Exhibit No.:
Issue: *Rate of Return*
Witness: *David Murray*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case Nos.: *ER-2004-0570*
Date Testimony Prepared: *September 20, 2004*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

DAVID MURRAY

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

Jefferson City, Missouri
September 2004

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In The Matter of the Tariff Filing of The Empire District Electric Company to Implement a General Rate Increase for Retail Electric Service Provided to Customers in its Missouri Service Area.	)))))	Case No. ER-2004-0570

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David Murray, being of lawful age, on his oath states: that he has participated in the preparation of the following direct testimony in question and answer form, consisting of 42 pages to be presented in the above case; that the answers in the following direct testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

David Murray

Subscribed and sworn to before me this 17th day of September 2004.

Notary

TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004

TABLE OF CONTENTS

OF DIRECT TESTIMONY OF

DAVID MURRAY

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

DIRECT TESTIMONY

OF

DAVID MURRAY

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

Q. Please state your name.

A. My name is David Murray.

Q. Please state your business address.

A. My business address is P.O. Box 360, Jefferson City, Missouri 65102.

Q. What is your present occupation?

A. I am employed as a Utility Regulatory Auditor III for the Missouri Public Service Commission (Commission). I accepted the position of a Public Utility Financial Analyst in June 2000 and have since had my position reclassified to my current title.

Q. Were you employed before you joined the Commission's Staff (Staff)?

A. Yes, I was employed by the Missouri Department of Insurance in a regulatory position.

Q. What is your educational background?

A. In May 1995, I earned a Bachelor of Science degree in Business Administration with an emphasis in Finance and Banking, and Real Estate from the University of Missouri-Columbia. I earned a Masters in Business Administration from Lincoln University in December 2003.

Q. Have you filed testimony in other cases before this Commission?

A. Yes. Please see Attachment A for a list of these cases.

Q. Have you made recommendations in any other cases before this Commission?

A. Yes, I have made recommendations on finance, merger, and acquisition cases before this Commission.

Q. Have you attended any schools, conferences and/or seminars specific to utility finance and utility regulation?

A. Yes. I attended the Annual Eastern Utility Rate School in October 2000, the Fundamentals of Utility Finance seminar in January 2001 and the National Association of Regulatory Utility Commissioners' Annual Regulatory Studies Program in August 2001.

Q. What is the purpose of your testimony in this case?

A. My testimony is presented to recommend to the Commission a fair and reasonable rate of return for the Missouri jurisdictional electric utility rate base for The Empire District Electric Company (Empire).

Q. Have you prepared any schedules in connection with your analysis of the cost of capital for Empire?

A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for The Empire District Electric Company, Case No. ER-2004-0570" consisting of 28 schedules which are attached to this direct testimony (see Schedule 1).

Q. What do you conclude is the cost of capital for Empire?

A. The cost of capital for Empire is in the range of 7.85 to 8.34 percent.

Economic and Legal Rationale for Regulation

Q. Why are the prices charged to customers by utilities such as Empire regulated?

A. A primary purpose of price regulation is to restrain the exercise of monopoly power. Monopoly power represents the ability to charge excessive or unduly discriminatory prices. Monopoly power may arise from the presence of economies of scale and/or from the granting of a monopoly franchise.

For services that operate efficiently and have the ability to achieve economies of scale, a monopoly is the most efficient form of market organization. Utility companies can supply service at lower costs if the duplication of facilities by competitors is avoided. This allows the use of larger and more efficient equipment and results in lower per-unit costs. For instance, it may cost more to have two or more competing companies maintaining electric utility systems and providing competing residential services to one household than it would cost if there was only one company. This situation could result in price wars and lead to unsatisfactory and perhaps irregular service. For these reasons, exclusive rights may be granted to a single utility to provide service to a given territory. This also creates a more stable environment for operating the utility company. Utility regulation acts as a substitute for the economic control of market competition and allows the consumer to receive adequate utility service at a reasonable price.

Electric utility providers such as Empire provide electric utility services essentially under a monopoly franchise. Therefore, it is clear that Empire has monopoly power.

Another purpose of price regulation is to provide the utility company with an opportunity to earn a fair return on its capital, particularly on investments made as a result of a monopoly franchise.

Q. Please describe your understanding of the basis you must use when determining a fair and reasonable return for a public utility.

A. Several landmark decisions by the U.S. Supreme Court provide the framework for regulation and for what constitutes a fair and reasonable rate of return for a public utility. Listed below are some of the cases:

1. Munn v. People of Illinois (1877);
2. Bluefield Water Works and Improvement Company (1923);
3. Natural Gas Pipeline Company of America (1942); and
4. Hope Natural Gas Company (1944).

In the case of Munn v. People of Illinois, 94 U.S. 113 (1877), the Court found that:

> . . . when private property is "affected with a public interest, it ceases to be *juris privati* only" . . . . Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. Id at 126.

The Munn decision is important because it states the basis for regulation of both utility and non-utility industries.

In the case of Bluefield Water Works and Improvement Company v. Public Service Commission of the State of West Virginia, 262 U.S. 679 (1923), the Supreme Court ruled that a fair return would be:

1. A return "generally being made at the same time" in that "general part of the country";

2. A return achieved by other companies with "corresponding risks and uncertainties"; and

3. A return "sufficient to assure confidence in the financial soundness of the utility."

The Court specifically stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. Id. at 692-3.

In Federal Power Commission et al. v. Natural Gas Pipeline Company of America et al., 315 U.S. 575 (1942), the Court decided that:

> The Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas . . . . If the Commission's order, as applied to the facts before it and viewed in its entirety, produces no arbitrary result, our inquiry is at an end. Id. at 586.

The U.S. Supreme Court also discussed the reasonableness of a return for a utility in the case of Federal Power Commission et al. v. Hope Natural Gas Company, 320 U.S. 591 (1944). The Court stated that:

> The rate-making process . . . , i.e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests. Thus we stated . . . that "regulation does not

> insure that the business shall produce net revenues" . . . it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock . . . . By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. Id. at 603.

The Hope case restates the concept of comparable returns to include those achieved by any other enterprises that have "corresponding risks." The Supreme Court also noted in this case that regulation does not guarantee profits to a utility company.

A more recent case heard by the Supreme Court of Pennsylvania discusses the Hope case decision as it relates to balancing the interests of the investors and the consumers. The Supreme Court of Pennsylvania stated that:

> We do not believe, however, . . . that the end result of a rate-making body's adjudication *must* be the setting of rates at a level that will, in any given case, guarantee the continued financial integrity of the utility concerned . . . . In cases where the balancing of consumer interests against the interests of investors causes rates to be set at a "just and reasonable" level which is insufficient to ensure the continued financial integrity of the utility, it may simply be said that the utility has encountered one of the risks that imperil any business enterprise, namely the risk of financial failure. Pennsylvania Electric Company, et al. v. Pennsylvania Public Utility Commission, 502 A.2d 130, 133-34 (1985), cert. denied, 476 U.S. 1137 (1986).

I included the Pennsylvania Electric Company case in my testimony to illustrate a point, which is simply this: captive ratepayers of public utilities should not be forced to pay higher rates to ensure the continued financial integrity of a utility if it is deemed that to do so would result in unreasonable rates. It should be noted that I do not believe that utility companies should be casually subjected to risk of financial failure in a rate case proceeding. However, I do not believe it would always be appropriate for a regulatory

agency to provide sufficient funds for management to continue operations, no matter what the costs are to the ratepayers.

Through these and other court decisions, it has generally been recognized that public utilities can operate more efficiently when they operate as monopolies. It has also been recognized that regulation is required to offset the lack of competition and maintain prices at a reasonable level. It is the regulatory agency's duty to determine a fair rate of return and the appropriate revenue requirement for the utility, while maintaining reasonable prices for the public consumer.

Cost of Common Equity and Fair Rate of Return

Q. Is the recommendation of the cost of common equity consistent with a fair rate of return?

A. Yes. It is generally recognized that authorizing an allowed return based on a utility's cost of capital is consistent with a fair rate of return. It is for this very reason that the Discounted Cash Flow (DCF) model, which will be described in more detail later in my testimony, is widely recognized as an appropriate model to utilize in arriving at a reasonable recommended return on equity that should be authorized for a utility. The concept underlying the DCF model is to determine the cost of common equity capital to the utility, which reflects the current economic and capital market environment. For example, a company may achieve a return on common equity that is higher than its cost of common equity. This situation will tend to increase the share price. However, this does not mean that this past achieved return is the barometer for what would be a fair authorized return in the context of a rate case. It is the lower cost of capital that should be recognized as a fair authorized return. If a utility continues to be

allowed a return on common equity that is not reflective of today's current low cost of capital environment, then this will result in the possibility of excessive returns.

The authorized return should provide a fair and reasonable return to the investors of the company, while ensuring that excessive earnings do not result from the utility's monopolistic powers. However, this fair and reasonable rate does not necessarily guarantee revenues or the continued financial integrity of the utility.

It should be noted that a reasonable return may vary over time as economic conditions, such as the level of interest rates, and business conditions change. Therefore, the past, present and projected economic and business conditions must be analyzed in order to calculate a fair and reasonable rate of return.

Historical Economic Conditions

Q. Please discuss the relevant historical economic conditions in which Empire has operated.

A. One of the most commonly accepted indicators of economic conditions is the discount rate set by the Federal Reserve Board (Federal Reserve or Fed). The Federal Reserve tries to achieve its monetary policy objectives by controlling the discount rate (the interest rate charged by the Federal Reserve for loans of reserves to depository institutions) and the Federal (Fed) Funds Rate (the overnight lending rate between banks). However, recently the Fed Funds Rate has become the primary means for the Federal Reserve to achieve its monetary policy, and the discount rate has become more of a symbolic interest rate. This explains why the Federal Reserve's decisions now focus on the Fed Funds rate and this is reflected in the discussion of interest rates. It should also be noted that on January 9, 2003 the Federal Reserve changed the administration of the

discount window. Under the changed administration of the discount window an eligible institution does not need to exhaust other sources of funds before coming to the discount window, nor are there restrictions on the purposes for which the borrower can use primary credit. This explains why the discount rate jumped from 0.75 percent to 2.25 percent on January 9, 2003 when the Fed Funds rate didn't change. Therefore, discount rates before January 9, 2003 are not comparable to discount rates after January 9.

At the end of 1982, the U.S. economy was in the early stages of an economic expansion, following the longest post-World War II recession. This economic expansion began when the Federal Reserve reduced the discount rate seven times in the second half of 1982 in an attempt to stimulate the economy. This reduction in the discount rate led to a reduction in the prime interest rate (the rate charged by banks on short-term loans to borrowers with high credit ratings) from 16.50 percent in June 1982, to 11.50 percent in December 1982. The economic expansion continued for approximately eight years until July 1990, when the economy entered into a recession.

In December 1990, the Federal Reserve responded to the slumping economy by lowering the discount rate to 6.50 percent (see Schedules 2-1 and 2-2). Over the next year-and-a-half, the Federal Reserve lowered the discount rate another six times to a low of 3.00 percent, which had the effect of lowering the prime interest rate to 6.00 percent (see Schedules 3-1 and 3-2).

In 1993, perhaps the most important factor for the U.S. economy was the passage of the North American Free Trade Agreement (NAFTA). NAFTA created a free trade zone consisting of the United States, Canada and Mexico. The rate of economic growth

for the fourth quarter of 1993 was one the Federal Reserve believed could not be sustained without experiencing higher inflation. In the first quarter of 1994, the Federal Reserve took steps to try to restrict the economy by increasing interest rates. As a result, on March 24, 1994, the prime interest rate increased to 6.25 percent. On April 18, 1994, the Federal Reserve announced its intention to raise its targeted interest rates, which resulted in the prime interest rate increasing to 6.75 percent. The Federal Reserve took action again on May 17, 1994, by raising the discount rate to 3.50 percent. The Federal Reserve took three additional restrictive monetary actions, with the last occurring on February 1, 1995. These actions raised the discount rate to 5.25 percent, and in turn, banks raised the prime interest rate to 9.00 percent.

The Federal Reserve then reversed its policy in late 1995 by lowering its target for the Fed Funds Rate by 0.25 percentage points on two different occasions. This had the effect of lowering the prime interest rate to 8.50 percent. On January 31, 1996, the Federal Reserve lowered the discount rate to a rate of 5.00 percent.

The actions of the Federal Reserve from 1996 through 2000 were primarily focused on keeping the level of inflation under control, and it was successful. The inflation rate, as measured by the *Consumer Price Index - All Urban Consumers* (CPI), had never been higher than 3.70 percent during this period. The increase in CPI stood at 3.00 percent for the twelve months ending July 31, 2004 (see attached Schedules 4-1, 4-2 and 6).

The unemployment rate was 5.50 percent as of July 2004 (see Schedule 6), which is not as high as the January 1993 level of 7.3 percent, but still higher than the high three- to four-percent range experienced from mid-1997 to mid-2001.

The combination of low inflation and low unemployment had led to a prosperous economy from 1993 through 2000 as evidenced by the fact that real gross domestic product (GDP) of the United States increased every quarter during this period. However, GDP actually declined for the first three quarters of 2001, indicating there was a contraction in the economy during these three quarters. This contraction of GDP for more than two quarters in a row meets the textbook definition of a recession. According to the National Bureau of Economic Research, the recession began in March of 2001 and ended eight months later. Since the recession ended, GDP had been low up until the second quarter of 2003, but since the second quarter of 2003, GDP has been fairly healthy. However, GDP was a bit lower in the most recent quarter when it grew by 2.80 percent (see attached Schedule 6).

The Federal Reserve recently reacted to the improving economy by raising the Fed Funds Rate by 25 basis points on June 30, 2004. This was after the Federal Reserve had kept the Fed Funds Rate at a 46-year low of 1.00 percent for a full year. The Fed indicated it can move at a "pace that is likely to be measured." However the Fed warned that it "will respond to changes in economic prospects as needed to fulfill its obligations to maintain price stability." According to the *Wall Street Journal*, this is a warning that the Federal Reserve will move to half-percentage-point increases if inflation accelerates (*Wall Street Journal,* p. A1 and A2, July 1, 2004). Long-term interest rates have risen somewhat since the Federal Reserve lowered the Fed Funds Rate to 1.00 percent in June 2003. Since its recent low of 4.37 percent for the month of June 2003, the yield on the Thirty-Year U.S. Treasury Bonds increased to as high as 5.42 percent in May of 2004, but have since come back down to 5.06 percent as of August 2004. However,

even with this slight increase in long-term interest rates, this interest rate level is fairly low when measured against the history of interest rates over the last twenty-five years (see attached Schedule 5-3).

In light of the above interest rate activity, it is important to reflect on the results of the major stock market indexes in the past year. According to the July 9, 2004, issue of the *The Value Line Investment Survey: Selection & Opinion*, for the first half of 2004, the Dow Jones Industrial Average (DJIA) decreased 0.2 percent, the S&P 500 increased 2.6 percent, the Nasdaq Composite Index (NASDAQ) increased 2.2 percent and the Dow Jones Utility Average (DJUA) increased 4.1 percent. According to the same publication, for the second quarter of 2004, the DJIA increased 0.8 percent, the S&P 500 increased 1.3 percent, the NASDAQ increased 2.7 percent and the DJUA decreased 1.1 percent. For the twelve months, June 30, 2003 through June 30, 2004, the DJIA increased 16.1 percent, the S&P 500 increased 17.1 percent and the NASDAQ increased 26.2 percent (*Wall Street Journal,* p. C12, July 1, 2004). According to closing quotes obtained from *Wall Street City's* website, the DJUA increased 11.69 percent over this same period.

These economic changes have resulted in cost of capital changes for utilities and are closely reflected in the yields on public utility bonds and yields on Thirty-Year U.S. Treasury Bonds (see attached Schedules 5-1 and 5-2). Schedule 5-3, attached to this direct testimony, shows how closely the Mergent's "Public Utility Bond Yields" have followed the yields of Thirty-Year U.S. Treasury Bonds during the period from 1980 to the present. The average spread for this period between these two composite indices has been 155 basis points, with the spread ranging from a low of 80 basis points to a high of

304 basis points (see attached Schedule 5-4). These spread parameters can be utilized with numerous published forecasts of Thirty-Year U.S. Treasury Bond yields to estimate future long-term debt costs for utility companies.

Economic Projections

Q. What are the inflationary estimations and expectations for 2004 through 2006?

A. *The Value Line Investment Survey: Selection & Opinion*, August 27, 2004, estimates inflation to be 3.3 percent for 2004, 2.5 percent for 2005 and 2.2 percent for 2006. The Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2005-2014*, issued January 26, 2004, states that inflation is expected to be 1.6 percent for 2004, 1.7 percent for 2005 and 2.0 percent for 2006 (see attached Schedule 6).

Q. What are the interest rate estimates and forecasts for 2004, 2005 and 2006?

A. Short-term interest rates, those measured by Three-Month U.S. Treasury Bills, are estimated to be 1.4 percent in 2004, 2.4 percent in 2005 and 2.7 percent in 2006 according to Value Line's predictions. Value Line expects long-term treasury bond rates to average 5.3 percent in 2004, 6.0 percent in 2005 and 6.0 percent in 2006.

The current rate for the period ending July 2004 is 1.33 percent for 3-month Treasury Bills, as noted on the Federal Reserve website, http://www.stls.frb.org/fred/data/rates.html. The rate for 30-Year U.S. Treasury Bonds was 5.01 percent as of September 7, 2004, as quoted on CBS MarketWatch at http://cbs.marketwatch.com/tools/marketsummary/default.asp?siteid=mktw.

Q. What are the growth estimates and expectations for real GDP?

A. GDP is a benchmark utilized by the Commerce Department to measure economic growth within the United States' borders. Real GDP is measured by the actual Gross Domestic Product, adjusted for inflation. Value Line stated that real GDP growth is expected to increase by 4.3 percent in 2004, 3.5 percent in 2005 and 3.5 percent in 2006. The Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2005-2014*, stated that real GDP is expected to increase by 4.8 percent in 2004, 4.2 percent in 2005 and 3.2 percent in 2006 (see attached Schedule 6).

Q. Please summarize the expectations of the economic conditions for the next few years.

A. In summary, when combining the previously mentioned sources, inflation is expected to be in the range of 1.6 to 3.3 percent, increase in real GDP in the range of 3.2 to 4.8 percent and long-term interest rates are expected to range from 5.3 to 6.0 percent.

