BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the Kansas City Power and Light Company of Kansas City, Missouri for authority to file tariffs increasing rates for service provided to customers in the Missouri service area.	))))))	Case Number HO 86-139

AFFIDAVIT OF Bruce Schmidt

STATE OF MISSOURI)
) SS
COUNTY OF COLE)

Bruce Schmidt of lawful age, on his oath states: that he has participated in the preparation of the attached written testimony in question and answer form, consisting of 28 pages, to be presented in the above case; that the answers in the attached written testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Bruce Schmidt

Subscribed and sworn to before me this 20th day of February, 1987.

Joyce C. Newner
Notary Public

My commission expires June 18, 1989

Joyce C. Newner, Notary Public
Osage County, State of Missouri
My Commission Expires June 18, 1989

PREPARED TESTIMONY

OF

BRUCE SCHMIDT

Office of Financial Analysis
Missouri Public Service Commission

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

Q. Please state your name.

A. My name is Bruce Schmidt.

Q. What is your business address?

A. P.O. Box 360, Jefferson City, Missouri, 65102.

Q. What is your present occupation?

A. I am employed by the Missouri Public Service Commission as a Financial Analyst.

Q. What is your educational background?

A. I received a Master of Business Administration degree with an emphasis in Finance from the University of Missouri-Columbia in 1982.

Q. Are you a member of any professional societies?

A. Yes, I am a member of the St. Louis Society of Financial Analysts.

Q. Do you have any other professional qualifications?

A. Yes, I am a Chartered Financial Analyst.

Q. Have you filed testimony previously before this Commission?

A. Yes. I have filed testimony in approximately twenty rate cases, and have made numerous recommendations regarding utility financing proposals.

Q. What is the purpose of this testimony?

A. The purpose of my testimony is to recommend a fair and reasonable rate of return for Kansas City Power and Light Company's steam heat rate base.

Q. Have you prepared an analysis of a fair rate of return which, in your opinion, Kansas City Power and Light (KCPL) should have the opportunity to earn on its steam heat rate base?

A. Yes. The results of that analysis are contained in Schedules FA-2 through FA-14 at the end of this testimony.

Q. Is the information contained in your testimony and schedules true and correct to the best of your knowledge and belief?

A. Yes, it is.

Q. What are the sources of information on which your testimony and schedules are base?

A. Financial reports of KCPL and other electric utility companies, and various financial periodicals and financial theory texts were the main sources of information used in preparing my testimony and schedules.

Q. Have you formed an opinion from your analysis as to the rate of return required by KCPL on its steam heat operations?

A. Yes, my analysis leads me to conclude that a fair return for KCPL is in the range of 10.14 to 10.34 percent.

Q. How does this range apply to the Revenue Requirement or Cost of Service equation presented in Schedule FA-2?

A. This is the R variable in the Cost of Service equation presented in Schedule FA-2. This equation states that the revenue requirement of a public utility should equal its cost of service, assuming efficient and economical management. The cost of service of a public utility is defined as the total of (a) proper operating expenses; (b)

depreciation expense; (c) taxes; and (d) a reasonable return on the net valuation of property. This allowed rate of return is generally thought of as a return that the utility has an opportunity to achieve, and not a guaranteed rate. The rate of return variable (R), as indicated in Schedule FA-2, is a weighted average cost of capital. The weighted average cost of capital is composed of the embedded cost of debt weighted by the proportion of debt in the capital structure, plus the embedded cost of preferred stock weighted by the proportion of preferred stock in the capital structure, plus the cost of common equity weighted by the proportion of common equity in the capital structure. This weighted average cost of capital is then applied to the net valuation of property (rate base). This rate base should represent the dollar amount of investment a company has made to support its utility operations. The return on this investment should provide for all financing costs (interest payments and returns to equity holders) associated with utility service.

Economic and Legal Rationale for Regulation

Q. Are there economic and legal reasons you are aware of which justify and support the determination of the variables in the above-mentioned cost of service equation as regulatory guidelines with respect to public utility operations?

A. Yes. Utilities, in general, are able to realize significant economies of scale with increases in output. Decreasing average unit costs result from increases in production as fixed costs of production are distributed over a greater number of service units (although it is not necessarily true that decreasing average unit costs will continue until plant capacity is fully utilized). Economies of scale are not unique to utilities, but given the costly duplication and sometimes inadequate

service that competition can lead to in these industries, it has been generally concluded that utilities operate at their greatest efficiency in a monopolistic atmosphere. These general economic considerations, coupled with the relative necessity of services provided by utilities, and the possibility of extracting excessive monopolistic profits from customers have given rise to the regulatory environment in which public utilities operate. The goal of regulation is to obtain the efficiencies of a competitive environment along with the benefits of a monopoly operation for the good of the public, while allowing utilities earnings which are adequate to cover expenses and investment capital costs.

There is a well documented history of legal guidelines for regulation and the fair rate of return concept. This testimony will be based on the financial and economic principles espoused in the Bluefield Water Works, 262 U.S. 679 (1923) and the Hope Natural Gas, 320 U.S. 591 (1944) cases. The courts have ruled that a fair rate of return should be similar to the return for businesses of similar risks, but not as high as that earned in a highly profitable or speculative venture. The return should be sufficient to assure confidence in the financial condition of the utility, allowing the utility to maintain and support its credit and attract the capital necessary to provide service. The courts have also asserted that a prerequisite to a fair return is efficient management, and that the reasonable level for the rate of return may vary with changes in the capital markets and general economic conditions.

Pursuant to these guidelines, an appropriate analysis should include:

1. Evaluation of general economic conditions,
2. Evaluation of the capital structure of the company,
3. Determination of the embedded cost of debt,

4. Determination of the embedded cost of preferred stock, and

5. Determination of a return on common equity that enables the firm to maintain financial integrity and gives the firm the ability to raise additional equity capital.

Economic and Capital Market Conditions

Q. Please discuss current and expected economic and capital market conditions.

A. Current economic headlines have been dominated by reports of relatively low GNP growth, relatively low levels of interest rates, low inflation or disinflation in some sectors of the economy, and the stubborn international trade deficit. Assessments involving the likely effects of tax reform have been made for most industries (only the results remain to be seen), and the federal government's budget deficit has come back into the news with President Reagan's submission of a trillion dollar proposed budget to Congress for fiscal year 1988.

The Commerce Department's estimate of third quarter 1986 GNP growth is 2.8 percent. Second quarter GNP rose 0.6 percent, and first quarter GNP growth was 4.1 percent (Barron's, 12/22/86). Treasury bond and bill rates for 1986 are listed in Schedule FA-3. Three-month and one-year Treasury bill rates have declined from 7.04 percent and 7.73 percent to 5.61 and 5.84 percent, respectively since the beginning of 1986. Long-term Treasury bond yields have declined from 9.51 percent to 7.81 percent over the same time period (through November). Moody's average public utility bond yields are graphed and listed in Schedule FA-4. The average public utility bond yield has dropped from 10.66 percent in January, 1986, to 9.15 percent as of November, 1986. The rate of inflation as measured by the consumer price index (CPI) has fallen from approximately 4.0 percent in January 1986 to 1.3 percent in November 1986

(12 month percentage changes in the CPI). The rate of inflation as measured by the CPI is graphed and listed in Schedule FA-5

Lower inflation and interest rates have also led to lower stock market dividend yields in general. This is illustrated in Schedule FA-6 which graphs Standard and Poor's 40 Utilities and 400 Industrials index yields. The S&P Utilities index was yielding 7.4 percent in January, 1986 and approximately 6.1 percent by the end of December, 1986. The S&P Industrials index was yielding 3.45 percent in January, 1986 and approximately 3.0 percent by the end of December, 1986.

The decline in interest rates over the past two years has been due (in large part) to lessened inflationary pressures, and more recently this combined with perceived economic weakness. Relatively slow economic growth has prompted the Federal Reserve Board of Governors to pursue an "easier" monetary policy. A general easing in monetary policy can be traced back as far as November, 1981 when the Federal Reserve began reflecting a change in monetary policy through reductions in the discount rate (the rate charged to banks for borrowing reserves). Discount rate changes are shown in Schedule FA-7. GNP growth did not begin responding to the change in policy until late in 1982. As monetary policy eased and expected inflation rates declined, interest rates declined. Recent low GNP growth and low inflation have enabled the Federal Reserve to maintain a relatively easy monetary policy. International trade imbalances have also recently served as a reason to pursue easier monetary policy worldwide (to drop the value of the dollar against other major currencies as an attempt to stimulate worldwide demand for U.S. products and make foreign imports more expensive to U.S. consumers).

Whether the monetary policy manipulation will have desirable effects is still being debated. The trade deficit still seems to be

looking for a "bottom" (see Wall Street Journal, 12/17/86) and the index of leading economic indicators rose 0.6 percent in October of last year, but some analysts contended that this overstated the economy's strength (Wall Street Journal, 12/3/86). The leading indicator index rose 0.2 percent in September and dropped 0.2 percent in August of last year.

Schedule FA-8 lists some 1987 economic projections. The only significant change from current conditions seems to be an expected increase in the rate of inflation from around 1.5 percent to the 3.5 percent to 4.0 percent range. GNP growth and unemployment are expected (by these sources) to remain approximately at their latest levels of 2.8 percent and 7.0 percent, respectively. Long and short-term Treasury security rates seem to be expected to decrease somewhat from their current levels of 7.8 percent and 5.6 percent, respectively, or to decline slightly (even with an increase in the expected rate of inflation). Overall, economists appear to expect a fairly stable economic environment over the next year.

