| 08/31/1995 | 12.0 | 7.71 | 4.29 | 08/31/2000 | 13.5 | 7.95 | 5.55 |
| 09/30/1995 | 12.0 | 7.48 | 4.52 | 09/30/2000 | 13.5 | 8.11 | 5.39 |
| 10/31/1995 | 12.0 | 7.30 | 4.70 | 10/31/2000 | 14.0 | 8.08 | 5.92 |
| 11/30/1995 | 12.0 | 7.22 | 4.78 | 11/30/2000 | 14.0 | 8.03 | 5.97 |
| 12/31/1995 | 12.0 | 7.03 | 4.97 | 12/31/2000 | 14.0 | 7.79 | 6.21 |
| 01/31/1996 | 11.5 | 7.02 | 4.48 | 01/31/2001 | 14.0 | 7.73 | 6.27 |
| 02/29/1996 | 11.5 | 7.20 | 4.30 | 2/29/2001 | 14.0 | 7.62 | 6.38 |
| 03/31/1996 | 11.5 | 7.55 | 3.95 | 03/31/2001 | 14.0 | 7.51 | 6.49 |
| 04/30/1996 | 13.0 | 7.70 | 5.30 | 04/30/2001 | 14.0 | 7.72 | 6.28 |
| 05/31/1996 | 13.0 | 7.79 | 5.21 | 05/31/2001 | 14.0 | 7.79 | 6.21 |
| 06/30/1996 | 13.0 | 7.87 | 5.13 | 06/30/2001 | 14.0 | 7.62 | 6.38 |
| 07/31/1996 | 13.0 | 7.83 | 5.17 | 07/31/2001 | 14.0 | 7.55 | 6.45 |
| 08/31/1996 | 13.0 | 7.66 | 5.34 | 08/31/2001 | 14.0 | 7.39 | 6.61 |
| 09/30/1996 | 13.0 | 7.84 | 5.16 | 09/30/2001 | 14.0 | 7.55 | 6.45 |
| 10/31/1996 | 13.0 | 7.60 | 5.40 | 10/31/2001 | 14.0 | 7.47 | 6.53 |
| 11/30/1996 | 13.0 | 7.32 | 5.68 | 11/30/2001 | 14.0 | 7.45 | 6.55 |
| 12/31/1996 | 13.0 | 7.44 | 5.56 | 12/31/2001 | 14.0 | 7.53 | 6.47 |

| | | |
|---|---|---|
| Average Risk Premium (1992-2001) | | 5.25 |
| Cost of Equity | 5.25 + 7.28 = | 12.53 |

Notes:
[1]: Value Line Investment Survey
[2]: Mergent Bond Record
[3]: [1] - [2]
[4]: Average risk premium (1992-2001) + Average January 2002 bond yield.

Ameren data through 1997 is that for Union Electric.

## Allegheny Risk Premium Analysis Using "Aa" Rated Moody's Utility Bonds

| Date | Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] | Date | Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] |
|---|---|---|---|---|---|---|---|
| 01/31/1992 | 11.0 | 8.63 | 2.37 | 01/31/1997 | 12.5 | 7.68 | 4.82 |
| 02/29/1992 | 11.0 | 8.76 | 2.24 | 02/28/1997 | 12.5 | 7.60 | 4.90 |
| 03/31/1992 | 11.0 | 8.82 | 2.18 | 03/31/1997 | 12.5 | 7.84 | 4.66 |
| 04/30/1992 | 11.5 | 8.76 | 2.74 | 04/30/1997 | 12.5 | 8.00 | 4.50 |
| 05/31/1992 | 11.5 | 8.69 | 2.81 | 05/31/1997 | 12.5 | 7.85 | 4.65 |
| 06/30/1992 | 11.5 | 8.63 | 2.87 | 06/30/1997 | 12.5 | 7.68 | 4.82 |
| 07/31/1992 | 11.5 | 8.45 | 3.05 | 07/31/1997 | 12.0 | 7.43 | 4.57 |
| 08/31/1992 | 11.5 | 8.30 | 3.20 | 08/31/1997 | 12.0 | 7.46 | 4.54 |
| 09/30/1992 | 11.5 | 8.28 | 3.22 | 09/30/1997 | 12.0 | 7.43 | 4.57 |
| 10/31/1992 | 11.5 | 8.42 | 3.08 | 10/31/1997 | 12.0 | 7.28 | 4.72 |
| 11/30/1992 | 11.5 | 8.51 | 2.99 | 11/30/1997 | 12.0 | 7.15 | 4.85 |
| 12/31/1992 | 11.5 | 8.32 | 3.18 | 12/31/1997 | 12.0 | 7.07 | 4.93 |
| 01/31/1993 | 11.0 | 8.14 | 2.86 | 01/31/1998 | 12.5 | 6.94 | 5.56 |
| 02/28/1993 | 11.0 | 7.92 | 3.08 | 02/28/1998 | 12.5 | 6.99 | 5.51 |
| 03/31/1993 | 11.0 | 7.76 | 3.24 | 03/31/1998 | 12.5 | 7.04 | 5.46 |
| 04/30/1993 | 11.0 | 7.64 | 3.36 | 04/30/1998 | 12.0 | 7.02 | 4.98 |
| 05/31/1993 | 11.0 | 7.64 | 3.36 | 05/31/1998 | 12.0 | 7.02 | 4.98 |
| 06/30/1993 | 11.0 | 7.54 | 3.46 | 06/30/1998 | 12.0 | 6.91 | 5.09 |
| 07/31/1993 | 11.0 | 7.38 | 3.62 | 07/31/1998 | 14.0 | 6.91 | 7.09 |
| 08/31/1993 | 11.0 | 7.07 | 3.93 | 08/31/1998 | 14.0 | 6.87 | 7.13 |
| 09/30/1993 | 11.0 | 6.89 | 4.11 | 09/30/1998 | 14.0 | 6.78 | 7.22 |
| 10/31/1993 | 11.5 | 6.89 | 4.61 | 10/31/1998 | 14.0 | 6.79 | 7.21 |
| 11/30/1993 | 11.5 | 7.17 | 4.33 | 11/30/1998 | 14.0 | 6.89 | 7.11 |
| 12/31/1993 | 11.5 | 7.18 | 4.32 | 12/31/1998 | 14.0 | 6.78 | 7.22 |
| 01/31/1994 | 11.5 | 7.18 | 4.32 | 01/31/1999 | 14.5 | 6.82 | 7.68 |
| 02/28/1994 | 11.5 | 7.34 | 4.16 | 02/28/1999 | 14.5 | 6.94 | 7.56 |
| 03/31/1994 | 11.5 | 7.74 | 3.76 | 03/31/1999 | 14.5 | 7.11 | 7.39 |
| 04/30/1994 | 11.5 | 8.12 | 3.38 | 04/30/1999 | 17.0 | 7.11 | 9.89 |
| 05/31/1994 | 11.5 | 8.24 | 3.26 | 05/31/1999 | 17.0 | 7.38 | 9.62 |
| 06/30/1994 | 11.5 | 8.21 | 3.29 | 06/30/1999 | 17.0 | 7.67 | 9.33 |
| 07/31/1994 | 11.5 | 8.38 | 3.12 | 07/31/1999 | 17.0 | 7.62 | 9.38 |
| 08/31/1994 | 11.5 | 8.32 | 3.18 | 08/31/1999 | 17.0 | 7.82 | 9.18 |
| 09/30/1994 | 11.5 | 8.56 | 2.94 | 09/30/1999 | 17.0 | 7.82 | 9.18 |
| 10/31/1994 | 11.0 | 8.78 | 2.22 | 10/31/1999 | 16.5 | 7.96 | 8.54 |
| 11/30/1994 | 11.0 | 8.90 | 2.10 | 11/30/1999 | 16.5 | 7.82 | 8.68 |
| 12/31/1994 | 11.0 | 8.69 | 2.31 | 12/31/1999 | 16.5 | 8.00 | 8.50 |
| 01/31/1995 | 11.5 | 8.66 | 2.84 | 01/31/2000 | 17.5 | 8.17 | 9.33 |
| 02/28/1995 | 11.5 | 8.45 | 3.05 | 02/29/2000 | 17.5 | 7.99 | 9.51 |
| 03/31/1995 | 11.5 | 8.29 | 3.21 | 03/31/2000 | 17.5 | 7.99 | 9.51 |
| 04/30/1995 | 11.0 | 8.17 | 2.83 | 04/30/2000 | 17.0 | 8.00 | 9.00 |
| 05/31/1995 | 11.0 | 7.80 | 3.20 | 05/31/2000 | 17.0 | 8.44 | 8.56 |
| 06/30/1995 | 11.0 | 7.49 | 3.51 | 06/30/2000 | 17.0 | 8.10 | 8.90 |
| 07/31/1995 | 11.0 | 7.60 | 3.40 | 07/31/2000 | 18.0 | 8.10 | 9.90 |
| 08/31/1995 | 11.0 | 7.71 | 3.29 | 08/31/2000 | 18.0 | 7.95 | 10.05 |
| 09/30/1995 | 11.0 | 7.48 | 3.52 | 09/30/2000 | 18.0 | 8.11 | 9.89 |
| 10/31/1995 | 11.0 | 7.30 | 3.70 | 10/31/2000 | 14.5 | 8.08 | 6.42 |
| 11/30/1995 | 11.0 | 7.22 | 3.78 | 11/30/2000 | 14.5 | 8.03 | 6.47 |
| 12/31/1995 | 11.0 | 7.03 | 3.97 | 12/31/2000 | 14.5 | 7.79 | 6.71 |
| 01/31/1996 | 11.5 | 7.02 | 4.48 | 01/31/2001 | 18.5 | 7.73 | 10.77 |
| 02/29/1996 | 11.5 | 7.20 | 4.30 | 2/29/2001 | 18.5 | 7.62 | 10.88 |
| 03/31/1996 | 11.5 | 7.55 | 3.95 | 03/31/2001 | 18.5 | 7.51 | 10.99 |
| 04/30/1996 | 10.0 | 7.70 | 2.30 | 04/30/2001 | 18.0 | 7.72 | 10.28 |
| 05/31/1996 | 10.0 | 7.79 | 2.21 | 05/31/2001 | 18.0 | 7.79 | 10.21 |
| 06/30/1996 | 10.0 | 7.87 | 2.13 | 06/30/2001 | 18.0 | 7.62 | 10.38 |
| 07/31/1996 | 10.0 | 7.83 | 2.17 | 07/31/2001 | 18.5 | 7.55 | 10.95 |
| 08/31/1996 | 10.0 | 7.66 | 2.34 | 08/31/2001 | 18.5 | 7.39 | 11.11 |
| 09/30/1996 | 10.0 | 7.84 | 2.16 | 09/30/2001 | 18.5 | 7.55 | 10.95 |
| 10/31/1996 | 10.0 | 7.60 | 2.40 | 10/31/2001 | 18.5 | 7.47 | 11.03 |
| 11/30/1996 | 10.0 | 7.32 | 2.68 | 11/30/2001 | 18.5 | 7.45 | 11.05 |
| 12/31/1996 | 10.0 | 7.44 | 2.56 | 12/31/2001 | 18.5 | 7.53 | 10.97 |

| | | |
|---|---|---|
| Average Risk Premium (1992-2001) | | 5.50 |
| Cost of Equity | 5.50 + 7.28 = | 12.78 |

Notes:
[1]: Value Line Investment Survey
[2]: Mergent Bond Record
[3]: [1] - [2]
[4]: Average risk premium (1992-2001) + Average January 2002 bond yield.