The Value Line Investment Survey: Selection & Opinion, September 3, 2004, states that:

> **There's no shortage of good and bad news for investors to balance as the summer winds down.** On the plus side of the ledger, the housing market continues to hold its own with the latest data showing that sales of both new and existing homes, albeit lower, were still at comfortably high levels. Continued attractive mortgage rates and the steady rise in prices in many locales, meantime, are likely to keep this sector strong. Moreover, we are seeing a relatively steady decline in layoffs, a pickup in industrial production, and generally muted price inflation. On the other hand, the retail sector is mixed; our trade balance is eroding rapidly (reflecting the surge in oil imports); and second quarter gross domestic product—which was reported initially to have increased by 3.0%—was revised to a gain of 2.8%.

> **We think such crosscurrents will limit growth to 3%, or so, over the next few quarters.** Our sense is that we'll see a good deal of unevenness on the consumer and industrial sides. That mixed showing—assuming that it is accompanied by muted inflation—could persuade the Federal Reserve, which recently voted to raise a key lending rate for the second time this year, to go slowly on the rate front.
>
> **There are other worries as well.** With the economy showing signs of wear and tear, it is not too surprising that earnings worries are increasing. These concerns, though, pale against the more serious global uncertainties, particularly as they pertain to our growing trade imbalance, the standoff in Iraq, and the threat of terrorism...
>
> ...**Investors are understandably on edge.** This skittishness has kept the stock market from showing sustained strength this year, with most rallies lasting only days and being followed, in short order, by selloffs...

S&P stated the following in the September 1, 2004, issue of *The Outlook*:

> The market has advanced a bit over the past two weeks, but Standard & Poor's believes that it is unlikely to barrel ahead to a new high anytime soon. We expect the S&P 500 to end 2004 at 1130, or only 1.6% above where it started the year.
>
> If our projections are on target, this year's percentage gain would be one of the smallest in the history of the S&P 500. For investors burned by the 40% drop from the end of 1999 through 2002, any gain might be viewed as something to be grateful for. Nevertheless, a 1.6% rise pales against the 26.4% advance of 2003.
>
> The potential good news in this otherwise boring market forecast is what this year's projected weakness may portend for 2005. Since 1928, the S&P 500 has ended the year up, but by less than 5%, only six times: in 1956, 1970, 1978, 1984, 1987, and 1992. In all but one case, the market posted a decent gain the following year. (The exception was in 1957 when the S&P 500 delivered a loss of 14.3%.) The six years following gains of less than 5% showed an average advance of 9.1%.
>
> We are entering a traditionally weak period for stocks. The three months ending November historically have produced the worst stock market returns of any of the 12 rolling quarters. Over the past 76 years, the S&P 500 has averaged a 0.2% loss for these three months.

> We suspect that the seasonal weakness is because some investors finally abandon the rosy scenarios with which they began the year. In the autumn of 2004, there will likely be numerous negative headlines to dampen investors' moods.
>
> But it's human nature to be optimistic at the start of a new year. By then, some of the world's current problems may look more manageable. Or we may have become more acclimated to them.
>
> History suggests stocks will reflect that.

Business Operations of Empire

Q. Please describe Empire's business operations.

A. Empire's Form 10K Securities and Exchange Commission (SEC) filing for the 2003 calendar year provides a good description of Empire's business operations:

> The Empire District Electric Company, a Kansas corporation organized in 1909, is an operating public utility engaged in the generation, purchase, transmission, distribution and sale of electricity in parts of Missouri, Kansas, Oklahoma and Arkansas. We also provide water service to three towns in Missouri and have investments in several non-regulated businesses. In 2003, 93.2% of our gross operating revenues were provided from the sale of electricity, 0.4% from the sale of water and 6.4% from our non-regulated businesses.
>
> The territory served by our electric operations embraces an area of about 10,000 square miles with a population of over 450,000. The service territory is located principally in Southwestern Missouri and also includes smaller areas in Southeastern Kansas, Northeastern Oklahoma and Northwestern Arkansas. The principal activities of these areas include light industry, agriculture and tourism. Of our total 2003 retail electric revenues, approximately 88.7% came from Missouri customers, 5.8% from Kansas customers, 2.8% from Oklahoma customers and 2.7% from Arkansas customers.
>
> We supply electric service at retail to 120 incorporated communities and to various unincorporated areas and at wholesale to four municipally owned distribution systems. The largest urban area we serve is the city of Joplin, Missouri, and its immediate vicinity, with a population of approximately 157,000. We operate under franchises having original terms of twenty years or longer in

> virtually all of the incorporated communities. Approximately 49% of our electric operating revenues in 2003 were derived from incorporated communities with franchises having at least ten years remaining and approximately 21% were derived from incorporated communities in which our franchises have remaining terms of ten years or less. Although our franchises contain no renewal provisions, in recent years we have obtained renewals of all of our expiring electric franchises prior to the expiration dates.
>
> Our electric operating revenues in 2003 were derived as follows: residential 41%, commercial 30%, industrial 17%, wholesale on-system 4%, wholesale off-system 3.5% and other 4.5%. Our largest single on-system wholesale customer is the city of Monett, Missouri, which in 2003 accounted for approximately 3% of electric revenues. No single retail customer accounted for more than 1% of electric revenues in 2003.

Empire's total operating revenues were $325,504,896 for the 12 months ended December 31, 2003, versus $305,902,995 for the 12 months ended December 31, 2002. These 2003 revenues resulted in an overall net income applicable to common stock of $29,450,307 for an earnings per share of $1.29 as compared to the 2002 net income applicable to common stock of $25,524,118 for an earnings per share of $1.19. These revenues and net incomes were generated from total property, plant and equipment of $833,872,049 at December 31, 2003 and $798,948,574 at December 31, 2002. These figures were taken from Empire's 2003 Annual Report.

Q. Please describe the credit ratings of Empire.

A. Currently, Standard & Poor's Corporation (S&P) assigns an issuer credit rating of "BBB" to Empire and rates its commercial paper as "A-2." S&P assigns Empire a business profile of "6," which is slightly below average (with average being a "5"). Empire's corporate credit rating of BBB is considered to be of "investment grade."

Q. Please provide S&P's most recent Rationale and Outlook concerning the credit rating assigned to Empire.

A. On July 13, 2004, S&P provided the following Rationale and Outlook:

RATIONALE

The ratings on Empire District Electric Co. reflect an average business profile and a financial position (adjusted for off-balance-sheet, purchased-power obligations) that remains somewhat weak, albeit improving, for the current ratings. Empire benefits from a service territory with a well-diversified business mix, below-average rates due to the low embedded cost of its coal plants, and adequate liquidity. However, the company remains challenged by its regulatory environment. Empire is a public utility involved in the generation, purchase, transmission, distribution, and sale of electricity primarily in Missouri (89% of electric operating revenues), Kansas (6%), Oklahoma (3%), and Arkansas (3%).

Empire's business profile is supported by a healthy service area with little industrial concentration. The territory consists primarily of small, rural customers that benefit from Empire's below-average rates, which the company derives from low-cost coal plants. The company does conduct some higher-risk, nonregulated activities, but they are extremely limited and Empire has demonstrated its willingness to exit ventures if financial performance does not materialize.

A challenging regulatory environment tempers the strengths of Empire's business profile. Under the jurisdiction of the Missouri Public Service Commission (MPSC), Empire suffers from relatively low allowed ROEs, receives low depreciation allowances, lacks recovery for construction work in progress (CWIP), and lacks a fuel-adjustment clause to help shield the company from its markedly increased natural gas dependence. The lack of a fuel-adjustment clause exposes Empire to potential fuel and purchased-power price volatility, which concerns Standard & Poor's. Timely recovery of prudently incurred fuel and purchased-power expenses is important for Empire's credit quality.

Regarding its financial profile, Empire is trying to improve its earnings and cash flow protection measures by hedging fuel expenses and controlling other costs. As long as the company continues to aggressively hedge its forecast natural gas needs (as of April 2004, Empire had hedged about 65% of its remaining expected gas burn for 2004 with rates at or below those budgeted in its rate structure) and receives timely rate relief, the principal financial measures should fall in line with lower levels suitable for the established risk profile at the 'BBB' level. Specifically, funds from operations (FFO) to total debt should be between 20% and 27% and FFO interest coverage between 3x and 4x.

Empire's credit facility is rated one notch below the corporate credit rating to reflect its subordination to Empire's secured debt. Because the loan is unsecured, Standard & Poor's expects that lenders will fare the same as senior unsecured creditors in the event of a default.

Short-term credit factors.

Empire's short-term rating is 'A-2'. Over the short term, Standard & Poor's expects cash flow from operations to fully fund maintenance capital expenditures and dividends, assuming continued, timely recovery of regulatory-related costs. Future actions by the MPSC will weigh heavily on Empire's credit profile because of the lack of conventional regulatory support (no fuel-adjustment clause and no CWIP recovery). The current short-term rating incorporates additional rate relief over the near term, given currently strong natural gas and coal prices. Empire's primary coal supply contract expires in December 2004, and current coal prices exceed those in its existing fixed-price contract. The lack of adequate rate relief would adversely affect the company's profitability.

Empire's adequate liquidity is supported by access to a $100 million unsecured revolving credit facility that matures in April 2005 and limited long-term debt maturities in the next five years. As of March 31, 2004, the facility was fully available and adequate for working capital needs, assuming Empire continues to prudently hedge its expected natural gas burn. The facility includes no rating triggers, but requires total debt (excluding trust-preferred securities) to be less than 62.5% of total capital, and EBITDA to be at least 2x interest charges (including distributions from trust-preferred securities). Empire safely meets the debt-to-capital requirement (45.6%) and the EBITDA-to-interest covenant (3.31x) as of March 31, 2004.

Other points of note include the following:

- The company annually distributes about $30 million in common dividends, which would provide flexibility in a liquidity crunch.
- Restrictions in Empire's mortgage bond charter, particularly an interest coverage requirement, would limit the issuance of new first mortgage bonds to roughly $227 million as of March 31, 2004. However, no such restrictions exist on unsecured debt issuances.

- Empire has limited room for capital expenditure reductions, as projected generation outlays are required to maintain reserve margins. Projected growth expenditures will require external funding.

- Though the company operates various diversified businesses, Standard & Poor's believes that their sale would generate few proceeds.

OUTLOOK: STABLE

The stable outlook on Empire assumes several factors. These include adequate regulatory treatment in future rate proceedings, manageable environmental compliance costs that are recoverable through rates in a timely manner, and continued attention to risk management of the company's generation fleet, fuel procurement, and purchased-power needs. Given the current volatile commodity price environment, failure to effectively hedge natural gas costs would pressure the ratings. In addition, the need for additional generation capacity could strain the company's long-term financial profile. Of paramount importance, however, will be the MPSC's treatment of the company's upcoming rate case.

Q. Are you recommending a reasonable rate of return in this case?

A. Yes, I am, and I will explain why in more detail later in my testimony.

Q. Please provide some historical financial information for Empire.

A. Schedules 7 and 8 present historical capital structures and selected financial ratios from 1999 through 2003 for Empire. Empire's consolidated common equity ratio has ranged from a high of 47.18 percent to a low of 36.65 percent from 1999 through 2003. As of June 30, 2004, the update period, the capital structure used for purposes of calculating the rate of return to be applied to Empire's rate base has a common equity ratio of 49.14 percent (Schedule 9), which is higher than the historical equity ratios of the past five years. This higher common equity ratio is mainly the result of Empire's decision to issue and sell additional common equity in the past year. On December 17, 2003, the Company sold 2,000,000 shares of its common stock in an

underwritten public offering at a price of $21.15 per share to generate net proceeds of $40.3 million. On January 8, 2004, the underwriters purchased an additional 300,000 shares for approximately $6.1 million.

Empire's return on year-end common equity (ROE) had been relatively consistent from 1999 through 2003, except for 2001 when the ROE was 3.89%. Otherwise, the ROEs were in the 8 to 9 percent range. Empire's 2003 ROE of 8.79 percent was below the comparable companies' (DPL Inc., Duquesne Light, Hawaiian Electric and NSTAR, which will be discussed in more detail later in my direct testimony) average of 13.78 percent for the year ending December 31, 2003, according to The Value Line Investment Survey: Ratings & Reports, July 2, 2004, August 13, 2004 and September 3, 2004. Value Line also estimates that Empire's return on equity will be 6.00 percent for 2004 and 9.00 percent for 2005.

Empire's maintenance of a dividend payout ratio of near or over 100 percent for the last several years is of concern to Staff. Empire's dividend policy has caused erosion in its common equity balance, because when a company pays out more than it earns, it causes a reduction in the retained earnings, which is a component of the common equity balance. As a result, in order for Empire to increase the amount of common equity in its capital structure, it has to resort to issuing more costly new common equity. Empire's dividend payout ratio was a very high 216.95 percent in 2001, meaning Empire paid out more than twice what it earned in 2001. In the last five years the lowest payout ratio that Empire had was 94.81 percent in 2000. Consistent payout ratios of this magnitude may cause some concern as to whether the dividend can be sustained at this level. In fact, Value Line recently reported the following in its July 2, 2004 analysis:

> We advise investors to tread carefully here. The yield is well above average, even by utility standards. We think the board of directors will wait until the Missouri rate case is completed before addressing the dividend, so we aren't showing a split dividend at the top of the page, but an unfavorable order could lead to a reduction in the disbursement. Even if the dividend holds at the current level, an increase is unlikely, even over the 3- to 5-year period.

The payout ratio for 2004 will be well over 100 percent once again based on Value Line's EPS prediction of $0.90 per share. If Empire maintains its $1.28 dividend per share (DPS) for all of 2004, this would result in a 142.22 percent payout ratio for 2004. It is my opinion that Empire's dividend payment policy is causing it to have a higher cost of capital than if it had a more conservative dividend payment policy with a target payout more in line with the industry average or slightly above the industry average. According to the July 2004 issues of C.A. Turner Utility Reports, the average dividend payout ratio for electric companies was 69 percent. According to the same publication, the average dividend payout ratio for both electric and natural gas companies was 60 percent. Although Staff is not recommending a downward adjustment to its recommended cost of common equity in this case, the perils created by this dividend payment policy are great. Management of many companies will not issue new common stock unless they have attractive investment opportunities in which to invest the funds because they do not want to dilute the EPS for existing shareholders. Because the issuance and sale of new common stock results in a greater common equity ratio for the purposes of the capital structure recommended in the rate case, more of the revenue requirement dollars will be for a return to the shareholders, even though there may be more of them, because they make up a greater proportion of the capital invested in the company. However, with more shares outstanding and the dividend remaining at

$1.28 per share, a greater amount of cash is paid out in dividends. Unless things change, this appears to be a vicious cycle that will result in the constant need to issue additional common equity, even though the need for new common equity is partially caused by the common equity erosion that Empire caused by paying the existing common equity holders a high cash dividend. For the foregoing reasons, rates should not be set in this rate case, nor in any other rate case, in order to improve the company's payout ratio or to maintain the current dividend. The Company needs to react to its financial situation and if it can grow earnings through organic growth, then this may allow for dividend growth in the future.

Empire's market-to-book ratio has ranged from 1.27 times, for year-end 2002, to 1.93 times, for year-end 2000. Empire's market-to-book ratio stood at 1.45 times for year-end 2003.

Determination of the Cost of Capital

Q. Please describe the approach for determining a utility company's cost of capital.

A. The total dollars of capital for the utility company are determined as of a specific point in time. This total dollar amount is then apportioned into each specific capital component, i.e. common equity, long-term debt, preferred stock and short-term debt. A weighted cost for each capital component is determined by multiplying each capital component ratio by the appropriate embedded cost or by the estimated cost of common equity component. The individual weighted costs are summed to arrive at a total weighted cost of capital. This total weighted cost of capital is synonymous with the fair rate of return for the utility company.

Q. Why is a total weighted cost of capital synonymous with a fair rate of return?

A. From a financial viewpoint, a company employs different forms of capital to support or fund the assets of the company. Each different form of capital has a cost and these costs are weighted proportionately to fund each dollar invested in the assets.

Assuming that the various forms of capital are within a reasonable balance and are costed correctly, the resulting total weighted cost of capital, when applied to rate base, will provide the funds necessary to service the various forms of capital. Thus, the total weighted cost of capital corresponds to a fair rate of return for the utility company.

Capital Structure and Embedded Costs

Q. What capital structure did you use for Empire?

A. I have used Empire's capital structure on a consolidated basis as of June 30, 2004. Schedule 9 presents Empire's capital structure and associated capital ratios. The resulting capital structure consists of 49.14 percent common stock equity, 6.32 percent trust preferred stock, and 44.53 percent long-term debt.

The amount of long-term debt outstanding on June 30, 2004 includes current maturities due within one year and was reduced by $20,714,252 for the net balance associated with the unamortized premiums, discounts and expenses as reported in Empire's updated response to Staff Data Request No. 0335.

The amount of trust preferred stock outstanding on June 30, 2004, was reduced by $1,675,732 for the net balance associated with the unamortized issuance expense as reported in Empire's updated response to Staff Data Request No. 0335.

As of June 30, 2004, Empire had $8,500,000 of short-term debt outstanding with $8,341,254 of Construction Work In Progress (CWIP) outstanding. The difference between the amount of short-term debt outstanding and CWIP outstanding is only $158,746. Usually, the difference between actual short-term debt outstanding and CWIP outstanding is included in the capital structure for the short-term debt balance because CWIP is not allowed in rate base and it is assumed that CWIP is initially funded by short-term debt and will eventually be funded by long-term debt. However, because the difference between short-term debt and CWIP is not significant enough to impact my cost of capital recommendation, I did not include short-term debt in my recommended capital structure.

Q. What was the embedded cost of long-term debt for Empire on June 30, 2004?

A. The embedded cost of long-term debt for Empire was 7.22 percent as of June 30, 2004 (see Schedule 10). I arrived at this figure by combining the embedded cost of long-term debt that Empire provided for its "regulated" operations in its updated response to Staff Data Request No. 0335 with the cost of Empire's other debt that was provided in a supplemental response to Staff Data Request No. 0335.

Q. What was the embedded cost of trust preferred stock for Empire on June 30, 2004?

A. The embedded cost of trust preferred stock for Empire was 8.92 percent on June 30, 2004. I arrived at these figures by adopting Empire's embedded cost of trust preferred stock calculation in its updated response to Staff Data Request No. 0335. It should be noted that the preferred stock Empire has issued is a hybrid between debt and

equity. It has the tax deductibility of interest, like debt, and the option of deferring the dividends, like equity. Consequently, the interest payments do not need to be factored up for taxes, and the Staff recommends that all the benefits of this tax deductibility go to the ratepayer. Staff's revenue requirement calculation will reflect this by not grossing up the interest payments for taxes.