KCPL Steam Heat Operations

Q. Please briefly describe KCPL's steam heat operations.

A. KCPL's current steam heating system consists basically of the Grand Avenue generating plant and approximately 55,000 feet of steam main line. The steam system serves a small portion of the downtown Kansas City area. The Grand Avenue plant has been operating in KCPL's system since 1927. The main lines in the steam system are between 60 and 80 years old. The steam system serves approximately 130 customers currently. 1985 steam heat operations provided $13,508,000 in revenues out of total company revenue of $596,621,000. According to KCPL's management, significant decreases in customers on the steam heat system since the

1950s and the advanced age of plant generating and distributing steam heat make the situation conducive to phasing out steam heat operations by 1990. The company proposes to serve remaining customers with on-site electric boilers subject to space heating rates.

Capital Structure

Q. What capital structure are you using in this analysis?

A. I am using KCPL's capital structure as of 9/30/86, which coincides with the end of the accounting staff's test year. This capital structure is displayed in Schedule FA-9 and consists of 50.47 percent long-term debt, 8.55 percent preferred stock, and 40.98 percent common equity.

Long-term Debt Cost

Q. What is KCPL's embedded cost of long-term debt?

A. The company's embedded cost of long-term debt is 8.64 percent. This number was calculated by company witness John De Stefano in response to data requests requiring him to update his direct testimony Schedules 5 through 10. The schedules were updated to 9/30/86 to coincide with the end of the accounting staff's test year. One exception to this was to pro forma the embedded cost of long-term debt to include the retirement of $50,000,000 of 16.5 percent and $50,000,000 of 12.0 percent first mortgage bonds. The 12.0 percent bonds were replaced with 8.375 percent general mortgage bonds. The 16.5 percent bonds were replaced using short-term debt, which I have not included in the capital structure.

I have examined the updated calculations and I agree with them, therefore I will not present them again in the schedules accompanying this testimony.

Preferred Stock Cost

What is KCPL's embedded cost of preferred stock?

A. The company's embedded cost of preferred stock is 10.10 percent. This number was calculated by company witness John DeStefano in updating Schedule 11 accompanying his direct testimony. I agree with the calculation and will therefore not present it again.

Cost of Equity

Q. Have you determined a cost for the common equity of KCPL?

A. Yes. The cost of common equity, though, is not as easy to ascertain as the embedded costs of debt and preferred stock because common stock has no stated contractual payments. The cost associated with a particular company's common stock can depend upon a myriad of factors including expected dividend payments, expected dividend and/or earnings growth, as well as the potential for and consequences of deviations from expected events. Thus, the price of a given common stock depends on the most likely cash flows associated with purchasing, holding and selling that stock versus an investor's opportunities elsewhere in the investment market.

Q. How do you propose to analyze these relationships?

A. There are several methodologies used in attempting to quantify the above relationships. I have chosen two of the more prominent methods for my analysis; the discounted cash flow (DCF) model and the capital asset pricing model (CAPM). DCF results are derived from current

common stock prices and dividends as well as expected dividend growth, while CAPM results are derived from current capital market conditions and the expected variance (or "risk") of a company's stock returns relative to "market" returns. CAPM is one version of risk premium cost of equity analysis.

The DCF Model

Q. Please describe the DCF model and its application.

A. The infinite version of the DCF model simplifies to the following expression:

where:

Solving this expression for the investors' required rate of return (k) gives:

The first term in this expression is the expected dividend yield, while the second term is the expected constant growth in dividends. The growth in dividends (also implies growth in earnings) will be reflected in market price, therefore this model also recognizes the capital gain potential associated with owning a stock.

The DCF is a continuous stock valuation model and the theory behind its development imposes some assumptions on the model, namely that:

1. Earnings and dividends grow at the same constant rate (implies a constant payout ratio),

2. The price/earnings ratio remains constant (i.e., constantly growing earnings will be value at a constant multiple),

3. Then, from the above, when k (the required rate of return) is constant and earned on a regulated rate base derived from accounting book values, investors will price the stock so that it equals book value ("On the Use of Security Analysts' Growth Projections in the DCF Model", Avera & Fairchild, and "A myopic View of the DCF Model", Patterson, in Earnings Regulation Under Inflation, published by the Institute for Study of Regulation, 1982).

These assumptions may seem rather stringent given that any one or all of the components in the DCF model are subject to change. But the continuous nature of the DCF model also assumes that someone will always hold the stock, i.e., a continuous market where investors are constantly analyzing opportunities and comparing the opportunities with their own expectations and requirements. This does not imply that expectations and opportunities cannot or will not change over time, but simply that there will be a mechanism that reflects these opportunities and an active exchange market. Most applications of the model attempt to capture longer-term "sustainable" expectations even though capital market and economic conditions change constantly.

Q. What are the advantages of using the DCF model?

A. The main advantages of the DCF model are:

1. It recognizes that dividend payments from many stocks grow,

2. It accounts for price appreciation by implicitly recognizing reinvestments into a firm (through the constant payout and earnings growth assumptions), and

3. It is a market oriented approach which takes advantage of efficient market theory and market information.

The DCF model looks at a stream of expected dividends and a future price in present value terms. Associated with these expectations is uncertainty; no one can be sure of future dividend payments and the price of a common stock. Nevertheless, investors must expect to earn a reasonable rate of return from owning a stock or they would not own it. The rate of return required by the average investor in the market depends

on the uncertainty of dividends and future price, and this is the required rate of return represented by k in the DCF model.

Description of the CAPM

Q. Please describe the CAPM and its application.

A. CAPM is expressed mathematically as follows:

The CAPM describes the security market line (SML), which plots the expected return of a security or portfolio of securities against the beta value (B) for the security or portfolio. The CAPM assumes that all securities and portfolios plot on this SML going through a point representing the market portfolio and a point representing the risk-free rate of interest. The CAPM also assumes risk-averse investors with homogeneous expectations about security returns, and highly efficient capital markets with no imperfections.

The CAPM attempts to quantify the risk associated with owning a particular security by comparing the variance of returns on that security with the variance of returns on a "market" portfolio representing all capital assets. Market (or systematic) risk is the amount of variance in security returns associated with changes in inflation, interest rates, political climates, or anything that might affect market returns in general. Non-market (or unsystematic risk) is security-specific risk

associated with the nature of a particular company's business and financial position. CAPM theory suggests that this non-market risk can be minimized (if not eliminated) by holding a well diversified portfolio of assets. Therefore the manner in which market risk affects a specific security's return is the only important measure of risk. This does not imply that security-specific risk cannot impact CAPM-derived returns. Since security-specific risk will affect a particular security's price movement in relation to "market" price movements, beta should capture this relevant portion of risk. There is considerable debate over how well measured betas accomplish this, though.

Q. How has the CAPM held up under empirical tests?

A. Copeland and Weston (Financial Theory and Corporate Policy, Addison-Wesley Publishing Co., 1979) summarize results from several studies on the validity of the CAPM. The conclusions were that the model does a reasonable job of predicting portfolio returns, even though it does not explain all of the variance in returns.

Q. What are the disadvantages in using the CAPM to determine a cost of equity for an individual company?

A. The disadvantages are:

1. There is some difficulty in definite the"market" portfolio, a risk-free rate of interest, and relevant time periods for measuring betas,

2. CAPM has much more explanatory power when applied to portfolio returns than when applied to an individual company, and

3. CAPM is a single period model that concerns itself with investor expectations about returns in a single future time period. The model does not attempt to describe how investors have behaved historically or how stock prices have behaved in the past, but only how investors would behave in the next time period if they act consistently with the model's assumptions (Valentine and Mennis, Quantitative Techniques for Financial Analysis, Richard D. Irwin, Inc., 1980).

Q. What are the advantages in using the CAPM?

A. The advantages are:

1. CAPM is based on market efficiency theory and therefore utilizes market information, and

2. The model stands up reasonably well when empirically tested under relaxed assumptions.

Given the above observations, I believe the CAPM can provide an indication of the effect an individual company should have on a diversified portfolio's performance, but I also believe the CAPM should not be solely relied upon when deriving required returns on equity.

DCF and CAPM Return on Equity

Q. What data have you relied on to develop a cost of equity for KCPL?

A. I have examined recent stock market data for KCPL and other electric utilities, recent and projected interest rates, historic dividend and earnings growth, projections for earnings and dividend growth from several investment services, and historic and projected risk premium data. I have calculated from this information DCF and CAPM costs of equity for 100 electric utilities followed by Salomon Brothers in its Electric Utility Monthly publication. These electric utility companies have been sorted into seven groups according to Standard and Poor's and Moody's bond ratings for the companies.

Q. Why have you examined other electric utilities as well as KCPL?

A. The main reason was to have a reference base for determining the reasonableness of the cost of equity developed for KCPL. KCPL's earnings and dividend growth prospects have been reduced significantly according to many investment advisory services (at least for the near

term). Consequently many earnings growth projections for KCPL have been very low or negative. Historic dividend growth rates, calculated using 1986 or 1987 as the ending years for certain time periods, are also negative since the company has reduced its dividend rate. Growth rates used in the DCF model must be positive and should reflect longer-term expectations. This problem eliminated many growth rates traditionally used in the DCF model. Projected dividend growth rates probably provide the best theoretical and practical solution to using the DCF model when a company's perceived earnings potential has changed significantly. Sources providing "long-term" projected dividend growth are somewhat limited though. Therefore, in order to increase (or decrease) my confidence in the DCF results for KCPL, I wanted to have a "comparable risk" group of electric companies to examine.

The companies followed by Salomon Brothers, in my opinion, should provide a "check" on the reasonableness of the required returns on equity derived for KCPL. KCPL is included in the group of electric utilities that have bond ratings of Baa and/or BBB (BBB is Standard and Poor's, Baa is Moody's).