## Alliant Risk Premium Analysis Using "Aa" Rated Moody's Utility Bonds

| Date | Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] | Date | Expected ROE (%) [1] | Moody's AA Utility Bond (%) [2] | Risk Premium (%) [3] |
|---|---|---|---|---|---|---|---|
| 01/31/1992 | 13.0 | 8.63 | 4.37 | 01/31/1997 | 12.2 | 7.68 | 4.52 |
| 02/29/1992 | 13.0 | 8.76 | 4.24 | 02/28/1997 | 12.2 | 7.60 | 4.60 |
| 03/31/1992 | 13.0 | 8.82 | 4.18 | 03/31/1997 | 12.2 | 7.84 | 4.36 |
| 04/30/1992 | 13.0 | 8.76 | 4.24 | 04/30/1997 | 12.0 | 8.00 | 4.00 |
| 05/31/1992 | 13.0 | 8.69 | 4.31 | 05/31/1997 | 12.0 | 7.85 | 4.15 |
| 06/30/1992 | 13.0 | 8.63 | 4.37 | 06/30/1997 | 12.0 | 7.68 | 4.32 |
| 07/31/1992 | 13.0 | 8.45 | 4.55 | 07/31/1997 | 12.0 | 7.43 | 4.57 |
| 08/31/1992 | 13.0 | 8.30 | 4.70 | 08/31/1997 | 12.0 | 7.46 | 4.54 |
| 09/30/1992 | 13.0 | 8.28 | 4.72 | 09/30/1997 | 12.0 | 7.43 | 4.57 |
| 10/31/1992 | 12.5 | 8.42 | 4.08 | 10/31/1997 | 11.5 | 7.28 | 4.22 |
| 11/30/1992 | 12.5 | 8.51 | 3.99 | 11/30/1997 | 11.5 | 7.15 | 4.35 |
| 12/31/1992 | 12.5 | 8.32 | 4.18 | 12/31/1997 | 11.5 | 7.07 | 4.43 |
| 01/31/1993 | 12.5 | 8.14 | 4.36 | 01/31/1998 | 11.0 | 6.94 | 4.06 |
| 02/28/1993 | 12.5 | 7.92 | 4.58 | 02/28/1998 | 11.0 | 6.99 | 4.01 |
| 03/31/1993 | 12.5 | 7.76 | 4.74 | 03/31/1998 | 11.0 | 7.04 | 3.96 |
| 04/30/1993 | 12.5 | 7.64 | 4.86 | 04/30/1998 | 11.0 | 7.02 | 3.98 |
| 05/31/1993 | 12.5 | 7.64 | 4.86 | 05/31/1998 | 11.0 | 7.02 | 3.98 |
| 06/30/1993 | 12.5 | 7.54 | 4.96 | 06/30/1998 | 11.0 | 6.91 | 4.09 |
| 07/31/1993 | 12.5 | 7.38 | 5.12 | 07/31/1998 | 7.5 | 6.91 | 0.59 |
| 08/31/1993 | 12.5 | 7.07 | 5.43 | 08/31/1998 | 7.5 | 6.87 | 0.63 |
| 09/30/1993 | 12.5 | 6.89 | 5.61 | 09/30/1998 | 7.5 | 6.78 | 0.72 |
| 10/31/1993 | 12.5 | 6.89 | 5.61 | 10/31/1998 | 7.0 | 6.79 | 0.21 |
| 11/30/1993 | 12.5 | 7.17 | 5.33 | 11/30/1998 | 7.0 | 6.89 | 0.11 |
| 12/31/1993 | 12.5 | 7.18 | 5.32 | 12/31/1998 | 7.0 | 6.78 | 0.22 |
| 01/31/1994 | 13.5 | 7.18 | 6.32 | 01/31/1999 | 7.0 | 6.82 | 0.18 |
| 02/28/1994 | 13.5 | 7.34 | 6.16 | 02/28/1999 | 7.0 | 6.94 | 0.06 |
| 03/31/1994 | 13.5 | 7.74 | 5.76 | 03/31/1999 | 7.0 | 7.11 | -0.11 |
| 04/30/1994 | 11.0 | 8.12 | 2.88 | 04/30/1999 | 10.5 | 7.11 | 3.39 |
| 05/31/1994 | 11.0 | 8.24 | 2.76 | 05/31/1999 | 10.5 | 7.38 | 3.12 |
| 06/30/1994 | 11.0 | 8.21 | 2.79 | 06/30/1999 | 10.5 | 7.67 | 2.83 |
| 07/31/1994 | 11.5 | 8.38 | 3.12 | 07/31/1999 | 10.5 | 7.62 | 2.88 |
| 08/31/1994 | 11.5 | 8.32 | 3.18 | 08/31/1999 | 10.5 | 7.82 | 2.68 |
| 09/30/1994 | 11.5 | 8.56 | 2.94 | 09/30/1999 | 10.5 | 7.82 | 2.68 |
| 10/31/1994 | 12.0 | 8.78 | 3.22 | 10/31/1999 | 10.0 | 7.96 | 2.04 |
| 11/30/1994 | 12.0 | 8.90 | 3.10 | 11/30/1999 | 10.0 | 7.82 | 2.18 |
| 12/31/1994 | 12.0 | 8.69 | 3.31 | 12/31/1999 | 10.0 | 8.00 | 2.00 |
| 01/31/1995 | 11.5 | 8.66 | 2.84 | 01/31/2000 | 10.5 | 8.17 | 2.33 |
| 02/28/1995 | 11.5 | 8.45 | 3.05 | 02/29/2000 | 10.5 | 7.99 | 2.51 |
| 03/31/1995 | 11.5 | 8.29 | 3.21 | 03/31/2000 | 10.5 | 7.99 | 2.51 |
| 04/30/1995 | 11.5 | 8.17 | 3.33 | 04/30/2000 | 10.5 | 8.00 | 2.50 |
| 05/31/1995 | 11.5 | 7.80 | 3.70 | 05/31/2000 | 10.5 | 8.44 | 2.06 |
| 06/30/1995 | 11.5 | 7.49 | 4.01 | 06/30/2000 | 10.5 | 8.10 | 2.40 |
| 07/31/1995 | 11.5 | 7.60 | 3.90 | 07/31/2000 | 8.0 | 8.10 | -0.10 |
| 08/31/1995 | 11.5 | 7.71 | 3.79 | 08/31/2000 | 8.0 | 7.95 | 0.05 |
| 09/30/1995 | 11.5 | 7.48 | 4.02 | 09/30/2000 | 8.0 | 8.11 | -0.11 |
| 10/31/1995 | 11.5 | 7.30 | 4.20 | 10/31/2000 | 8.0 | 8.08 | -0.08 |
| 11/30/1995 | 11.5 | 7.22 | 4.28 | 11/30/2000 | 8.0 | 8.03 | -0.03 |
| 12/31/1995 | 11.5 | 7.03 | 4.47 | 12/31/2000 | 8.0 | 7.79 | 0.21 |
| 01/31/1996 | 11.5 | 7.02 | 4.48 | 01/31/2001 | 8.5 | 7.73 | 0.77 |
| 02/29/1996 | 11.5 | 7.20 | 4.30 | 2/29/2001 | 8.5 | 7.62 | 0.88 |
| 03/31/1996 | 11.5 | 7.55 | 3.95 | 03/31/2001 | 8.5 | 7.51 | 0.99 |
| 04/30/1996 | 12.0 | 7.70 | 4.30 | 04/30/2001 | 9.0 | 7.72 | 1.28 |
| 05/31/1996 | 12.0 | 7.79 | 4.21 | 05/31/2001 | 9.0 | 7.79 | 1.21 |
| 06/30/1996 | 12.0 | 7.87 | 4.13 | 06/30/2001 | 9.0 | 7.62 | 1.38 |
| 07/31/1996 | 12.5 | 7.83 | 4.67 | 07/31/2001 | 9.5 | 7.55 | 1.95 |
| 08/31/1996 | 12.5 | 7.66 | 4.84 | 08/31/2001 | 9.5 | 7.39 | 2.11 |
| 09/30/1996 | 12.5 | 7.84 | 4.66 | 09/30/2001 | 9.5 | 7.55 | 1.95 |
| 10/31/1996 | 12.5 | 7.60 | 4.90 | 10/31/2001 | 9.5 | 7.47 | 2.03 |
| 11/30/1996 | 12.5 | 7.32 | 5.18 | 11/30/2001 | 9.5 | 7.45 | 2.05 |
| 12/31/1996 | 12.5 | 7.44 | 5.06 | 12/31/2001 | 9.5 | 7.53 | 1.97 |

| | | |
|---|---|---|
| Average Risk Premium (1992-2001) | | 3.28 |
| Cost of Equity | 3.28 + 7.28 = | 10.56 |

Notes:
[1]: Value Line Investment Survey
[2]: Mergent Bond Record
[3]: [1] - [2]
[4]: Average risk premium (1992-2001) + Average January 2002 bond yield.

Alliant Corporation was formed in April 1998 through a merger of WPL Holdings, Interstate Power, and IES Industries. Expected ROE's for months before the merger are for WPL Holdings.