Cost of Common Equity

Q. How do you propose to analyze those factors by which the cost of common equity for Empire may be determined?

A. I have selected the discounted cash flow (DCF) model as the primary tool to determine a company-specific cost of common equity for Empire. However, I also used the Capital Asset Pricing Model (CAPM) and the risk premium model to check the reasonableness of the DCF results. Additionally, I selected a group of comparable companies and applied the DCF model and the CAPM to test the reasonableness of my company-specific DCF result.

The DCF Model

Q. Please describe the DCF model.

A. The DCF model is a market-oriented approach for deriving the cost of common equity. The cost of common equity calculated from the DCF model is inherently capable of attracting capital. This results from the theory that security prices adjust continually over time, so that an equilibrium price exists and the stock is neither undervalued nor overvalued. It can also be stated that stock prices continually fluctuate to reflect the required and expected return for the investor.

The constant-growth form of the DCF model was used in this analysis. This model relies upon the fact that a company's common stock price is dependent upon the expected cash dividends and upon cash flows received through capital gains or losses that result from stock price changes. The interest rate which discounts the sum of the future expected cash flows to the current market price of the common stock is the calculated cost of common equity. This can be expressed algebraically as:

$$\text{Present Price} = \underset{\text{Discounted by k}}{\text{Expected Dividends}} + \underset{\text{Discounted by k}}{\text{Expected Price in 1 year}} \qquad (1)$$

where k equals the cost of common equity. Since the expected price of a stock in one year is equal to the present price multiplied by one plus the growth rate, equation (1) can be restated as:

$$\text{Present Price} = \frac{\text{Expected Dividends}}{(1+k)} + \frac{\text{Present Price } (1+g)}{(1+k)} \qquad (2)$$

where g equals the growth rate and k equals the cost of common equity. Letting the present price equal P_0 and expected dividends equal D_1, the equation appears as:

$$P_0 = \frac{D_1}{(1+k)} + \frac{P_0(1+g)}{(1+k)} \qquad (3)$$

The cost of common equity equation may also be algebraically represented as:

$$k = \frac{D_1}{P_0} + g \qquad (4)$$

Thus, the cost of common stock equity, k, is equal to the expected dividend yield (D_1/P_0) plus the expected growth in dividends (g) continuously summed into the future. The

growth in dividends and implied growth in earnings will be reflected in the current price. Therefore, this model also recognizes the potential of capital gains or losses associated with owning a share of common stock.

The discounted cash flow method is a continuous stock valuation model. The DCF theory is based on the following assumptions:

1. Market equilibrium;
2. Perpetual life of the company;
3. Constant payout ratio;
4. Payout of less than 100% earnings;
5. Constant price/earnings ratio;
6. Constant growth in cash dividends;
7. Stability in interest rates over time;
8. Stability in required rates of return over time; and
9. Stability in earned returns over time.

Flowing from these, it is further assumed that an investor's growth horizon is unlimited and that earnings, book values and market prices grow hand-in-hand. Although the entire list of the above assumptions is rarely met, the DCF model is a reasonable working model describing an actual investor's expectations and resulting behaviors.

Q. Can you directly analyze the cost of common equity for Empire?

A. Yes. In order to arrive at a company-specific DCF result, the company must have common stock that is market-traded and must pay dividends. Empire's stock is publicly traded on the New York Stock Exchange under the ticker symbol of "EDE" and Empire has paid cash dividends each year since 1944.

Q. Please explain how you determined the range of growth used in the DCF formula for Empire.

A. I reviewed Empire's actual historical dividends per share (DPS), earnings per share (EPS) and book values per share (BVPS) as well as projected growth rates for Empire. Schedule 11 lists Empire's historical five-year and ten-year compound growth rates for DPS, EPS and BVPS as reported by Value Line on July 2, 2004. Schedule 12 presents the five- and ten-year historical EPS, DPS and BVPS growth rates as well as the projected growth rates for Empire. The projected growth rates were obtained from three outside sources. I/B/E/S Inc.'s Institutional Brokers Estimate System, August 19, 2004, median five-year EPS growth rate for Empire was 2.50 percent with a low of 2.00 percent and a high of 3.00 percent. Standard & Poor's Corporation's Earnings Guide, August 2004, projects a five-year EPS growth rate of 3.00 percent for Empire. The Value Line Investment Survey: Ratings and Reports, July 2, 2004, projects the compound annual rate of growth for EPS during the next three to five years will be 6.50 percent for Empire. The average of the three outside sources produces a projected growth rate of 4.00 percent. The average of the historical and projected growth rates produces an average growth rate of 1.67 percent. The historical growth rates for Empire were negative as a result of an anomalous year in 2001. Value Line calculates its historical five-year and ten-year compound growth rates by taking an average of three years of data for the beginning and ending values in order to smooth out the results. Even with this smoothing, 2001 was such an abnormal year for Empire that it still causes the historical growth rates to be negative. Therefore, I didn't give as much weight to the historical growth rate as I might normally. For this same reason, I did not give as much weight to

Value Line's projected growth rate. Value Line's projected compound growth rate is based on a base period that includes Empire's anomalous year in 2001. This results in an upwardly-biased projected growth rate. If an analyst uses a base year that contains an anomalous low EPS, then this will result in a five-year projected (EPS) growth rate that is not sustainable. It appears that some of I/B/E/S's and S&P's analysts have taken the anomalous year into consideration because I/B/E/S's median estimated five-year EPS growth rate was 2.50 percent and S&P's projected five-year EPS growth rate was 3.00 percent. Considering all of this information, I chose a reasonable growth rate range of 2.25 percent to 3.25 percent (see Schedule 12). This range of growth (g) is the range that I used in the DCF model to calculate a cost of common equity for Empire. I determined the upper end of my range of growth by recalculating Value Line's projected EPS growth without the inclusion of Empires' anomalous year in 2001. This resulted in a projected EPS growth rate of 3.22 percent. I rounded this up to 3.25 percent for the upper part of my range. For the lower part of my range, I decided to give weight to the other lower projected growth rates and some of the historical growth rates. This range of growth is supported by Empire's projected 2.8 percent kilowatt-hour sales growth over the next several years, which Empire predicted in its 2001 Annual Report. This also compares to Empire's ten-year historical annual compound growth rate in total electric sales of 3.03 percent. I calculated this growth rate from data in Empire's 2003 Annual Report. I used Empire's prediction from its 2001 Annual Report because I could not find any predictions in its two most recent Annual Reports.

Q. Instead of calculating Empire's historical five-year and ten-year DPS, EPS and BVPS growth rates yourself, as you did in Empire's last rate case, Case No.

ER-2002-424, you relied on Value Line's historical five-year and ten-year historical growth rates. Why did you make this change?

A. Because investors rely on Value Line to make investment decisions, it appeared to be logical to use these historical growth rates in analyzing what investors expectations may be for the growth in a company's stock price. The rate-of-return witness' objective is to estimate investors' required rate of return. Therefore, because investors rely on this information to make their investment decisions, this is consistent with the role of a rate-of-return witness. Additionally, because Value Line averages three years of financial data for both the beginning and ending values in its calculation of both historical and projected compound growth rates, this allows for the minimization of the impact that a "good" or "bad" year may have on the calculated growth rates. However, as Empire's Value Line historical and projected growth rates prove, even this smoothing attempt may not be effective, if one or more of the three years contains an extreme result as compared to past results.

Q. Please explain how you determined the yield term of the DCF formula for Empire.

A. The expected yield term (D_1/P_0) of the DCF model is calculated by dividing the amount of common dividends per share expected to be paid over the next twelve months (D_1) by the current market price per share of the firm's common stock (P_0). Even though a strict technical application of the model requires the use of a current spot market price, I have chosen to use a monthly high/low average market price of Empire's common stock for the period of February 1, 2004, through July 30, 2004.

This averaging technique is an attempt to minimize the effects on the dividend yield, which can occur due to daily volatility in the stock market.

Schedule 13 presents the monthly high/low average stock market prices from February 1, 2004 through July 30, 2004 for Empire. Empire's common stock price has ranged from a low of $19.480 per share to a high of $23.480 per share for the above-mentioned time period. This has produced a range for the monthly average high/low market price of $19.990 to $22.725 per share and reflects the most recent market conditions for the price term (P_0) in the DCF model.

The Value Line Investment Survey: Ratings & Reports, July 2, 2004, states that Empire's common dividend declared per share will be $1.28 for 2004 and 2005. Therefore, I have chosen to use the value of $1.28 for the amount of common dividends per share (D_1) expected-to-be paid by Empire for the next 12 months.

Combining the expected dividend of $1.28 per share and a market price range of $19.990 to $22.725 per share produces an approximate expected dividend yield of 6.04 percent. This is the dividend yield I used as the yield portion (D_1/P_0) in the DCF model.

Q. Please summarize the results of your expected dividend yield and growth rate analysis for the DCF cost of common equity for Empire.

A. The summarized DCF cost of common equity estimate for Empire is presented as follows:

Yield (D_1/P_0)	+	Growth Rate (g)	=	Cost of Equity (k)
6.04%	+	2.25%	=	8.29%
6.04%	+	3.25%	=	9.29%

This range of return on common equity of 8.29 to 9.29 percent is the company-specific cost-of-common-equity range for Empire (see Schedule 14).

Reasonableness of DCF Returns for Empire

Q. Did you utilize the Capital Asset Pricing Model (CAPM) to check the reasonableness of your DCF model-derived cost of common equity for Empire?

A. Yes. I performed a CAPM cost of common equity analysis for Empire. The CAPM describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return that investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

$$k = R_f + \beta (R_m - R_f)$$

where:

k = the expected return on equity for a specific security;

R_f = the risk-free rate;

β = beta; and

$R_m - R_f$ = the market risk premium.

The first term of the CAPM is the risk-free rate (R_f). The risk-free rate reflects the level of return that can be achieved without accepting any risk. In reality, there is no such risk-free asset, but it is generally represented by U.S. Treasury securities. For purposes of this analysis, the risk-free rate was represented by the yield on 30-Year U.S.

Treasury Bonds. The appropriate rate was determined to be the average yield for the month of August 2004. This rate was determined from Yahoo!Finance's Investopedia web site and was calculated to be 5.06 percent.

The second term of the CAPM is beta (β). Beta is an indicator of a security's investment risk. It represents the relative movement and relative risk between a particular security and the market as a whole (where beta for the market equals 1.00). Securities with betas greater than 1.00 exhibit greater volatility than do securities with betas less than 1.00. Thus, a higher beta security is considered riskier and requires a higher return in order to attract investor capital away from a lower beta security. For purposes of this analysis, the appropriate beta was determined to be 0.65, as published in The Value Line Investment Survey: Ratings & Reports, July 2, 2004.

The final term of the CAPM is the market risk premium (R_m - R_f). The market risk premium represents the expected return from holding the entire market portfolio, less the expected return from holding a risk-free investment. For purposes of this analysis, I looked at two time periods for risk premium estimates. The first risk premium used was based on the long-term period of 1926-2003, which was 6.60 percent. The second risk premium used was based on the short-term, recent period of 1994-2003, which was determined to be 3.05 percent. These risk premiums were taken from Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2004 Yearbook.

Schedule 15 presents the CAPM analysis with regard to Empire. The CAPM analysis produces an estimated cost of common equity of 9.35 percent for Empire when using the long-term risk premium period. Using the short-term risk premium period produces an estimated cost of common equity of 7.04 percent. The long-term CAPM

result supports the high end of my recommended cost of common equity range calculated in my DCF analysis. The short-term CAPM illustrates the fact that, in recent years, returns achieved on common stocks have not been much higher than the returns achieved on risk-free securities. This would lend support to a lower recommended cost of common equity.

Q. What other analysis did you perform to determine the reasonableness of your DCF model-derived cost of common equity for Empire?

A. I performed a risk premium cost of common equity analysis for Empire. The risk premium concept implies that the required return on equity is found by adding an explicit premium for risk to a current interest rate. Schedule 16 shows the average risk premium above the yield of "30-year U.S. Treasury Bonds" for Empire's expected return on common equity. This analysis shows, on average, Empire's expected return on common equity, as reported by The Value Line Investment Survey: Ratings & Reports, is 417 basis points higher than the average yield on "30-year U.S. Treasury Bonds" for the period of January 1994 to August 2004 (see Schedule 17).

An average 30-Year U.S. Treasury Bond yield of 5.06 percent for the month of August 2004 was calculated from Yahoo!Finance's Investopedia web site. Adding 417 basis points to this 30-year U.S. Treasury Bond yield produces an estimated cost of common equity of 9.23 percent (see Schedule 17). This supports the upper part of my recommended cost of common equity range using the DCF model.

Q. Based on your analysis of the DCF, risk premium and CAPM cost of common equity results, what is your cost-of-common-equity estimate for Empire?

A. Based on my DCF, risk premium and CAPM analyses, I believe a recommended return on common equity range of 8.29 to 9.29 is appropriate for Empire (see Schedule 28).

Q. Did you perform an analysis on Empire's resulting pre-tax interest coverage ratios?

A. Yes. A pro forma pre-tax interest coverage calculation was completed for Empire (see Schedule 18). It reveals that the cost of common equity range of 8.29 to 9.29 percent would yield a pre-tax interest coverage ratio in the range of 2.89 to 3.11 times (see Schedule 18). This interest coverage range is above the mean (2.81) of pre-tax interest coverage ratios for BBB-rated integrated electric utilities for the last three fiscal years. I calculated this mean from S&P's CreditStats published by S&P on August 20, 2004. S&P no longer publishes benchmarks for pre-tax interest coverage ratios. Therefore, I was not able to compare the pre-tax interest coverage ratios resulting from my recommendation to anything other than the average that I calculated for actual pre-tax interest coverage ratios for the last three years. However, my recommendation indicates that Empire's pre-tax interest coverage ratio could be better than the average for BBB-rated integrated electric utilities.

Q. Does the above information guarantee that Empire's credit rating will remain at BBB?

A. No, but if the Company were able to earn the return that I have recommended that rates be set at, then based on the pro forma pre-tax interest coverage ratio, it should be able to achieve a pre-tax interest coverage ratio that is above average

for its current credit rating. Of course, ultimately it will be the performance of Empire's actual operations that will determine its credit rating.

Q. Did you perform any cost of common equity analysis on other utility companies?

A. Yes. I have selected a group of electric utility companies to analyze for determining the reasonableness of the company-specific DCF results for Empire. Schedule 19 presents a list of 70 publicly traded electric utility companies monitored by Value Line, which also monitors Empire. The criteria that I used to select the comparable companies are as follows:

1. Stock publicly traded: This criterion did not eliminate any companies;
2. Information printed in Value Line: This criterion eliminated five companies;
3. Ten years of data (DPS, BVPS & EPS) available: This criterion eliminated twelve companies;
4. Greater than 70 percent of revenues received from electric utility operations: This criterion eliminated thirty-one companies;
5. Total capitalization less than $5 billion: This criterion eliminated nine additional companies.
6. No nuclear operations: This criterion eliminated four additional companies.
7. No Missouri operations: This criterion did not eliminate any companies.

After examining the Value Line information of this initial final group of nine publicly traded electric utility companies, I decided to eliminate five more companies. I eliminated UNITIL Corporation and Maine & Maritimes Corp because Value Line did not provide projections of needed financial information for them.. I eliminated UniSource Energy because it was the subject of an acquisition. I eliminated Cleco Corporation and IDACORP, Inc. because these companies did not have projected growth information

from I/B/E/S and S&P. The final group of four publicly traded electric utility companies were: DPL Inc., Duquesne Light, Hawaiian Electric and NSTAR. These companies served as the proxy group to test the reasonableness of my recommended cost of common equity for Empire. The comparables are listed on Schedule 20.

Q. Please explain how you approached the determination of the cost of common equity for the comparable electric utility companies.

A. I calculated a DCF cost of common equity for each of the four comparable electric utility companies. The first step was to calculate a growth rate. Basically, I used the same approach of obtaining a growth rate estimate for the four electric utility companies as I used in calculating a growth rate for Empire (see Schedules 21 and 22). The electric utility companies' average historical growth rates ranged from -3.67 to 3.50 percent with an overall average of 0.96 percent for the group. The projected growth rates ranged from 0.50 to 11.00 percent with an average of 3.90 percent. Taking into account the projected and historical growth rates, a proposed range of growth of 2.45 to 3.90 percent was used in the DCF calculation for the comparable companies (see Schedule 22). Eighty percent of Empire's proposed growth rate range falls within the proposed range of growth for the comparable companies.

The next step was to calculate an expected dividend yield for each of the four electric utility companies. Schedule 23 presents the average high/low stock price for the period of April 2004 through July 2004 for each electric utility company. Column 3 of Schedule 24 shows that the projected dividend yields ranged from 3.31 to 5.27 percent for the four electric utility companies with the average at 4.72 percent. A proposed dividend yield of 4.72 percent was used in the DCF calculation for the comparable

companies. The proposed dividend yield of 6.06 percent for Empire falls above the proposed dividend yield for the comparable electric utility companies.

The estimated growth rates and projected dividend yields were then added together to reach an estimated DCF cost of common equity for each of the four electric utility companies (see Column 5 of Schedule 24). When adding a range of growth of 2.45 to 3.90 percent to the average dividend yield of 4.72 percent for the comparable utility companies, this produces a DCF cost of common equity ranging from 7.17 to 8.62 percent. As can be observed, the range of cost of common equity for the comparables is mostly below the range that I have recommended for Empire with the high end of the range for the comparables falling slightly above the low end of the range that I have recommended for Empire. The midpoint of 7.90 percent for the comparables falls below my recommended cost of common equity for Empire.

Q. Did you do any other analysis in determining the cost of common equity for the comparable electric utility companies?

A. Yes. I performed a CAPM cost of common equity analysis for the comparable electric utility companies. The betas for the comparable electric utility companies averaged 0.75, which is above Empire's beta of 0.65. Hawaiian Electric has a beta of 0.65, implying a market risk level similar to Empire. The CAPM analysis based upon the long-term time period of 1926-2003 implies that the required return on equity for the comparable electric utility companies is 10.01 percent, which is above my recommended range for Empire. The CAPM analysis based upon the short-term period of 1994-2003 implies that the required return on equity for the comparable electric utility companies is 7.35 percent, which is below the range that I have recommended for

Empire. It is interesting to note the lower results produced by the short-term CAPM analysis. The combination of lower interest rates and low equity market returns between 2000 and 2002 has had a significant impact on the CAPM's indicated cost of common equity (see Schedule 25).