Q. Please describe the data used in the DCF model and the CAPM, beginning with the DCF data.

A. Dividend yields for DCF-derived costs of equity were calculated using the most recent three-month high/low average prices and indicated dividends from Standard and Poor's Stock Guide. The most recent three-month time period at the time of this writing was September through November, 1986. KCPL's monthly high/low price, indicated dividend, and average monthly dividend yield are listed for 1986 in Schedule PA-10. The three-month average yield from September through November of last year was

6.95 percent, or approximately 7.0 percent. This is the dividend yield I will use in the DCF model for KCPL.

Q. What rate of growth in dividends per share have you used in the DCF model for KCPL?

A. As I stated before, sources of projected dividend growth for KCPL are limited and some of the projections are inappropriate for use in the DCF model. Value Line's Investment Survey (10/24/86) projects dividend growth of only 0.5 percent over the next five years for KCPL. Merrill Lynch's Quantitative Analysis (10/31/86) projects dividend growth of only 1.2 percent over the next five years and eleven year "steady-state" earnings per share growth of 2.8 percent. Institutional Brokers Estimate System (IBES) five-year earnings per share growth estimates averaged -0.84 percent over the September-November, 1986 period. Salomon Brothers Electric Utility Monthly (September through November, 1986) projects a five-year "normalized" growth rate in earnings and dividends of 4.0 percent for KCPL.

KCPL's historic growth rates in dividends and earnings for five and ten year periods ending in 1976 through 1985 are listed in Schedule FA-11. These are "least squares trended" growth rates. Historic growth rates in dividend and earnings for KCPL calculated by Value Line (Investment Survey, 10/24/86) are also listed in Schedule FA-11. The most recent five-year averages of the trended growth rates are shown at the bottom of Schedule FA-11 (1981-1985). Dividend growth was in the 4.1 to 5.2 percent range. Value Line's historic dividend growth rates range from 4.5 to 5.5 percent. Earnings growth has been significantly higher, but these growth rates have been overwhelmingly influenced by AFUDC (Allowance for funds used during construction) during recent years. AFUDC is a non-cash item that does not necessarily reflect current earnings in a manner that can be

expected in the future (as evidenced by the earnings growth projections cited above). Therefore, historic EPS growth rates probably don't provide a good estimate of investor expectations in this case.

My conclusion, from examining these historic and projected growth rates, is that an assumption of a return to some "normal" growth rate in dividends for KCPL in the range of 4.5 to 5.5 percent is not unreasonable. This assumption will be compared to growth and total return expectations for other electric utilities later in this testimony.

Q. What DCF cost of equity do the yield and growth rate data imply for KCPL?

A. The resulting DCF cost of equity for KCPL is calculated below and is 11.5 to 12.5 percent:

Q. What information have you used to calculate a CAPM cost of equity for KCPL?

A. I have used historic and projected short-term interest rates and risk premiums, in conjunction with Value Line's beta.

Q. Why have you examined historic and projected data?

A. The CAPM, as with the DCF model, is intended to be "forward-looking". This is why projected data is theoretically best. My access to projected stock "market" forecasts is limited (in this instance I discovered only one forecast), so I felt it was necessary to use historic data to prevent total reliance on limited data.

Q. What are the risk-free rates (R_f) you have used in the CAPM?

A. I have used the six month average of one-year Treasury bills adjusted to constant maturity as the recent historic risk-free rate. This rate is 5.9 percent and is displayed in Schedule BA-3. I have used 5.6

percent for the projected risk-free rate. This number was derived by adding 0.4 percent (the approximate difference in six-month averages between one-year and 91-day Treasury bills in Schedule FA-3) to 5.2 percent (the approximate average of the 91-day Treasury bill rate projections in Schedule FA-8), since I didn't have a specific projection for one-year Treasury bills.

Q. What values have you used for the risk premiums (E(R)-R) in the CAPM?

A. I have used 8.4 percent or the historic value, which was the average risk premium of common stock returns over Treasury bill returns from 1926 through 1985 according to Stocks, Bonds, Bills, and Inflation - 1986 Yearbook (Ibbotson Associates Capital Market Research Center). I have used 10.4 percent as the projected risk premium. This number was derived from a forecast in Standard & Poor's Outlook (12/17/86). The S&P 500 index was predicted to reach a level of 275 to 280 by the end of 1987 from a level of 247 at that time. This would be a percentage change of around 12.4 percent during the year. Adding the 3.4 percent current dividend yield on the S&P 500 to the 12.4 percent price change results in an approximate 16.0 percent total return expectation from this index of stocks. This 16.0 percent minus the 5.6 percent projected risk-free rate results in the 10.4 percent projected risk premium (it should be noted that this is a spot estimate which can vary significantly from day to day and that longer term expectdations could vary significantly since the forecasted data is only for the next twelve months).

Q. What value have you used for beta (B) in the CAPM?

A. I have used a beta value of .70 for KCPL (Value Line's published beta for KCPL is .65 (10/24/86) and Merrill Lynch's published beta for KCPL is .70 (10/31/86)).

Q. What is the resulting CAPM cost of equity using these values?

A. The resulting CAPM cost of equity for KCPL is in the range of 11.8 percent to 12.9 percent and is calculated as follows:

Q. How does the CAPM cost of equity range compare to the DCF cost of equity range?

A. The CAPM results are 30 to 40 basis points greater than the DCF results, but in general, support the DCF range.

Comparison of KCPL Equity Cost to Other Electric Utility Equity Costs

Q. How does KCPL's resulting equity cost compare to equity costs derived in a similar manner for other electric utilities?

A. Schedule FA-12 shows results from DCF and CAPM calculations for 99 other electric utilities and KCPL. The companies are sorted by bond ratings from Standard and Poor's and Moody's. In addition, this schedule lists current market-to-book ratios and a nuclear operation indicator.

Q. Are there any differences in the cost of equity calculations used for these companies versus what you did for KCPL?

A. Yes. The average growth rate ("G") displayed in the schedule was calculated from the most recent three-month EPS growth projections provided by IBES (a three-month average growth rate), the growth rate in DPS and EPS projected by Salomon Brothers in the most recent Electric Utility Monthly, and the five-year dividend growth rate projected in Value Line's Investment Survey. This "G" is an average of the projections provided by these three sources.

Q. Why have you used more sources for obtaining the growth rate in the DCF calculation?

A. The purpose was to, hopefully, derive a more reliable estimate of investor growth expectations. The same sources were examined in attempting to derive a growth rate for KCPL, but many of the projections were not useful since KCPL is in a "transition" phase. Most of the other electric utilities examined are in a relatively stable operating phase. This, in my opinion, makes the growth rate projections more reliable and less variable. As with KCPL, if growth rate projections were unavailable or negative from any source "G" was not calculated and shows up in the schedule as being unavailable.

Q. How do the growth rate expectations in Schedule FA-12 compare to the growth rate of 4.5 to 5.5 percent you have assumed to be appropriate for KCPL?

A. The average growth rates for the various bond rating groups of companies range from 2.8 to 6.1 percent, approximately. Higher earnings and dividend growth is expected from the companies with better bond ratings. The average expected growth rate for the group of companies including KCPL is only 2.8 percent. But, many of these companies did not have growth rates available from all sources. Most of these companies also have significantly higher dividend yields, thus offsetting lower growth expectations. The average expected growth rate for companies with dividend yields more comparable to KCPL's (bond rating groups 2 through 5) range from approximately 4.3 to 5.4 percent. Given these observations, I believe a 4.5 to 5.5 percent growth rate expectation for KCPL is within reason.

Q. Are there any other differences in your specific analysis of KCPL's cost of equity versus the general analysis done for the other companies in Schedule FA-12?

A. Yes. The CAPM results were derived using only Value Line betas and historic interest rate and risk-premium data. The reason for using Value Line's betas is that I did not have Merrill Lynch betas for the other companies. The reason that only historic data was used to calculate the CAPM costs of equity is because data is more readily available on this basis. Additionally, the limited data problem and "spot" nature of the projected CAPM result make it difficult to rely on this calculation heavily.

Q. What do the cost of equity results in Schedule FA-12 indicate to you about the reasonableness of the returns on equity you have derived for KCPL?

A. Presuming that grouping companies together according to bond ratings is a reasonable surrogate for a comparable risk analysis, the results indicate that a cost of equity somewhere in the area of 12.0 percent would be expected for a company with KCPL's risk characteristics. The 12.0 percent is the approximate DCF and CAPM average derived for the group of companies in which KCPL is included ("Bond Rating 6"). This is within the DCF and CAPM ranges I have derived for KCPL.

Q. Is ranking companies in the same industry by bond ratings a reasonable surrogate for risk ranking?

A. Probably. Bond rating agencies take into consideration capital structure characteristics, interest coverage ratios, cash flow adequacy, as well as nuclear exposure and other qualitative aspects of a company's operations before assigning bond ratings. While bond ratings are not the only conceivable measure of a company's common stock risk,

they do encompass many factors that affect the risk associated with common stock returns.

Q. Is there a direct relationship between a company's bond rating and its cost of equity capital?

A. There is not necessarily a direct or predictable relationship between bond ratings and the cost of equity for a specific company or group of companies. The average costs of equity derived for the first four bond rating groups are essentially all around 11.5 percent. The average costs of equity derived for the last three bond rating groups are in the 12.0 to 12.5 percent range. The direction of changes that do exist in costs of equity between groups of companies (within the first four groups and the last three groups) or individual companies are not necessarily what would be expected if a direct relationship existed..