## Cinergy Risk Premium Analysis Using "Aa" Rated Moody's Utility Bonds

| Date | Expected ROE (%) [1] | Yields on Moody's AA Utility Bond [2] | Risk Premium (%) [3] | Date | Expected ROE (%) [1] | Yields on Moody's AA Utility Bond [2] | Risk Premium (%) [3] |
|---|---|---|---|---|---|---|---|
| 01/31/1992 | 13.5 | 8.63 | 4.87 | 01/31/1997 | 15 | 7.68 | 7.32 |
| 02/29/1992 | 13.5 | 8.76 | 4.74 | 02/28/1997 | 15 | 7.60 | 7.40 |
| 03/31/1992 | 13.5 | 8.82 | 4.68 | 03/31/1997 | 15 | 7.84 | 7.16 |
| 04/30/1992 | 12 | 8.76 | 3.24 | 04/30/1997 | 15.5 | 8.00 | 7.50 |
| 05/31/1992 | 12 | 8.69 | 3.31 | 05/31/1997 | 15.5 | 7.85 | 7.65 |
| 06/30/1992 | 12 | 8.63 | 3.37 | 06/30/1997 | 15.5 | 7.68 | 7.82 |
| 07/31/1992 | 10.5 | 8.45 | 2.05 | 07/31/1997 | 15 | 7.43 | 7.57 |
| 08/31/1992 | 10.5 | 8.30 | 2.20 | 08/31/1997 | 15 | 7.46 | 7.54 |
| 09/30/1992 | 10.5 | 8.28 | 2.22 | 09/30/1997 | 15 | 7.43 | 7.57 |
| 10/31/1992 | 10.5 | 8.42 | 2.08 | 10/31/1997 | 14.5 | 7.28 | 7.22 |
| 11/30/1992 | 10.5 | 8.51 | 1.99 | 11/30/1997 | 14.5 | 7.15 | 7.35 |
| 12/31/1992 | 10.5 | 8.32 | 2.18 | 12/31/1997 | 14.5 | 7.07 | 7.43 |
| 01/31/1993 | 11 | 8.14 | 2.86 | 01/31/1998 | 14.5 | 6.94 | 7.56 |
| 02/28/1993 | 11 | 7.92 | 3.08 | 02/28/1998 | 14.5 | 6.99 | 7.51 |
| 03/31/1993 | 11 | 7.76 | 3.24 | 03/31/1998 | 14.5 | 7.04 | 7.46 |
| 04/30/1993 | 11 | 7.64 | 3.36 | 04/30/1998 | 15 | 7.02 | 7.98 |
| 05/31/1993 | 11 | 7.64 | 3.36 | 05/31/1998 | 15 | 7.02 | 7.98 |
| 06/30/1993 | 11 | 7.54 | 3.46 | 06/30/1998 | 15 | 6.91 | 8.09 |
| 07/31/1993 | 11 | 7.38 | 3.62 | 07/31/1998 | 15 | 6.91 | 8.09 |
| 08/31/1993 | 11 | 7.07 | 3.93 | 08/31/1998 | 15 | 6.87 | 8.13 |
| 09/30/1993 | 11 | 6.89 | 4.11 | 09/30/1998 | 15 | 6.78 | 8.22 |
| 10/31/1993 | 10.5 | 6.89 | 3.61 | 10/31/1998 | 13.5 | 6.79 | 6.71 |
| 11/30/1993 | 10.5 | 7.17 | 3.33 | 11/30/1998 | 13.5 | 6.89 | 6.61 |
| 12/31/1993 | 10.5 | 7.18 | 3.32 | 12/31/1998 | 13.5 | 6.78 | 6.72 |
| 01/31/1994 | 12.5 | 7.18 | 5.32 | 01/31/1999 | 15 | 6.82 | 8.18 |
| 02/28/1994 | 12.5 | 7.34 | 5.16 | 02/28/1999 | 15 | 6.94 | 8.06 |
| 03/31/1994 | 12.5 | 7.74 | 4.76 | 03/31/1999 | 15 | 7.11 | 7.89 |
| 04/30/1994 | 12.5 | 8.12 | 4.38 | 04/30/1999 | 15 | 7.11 | 7.89 |
| 05/31/1994 | 12.5 | 8.24 | 4.26 | 05/31/1999 | 15 | 7.38 | 7.62 |
| 06/30/1994 | 12.5 | 8.21 | 4.29 | 06/30/1999 | 15 | 7.67 | 7.33 |
| 07/31/1994 | 12.5 | 8.38 | 4.12 | 07/31/1999 | 15.5 | 7.62 | 7.88 |
| 08/31/1994 | 12.5 | 8.32 | 4.18 | 08/31/1999 | 15.5 | 7.82 | 7.68 |
| 09/30/1994 | 12.5 | 8.56 | 3.94 | 09/30/1999 | 15.5 | 7.82 | 7.68 |
| 10/31/1994 | 12 | 8.78 | 3.22 | 10/31/1999 | 13 | 7.96 | 5.04 |
| 11/30/1994 | 12 | 8.90 | 3.10 | 11/30/1999 | 13 | 7.82 | 5.18 |
| 12/31/1994 | 12 | 8.69 | 3.31 | 12/31/1999 | 13 | 8.00 | 5.00 |
| 01/31/1995 | 14 | 8.66 | 5.34 | 01/31/2000 | 14.5 | 8.17 | 6.33 |
| 02/28/1995 | 14 | 8.45 | 5.55 | 02/29/2000 | 14.5 | 7.99 | 6.51 |
| 03/31/1995 | 14 | 8.29 | 5.71 | 03/31/2000 | 14.5 | 7.99 | 6.51 |
| 04/30/1995 | 13 | 8.17 | 4.83 | 04/30/2000 | 14.5 | 8.00 | 6.50 |
| 05/31/1995 | 13 | 7.80 | 5.20 | 05/31/2000 | 14.5 | 8.44 | 6.06 |
| 06/30/1995 | 13 | 7.49 | 5.51 | 06/30/2000 | 14.5 | 8.10 | 6.40 |
| 07/31/1995 | 13 | 7.60 | 5.40 | 07/31/2000 | 14.5 | 8.10 | 6.40 |
| 08/31/1995 | 13 | 7.71 | 5.29 | 08/31/2000 | 14.5 | 7.95 | 6.55 |
| 09/30/1995 | 13 | 7.48 | 5.52 | 09/30/2000 | 14.5 | 8.11 | 6.39 |
| 10/31/1995 | 13 | 7.30 | 5.70 | 10/31/2000 | 14.5 | 8.08 | 6.42 |
| 11/30/1995 | 13 | 7.22 | 5.78 | 11/30/2000 | 14.5 | 8.03 | 6.47 |
| 12/31/1995 | 13 | 7.03 | 5.97 | 12/31/2000 | 14.5 | 7.79 | 6.71 |
| 01/31/1996 | 13 | 7.02 | 5.98 | 01/31/2001 | 15.0 | 7.73 | 7.27 |
| 02/29/1996 | 13 | 7.20 | 5.80 | 2/29/2001 | 15.0 | 7.62 | 7.38 |
| 03/31/1996 | 13 | 7.55 | 5.45 | 03/31/2001 | 15.0 | 7.51 | 7.49 |
| 04/30/1996 | 13.5 | 7.70 | 5.80 | 04/30/2001 | 14.5 | 7.72 | 6.78 |
| 05/31/1996 | 13.5 | 7.79 | 5.71 | 05/31/2001 | 14.5 | 7.79 | 6.71 |
| 06/30/1996 | 13.5 | 7.87 | 5.63 | 06/30/2001 | 14.5 | 7.62 | 6.88 |
| 07/31/1996 | 14 | 7.83 | 6.17 | 07/31/2001 | 15.0 | 7.55 | 7.45 |
| 08/31/1996 | 14 | 7.66 | 6.34 | 08/31/2001 | 15.0 | 7.39 | 7.61 |
| 09/30/1996 | 14 | 7.84 | 6.16 | 09/30/2001 | 15.0 | 7.55 | 7.45 |
| 10/31/1996 | 14 | 7.60 | 6.40 | 10/31/2001 | 15.0 | 7.47 | 7.53 |
| 11/30/1996 | 14 | 7.32 | 6.68 | 11/30/2001 | 15.0 | 7.45 | 7.55 |
| 12/31/1996 | 14 | 7.44 | 6.56 | 12/31/2001 | 15.0 | 7.53 | 7.47 |

| | | |
|---|---|---|
| Average Risk Premium (1992-2001) | | 5.81 |
| Cost of Equity | 5.81 + 7.28 = | 13.09 |

Notes:
[1]: Value Line Investment Survey
[2]: Mergent Bond Record
[3]: [1] - [2]
[4]: Average risk premium (1992-2001) + Average January 2002 bond yield.

Cinergy was formed in October 1994 through a merger of Cincinatti Gas & Electric and PSI Resources.
Expected ROE's for months before the merger are for CG&E.