Q. Why didn't you apply the risk premium model to your comparables in this case to test the reasonableness of the results of your company-specific analysis for Empire, when you did so in the last case?

A. Because I was selecting a comparable group to test the reasonableness of my company-specific cost of common equity analysis and have already applied the risk premium model to Empire specifically, I felt that I had performed enough tests of reasonableness to my DCF cost of common equity analysis of Empire. Further, as I indicated in the most recent MGE rate case, Case No. GR-2004-0209, Staff does not give much weight to the risk premium model when recommending a return on common equity for a Missouri utility. The DCF model estimates the cost of common equity to the company. The cost of common equity is the investors' required rate of return, which may or may not be equivalent to the expected return on common equity of the investor. If an investor continues to expect a return on equity that is higher than the cost of common equity, then this may mean that the utility is in an overearnings situation. I have explained this before by using Staff's 2002 earnings complaint against AmerenUE as an example. Investors in AmerenUE may have expected that AmerenUE would continue to earn a certain return on common equity over AmerenUE's cost of common equity, but it wasn't until the Commission recognized AmerenUE's lower cost of common equity that investors' expected returns on common equity were ratcheted down. The same analogy

can apply to the use of the risk premium model. This is why Staff only uses this model to check the reasonableness of its DCF results and because I had already applied this model to Empire, I did not believe it would be worthwhile to apply it to the comparable companies since I am only using them to test the reasonableness of my Empire-specific recommendation.

Rate of Return for Empire

Q. Please explain how to apply the returns you developed for each capital component to Empire's Missouri electric utility operations.

A. The cost-of-service ratemaking method was adopted in this case. This approach develops the public utility's revenue requirement. The cost of service (revenue requirement) is based on the following components: prudent operation costs, rate base and a return allowed on the rate base (see Schedule 27).

It is my responsibility to calculate and recommend a rate of return that should be authorized on the Missouri jurisdictional electric utility rate base for Empire. Under the cost- of-service ratemaking approach, a weighted cost of capital in the range of 7.85 to 8.34 percent was developed for Empire's Missouri electric utility operations (see Schedule 28). This rate was calculated by applying an embedded cost of long-term debt of 7.22 percent, an embedded cost of trust preferred stock of 8.92 percent, and a return on common equity range of 8.29 to 9.29 percent to a capital structure consisting of 44.54 percent long-term debt, 6.32 percent preferred stock and 49.14 percent common equity. Therefore, I am recommending that The Empire District Electric Company's Missouri electric utility operations be allowed to earn a return on its original cost rate base in the range of 7.85 to 8.34 percent.

Through my analysis, I believe that I have developed a fair and reasonable return and when applied to The Empire District Electric Company's Missouri jurisdictional electric utility rate base will allow Empire the opportunity to earn the revenue requirement developed in this rate case.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

CASE PROCEEDING PARTICIPATION

DAVID MURRAY

Date Filed	Issue	Case Number	Exhibit	Case Name
1/31/2001	Rate of Return	TC2001402	Direct	Ozark Telephone Company
2/28/2001	Proposed Rate Design Rate of Return	TR2001344	Direct	Northeast Missouri Rural Telephone Company
3/1/2001	Rate of Return	TT2001328	Rebuttal	Oregon Farmers Mutual Telephone Company
4/19/2001	Rate of Return	GR2001292	Direct	Missouri Gas Energy, A Division of Southern Union Company
5/22/2001	Rate of Return	GR2001292	Rebuttal	Missouri Gas Energy, A Division of Southern Union Company
12/6/2001	Rate of Return	ER2001672	Direct	UtiliCorp United Inc. dba Missouri Public Service
12/6/2001	Rate of Return	EC2002265	Direct	UtiliCorp United Inc. dba Missouri Public Service
1/8/2002	Rate of Return	ER2001672	Rebuttal	UtiliCorp United Inc. dba Missouri Public Service
1/8/2002	Rate of Return	EC2002265	Rebuttal	UtiliCorp United Inc. dba Missouri Public Service
1/22/2002	Rate of Return	EC2002265	Surrebuttal	UtiliCorp United Inc. dba Missouri Public Service
1/22/2002	Rate of Return	ER2001265	Surrebuttal	UtiliCorp United Inc. dba Missouri Public Service
8/6/2002	Rate of Return	TC20021076	Direct	BPS Telephone Company
8/16/2002	Capital Structure Rate of Return	ER2002424	Direct	The Empire District Electric Company
9/24/2002	Capital Structure Rate of Return	ER2002424	Rebuttal	The Empire District Electric Company
10/16/2002	Capital Structure Rate of Return	ER2002424	Surrebuttal	The Empire District Electric Company
3/17/2003	Insulation	GM20030238	Rebuttal	Southern Union Co. dba Missouri Gas Energy
10/3/2003	Rate of Return Capital Structure	WC20040168	Direct	Missouri-American Water Company
10/3/2003	Rate of Return Capital Structure	WR20030500	Direct	Missouri-American Water Company

Date Filed	Issue	Case Number	Exhibit	Case Name
11/10/2003	Rate of Return Capital Structure	WR20030500	Rebuttal	Missouri-American Water Company
11/10/2003	Rate of Return Capital Structure	WC20040168	Rebuttal	Missouri-American Water Company
12/5/2003	Rate of Return Capital Structure	WC20040168	Surrebuttal	Missouri-American Water Co
12/5/2003	Rate of Return Capital Structure	WR20030500	Surrebuttal	Missouri-American Water Co
12/9/2003	Rate of Return Capital Structure	ER20040034	Direct	Aquila, Inc.
12/9/2003	Rate of Return Capital Structure	HR20040024	Direct	Aquila, Inc.
12/19/2003	Rate of Return Capital Structure	ST20030562	Direct	Osage Water Company
12/19/2003	Rate of Return Capital Structure	WT20030563	Direct	Osage Water Company
1/6/2004	Rate of Return Capital Structure	GR20040072	Direct	Aquila, Inc.
1/9/2004	Rate of Return Capital Structure	WT20030563	Rebuttal	Osage Water Company
1/9/2004	Rate of Return Capital Structure	ST20030562	Rebuttal	Osage Water Company
1/26/2004	Rate of Return Capital Structure	HR20040024	Rebuttal	Aquila, Inc. dba Aquila Networks-MPS and Aquila Networks L&P
1/26/2004	Rate of Return Capital Structure	ER20040034	Rebuttal	Aquila, Inc. dba Aquila Networks-MPS and Aquila Networks L&P
2/13/2004	Rate of Return Capital Structure	GR20040072	Rebuttal	Aquila, Inc. dba Aquila Networks-MPS and Aquila Networks-L&P
2/13/2004	Rate of Return Capital Structure	ER20040034	Surrebuttal	Aquila, Inc. dba Aquila Networks-MPS and Aquila Networks-L&P
2/13/2004	Rate of Return Capital Structure	HR20040024	Surrebuttal	Aquila, Inc. dba Aquila Networks-MPS and Aquila Networks-L&P
3/11/2004	Rate of Return Capital Structure	IR20040272	Direct	Fidelity Telephone Company
4/15/2004	Capital Structure Rate of Return	GR20040209	Direct	Missouri Gas Energy

AN ANALYSIS OF THE COST OF CAPITAL

FOR

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

SCHEDULES

BY

DAVID MURRAY

UTILITY SERVICES DIVISION

MISSOURI PUBLIC SERVICE COMMISSION

SEPTEMBER 2004

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

List of Schedules

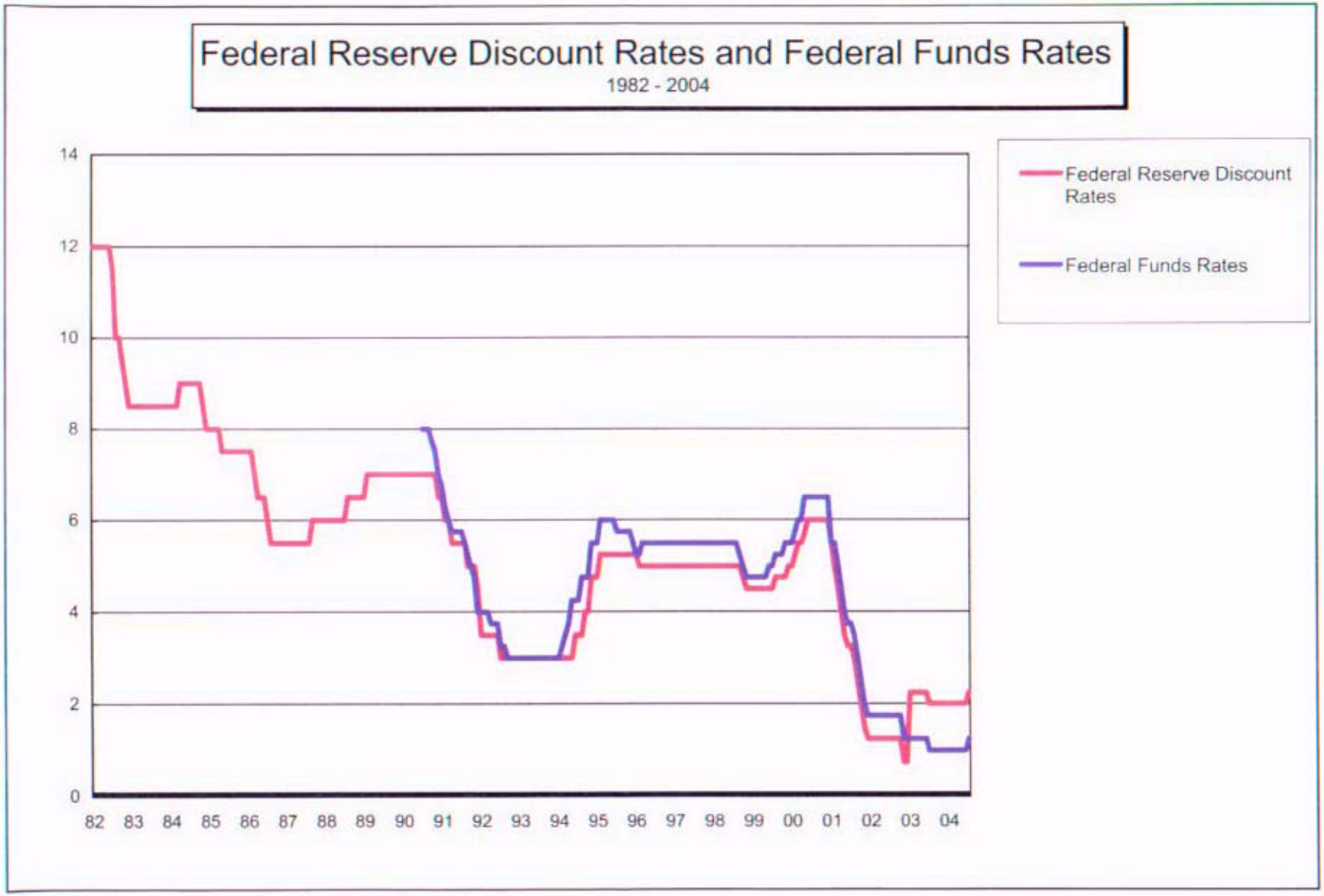
The Empire District Electric Company
Case No. ER-2004-0570

Federal Reserve Discount Rate Changes

Date	Discount Rate	Federal Reserve Rate
07/19/82	11.50%	
07/31/82	11.00%	
08/14/82	10.50%	
08/26/82	10.00%	
10/10/82	9.50%	
11/20/82	9.00%	
12/14/82	8.50%	
01/01/83	8.50%	
12/31/83	8.50%	
04/09/84	9.00%	
11/21/84	8.50%	
12/24/84	8.00%	
05/20/85	7.50%	
03/07/86	7.00%	
04/21/86	6.50%	
07/11/86	6.00%	
08/21/86	5.50%	
09/04/87	6.00%	
08/09/88	6.50%	
02/24/89	7.00%	
07/13/90		8.00%
10/29/90		7.75%
11/13/90		7.50%
12/07/90		7.25%
12/18/90		7.00%
12/19/90	6.50%	
01/09/91		6.75%
02/01/91	6.00%	6.25%
03/08/91		6.00%
04/30/91	5.50%	5.75%
08/06/91		5.50%
09/13/91	5.00%	5.25%
10/31/91		5.00%
11/06/91	4.50%	4.75%
12/06/91		4.50%
12/20/91	3.50%	4.00%
04/09/92		3.75%
07/02/92	3.00%	3.25%
09/04/92		3.00%
01/01/93		
12/31/93	No Changes	No Changes
02/04/94		3.25%
03/22/94		3.50%
04/18/94		3.75%
05/17/94	3.50%	4.25%
08/16/94	4.00%	4.75%
11/15/94	4.75%	5.50%
02/01/95	5.25%	6.00%
07/06/95		5.75%
12/19/95		5.50%
01/31/96	5.00%	5.25%
03/25/97		5.50%
12/12/97	5.00%	
01/09/98	5.00%	
03/06/98	5.00%	
09/29/98		5.25%
10/15/98	4.75%	5.00%
11/17/98	4.50%	4.75%
06/30/99	4.50%	5.00%
08/24/99	4.75%	5.25%
11/16/99	5.00%	5.50%
02/02/00	5.25%	5.75%
03/21/00	5.50%	6.00%
05/19/00	6.00%	6.50%
01/03/01	5.75%	6.00%
01/04/01	5.50%	6.00%
01/31/01	5.00%	5.50%
03/20/01	4.50%	5.00%
04/18/01	4.00%	4.50%
05/15/01	3.50%	4.00%
06/27/01	3.25%	3.75%
08/21/01	3.00%	3.50%
09/17/01	2.50%	3.00%
10/02/01	2.00%	2.50%
11/06/01	1.50%	2.00%
12/11/01	1.25%	1.75%
11/06/02	0.75%	1.25%
01/09/03	2.25%**	1.25%
06/25/03	2.00%	1.00%
06/30/04	2.25%	1.25%

* Began tracking the Federal Funds Rate.
**Revised discount window program begins. Reflects rate on primary credit. This revised discount window policy results in incomparability of the discount rates after January 9, 2003 to discount rates before January 9, 2003.

Source: Federal Reserve Bank of New York: http://www.newyorkfed.org/aboutthefed/fedpoint/fed18.html (1/1/2000 through 8/25/2004).
Source: MGE direct testimony in Case No.GR-2004-0209 (all data prior to 1/1/2000).
Note: Interest rates as of December 31 for each year are underlined.


Federal Reserve Discount Rates and Federal Funds Rates
1982 - 2004
14
12
10
8
6
4
2
0
82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
Federal Reserve Discount Rates
Federal Funds Rates

