Q. Okay. Well, there is -- we can agree, I think, from your testimony that in this case you did not average these three sets of results to come up with one particular --

A. No. I did not weight the other two outputs at all.

Q. Okay.

And so a different way of doing this would be to take these results and add them up and divide by three, which would just be a straight average?

A. A straight average.

Q. In addition, you could average these by giving each one of these numbers a different weight --

A. That's correct.

Q. -- so they'd have more significance in --

A. That's correct.

Q. And have you ever used that approach?

A. Yes.

Q. And where would that be?

A. In doing the estimates for the report that Staff filed on the EARP, January, February.

Q. Now, why did you do that?

A. Like I said, to give the company the benefit of the doubt of the higher numbers.

Q. On what do you base your judgment that doing

that produces higher numbers for the company?

A. Well, any time you weight a higher number, you're going to incrementally move the overall average up.

Q. What if you weight the lower number, though; then you move the incremental average down. True?

A. Well, if you start with the DCF model and it's the lower number, that would be the result you would use. And anything that you would weight that is higher than that would bring the overall result up.

Q. So any averaging in that situation would bring the result up if the other numbers were higher?

A. If the other numbers were higher.

Q. Now, let's turn to Schedule 20.

Now, I want to talk a little bit about the sample companies that you worked with to develop the comparables that you used in this case.

First of all, on Schedule 20 there is a list of utilities in the left-hand side of this chart. And how did you select those?

A. We subscribed to Value Line, and it's provided to us on a monthly basis on diskette. And it has the capability with filters to enter different criteria into it, and it will filter through the database and produce company names based on the criteria. And that's how I did it.

And what were the criteria that you used here?

A. There at the top of it, across the top.

Q. Okay. Now, if I recall -- does that total capital, the fourth criteria there --

A. Yes.

Q. -- does that refer to large cap stocks?

A. That's the way it comes out of the database in Value Line. Those would be included in large cap.

Q. And that was the criteria that you were looking, just to use large cap, and I think --

A. I used all of these criteria.

Q. But one of the filters, as you said --

A. One of them, yeah.

Q. -- was to exclude everything that was not a large cap stock. Correct?

A. No. The filter was 5 billion to 6 billion.

Q. Well, if you'd turn to page 27 of your testimony, on lines 14 to 15 you said, quote, Therefore, I searched the Value Line database for large cap electric utility companies, close quote?

A. Okay.

Q. So that's why I have it in my head that you were looking for large cap.

A. Well, you were saying the criteria as referring to what I put into the filter. So --

Q. True.

But the bottom-line criteria in your mind analytically was large cap stock?

For purposes of the Value Line filter, you had to put it in that way?

A. Yes.

Q. And now with respect to -- if I recall from your testimony here -- in fact, the sentence right before the one I read, to answer my next question, and what I'd like to know, is if there is any other thing.

Value Line characterizes Ameren as a large cap stock. So that's the genesis of that criteria?

A. Yes.

Q. Okay. On Schedule 23, could you briefly explain how you calculated the comparable companies growth rates for DCF?

A. I averaged the five-year growth out of I/B/E/S, Standard & Poors and Value Line, and then averaged that with the average ten-year annual compound historical.

Q. Okay. Now, as we were talking about before, a significant event that was going to occur in the future that hasn't occurred in the past would be quite relevant to your estimation of a future growth rate.

Would that be fair?

A. [redacted] you knew it was going to happen. But if you

don't know a future event is going to happen, I don't see how you can incorporate it into your estimation of what the future is going to hold.

Q. Well, in the -- once again, in Exhibit 2, on Document 005-00032, with respect to Cinergy, and the highlighted portion right up there, identifies that retail competition began in Ohio on January 1st of 2001.

A. Okay.

Q. In your view is that not a significant event that is likely to affect future growth rates?

A. It could.

Q. Do you have any opinion of whether it will?

A. It may or it may not.

I mean, if this is a marketplace for Cinergy, certainly if there is more competition, then it could. If Cinergy happens to be a dominant low-cost provider, they may have higher growth because they'll capture market share.

Q. Well, in the context of this DCF calculation, you are in the process of calculating a future growth rate for Cinergy. Correct?

A. Yes.

Q. And what you just posed is essentially a reiteration of my question, much more elaborately done and sophisticatedly done, but you just posed the question, if

there was this event that occurred, that may or may not affect future growth rates.

Is it your view that in doing this calculation of future growth rates, you don't have to answer the very question you just posed?

A. If I use Value Line's estimates or somebody else's estimates, I would assume that they're incorporating in their estimation of future growth if they're commenting on it.

Q. Okay.

A. So --

Q. If I could borrow it back.

Now, in the -- if I understand -- in calculating the growth of your comparable companies on Schedule 23, how far back did you go in looking at the historical growth rates?

A. It says in Column 1, ten year.

Q. Okay. Now, you just a second ago pointed out that you take the judgments that Value Line would make about, in the example we were talking about, the impact of retail electric competition in terms of reporting their numbers.

Am I understanding you correct on that, correctly?

A. I would assume that if Value Line is commenting

on anything that is happening with a company, they have taken that into consideration in their projections.

Q. Okay. Now, Value Line also notes -- and I'll pass this to you in a second -- that Cinergy was formed on October 29th -- 24th -- excuse me -- 1994 through the merger of Cincinnati Gas & Electric and PSI Resources, and then it goes down to say that pre-merger data are for figures for Cincinnati Gas & Electric only and are not comparable to Cinergy data. That's up there.

So that Value Line is representing that those numbers before 1994 are not comparable to the ones afterwards.

A. Okay.

Q. And did you make any distinction between the pre '94 numbers and post '94 numbers in light of that representation from Value Line?

A. No.

Q. Now, why would you assume and follow Value Line's judgment concerning the impact of retail competition being introduced in Ohio, yet not follow Value Line's warning that the data is not comparable with respect to those rates for Cinergy?

A. Well, I wouldn't construe this as a warning from Value Line. And I would consider that Value Line has taken this into consideration when they've made their

projections.

Q. When Value Line says that that data is not comparable, what do you understand Value Line to be saying?

A. That the data is for Cincinnati Gas & Electric and not for Cinergy --

Q. And --

A. -- on those dates.

Q. And Cincinnati Gas & Electric is a different company from Cinergy. Correct?

A. Yes.

Q. And earlier this afternoon, or this morning -- I forget when it was -- you corrected me when I was comparing rates from different companies, because you said that is important to keep different companies separate, they have different attributes and so forth.

So I'm a little confused.

Wouldn't the data for Cincinnati Gas & Electric be something that you'd want to keep separate from the data for Cinergy, being two different companies?

A. It's not two different companies in the same sense that I was referring to earlier.

Q. In what sense are they not different?

A. Well, you're talking -- when I referred to it earlier, was geographically separated, no-relationship

companies.

These companies are related in that one of them exists -- well, they both existed and then they merged and formed one company.

Q. Okay.

A. And that happens all of the time, and that changes the financial situation and picture numerically for all of these companies.

Q. And it changed their growth rate?

A. I don't know that it changes their growth rate or not.

Q. Well, when Value Line says that the data is not comparable before and after the merger, and they are representing figures there that go to growth rate, that doesn't suggest a judgment from Value Line that the two entities are different for purposes of understanding what the growth rate is going to be?

A. No.

I would assume that Value Line is taken into consideration to merged companies when it gives an estimate of its future growth rate.

Q. Okay. Okay. Thank you.

I may be able to summarize a few questions into one question here, because the last exchange gave me a lot of insight, and I appreciate your patience.

Is it fair to say that in your view -- that in your view, that in the Value Line report, whenever Value Line is describing some event in any of this commentary it has on the bottom of the page or stuff over here, that at the end of the day Value Line has taken that into account in reporting these numbers?

MR. WILLIAMS: Can you be more specific? "These numbers" are pretty vague.

MR. CYNKAR: Okay.

MR. WILLIAMS: Are you talking about future numbers?

MR. CYNKAR: Maybe I just better go back and ask my original questions. It probably was trying to compress too much.

BY MR. CYNKAR:

Q. Let's take a look at Schedule 25 in your testimony.

With respect to the comparable companies expected annual dividends in the schedule --

A. Yes.

Q. -- could you just briefly explain how you calculated those?

A. Well, as it says in the note, estimated dividends declared per share represents the average actual and projected dividends for 2000 and 2001.

Q. Now, in that calculation where do you get the average actual dividend from?

A. It would be on the Value Line sheet.

Q. Okay. So with respect to Cinergy, could you show me a pre 1994 number that you're talking about?

Because I take it that average actual is an average of historic dividends that the company has paid.

A. What are you asking me to show you?

Q. Well, this component, average actual dividends for 2000 -- for 2000 through 2001 -- never mind. Never mind, actually.

A. Well, there is dividends declared per share of $1.80 for 2000.

Q. Uh-huh.

A. There is an estimate of $1.84 for 2001, and so the average of that is $1.82, and that's what I put down.

Q. Now, you did the CAPM cost of equity analysis on all of your comparable companies. Correct?

A. Yes.

Q. Okay. Now, you didn't do a risk premium analysis on your comparable companies?

A. That's correct.

Q. Why not?

A. Because I didn't want to.

Q. And why didn't you want to?

A. I just didn't want to.

MR. CYNKAR: All right. Let's take about a 15-minute break. I may be able to wind this up.

MR. WILLIAMS: Sure.

(A RECESS WAS TAKEN.)

BY MR. CYNKAR:

Q. Earlier in the day in your testimony about your work as an investment advisor -- you referred to the fact that you had worked as an investment advisor and so forth.

In advising people concerning investments in companies, what, if anything, would you tell investors to look at in evaluating the quality of management of a company?

A. Well, maybe I should clarify.

As a financial analyst planner, I wasn't an investment advisor in title. I did work with investment advisors.

As far as quality of management, you can pick that information up from Standard & Poor's and Moody's and their comments. Again, they do qualitative and quantitative evaluations. Value Line will make comments.

Q. Okay. That's fine. I don't need to belabor the point.

And what I think is going to be the last question: From your perspective, what do you think is the

role of the Staff in a rate case like this one?

A. My understanding is, to determine just and reasonable rates and balance the shareholder and the ratepayers interest.

MR. CYNKAR: Colleagues, before I say close the curtain on this, speak now or forever hold your piece.

No worried looks.

All right. Thanks. That's it.

THE COURT REPORTER: Signature?

MR. WILLIAMS: Probably ought to do that.

THE COURT REPORTER: Waive presentment, obtain signature?

MR. WILLIAMS: Yes.

_____

RONALD L. BIBLE

subscribed and sworn to before me this day of , 2001.

_____

Notary Public in and for
County
State of Missouri

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

I, Patricia A. Stewart, RPR, CCR, CSR, Registered Merit Reporter with the firm of Associated Court Reporters, Inc. do hereby certify that pursuant to notice, there came before me,

RONALD L. BIBLE,

at the Capital Plaza Hotel, in the City of Jefferson, County of Cole, State of Missouri, on the 12th day of November, 2001, who was first duly sworn to testify to the whole truth of his knowledge concerning the matter in controversy aforesaid; that he was examined and his examination was then and there written in machine shorthand by me and afterwards typed under my supervision, and is fully and correctly set forth in the foregoing pages; and the witness and counsel waived presentment of this deposition to the witness, by me, and that the signature may be acknowledged by another notary public, and the deposition is now herewith returned.

I further certify that I am neither attorney nor counsel for, nor related to, nor employed by any party to said action in which this deposition is taken; and further, that I am not a relative of employee of any attorney or counsel employed by the parties hereto, nor finally interested in this action.

Given at my office in the City of Jefferson, State of Missouri, this 13th of November, 2001.

Patricia A. Stewart

Patricia A. Stewart, RPR, CSR, CCR
Registered Merit Reporter

November 13, 2001

Public Service Commission
P. O. Box 899
Jefferson City, Missouri 65102

ATTN: Nathan Williams

In Re: Case No. EC-2002-1

Dear Mr. Williams:

Please find enclosed your copy of the deposition of Ronald L. Bible taken on November 12, 2001 in the above-referenced case. Also enclosed is the original signature page and errata sheet.

Please have the witness read your copy of the transcript, indicate any changes and/or corrections desired on the errata sheet, and sign the signature page before a notary public.

Please return the errata sheet and notarized signature page to Mr. Cynkar for filing prior to trial date.

Thank you for your attention to this matter.

Sincerely,

Patricia A. Stewart

Patricia A. Stewart

Encl:

CC: Robert J. Cynkar

Exhibit No.:	
Issues:	*Rate of Return*
Witness:	*Ronald L. Bible*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Direct Testimony*
Case Nos.:	*EC-2002-1*
Date Testimony Prepared:	*July 2, 2001*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

RONALD L. BIBLE

UNION ELECTRIC COMPANY
d/b/a AMERENUE

CASE NO. EC-2002-1

Jefferson City, Missouri
July 2001

2
EXHIBIT
4/16/02 KEM

11/01/2001

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UNION ELECTRIC COMPANY

d/b/a AMERENUE

CASE NO. EC-2002-1

DIRECT TESTIMONY

OF

RONALD L. BIBLE

UNION ELECTRIC

dba AMERENUE

CASE NO. EC-2002-1

Q. Please state your name, occupation and business address.

A. My name is Ronald L. Bible. I am employed by the Missouri Public Service Commission (MoPSC) as the Manager of the Financial Analysis Department. My business address is 200 Madison, Jefferson City, Missouri 65102.