## ACHIEVED AND FORECAST RETURNS ON EQUITY FOR CENTRAL U.S. ELECTRIC UTILITIE

| | Historic | | | | | | | Forecast | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Company Name | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | Average 1995-2000 | 2001 | 2002 | 2004-2006 |
| Allette | 8.4 | 10.9 | 11.6 | 11.0 | 12.7 | 13.0 | 11.3 | 12.0 | 13.5 | 14.0 |
| Alliant Energy | 12.0 | 10.9 | 10.1 | 6.0 | 8.0 | 9.6 | 9.4 | 8.0 | 9.5 | 10.0 |
| Ameren | 13.0 | 12.4 | 11.1 | 12.6 | 12.5 | 14.3 | 12.7 | 14.0 | 14.0 | 13.5 |
| American Electric Powe | 12.2 | 12.9 | 13.3 | 11.1 | 10.4 | 4.0 | 10.7 | 13.0 | 14.0 | 14.5 |
| Cinergy | 13.6 | 13.4 | 18.1 | 12.3 | 12.6 | 14.5 | 14.1 | 15.0 | 15.0 | 13.0 |
| Cleco Corp. | 13.2 | 13.4 | 12.9 | 12.7 | 12.9 | 14.9 | 13.3 | 14.0 | 15.5 | 14.5 |
| CMS Energy Corp | 13.9 | 14.1 | 13.6 | 10.3 | 12.9 | 12.1 | 12.8 | 10.5 | 11.5 | 12.5 |
| DPL Inc. | 14.1 | 14.3 | 14.0 | 13.6 | 14.0 | 22.3 | 15.4 | 28.0 | 27.5 | 23.0 |
| DTE Energy Co | 12.7 | 11.8 | 11.7 | 12.0 | 12.4 | 11.7 | 12.1 | 6.0 | 12.0 | 12.0 |
| Empire District | 9.0 | 9.2 | 9.8 | 11.3 | 8.8 | 9.8 | 9.7 | 4.5 | 10.0 | 11.0 |
| Entergy Corp | 7.5 | 8.6 | 8.1 | 7.4 | 7.7 | 9.7 | 8.2 | 9.0 | 9.5 | 8.5 |
| FirstEnergy | 12.2 | 12.1 | 7.4 | 9.9 | 12.5 | 12.9 | 11.2 | NMF | 13.0 | 13.0 |
| Great Plains Energy | 13.2 | 11.5 | 11.9 | 13.1 | 9.0 | 13.8 | 12.1 | 10.5 | 12.5 | 13.0 |
| NiSource Inc | 15.4 | 16.0 | 15.1 | 16.9 | 11.9 | NMF | 15.1 | 9.0 | 13.0 | 13.0 |
| NorthWestern Corp. | 11.8 | 13.9 | 14.6 | 10.7 | 14.8 | 15.5 | 13.6 | 12.5 | 12.0 | 12.5 |
| OGE Energy Corp | 13.1 | 13.6 | 13.2 | 15.8 | 14.8 | 13.8 | 14.1 | 10.5 | 12.5 | 14.0 |
| Otter Tail Corp | 14.4 | 14.3 | 14.3 | 13.5 | 14.1 | 14.8 | 14.2 | 15.0 | 15.0 | 13.5 |
| Reliant Energy | 9.6 | 12.2 | 9.5 | 12.5 | 9.4 | 15.3 | 11.4 | 10.5 | 10.0 | 10.0 |
| TXU Corp. | 11.6 | 11.6 | 9.7 | 10.2 | 10.7 | 11.0 | 10.8 | 11.5 | 12.5 | 12.0 |
| UtiliCorp United | 9.0 | 8.5 | 10.4 | 9.1 | 10.5 | 11.5 | 9.8 | 9.5 | 10.5 | 11.5 |
| Vectren Corp. | | | | | 12.6 | 9.7 | 11.2 | 10.0 | 13.5 | 13.5 |
| Western Resources | 10.8 | 10.2 | NMF | 7.1 | 5.3 | 3.2 | 7.3 | NMF | 0.5 | 5.5 |
| Wisconsin Energy | 12.5 | 11.2 | 3.3 | 9.9 | 10.9 | 6.5 | 9.1 | 10.0 | 12.0 | 10.5 |
| WPS Resources | 11.9 | 10.1 | 10.6 | 9.0 | 11.1 | 11.9 | 10.8 | 10.5 | 12.0 | 13.0 |
| Average (ex. Ameren | | | | | | | 11.6 | 11.4 | 12.5 | 12.5 |
| Median (ex. Ameren | | | | | | | 11.3 | 10.5 | 12.5 | 13.0 |
| Average (incl. Ameren | | | | | | | 11.7 | 11.5 | 12.5 | 12.6 |
| Upper 50% (ex. Ameren | | | | | | | | | | |
| Average | | | | | | | 13.5 | 14.2 | 15.0 | 13.1 |
| Median | | | | | | | 13.6 | 12.8 | 13.5 | 13.5 |
| Bottom 50% (ex. Ameren | | | | | | | | | | |
| Average | | | | | | | 9.9 | 8.9 | 10.2 | 10.8 |
| Median | | | | | | | 10.2 | 9.5 | 11.0 | 11.3 |

Source: Value Line Investment Surve, January 4, 2002

## SELECTED INDICATORS OF ECONOMIC ACTIVIT
**(1989 = 100)**

| Year | | Gross Domestic Product a/ Constant Dollars (1) | Gross Domestic Product a/ Current Dollars (2) | Industrial Production (3) | GDP Implicit Price Deflator Index a/ (4) | GDP Implicit Price Deflator Index b/ (5) | Consumer Price Index (6) | Consumer Price Index b/ (7) | Corporate Profit Index (8) | Corporate Profit as a % of GDP (9) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1989 | | 100.0 | 100.0 | 100.0 | 100.0 | | 100.0 | | 100.0 | 100.0 |
| 1990 | | 102.1 | 105.7 | 99.8 | 103.6 | 3.6 | 105.4 | 5.4 | 110.9 | 104.5 |
| 1991 | | 101.6 | 109.1 | 97.9 | 107.3 | 3.6 | 109.8 | 4.2 | 120.1 | 109.4 |
| 1992 | | 104.7 | 115.1 | 100.9 | 109.9 | 2.4 | 113.2 | 3.0 | 131.1 | 114.8 |
| 1993 | | 107.5 | 121.0 | 104.3 | 112.6 | 2.4 | 116.5 | 3.0 | 146.6 | 120.7 |
| 1994 | | 111.9 | 128.5 | 110.1 | 114.9 | 2.1 | 119.5 | 2.6 | 164.3 | 127.3 |
| 1995 | | 114.8 | 134.8 | 115.4 | 117.4 | 2.2 | 122.9 | 2.8 | 194.4 | 135.2 |
| 1996 | | 118.9 | 142.3 | 120.7 | 119.7 | 1.9 | 126.5 | 2.9 | 213.6 | 143.9 |
| 1997 | | 124.2 | 151.5 | 129.1 | 121.7 | 1.7 | 129.5 | 2.3 | 236.0 | 153.5 |
| 1998 | | 129.6 | 160.1 | 135.7 | 123.5 | 1.5 | 131.5 | 1.6 | 218.3 | 162.5 |
| 1999 | | 134.9 | 168.9 | 140.7 | 125.2 | 1.4 | 134.4 | 2.2 | 222.4 | 168.3 |
| 2000 | | 140.4 | 179.9 | 147.0 | 128.1 | 2.3 | 138.9 | 3.3 | 243.9 | 179.0 |
| 1999 | 1Q | 133.0 | 165.7 | 135.8 | 124.6 | 1.3 | 132.9 | 1.8 | 216.4 | 164.5 |
| | 2Q | 133.5 | 166.9 | 137.3 | 125.0 | 1.4 | 134.0 | 2.1 | 217.3 | 167.0 |
| | 3Q | 135.1 | 169.4 | 139.0 | 125.4 | 1.3 | 134.9 | 2.4 | 218.9 | 169.5 |
| | 4Q | 137.8 | 173.5 | 141.2 | 125.9 | 1.5 | 135.9 | 2.7 | 237.0 | 172.2 |
| 2000 | 1Q | 138.6 | 176.1 | 143.0 | 127.1 | 2.0 | 137.0 | 3.1 | 241.3 | 174.9 |
| | 2Q | 140.5 | 179.6 | 145.8 | 127.8 | 2.3 | 138.5 | 3.3 | 247.2 | 177.6 |
| | 3Q | 141.0 | 181.0 | 146.9 | 128.4 | 2.4 | 139.6 | 3.5 | 247.9 | 180.3 |
| | 4Q | 141.6 | 182.7 | 149.3 | 129.0 | 2.4 | 140.3 | 3.3 | 239.3 | 183.3 |
| 2001 | 1Q | 142.1 | 184.8 | 144.7 | 130.0 | 2.3 | 141.7 | 3.4 | 220.5 | 185.9 |
| | 2Q | 142.2 | 185.9 | 142.6 | 130.7 | 2.2 | 143.2 | 3.4 | 216.9 | 188.7 |
| | 3Q | 141.7 | 186.3 | 141.0 | 131.4 | 2.3 | 143.4 | 2.7 | 202.1 | 191.4 |
| | 4Q | 142.2 | 186.8 | 138.6 | 131.3 | 1.8 | 143.2 | 2.0 | -- | -- |

Source: Economic Indicators, prepared by the Council of Economic Advisors

Note: Corporate profit data is not yet available for 4th quarter 2001

a/ Data are based on Chain Weighted Indexes.
b/ Inflation rate measured against prior year period

cs05

## TREND IN INTEREST RATES AND OUTSTANDING BOND YIELDS
(Percent Per Annum)

| Year | | Prime Rate | Government Securities: 3-Month Bills a/ | Government Securities: 10-Year Bonds | Government Securities: 30-Year Bonds b/ | Moody's Utility Bonds: AA | Moody's Utility Bonds: A | Moody's Corporate Bonds: AAA |
|---|---|---|---|---|---|---|---|---|
| 1976 | | 6.84 | 5.00 | 7.61 | 7.86 | 8.92 | 9.29 | 8.43 |
| 1977 | | 6.83 | 5.26 | 7.42 | 7.67 | 8.43 | 8.61 | 8.02 |
| 1978 | | 9.06 | 7.22 | 8.41 | 8.49 | 9.10 | 9.29 | 8.73 |
| 1979 | | 12.67 | 10.04 | 9.44 | 9.29 | 10.22 | 10.49 | 9.63 |
| 1980 | | 15.27 | 11.51 | 11.46 | 11.30 | 13.00 | 13.34 | 11.94 |
| 1981 | | 18.87 | 14.08 | 13.91 | 13.44 | 15.30 | 15.95 | 14.17 |
| 1982 | | 14.86 | 10.69 | 13.00 | 12.76 | 14.79 | 15.86 | 13.79 |
| 1983 | | 10.79 | 8.63 | 11.10 | 11.18 | 12.83 | 13.66 | 12.04 |
| 1984 | | 12.04 | 9.58 | 12.44 | 12.39 | 13.66 | 14.03 | 12.71 |
| 1985 | | 9.93 | 7.49 | 10.62 | 10.79 | 12.06 | 12.47 | 11.37 |
| 1986 | | 8.33 | 5.97 | 7.68 | 7.80 | 9.30 | 9.58 | 9.02 |
| 1987 | | 8.22 | 5.82 | 8.39 | 8.59 | 9.77 | 10.10 | 9.38 |
| 1988 | | 9.32 | 6.69 | 8.85 | 8.96 | 10.26 | 10.49 | 9.71 |
| 1989 | | 10.87 | 8.12 | 8.49 | 8.45 | 9.56 | 9.77 | 9.26 |
| 1990 | | 10.01 | 7.51 | 8.55 | 8.61 | 9.65 | 9.86 | 9.32 |
| 1991 | | 8.46 | 5.42 | 7.86 | 8.14 | 9.09 | 9.36 | 8.77 |
| 1992 | | 6.25 | 3.45 | 7.01 | 7.67 | 8.55 | 8.69 | 8.14 |
| 1993 | | 6.00 | 3.02 | 5.87 | 6.59 | 7.44 | 7.59 | 7.22 |
| 1994 | | 7.23 | 4.34 | 7.08 | 7.37 | 8.21 | 8.31 | 7.96 |
| 1995 | | 8.81 | 5.44 | 6.58 | 6.88 | 7.77 | 7.89 | 7.59 |
| 1996 | | 8.27 | 5.04 | 6.44 | 6.73 | 7.57 | 7.75 | 7.37 |
| 1997 | | 5.44 | 5.11 | 6.32 | 6.58 | 7.54 | 7.60 | 7.26 |
| 1998 | | 8.31 | 4.79 | 5.26 | 5.54 | 6.91 | 7.04 | 6.53 |
| 1999 | | 8.02 | 4.70 | 5.69 | 5.91 | 7.50 | 7.62 | 7.04 |
| 2000 | | 9.27 | 5.85 | 5.99 | 5.91 | 8.04 | 8.22 | 7.62 |
| 2000 | Jan | 8.50 | 5.39 | 6.68 | 6.57 | 8.17 | 8.35 | 7.78 |
| | Feb | 8.75 | 5.67 | 6.38 | 6.13 | 7.99 | 8.25 | 7.68 |
| | Mar | 9.00 | 5.70 | 6.13 | 5.94 | 7.99 | 8.28 | 7.68 |
| | Apr | 9.00 | 5.62 | 6.15 | 5.95 | 8.00 | 8.29 | 7.64 |
| | May | 9.50 | 5.73 | 6.42 | 6.14 | 8.44 | 8.70 | 7.99 |
| | June | 9.50 | 5.68 | 6.08 | 5.94 | 8.10 | 8.36 | 7.67 |
| | July | 9.50 | 6.01 | 6.04 | 5.80 | 8.10 | 8.25 | 7.65 |
| | Aug | 9.50 | 6.14 | 5.80 | 5.74 | 7.95 | 8.13 | 7.55 |
| | Sep | 9.50 | 6.03 | 5.82 | 5.89 | 8.14 | 8.21 | 7.62 |
| | Oct | 9.50 | 6.18 | 5.74 | 5.80 | 8.05 | 8.13 | 7.55 |
| | Nov | 9.50 | 6.21 | 5.48 | 5.60 | 7.88 | 7.95 | 7.45 |
| | Dec | 9.50 | 5.89 | 5.12 | 5.46 | 7.71 | 7.75 | 7.21 |
| 2001 | Jan | 9.00 | 4.99 | 5.19 | 5.54 | 7.63 | 7.73 | 7.15 |
| | Feb | 8.50 | 4.73 | 4.90 | 5.33 | 7.55 | 7.68 | 7.10 |
| | Mar | 8.00 | 4.20 | 4.97 | 5.46 | 7.61 | 7.82 | 6.98 |
| | Apr | 7.50 | 3.95 | 5.34 | 5.78 | 7.80 | 8.01 | 7.20 |
| | May | 7.00 | 3.71 | 5.41 | 5.78 | 7.75 | 7.98 | 7.29 |
| | June | 6.75 | 3.65 | 5.42 | 5.75 | 7.63 | 7.85 | 7.18 |
| | July | 6.75 | 3.54 | 5.07 | 5.51 | 7.41 | 7.68 | 7.13 |
| | Aug | 6.50 | 3.35 | 4.84 | 5.48 | 7.32 | 7.47 | 7.02 |
| | Sep | 6.00 | 2.38 | 4.59 | 5.48 | 7.52 | 7.76 | 7.17 |
| | Oct | 5.50 | 2.05 | 4.25 | 5.27 | 7.25 | 7.36 | 6.96 |
| | Nov | 5.00 | 1.78 | 4.79 | 5.24 | 7.53 | 7.71 | 7.02 |
| | Dec | 4.75 | 1.74 | 5.07 | 5.48 | 7.42 | 7.77 | 6.61 |
| 2002 | Jan | 4.75 | 1.76 | 5.07 | 5.44 | 7.20 | 7.56 | 6.54 |
| | Feb | 4.75 | 1.79 | 4.88 | 5.42 | 7.23 | 7.60 | 6.52 |