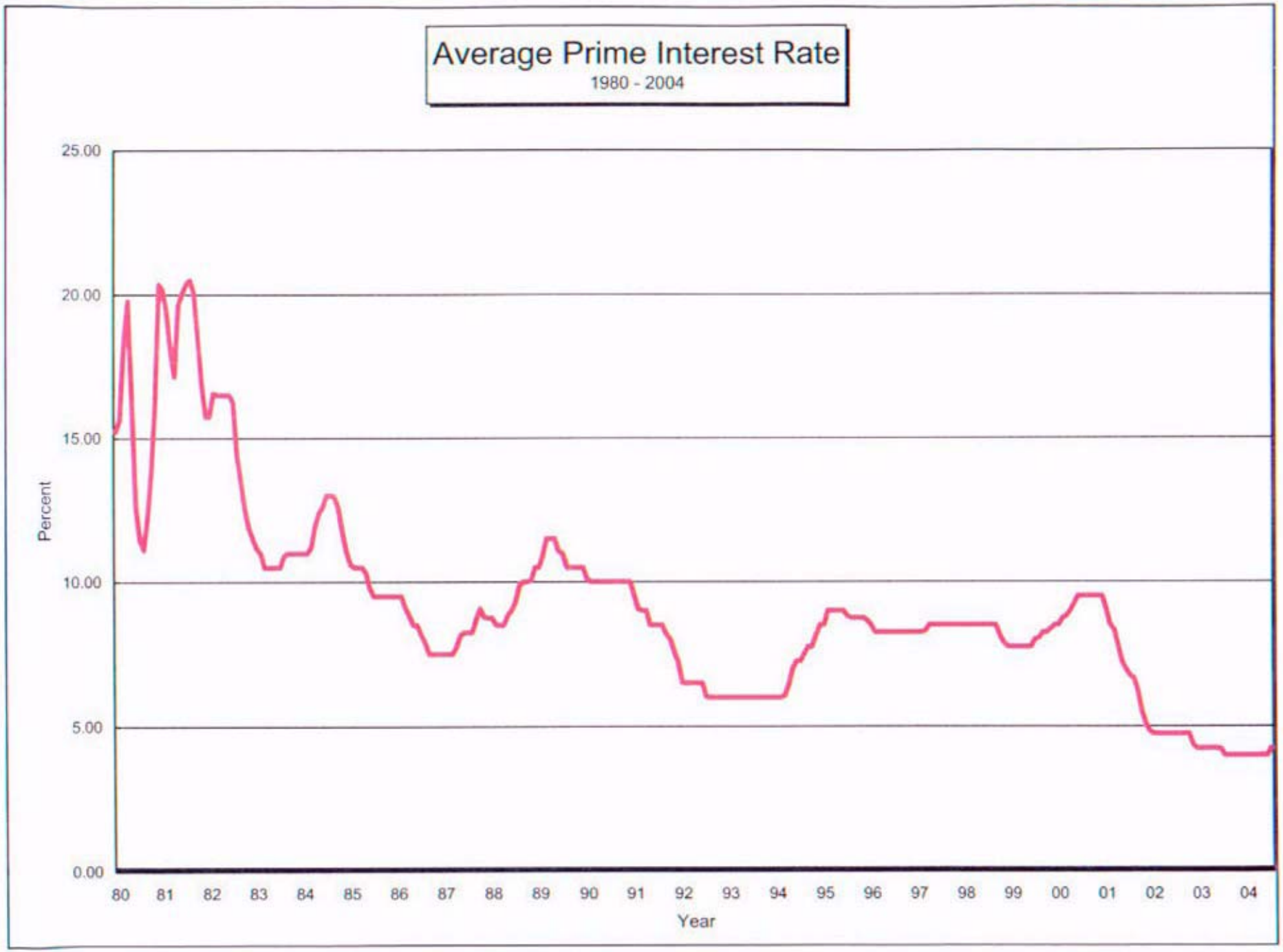
SCHEDULE 2-2

The Empire District Electric Company
Case No. ER-2004-0570

Average Prime Interest Rates

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	15.25	Jan 1984	11.00	Jan 1988	8.75	Jan 1992	6.50	Jan 1996	8.50	Jan 2000	8.50	Jan 2004	4.00
Feb	15.63	Feb	11.00	Feb	8.51	Feb	6.50	Feb	8.25	Feb	8.73	Feb	4.00
Mar	18.31	Mar	11.21	Mar	8.50	Mar	6.50	Mar	8.25	Mar	8.83	Mar	4.00
Apr	19.77	Apr	11.93	Apr	8.50	Apr	6.50	Apr	8.25	Apr	9.00	Apr	4.00
May	16.57	May	12.39	May	8.64	May	6.50	May	8.25	May	9.24	May	4.00
Jun	12.63	Jun	12.60	Jun	9.00	Jun	6.50	Jun	8.25	Jun	9.50	Jun	4.00
Jul	11.48	Jul	13.00	Jul	9.29	Jul	6.02	Jul	8.25	Jul	9.50	Jul	4.25
Aug	11.12	Aug	13.00	Aug	9.84	Aug	6.00	Aug	8.25	Aug	9.50		
Sep	12.23	Sep	12.97	Sep	10.00	Sep	6.00	Sep	8.25	Sep	9.50		
Oct	13.79	Oct	12.58	Oct	10.00	Oct	6.00	Oct	8.25	Oct	9.50		
Nov	16.06	Nov	11.77	Nov	10.05	Nov	6.00	Nov	8.25	Nov	9.50		
Dec	20.35	Dec	11.06	Dec	10.50	Dec	6.00	Dec	8.25	Dec	9.50		
Jan 1981	20.16	Jan 1985	10.61	Jan 1989	10.50	Jan 1993	6.00	Jan 1997	8.26	Jan 2001	9.05		
Feb	19.43	Feb	10.50	Feb	10.93	Feb	6.00	Feb	8.25	Feb	8.50		
Mar	18.05	Mar	10.50	Mar	11.50	Mar	6.00	Mar	8.30	Mar	8.32		
Apr	17.15	Apr	10.50	Apr	11.50	Apr	6.00	Apr	8.50	Apr	7.80		
May	19.61	May	10.31	May	11.50	May	6.00	May	8.50	May	7.24		
Jun	20.03	Jun	9.78	Jun	11.07	Jun	6.00	Jun	8.50	Jun	6.98		
Jul	20.39	Jul	9.50	Jul	10.98	Jul	6.00	Jul	8.50	Jul	6.75		
Aug	20.50	Aug	9.50	Aug	10.50	Aug	6.00	Aug	8.50	Aug	6.67		
Sep	20.08	Sep	9.50	Sep	10.50	Sep	6.00	Sep	8.50	Sep	6.28		
Oct	18.45	Oct	9.50	Oct	10.50	Oct	6.00	Oct	8.50	Oct	5.53		
Nov	16.84	Nov	9.50	Nov	10.50	Nov	6.00	Nov	8.50	Nov	5.10		
Dec	15.75	Dec	9.50	Dec	10.50	Dec	6.00	Dec	8.50	Dec	4.84		
Jan 1982	15.75	Jan 1986	9.50	Jan 1990	10.11	Jan 1994	6.00	Jan 1998	8.50	Jan 2002	4.75		
Feb	16.56	Feb	9.50	Feb	10.00	Feb	6.00	Feb	8.50	Feb	4.75		
Mar	16.50	Mar	9.10	Mar	10.00	Mar	6.06	Mar	8.50	Mar	4.75		
Apr	16.50	Apr	8.83	Apr	10.00	Apr	6.45	Apr	8.50	Apr	4.75		
May	16.50	May	8.50	May	10.00	May	6.99	May	8.50	May	4.75		
Jun	16.50	Jun	8.50	Jun	10.00	Jun	7.25	Jun	8.50	Jun	4.75		
Jul	16.26	Jul	8.16	Jul	10.00	Jul	7.25	Jul	8.50	Jul	4.75		
Aug	14.39	Aug	7.90	Aug	10.00	Aug	7.51	Aug	8.50	Aug	4.75		
Sep	13.50	Sep	7.50	Sep	10.00	Sep	7.75	Sep	8.49	Sep	4.75		
Oct	12.52	Oct	7.50	Oct	10.00	Oct	7.75	Oct	8.12	Oct	4.75		
Nov	11.85	Nov	7.50	Nov	10.00	Nov	8.15	Nov	7.89	Nov	4.35		
Dec	11.50	Dec	7.50	Dec	10.00	Dec	8.50	Dec	7.75	Dec	4.25		
Jan 1983	11.16	Jan 1987	7.50	Jan 1991	9.52	Jan 1995	8.50	Jan 1999	7.75	Jan 2003	4.25		
Feb	10.98	Feb	7.50	Feb	9.05	Feb	9.00	Feb	7.75	Feb	4.25		
Mar	10.50	Mar	7.50	Mar	9.00	Mar	9.00	Mar	7.75	Mar	4.25		
Apr	10.50	Apr	7.75	Apr	9.00	Apr	9.00	Apr	7.75	Apr	4.25		
May	10.50	May	8.14	May	8.50	May	9.00	May	7.75	May	4.25		
Jun	10.50	Jun	8.25	Jun	8.50	Jun	9.00	Jun	7.75	Jun	4.22		
Jul	10.50	Jul	8.25	Jul	8.50	Jul	8.80	Jul	8.00	Jul	4.00		
Aug	10.89	Aug	8.25	Aug	8.50	Aug	8.75	Aug	8.06	Aug	4.00		
Sep	11.00	Sep	8.70	Sep	8.20	Sep	8.75	Sep	8.25	Sep	4.00		
Oct	11.00	Oct	9.07	Oct	8.00	Oct	8.75	Oct	8.25	Oct	4.00		
Nov	11.00	Nov	8.78	Nov	7.58	Nov	8.75	Nov	8.37	Nov	4.00		
Dec	11.00	Dec	8.75	Dec	7.21	Dec	8.65	Dec	8.50	Dec	4.00		

Source: St Louis Federal Reserve Bank, http://research.stlouisfed.org/fred2/data/MPRIME.txt


Average Prime Interest Rate
1980 - 2004
25.00
20.00
15.00
10.00
5.00
0.00
Percent
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
Year

SCHEDULE 3-2

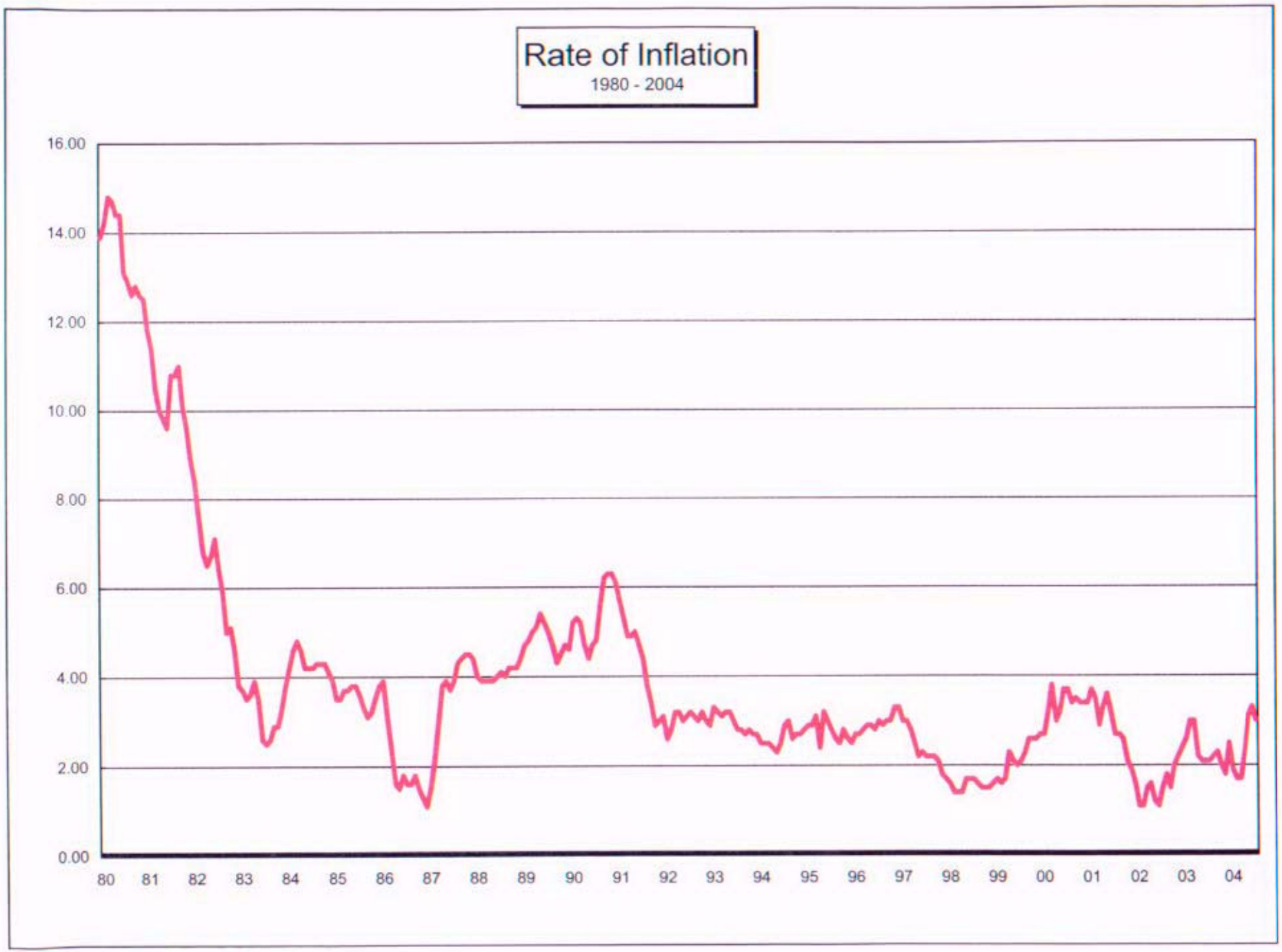
Empire District Electric
Case No. ER-2004-0570

Rate of Inflation

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	13.90	Jan 1984	4.20	Jan 1988	4.00	Jan 1992	2.60	Jan 1996	2.70	Jan 2000	2.70	Jan 2004	1.90
Feb	14.20	Feb	4.60	Feb	3.90	Feb	2.80	Feb	2.70	Feb	3.20	Feb	1.70
Mar	14.80	Mar	4.80	Mar	3.90	Mar	3.20	Mar	2.80	Mar	3.70	Mar	1.70
Apr	14.70	Apr	4.60	Apr	3.90	Apr	3.20	Apr	2.90	Apr	3.00	Apr	2.30
May	14.40	May	4.20	May	3.90	May	3.00	May	2.90	May	3.20	May	3.10
Jun	14.40	Jun	4.20	Jun	4.00	Jun	3.10	Jun	2.80	Jun	3.70	Jun	3.30
Jul	13.10	Jul	4.20	Jul	4.10	Jul	3.20	Jul	3.00	Jul	3.70	Jul	3.00
Aug	12.90	Aug	4.30	Aug	4.00	Aug	3.10	Aug	2.90	Aug	3.40		
Sep	12.80	Sep	4.30	Sep	4.20	Sep	3.00	Sep	3.00	Sep	3.50		
Oct	12.80	Oct	4.30	Oct	4.20	Oct	3.20	Oct	3.00	Oct	3.40		
Nov	12.60	Nov	4.10	Nov	4.20	Nov	3.00	Nov	3.30	Nov	3.40		
Dec	12.50	Dec	3.90	Dec	4.40	Dec	2.90	Dec	3.30	Dec	3.40		
Jan 1981	11.80	Jan 1985	3.50	Jan 1989	4.70	Jan 1993	3.30	Jan 1997	3.00	Jan 2001	3.70		
Feb	11.40	Feb	3.50	Feb	4.80	Feb	3.20	Feb	3.00	Feb	3.50		
Mar	10.50	Mar	3.70	Mar	5.00	Mar	3.10	Mar	2.80	Mar	2.90		
Apr	10.00	Apr	3.70	Apr	5.10	Apr	3.20	Apr	2.50	Apr	3.30		
May	9.80	May	3.80	May	5.40	May	3.20	May	2.20	May	3.60		
Jun	9.60	Jun	3.80	Jun	5.20	Jun	3.00	Jun	2.30	Jun	3.20		
Jul	10.80	Jul	3.60	Jul	5.00	Jul	2.80	Jul	2.20	Jul	2.70		
Aug	10.80	Aug	3.30	Aug	4.70	Aug	2.80	Aug	2.20	Aug	2.70		
Sep	11.00	Sep	3.10	Sep	4.30	Sep	2.70	Sep	2.20	Sep	2.60		
Oct	10.10	Oct	3.20	Oct	4.50	Oct	2.80	Oct	2.10	Oct	2.10		
Nov	9.60	Nov	3.50	Nov	4.70	Nov	2.70	Nov	1.80	Nov	1.90		
Dec	8.90	Dec	3.80	Dec	4.60	Dec	2.70	Dec	1.70	Dec	1.60		
Jan 1982	8.40	Jan 1986	3.90	Jan 1990	5.20	Jan 1994	2.50	Jan 1998	1.60	Jan 2002	1.10		
Feb	7.60	Feb	3.10	Feb	5.30	Feb	2.50	Feb	1.40	Feb	1.10		
Mar	6.80	Mar	2.30	Mar	5.20	Mar	2.50	Mar	1.40	Mar	1.50		
Apr	6.50	Apr	1.60	Apr	4.70	Apr	2.40	Apr	1.40	Apr	1.60		
May	6.70	May	1.50	May	4.40	May	2.30	May	1.70	May	1.20		
Jun	7.10	Jun	1.80	Jun	4.70	Jun	2.50	Jun	1.70	Jun	1.10		
Jul	6.40	Jul	1.60	Jul	4.80	Jul	2.90	Jul	1.70	Jul	1.50		
Aug	5.90	Aug	1.60	Aug	5.60	Aug	3.00	Aug	1.60	Aug	1.80		
Sep	5.00	Sep	1.80	Sep	6.20	Sep	2.60	Sep	1.50	Sep	1.50		
Oct	5.10	Oct	1.50	Oct	6.30	Oct	2.70	Oct	1.50	Oct	2.00		
Nov	4.60	Nov	1.30	Nov	6.30	Nov	2.70	Nov	1.50	Nov	2.20		
Dec	3.80	Dec	1.10	Dec	6.10	Dec	2.80	Dec	1.60	Dec	2.40		
Jan 1983	3.70	Jan 1987	1.50	Jan 1991	5.70	Jan 1995	2.90	Jan 1999	1.70	Jan 2003	2.60		
Feb	3.50	Feb	2.10	Feb	5.30	Feb	2.90	Feb	1.60	Feb	3.00		
Mar	3.60	Mar	3.00	Mar	4.90	Mar	3.10	Mar	1.70	Mar	3.00		
Apr	3.90	Apr	3.80	Apr	4.90	Apr	2.40	Apr	2.30	Apr	2.20		
May	3.50	May	3.90	May	5.00	May	3.20	May	2.10	May	2.10		
Jun	2.60	Jun	3.70	Jun	4.70	Jun	3.00	Jun	2.00	Jun	2.10		
Jul	2.50	Jul	3.90	Jul	4.40	Jul	2.80	Jul	2.10	Jul	2.10		
Aug	2.60	Aug	4.30	Aug	3.80	Aug	2.60	Aug	2.30	Aug	2.20		
Sep	2.90	Sep	4.40	Sep	3.40	Sep	2.50	Sep	2.60	Sep	2.30		
Oct	2.90	Oct	4.50	Oct	2.90	Oct	2.80	Oct	2.60	Oct	2.00		
Nov	3.30	Nov	4.50	Nov	3.00	Nov	2.60	Nov	2.60	Nov	1.80		
Dec	3.80	Dec	4.40	Dec	3.10	Dec	2.50	Dec	2.70	Dec	1.90		

Source: U.S. Dept of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers,
Change for 12-Month Period, Bureau of Labor Statistics.
ftp://ftp.bls.gov/pub/news.release/History/cpi.08172004.news for July 2004 CPI info

SCHEDULE 4-1


Rate of Inflation
1980 - 2004
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
02
03
04