Q. What do the market-to-book ratios in Schedule FA-12 indicate?

A. Traditionally, utility market-to-book ratios have been thought of as a measure of "earnings adequacy"in terms of keeping utility investors "whole". The rationale behind this is that if a utility is allowed to and does earn its true cost of capital on the book value of its investment in rate base, the utility's common stock must by definition be priced to equal book value. This oversimplification ignores many other factors that can affect utility stock prices (such as rapidly changing interest rate levels and inflation expectations), as well as the potential irrelevance of the book value of assets to a utility's earnings potential.In the case of a company that is 100 percent involved in utility operations under relatively stable economic conditions, the market-to-book ratio might be an acceptable earnings adequacy indicator. Given the dramatic change in general economic conditions over the past several

years, differing nuclear involvements, and the diversification efforts of some companies a less stringent interpretation of market-to-book ratios is probably appropriate. I believe the market-to-book ratios might be better interpreted as indicators of how confident investors are of achieving expected returns from a particular company's stock, and how those expected returns compare to the returns and risks associated with alternative investments.

The healthy market-to-book ratios in Schedule FA-12 for companies in the higher bond rating groups (ratings 1 through 4) are significantly different from the market-to-book ratios for the companies in the lower bond rating groups (ratings 5 through 7). I would speculate that this difference is due to the uncertainty associated with the expected returns rather than any inherent adequacy or inadequacy of the level of expected returns from the various groups. On the other hand, the dramatic improvement in the electric utility industry's market-to-book ratio as a whole over the past several years probably does serve as an "adequacy" indicator when considered in the context of return expectations from alternative investments. That is, as interest rate and inflation expectations have fallen, the returns expected from utility stocks have become more attractive in relation to other investment return expectations. I do not believe much more can be concluded from the market-to-book ratios presented in Schedule FA-12.

Recommended Return on Equity

Q. What return on equity are you recommending that KCPL be allowed to earn?

A. I am recommending the upper half of the DCF derived cost of equity since the CAPM and "comparable company" results were toward the

upper end of that range. This results in a recommended return on equity of 12.0 to 12.5 percent.

Q. Are you recommending a flotation cost adjustment to the DCF derived return on equity?

A. No.

Q. Why not?

A. A flotation cost adjustment is commonly proposed to compensate utility companies for out of pocket expenses and market price discounts (market "pressure") associated with new issues of common stock. The adjustment is generally supported through the contention that the DCF model has no parameter that reflects such actual and opportunity costs. Market pressure is generally contended to exist because of perceived temporary excess supplies of a company's stock and/or "dilution" of existing shareholders' equity through the mere existence of additional new shares.

The assumption that the DCF model does not recognize flotation costs implies that observed market prices for utility stocks contain no "discount" for the possibility and consequences of stock issuances over time. I believe the market for utility stocks is probably efficient enough to recognize the implications of utility company financing needs. If a utility must issue stock when its stock price is suppressed below book value this automatically implies a yield level above what investors would require during time periods when investors perceive the utility's prospects in a more favorable context. If the utility requests rate adjustments during time periods when its stock is suppressed, financing costs should be reflected in the stock price along with any other investor perceived opportunity costs they expect to receive. In the case of a utility requesting rate adjustments during time periods when its stock

price is at book value or above, obviously investors have a more favorable view of the utility's prospects including recovery of all financing costs. Regardless of when a utility issues common stock, it seems unlikely to me that market prices will not reflect investor return requirements including any potential affects of a new issue.

Q. What is the magnitude of a typical flotation cost adjustment in terms of cost of capital and revenue effects?

A. Five to ten percent flotation cost adjustments are not unusual recommendations by rate of return witnesses. Using KCPL as an example, a five percent adjustment would result in approximately a 0.4 percent increase in the cost of equity (7.0 percent yield divided by 1 - .05 equals 7.4 percent). In other words, investors have "mispriced" KCPL's stock to the extent that is is necessary to make a 0.4 percent adjustment to reflect the "true" cost of equity if flotation cost adjustment assumptions are to be believed. Depending upon the yield level and the size of the proposed adjustment increases of 0.5 to 1.0 percent in the cost of equity are not unusual.

In terms of revenue requirements, the dollar amounts associated with flotation cost adjustments can become excessive. Using KCPL as an example again, the 0.4 percent increase in the cost of equity translates into a 0.16 percent increase in KCPL's rate of return (0.4 percent times KCPL's approximate equity ratio of 40 percent equals 0.16 percent). KCPL reported a total company rate base of approximately $2.0 billion at the end of September, 1986 (from monthly surveillance reports). Presuming KCPL obtained a 5 percent flotation adjustment in all jurisdictions, this would translate into an annual increase in net income of $3,200,000 (.0016 x $2.0 billion). This would have to be "grossed up" with income taxes to get to the increase in revenue required. According to Schedule 18 of

company witness John De Stefano's direct testimony, KCPL has incurred approximately $15,000,000 in actual common stock issuance expenses since 1950. In order for the present value of a $3.2 million dollar annual increase in net income to equal $15 million in issuance expenses, the rate increase needs to be in effect between seven and eight years (a $3.2 million annuity discounted at 12.5 percent for eight years is equivalent to $15.6 million; 12.5 percent is the upper end of the cost of equity range I have derived for KCPL). If this flotation cost adjustment was to be allowed in all time periods, the present value of the allowance would be equal to $25.6 million (the present value of this perpetuity is $3.2 million divided by 12.5 percent which equals $25.6 million). I believe this illustrates how flotation cost adjustments can go well beyond recovery of actual issuance expenses and reasonable cost of equity estimates.

Q. Are there any circumstances in which you would propose a flotation cost adjustment?

A. It might be desirable (in terms of reducing a company's need to finance using external capital markets or attempting to maintain favorable financing terms) during construction phases or when a new issue is projected to explicitly recognize flotation costs in some manner. Alternative treatments could include expensing actual costs over some time period, or making a cost of equity adjustment only when a new issue is projected for a future time period. Since KCPL does not have any significant construction or common equity financing planned for the near future, I do not believe a flotation cost adjustment is necessary.

Recommended Rate of Return

Q. What rate of return are you recommending for KCPL's steam

heat operations?

A. I am recommending KCPL's weighted average cost of capital, assuming that steam service is a continuing viable service option for KCPL and its steam customers. In other words, I am assuming that KCPL can provide steam service on a continuing basis or sell the steam plant to someone who will. This cost calculation is illustrated in Schedule FA-13 and ranges from 10.14 to 10.34 percent. KCPL's after-tax weighted average cost of capital is calculated as in Schedule FA-14 and ranges from 8.13 to 8.33 percent. This calculation takes into account the income tax reduction effect of interest expense.

Q. Why did you specify that this rate of return be applied assuming continuing steam service?

A. I specified this to highlight a difference betwen KCPL's and PSC Staff's overall proposals in this case. KCPL's proposal for eliminating steam heat service includes an allowance for recovering the remaining (non-depreciated) value of steam heat plant, even though the company is essentially prepared to abandon this portion of its plant and convert any remaining steam heat customers to electric customers. If the Commission finds this type of proposal appropriate, I would suggest that a reduced rate of return on any steam plant included in rate base would be more appropriate than simply applying a traditional rate of return to an entire rate base that includes some non-productive plant.

Q. Why would you recommend this modified approach under these circumstances?

A. Because this type of rate determination is designed to provide a guaranteed return of capital to all classes of investors. In a non-regulated competitive industry, investors would probably incur losses or, at best, minimal returns on any non-productive assets that had not

been fully depreciated. Therefore, this type of proposal significantly reduces the risk associated with the portion of the investment that is guaranteed to be returned. If the goal of this type of treatment is to guarantee some type of return to equity investors, I would recommend that any portion of non-productive assets included in rate base be allowed a weighted cost of capital with the equity component receiving a current government bond rate whose term to maturity coincides with the period of time over which such asset costs are to be recovered.

Q. Does this conclude your direct testimony?

A. Yes.

Schedule FA- 1
LIST OF SCHEDULES

FA- 2	Public Utility Revenue Requirement or Cost of Service
FA- 3	Treasury Bond and Bill Rates, 1986
FA- 4-1	Moody's Average Public Utility Bond Yields (graph)
FA- 4-2	Moody's Average Public Utility Bond Yields
FA- 5-1	Rate of Inflation (graph)
FA- 5-2	Rate of Inflation
FA- 6	S&P's Industrial and Utility Stock Index Yields (graph)
FA- 7	Federal Reserve Discount Rate Changes
FA- 8	1987 Economic Projections
FA- 9	Capital Structure
FA-10	KCPL's Monthly Average Dividend Yields During 1986
FA-11	KCPL's Historic Growth in DPS and EPS
FA-12	Equity Costs for 100 Electric Utilities (sorted by Bond Ratings)
FA-13	Weighted Average Cost of Capital
FA-14	Weighted Average Cost of Capital (after tax)

Public Utility Revenue Requirements

or

Cost of Service

The formula for the revenue requirements of a public utility may be stated as:

Equation 1: Revenue Requirement = Cost of Service

or

Equation 2: $RR = O + (V - D)R$

The symbols in the second equation represent the following factors:

RR	=	Revenue Requirement
O	=	Operating Cost, including depreciation and taxes
V	=	Gross Valuation of the property serving the public
D	=	Accrued Depreciation
(V-D)	=	Rate Base (net valuation)
(V-D)R	=	Return Amount, or earnings allowed on the rate base
R	=	iL + dP + kE (a percentage)
L	=	Proportion of debt in capital structure
i	=	Embedded Interest rate
P	=	Proportion of preferred stock in the capital structure
d	=	Embedded cost of preferred
E	=	Proportion of Equity in the capital structure
k	=	Rate of return on equity