Q. Please describe your educational and professional background.

A. In 1981, I earned a Master of Business Administration degree with an emphasis in Finance and Investments from the Southern Illinois University at Edwardsville, Illinois. In 1976, I earned a Bachelor of Arts degree in Social Science from Colorado State University, Ft. Collins, Colorado.

Q. What is your work experience.

A. I was employed by Credit Union National Association from 1995 to 1997 and by American Express from 1991 to 1995 as a Financial and Investment Analyst/Planner. Prior to that, I was with Voluntary Hospitals of America and Hospital Corporation of America where I performed statistical and financial analysis. Previous to these positions, I was an officer in the United States Air Force and was responsible for a unit that provided statistical analysis.

Q. Have you previously filed testimony before this Commission?

A. Yes. I have testified before the MoPSC a number of times. My testimony at the MoPSC has addressed issues including rate of return, proposed financings, and merger and acquisition issues.

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

A. My testimony is presented to provide a recommendation to the Commission as to a fair and reasonable rate of return (cost of capital) to be applied to the rate base for Union Electric Company d/b/a AmerenUE (AmerenUE).

Q. Have you prepared any schedules to your analysis of the cost of capital for AmerenUE?

A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for Union Electric d/b/a AmerenUE, Case No. EC-2002-1" consisting of ~~31~~ 29 schedules which are attached to this direct testimony (see Schedule 1).

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

A. My analysis leads me to conclude that the cost of capital for AmerenUE is in the range of 8.13 to 8.70 percent.

Q. What range are you proposing for the return on common equity (ROE) for AmerenUE?

A. I estimate AmerenUE's return on common equity to be in the range of 9.04 percent to 10.04 percent with a midpoint of 9.54 percent.

Economic and Legal Rationale for Regulation

Q. Why are the prices charged to customers by utilities such as AmerenUE 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 which results in lower per unit costs. For instance, it may cost more for two or more competing companies to maintain duplicate electric distribution systems to provide competing residential services to one household. 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 within 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 distribution utility companies such as AmerenUE provide electric distribution services essentially under a monopoly franchise. Therefore, it is clear that AmerenUE 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. What is your understanding of the legal 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 legal 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 conceptual 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";

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

4. A fair return can change with economic conditions and capital markets.

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.

Hope 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 further clarifies the *Hope* decision beyond 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).

Pennsylvania is included in my testimony to illustrate the following point: captive ratepayers of public utilities should not be forced to bear the brunt of poor or inept management that results in unnecessarily higher costs. I do not believe that utility companies should be casually subjected to risk of financial failure in a rate case proceeding. However, in the case of poor management, I do not believe it would always be appropriate for a regulatory agency to provide sufficient funds 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.

The courts today still believe that a fair return on common equity should be similar to the return for a business with similar risks, but not as high as a highly profitable or speculative venture requires. 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 the courts have determined that a reasonable return may vary over time as economic and business conditions change. Therefore, it is important to take into consideration the concepts presented by the U. S. Supreme Court, as well as, the historical and projected economic conditions and the business operations of a utility in order to calculate a fair and reasonable rate of return.

Historical Economic Conditions

Q. Please discuss the relevant historical economic conditions in which AmerenUE 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). The Federal

Reserve tries to achieve its monetary policy objectives by controlling the Discount Rate (the discount rate is the rate at which member banks borrow directly from the Federal Reserve) and the Fed Funds Rate (the federal funds rate is the interest rate that banks charge each other for overnight lending). At the end of 1982, the U.S. economy was in the early stages of recovery from 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 also 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 of 1990, when the economy entered into a recession.

In December of 1990, the Federal Reserve responded to the slumping economy by lowering the Discount Rate to 6.50 percent. 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 result of lowering the Prime Interest Rate to 6.00 percent. (See Schedule 3.)

In 1993, newly elected President Clinton implemented a plan to raise additional revenues, by increasing certain corporate and personal income tax rates, but perhaps the most important factor for the U.S. economy in 1993 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 which 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 and 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 being increased to 6.75 percent. The Federal Reserve took action on May 17, 1994, by raising the Discount Rate to 3.5 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 0.25 percentage points on two different occasions. This had the effect of lowering the Prime Interest Rate to 8.50 percent. On November 17, 1998, the Federal Reserve lowered the Discount Rate to a rate of 4.50 percent.

The actions of the Federal Reserve over the last five years have been primarily focused on keeping the level of inflation under control, and they have been successful. The inflation rate, as measured by the *Consumer Price Index - All Urban Consumers* (CPI), was at a high of 3.70 percent in March 2000. The increase in CPI stood at 3.3 percent for the period ending December 31, 2000 (see Schedule 4-1). What is significant about the low inflation rate is that while inflation has been at historically low levels, the unemployment rate has also dropped to historically low levels. In January 1993, the unemployment rate stood at 7.30 percent and gradually dropped to 4.20 percent for the period ending February 28, 2001 (see Schedule 6).

The combination of low inflation and low unemployment has led to a prosperous economy, as evidenced by the real gross domestic product of the United States. Over the time period of 1993 through the present, real GDP has increased every quarter, although at a slower level as of recently. The stock market, as measured by the Dow Jones Composite Index, has increased by 81.23 percent between August 1, 1996 and February 22, 2001, while the Dow Jones Industrial Index has increased by 88.16 percent over that same time frame. The stock market has increased 18.36 percent as measured by The Value Line Geometric Averages Composite Index from August 1, 1996 through February 22, 2001. It should be noted that the Value Line Composite Index is an equally weighted geometric average of 1,594 companies as compared to the Dow Jones Composite Index, which is a price-weighted arithmetic average of 65 companies. Although the stock market has increased significantly since August 1, 1996, it should be noted that the stock market suffered set backs last year when looking at calendar year returns for the major indexes.

In both August and September 2000, energy movements dominated the CPI. After falling by 2.90 percent in August, energy prices shot up 3.80 percent in September, the biggest advance since a 5.60 percent surge in June 2000. The big rise in energy prices, which consumers felt in sharply rising gasoline prices and home heating oil costs, prompted President Clinton to order a release of oil from the government's Strategic Petroleum Reserve. While steep price increases have been contained in the energy sector, economists worried about a spillover effect that could send overall inflation higher, thus setting off alarms at the Federal Reserve.

After raising the federal funds rate six times in 1999 and 2000 to hold down inflation in a rapidly growing economy, Federal Reserve policy-makers began expressing concern about a slowdown in December 2000. On January 3, 2001, the Federal Open Market Committee lowered the federal funds rate by 50 basis points to 6 percent. In a related action, the Board of Governors approved a decrease in the discount rate to 5.75 percent. These actions were taken in light of further weakening of sales and production, and in the context of lower consumer confidence, tight conditions in some segments of financial markets, slowing of real GDP and high energy prices weakening household and business purchasing power. On January 31, 2001, the Federal Reserve again lowered the federal funds rate by 50 basis points to 5.5 percent in an attempt to provide lower rates for many business and consumer loans. At the same time, the discount rate was also lowered by 50 basis points to 5 percent (see Schedule 2-1). In cutting its benchmark rate by a full point in the first month of 2001, the Federal Reserve has taken its most aggressive action to boost the economy since December 1991. The Federal Reserve justified its actions by citing eroding consumer and business confidence and rising energy costs. Further weakening in the economy prompted the Federal reserve to reduce interest rates more. On March 20, 2001, the discount rate was lowered to 4.50 percent, and to 4.00 percent on April 18, 2001.

The Federal Reserve claims it does not make interest rate decisions based on stock market activity. However, it is important to reflect on the results of the major indexes in the past year. Based on *The Value Line Investment Survey, Selection and Opinion*, April 27, 2001, the 12-month percentage change in market stock price averages shows the S&P 500 suffered a 12.20 percent decline and the NASDAQ suffered a 41.10

percent decline, as of April 19, 2001. Therefore, as mentioned earlier, the stock market has faired well since 1996, although, it has suffered some set backs when compared to more recent levels.

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 of Thirty-Year U.S. Treasury Bonds (see Schedules 5-1 and 5-2). Schedule 5-3 shows how closely the Mergent "Public Utility Bond Yields" have followed the yields of Thirty-Year U.S. Treasury Bonds during the period from 1984 to the present. The average spread for this time period between these two composite indices has been 131 basis points, with the spread ranging from a low of 80 basis points and a high of 241 basis points (see 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 expectations for the remainder of 2001 and beyond?

A. The latest inflation rate, as measured by the *Consumer Price Index-All Urban Consumers* (CPI), was 2.90 percent for the 12 months ended March 2001. *The Value Line Investment Survey: Selection & Opinion*, March 2, 2001, predicts inflation to be 2.60 percent for 2001, 2.50 percent for 2002 and 2.60 percent for 2003. One of the major fears of the Federal Reserve is the United States will experience weakness in key areas of the economy that could lead to a recession.

Q. What are the interest rate forecasts for 2001, 2002 and 2003?

A. Short-term interest rates, those measured by Three-Month U.S. Treasury Bills, are expected to be 4.80 percent in 2001, 5.10 percent in 2002 and 5.20 percent in 2003 according to Value Line's predictions. Value Line expects long-term interest rates, those measured by the Thirty-Year U.S. Treasury Bond, to average 5.50 percent in 2001, 5.80 percent in 2002 and 6.00 percent in 2003. The current rates for the period ending April 30, 2001 are 3.97 percent for 3-month T-Bills and 5.64 percent for 30-year T-Bonds, as noted on the Federal Reserve website.

Q. What are the growth expectations for real GDP in the future?

A. Value Line expects real GDP to increase by 1.90 percent in 2001, 3.40 percent in 2002, and by 3.50 percent in 2003. The Budget and Economic Outlook, Fiscal Years 2002-2011 published by the Congressional Budget Office in January 2001 stated that real GDP is expected to increase by 2.40 percent in 2001, 3.40 percent in 2002 and 3.30 percent in 2003. (See Schedule 6.)

Q. Please summarize your projections of the economic conditions that will affect AmerenUE for the next few years.

A. Considering the previously mentioned sources, inflation is expected to be in the range of 2.50 to 2.80 percent, increase in real GDP in the range of 1.90 to 3.50 percent and long-term interest rates are expected to range from 5.50 to 6.00 percent. *The Value Line Investment Survey: Selection & Opinion*, April 27, 2001, states that:

> **The Federal Reserve Board's recent decision to reduce interest rates before its May 15th Federal Open Market Committee meeting suggests that the central bank is still worried about the health of the economy.** Those worries are, in fact, well founded, as the economy is now showing weakness in such areas as manufacturing, housing, consumer confidence, and employment. At the same time, inflation is muted, in part, because companies, beset by falling demand, are having difficulty raising prices.

> Moreover, we think economic activity will continue to founder in months ahead, with the threat of a recession continuing into the second half.
> [Emphasis added]

S&P states the following in the April 25, 2001, issue of *The Outlook*:

> With inflation low and the dollar strong, the Fed has room to lower rates aggressively to keep the economy out of recession. S&P chief economist David Wyss expects the central bank to continue to take full advantage of this leeway, a clear plus for the market.

S&P also stated in the May 2, 2001 issue of *The Outlook*:

> ...What we believe will prove to be the trump card in the intermediate term, however, is the Fed's aggressive monetary easing. The four half-point cuts in the fed funds target since early January, which we expect to be augmented by another half-point reduction by summer, will have an increasingly stimulative effect on the economy starting in the third quarter and continuing into 2002.

Business Operations of Ameren

Q. Please describe Union Electric's business operations.

A. After their merger, Union Electric (UE) and Central Illinois Power Supply (CIPS) became subsidiaries of St. Louis, MO-based Ameren, a registered public utility holding company created on December 31, 1997. UE (doing business as AmerenUE) remains headquartered in St. Louis and CIPS (doing business as AmerenCIPS) in Springfield, IL. Ameren's unregulated operations include the recently formed unregulated generation subsidiary, AmerenEnergy Generating Company (AEGC) and other unregulated businesses, such as energy marketing and trading.

UE, incorporated in Missouri in 1922, supplies electric service in Missouri and Illinois. UE accounts for 72 percent of Ameren's revenues, 75 percent of operating income, and 77 percent of total assets. UE mainly engages in selling electricity

(96 percent of UE's operating revenues) in Missouri and in a small area of Illinois. The Missouri service territory covers 24,500 square miles, including the metropolitan St. Louis area, and has an estimated customer base of 2.6 million. Retail natural gas (4 percent of operating revenues) is distributed in 90 Missouri communities and in Alton, Illinois and its surrounding area. [Source: S&P's *Ratings Direct*, dated November 10, 2001.]