a/ Rates on new issues.

b/ 20-year constant maturities for 1974-1978; 30-year maturities after 1978. Series represents yields on the more actively traded issues adjusted to constant maturities by the U.S. Treasury based on daily closing bids.

Note: Monthly data reflect rate in effect at end of month, except for Moody's data, which reflect monthly average.
Source: Annual Statistical Digest (Federal Reserve System); Federal Reserve Bulletin (various issues).

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**UTILITY ASSETS, S&P DEBT RATINGS AND VALUE LINE RISK MEASURES FOR SAMPLE OF ELECTRIC UTILITY COMPANIES**

| | 2000 Total Assets (millions) | 2000 Percentage of Electric Assets | S&P Business Profile | S&P Senior Debt Rating | Value Line Risk Measures: Safety Rank | Earnings Predictability | Financial Strength | Beta |
|---|---|---|---|---|---|---|---|---|
| AMEREN CORP | 9714.4 | 97% | 5 | A+ | 1 | 85 | A+ | 0.55 |
| AMERICAN ELECTRIC POWER | 54548.0 | 74% | 4 | A- | 2 | 80 | B++ | 0.55 |
| EXELON CORP | 34597.0 | 83% | 6 | A- | 2 | NMF | B++ | NMF |
| FPL GROUP INC | 15300.0 | 79% | 6 | A | 2 | 100 | A | 0.45 |
| NSTAR | 5569.5 | 81% | 3 | A | 1 | 90 | A | 0.55 |
| POTOMAC ELECTRIC POWER | 7027.3 | 81% | 5 | A | 2 | 80 | B++ | 0.50 |
| SOUTHERN CO | 31362.0 | 92% | 4 | A | 2 | NMF | B++ | NMF |
| WISCONSIN ENERGY CORP | 8406.1 | 78% | 5 | A- | 2 | 40 | B++ | 0.50 |
| **AVERAGE** | **20815.5** | **83%** | **5** | **A** | **2** | **79** | **A-** | **0.52** |
| **MEDIAN** | **12507.2** | **81%** | **5** | **A** | **2** | **83** | **B++** | **0.53** |

Source: Standard & Poor's Research Insight; Annual Reports to Shareholders; Value Line Investment Survey (October & December 2001); Standard & Poor's Utilities and Perspectives (12/24/01).

VLGDSMPL

## DCF COST OF EQUITY, HISTORIC PAYOUT RATIOS, AND VALUE LINE RETURN ON EQUITY AND PAYOUT FORECASTS FOR SAMPLE OF ELECTRIC UTILITIES
## (Percentages)

| Company | December - February 2002 Dividend Yield | Long-Term EPS Forecasts I/B/E/S (Feb. 2002) | Long-Term EPS Forecasts Zacks (Feb. 2002) | Cash Flow Per Share Forecast Value Line | Average of Forecasts | DCF Cost 1/ | Value Line ROE Forecast (2004-2007) | Historic Dividend Payout Ratios (1993-2000) | Value Line Dividend Payout Forecast (2004-2007) |
|---|---|---|---|---|---|---|---|---|---|
| AMEREN CORP | 6.1 | 4.5 | 3.8 | 6.0 | 4.8 | 11.1 | 13.5 | 87.0 | 69.9 |
| AMERICAN ELECTRIC POWER | 5.6 | 7.0 | 6.6 | 13.5 | 9.0 | 15.1 | 14.5 | 83.1 | 50.5 |
| EXELON CORP | 3.6 | 7.0 | 8.3 | 7.7 | 7.7 | 11.6 | 15.0 | NMF | 28.4 |
| FPL GROUP INC | 4.3 | 7.0 | 7.1 | 8.5 | 7.5 | 12.1 | 15.0 | 61.0 | 50.5 |
| NSTAR | 4.8 | 6.5 | 6.4 | 6.5 | 6.5 | 11.6 | 13.5 | 72.9 | 59.5 |
| POTOMAC ELECTRIC POWER | 4.5 | 5.0 | 3.8 | 2.0 | 3.6 | 8.2 | 11.0 | 93.3 | 45.7 |
| SOUTHERN CO | 5.3 | 5.0 | 5.2 | 3.5 | 4.6 | 10.1 | 15.0 | 77.4 | 69.1 |
| WISCONSIN ENERGY CORP | 3.5 | 4.0 | 4.7 | 6.0 | 4.9 | 8.5 | 10.5 | 75.3 | 36.0 |
| **Including Ameren** | | | | | | | | | |
| **Average** | **4.7** | **5.8** | **5.7** | **6.7** | **6.1** | **11.0** | **13.5** | **78.6** | **51.2** |
| **Median** | **4.6** | **5.8** | **5.8** | **6.3** | **5.7** | **11.3** | **14.0** | **77.4** | **50.5** |
| **Excluding Ameren** | | | | | | | | | |
| **Average** | **4.5** | **5.9** | **6.0** | **6.8** | **6.2** | **11.0** | **13.5** | **77.2** | **48.5** |
| **Median** | **4.5** | **6.5** | **6.4** | **6.5** | **6.5** | **11.6** | **14.5** | **76.3** | **50.5** |

1/ Adjusted dividend yield plus growth;
[DY*(1+(Growth))] + Growth

Source: I/B/E/S International, Inc., Standard & Poor's Research Insight, Value Line Investment Survey (1/4/02, 3/8/02), and Zacks.

VLDCF

**MARKET/BOOK AND REPRICED EQUITY/BOOK VALUE RATIOS**
**FOR SAMPLE OF ELECTRIC UTILITIES**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | Average 1991-2000 | 2000 Repriced Equity/ Book Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMEREN CORP | 187 | 176 | 182 | 159 | 184 | 167 | 197 | 192 | 145 | 199 | 179 | 150 |
| AMERICAN ELECTRIC POWER | 150 | 144 | 165 | 144 | 174 | 170 | 210 | 186 | 125 | 186 | 165 | 140 |
| EXELON CORP | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 310 | NMF | NMF |
| FPL GROUP INC | 189 | 173 | 181 | 156 | 200 | 183 | 222 | 217 | 142 | 225 | 189 | 147 |
| NSTAR | 138 | 146 | 154 | 120 | 143 | 126 | 171 | 185 | 152 | 169 | 151 | 146 |
| POTOMAC ELECTRIC POWER | 162 | 150 | 161 | 111 | 166 | 162 | 164 | 166 | 142 | 147 | 153 | 158 |
| SOUTHERN CO | 156 | 170 | 185 | 160 | 188 | 169 | 186 | 207 | 170 | 212 | 180 | 148 |
| WISCONSIN ENERGY CORP | 182 | 177 | 175 | 162 | 181 | 154 | 174 | 191 | 114 | 133 | 164 | 151 |
| **MEDIAN** | **162** | **170** | **175** | **156** | **181** | **167** | **186** | **191** | **142** | **192** | **165** | **148** |
| **AVERAGE OF ANNUAL MEDIANS** | | | | | | | | | | | **172** | |

Source: Standard & Poor's Research Insight

VLLDCMB

## DERIVATION OF IMPLICIT RELATIONSHIP AMONG "BARE-BONES" COST OF CAPITAL, RETURN ON BOOK EQUITY AND MARKET/BOOK RATIO

Assume the following:

- $k$ = the equity capitalization rate, i.e., the "bare-bones" cost of equity
- $D$ = dividend per share
- $E$ = earnings per share
- $M$ = current market price
- $B$ = current book value per share
- $b$ = retention rate
- $r$ = return on book equity
- $RE$ = per-share retained earnings
- $g$ = sustainable growth as measured by $b(r)$