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

Treasury Bond and Bill Rates, 1986

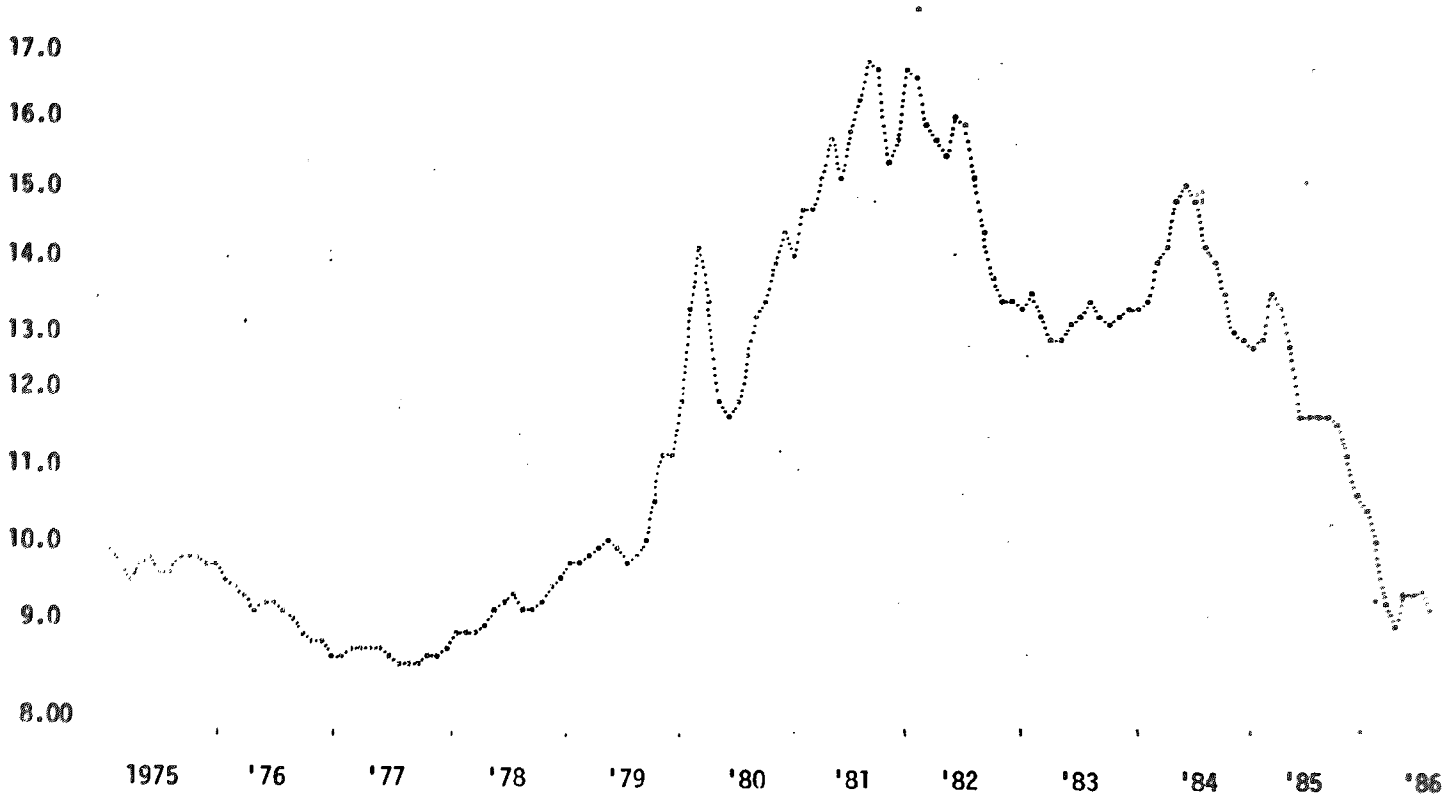
Month	91-Day T-bills(1)	1-Yr Treasuries Constant Maturity(2)	Long-term Treasury Bond Yields(1)
Jan	7.04%	7.73%	9.51%
Feb	7.03	7.61	9.07
Mar	6.59	7.03	8.13
Apr	6.06	6.44	7.59
May	6.12	6.65	8.02
Jun	6.21	6.81	8.23
Jul	5.84	6.34	7.68
Aug	5.57	5.93	7.72
Sep	5.19	5.77	8.08
Oct	5.18	5.74	8.04
Nov	5.35	5.80	7.81
Dec	5.61 (3)	5.84 (3)	N/A
3 mo. Ave.	5.38%	5.79%	7.98%
6 mo. Ave.	5.46%	5.90%	7.93%

(1) Source: Business Conditions Digest

(2) Source: Federal Reserve Bulletin and Barron's (Oct, Nov, and Dec. are averages of weekly figures)