Q. Please describe the credit ratings of AmerenUE.

A. Currently, Standard & Poor's Corporation gives AmerenUE a corporate credit rating of A+ and a first mortgage bond rating of A+. These ratings are considered to be of "investment grade" ("investment grade" is defined as a "BBB" rating or higher). The Corporate Credit Rating issued by Standard & Poor's reflects a stable outlook for AmerenUE.

Q. Please provide Standard & Poor's Corporation's most recent outlook concerning the credit rating assigned to AmerenUE.

A. Standard & Poor's Corporation's *Ratings Direct*, dated November 10, 2001, provides a summary explaining the outlook. Specifically, the report states:

> The stable outlook for UE mirrors that of the parent Ameren. Specifically, the outlook reflects a healthy stand-alone, consolidated financial profile, a competitive generation system, excellent nuclear performance, strong transmission ties, and a multiyear, full-requirement contract between the unregulated generation/marketing companies and their affiliated delivery company. Upside ratings potential will be limited by commodity price risks associated with Ameren's growing unregulated generation business. Ameren's long-term goal is to expand its generation business to 20,000 MW, including UE's capacity, from about 11,000 MW currently.

Q. What historical financial information have you relied upon for AmerenUE?

A. Schedules 7 and 8 present historical capital structures and selected financial ratios from 1996 to 2000 for AmerenUE. AmerenUE's common equity ratio has ranged from a high of 57.30 percent to a low of 53.85 percent over the time period of 1996 through 2000. *The Value Line Investment Survey: Ratings & Reports* dated April 6, 2001, reported that the average common equity ratio (figured excluding short-term debt) for the electric utility (central) industry for 1999 was 41.90 percent and estimated to be 44.50 percent, 44.50 percent, 45.00 percent for 2000, 2001, 2002, respectively, and 47.5 percent for the period 2004 to 2006. According to Standard & Poor's Corporation: *Ratings Direct,* dated November 10 2001, "UE's common equity layer remains strong at about 53 percent of total capital."

AmerenUE's reported return on year-end common equity (ROE) has fluctuated during this time period ranging from a low of 12.38 percent in 1996 to a high of 14.60 percent in 2000 (see Schedule 8). AmerenUE's ROE of 14.60 percent for 2000 is above the estimated average of 12.50 percent for the electric utility (central) industry according to *The Value Line Investment Survey: Ratings & Reports,* April 6, 2001. *The Value Line Investment Survey: Ratings & Reports,* April 6, 2001 estimates that Ameren's return on equity for 2001 will be 14.00 percent. AmerenUE's market-to-book ratio has varied from a low of 1.46 times in 1999 to a high of 1.99 in year 2000 (see Schedule 8).

Determination of the Cost of Capital

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

A. The total dollars of capital for a utility company are determined for a specific point in time. This total dollar amount is proportioned into each specific capital component. A weighted cost for each capital component is determined by multiplying each capital component ratio by the appropriate embedded cost or the estimated cost of common equity. 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. Can an investor directly invest in AmerenUE?

A. No. An investor can only indirectly invest in AmerenUE through a direct investment in Ameren, AmerenUE's parent company. As a result, potential investors can only look at the earnings potential of the entire consolidated corporate entity of Ameren when evaluating decisions such as whether or not to invest in AmerenUE's common stock. Ultimately, that investor is purchasing the earnings power of the entire

consolidated corporation, consisting of its operating divisions and its subsidiaries. Therefore, in order to analyze AmerenUE's divisional cost of capital, an investor must derive AmerenUE's divisional cost of capital from Ameren's overall cost of capital.

Q. What capital structure have you employed in developing a weighted cost of capital for AmerenUE?

A. I employed AmerenUE's capital structure as of June 30, 2000, which is the end of the test year period, and as of December 31, 2000, which is the end of the update period. Schedules 9 and 10 present AmerenUE's capital structure and associated capital ratios. The resulting capital structure consists of 53.66 percent common stock equity, 3.44 percent preferred stock and 42.90 percent long-term debt for June 2000, and 57.30 percent common stock equity, 3.46 percent preferred stock and 39.24 percent long-term debt for December 2000.

It is the Staff's opinion that only the short-term debt that exceeds the amount of construction work in progress (CWIP) should be included in the capital structure. An assumption is made that CWIP, which is not yet included in rate base, is financed with short-term debt. In this case, AmerenUE's CWIP at June 30, 2000 and December 31, 2000 exceeded the amount of short-term debt; therefore, no short-term debt is being included in the capital structure.

Q. What was the embedded cost of long-term debt for AmerenUE on June 30, 2000 and December 31, 2000?

A. I determined the embedded cost of long-term debt, for AmerenUE to be 6.95 percent on June 30, 2000 and 7.04 percent on December 31, 2000. I arrived at these figures by adopting AmerenUE's response to Staff Data Request No. 3802.

Q. What was the embedded cost of preferred stock for AmerenUE on June 30, 2000 and December 31, 2000?

A. I determined the embedded cost of preferred stock for AmerenUE to be 5.72 percent on June 30, 2000 and 5.72 percent on December 31, 2000. I arrived at these figures by adopting AmerenUE's response to Staff Data Request No. 3802.

Cost of Equity

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

A. I have selected the discounted cash flow model (DCF) model as the primary tool to determine the cost of equity for AmerenUE.

The DCF Model

Q. Please describe the DCF model.

A. The DCF model is a market-oriented approach for deriving the cost of equity. The return on 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 under-valued nor over-valued. It can also be stated that stock prices continually fluctuate to reflect the required and expected return for the investor.

The continuous growth form of the DCF model was used in estimating the cost of equity for AmerenUE. This model relies upon the fact that a company's common stock price is dependent on the expected cash dividends and on cash flows received through capital gains or losses that result from stock price changes. The rate that

discounts the sum of the future expected cash flows to the current market price of the common stock is the calculated cost of equity. This can be expressed algebraically as:

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

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:

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

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

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

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

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

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 DCF 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.

The DCF method also assumes that an investor's growth horizon is unlimited and that earnings, book values and market prices grow hand-in-hand. Even though the entire list of 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 equity for AmerenUE?

A. No. In order to arrive at a company-specific DCF result, the company must have common stock that is publicly-traded and must pay dividends. AmerenUE's stock is not publicly traded. However, Ameren Corporation, AmerenUE's parent company, is publicly traded on the New York Stock Exchange under the ticker symbol of "AEE." Therefore, I used Ameren as a surrogate for AmerenUE in the DCF model.

Q. Please explain how you determined for Ameren a value range for the growth term of the DCF formula.

A. I reviewed Ameren's actual dividends per share (DPS), earnings per share (EPS) and book values per share (BVPS) as well as projected growth rates for Ameren. Schedule 11 lists annual compound growth rates calculated for DPS, EPS and BVPS for the periods of 1990 through 2000 and 1995 through 2000. Schedule 12 presents the

historical DPS, EPS and BVPS growth rates and projected growth rates for Ameren. The projected growth rates were obtained from two outside sources. I/B/E/S Inc.'s *Institutional Brokers Estimate System*, March 15, 2001, projects a five-year growth in EPS of 3.00 percent for Ameren. Standard & Poor's Corporation's *Earnings Guide*, April 2001, projects a five-year EPS growth rate of 4.00 percent for Ameren. The average of the two outside sources produces a projected EPS growth rate of 3.50 percent. Combining the average of the historical DPS, EPS and BVPS of 1.52 percent with the projected EPS growth rates produces a reasonable growth rate range of 2.00 to 3.00 percent. This range of growth (g) is the range that I used in the DCF model to calculate a cost of common equity for Ameren. (see Schedules 15 and 16)

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

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 12 months (D_1) by the current market price per share of the firm's common stock (P_0). Even though the model requires the use of a current or spot market price, I have chosen to use a monthly high/low average market price of Ameren's common stock for the period of January 1, 2000, through June 30, 2000 and July 1, 2000 through December 31, 2000 to represent separately the test year and update periods. 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 January 1, 2000, through June 30, 2000. Ameren's common stock price has ranged

from a low of $27.563 per share to a high of $38.000 per share for this time period. This has produced a range for the monthly average high/low market price of $29.376 to $36.157 per share and reflects recent market conditions for the price term (P_0) in the DCF model.

Schedule 14 presents the monthly high/low average stock market prices from July 1, 2000, through December 31, 2000. Ameren's common stock price has ranged from a low of $34.063 per share to a high of $46.930 per share for this time period. This has produced a range for the monthly average high/low market price of $35.532 to $44.900 per share and reflects more recent market conditions for the price term (P_0) in the DCF model.

The Value Line Investment Survey: Ratings & Reports, April 6, 2001, is estimating that Ameren's common dividend declared per share will be $2.54 for 2001 and $2.54 for 2002. This compares with the actual dividend Ameren paid in 2000 of $2.54. Therefore, I have chosen to use the value of $2.54 for the amount of common dividends per share (D_1) expected to be paid by Ameren for my analysis.

Combining the expected dividend of $2.54 per share and an average market price range of $29.376 to $36.157 per share produces an expected dividend yield of 7.71 percent for June 30, 2000.

Combining the expected dividend of $2.54 per share and an average market price range of $35.532 to $44.900 per share produces an expected dividend yield of 6.36 percent for December 31, 2000.

Q. Please summarize the results of your expected dividend yield and growth rate analysis for the DCF return on common equity for Ameren.

A. The summarized DCF cost of equity estimate for the period January 1, 2000 through June 30, 2000 for Ameren is presented as follows:

Yield (D_1/P_0)	+	Growth Rate (g)	=	Cost of Equity(k)
7.71%	+	2.00%	=	9.71%
7.71%	+	3.00%	=	10.71%

The summarized DCF cost of equity estimate for the period July 1, 2000 through December 31, 2000 for Ameren is presented as follows:

Yield (D_1/P_0)	+	Growth Rate (g)	=	Cost of Equity(k)
6.36%	+	2.00%	=	8.36%
6.36%	+	3.00%	=	9.36%

Averaging the range of return on common equity for these two time periods produces a range of return on common equity of 9.04 to 10.04 percent, with a mid-point of 9.54 percent and is the company-specific cost of equity range for Ameren.

As mentioned previously, 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 12 months (D_1) by the current market price per share of the firm's common stock (P_0). Even though the model requires the use of a current or spot market price, I have used an averaging technique in an attempt to minimize the effects on the dividend yield, which can occur due to daily volatility in the stock market. Using the spot price of $41.98, as assumed by the model, for June 21, 2001, produces a dividend yield of 6.05 percent, which is lower than the dividend yield used in my DCF estimates and would decrease the recommended return on common equity.

I also looked at the monthly high/low average stock price for Ameren for the period January 1, 2001 through May 31, 2001. Using this time period produces a dividend yield of 6.12 percent, which is also lower than the dividend yield used in my DCF estimate and would also decrease the recommended return on common equity.

Reasonableness of DCF Returns for AmerenUE

Q. What analysis was performed to determine the reasonableness of your DCF model derived return on common equity for Ameren?

A. I performed a risk premium cost of equity analysis for Ameren. The risk premium concept implies that the required return on common equity is found by adding an explicit premium for risk to a current interest rate. Schedule 17 shows the average risk premium above the yield of 30-Year Treasury Bonds for Ameren's expected return on common equity. This analysis shows, on average, Ameren's expected return on equity as reported by *The Value Line Investment Survey: Ratings & Reports* is 620 basis points higher than the yield on 30-Year Treasury Bonds for the period of January 1990 to December 2000 (see Schedule 17).

The average yield for 30-Year Treasury Bonds on December 11, 2000 was 5.54 percent. Adding 620 basis points to this yield produces an estimated cost of equity of 11.74 percent. (See Schedule 18.)

Q. Did you perform any other checks on reasonableness of your DCF model derived return on common equity for Ameren?

A. Yes. I performed a Capital Asset Pricing Model (CAPM) cost of equity analysis for Ameren. 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 mathematical expression of the CAPM is the following:

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

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 which can be achieved without accepting any risk. In reality, there is no such riskless asset, but it is generally represented by U.S. Treasury securities, because of the government's unlimited ability to tax and create money. 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 5.54 percent for the period December 11, 2000, as published on www.marketwatch.com.

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 0.55 as published in *The Value Line Investment Survey: Ratings & Reports*, January 5, 2001.

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, the appropriate market risk premium was determined to be 7.80 percent for the period 1926-1999 and 9.41 percent for the period 1990-1999, as calculated in Ibbotson Associates, Inc.'s *Stocks, Bonds, Bills, and Inflation: 2000 Yearbook.*

Schedule 19 presents my CAPM analysis for Ameren. My CAPM analysis produces an estimated cost of equity range of 9.83 to 10.72 percent for Ameren.