DCF cost of capital:

$$(1)\quad k = \frac{D}{M} + g$$

Price of stock:

$$(2)\quad M = \frac{D}{k - g}$$

From the definition of return on book equity:

$$(3)\quad r = \frac{E}{B} = \frac{D}{B} + \frac{RE}{B}$$

If, from the assumptions,

$$(4)\quad g = br,$$

$$(5)\quad \text{by definition,}\quad g = \frac{RE}{E} \times \frac{E}{B} = \frac{RE}{B}$$

Substitute Equation (5) into Equation (3):

$$(6)\quad r = \frac{D}{B} + g$$

Solve for Equation (6) for B:

$$(7)\quad B = \frac{D}{r - g}$$

Divide Equation (2) by Equation (7) to obtain an expression of the market/book ratio:

$$(8)\quad M/B = \frac{\frac{D}{k - g}}{\frac{D}{r - g}} = \frac{r - g}{k - g}$$

From the formulation of $g = b(r)$ in Equation (4):

$$(9)\quad M/B = \frac{r - [b(r)]}{k - (b)(r)} = \frac{(1 - b)r}{k - br}$$

Solve Equation (9) for r:

$$(10)\quad r = \frac{M/B \times k}{1 + b\ (M/B - 1)}$$

**HISTORIC MARKET EQUITY RISK PREMIUMS**
**(Percentages)**

| | Annual Average Returns | | S & P Equity Risk Premium in Relation to: |
|---|---|---|---|
| | S & P 500 Common Stock Index | Long-Term U.S. Treasury Bonds 1/ | Long-Term U.S. Treasury Bonds |
| 1926-2001 | 12.7 | 5.2 | 7.5 |
| 1947-2001 | 13.7 | 6.1 | 7.6 |

1/ Average of annual income returns.

Source: Ibbotson Associates; Stocks, Bonds, Bills and Inflation: 2001 Yearbook

IS01

## S&P 500
## MARKET RISK PREMIUM STUDY
## (Quarterly Averages of Monthly Data)

| | S&P 500 Growth | Dividend Yield | DCF Cost | 10 Year Treasury Bond Yield | Risk Premium |
|---|---|---|---|---|---|
| 1992 1Q | 12.1 | 3.0 | 15.2 | 7.3 | 7.8 |
| 2Q | 12.0 | 3.4 | 15.4 | 7.4 | 8.0 |
| 3Q | 12.0 | 3.2 | 15.2 | 6.6 | 8.6 |
| 4Q | 12.0 | 2.9 | 15.0 | 6.7 | 8.2 |
| 1993 1Q | 11.8 | 3.0 | 14.8 | 6.3 | 8.5 |
| 2Q | 11.5 | 3.1 | 14.6 | 6.0 | 8.6 |
| 3Q | 11.3 | 3.0 | 14.3 | 5.6 | 8.7 |
| 4Q | 11.3 | 2.7 | 14.0 | 5.6 | 8.4 |
| 1994 1Q | 11.4 | 2.8 | 14.2 | 6.1 | 8.1 |
| 2Q | 11.5 | 3.2 | 14.7 | 7.1 | 7.6 |
| 3Q | 11.6 | 3.0 | 14.6 | 7.3 | 7.3 |
| 4Q | 11.6 | 3.0 | 14.6 | 7.8 | 6.7 |
| 1995 1Q | 11.5 | 2.8 | 14.3 | 7.5 | 6.8 |
| 2Q | 11.6 | 2.9 | 14.5 | 6.6 | 7.9 |
| 3Q | 11.9 | 2.6 | 14.5 | 6.3 | 8.1 |
| 4Q | 12.0 | 2.5 | 14.5 | 5.9 | 8.6 |
| 1996 1Q | 11.9 | 2.3 | 14.2 | 5.9 | 8.3 |
| 2Q | 12.3 | 2.3 | 14.7 | 6.7 | 7.9 |
| 3Q | 12.5 | 2.5 | 15.1 | 6.8 | 8.3 |
| 4Q | 12.8 | 2.1 | 15.0 | 6.3 | 8.6 |
| 1997 1Q | 13.0 | 1.9 | 14.9 | 6.6 | 8.3 |
| 2Q | 13.3 | 1.9 | 15.2 | 6.6 | 8.5 |
| 3Q | 13.7 | 1.7 | 15.4 | 6.2 | 9.3 |
| 4Q | 13.6 | 1.7 | 15.3 | 5.8 | 9.5 |
| 1998 1Q | 13.7 | 1.5 | 15.3 | 5.6 | 9.6 |
| 2Q | 14.0 | 1.5 | 15.5 | 5.6 | 9.9 |
| 3Q | 14.4 | 1.7 | 16.1 | 5.1 | 11.0 |
| 4Q | 14.6 | 1.4 | 16.0 | 4.7 | 11.3 |
| 1999 1Q | 15.7 | 1.4 | 17.0 | 5.0 | 12.0 |
| 2Q | 15.7 | 1.3 | 17.0 | 5.6 | 11.5 |
| 3Q | 16.0 | 1.4 | 17.4 | 5.9 | 11.5 |
| 4Q | 16.9 | 1.2 | 18.1 | 6.3 | 11.8 |
| 2000 1Q | 17.7 | 1.2 | 18.9 | 6.4 | 12.5 |
| 2Q | 17.9 | 1.3 | 19.2 | 6.2 | 13.0 |
| 3Q | 18.6 | 1.2 | 19.8 | 5.9 | 13.9 |
| 4Q | 17.9 | 1.2 | 19.1 | 5.4 | 13.4 |
| 2001 1Q | 16.8 | 1.3 | 18.0 | 5.0 | 13.0 |
| 2Q | 15.8 | 1.3 | 17.1 | 5.4 | 11.3 |
| 3Q | 15.1 | 1.4 | 16.5 | 4.8 | 11.7 |
| 4Q | 14.6 | 1.4 | 16.0 | 4.7 | 11.3 |
| **Averages** | | | | | |
| **1992 - 2001** | **13.6** | **2.1** | **15.8** | **6.1** | **9.6** |
| **1997 - 2001** | **15.5** | **1.4** | **16.9** | **5.6** | **11.2** |
| **1999 - 2001** | **16.6** | **1.3** | **17.9** | **5.6** | **12.2** |

Schedule 12

Source: I/B/E/S Rewind, Standard & Poor's Research Insight

## HISTORIC VALUE LINE BETAS
## FOR SAMPLE OF EIGHT ELECTRIC UTILITIES

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 |
|---|---|---|---|---|---|---|---|---|
| AMEREN CORP 1/ | 0.70 | 0.75 | 0.75 | 0.80 | 0.80 | 0.70 | 0.70 | 0.65 |
| AMERICAN ELECTRIC POWER | 0.80 | 0.70 | 0.75 | 0.75 | 0.75 | 0.70 | 0.75 | 0.70 |
| EXELON CORP 2/ | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF |
| FPL GROUP INC | 0.75 | 0.75 | 0.70 | 0.75 | 0.75 | 0.70 | 0.65 | 0.65 |
| NSTAR 3/ | 0.60 | 0.65 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| POTOMAC ELECTRIC POWER | 0.65 | 0.65 | 0.60 | 0.65 | 0.65 | 0.65 | 0.60 | 0.65 |
| SOUTHERN CO | 0.65 | 0.75 | 0.70 | 0.75 | 0.75 | 0.70 | 0.65 | 0.65 |
| WISCONSIN ENERGY CORP 4/ | 0.70 | 0.75 | 0.65 | 0.65 | 0.65 | 0.65 | 0.70 | 0.60 |
| **Average** | **0.66** | **0.70** | **0.68** | **0.71** | **0.71** | **0.69** | **0.65** | **0.66** |
| **Median** | **0.65** | **0.70** | **0.70** | **0.73** | **0.73** | **0.70** | **0.65** | **0.65** |

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| AMEREN CORP 1/ | 0.65 | 0.65 | 0.70 | 0.70 | 0.65 | 0.50 | 0.55 | 0.55 |
| AMERICAN ELECTRIC POWER | 0.75 | 0.75 | 0.70 | 0.70 | 0.55 | 0.45 | 0.55 | 0.55 |
| EXELON CORP 2/ | NMF | NMF | NMF | NMF | NMF | NMF | NMF | NMF |
| FPL GROUP INC | 0.70 | 0.70 | 0.75 | 0.80 | 0.70 | 0.45 | 0.45 | 0.45 |
| NSTAR 3/ | 0.75 | 0.75 | 0.75 | 0.70 | 0.65 | 0.50 | 0.55 | 0.55 |
| POTOMAC ELECTRIC POWER | 0.75 | 0.75 | 0.70 | 0.75 | 0.70 | 0.50 | 0.50 | 0.50 |
| SOUTHERN CO | 0.65 | 0.65 | 0.65 | 0.75 | 0.65 | 0.45 | 0.45 | NMF |
| WISCONSIN ENERGY CORP 4/ | 0.75 | 0.70 | 0.70 | 0.70 | 0.55 | 0.50 | 0.50 | 0.50 |
| **Average** | **0.71** | **0.71** | **0.71** | **0.73** | **0.64** | **0.48** | **0.51** | **0.52** |
| **Median** | **0.73** | **0.73** | **0.73** | **0.73** | **0.65** | **0.48** | **0.53** | **0.53** |

Notes:
1/ Union Electric for Ameren through 1997
2/ Exelon formed 2000
3/ Boston Edison for NSTAR in 1997, BEC Energy for NSTAR in 1998
4/ Wisconsin Electric for Wisconsin Energy prior to 1999