(3) Source: Barron's, averages of weekly figures

Moody's Average Public Utility Bond Yield



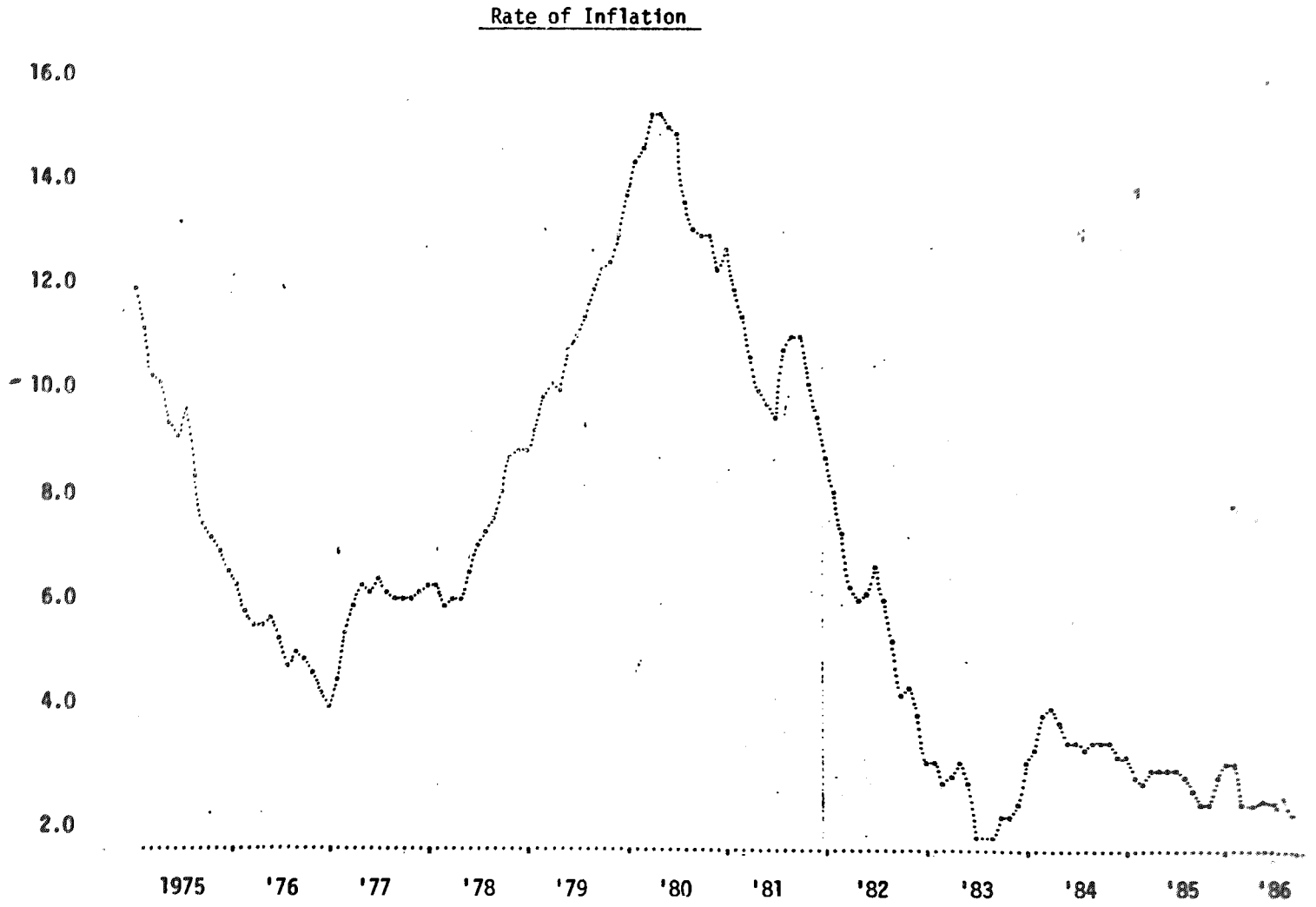
Schedule FA-4-1

Moody's Average Public Utility Bond Yield

Mo/Year	Average Yield	Mo/Year	Average Yield	Mo/Year	Average Yield
Jan/75	10.10%	Jan/79	9.85%	Jan/83	13.46%
Feb	9.83	Feb	9.84	Feb	13.60
Mar	9.67	Mar	10.02	Mar	13.31
Apr	9.88	Apr	10.05	Apr	13.03
May	9.93	May	10.23	May	13.00
Jun	9.81	Jun	10.04	Jun	13.17
Jul	9.81	Jul	9.90	Jul	13.28
Aug	9.93	Aug	9.97	Aug	13.50
Sep	9.98	Sep	10.19	Sep	13.35
Oct	9.94	Oct	10.71	Oct	13.19
Nov	9.83	Nov	11.37	Nov	13.33
Dec	9.87	Dec	11.35	Dec	13.48
Jan/76	9.68	Jan/80	12.12	Jan/84	13.40
Feb	9.50	Feb	13.48	Feb	13.50
Mar	9.43	Mar	14.33	Mar	14.03
Apr	9.27	Apr	13.50	Apr	14.30
May	9.31	May	12.17	May	14.95
Jun	9.36	Jun	11.87	Jun	15.16
Jul	9.25	Jul	12.12	Jul	14.92
Aug	9.07	Aug	12.82	Aug	14.29
Sep	8.91	Sep	13.29	Sep	14.04
Oct	8.83	Oct	13.53	Oct	13.68
Nov	8.77	Nov	14.07	Nov	13.15
Dec	8.61	Dec	14.48	Dec	12.96
Jan/77	8.59	Jan/81	14.22	Jan/85	12.88
Feb	8.63	Feb	14.94	Feb	13.00
Mar	8.66	Mar	14.86	Mar	13.66
Apr	8.65	Apr	15.32	Apr	13.42
May	8.64	May	15.84	May	12.89
Jun	8.53	Jun	15.27	Jun	11.91
Jul	8.48	Jul	15.87	Jul	11.88
Aug	8.47	Aug	16.33	Aug	11.93
Sep	8.43	Sep	16.89	Sep	11.95
Oct	8.56	Oct	16.76	Oct	11.84
Nov	8.61	Nov	15.50	Nov	11.33
Dec	8.65	Dec	15.77	Dec	10.82
Jan/78	8.87	Jan/82	16.73	Jan/86	10.66
Feb	8.90	Feb	16.72	Feb	10.16
Mar	8.93	Mar	16.07	Mar	9.33
Apr	9.05	Apr	15.82	Apr	9.02
May	9.19	May	15.60	May	9.52
Jun	9.33	Jun	16.18	Jun	9.51
Jul	9.38	Jul	16.04	Jul	9.10
Aug	9.21	Aug	15.22	Aug	9.15
Sep	9.17	Sep	14.56	Sep	9.42
Oct	9.37	Oct	13.88	Oct	9.39
Nov	9.58	Nov	13.58	Nov	9.15
Dec	9.67	Dec	13.55	Dec	8.96

Source: Moody's Bond Record

Schedule PA-4-2



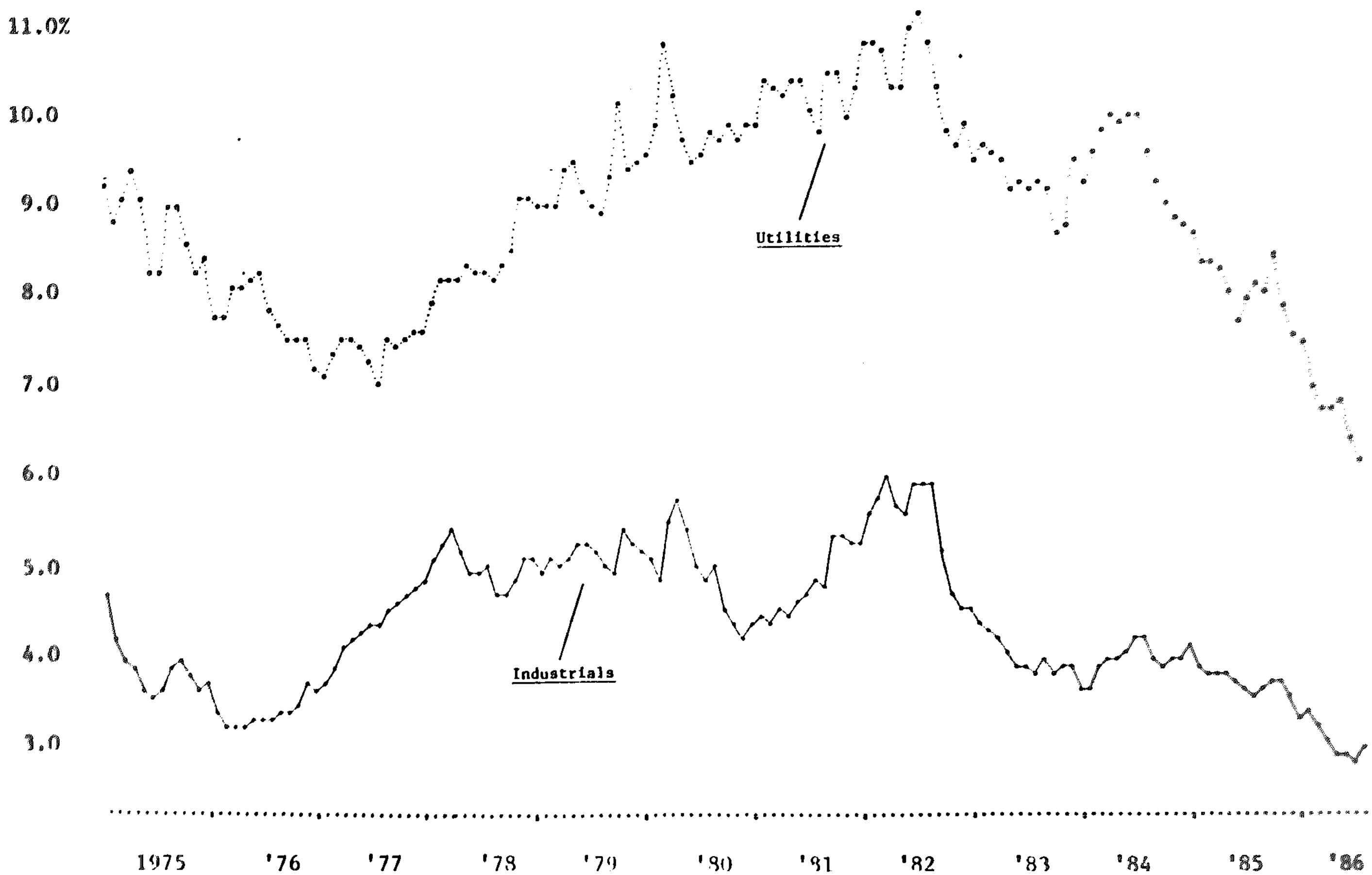
Schedule FA-1

Rate of Inflation

Mo/Year	Rate of Inflation	Mo/Year	Rate of Inflation	Mo/Year	Rate of Inflation
Jan/75	11.70 %	Jan/79	9.35 %	Jan/83	3.80 %
Feb	11.10	Feb	9.93	Feb	3.50
Mar	10.30	Mar	10.17	Mar	3.60
Apr	10.20	Apr	10.00	Apr	3.90
May	9.50	May	10.76	May	3.50
Jun	9.30	Jun	10.90	Jun	2.60
Jul	9.70	Jul	11.28	Jul	2.40
Aug	8.60	Aug	11.77	Aug	2.60
Sep	7.80	Sep	12.09	Sep	2.90
Oct	7.60	Oct	12.19	Oct	2.90
Nov	7.30	Nov	12.62	Nov	3.20
Dec	7.00	Dec	13.30	Dec	3.80
Jan/76	6.80	Jan/80	13.92	Jan/84	4.10
Feb	6.30	Feb	14.15	Feb	4.60
Mar	6.10	Mar	14.68	Mar	4.70
Apr	6.10	Apr	14.66	Apr	4.50
May	6.20	May	14.39	May	4.20
Jun	5.90	Jun	14.31	Jun	4.20
Jul	5.40	Jul	13.20	Jul	4.10
Aug	5.60	Aug	12.80	Aug	4.20
Sep	5.50	Sep	12.67	Sep	4.20
Oct	5.30	Oct	12.64	Oct	4.20
Nov	5.00	Nov	12.06	Nov	4.00
Dec	4.80	Dec	12.40	Dec	4.00
Jan/77	5.20	Jan/81	11.70	Jan/85	3.50
Feb	6.00	Feb	11.30	Feb	3.50
Mar	6.40	Mar	10.60	Mar	3.70
Apr	6.80	Apr	10.00	Apr	3.70
May	6.70	May	9.80	May	3.70
Jun	6.90	Jun	9.60	Jun	3.70
Jul	6.70	Jul	10.70	Jul	3.60
Aug	6.60	Aug	10.90	Aug	3.40
Sep	6.60	Sep	11.00	Sep	3.20
Oct	6.50	Oct	10.20	Oct	3.20
Nov	6.70	Nov	9.60	Nov	3.60
Dec	6.80	Dec	8.90	Dec	3.80
Jan/78	6.80	Jan/82	8.40	Jan/86	3.90
Feb	6.40	Feb	7.70	Feb	3.20
Mar	6.50	Mar	6.80	Mar	2.30
Apr	6.60	Apr	6.60	Apr	1.60
May	7.00	May	6.70	May	1.60
Jun	7.40	Jun	7.10	Jun	1.70
Jul	7.70	Jul	6.50	Jul	1.60
Aug	7.90	Aug	5.90	Aug	1.60
Sep	8.30	Sep	5.00	Sep	1.80
Oct	8.90	Oct	5.10	Oct	1.50
Nov	9.00	Nov	4.60	Nov	1.30
Dec	9.03	Dec	3.90		

Source: U.S. Department of Labor, Bureau of Labor Statistics, The Consumer Price Index

Standard and Poor's Utilities and Industrials Stock Yields



Schedule 7A-6

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 36-139

Federal Reserve Discount Rate Changes

Date	Discount Rate (%)
Oct-Dec, 1979	9 1/2 - 12
02/15/80	13
05/28/80	12
06/12/80	11
07/28/80	10
09/26/80	11
11/17/80	12
12/04/80	13
06/05/81	14
11/02/81	13
12/04/81	12
07/19/82	11.5
07/30/82	11.0
08/16/82	10.5
08/26/82	10.0
10/08/82	9.5
11/19/82	9.0
12/13/82	8.5
03/06/84	9.0
11/21/84	8.5
12/24/84	8.0
05/17/85	7.5
03/07/86	7.0
04/18/86	6.5
07/10/86	6.0
08/20/86	5.5