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

A. Yes. I have selected a group of comparable electric utility companies to analyze for determining the reasonableness of the company-specific DCF results for Ameren. Value Line categorizes Ameren as a large cap stock. Therefore, I searched the Value Line database for large cap electric utility companies. Schedule 20 presents a list of 19 market-traded large cap electric utility companies. This list was reviewed for the following criteria:

1. Information printed in Value Line: This criterion eliminated no companies;

2. Standard & Poor's Utility Credit Rating of AA- to BBB+: This criterion eliminated five companies;

3. Total capital greater than $5 billion and less than $6 billion: This criterion eliminated nine additional companies;

4. Positive Dividends Per Share Annual Compound Growth Rate for the period of 1990 through 2000: This criterion eliminated one additional company; and

5. No Missouri Operations: This criterion eliminated Ameren.

On average, this final group of three publicly traded electric utility companies (comparable electric utility companies) is comparable to Ameren because of similar business operations and financial conditions. The three comparable electric utility companies are listed on Schedule 21.

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

A. I have calculated a DCF cost of equity for each of the three 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 three comparable electric companies as I used in calculating a growth rate for Ameren (see Schedules 22 and 23). The comparable electric utility companies' average historical growth rates ranged from 0.06 to 2.99 percent with an overall average of 1.29 percent for the group (Column 1 of Schedule 23). The projected growth rates ranged from 5.17 to 10.00 percent with an average of 7.06 percent (Schedule 23). Taking into account the projected and historical growth rates, a proposed range of growth of 2.61 to 6.50 percent (Column 6 of Schedule 23) was used in the DCF calculation for the comparable companies. The growth rate range of 2.00 to 3.00 percent as calculated for Ameren (see Schedule 12) falls within and below the proposed range of growth for the three comparable electric utility companies.

The next step was to calculate an expected dividend yield for each of the three comparable electric utility companies. Schedule 24 presents the average high/low stock price for the period of September 1, 2000, through December 31, 2000, for each

electric utility company. Column 3 of Schedule 25 shows that the projected dividend yields ranged from 3.88 to 6.96 percent for the three comparable electric utility companies with the average at 5.54 percent. Ameren's proposed dividend yields of 6.36 and 7.71 percent (see Schedules 13 and 14) falls within and above the average for the three comparable electric utility companies.

The projected growth rates and projected dividend yields were then added together to reach an estimated DCF cost of equity for each of the three comparable electric utility companies. These estimates produced a DCF cost of equity ranging from 8.38 to 10.38 percent for the comparable electric utility companies with an average of 9.71 percent (see Column 5 of Schedule 25).

Q. What analysis was performed to determine the reasonableness of your DCF model derived return on common equity for the comparable company group?

A. I performed a CAPM cost of equity analysis for the comparable company group. The betas for the three comparable electric utility companies averaged 0.53, very close to Ameren's beta of 0.55. This suggests that Ameren is comparable in risk as measured by beta and relative to the market and the comparable companies on average. The CAPM analysis implies that, on average, the required return on equity for the three comparable electric utility companies falls within the range of 9.70 to 10.56 percent (see Schedule 26). This provides support for my DCF cost of equity analysis for the comparable company group and the proposed required return on common equity range of 9.04 percent to 10.04 percent for AmerenUE.

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

A. Yes. A pro forma pre-tax interest coverage calculation was completed for AmerenUE (see Schedule 27) utilizing the proposed range and midpoint ROE for Ameren. It reveals that the return on common equity range of 9.04 to 10.04 percent would yield a pre-tax interest coverage ratio in the range of 4.30 times to 4.65 times. This interest coverage range is in line with Standard & Poor's range for an "AA to BBB" rated electric utility company, which is 4.17 to 2.33 times. AmerenUE's midpoint of 4.47 times makes it consistent with an "AA" rating.

Rate of Return for AmerenUE

Q. Please explain how the returns developed for each capital component are used in the ratemaking approach you have adopted to be applied to AmerenUE's 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: revenues, prudent operation costs, rate base and a return allowed on the rate base (see Schedule 28).

It is my responsibility to calculate and recommend a rate of return that should be authorized on the rate base of AmerenUE. Under the cost of service ratemaking approach, a weighted cost of capital in the range of 8.13 to 8.70 percent was developed for AmerenUE's electric utility operations (see Schedule 29). This rate was calculated by applying an average embedded cost of long-term debt for June 30, 2000 and December 31, 2000 of 7.00 percent, an embedded cost of preferred stock of 5.72 percent and a return on common equity range of 9.04 to 10.04 percent to a capital structure consisting of 39.24 percent long-term debt, 3.46 percent preferred stock and

57.30 percent common equity. Therefore, as I suggested earlier, I am recommending that AmerenUE's electric utility operations be allowed to earn a return on its original cost rate base in the range of 8.13 to 8.70 percent.

Through this analysis, I believe I have developed a fair and reasonable rate of return. My rate of return is based on a return on common equity range of 9.04 to 10.04 percent. My return range is based on the historical and projected economic conditions. This range is sufficient to assure confidence in the financial soundness of the utility and will be adequate, under efficient and economical management, to maintain and support its financial standing, as well as allow AmerenUE the opportunity to earn the revenue requirement developed in this rate case.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF RONALD L. BIBLE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Ronald L. Bible, is, of lawful age, and on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 31 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Ronald L. Bible

Ronald L. Bible

Subscribed and sworn to before me this 1st day of November, 2001.

ROSEMARIE RIEDL
Notary Public - Notary Seal
STATE OF MISSOURI
COLE COUNTY
MY COMMISSION EXP June 1, 2005

Notary Public

AN ANALYSIS OF THE COST OF CAPITAL

FOR

UNION ELECTRIC COMPANY
dba AmerenUE

CASE NO. EC-2002-1

BY

RONALD L. BIBLE

UTILITY SERVICES DIVISION

MISSOURI PUBLIC SERVICE COMMISSION

July 2001

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

List of Schedules

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UNION ELECTRIC COMPANY
dba AmerenUE
CASE NO. EC-2002-1

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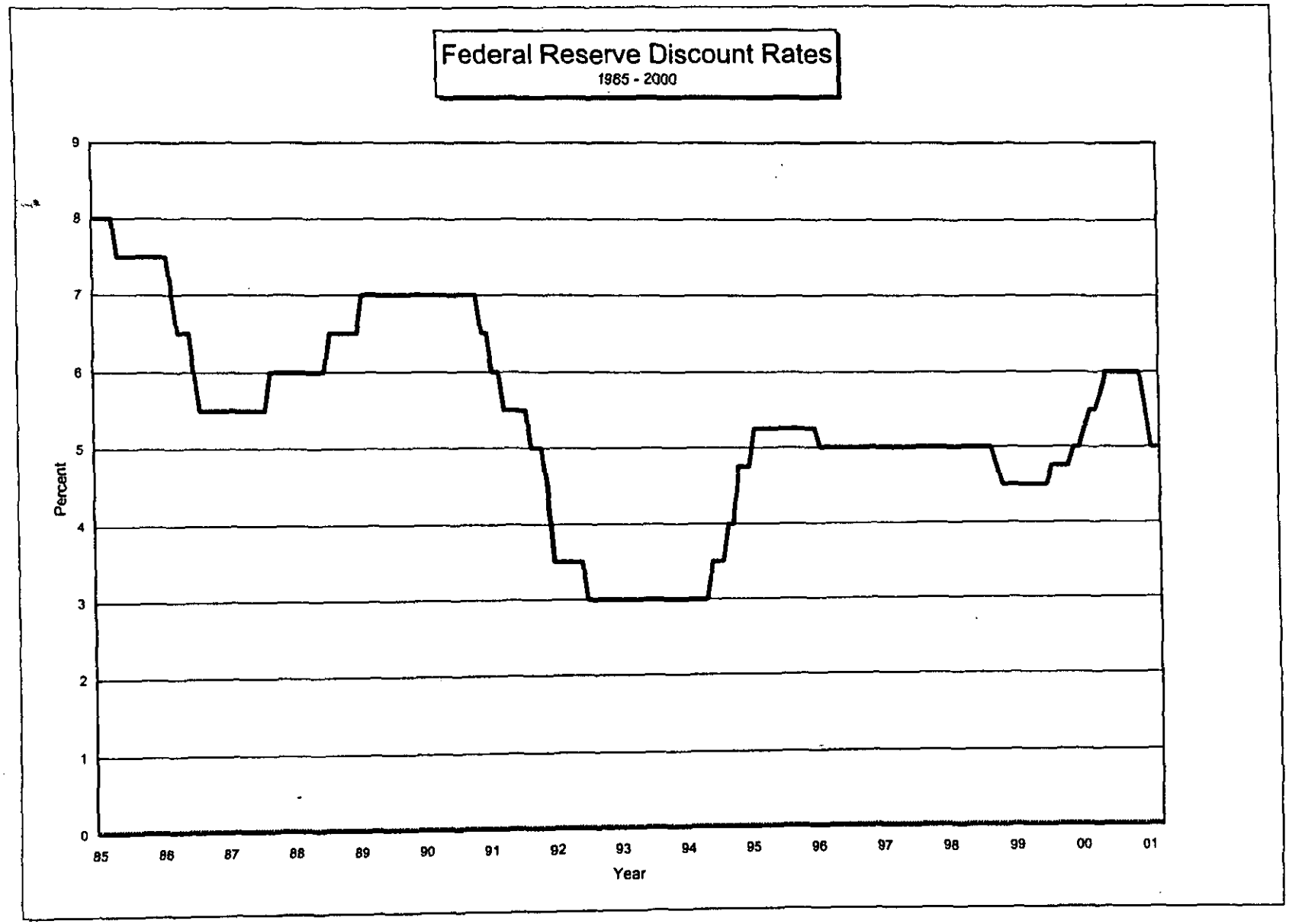
Federal Reserve Discount Rate Changes

Date	Discount Rate
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%
12/19/90	6.50%
02/01/91	6.00%
04/30/91	5.50%
09/13/91	5.00%
11/06/91	4.50%
12/20/91	3.50%
07/02/92	3.00%
01/01/93	3.00%
12/31/93	3.00%
05/17/94	3.50%
08/16/94	4.00%
11/15/94	4.75%
02/01/95	5.25%
01/31/96	5.00%
12/12/97	5.00%
01/09/98	5.00%
03/06/98	5.00%
10/15/98	4.75%
11/17/98	4.50%
06/30/99	4.50%
08/24/99	4.75%
11/16/99	5.00%
02/02/00	5.25%
03/21/00	5.50%
05/16/00	5.50%
05/19/00	6.00%
01/03/01	5.75%
01/04/01	5.50%
01/05/01	5.50%
01/31/01	5.00%
03/20/01	4.50%
04/18/01	4.00%

Sources: Federal Reserve Bulletin & The Wall Street Journal.


Federal Reserve Discount Rates
1985 - 2000
Percent
9
8
7
6
5
4
3
2
1
0
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
Year