SCHEDULE 4-2

Empire District Electric
Case No. ER-2004-0570

Average Yields on Mergent's Public Utility Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.12	Jan 1984	13.40	Jan 1988	10.75	Jan 1992	8.67	Jan 1996	7.20	Jan 2000	8.22	Jan 2004	6.23
Feb	13.48	Feb	13.50	Feb	10.11	Feb	8.77	Feb	7.37	Feb	8.10	Feb	6.17
Mar	14.33	Mar	14.03	Mar	10.11	Mar	8.84	Mar	7.72	Mar	8.14	Mar	6.01
Apr	13.50	Apr	14.30	Apr	10.53	Apr	8.79	Apr	7.68	Apr	8.14	Apr	6.38
May	12.17	May	14.95	May	10.75	May	8.72	May	7.99	May	8.55	May	6.68
Jun	11.87	Jun	15.16	Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22	Jun	6.53
Jul	12.12	Jul	14.92	Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17	Jul	6.34
Aug	12.82	Aug	14.29	Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.05		
Sep	13.29	Sep	14.04	Sep	10.56	Sep	8.32	Sep	8.01	Sep	8.16		
Oct	13.53	Oct	13.68	Oct	9.92	Oct	8.44	Oct	7.76	Oct	8.08		
Nov	14.07	Nov	13.15	Nov	9.89	Nov	8.53	Nov	7.48	Nov	8.03		
Dec	14.46	Dec	12.96	Dec	10.02	Dec	8.36	Dec	7.58	Dec	7.79		
Jan 1981	14.22	Jan 1985	12.88	Jan 1989	10.02	Jan 1993	8.23	Jan 1997	7.79	Jan 2001	7.76		
Feb	14.94	Feb	13.00	Feb	10.02	Feb	8.00	Feb	7.68	Feb	7.69		
Mar	14.86	Mar	13.66	Mar	10.16	Mar	7.85	Mar	7.92	Mar	7.59		
Apr	15.32	Apr	13.42	Apr	10.14	Apr	7.76	Apr	8.08	Apr	7.81		
May	15.84	May	12.89	May	9.92	May	7.78	May	7.94	May	7.68		
Jun	15.27	Jun	11.91	Jun	9.49	Jun	7.68	Jun	7.77	Jun	7.75		
Jul	15.87	Jul	11.86	Jul	9.34	Jul	7.53	Jul	7.52	Jul	7.71		
Aug	16.33	Aug	11.93	Aug	9.37	Aug	7.21	Aug	7.57	Aug	7.57		
Sep	16.89	Sep	11.95	Sep	9.43	Sep	7.01	Sep	7.50	Sep	7.73		
Oct	16.76	Oct	11.84	Oct	9.37	Oct	6.99	Oct	7.37	Oct	7.64		
Nov	15.50	Nov	11.33	Nov	9.33	Nov	7.30	Nov	7.24	Nov	7.61		
Dec	15.77	Dec	10.82	Dec	9.31	Dec	7.33	Dec	7.16	Dec	7.86		
Jan 1982	16.73	Jan 1986	10.66	Jan 1990	9.44	Jan 1994	7.31	Jan 1998	7.03	Jan 2002	7.69		
Feb	16.72	Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09	Feb	7.62		
Mar	16.07	Mar	9.33	Mar	9.75	Mar	7.83	Mar	7.13	Mar	7.83		
Apr	15.82	Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12	Apr	7.74		
May	15.60	May	9.52	May	9.89	May	8.32	May	7.11	May	7.76		
Jun	16.18	Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99	Jun	7.67		
Jul	16.04	Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99	Jul	7.54		
Aug	15.22	Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96	Aug	7.34		
Sep	14.56	Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88	Sep	7.23		
Oct	13.88	Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88	Oct	7.43		
Nov	13.58	Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96	Nov	7.31		
Dec	13.55	Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84	Dec	7.20		
Jan 1983	13.46	Jan 1987	8.77	Jan 1991	9.56	Jan 1995	8.77	Jan 1999	6.87	Jan 2003	7.13		
Feb	13.60	Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00	Feb	6.92		
Mar	13.28	Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18	Mar	6.80		
Apr	13.03	Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16	Apr	6.68		
May	13.00	May	9.82	May	9.29	May	7.93	May	7.42	May	6.35		
Jun	13.17	Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70	Jun	6.21		
Jul	13.28	Jul	10.01	Jul	9.40	Jul	7.73	Jul	7.66	Jul	6.54		
Aug	13.50	Aug	10.33	Aug	9.16	Aug	7.86	Aug	7.86	Aug	6.78		
Sep	13.35	Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87	Sep	6.58		
Oct	13.19	Oct	11.32	Oct	8.99	Oct	7.46	Oct	8.02	Oct	6.50		
Nov	13.33	Nov	10.82	Nov	8.93	Nov	7.40	Nov	7.86	Nov	6.44		
Dec	13.48	Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04	Dec	6.36		

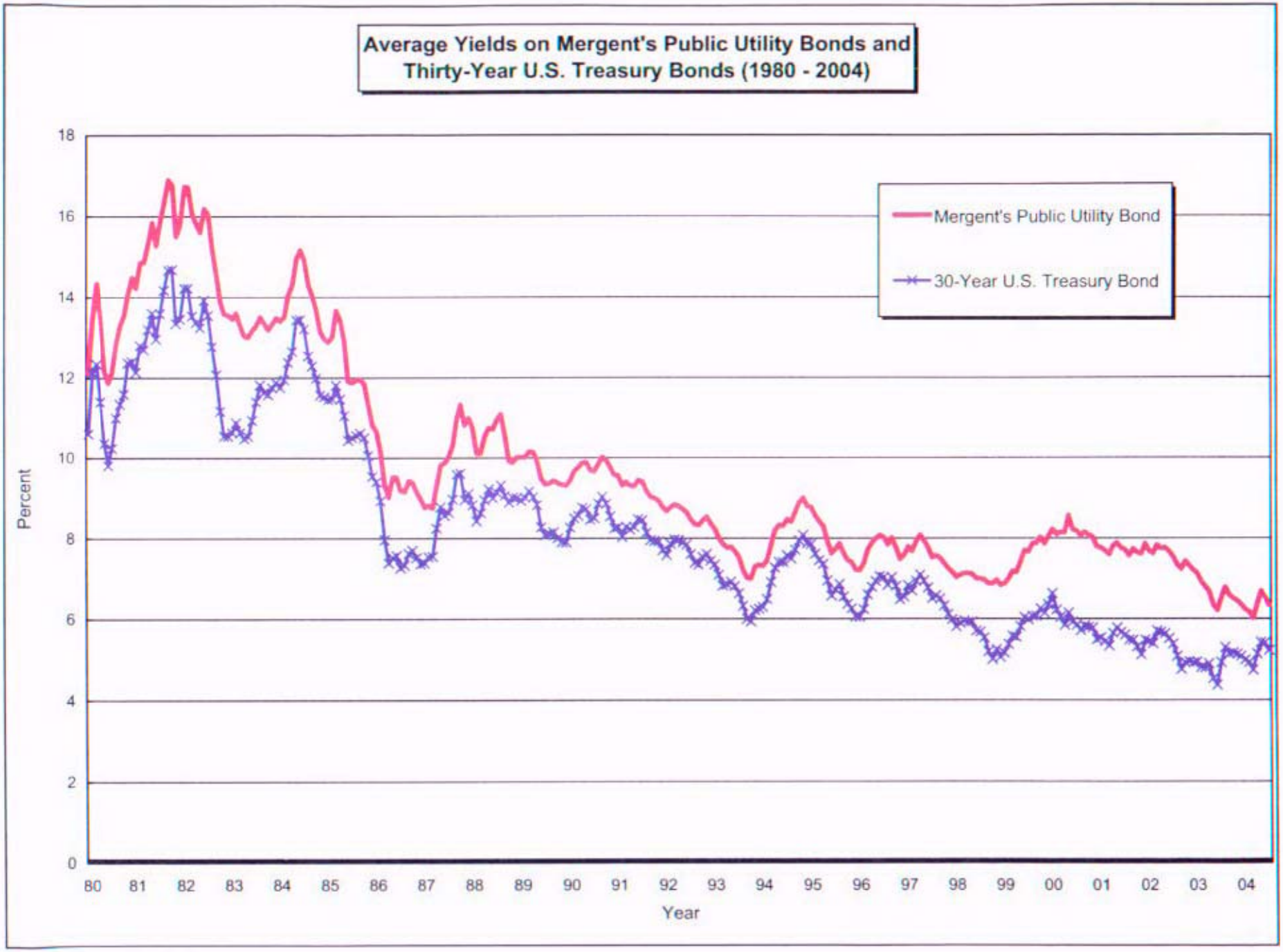
Source: Mergent Bond Record

Empire District Electric
Case No. ER-2004-0570

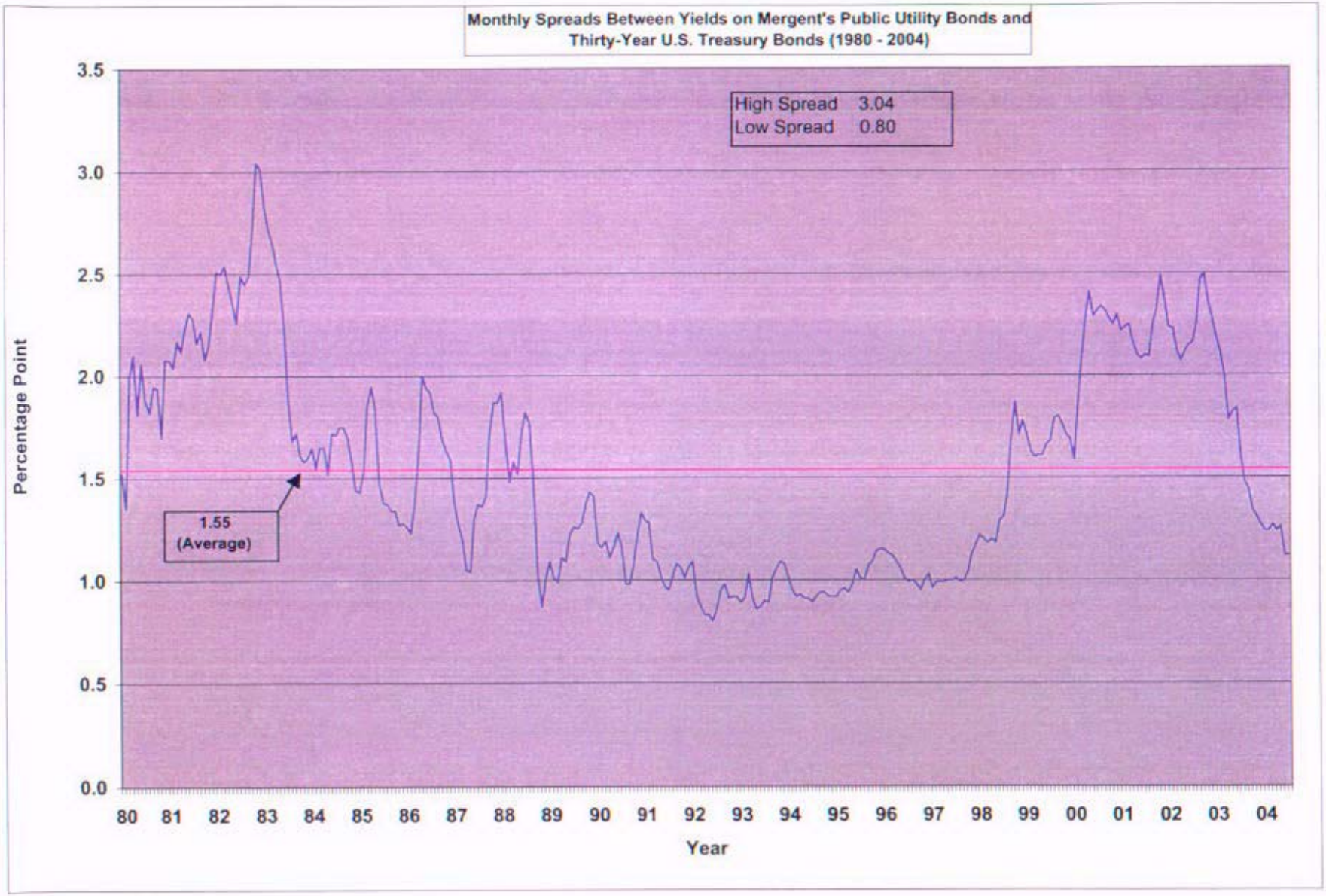
Average Yields on Thirty-Year U.S. Treasury Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	10.60	Jan 1984	11.75	Jan 1988	8.83	Jan 1992	7.58	Jan 1996	6.05	Jan 2000	6.63	Jan 2004	4.99
Feb	12.13	Feb	11.95	Feb	8.43	Feb	7.85	Feb	6.24	Feb	6.23	Feb	4.93
Mar	12.34	Mar	12.38	Mar	8.63	Mar	7.97	Mar	6.60	Mar	6.05	Mar	4.74
Apr	11.40	Apr	12.65	Apr	8.95	Apr	7.96	Apr	6.79	Apr	5.85	Apr	5.14
May	10.36	May	13.43	May	9.23	May	7.89	May	6.93	May	6.15	May	5.42
Jun	9.81	Jun	13.44	Jun	9.00	Jun	7.84	Jun	7.06	Jun	5.93	Jun	5.41
Jul	10.24	Jul	13.21	Jul	9.14	Jul	7.60	Jul	7.03	Jul	5.85	Jul	5.22
Aug	11.00	Aug	12.54	Aug	9.32	Aug	7.39	Aug	6.84	Aug	5.72	Aug	5.06
Sep	11.34	Sep	12.29	Sep	9.06	Sep	7.34	Sep	7.03	Sep	5.83		
Oct	11.59	Oct	11.98	Oct	8.89	Oct	7.53	Oct	6.81	Oct	5.80		
Nov	12.37	Nov	11.56	Nov	9.02	Nov	7.61	Nov	6.46	Nov	5.76		
Dec	12.40	Dec	11.52	Dec	9.01	Dec	7.44	Dec	6.55	Dec	5.49		
Jan 1981	12.14	Jan 1985	11.45	Jan 1989	8.93	Jan 1993	7.34	Jan 1997	6.83	Jan 2001	5.54		
Feb	12.80	Feb	11.47	Feb	9.01	Feb	7.09	Feb	6.69	Feb	5.45		
Mar	12.69	Mar	11.81	Mar	9.17	Mar	6.82	Mar	6.93	Mar	5.34		
Apr	13.20	Apr	11.47	Apr	9.03	Apr	6.85	Apr	7.09	Apr	5.65		
May	13.60	May	11.05	May	8.83	May	6.92	May	6.94	May	5.78		
Jun	12.96	Jun	10.44	Jun	8.27	Jun	6.81	Jun	6.77	Jun	5.67		
Jul	13.59	Jul	10.50	Jul	8.08	Jul	6.63	Jul	6.51	Jul	5.61		
Aug	14.17	Aug	10.56	Aug	8.12	Aug	6.32	Aug	6.58	Aug	5.48		
Sep	14.67	Sep	10.61	Sep	8.15	Sep	6.00	Sep	6.50	Sep	5.48		
Oct	14.68	Oct	10.50	Oct	8.00	Oct	5.94	Oct	6.33	Oct	5.32		
Nov	13.35	Nov	10.06	Nov	7.90	Nov	6.21	Nov	6.11	Nov	5.12		
Dec	13.45	Dec	9.54	Dec	7.90	Dec	6.25	Dec	5.99	Dec	5.48		
Jan 1982	14.22	Jan 1986	9.40	Jan 1990	8.26	Jan 1994	6.29	Jan 1998	5.81	Jan 2002	5.44		
Feb	14.22	Feb	8.93	Feb	8.50	Feb	6.49	Feb	5.89	Feb	5.39		
Mar	13.53	Mar	7.96	Mar	8.56	Mar	6.91	Mar	5.95	Mar	5.71		
Apr	13.37	Apr	7.39	Apr	8.76	Apr	7.27	Apr	5.92	Apr	5.67		
May	13.24	May	7.52	May	8.73	May	7.41	May	5.93	May	5.64		
Jun	13.92	Jun	7.57	Jun	8.46	Jun	7.40	Jun	5.70	Jun	5.52		
Jul	13.55	Jul	7.27	Jul	8.50	Jul	7.58	Jul	5.68	Jul	5.38		
Aug	12.77	Aug	7.33	Aug	8.86	Aug	7.49	Aug	5.54	Aug	5.08		
Sep	12.07	Sep	7.62	Sep	9.03	Sep	7.71	Sep	5.20	Sep	4.76		
Oct	11.17	Oct	7.70	Oct	8.86	Oct	7.94	Oct	5.01	Oct	4.93		
Nov	10.54	Nov	7.52	Nov	8.54	Nov	8.08	Nov	5.25	Nov	4.95		
Dec	10.54	Dec	7.37	Dec	8.24	Dec	7.87	Dec	5.06	Dec	4.92		
Jan 1983	10.63	Jan 1987	7.39	Jan 1991	8.27	Jan 1995	7.85	Jan 1999	5.16	Jan 2003	4.94		
Feb	10.88	Feb	7.54	Feb	8.03	Feb	7.61	Feb	5.37	Feb	4.81		
Mar	10.63	Mar	7.55	Mar	8.29	Mar	7.45	Mar	5.58	Mar	4.80		
Apr	10.48	Apr	8.25	Apr	8.21	Apr	7.36	Apr	5.55	Apr	4.90		
May	10.53	May	8.78	May	8.27	May	6.95	May	5.81	May	4.53		
Jun	10.93	Jun	8.57	Jun	8.47	Jun	6.57	Jun	6.04	Jun	4.37		
Jul	11.40	Jul	8.64	Jul	8.45	Jul	6.72	Jul	5.98	Jul	4.93		
Aug	11.82	Aug	8.97	Aug	8.14	Aug	6.86	Aug	6.07	Aug	5.30		
Sep	11.63	Sep	9.59	Sep	7.95	Sep	6.55	Sep	6.07	Sep	5.14		
Oct	11.58	Oct	9.61	Oct	7.93	Oct	6.37	Oct	6.26	Oct	5.16		
Nov	11.75	Nov	8.95	Nov	7.92	Nov	6.26	Nov	6.15	Nov	5.13		
Dec	11.88	Dec	9.12	Dec	7.70	Dec	6.06	Dec	6.35	Dec	5.08		

Sources: Federal Reserve, http://www.stls.frb.org/fred/data/irates/gs30
yahoo finance http://finance.yahoo.com/q/hp?s=^TYX


Average Yields on Mergent's Public Utility Bonds and Thirty-Year U.S. Treasury Bonds (1980 - 2004)
Mergent's Public Utility Bond
30-Year U.S. Treasury Bond
Percent
Year
0
2
4
6
8
10
12
14
16
18
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
02
03
04

SCHEDULE 5-3


Monthly Spreads Between Yields on Mergent's Public Utility Bonds and Thirty-Year U.S. Treasury Bonds (1980 - 2004)
High Spread 3.04
Low Spread 0.80
1.55 (Average)
Percentage Point
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
Year

SCHEDULE 5-4

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Economic Estimates and Projections, 2004-2006

	Inflation Rate			Real GDP			Unemployment			3-Mo. T-Bill Rate			Long-Term T-Bond Rate		
Source	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
Value Line Investment Survey (8/27/04)	3.3%	2.5%	2.2%	4.3%	3.5%	3.5%	5.6%	5.4%	5.4%	1.4%	2.4%	2.7%	5.3%	6.0%	6.0%
The Budget and Economic Outlook FY2005-2014 (1/26/04)	1.6%	1.7%	2.0%	4.8%	4.2%	3.2%	5.8%	5.3%	5.0%	1.3%	3.0%	4.0%	N.A.	N.A.	N.A.
Current rate	3.00%			2.80%			5.50%			1.33%			5.01%		

Notes: N.A. = Not Available

Sources of Current Rates:

Inflation:	The Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, 12-Month Period Ending July 31, 2004
3-Month Treasury:	Federal Reserve website, http://www.stls.frb.org/fred/data/irates.html, for July 2004
30-Yr T-Bond:	CBS MarketWatch at: http://cbs.marketwatch.com/tools/marketsummary/default.asp?tslied=mktw on September 7, 2004
GDP:	U.S. Department of Commerce, Bureau of Economic Analysis for the Quarter Ending June 30, 2004
Unemployment:	The Bureau of Labor Statistics, Economy at a Glance - Unemployment Rate, July 2004

Other Sources:

The Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2005-2014, January 26, 2004, as published on http://www.cbo.gov/showdoc.cfm?index=1824&sequence=0

SCHEDULE 6

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Historical Capital Structures for The Empire District Electric Company

Capital Components	1999	2000	2001	2002	2003
Common Equity	$234,188,018.0	$240,152,911.0	$268,307,971.0	$ 329,314,662.0	$ 378,824,831.0
Preferred Stock	0.0	0.0	50,000,000.0	$ 50,000,000.0	$ -
Long-Term Debt	345,850,169.0 *	345,643,766.0 *	346,273,007.0 *	$ 361,429,110.0 *	$ 411,027,316.0 *
Short-Term Debt	0.0	69,500,000.0	55,500,000.0	$ 22,541,000.0	$ 13,000,000.0
Total	$580,038,187.0	$655,296,677.0	$720,080,978.0	$763,284,772.0	$802,852,147.0

Capital Structure	1999	2000	2001	2002	2003
Common Equity	40.37%	36.65%	37.26%	43.14%	47.18%
Preferred Stock	0.00%	0.00%	6.94%	6.55%	0.00%
Long-Term Debt	59.63%	52.75%	48.09%	47.35%	51.20%
Short-Term Debt	0.00%	10.61%	7.71%	2.95%	1.62%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Note: $50 Million in preferred stock for 2001 and 2002 included as long-term debt for 2003 per FASB interpretation 46-1.
2002 long-term debt includes $236,872 of current maturities of long-term debt that was restated as current maturities of long-term debt in Empire's 2003 Annual Report.