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

1987 Projections

Source	GNP	3-month T-Bill	30-yr. T-Bond	Inflation Rate	Unemployment
Wall Street Journal, 1/5/87 (1)	2.6%	5.2%	7.2%	3.7%	7.0%
Business Week, 12/29/86(2)					
Individual Economists	2.4%			3.4%	7.0%
Econometric Services	3.0%			3.3%	7.0%
S&P's Outlook, 12/17/86(3)	3.2%	5.0%	7.3%	4.2%	6.8%
Value Line Selection and Opinion, 11/21/86	2.0%	5.3%	7.6%	3.2%	7.2%
Fortune, 1/19/87	1.5-3.0%			3.3-4.0%	6.8-7.2%
Current Figures	2.8%(4)	5.6%	7.8%	1.3%	7.0%

(1) Averages of 1st and 2nd half projections provided by survey of economists

(2) Averages of economists and econometric services surveyed

(3) Averages of quarterly projections

(4) Third quarter, 1986

Schedule 7-S

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

Capital Structure

Type of Capital	$(000s)	% Total
Long-term Debt	$ 1,077,886	50.47%
Preferred Stock	182,676	8.55
Common Equity	875,344	40.98
	$ 2,135,906	100.00%

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

KCPL's Average Monthly Dividend Yield During 1996

Month	High	Low	Dividend	Yield
Jan	$ 24.375	$ 21.125	$ 2.36	10.37%
Feb	26.125	23.50	2.36	9.51
Mar	29.25	25.625	2.36	8.60
Apr	29.50	23.875	2.36	8.84
May	27.50	24.00	2.00	7.77
Jun	25.00	23.00	2.00	8.33
Jul	28.625	24.25	2.00	7.57
Aug	32.25	27.50	2.00	6.69
Sep	31.625	25.875	2.00	6.96
Oct	29.375	26.375	2.00	7.17
Nov	30.75	28.75	2.00	6.72
Sep-Nov Ave.				6.95%

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

KCPL's Historic Growth in DPS and EPS

	Least Squares Trended Growth Rates				Value Line Historic Growth Rates			
Year	5 yr. DPS	10 yr. DPS	5 yr. EPS	10 yr. EPS	5 yr. DPS	10 yr. DPS	5 yr. EPS	10 yr. EPS
1976	2.27%	3.95%	3.03%	1.97%	5.5%	4.5%	12.5%	[illegible].5%
1977	2.39	3.30	2.70	.34				
1978	3.95	2.86	2.08	1.04				
1979	4.05	2.95	-3.46	.37				
1980	3.54	3.05	4.55	1.79				
1981	3.32	3.28	12.20	3.76				
1982	4.01	3.60	8.32	4.67				
1983	5.53	4.20	15.15	6.50				
1984	6.90	4.69	11.84	7.90				
1985	6.19	4.87	11.67	9.70				
5 Yr. Ave.	5.19%	4.13%	11.84%	6.51%				

Schedule PA-11

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

EQUITY COSTS FOR 107 ELECTRIC UTILITIES (SORTED BY BOND RATINGS)
(0.01 OR 0.1 INDICATE UNAVAILABLE DATA)

BOND RATING 1 (1)

COND	COMPANY	AVE. YLD. (2)	AVE. G (3)	DCF K (4)	BETA (5)	CAPM K (6)	MKT/BK (7)	NUKE (8)
65	CEN ILL PUB SVC	6.00%	3.80%	9.80%	0.75	12.20%	192.00%	3.0
89	POTOMAC ELEC PWR	4.77%	7.03%	11.74%	0.60	10.94%	236.00%	3.0
61	WISC ELEC PWR	4.78%	7.28%	12.06%	0.70	11.78%	184.00%	2.0
63	WISCONSIN P S	5.53%	6.44%	11.97%	0.65	11.36%	184.00%	2.0
62	WISCONSIN P&L	5.58%	6.16%	11.73%	0.70	11.78%	190.00%	2.0
	AVERAGES	5.32%	6.14%	11.46%	0.68	11.61%	195.20%	

BOND RATING 2

COND	COMPANY	AVE. YLD.	AVE. G	DCF K	BETA	CAPM K	MKT/BK	NUKE
2	ATLANTIC CITY ELEC	6.63%	4.29%	10.92%	0.60	10.94%	164.00%	1.0
36	BALTIMORE G&E	5.22%	6.10%	11.32%	0.70	11.78%	180.00%	2.0
67	CILCORP	5.85%	4.84%	10.69%	0.65	11.36%	182.00%	3.0
38	CONSOLIDATED ED	5.65%	8.16%	13.82%	0.65	11.36%	142.00%	2.0
40	DELMARVA P&L	6.06%	5.14%	11.20%	0.65	11.36%	182.00%	2.0
12	DUKE POWER	5.76%	6.02%	11.78%	0.65	11.36%	163.00%	1.0
43	FPL GROUP	6.15%	5.68%	12.03%	0.70	11.78%	163.00%	2.0
74	IOWA SOUTHERN INC	5.64%	5.67%	11.31%	0.65	11.36%	168.00%	3.0
46	IOWA-ILLINOIS G&E	6.63%	4.82%	11.45%	0.60	10.94%	153.00%	2.0
75	IPALCO ENTERPRISES	5.87%	4.17%	10.03%	0.60	10.94%	172.00%	3.0
76	KANSAS P&L	5.58%	5.78%	11.36%	0.55	10.52%	181.00%	3.0
77	KENTUCKY UTILITIES	6.06%	4.29%	10.35%	0.60	10.94%	177.00%	3.0
78	LOUISVILLE G&E	6.44%	3.51%	9.95%	0.65	11.36%	160.00%	3.0
50	MADISON G&E	6.24%	0.01%	0.01%	0.01	0.01%	194.00%	2.0
80	MIDWEST ENERGY	6.46%	4.41%	10.86%	0.55	10.52%	200.00%	3.0
20	NEW ENGLAND ELEC	6.43%	5.63%	12.06%	0.65	11.36%	154.00%	1.0
52	NORTHERN STATES PWR	5.41%	6.56%	11.97%	0.70	11.78%	174.00%	2.0
86	OKLAHOMA G&E	6.05%	4.94%	10.99%	0.70	11.78%	187.00%	3.0
87	ORANGE & ROCK UTILS	6.24%	4.00%	10.24%	0.65	11.36%	166.00%	3.0
27	PUB SVC ENT GROUP	7.12%	0.01%	0.01%	0.75	12.20%	145.00%	1.0
31	SO CALIF EDISON	6.67%	5.76%	12.43%	0.70	11.78%	162.00%	1.0
93	SOUTHERN IND G&E	5.10%	6.62%	11.72%	0.65	11.36%	176.00%	3.0
94	SOUTHWESTERN P S	6.25%	5.90%	12.15%	0.65	11.36%	237.00%	3.0
95	TECO ENERGY	5.31%	6.60%	11.91%	0.70	11.78%	190.00%	3.0
	AVERAGES	6.03%	5.41%	11.39%	0.65	11.36%	173.83%	

(1) 1=Aaa/AA or Aa/AAA
2=Aa/AA
3=Aa/A or A/AA
4=A/A
5=A/BBB or Baa/A
6=Baa/BBB
7=Below Baa/BBB
(2) AVERAGE OF SEPT-NOV 1986 MONTHLY HIGH/LOW YIELDS
(3) AVERAGE OF SEPT-NOV 1986 IBES, SOLOMON BROS. (11/4/86), AND VALUE LINE (10/24/86) DPS GROWTH RATES
(4) AVE. YLD. + AVE. G
(5) VALUE LINE BETA, 10/24/86
(6) 5.5% + (BETA*6.4%)
(7) SOLOMON BROS. ELEC. UTIL. MONTHLY 11/4/86
(8) 1=NUCLEAR UNDER CONSTRUCTION
2=NUCLEAR IN OPERATION
3=NO NUCLEAR INVOLVEMENT

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 96-139

BOND RATING 3 (1)

COMP	COMPANY	AVE. YLD. (2)	AVE. G (3)	DCF K (4)	BETA (5)	CAPM K (6)	MKT/BK (7)	NUKE (8)
44	ALLEGHENY PWR	7.16%	4.45%	10.61%	0.65	11.36%	177.00%	3.0
7	CEN & SOUTH WEST	6.24%	5.67%	11.91%	0.70	11.78%	151.00%	1.0
73	INTERSTATE PWR	7.13%	3.57%	10.68%	0.60	10.94%	145.00%	3.0
47	IOWA RESOURCES	6.50%	3.65%	10.15%	0.60	10.94%	167.00%	2.0
81	MINNESOTA PWR	5.01%	6.28%	11.29%	0.75	12.20%	209.00%	3.0
58	SAN DIEGO G&E	6.51%	5.62%	12.13%	0.65	11.36%	170.00%	2.0
97	TUSCON ELEC PWR	5.62%	6.19%	11.81%	0.55	10.52%	219.00%	3.0
	AVERAGES	6.16%	5.06%	11.23%	0.64	11.30%	176.86%	