Schedule 2-2

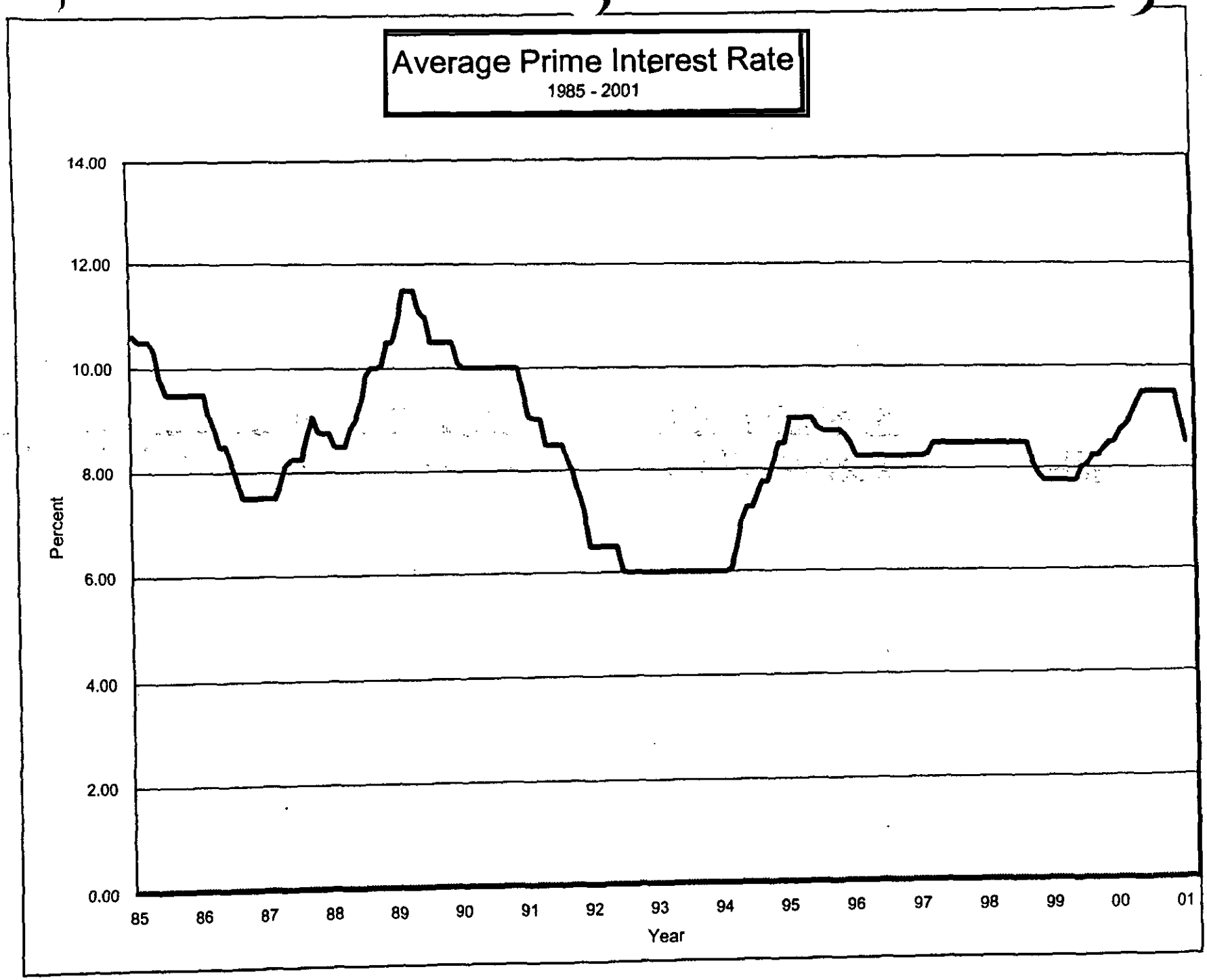
UNION ELECTRIC COMPANY
EC-2002-1

Average Prime Interest Rates

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1985	10.61	Jan 1989	10.50	Jan 1993	6.00	Jan 1997	8.26
Feb	10.50	Feb	10.93	Feb	6.00	Feb	8.25
Mar	10.50	Mar	11.50	Mar	6.00	Mar	8.30
Apr	10.50	Apr	11.50	Apr	6.00	Apr	8.50
May	10.31	May	11.50	May	6.00	May	8.50
Jun	9.78	Jun	11.07	Jun	6.00	Jun	8.50
Jul	9.50	Jul	10.98	Jul	6.00	Jul	8.50
Aug	9.50	Aug	10.50	Aug	6.00	Aug	8.50
Sep	9.50	Sep	10.50	Sep	6.00	Sep	8.50
Oct	9.50	Oct	10.50	Oct	6.00	Oct	8.50
Nov	9.50	Nov	10.50	Nov	6.00	Nov	8.50
Dec	9.50	Dec	10.50	Dec	6.00	Dec	8.50
Jan 1986	9.50	Jan 1990	10.11	Jan 1994	6.00	Jan 1998	8.50
Feb	9.50	Feb	10.00	Feb	6.00	Feb	8.50
Mar	9.10	Mar	10.00	Mar	6.06	Mar	8.50
Apr	8.83	Apr	10.00	Apr	6.45	Apr	8.50
May	8.50	May	10.00	May	6.99	May	8.50
Jun	8.50	Jun	10.00	Jun	7.25	Jun	8.50
Jul	8.16	Jul	10.00	Jul	7.25	Jul	8.50
Aug	7.90	Aug	10.00	Aug	7.51	Aug	8.50
Sep	7.50	Sep	10.00	Sep	7.75	Sep	8.49
Oct	7.50	Oct	10.00	Oct	7.75	Oct	8.12
Nov	7.50	Nov	10.00	Nov	8.15	Nov	7.89
Dec	7.50	Dec	10.00	Dec	8.50	Dec	7.75
Jan 1987	7.50	Jan 1991	9.52	Jan 1995	8.50	Jan 1999	7.75
Feb	7.50	Feb	9.05	Feb	9.00	Feb	7.75
Mar	7.50	Mar	9.00	Mar	9.00	Mar	7.75
Apr	7.75	Apr	9.00	Apr	9.00	Apr	7.75
May	8.14	May	8.50	May	9.00	May	7.75
Jun	8.25	Jun	8.50	Jun	9.00	Jun	7.75
Jul	8.25	Jul	8.50	Jul	8.80	Jul	8.00
Aug	8.25	Aug	8.50	Aug	8.75	Aug	8.06
Sep	8.70	Sep	8.20	Sep	8.75	Sep	8.25
Oct	9.07	Oct	8.00	Oct	8.75	Oct	8.25
Nov	8.78	Nov	7.58	Nov	8.75	Nov	8.37
Dec	8.75	Dec	7.21	Dec	8.65	Dec	8.50
Jan 1988	8.75	Jan 1992	6.50	Jan 1996	8.50	Jan 2000	8.50
Feb	8.51	Feb	6.50	Feb	8.25	Feb	8.73
Mar	8.50	Mar	6.50	Mar	8.25	Mar	8.83
Apr	8.50	Apr	6.50	Apr	8.25	Apr	9.00
May	8.84	May	6.50	May	8.25	May	9.24
Jun	9.00	Jun	6.50	Jun	8.25	Jun	9.50
Jul	9.29	Jul	6.02	Jul	8.25	Jul	9.50
Aug	9.84	Aug	6.00	Aug	8.25	Aug	9.50
Sep	10.00	Sep	6.00	Sep	8.25	Sep	9.50
Oct	10.00	Oct	6.00	Oct	8.25	Oct	9.50
Nov	10.05	Nov	6.00	Nov	8.25	Nov	9.50
Dec	10.50	Dec	6.00	Dec	8.25	Dec	9.50
						Jan 2001	9.05
						Feb	8.50

Sources: Federal Reserve Bulletin & The Wall Street Journal.

Schedule 3-1


Average Prime Interest Rate
1985 - 2001
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
Percent
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
Year

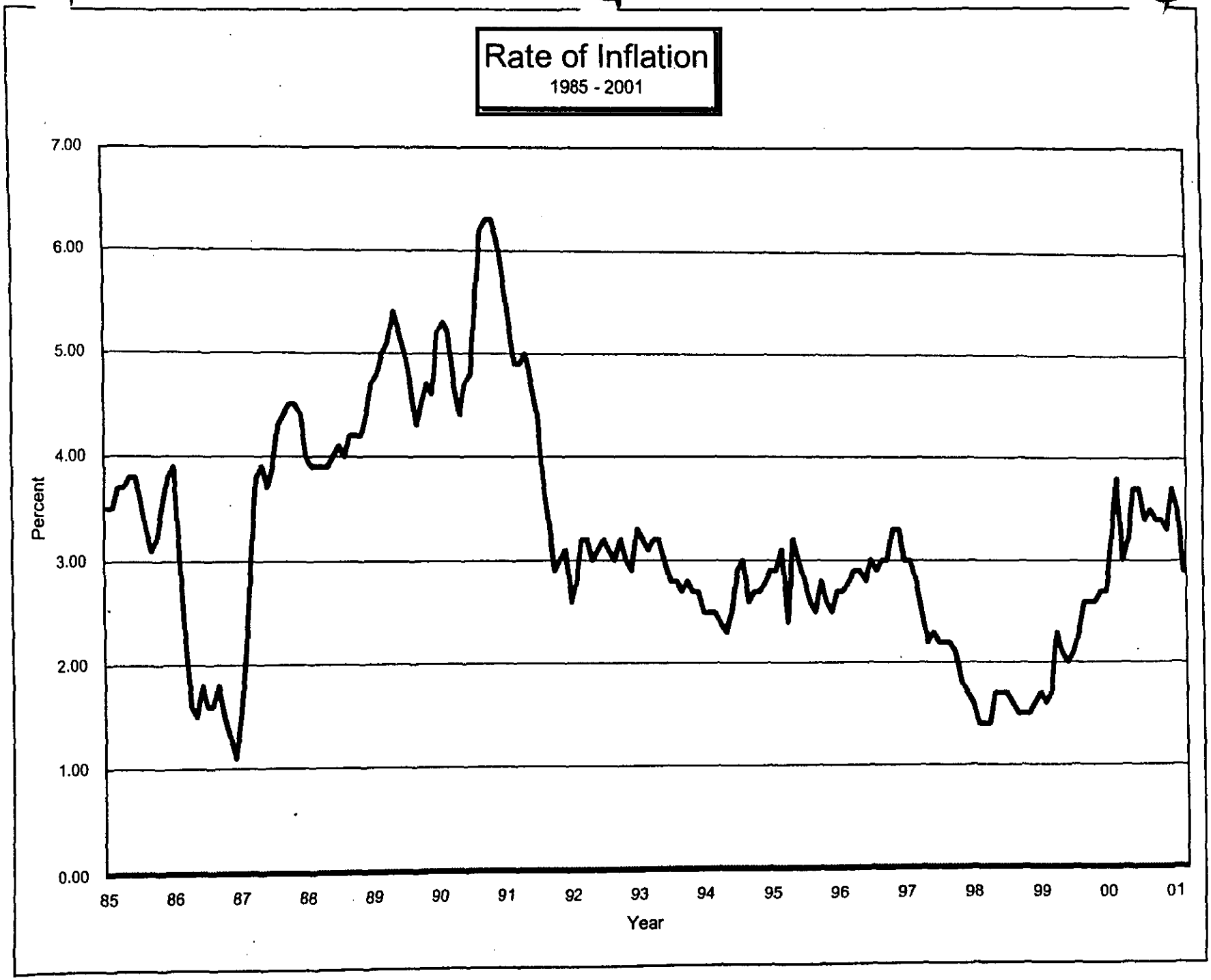
Schedule 3-2

UNION ELECTRIC COMPANY
EC-2002-1

Rate of Inflation

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1985	3.50	Jan 1989	4.70	Jan 1993	3.30	Jan 1997	3.00
Feb	3.50	Feb	4.80	Feb	3.20	Feb	3.00
Mar	3.70	Mar	5.00	Mar	3.10	Mar	2.80
Apr	3.70	Apr	5.10	Apr	3.20	Apr	2.50
May	3.80	May	5.40	May	3.20	May	2.20
Jun	3.80	Jun	5.20	Jun	3.00	Jun	2.30
Jul	3.60	Jul	5.00	Jul	2.80	Jul	2.20
Aug	3.30	Aug	4.70	Aug	2.80	Aug	2.20
Sep	3.10	Sep	4.30	Sep	2.70	Sep	2.20
Oct	3.20	Oct	4.50	Oct	2.80	Oct	2.10
Nov	3.50	Nov	4.70	Nov	2.70	Nov	1.80
Dec	3.80	Dec	4.60	Dec	2.70	Dec	1.70
Jan 1986	3.90	Jan 1990	5.20	Jan 1994	2.50	Jan 1998	1.60
Feb	3.10	Feb	5.30	Feb	2.50	Feb	1.40
Mar	2.30	Mar	5.20	Mar	2.50	Mar	1.40
Apr	1.60	Apr	4.70	Apr	2.40	Apr	1.40
May	1.50	May	4.40	May	2.30	May	1.70
Jun	1.80	Jun	4.70	Jun	2.50	Jun	1.70
Jul	1.60	Jul	4.80	Jul	2.90	Jul	1.70
Aug	1.60	Aug	5.60	Aug	3.00	Aug	1.60
Sep	1.80	Sep	6.20	Sep	2.60	Sep	1.50
Oct	1.50	Oct	6.30	Oct	2.70	Oct	1.50
Nov	1.30	Nov	6.30	Nov	2.70	Nov	1.50
Dec	1.10	Dec	6.10	Dec	2.80	Dec	1.60
Jan 1987	1.50	Jan 1991	5.70	Jan 1995	2.90	Jan 1999	1.70
Feb	2.10	Feb	5.30	Feb	2.90	Feb	1.60
Mar	3.00	Mar	4.90	Mar	3.10	Mar	1.70
Apr	3.80	Apr	4.90	Apr	2.40	Apr	2.30
May	3.90	May	5.00	May	3.20	May	2.10
Jun	3.70	Jun	4.70	Jun	3.00	Jun	2.00
Jul	3.90	Jul	4.40	Jul	2.80	Jul	2.10
Aug	4.30	Aug	3.80	Aug	2.60	Aug	2.30
Sep	4.40	Sep	3.40	Sep	2.50	Sep	2.60
Oct	4.50	Oct	2.90	Oct	2.80	Oct	2.60
Nov	4.50	Nov	3.00	Nov	2.60	Nov	2.60
Dec	4.40	Dec	3.10	Dec	2.50	Dec	2.70
Jan 1988	4.00	Jan 1992	2.60	Jan 1996	2.70	Jan 2000	2.70
Feb	3.90	Feb	2.80	Feb	2.70	Feb	3.20
Mar	3.90	Mar	3.20	Mar	2.80	Mar	3.70
Apr	3.90	Apr	3.20	Apr	2.90	Apr	3.00
May	3.90	May	3.00	May	2.90	May	3.20
Jun	4.00	Jun	3.10	Jun	2.80	Jun	3.70
Jul	4.10	Jul	3.20	Jul	3.00	Jul	3.70
Aug	4.00	Aug	3.10	Aug	2.90	Aug	3.40
Sep	4.20	Sep	3.00	Sep	3.00	Sep	3.50
Oct	4.20	Oct	3.20	Oct	3.00	Oct	3.40
Nov	4.20	Nov	3.00	Nov	3.30	Nov	3.40
Dec	4.40	Dec	2.90	Dec	3.30	Dec	3.30
						Jan 2001	3.70
						Feb	3.50
						Mar	2.90

Source: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, Change for 12-M
Bureau of Labor Statistics Website and Wall Street Journal.