Source: Value Line Investment Survey

EBETA

## Value Line and S&P Risk Measures
## for the Sample of Eight Electric Utilities

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|
| **Value Line** | | | | | | |
| Earnings Predictability | | | | | | |
| AMEREN CORP 1/ | 95 | 95 | 90 | 85 | 85 | 85 |
| AMERICAN ELECTRIC POWER | 90 | 90 | 90 | 85 | 80 | 80 |
| EXELON CORP 2/ | nmf | nmf | nmf | nmf | nmf | nmf |
| FPL GROUP INC | 90 | 95 | 95 | 100 | 100 | 100 |
| NSTAR 3/ | 80 | 80 | 85 | 85 | 85 | 90 |
| POTOMAC ELECTRIC POWER | 80 | 85 | 80 | 80 | 80 | 80 |
| SOUTHERN CO | 90 | 90 | 85 | 90 | 90 | nmf |
| WISCONSIN ENERGY CORP 4/ | 80 | 70 | 45 | 35 | 35 | 40 |
| **Median** | **90** | **90** | **85** | **85** | **85** | **83** |
| Financial Strength | | | | | | |
| AMEREN CORP 1/ | A+ | A+ | A+ | A+ | A+ | A+ |
| AMERICAN ELECTRIC POWER | B++ | A | A | A | A | B++ |
| EXELON CORP 2/ | n/a | n/a | n/a | n/a | B++ | B++ |
| FPL GROUP INC | A | A | A | A | A | A |
| NSTAR 3/ | B | B+ | B++ | A | A | A |
| POTOMAC ELECTRIC POWER | A | A | A | B++ | B++ | B++ |
| SOUTHERN CO | A | A | A | A | B++ | B++ |
| WISCONSIN ENERGY CORP 4/ | A+ | A++ | A+ | A | B++ | B++ |
| **Median** | **A** | **A** | **A** | **A** | **A / B++** | **B++** |
| Safety Rank | | | | | | |
| AMEREN CORP 1/ | 1 | 1 | 1 | 1 | 1 | 1 |
| AMERICAN ELECTRIC POWER | 3 | 2 | 2 | 2 | 2 | 2 |
| EXELON CORP 2/ | n/a | n/a | n/a | n/a | 2 | 2 |
| FPL GROUP INC | 2 | 2 | 2 | 2 | 2 | 2 |
| NSTAR 3/ | 3 | 3 | 2 | 1 | 1 | 1 |
| POTOMAC ELECTRIC POWER | 2 | 2 | 2 | 2 | 2 | 2 |
| SOUTHERN CO | 1 | 1 | 1 | 1 | 2 | 2 |
| WISCONSIN ENERGY CORP 4/ | 1 | 2 | 2 | 2 | 2 | 2 |
| **Median** | **2** | **2** | **2** | **2** | **2** | **2** |
| **Standard & Poor's** | | | | | | |
| Business Profile | | | | | | |
| AMEREN CORP 1/ | n/a | 5 | n/a | 4 | 5 | 5 |
| AMERICAN ELECTRIC POWER | n/a | 4 | n/a | 5 | 4 | 4 |
| EXELON CORP 2/ | n/a | n/a | n/a | n/a | 6 | 6 |
| FPL GROUP INC | n/a | 3 | n/a | 5 | 5 | 6 |
| NSTAR 3/ | n/a | 6 | n/a | 4 | 4 | 3 |
| POTOMAC ELECTRIC POWER | n/a | 5 | n/a | 5 | 5 | 5 |
| SOUTHERN CO | n/a | 5 | n/a | 5 | 4 | 4 |
| WISCONSIN ENERGY CORP 4/ | n/a | 4 | n/a | 4 | 4 | 5 |
| **Median** | **n/a** | **5** | **n/a** | **5** | **5** | **5** |
| Bond Rating | | | | | | |
| AMEREN CORP 1/ | AA- 1/ | AA- 1/ | A+ | A+ | A+ | A+ |
| AMERICAN ELECTRIC POWER | A- | A- | A- | A- | A- | A- |
| EXELON CORP 2/ | n/a | n/a | n/a | n/a | A- | A- |
| FPL GROUP INC | A+ | AA- | A+ | A+ | AA- | A |
| NSTAR 3/ | BBB | BBB | A- | A- | A- | A |
| POTOMAC ELECTRIC POWER | A | A | A | A | A | A |
| SOUTHERN CO | A+ | A+ | A | A | A | A |
| WISCONSIN ENERGY CORP 4/ | AA+ | AA+ | AA+ | AA+ | A+ | A- |
| **Median** | **A+** | **A+** | **A** | **A** | **A** | **A** |

Notes:
1/ Union Electric for Ameren through 1997
2/ Exelon formed 2000
3/ Boston Edison for NSTAR in 1997, BEC Energy for NSTAR in 1998,
4/ Wisconsin Electric for Wisconsin Energy prior to 1999

Source: Standard & Poor's Research Insight; Annual Reports to Shareholders; Value Line Investment Survey
Standard & Poor's Utilities and Perspectives .

ELECRST

**S&P DEBT RATINGS AND VALUE LINE RISK MEASURES**
**FOR 34 LOW RISK INDUSTRIALS**

| | S&P Debt Rating | Value Line Risk Measures: Safety Rating | Earnings Predictability | Financial Strength | Beta |
|---|---|---|---|---|---|
| ALBERTO-CULVER CO | BBB+ | 2 | 100 | B++ | 0.75 |
| ALBERTSONS INC | BBB+ | 2 | 90 | A | 0.60 |
| AMERICAN HOME PRODUCTS CORP | A | 2 | 85 | A+ | 0.90 |
| AVERY DENNISON CORP | A | 2 | 65 | B+ | 0.90 |
| BALDOR ELECTRIC | | 2 | 90 | B++ | 0.70 |
| BARD (C.R.) INC | BBB+ | 2 | 85 | A | 0.80 |
| BECTON DICKINSON & CO | A+ | 2 | 90 | A+ | 0.80 |
| BRIGGS & STRATTON | BBB- | 2 | 45 | A | 0.95 |
| CLOROX CO/DE | A+ | 2 | 100 | A+ | 0.85 |
| CONAGRA FOODS INC | BBB+ | 2 | 95 | A | 0.70 |
| CURTISS-WRIGHT CORP | | 2 | 75 | B++ | 0.60 |
| DENTSPLY INTERNATL INC | BBB+ | 2 | 95 | B++ | 0.65 |
| DONALDSON CO INC | | 2 | 95 | B++ | 0.80 |
| DONNELLEY (R R) & SONS CO | A | 2 | 80 | B++ | 0.85 |
| EASTMAN KODAK CO | A+ | 2 | 70 | A+ | 0.80 |
| EATON CORP | A- | 2 | 65 | A | 0.90 |
| ECOLAB INC | A | 2 | 100 | B++ | 0.85 |
| FEDERAL SIGNAL CORP | | 2 | 85 | A | 0.85 |
| HILLENBRAND INDUSTRIES | A+ | 2 | 70 | A | 0.80 |
| INTL FLAVORS & FRAGRANCES | | 2 | 80 | B++ | 0.85 |
| JOHNSON CONTROLS INC | A- | 2 | 100 | A | 0.90 |
| KNIGHT-RIDDER INC | A | 2 | 45 | B++ | 0.80 |
| LA-Z-BOY INC | | 2 | 80 | B++ | 0.85 |
| LIZ CLAIBORNE INC | BBB | 2 | 90 | A+ | 0.95 |
| MCCORMICK & CO | A- | 2 | 80 | B++ | 0.55 |
| PALL CORP | | 2 | 40 | A | 0.80 |
| PROCTER & GAMBLE CO | AA | 2 | 100 | A++ | 0.70 |
| SENSIENT TECHNOLOGIES CORP | BBB | 2 | 90 | B++ | 0.60 |
| SHERWIN-WILLIAMS CO | A | 2 | 95 | A | 0.95 |
| SIGMA-ALDRICH | | 2 | 90 | A | 0.75 |
| SONOCO PRODUCTS CO | A- | 2 | 95 | A | 0.90 |
| SUPERIOR INDUSTRIES INTL | | 2 | 70 | B++ | 0.80 |
| UNIVERSAL CORP/VA | | 2 | 50 | A | 0.60 |
| WENDY'S INTERNATIONAL INC | BBB+ | 2 | 90 | A | 0.75 |
| **AVERAGE** | **A-** | **2** | **82** | **A-** | **0.79** |
| **MEDIAN** | **A-** | **2** | **88** | **A** | **0.80** |

Source: S&P Research Insight, S&P Bond Guide, Value Line Investment Survey.