BOND RATING 4

COMP	COMPANY	AVE. YLD.	AVE. G	DCF K	BETA	CAPM K	MKT/BK	NUKE
35	AMER ELEC PWR	7.94%	3.70%	11.64%	0.75	12.20%	147.00%	2.0
37	BOSTON EDISON	7.04%	4.48%	11.51%	0.60	10.94%	134.00%	2.0
3	CAROLINA P&L	6.87%	4.34%	11.21%	0.75	12.20%	142.00%	1.0
5	CEN HUDSON G&E	8.86%	2.54%	11.41%	0.65	11.36%	101.00%	1.0
66	CEN LOUISIANNA EL	5.96%	4.38%	10.34%	0.70	11.78%	151.00%	3.0
9	COMMONWEALTH ED	9.11%	3.06%	12.18%	0.70	11.78%	108.00%	1.0
10	COMMONWEALTH ENER	6.55%	5.58%	12.13%	0.70	11.78%	148.00%	1.0
41	DOMINION RES	6.26%	5.16%	11.42%	0.65	11.36%	158.00%	2.0
70	EMPIRE DIST ELEC	5.98%	4.91%	10.89%	0.50	10.10%	181.00%	3.0
42	FLORIDA PROG CORP	5.64%	6.08%	11.72%	0.70	11.78%	190.00%	2.0
71	HAWAIIAN ELEC	5.50%	5.46%	10.96%	0.65	11.36%	183.00%	3.0
17	HOUSTON INDUSTRIES	8.28%	5.17%	13.45%	0.70	11.78%	133.00%	1.0
72	IDAHO PWR	6.55%	4.69%	11.23%	0.70	11.78%	163.00%	3.0
45	IE INDUSTRIES	7.84%	6.00%	13.84%	0.65	11.36%	142.00%	2.0
18	ILLINIOS POWER	9.76%	2.59%	11.35%	0.75	12.20%	123.00%	1.0
79	MDU RESOURCES	5.92%	6.50%	12.42%	0.65	11.36%	172.00%	3.0
83	NEVADA PWR	6.50%	4.13%	10.63%	0.69	10.94%	180.00%	3.0
85	NORTHWESTERN P S	6.52%	0.01%	0.01%	0.01	0.01%	159.00%	3.0
88	OTTER TAIL POWER	6.32%	4.46%	10.78%	0.60	10.94%	179.00%	3.0
25	PACIFIC G&E	7.81%	4.62%	12.44%	0.70	11.78%	134.00%	1.0
53	PACIFICORP	6.80%	4.84%	11.63%	0.70	11.78%	144.00%	2.0
54	PENNSYLVANIA P&L	6.76%	3.87%	10.63%	0.65	11.36%	154.00%	2.0
55	PORTLAND GEN CORP	6.27%	4.35%	10.63%	0.65	11.36%	156.00%	2.0
56	PUB SVC COLORADO	10.90%	0.01%	0.01%	0.70	11.78%	113.00%	2.0
57	PUDGET SOUND P&L	7.79%	2.47%	10.27%	0.75	12.20%	146.00%	2.0
30	ROCHESTER G&E	8.78%	3.63%	12.41%	0.65	11.36%	97.00%	1.0
91	SAVANNAH E&P	4.32%	6.00%	10.32%	0.60	10.94%	205.00%	3.0
59	SCANA CORP	5.87%	4.73%	10.60%	0.65	11.36%	194.00%	2.0
92	SIERRA PAC RES	6.63%	4.34%	10.96%	0.55	10.52%	163.00%	3.0
33	TEXAS UTILITIES	7.98%	5.36%	13.30%	0.65	11.36%	114.00%	1.0
96	TNP ENTERPRISES	6.05%	6.28%	12.33%	0.60	10.94%	153.00%	3.0
68	UNION ELECTRIC	6.55%	4.30%	10.85%	0.70	11.78%	157.00%	2.0
98	UTAH P&L	7.38%	2.80%	10.19%	0.65	11.36%	176.00%	3.0
100	WASHINGTON WTR PWR	8.86%	2.06%	10.94%	0.60	10.94%	120.00%	3.0
	AVERAGES	7.07%	4.47%	11.46%	0.66	11.45%	158.59%	

KANSAS CITY POWER AND LIGHT COMPANY
Case Number RO 86-139

BOND RATING 5 (1)

COMP	COMPANY	AVE. YLD. (2)	AVE. G (3)	DCF K (4)	BETA (5)	CAPM K (6)	MKT/BK (7)	NUKE (8)
69	DPL INC	7.59%	3.80%	10.59%	0.65	11.36%	141.00%	3.0
14	EASTERN UTILITIES	6.19%	6.07%	12.26%	0.75	12.20%	193.00%	1.0
15	EL PASO ELEC	8.53%	3.86%	12.39%	0.70	11.78%	107.00%	1.0
44	GEN PUBLIC UTIL	0.00%	0.01%	0.01%	0.85	13.04%	90.00%	2.0
32	MONTANA PWR	6.50%	0.01%	0.01%	0.70	11.78%	124.00%	3.0
94	NORTHERN IND P S	0.00%	0.01%	0.01%	0.75	12.20%	91.00%	3.0
29	PUB SVC NEW MEX	8.32%	3.45%	11.76%	0.70	11.78%	140.00%	1.0
32	SOUTHERN COMPANY	8.37%	4.99%	13.36%	0.70	11.78%	126.00%	1.0
	AVERAGES	7.58%	4.27%	12.07%	0.73	11.99%	125.25%	

BOND RATING 6

COMP	COMPANY	AVE. YLD.	AVE. G	DCF K	BETA	CAPM K	MKT/BK	NUKE
1	AZP GROUP	9.35%	3.34%	12.69%	0.75	12.20%	112.00%	1.0
6	CEN MAINE POWER	7.69%	0.01%	0.01%	0.65	11.36%	122.00%	1.0
8	CEN VERMONT P S	7.04%	0.01%	0.01%	0.01	0.01%	115.00%	1.0
4	CENTERIOR ENERGY	10.57%	1.64%	12.22%	0.75	12.20%	113.00%	1.0
68	CINCINNATTI G&E	7.99%	3.26%	11.25%	0.70	11.78%	139.00%	3.0
13	DEQUESNE LIGHT	9.13%	0.01%	0.01%	0.65	11.36%	79.00%	1.0
11	DETROIT EDISON	9.68%	2.00%	11.68%	0.80	12.62%	100.00%	1.0
48	KANSAS CITY P&L	6.95%	0.01%	0.01%	0.65	11.36%	105.00%	2.0
49	KANSAS G&E	6.04%	0.01%	0.01%	0.70	11.78%	104.00%	2.0
51	MIDDLE SOUTH UTIL	0.00%	0.01%	0.01%	0.80	12.62%	68.00%	2.0
22	NIAGRA MOHAWK PWR	10.94%	2.19%	13.12%	0.80	12.62%	93.00%	1.0
23	NORTHEAST UTILITIES	6.64%	5.02%	11.66%	0.65	11.36%	152.00%	1.0
21	NY STATE E&G	7.99%	4.21%	12.20%	0.65	11.36%	123.00%	1.0
24	OHIO EDISON	9.64%	2.37%	12.01%	0.70	11.78%	120.00%	1.0
26	PHILADELPHIA ELEC	9.71%	1.16%	10.87%	0.60	10.94%	131.00%	1.0
34	UNITED ILLUMINATING	6.97%	0.01%	0.01%	0.80	12.62%	85.00%	1.0
	AVERAGES	8.42%	2.80%	11.97%	0.71	11.56%	110.06%	

BOND RATING 7

COMP	COMPANY	AVE. YLD.	AVE. G	DCF K	BETA	CAPM K	MKT/BK	NUKE
39	CONSUMERS PWR	0.00%	0.01%	0.01%	0.85	13.04%	69.00%	2.0
16	GULF STATES UTIL	0.00%	0.01%	0.01%	0.70	11.78%	44.00%	1.0
19	LONG ISLAND LTG	0.00%	0.01%	0.01%	0.75	12.20%	42.00%	1.0
90	PUB SVC INDIANA	0.00%	0.01%	0.01%	0.70	11.78%	424.00%	3.0
28	PUB SVC NEW HAMP	0.00%	0.01%	0.01%	0.90	13.48%	44.00%	1.0
	AVERAGES	0.01%	0.01%	0.01%	0.78	12.65%	134.60%	

NO BOND RATING

COMP	COMPANY	AVE. YLD.	AVE. G	DCF K	BETA	CAPM K	MKT/BK	NUKE
99	UTILICORP UNITED	4.66%	7.57%	12.17%	0.65	11.36%	152.00%	3.0

KANSAS CITY LIGHT AND POWER COMPANY
Case Number HO 86-139

Weighted Average Cost of Capital

Type of Capital	% Total	Embedded Cost	Weighted Average Cost Assuming Returns on Equity of: 12.0%	12.3%	12.5%
Common Equity	40.87%	-	4.92	5.04	5.12
Preferred Stock	8.55	10.10%	.86	.86	.86
Long-term Debt	50.47	8.64	4.36	4.36	4.36
	100.00%		10.14%	10.26%	10.34%

KANSAS CITY POWER AND LIGHT COMPANY
Case Number HO 86-139

Weighted Average Cost of Capital
(After-Tax)

Type of Capital	% Total	Embedded Cost	Weighted Cost	Tax Factor	Weighted Avg. Cost of Capital Assuming Return on Equity of: 12.0%	12.3%	12.5%
Common Equity	40.98%	-	-	1.00	4.92	5.04	5.12
Preferred Stock	8.55	10.10%	.86%	1.00	.86	.86	.86
Long-term Debt	50.47	8.64	4.36	.54*	2.35	2.35	2.35
	100.00%				8.13%	8.25%	8.33%

* 1.0 minus an effective tax rate of 46%