Rate of Inflation
1985 - 2001
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Percent
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
Year

Schedule 4-2

UNION ELECTRIC COMPANY
EC-2002-1

Average Yields on Mergent's Public Utility Bonds

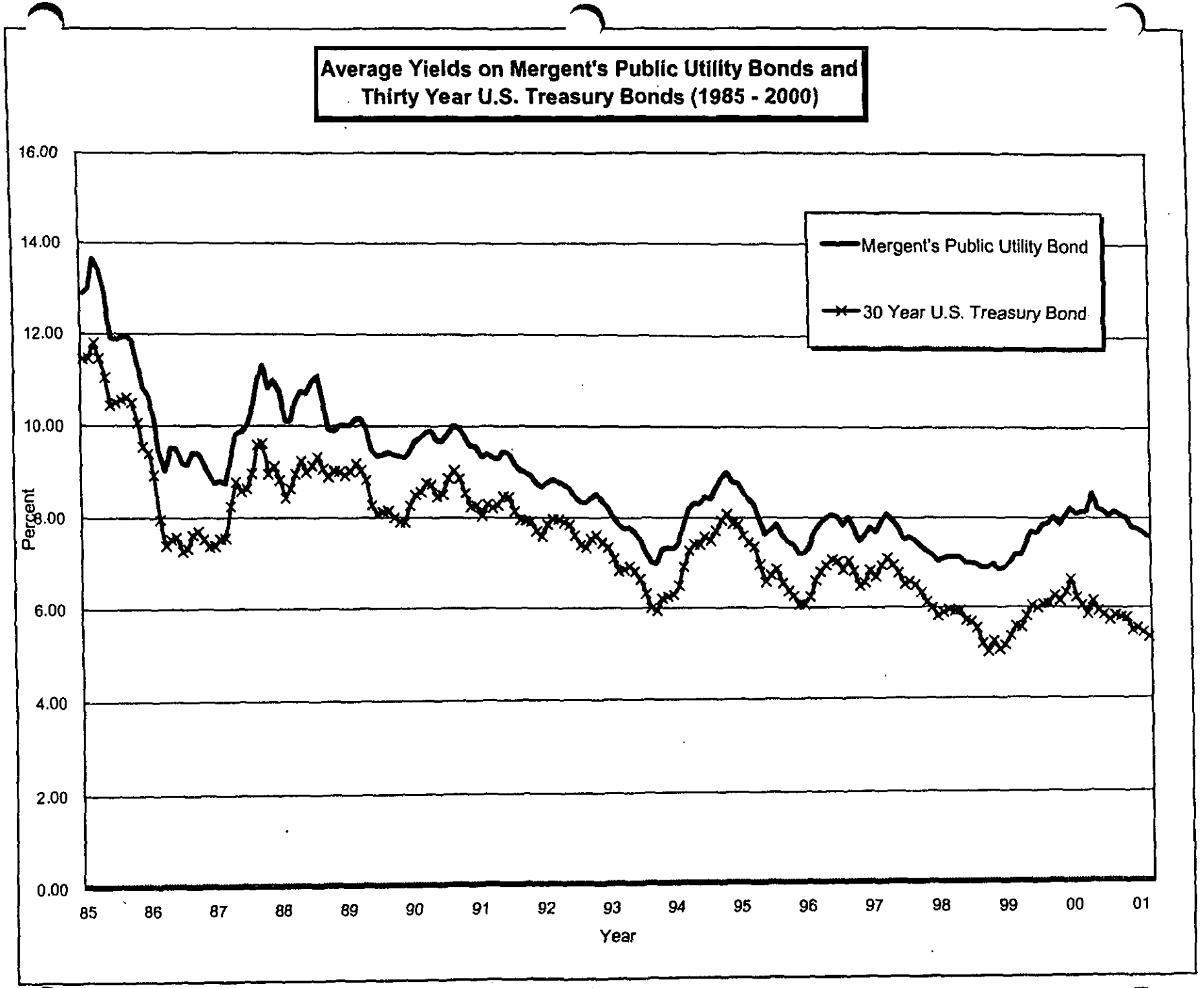
Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1985	12.88	Jan 1989	10.02	Jan 1993	8.23	Jan 1997	7.79
Feb	13.00	Feb	10.02	Feb	8.00	Feb	7.68
Mar	13.66	Mar	10.16	Mar	7.85	Mar	7.92
Apr	13.42	Apr	10.14	Apr	7.76	Apr	8.08
May	12.89	May	9.92	May	7.78	May	7.94
Jun	11.91	Jun	9.49	Jun	7.68	Jun	7.77
Jul	11.88	Jul	9.34	Jul	7.53	Jul	7.52
Aug	11.93	Aug	9.37	Aug	7.21	Aug	7.57
Sep	11.95	Sep	9.43	Sep	7.01	Sep	7.50
Oct	11.84	Oct	9.37	Oct	6.99	Oct	7.37
Nov	11.33	Nov	9.33	Nov	7.30	Nov	7.24
Dec	10.82	Dec	9.31	Dec	7.33	Dec	7.16
Jan 1986	10.66	Jan 1990	9.44	Jan 1994	7.31	Jan 1998	7.03
Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09
Mar	9.33	Mar	9.75	Mar	7.83	Mar	7.13
Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12
May	9.52	May	9.89	May	8.32	May	7.11
Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99
Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99
Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96
Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88
Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88
Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96
Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84
Jan 1987	8.77	Jan 1991	9.56	Jan 1995	8.77	Jan 1999	6.87
Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00
Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18
Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16
May	9.82	May	9.29	May	7.93	May	7.42
Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70
Jul	10.01	Jul	9.40	Jul	7.73	Jul	7.66
Aug	10.33	Aug	9.16	Aug	7.86	Aug	7.86
Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87
Oct	11.32	Oct	8.99	Oct	7.46	Oct	8.02
Nov	10.82	Nov	8.93	Nov	7.40	Nov	7.86
Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04
Jan 1988	10.75	Jan 1992	8.67	Jan 1996	7.20	Jan 2000	8.22
Feb	10.11	Feb	8.77	Feb	7.37	Feb	8.10
Mar	10.11	Mar	8.84	Mar	7.72	Mar	8.14
Apr	10.53	Apr	8.79	Apr	7.88	Apr	8.14
May	10.75	May	8.72	May	7.99	May	8.56
Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22
Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17
Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.06
Sep	10.56	Sep	8.32	Sep	8.01	Sep	8.15
Oct	9.92	Oct	8.44	Oct	7.76	Oct	8.08
Nov	9.89	Nov	8.53	Nov	7.48	Nov	8.03
Dec	10.02	Dec	8.36	Dec	7.58	Dec	7.79
						Jan 2001	7.76
						Feb	7.69
						Mar	7.59

Source: Mergent Bond Record.

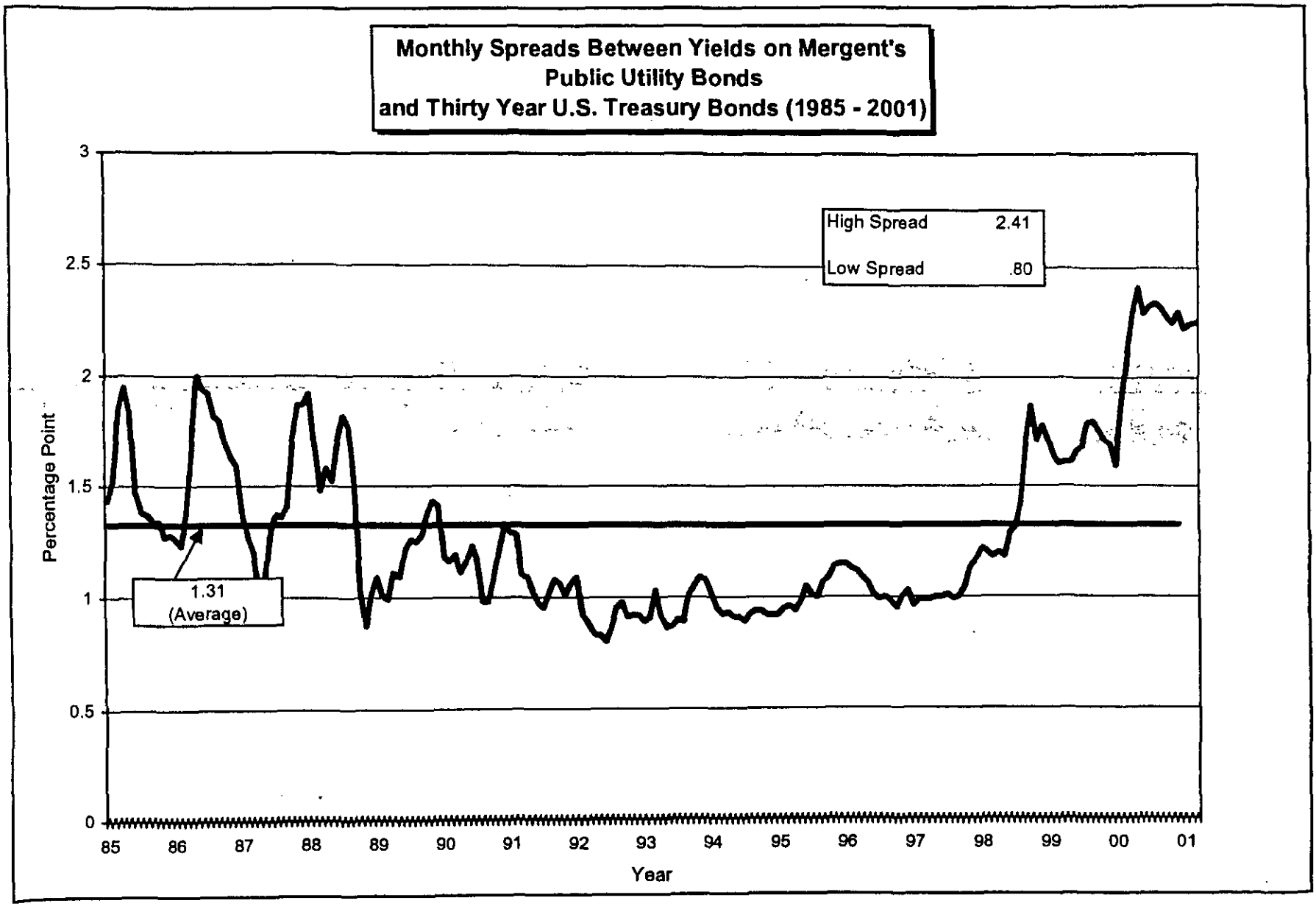
Average Yields on Thirty Year U.S. Treasury Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1985	11.45	Jan 1989	8.93	Jan 1993	7.34	Jan 1997	6.83
Feb	11.47	Feb	9.01	Feb	7.09	Feb	6.69
Mar	11.81	Mar	9.17	Mar	6.82	Mar	6.93
Apr	11.47	Apr	9.03	Apr	6.85	Apr	7.09
May	11.05	May	8.83	May	6.92	May	6.94
Jun	10.44	Jun	8.27	Jun	6.81	Jun	6.77
Jul	10.50	Jul	8.08	Jul	6.63	Jul	6.51
Aug	10.56	Aug	8.12	Aug	6.32	Aug	6.58
Sep	10.61	Sep	8.15	Sep	6.00	Sep	6.50
Oct	10.50	Oct	8.00	Oct	5.94	Oct	6.33
Nov	10.06	Nov	7.90	Nov	6.21	Nov	6.11
Dec	9.54	Dec	7.90	Dec	6.25	Dec	5.99
Jan 1986	9.40	Jan 1990	8.26	Jan 1994	6.29	Jan 1998	5.81
Feb	8.93	Feb	8.50	Feb	6.49	Feb	5.89
Mar	7.96	Mar	8.56	Mar	6.91	Mar	5.95
Apr	7.39	Apr	8.76	Apr	7.27	Apr	5.92
May	7.52	May	8.73	May	7.41	May	5.93
Jun	7.57	Jun	8.46	Jun	7.40	Jun	5.70
Jul	7.27	Jul	8.50	Jul	7.58	Jul	5.68
Aug	7.33	Aug	8.86	Aug	7.49	Aug	5.54
Sep	7.62	Sep	9.03	Sep	7.71	Sep	5.20
Oct	7.70	Oct	8.86	Oct	7.94	Oct	5.01
Nov	7.52	Nov	8.54	Nov	8.08	Nov	5.25
Dec	7.37	Dec	8.24	Dec	7.87	Dec	5.06
Jan 1987	7.39	Jan 1991	8.27	Jan 1995	7.85	Jan 1999	5.16
Feb	7.54	Feb	8.03	Feb	7.61	Feb	5.37
Mar	7.55	Mar	8.29	Mar	7.45	Mar	5.58
Apr	8.25	Apr	8.21	Apr	7.36	Apr	5.55
May	8.78	May	8.27	May	6.95	May	5.81
Jun	8.57	Jun	8.47	Jun	6.57	Jun	6.04
Jul	8.64	Jul	8.45	Jul	6.72	Jul	5.98
Aug	8.97	Aug	8.14	Aug	6.86	Aug	6.07
Sep	9.59	Sep	7.95	Sep	6.55	Sep	6.07
Oct	9.61	Oct	7.93	Oct	6.37	Oct	6.26
Nov	8.95	Nov	7.92	Nov	6.26	Nov	6.15
Dec	9.12	Dec	7.70	Dec	6.06	Dec	6.35
Jan 1988	8.83	Jan 1992	7.58	Jan 1996	6.05	Jan 2000	6.63
Feb	8.43	Feb	7.85	Feb	6.24	Feb	6.23
Mar	8.63	Mar	7.97	Mar	6.60	Mar	6.05
Apr	8.95	Apr	7.96	Apr	6.79	Apr	5.85
May	9.23	May	7.89	May	6.93	May	6.15
Jun	9.00	Jun	7.84	Jun	7.06	Jun	5.93
Jul	9.14	Jul	7.60	Jul	7.03	Jul	5.85
Aug	9.32	Aug	7.39	Aug	6.84	Aug	5.72
Sep	9.06	Sep	7.34	Sep	7.03	Sep	5.83
Oct	8.89	Oct	7.53	Oct	6.81	Oct	5.80
Nov	9.02	Nov	7.61	Nov	6.48	Nov	5.78
Dec	9.01	Dec	7.44	Dec	6.55	Dec	5.49
						Jan 2001	5.54
						Feb	5.45
						Mar	5.34