US34RS

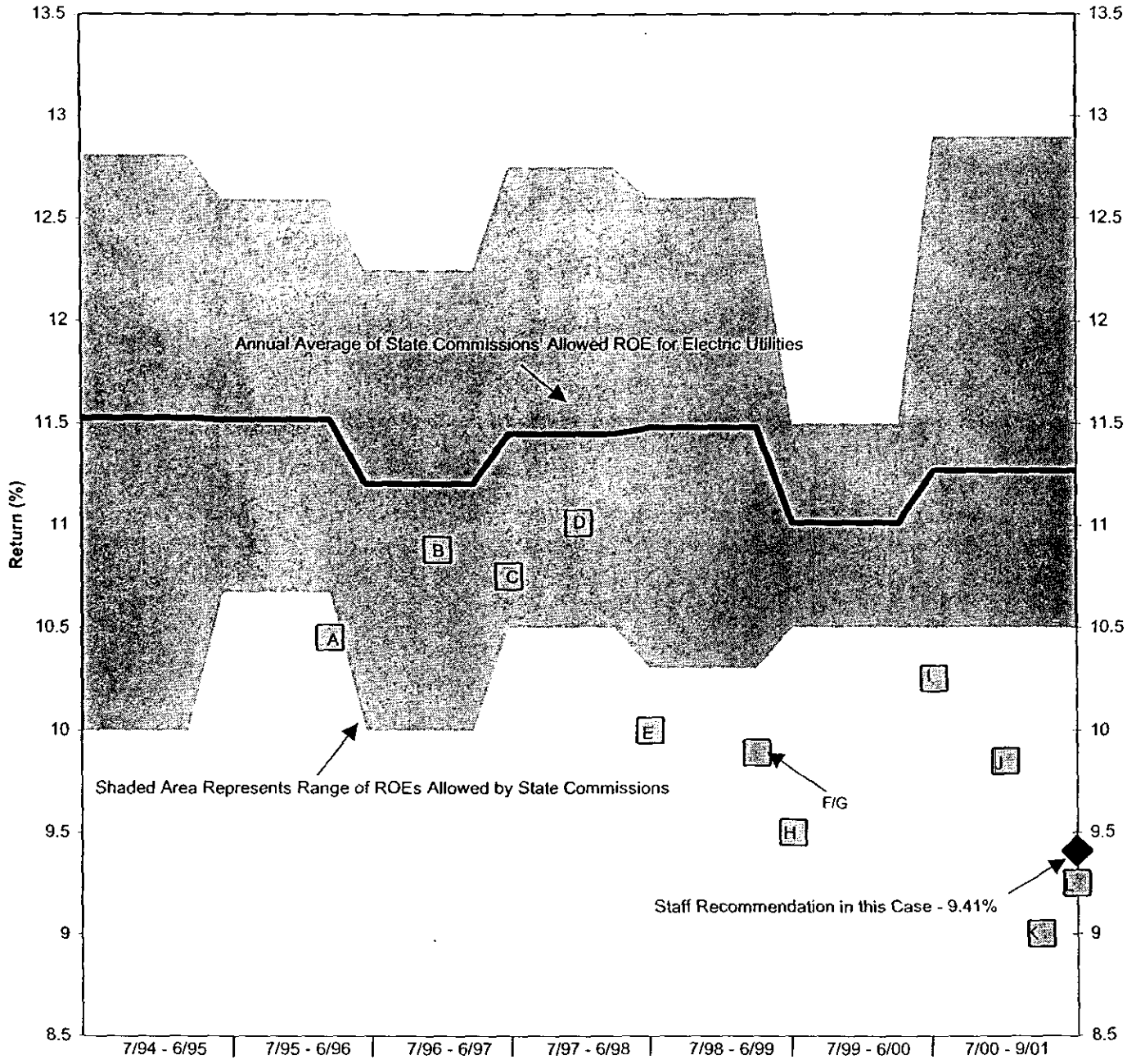
## RETURNS ON EQUITY AND BETAS
## FOR 34 LOW RISK U.S. INDUSTRIALS

| | Returns on Equity | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | Average 1991-2000 | Value Line Forecast 2004-2007 ROE | Value Line Beta |
| ALBERTO-CULVER CO | 12.5 | 14.4 | 14.1 | 14.1 | 15.1 | 15.8 | 18.5 | 16.1 | 15.6 | 17.1 | 15.3 | 14.0 | 0.75 |
| ALBERTSONS INC | 22.5 | 21.3 | 24.5 | 27.1 | 25.5 | 23.5 | 22.2 | 21.7 | 10.0 | 13.4 | 21.2 | 15.5 | 0.60 |
| AMERICAN HOME PRODUCTS CORP | 46.0 | 33.5 | 39.5 | 37.6 | 34.3 | 30.1 | 27.0 | 27.8 | -15.5 | -52.5 | 20.8 | 89.0 | 0.90 |
| AVERY DENNISON CORP | 7.5 | 9.8 | 10.9 | 15.1 | 18.6 | 21.4 | 24.5 | 26.7 | 26.2 | 34.6 | 19.5 | 20.5 | 0.90 |
| BALDOR ELECTRIC | 9.3 | 10.9 | 12.7 | 15.3 | 16.3 | 17.1 | 18.2 | 17.6 | 16.5 | 17.6 | 15.1 | 15.0 | 0.70 |
| BARD (C.R.) INC | 16.2 | 19.8 | 16.0 | 18.2 | 17.3 | 15.9 | 12.3 | 44.2 | 20.7 | 18.0 | 19.9 | 19.0 | 0.80 |
| BECTON DICKINSON & CO | 14.5 | 13.5 | 13.8 | 15.4 | 17.4 | 20.8 | 22.2 | 15.8 | 16.4 | 21.2 | 17.1 | 18.0 | 0.80 |
| BRIGGS & STRATTON | 13.1 | 17.3 | 20.9 | 26.8 | 24.9 | 19.7 | 14.5 | 21.2 | 31.1 | 35.2 | 22.5 | 19.0 | 0.95 |
| CLOROX CO/DE | 6.6 | 14.7 | 19.7 | 23.7 | 21.7 | 23.7 | 25.3 | 28.1 | 18.5 | 23.4 | 20.6 | 22.0 | 0.85 |
| CONAGRA FOODS INC | 17.2 | 17.1 | 19.3 | 20.0 | 7.6 | 26.0 | 23.9 | 12.6 | 13.2 | 19.9 | 17.7 | 19.5 | 0.70 |
| CURTISS-WRIGHT CORP | 16.1 | 14.7 | -2.0 | 12.9 | 11.0 | 9.1 | 14.4 | 13.4 | 16.0 | 15.0 | 12.1 | 10.0 | 0.60 |
| DENTSPLY INTERNATL INC | 12.5 | 22.5 | 18.1 | 23.1 | 17.5 | 19.7 | 18.9 | 8.3 | 20.4 | 20.4 | 18.2 | 19.0 | 0.65 |
| DONALDSON CO INC | 18.0 | 17.2 | 16.9 | 17.6 | 18.8 | 19.3 | 21.4 | 22.8 | 24.1 | 25.9 | 20.2 | 26.5 | 0.80 |
| DONNELLEY (R R) & SONS CO | 12.3 | 13.1 | 9.7 | 14.1 | 14.4 | -8.3 | 8.1 | 20.4 | 25.3 | 22.5 | 13.2 | 27.0 | 0.85 |
| EASTMAN KODAK CO | 0.3 | 15.7 | 13.5 | 22.3 | 27.4 | 26.1 | 0.1 | 38.9 | 35.2 | 38.3 | 21.8 | 20.5 | 0.80 |
| EATON CORP | 6.5 | 13.3 | 17.5 | 23.9 | 21.8 | 16.9 | 21.9 | 16.9 | 26.4 | 18.0 | 18.3 | 12.5 | 0.90 |
| ECOLAB INC | -69.6 | 20.0 | 21.2 | 20.2 | 21.6 | 23.2 | 25.0 | 31.0 | 24.2 | 27.5 | 14.4 | 27.0 | 0.85 |
| FEDERAL SIGNAL CORP | 20.0 | 20.0 | 21.0 | 22.3 | 22.0 | 23.8 | 20.6 | 19.1 | 17.0 | 16.4 | 20.2 | 18.0 | 0.85 |
| HILLENBRAND INDUSTRIES | 19.2 | 20.3 | 24.6 | 13.4 | 12.5 | 18.3 | 18.8 | 20.0 | 13.9 | 18.5 | 17.9 | 17.0 | 0.80 |
| INTL FLAVORS & FRAGRANCES | 18.2 | 18.2 | 21.7 | 23.8 | 23.4 | 17.3 | 21.0 | 20.9 | 18.0 | 16.5 | 19.9 | 23.5 | 0.85 |
| JOHNSON CONTROLS INC | 8.3 | 10.3 | 11.5 | 13.9 | 14.9 | 16.1 | 17.7 | 18.4 | 19.6 | 19.4 | 15.0 | 15.5 | 0.90 |
| KNIGHT-RIDDER INC | 12.9 | 12.5 | 12.2 | 13.9 | 14.3 | 23.9 | 30.8 | 22.8 | 18.9 | 18.3 | 18.1 | 18.5 | 0.80 |
| LA-Z-BOY INC | 10.6 | 10.7 | 12.5 | 11.8 | 11.8 | 12.9 | 13.4 | 16.5 | 16.3 | 10.1 | 12.6 | 12.5 | 0.85 |
| LIZ CLAIBORNE INC | 27.5 | 22.9 | 12.7 | 8.4 | 12.9 | 15.5 | 19.0 | 17.8 | 20.4 | 21.3 | 17.8 | 15.0 | 0.95 |
| MCCORMICK & CO | 21.5 | 23.0 | 22.0 | 12.8 | 19.3 | 10.3 | 23.3 | 26.6 | 26.8 | 37.1 | 22.3 | 33.0 | 0.55 |
| PALL CORP | 17.2 | 17.5 | 14.4 | 17.5 | 19.2 | 20.0 | 8.6 | 11.8 | 6.9 | 19.7 | 15.3 | 19.0 | 0.80 |
| PROCTER & GAMBLE CO | 22.4 | 21.4 | 2.1 | 26.4 | 26.6 | 26.9 | 28.4 | 30.8 | 30.6 | 28.8 | 24.4 | 27.0 | 0.70 |
| SENSIENT TECHNOLOGIES CORP | 21.6 | 14.0 | 18.6 | 16.1 | 19.2 | 12.4 | 17.7 | 18.5 | 19.1 | 14.0 | 17.1 | 16.5 | 0.60 |
| SHERWIN-WILLIAMS CO | 15.7 | 16.3 | 17.0 | 17.9 | 17.7 | 17.5 | 17.4 | 16.5 | 17.8 | 1.0 | 15.5 | 17.0 | 0.95 |
| SIGMA-ALDRICH | 19.7 | 20.0 | 19.4 | 17.1 | 17.3 | 16.7 | 16.6 | 14.6 | 13.9 | 30.2 | 18.6 | 14.0 | 0.75 |
| SONOCO PRODUCTS CO | 17.6 | 14.5 | 20.0 | 19.1 | 22.3 | 21.2 | -0.1 | 23.0 | 21.8 | 19.5 | 17.9 | 19.5 | 0.90 |
| SUPERIOR INDUSTRIES INTL | 19.2 | 23.8 | 28.8 | 29.9 | 24.7 | 19.5 | 20.6 | 17.5 | 21.3 | 21.2 | 22.6 | 17.5 | 0.80 |
| UNIVERSAL CORP/VA | 6.1 | 20.5 | 22.3 | 9.7 | 6.7 | 17.7 | 22.7 | 27.8 | 23.4 | 22.0 | 17.9 | 16.5 | 0.60 |
| WENDY'S INTERNATIONAL INC | 11.2 | 12.9 | 14.0 | 15.2 | 14.7 | 16.6 | 11.6 | 11.0 | 15.6 | 15.5 | 13.8 | 15.0 | 0.75 |
| **Median** | **15.9** | **17.2** | **17.3** | **17.5** | **18.2** | **18.8** | **19.0** | **19.6** | **19.0** | **19.6** | **18.0** | **18.3** | **0.80** |
| **Average** | | | | | | | | | | | **18.1** | **20.9** | **0.79** |
| **Average of Annual Medians** | | | | | | | | | | | **18.5** | | |

Source: Standard & Poor's Research Insight, Value Line Investment Survey .

USIND34

# Comparison of Allowed Returns on Equity
## (MPSC Staff Recommendations Compared to State Commissions' Orders)




Staff ROE Recommendations

A - Broadwater - GR-96-193 - Laclede (1996) - 10.45%
B - Broadwater - ER-97-81 - EDE (1997) - 10.88%
C - Hill - ER-97-394 - MPS (1997) - 10.75%
D - Bible - GR-98-140 - Missouri Gas (1998) - 11.01%
E - Broadwater - GR-98-374 - Laclede (1998) - 10%
F - Bible - GR-99-246 - SJLP (1999) - 9.89%
G - Bible - ER-99-247 - SJLP (1999) - 9.89%
H - Broadwater - GR-99-315 - Laclede (1999) - 9.5%
I - McKiddy - GR-2000-512 - AmerenUE (2000) - 10.25%
J - Murray - GR-2001-292 - Missouri Gas (2001) - 9.85%
K - McKiddy - ER-2001-299 - EDE (2001) - 9%
L - McKiddy - GR-2001-620 - Laclede (2001) - 9.25%

Note:
Allowed ROE statistics for 2001 do not include MPSC's September 21st decision allowing a 10.00% ROE for Empire District Electric.

Source: Regulatory Research Associates, Inc., Regualtory Focus, Major Rate Case Decisions: January 1990-December 2000, January 2001 and Major Rate Case Decisions - January - September 2001, October 2001