Note: *Includes current maturities on long-term debt.

Source: The Empire District Electric Company's Annual Reports for 1999, 2000, 2001, 2002 and 2003.

SCHEDULE 7

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Selected Financial Ratios for The Empire District Electric Company

Financial Ratios	1999	2000	2001	2002	2003
Return on Common Equity	8.31%	9.83%	3.89%	8.55%	8.79%
Earnings Per Common Share	$1.13	$1.35	$0.59	$1.19	$1.29
Cash Dividends Per Common Share	$1.28	$1.28	$1.28	$1.28	$1.28
Common Dividend Payout Ratio	113.27%	94.81%	216.95%	107.56%	99.22%
Year-End Market Price Per Common Share	$22.625	$26.312	$21.000	$18.200	$21.930
Year-End Book Value Per Common Share	$13.44	$13.62	$13.64	$14.28	$15.17
Year-End Market-to-Book Ratio	1.68 x	1.93 x	1.54 x	1.27 x	1.45 x
Pre-Tax Interest Coverage Ratio	2.70 x	2.25 x	1.31 x	2.25 x	2.44 x
First Mortgage Bonds (Standard & Poor's Corporation)	A-	A-	A-	A-/BBB*	BBB

Notes:

Return on Common Equity = Net Income Available for Common Stock / Common Shareholders' Equity.

Common Dividend Payout Ratio = Common Dividends Paid / Net Income Available for Common Stock.

Year-End Market-to-Book Ratio = Year-End Market Price Per Common Share / Year-End Book Value Per Common Share.

Pre-Tax Interest Coverage Ratio = Net Income + Income Taxes + Total Interest Expense / Total Interest Expense.

*S&P downgraded Empire to BBB July 2, 2002.

Sources: The Empire District Electric Company's Annual Reports for 1999, 2000, 2001, 2002 and 2003.
Standard and Poor's Ratings Direct and Telescan Inc's Wall Street City as of August 30, 2004.

SCHEDULE 8

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Capital Structure as of June 30, 2004
for The Empire District Electric Company

Capital Component	Amount in Dollars		Percentage of Capital
Common Stock Equity	$375,740,070		49.14%
Preferred Stock	48,324,268	1	6.32%
Long-Term Debt	340,608,754	2	44.54%
Short-Term Debt	0	3	0.00%
Total Capitalization	**$764,673,092**		**100.00%**

Electric Financial Ratio Benchmark
Total Debt / Total Capital

Standard & Poor's Corporation's RatingsDirect, Revised Financial Guidelines as of June 2, 2004	BBB Credit Rating based on a "6" Business Profile
	48% to 58%

Note: 1. Preferred Stock at June 30, 2004 is based on total trust preferred outstanding in Empire's June 30, 2004 consolidated balance sheet less unamortized expense provided in Empire's updated response to DR 0335.
2. Long-term Debt at June 30, 2004 is based on the net balance of long-term debt (total principal amount of long-term debt outstanding less unamortized expenses and discounts) shown on Schedule 10. This net balance was provided in Empire's updated response to DR 0335.
3. Short-term debt balance is net of construction work in progress (CWIP) at June 30, 2004. The balance was not significant enough to effect the cost of capital and therefore, was not included.

Source: The Empire District Electric Company's original and updated response to Staff's Data Request Nos. 0334 and 0335.

SCHEDULE 9

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Embedded Cost of Long-Term Debt as of June 30, 2004
for The Empire District Electric Company

Long-Term Debt	(1) Interest Rate	(2) Principal Amount Outstanding (06/30/04)	(3) Annualized Cost to Company (1 * 2)	(4) Individual Embedded Cost	(5) Amount Used for Embedded Cost	(6) Weight	(7) Weighted Embedded Cost (4) * (6)
Empire's "Regulated" Debt Provided in the Updated Response to Staff Data Request 0335				7.23% 1	$337,427,748	99.07%	7.16%
Other Debt Empire Provided in a Supplemental Updated Response to Staff Data Request 0335							
Notes Payable Due November 1, 2007	6.500%	80,835	5,254				
Notes Payable Due February 1, 2008	6.500%	210,380	13,675				
Notes Payable Due February 1, 2009	6.000%	335,471	20,128				
Notes Payable Due July 17, 2007	6.130%	2,286,057	140,135				
Notes Payable Due February 1, 2008	7.000%	78,563	5,499				
Notes Payable Due February 1, 2008	7.000%	55,569	3,890				
Notes Payable Due February 1, 2008	7.000%	134,131	9,389	6.22% 2	3,181,006	0.93%	0.06%
Total		3,181,006	197,971		340,608,754	100.00%	**7.22%**

Notes 1. Embedded cost of debt was provided in Empire's original updated response to Staff Data Request 0335. Empire maintained that this was "regulated" debt.
2. Embedded cost of debt was based on the weighted average cost of the debt that Empire provided in a supplemental updated response to Staff Data Request 0335. Apparently Empire did not provide this initially because they did not consider this regulated debt.

SCHEDULE 10

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for The Empire District Electric Company

Historical Annual Compound Growth Rates

	DPS	EPS	BVPS
Ten Years	0.00%	-2.00%	1.50%
Five Years	0.00%	-5.50%	2.00%

	DPS	EPS	BVPS
Average of Historical Growth Rates:	0.00%	-3.75%	1.75%

Source: Value Line Investment Survey, July 2, 2004

SCHEDULE 11

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Historical and Projected Growth Rates
for The Empire District Electric Company

Historical Growth Rates

DPS 5-Year Annual Compound Growth	0.00%	
DPS 10-Year Annual Compound Growth	0.00%	
BVPS 5-Year Annual Compound Growth	2.00%	
BVPS 10-Year Annual Compound Growth	1.50%	
EPS 5-Year Annual Compound Growth	-5.50%	
EPS 10-Year Annual Compound Growth	-2.00%	
Average of Historical Growth Rates		-0.67%

Projected Growth Rates from Outside Sources

5-Year EPS Growth Forecast (Median) I/B/E/S Inc.'s Institutional Brokers Estimate System August 19, 2004	2.50%	
5-Year Projected EPS Growth Rate Standard & Poor's Corporation's Earnings Guide August 2004	3.00%	
5-year Projected EPS Growth Rate Value Line Investment Survey July 2, 2004	6.50%	
Average of Projected Growth Rates		4.00%
Average of Historical and Projected Growth Rates		1.67%

Proposed Range of Growth
for The Empire District Electric Company:

2.25% to 3.25%

SCHEDULE 12

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Monthly High / Low Average Dividend Yields for The Empire District Electric Company

Month / Year	(1) High Stock Price	(2) Low Stock Price	(3) Average High / Low Price	(4) Expected Dividend (2004)	(5) Projected Dividend Yield
February 2004	$ 23.480	$ 21.600	$22.540	$1.28	5.68%
March 2004	$ 23.250	$ 22.200	$22.725	$1.28	5.63%
April 2004	$ 22.990	$ 20.790	$21.890	$1.28	5.85%
May 2004	$ 21.050	$ 19.480	$20.265	$1.28	6.32%
June 2004	$ 20.450	$ 19.530	$19.990	$1.28	6.40%
July 2004	$ 20.650	$ 19.630	$20.140	$1.28	6.36%
Average					**6.04%**

Proposed Dividend Yield for The Empire District Electric Company: **6.04%**

Notes: Column 3 = [(Column 1 + Column 2) / 2]

Column 4 = Estimated Dividends Declared per share represents the average projected dividends for 2004/2005.

Column 5 = (Column 4 / Column 3)

Sources: Standard & Poor's Corporation's Security Owner's Stock Guides: March 2004, April 2004, May 2004, June 2004, July 2004 and August 2004
Value Line Investment Survey, July 2, 2004

SCHEDULE 13

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Discounted Cash Flow (DCF) Cost of Common Equity Estimates for The Empire District Electric Company

EDE's Cost of Common Equity	=	Dividend Yield	+	Expected Growth
8.29%	=	6.04%	+	2.25%
9.29%	=	6.04%	+	3.25%

Discounted Cash Flow (DCF) Model Derivation

Present Price = Expected Dividends Discounted by k + Present Price (1 + g) Discounted by k

where: g = estimated growth rate and k = cost of common equity.

Letting: P0 = present price and D1 = expected dividends, then

$$P0 = \frac{D1}{(1+k)} + \frac{P0\,(1+g)}{(1+k)} \quad \text{or}$$

$$k = \frac{D1}{P0} + g$$

Thus:

Cost of Common Equity = Dividend Yield + Expected Growth

Notes: See Schedule 13 for calculation of proposed dividend yield for The Empire District Electric Company.

See Schedule 12 for calculation of proposed range of growth for The Empire District Electric Company.

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Capital Asset Pricing Model (CAPM) Cost of Equity Estimates
The Empire District Electric Company

EDE's Cost of Common Equity	=	Risk Free Rate (August 2004)	+		EDE's Beta	*	Market Risk Premium (1926 - 2003)	
9.35%	=	5.06%	+	(	0.65	*	6.60%	)

EDE's Cost of Common Equity	=	Risk Free Rate (August 2004)	+		EDE's Beta	*	Market Risk Premium (1994 - 2003)	
7.04%	=	5.06%	+	(	0.65	*	3.05%	)

Capital Asset Pricing Model

The capital asset pricing model (CAPM) describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

Cost of Common Equity = Risk-Free Rate + [Beta * Market Risk Premium]

where:

The Risk-Free Rate reflects the level of return which can be achieved without accepting any risk. The Risk-Free Rate is represented by the yield on 30-Year U.S. Treasury Bonds. The approriate rate was determined to be the average 30-year yield for August 2004 of 5.06% as calculated from Yahoo!Finance's Investopedia website at http://www.investopedia.com/offsite.asp?URL=http://quote.yahoo.com/q?s=%5ETYX&d=1y.

The Beta represents the relative movement and relative risk between a particular stock and the market. The approriate Beta for EDE was determined to be 0.65 as published in The Value Line Investment Survey: Ratings & Reports, July 2, 2004.

The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk-free investment. The approriate long-term Market Risk Premium was determined to be 6.60% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2004 Yearbook (SBBI 2004 Yearbook) for the period 1926 - 2003. The appropriate short-term Market Risk Premium was determined to be 3.05% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2004 Yearbook for the period 1994 - 2003.

The long-term Market Risk Premium is from Table 2-1, p. 33 of SBBI 2004 Yearbook, the arithmetic mean of large capital stocks less long-term government bonds.
The short-term Market Risk Premium is from Table 2-9, p. 45 of SBBI 2004 Yearbook, large capital stocks less long-term government bonds.

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Average Risk Premium above the Yields of 30-Year U.S. Treasury Bonds for The Empire District Electric Company's Expected Returns on Common Equity

Mo/Year	EDE's Expected ROE	30-Year U.S. Treasury Bond Yields	EDE's Risk Premium
Jan 1994	10.00%	6.29%	3.71%
Feb	10.00%	6.49%	3.51%
Mar	10.00%	6.91%	3.09%
Apr	10.00%	7.27%	2.73%
May	10.00%	7.41%	2.59%
Jun	10.00%	7.40%	2.60%
Jul	9.50%	7.58%	1.92%
Aug	9.50%	7.49%	2.01%
Sep	9.50%	7.71%	1.79%
Oct	10.00%	7.94%	2.06%
Nov	10.00%	8.08%	1.92%
Dec	10.00%	7.87%	2.13%
Jan 1995	10.50%	7.85%	2.65%
Feb	10.50%	7.61%	2.89%
Mar	10.50%	7.45%	3.05%
Apr	10.50%	7.36%	3.14%
May	10.50%	6.95%	3.55%
Jun	10.50%	6.57%	3.93%
Jul	10.50%	6.72%	3.78%
Aug	10.50%	6.86%	3.64%
Sep	10.50%	6.55%	3.95%
Oct	10.50%	6.37%	4.13%
Nov	10.50%	6.26%	4.24%
Dec	10.50%	6.06%	4.44%
Jan 1996	10.50%	6.05%	4.45%
Feb	10.50%	6.24%	4.26%
Mar	10.50%	6.60%	3.90%
Apr	10.50%	6.79%	3.71%
May	10.50%	6.93%	3.57%
Jun	10.50%	7.06%	3.44%
Jul	10.50%	7.03%	3.47%
Aug	10.50%	6.84%	3.66%
Sep	10.50%	7.03%	3.47%
Oct	9.00%	6.81%	2.19%
Nov	9.00%	6.48%	2.52%
Dec	10.50%	6.55%	3.95%
Jan 1997	10.50%	6.83%	3.67%
Feb	10.50%	6.69%	3.81%
Mar	10.50%	6.93%	3.57%
Apr	10.50%	7.09%	3.41%
May	10.50%	6.94%	3.56%
Jun	10.50%	6.77%	3.73%
Jul	10.50%	6.51%	3.99%
Aug	10.50%	6.58%	3.92%
Sep	10.50%	6.50%	4.00%
Oct	10.50%	6.33%	4.17%
Nov	10.50%	6.11%	4.39%
Dec	10.50%	5.99%	4.51%
Jan 1998	11.50%	5.81%	5.69%
Feb	11.50%	5.89%	5.61%
Mar	11.50%	5.95%	5.55%
Apr	12.00%	5.92%	6.08%
May	12.00%	5.93%	6.07%
Jun	12.00%	5.70%	6.30%
Jul	11.50%	5.68%	5.82%
Aug	11.50%	5.54%	5.96%
Sep	11.50%	5.20%	6.30%
Oct	10.50%	5.01%	5.49%
Nov	10.50%	5.25%	5.25%
Dec	10.50%	5.06%	5.44%

Mo/Year	EDE's Expected ROE	30-Year U.S. Treasury Bond Yields	EDE's Risk Premium
Jan 1999	12.50%	5.16%	7.34%
Feb	12.50%	5.37%	7.13%
Mar	12.50%	5.58%	6.92%
Apr	12.50%	5.55%	6.95%
May	12.50%	5.81%	6.69%
Jun	12.50%	6.04%	6.46%
Jul	11.50%	5.98%	5.52%
Aug	11.50%	6.07%	5.43%
Sep	11.50%	6.07%	5.43%
Oct	11.50%	6.26%	5.24%
Nov	11.50%	6.15%	5.35%
Dec	11.50%	6.35%	5.15%
Jan 2000	11.00%	6.63%	4.37%
Feb	11.00%	6.23%	4.77%
Mar	11.00%	6.05%	4.95%
Apr	12.00%	5.85%	6.15%
May	12.00%	6.15%	5.85%
Jun	12.00%	5.93%	6.07%
Jul	11.00%	5.85%	5.15%
Aug	11.00%	5.72%	5.28%
Sep	11.00%	5.83%	5.17%
Oct	11.00%	5.80%	5.20%
Nov	11.00%	5.78%	5.22%
Dec	11.00%	5.49%	5.51%
Jan 2001	12.00%	5.54%	6.46%
Feb	12.00%	5.45%	6.55%
Mar	12.00%	5.34%	6.66%
Apr	9.00%	5.65%	3.35%
May	9.00%	5.78%	3.22%
Jun	9.00%	5.67%	3.33%
Jul	7.50%	5.61%	1.89%
Aug	7.50%	5.48%	2.02%
Sep	7.50%	5.49%	2.01%
Oct	5.50%	5.31%	0.19%
Nov	5.50%	5.11%	0.39%
Dec	5.50%	5.48%	0.02%
Jan 2002	10.00%	5.44%	4.56%
Feb	10.00%	5.39%	4.61%
Mar	10.00%	5.71%	4.29%
Apr	8.50%	5.67%	2.83%
May	8.50%	5.64%	2.86%
Jun	8.50%	5.52%	2.98%
Jul	8.50%	5.39%	3.11%
Aug	8.50%	5.08%	3.42%
Sep	8.50%	4.76%	3.74%
Oct	8.00%	4.93%	3.07%
Nov	8.00%	4.95%	3.05%
Dec	8.00%	4.92%	3.08%
Jan 2003	10.00%	4.94%	5.06%
Feb	10.00%	4.81%	5.19%
Mar	10.00%	4.80%	5.20%
Apr	10.00%	4.90%	5.10%
May	10.00%	4.53%	5.47%
Jun	10.00%	4.37%	5.63%
Jul	10.50%	4.93%	5.57%
Aug	10.50%	5.30%	5.20%
Sep	10.50%	5.14%	5.36%
Oct	10.00%	5.16%	4.84%
Nov	10.00%	5.13%	4.87%
Dec	10.00%	5.08%	4.92%
Jan 2004	8.50%	4.99%	3.51%
Feb	8.50%	4.93%	3.57%
Mar	8.50%	4.74%	3.76%
Apr	9.00%	5.14%	3.86%
May	9.00%	5.43%	3.57%
Jun	9.00%	5.41%	3.59%
Jul	6.00%	5.22%	0.78%
Aug	6.00%	5.06%	0.94%

Summary Information	(1994 - 2004)
Average Risk Premium: (Jan 1994 - Aug 2004)	4.17%
High Risk Premium: (January 1999)	7.34%
Low Risk Premium: (December 2001)	0.02%

Sources: The Value Line Investment Survey: Ratings & Reports
St. Louis Federal Reserve Website: http://www.stls.frb.org/fred/data/ratesvgs.30
Yahoo!Finance's investcorelia web site at
http://www.investcorelia.com/offsite.asp?URL=http://quote.yahoo.com/c?s=%5ETYX&d=1y

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Risk Premium Cost of Equity Estimates for The Empire District Electric Company

EDE's Cost of Common Equity	=	30-Year U.S. Treasury Bond Yield (August 2004)	+	Equity Risk Premium (Jan 1994 – Aug 2004)
9.23%	=	5.06%	+	4.17%

Risk Premium Approach

The risk premium approach is based upon the proposition that common stocks are more risky than debt and, as a result, investors require a higher expected return on stocks than bonds. In this approach, the cost of common equity is computed by the following formula:

Cost of Common Equity = Current Cost of Debt + Equity Risk Premium

where:

The Current Cost of Debt is represented by the yield on the 30-Year U.S. Treasury Bond. The appropriate rate was determined by using the average yield on 30-Year U.S. Treasury Bonds for August 2004 as calculated from Yahoo!Finance's Investopedia website at: http://www.investopedia.com/offsite.asp?URL=http://quote.yahoo.com/q?s=%5ETYX&d=1y

The Equity Risk Premium represents the difference between EDE's expected return on common equity (ROE) as projected in the Value Line Investment Survey and the 30-Year U.S. Treasury Bond Yield as stated on the Federal Reserve web site, http://www.stls.frb.org/fred/data/irates/gs30 and Yahoo!Finance's Investopedia website, http://www.investopedia.com/offsite.asp?URL=http://quote.yahoo.com/q?s=%5ETYX&d=1y. The appropriate Equity Risk Premium was determined to be the average risk premium for the period January 1994 through August 2004. See Schedule 16 for the calculation of the Equity Risk Premium of 4.17%.