Source: Federal Reserve Bulletin and Federal Reserve Website: http://www.stls.frb.org/fred/data/irates/gs30


Average Yields on Mergent's Public Utility Bonds and Thirty Year U.S. Treasury Bonds (1985 - 2000)
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
Percent
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01
Year
Mergent's Public Utility Bond
30 Year U.S. Treasury Bond

Schedule 5-3


Monthly Spreads Between Yields on Mergent's
Public Utility Bonds
and Thirty Year U.S. Treasury Bonds (1985 - 2001)
High Spread 2.41
Low Spread .80
1.31
(Average)
Percentage Point
Year
3
2.5
2
1.5
1
0.5
0
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
00
01

Schedule 5-4

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Economic Estimates and Projections, 2001-2003

	Inflation Rate			Real GDP			Unemployment			3-Mo. T-Bill Rate			30-Yr. T-Bond Rate		
Source	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
The Budget & Economic Outlook: FY2002-2011 *(1/31/01)*	2.80%	2.80%	2.70%	2.40%	3.40%	3.30%	4.40%	4.50%	4.50%	4.80%	4.90%	5.00%	N.A	N.A.	N.A.
Value Line's "Investment Survey" (3/2/01)	2.60%	2.50%	2.60%	1.90%	3.40%	3.50%	4.50%	4.40%	4.60%	4.80%	5.10%	5.20%	5.50%	5.80%	6.00%
Current rate	2.90%			5.00% *			4.20% **			3.97%			5.64%		

Notes: N.A. = Not Available.
* Reflects annual increase from 1999 to 2000
** Rate reported by Bureau of Labor Statistics for the period ending February 2001

Sources of Current Rates: Federal Reserve website, http://www.stls.frb.org/fred/data/irates.html, April 2001.
U.S. Department of Commerce, Bureau of Economic Analysis, for the 12-month period ending December 31, 2000
The Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, April 17, 2001.
ftp.bls.gov/cpihome.htm

Other Sources: The Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2002-2011, January 2001
http://www.cbo.gov.showdoc.cfm?index=1820&sequence=3

Schedule 6

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Historical Consolidated Capital Structures for Union Electric Company

(Thousands of Dollars)

Capital Components	1996	1997	1998	1999	2000
Common Equity	$2,354,801.0	$2,387,500.0	$2,424,125.0	$2,433,682.0	$2,570,652.0
Preferred Stock	219,100.0	221,200.0	155,197.0	155,197.0	155,197.0
Long-Term Debt	1,798,671.0	1,780,500.0	1,674,311.0	1,882,601.0	1,760,439.0
Short-Term Debt	0.0	0.0	0.0	0.0	0.0
Total	$4,372,572.0	$4,389,200.0	$4,253,633.0	$4,471,480.0	$4,486,288.0

Capital Structure	1996	1997	1998	1999	2000
Common Equity	53.85%	54.39%	56.99%	54.43%	57.30%
Preferred Stock	5.01%	5.04%	3.65%	3.47%	3.46%
Long-Term Debt	41.14%	40.57%	39.36%	42.10%	39.24%
Short-Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Note: The amount of Long-Term Debt includes Current Maturities.
Short-term Debt has not been noted on this schedule since CWIP usually exceeds outstanding short-term debt balances.

Source: Union Electric Company's Shareholder Annual Reports and Union Electric Company's response to Staff's Data Information Request N

Schedule 7

Union Electric Company
d/b/a AmerenUE
CASE NO. EC-2002-1

Selected Financial Ratios for Union Electric Company
(Consolidated Basis)

Financial Ratios	1996	1997	1998	1999	2000
Return on Year-End Common Equity	12.38%	13.98%	12.84%	13.99%	14.60%
Earnings Per Common Share	$2.86	$2.44	$2.82	$2.81	$3.33
Common Dividend Payout Ratio	87.80%	88.58%	83.40%	96.55%	76.00%
Year-End Market Price Per Common Share	$38.500	$43.250	$42.687	$32.812	$46.310
Year-End Book Value Per Common Share	$23.06	$22.00	$22.27	$22.52	$23.30
Year-End Market to Book Ratio	1.67 x	1.97 x	1.92 x	1.46 x	1.99 x
Pre-Tax Interest Coverage Ratio	4.55 x	4.73 x	5.13 x	5.83 x	5.22 x

Notes:

Return on Year-End Common Equity = Net Income Available for Common Stock / Year-End Common Shareholders' Eq

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 Sha

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

Sources: Union Electric Company's Shareholder Annual Reports, Ameren Corporation Shareholder Annual Reports, Union Electric Company's response to Staff's Data Information Request No. 3801, Standard and Poor's Stoc and Standard & Poor's Corporation's Utility Rating Service.

Schedule 8

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Capital Structure as of June 30, 2000
for Union Electric Company (Consolidated Basis)
(thousands of dollars)

Capital Component	Amount in Dollars	Percentage of Capital
Common Stock Equity	$2,417,211.0	53.66%
Preferred Stock	155,197.0	3.44%
Long-Term Debt	1,932,444.0	42.90%
Short-Term Debt	0	0.00%
Total Capitalization	**$4,504,852.0**	**100.00%**

Financial Ratio Benchmarks
Total Debt / Total Capital - Including Preferred Stock

Standard & Poor's Corporation's Utility Rating Service 7/7/2000	AA	A	BBB
Electric Companies (Average)	49.00%	58.50%	62.43%

Source: Union Electric Company's response to Staff's Data Information Request Nos. 3801 and 3802.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Capital Structure as of December 31, 2000
for Union Electric Company (Consolidated Basis)
(thousands of dollars)

Capital Component	Amount in Dollars	Percentage of Capital
Common Stock Equity	$2,570,652.0	57.30%
Preferred Stock	155,197.0	3.46%
Long-Term Debt	1,760,439.0	39.24%
Short-Term Debt	0	0.00%
Total Capitalization	**$4,486,288.0**	**100.00%**

Financial Ratio Benchmarks
Total Debt / Total Capital - Including Preferred Stock

Standard & Poor's *Corporation's* Utility Rating Service 7/7/2000	AA	A	BBB
Electric Companies (Average)	49.00%	58.50%	62.43%

Source: Union Electric Company's response to Staff's Data Information Request Nos. 3801 and 3802.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for Ameren Corporation

Year	Dividends Per Share	Earnings Per Share	Book Value Per Share
1990	$2.10	$2.74	$19.79
1991	$2.18	$3.01	$20.62
1992	$2.26	$2.65	$21.19
1993	$2.34	$2.77	$21.60
1994	$2.40	$3.01	$22.22
1995	$2.46	$2.95	$22.71
1996	$2.51	$2.86	$23.06
1997	$2.54	$2.44	$22.00
1998	$2.54	$2.82	$22.27
1999	$2.54	$2.81	$22.52
2000	$2.54	$3.33	$23.30

Annual Compound Growth Rates

	DPS	EPS	BVPS
1990 - 2000	1.92%	1.97%	1.65%
1995 - 2000	0.64%	2.45%	0.51%

Source: Value Line Investment Survey, January 5 and April 6, 2001.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Historical and Projected Growth Rates for Ameren Corporation

Historical Growth Rates

DPS Annual Compound Growth (1995 - 2000)	0.64%
DPS Annual Compound Growth (1990 - 2000)	1.92%
BVPS Annual Compound Growth (1995 - 2000)	0.51%
BVPS Annual Compound Growth (1990 - 2000)	1.65%
EPS Annual Compound Growth (1995 - 2000)	2.45%
EPS Annual Compound Growth (1990 - 2000)	1.97%
Average of Historical Growth Rates	1.52%

Projected Growth Rates from Outside Sources

5 Year Growth Forecast (Median) I/B/E/S Inc.'s Institutional Brokers Estimate System March 15, 2001	3.00%
5-Year Projected EPS Growth Rate Standard & Poor's Corporation's Earnings Guide April 2001	4.00%
Average of Projected Growth Rates	3.50%
Average of historical and projected growth	2.51%
Proposed Range of Growth for Union Electric Company:	**2.00% - 3.00%**

Source: See Schedule 11 for Historical Growth Rate Information.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Monthly High / Low Average Dividend Yields
for Ameren Corporation

	(1)	(2)	(3)	(4)	(5)
Month / Year	High Stock Price	Low Stock Price	Average High / Low Price	Expected Dividend	Projected Dividend Yield
January 2000	34.250	31.563	$32.907	$2.54	7.72%
February 2000	33.438	28.500	$30.969	$2.54	8.20%
March 2000	31.188	27.563	$29.376	$2.54	8.65%
April 2000	38.000	30.625	$34.313	$2.54	7.40%
May 2000	37.625	34.688	$36.157	$2.54	7.03%
June 2000	36.813	33.313	$35.063	$2.54	7.24%
Average			**$33.131**		**7.71%**

Proposed Dividend Yield
for Ameren Corporation: **7.71%**

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

Column 4 = Estimated Dividends Declared per share represents the average projected dividends for 2001 and 2002.
Column 5 = (Column 4 / Column 3).

Sources: Standard and Poor's Stock Guide
Value Line Investment Survey, April 6, 2001

Schedule 13

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Monthly High / Low Average Dividend Yields
for Ameren Corporation

Month / Year	(1) High Stock Price	(2) Low Stock Price	(3) Average High / Low Price	(4) Expected Dividend	(5) Projected Dividend Yield
July 2000	37.000	34.063	$35.532	$2.54	7.15%
August 2000	40.625	36.188	$38.407	$2.54	6.61%
September 2000	43.680	37.430	$40.555	$2.54	6.26%
October 2000	42.500	37.370	$39.935	$2.54	6.36%
November 2000	43.375	39.875	$41.625	$2.54	6.10%
December 2000	46.930	42.870	$44.900	$2.54	5.66%
Average			**$40.159**		**6.36%**

Proposed Dividend Yield
for Ameren Corporation: **6.36%**

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

Column 4 = Estimated Dividends Declared per share represents the average projected dividends for 2001 and 2002.

Column 5 = (Column 4 / Column 3).

Sources: Standard and Poor's Stock Guide
Value Line investment Survey, April 6, 2001

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Discounted Cash Flow (DCF) Costs of Common Equity Estimates for Ameren Corporation

UE's Cost of Common Equity	=	Dividend Yield	+	Expected Growth
9.71%	=	7.71%	+	2.00%
10.71%	=	7.71%	+	3.00%

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: P_0 = present price and D1 = expected dividends, then

$$P_0 = \frac{D1}{(1+k)} + \frac{P_0 (1+g)}{(1+k)} \quad \text{or}$$

$$k = \frac{D1}{P_0} + g$$

Thus:

Cost of Common Equity = Dividend Yield + Expected Growth

Notes: See Schedule 13 for calculation of proposed dividend yield for Ameren Corporation.

See Schedule 12 for calculation of proposed range of growth for Ameren Corporation.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Discounted Cash Flow (DCF) Costs of Common Equity Estimates for Ameren Corporation

UE's Cost of Common Equity	=	**Dividend Yield**	+	**Expected Growth**
8.36%	=	**6.36%**	+	**2.00%**
9.36%	=	**6.36%**	+	**3.00%**

Discounted Cash Flow (DCF) Model Derivation

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

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

Letting: P_0 = present price and D1 = expected dividends, then

$$P_0 = \frac{D1}{(1+k)} + \frac{P_0(1+g)}{(1+k)} \quad \text{or}$$

$$k = \frac{D1}{P_0} + g$$

Thus:

Cost of Common Equity = *Dividend Yield* + Expected Growth

Notes: See Schedule 14 for calculation of proposed dividend yield for Ameren Corporation.