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Pro Forma Pre-Tax Interest Coverage Ratios for The Empire District Electric Company

	8.29%	8.79%	9.29%
1. Common Equity (Schedule 9)	$375,740,070	$375,740,070	$375,740,070
2. Earnings Allowed (ROE * [1])	$31,144,968	$33,023,668	$34,902,368
3. Preferred Dividends	$0	$0	$0
4. Net Income Available ([2] + [3])	$31,144,968	$33,023,668	$34,902,368
5. Tax Multiplier (1 / { 1 - Tax Rate })	1.6231	1.6231	1.6231
6. Pre-Tax Earnings ([4] * [5])	$50,550,682	$53,599,957	$56,649,233
7. Annual Interest Costs* (Updated Response to DR 0335)	$26,792,946	$26,792,946	$26,792,946
8. Avail. for Coverage ([6] + [7])	$77,343,628	$80,392,904	$83,442,179
9. **Pro Forma Pre-Tax Interest Coverage** ([8] / [7])	**2.89 x**	**3.00 x**	**3.11 x**

Integrated Electric Utility Average Pre-tax Interest Coverage for BBB-Rated Companies for Last Three Years

Standard & Poor's Corporation's CreditStats: Electric Utilities--Integrated August 20, 2004	Mean **BBB**
	2.81

* Interest expense includes interest paid on trust preferred series.

SCHEDULE 18

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Criteria for Selecting Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5a)	(6)	(7)	(8)
	Electric Utility Companies	Stock Publicly Traded	Information Printed In Value Line	10 Years of DPS, BVPS & EPS Available	> 75 % Of Revenues from Electric	Total Capitalization >$1 Billion	No Nuclear Operations	No Missouri Operations	Comparable Company Met All Criteria
1	Allegheny Energy	Yes	Yes	Yes	Yes	No			
2	ALLETE	Yes	Yes	Yes	No				
3	Alliant Energy	Yes	Yes	Yes	No				
4	Amer. Elec. Power	Yes	Yes	Yes	Yes	No			
5	Ameren Corp.	Yes	Yes	Yes	Yes	No			
6	Aquila, Inc.	Yes	Yes	Yes	No				
7	Avista Corp.	Yes	Yes	Yes	No				
8	BayCorp Holdings Limited	Yes	Yes	No					
9	Black Hills	Yes	Yes	Yes	No				
10	Cent. Vermont Pub. Serv.	Yes	Yes	Yes	Yes	Yes	No		
11	CenterPoint Energy	Yes	Yes	No					
12	CH Energy Group	Yes	Yes	Yes	No				
13	Cinergy Corp.	Yes	Yes	Yes	Yes	No			
14	**Cleco Corp.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
15	CMS Energy Corp.	Yes	Yes	Yes	No				
16	Consol. Edison	Yes	Yes	Yes	Yes	No			
17	Constellation Energy	Yes	Yes	Yes	No				
18	Dominion Resources	Yes	Yes	Yes	No				
19	**DPL Inc.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
20	DTE Energy	Yes	Yes	Yes	No				
21	Duke Energy	Yes	Yes	No					
22	**Duquesne Light Hldgs.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
23	Edison International	Yes	Yes	Yes	Yes	No			
24	El Paso Electric	Yes	Yes	No					
25	Energy East Corp.	Yes	Yes	Yes	No				
26	Entergy Corp.	Yes	Yes	No					
27	Exelon Corp.	Yes	Yes	No					
28	FirstEnergy Corp.	Yes	Yes	No					
29	Florida Public Utilities	Yes	Yes	Yes	No				
30	Fortis Inc.	Yes	No						
31	FPL Group	Yes	Yes	Yes	Yes	No			
32	Great Plains Energy	Yes	Yes	Yes	No				
33	Green Mountain Power	Yes	Yes	Yes	Yes	Yes	No		
34	**Hawaiian Electric**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
35	**IDACORP, Inc.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
36	ITC Hldg.	Yes	Yes	No					
37	**Maine & Maritimes Corp.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
38	MDU Resources	Yes	Yes	Yes	No				
39	MGE Energy	Yes	Yes	Yes	No				
40	NewPower Holdings Inc.	Yes	No						
41	NiSource Inc.	Yes	Yes	Yes	No				
42	Northeast Utilities	Yes	Yes	Yes	No				
43	NorthWestern Corp.	Yes	No						
44	**NSTAR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
45	OGE Energy	Yes	Yes	Yes	No				
46	Otter Tail Corp.	Yes	Yes	Yes	No				
47	Pepco Holdings	Yes	Yes	No					
48	PG&E Corp.	Yes	Yes	Yes	Yes	No			
49	Pinnacle West Capital	Yes	Yes	Yes	No				
50	PNM Resources	Yes	Yes	Yes	Yes	Yes	No		
51	PPL Corp.	Yes	Yes	Yes	No				
52	Progress Energy	Yes	Yes	Yes	No				
53	Public Serv. Enterprise	Yes	Yes	Yes	No				
54	Puget Energy Inc.	Yes	Yes	Yes	No				
55	SCANA Corp.	Yes	Yes	Yes	No				
56	Sempra Energy	Yes	Yes	Yes	No				
57	Sierra Pacific Res.	Yes	Yes	No					
58	Southern Co.	Yes	Yes	No					
59	TECO Energy	Yes	Yes	Yes	No				
60	TXU Corp.	Yes	Yes	Yes	No				
61	U.S. Energy Sys Inc.	Yes	No						
62	UIL Holdings	Yes	Yes	Yes	No				
63	**UniSource Energy**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
64	**UNITIL Corp.**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
65	Vectren Corp.	Yes	Yes	No					
66	Westar Energy	Yes	Yes	Yes	Yes	Yes	No		
67	Wisconsin Capital Management	Yes	No						
68	Wisconsin Energy	Yes	Yes	Yes	No				
69	WPS Resources	Yes	Yes	Yes	No				
70	Xcel Energy Inc.	Yes	Yes	Yes	Yes	No			

Sources: Columns 1, 2, 3, 5 and 6 - The Value Line Investment Survey - Ratings & Reports, June 4, 2004, July 2, 2004 and August 13, 2004
Column 4 - C.A. Turner Utility Reports, August 2004

SCHEDULE 19

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Four Comparable Electric Utility Companies

Number	Ticker Symbol	Company Name
1	DPL	DPL Inc.
2	DQE	Duquesne Light
3	HE	Hawaiian Electric
4	NST	NSTAR

Notes: -Removed UNITIL Corp. and Maine & Maritimes Corp because of lack of projected information in Value Line.
-Removed UniSource Energy because it is the subject of an acquisition.
-Removed Cleco Corporation and IDACORP, Inc. because of lack of projected growth information from I/B/E/S and Standard & Poor's.

SCHEDULE 20

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Four Comparable Electric Utility Companies

	10-Year Annual Compound Growth Rates			
Company Name	DPS	EPS	BVPS	Average of 10 Year Annual Compound Growth Rates
DPL Inc	3.00%	4.00%	-0.50%	2.17%
Duquesne Light	2.50%	-7.00%	-6.50%	-3.67%
Hawaiian Electric	1.00%	2.50%	2.00%	1.83%
NSTAR	2.50%	5.00%	3.00%	3.50%
Average	**2.25%**	**1.13%**	**-0.50%**	**0.96%**
Standard Deviation	0.75%	4.77%	3.69%	3.06%

Source: The Value Line Investment Survey: Ratings & Reports, July 2, 2004, August 13, 2004 and September 3, 2004

SCHEDULE 21

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Historical and Projected Growth Rates for the Four Comparable Electric Utility Companies

Company Name	(1) Average 10-Year Annual Compound	(2) Projected 5-Year Growth IBES (Median)	(3) Projected 5-Year EPS Growth (S&P)	(4) Projected 3-5 Year EPS Growth Value Line	(5) Average Projected Growth	(6) Average of Historical & Projected Growth
DPL Inc.	2.17%	4.00%	4.00%	0.50%	2.83%	2.50%
Duquesne Light	-3.67%	4.00%	4.00%	11.00%	6.33%	1.33%
Hawaiian Electric	1.83%	2.75%	3.00%	1.50%	2.42%	2.13%
NSTAR	3.50%	5.00%	4.00%	3.00%	4.00%	3.75%
Average	**0.96%**	**3.94%**	**3.75%**	**4.00%**	**3.90%**	**2.43%**

Proposed Range of Growth **2.45% - 3.90%**

Notes: Column 5 = [(Column 2 + Column 3 + Column 4) / 3].

Column 6 = [(Column 1 + Column 5) / 2].

Sources: Column 1 = Average of 10-Year Annual Compound Growth Rates from Schedule 21.

Column 2 = I/B/E/S Inc.'s Institutional Brokers Estimate System, August 19, 2004.

Column 3 = Standard & Poor's Corporation's Earnings Guide, August 2004.

Column 4 = Value Line's Investment Survey, July 2, 2004, August 13, 2004 and September 3, 2004.

SCHEDULE 22

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Average High / Low Stock Price for April 2004 through July 2004 for the Four Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	April 2004		May 2004		June 2004		July 2004		Average High/Low Stock Price
Company Name	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	(April 2004 - July 200
DPL Inc.	$19.000	$17.530	$20.100	$16.440	$19.560	$18.770	$20.170	$18.980	$18.819
Duquesne Light	$19.950	$17.970	$19.600	$17.640	$19.790	$18.770	$19.740	$18.390	$18.981
Hawaiian Electric	$52.350	$48.590	$50.600	$45.930	$26.280	$24.230	$26.740	$25.200	$37.490
NSTAR	$51.300	$47.280	$48.980	$45.300	$48.600	$16.600	$47.970	$46.010	$44.005

Notes:

Column 9 = [(Column 1 + Column 2 + Column 3 + Column 4 + Column 5 + Column 6 + Column 7 + Column 8) / 8]

Sources: Standard & Poor's Corporation's Security Owner's Stock Guide: August 2004, July 2004, June 2004 and May 2004

SCHEDULE 23

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

DCF Estimated Costs of Common Equity for the Four Comparable Electric Utility Companies

Company Name	(1) Expected Annual Dividend (2004)	(2) Average High/Low Stock Price	(3) Projected Dividend Yield	(4) Average Projected Growth Rate	(5) Estimated Cost of Common Equity
DPL Inc.	$0.970	$18.819	5.15%	2.83%	7.99%
Duquesne Light	$1.000	$18.981	5.27%	6.33%	11.60%
Hawaiian Electric	$1.240	$37.490	3.31%	2.42%	5.72%
NSTAR	$2.270	$44.005	5.16%	4.00%	9.16%
Average			**4.72%**	**3.90%**	**8.62%**

Proposed Dividend Yield	**4.72%**
Proposed Range of Growth	**2.45 - 3.90%**
Estimated Cost of Equity	**7.17 - 8.62%**

Notes: Column 1 = Estimated Dividends Declared per share represents the average projected dividends for 2004 and 2005.

Column 3 = (Column 1 / Column 2)

Column 5 = (Column 3 + Column 4).

Sources: Column 1 = The Value Line Investment Survey: Ratings & Reports, July 2, 2004, August 13, 2004 and September 3, 2004.

Column 2 = Schedule 23.

Column 4 = Schedule 22.

SCHEDULE 24

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Capital Asset Pricing Model (CAPM) Cost of Common Equity Estimates for the Four Comparable Electric Utility Companies

Company Name	(1) Risk-Free Rate	(2) Beta	(3) Market Risk Premium (1926-2003)	(4) Market Risk Premium (1994-2003)	(5) CAPM Cost of Common Equity (1926-2003)	(6) CAPM Cost of Common Equity (1994-2003)
DPL Inc.	5.06%	0.90	6.60%	3.05%	11.00%	7.81%
Duquesne Light	5.06%	0.75	6.60%	3.05%	10.01%	7.35%
Hawaiian Electric	5.06%	0.65	6.60%	3.05%	9.35%	7.04%
NSTAR	5.06%	0.70	6.60%	3.05%	9.68%	7.20%
Average		**0.75**			**10.01%**	**7.35%**

Notes: Column 5 = [Column 1 + (Column 2 * Column 3)]

Column 6 = [Column 1 + (Column 2 * Column 4)]

Sources: Column 1 = The Risk-Free Rate reflects the level of return which can be achieved without accepting any risk. The Risk-Free Rate is represented by the average yield on 30-Year U.S. Treasury Bonds for the month of August 2004 which was obtained from YahooFinance's Investopedia website at:. http://www.investopedia.com/offsite.asp?URL=http://quote.yahoo.com/q?s=%5ETYX&d=1y.

Column 2 = The Beta represents the relative movement and relative risk between a particular stock and the market. The approriate Betas were taken from The Value Line Investment Survey, July 2, 2004, August 13, 2004 and September 3, 2004.

Column 3 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk-free investment. The approriate Market Risk Premium for the period 1926-2003 was determined to be 6.60% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2004 Yearbook

Column 4 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk-free investment. The approriate Market Risk Premium for the period 1994-2003 was determined to be 3.05% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2004 Yearbook

SCHEDULE 25

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Selected Financial Ratios for the Four Comparable Electric Utility Companies

Company Name	(1) Year 2003 Common Equity to Total Capital Ratio	(2) Year 2003 Long-Term Debt Ratio	(3) Pre-Tax Interest Coverage Ratio	(4) Market-to-Book Value	(5) 2004 Projected Return on Common Equity	(6) Bond Rating
DPL Inc.	24.70%	74.60%	2.70 x	2.56 x	16.50%	BBB-
DQE, Inc.	35.40%	60.20%	2.40 x	2.42 x	14.50%	BBB+
Hawaiian Electric	49.80%	48.60%	3.30 x	1.66 x	9.00%	BBB
NSTAR	40.20%	58.50%	3.00 x	1.77 x	13.00%	A
Average	**37.53%**	**60.48%**	**2.85 x**	**2.10 x**	**13.25%**	**BBB+**
The Empire District Electric Company	**48.00%**	**52.00%**	**2.40 x**	**1.40 x**	**6.00%**	BBB

Sources: The Value Line Investment Survey: Ratings and Reports, July 2, 2004, August 13, 2004 and September 3, 2004 for columns (1), (2), (3) and (5).
C.A. Turner Utility Reports, August 2004 for columns (4) and (6).

SCHEDULE 26

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Public Utility Revenue Requirement

or

Cost of Service

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

Equation 1 : **Revenue Requirement = Cost of Service**

or

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

The symbols in the second equation are represented by the following factors :

R R	=	Revenue Requirement
O	=	Prudent Operating Costs, including Depreciation and Taxes
V	=	Gross Valuation of the Property Serving the Public
D	=	Accumulated Depreciation
(V - D)	=	Rate Base (Net Valuation)
(V - D) R	=	Return Amount ($$) or Earnings Allowed on Rate Base
R	=	i L + d P + k E or Overall Rate of Return (%)
i	=	Embedded Cost of Debt
L	=	Proportion of Debt in the Capital Structure
d	=	Embedded Cost of Preferred Stock
P	=	Proportion of Preferred Stock in the Capital Structure
k	=	Required Return on Common Equity (ROE)
E	=	Proportion of Common Equity in the Capital Structure

SCHEDULE 27

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

Weighted Cost of Capital as of June 30, 2004 for The Empire District Electric Company

Capital Component	Percentage of Capital	Embedded Cost	Weighted Cost of Capital Using Common Equity Return of: 8.29%	8.79%	9.29%
Common Stock Equity	49.14%	-----	4.07%	4.32%	4.56%
Preferred Stock	6.32%	8.92%	0.56%	0.56%	0.56%
Long-Term Debt	44.54%	7.22%	3.22%	3.22%	3.22%
Short-Term Debt	0.00%		0.00%	0.00%	0.00%
Total	**100.00%**		**7.85%**	**8.10%**	**8.34%**

Notes:

See Schedule 9 for the Capital Structure Ratios.

Embedded Cost of Long-Term Debt Taken from Schedule 10.

Embedded Cost of Preferred Stock Obtained from Updated Response to DR 0335.

SCHEDULE 28