See Schedule 12 for calculation of proposed range of growth for Ameren Corporation.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Average Risk Premium above the Yields of 30 Year Treasury Bonds for Ameren Corporation's Expected Return on Common Equity

Mo/Year	AEE's Expected ROE	30-Year U.S. Treasury Bond Yields	AEE's Risk Premium	Mo/Year	AEE's Expected ROE	30-Year U.S. Treasury Bond Yields	AEE's Risk Premium
Jan 1991	13.50%	8.27%	5.23%	Jan 1996	11.50%	6.05%	5.45%
Feb	13.50%	8.03%	5.47%	Feb	11.50%	6.24%	5.26%
Mar	13.50%	8.29%	5.21%	Mar	11.50%	6.60%	4.90%
Apr	13.00%	8.21%	4.79%	Apr	13.00%	6.79%	6.21%
May	13.00%	8.27%	4.73%	May	13.00%	6.93%	6.07%
Jun	13.00%	8.47%	4.53%	Jun	13.00%	7.06%	5.94%
Jul	14.00%	8.45%	5.55%	Jul	13.00%	7.03%	5.97%
Aug	14.00%	8.14%	5.86%	Aug	13.00%	6.84%	6.16%
Sep	14.00%	7.95%	6.05%	Sep	13.00%	7.03%	5.97%
Oct	14.50%	7.93%	6.57%	Oct	13.00%	6.81%	6.19%
Nov	14.50%	7.92%	6.58%	Nov	13.00%	6.48%	6.52%
Dec	14.50%	7.70%	6.80%	Dec	13.00%	6.55%	6.45%
Jan 1992	13.50%	7.58%	5.92%	Jan 1997	13.00%	6.83%	6.17%
Feb	13.50%	7.85%	5.65%	Feb	13.00%	6.69%	6.31%
Mar	13.50%	7.97%	5.53%	Mar	13.00%	6.93%	6.07%
Apr	13.00%	7.96%	5.04%	Apr	12.50%	7.09%	5.41%
May	13.00%	7.89%	5.11%	May	12.50%	6.94%	5.56%
Jun	13.00%	7.84%	5.16%	Jun	12.50%	6.77%	5.73%
Jul	13.00%	7.60%	5.40%	Jul	13.00%	6.51%	6.49%
Aug	13.00%	7.39%	5.61%	Aug	13.00%	6.58%	6.42%
Sep	13.00%	7.34%	5.66%	Sep	13.00%	6.50%	6.50%
Oct	12.50%	7.53%	4.97%	Oct	13.00%	6.33%	6.67%
Nov	12.50%	7.61%	4.89%	Nov	13.00%	6.11%	6.89%
Dec	12.50%	7.44%	5.06%	Dec	13.00%	5.99%	7.01%
Jan 1993	13.00%	7.34%	5.66%	Jan 1998	12.50%	5.81%	6.69%
Feb	13.00%	7.09%	5.91%	Feb	12.50%	5.89%	6.61%
Mar	13.00%	6.82%	6.18%	Mar	12.50%	5.95%	6.55%
Apr	12.50%	6.85%	5.65%	Apr	12.00%	5.92%	6.08%
May	12.50%	6.92%	5.58%	May	12.00%	5.93%	6.07%
Jun	12.50%	6.81%	5.69%	Jun	12.00%	5.70%	6.30%
Jul	12.50%	6.63%	5.87%	Jul	11.50%	5.68%	5.82%
Aug	12.50%	6.32%	6.18%	Aug	11.50%	5.54%	5.96%
Sep	12.50%	6.00%	6.50%	Sep	11.50%	5.20%	6.30%
Oct	13.50%	5.94%	7.56%	Oct	12.00%	5.01%	6.99%
Nov	13.50%	6.21%	7.29%	Nov	12.00%	5.25%	6.75%
Dec	13.50%	6.25%	7.25%	Dec	12.00%	5.06%	6.94%
Jan 1994	13.50%	6.29%	7.21%	Jan 1999	13.00%	5.16%	7.84%
Feb	13.50%	6.49%	7.01%	Feb	13.00%	5.37%	7.63%
Mar	13.50%	6.91%	6.59%	Mar	13.00%	5.58%	7.42%
Apr	13.50%	7.27%	6.23%	Apr	13.00%	5.55%	7.45%
May	13.50%	7.41%	6.09%	May	13.00%	5.81%	7.19%
Jun	13.50%	7.40%	6.10%	Jun	13.00%	6.04%	6.96%
Jul	13.00%	7.58%	5.42%	Jul	13.00%	5.98%	7.02%
Aug	13.00%	7.49%	5.51%	Aug	13.00%	6.07%	6.93%
Sep	13.00%	7.71%	5.29%	Sep	13.00%	6.07%	6.93%
Oct	13.50%	7.94%	5.56%	Oct	13.00%	6.26%	6.74%
Nov	13.50%	8.08%	5.42%	Nov	13.00%	6.15%	6.85%
Dec	13.50%	7.87%	5.63%	Dec	13.00%	6.35%	6.65%
Jan 1995	12.50%	7.85%	4.65%	Jan 2000	13.50%	6.63%	6.87%
Feb	12.50%	7.61%	4.89%	Feb	13.50%	6.23%	7.27%
Mar	12.50%	7.45%	5.05%	Mar	13.50%	6.05%	7.45%
Apr	12.50%	7.36%	5.14%	Apr	13.50%	5.85%	7.65%
May	12.50%	6.95%	5.55%	May	13.50%	6.15%	7.35%
Jun	12.50%	6.57%	5.93%	Jun	13.50%	5.93%	7.57%
Jul	12.00%	6.72%	5.28%	Jul	13.50%	5.85%	7.65%
Aug	12.00%	6.86%	5.14%	Aug	13.50%	5.72%	7.78%
Sep	12.00%	6.55%	5.45%	Sep	13.50%	5.83%	7.67%
Oct	12.00%	6.37%	5.63%	Oct	14.00%	5.80%	8.20%
Nov	12.00%	6.26%	5.74%	Nov	14.00%	5.78%	8.22%
Dec	12.00%	6.06%	5.94%	Dec	14.00%	5.49%	8.51%

Summary Information	(Jan 1991 - Dec 2000)
Average Risk Premium:	6.20%
High Risk Premium:	8.51%
Low Risk Premium:	4.53%

Sources: The Value Line Investment Survey: Ratings & Reports
St. Louis Federal Reserve Website: http://www.stls.frb.org/fred/data/irates/gs30

11/01/2001

Schedule 17

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Risk Premium Costs of Equity Estimates
for Ameren Corporation

AEE's *Cost of* Common Equity		30-Year U.S. Treasury *Bond* (December 11, 2000)		*Equity* Risk *Premium* (1/90 - 12/00)
11.74%	=	5.54%	+	6.20%

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:

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

where:

The Current Cost of Debt is represented by the yield on 30-Year U.S. Treasury Bonds,
The appropriate rate was determined by using the yield on U.S. Treasury Bonds on December 11, 2000

The Equity Risk Premium represents the difference between AEE's expected return on common equity (ROE) as projected in the Value Line Invetment Survey and the yield on U.S. Treasury Bonds on December 11, 2000. The appropriate Equity Risk Premium was determined to be the average risk premium for the period January 1990 through December 2000. See Schedule 17 for the calculation of the Equity Risk Premium of 6.20%.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Capital Asset Pricing Model (CAPM) Costs of Equity Estimates
Ameren Corporation

AEE's Cost of Common Equit	=	Risk Free Rate	+	(	(AEE's Beta	*	Market) Risk Premium)	
9.83%	=	5.54%	+	(	0.55	*	7.80%	)
10.72%	=	5.54%	+	(	0.55	*	9.41%	)

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 *5.54% on December 11, 2000 as published on WWW.MARKETWATCH.COM.*

The Beta represents the relative movement and relative risk between a particular stock and the market. The approriate Beta for AEE was determined to be 0.55 as published in The Value Line Investment Survey: Ratings & Reports, January 5, 2001.

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 was determined to be 7.80% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2000 Yearbook for the period 1926 - 1999 and 9.41% for the period 1990-1999.

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Criteria for Selecting Comparable Electric Utility Companies

Electric Utility Company	(1) Electric Utility Pulicly Traded	(2) Information Printed In Value Line	(3) S&P Utility Credit Rating "AA- to BBB+"	(4) Total Capital >$5.0 Billion <$6.0 Billion	(5) Positive DPS Annual Compound Growth Rate (1990 - 2000)	(6) No Missouri Operations	(7) Met All Criteria
Ameren Corp.	Yes	Yes	Yes	Yes	Yes	No	
American Electric Power	Yes	Yes	Yes	No			
Cinergy Corp.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consolidated Edison	Yes	Yes	Yes	No			
Constellation Energy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DTE Energy	Yes	Yes	No				
Dominion Resources	Yes	Yes	Yes	No			
Duke Energy	Yes	Yes	Yes	No			
Exelon Corp.	Yes	Yes	Yes	No			
FPL Group	Yes	Yes	Yes	No			
NiSource Inc.	Yes	Yes	No				
PG&E Corp.	Yes	Yes	No				
PPL Corp.	Yes	Yes	Yes	Yes	No		
Potomac Electric Power	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Progress Energy	Yes	Yes	Yes	No			
Public Service Enterprise	Yes	Yes	No				
Reliant Energy	Yes	Yes	Yes	No			
Southern Co..	Yes	Yes	Yes	No			
Southern Energy Inc.	Yes	Yes	No				

Sources: Columns 1, 2, 4 & 5 = The Value Line Investment Survey: Ratings and Reports, January 5, 2001, March 9, 2001.

Column 3 = Standard and Poor's Utilities and Perspectives, April 30, 2001.

Schedule 20

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

The Three Comparable Electric Utility Companies

Number	Ticker Symbol	Company Name
1	CIN	Cinergy
2	CEG	Constellation Energy Group
3	POM	Potomac Electric Power

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

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

	Dividends Per Share		Earnings Per Share		Book Value Per Share	
Company Name	1990	2000	1990	2000	1990	2000
Cinergy	$1.60	$1.80	$2.75	$2.55	$17.91	$17.45
Constellation Energy Group	$1.40	$1.68	$1.40	$2.30	$17.10	$20.95
Potomac Electric Power	$1.52	$1.66	$1.62	$1.62	$14.39	$16.80

Annual Compound Growth Rates

Company Name	DPS 1990 - 2000	EPS 1990 - 2000	BVPS 1990 - 2000	Average of 10 Year Annual Compound Growth Rates
Cinergy	1.18%	-0.75%	-0.26%	0.06%
Constellation Energy Group	1.84%	5.09%	2.05%	2.99%
Potomac Electric Power	0.88%	0.00%	1.56%	0.82%
Average	**1.30%**	**1.45%**	**1.12%**	**1.29%**
Standard Deviation	0.40%	2.59%	0.99%	1.24%

Source: The Value Line Investment Survey: Ratings & Reports, January 5, 2001 and March 9, 2001.
EPS and BVPS for Cinergy and BVPS for Potomac are estimates. Remaining EPS, DPS and BVPS are actual.

Schedule 22

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Historical and Projected Growth Rates
for the Three 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
Cinergy	0.06%	5.00%	5.00%	5.50%	5.17%	2.61%
Constellation Energy Group	2.99%	9.00%	8.00%	13.00%	10.00%	6.50%
Potomac Electric Power	0.82%	6.00%	5.00%	7.00%	6.00%	3.41%
Average	**1.29%**	**6.67%**	**6.00%**	**8.50%**	**7.06%**	**4.17%**

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 22.

Column 2 = I/B/E/S Inc.'s Institutional Brokers Estimate System, March 15, 2001.

Column 3 = Standard & Poor's Corporation's Earnings Guide, April 2001.

Column 4 = Value Line Investment Survey, Ratings & Reports, January 5 and March 9, 2001.

Schedule 23

11/01/2001

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Average High / Low Stock Price for September 2000 through December 2000
for the Three Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	September 2000		October 2000		November 2000		December 2000		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	(Sep 2000-Dec 2000)
Cinergy	$32.870	$28.500	$33.250	$29.120	$32.500	$29.680	$35.250	$31.180	$31.544
Constellation Energy Group	50.500	38.620	52.060	38.250	44.180	39.810	45.120	37.870	43.301
Potomac Electric Power	25.560	22.310	27.000	23.620	23.310	21.500	24.900	22.500	23.838

Notes:

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

Sources: Standard and Poor's Stock Guide

Schedule 24

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

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

Company Name	(1) Expected Annual Dividend (Avg 2000-2001)	(2) Average High/Low Stock Price	(3) Projected Dividend Yield	(4) Average of Historical & Projected Growth Rate	(5) Estimated Cost of Common Equity
Cinergy	$1.820	$31.544	5.77%	2.61%	8.38%
Constellation Energy Group	$1.680	$43.301	3.88%	6.50%	10.38%
Potomac Electric Power	$1.660	$23.838	6.96%	3.41%	10.37%
Average			**5.54%**	**4.17%**	**9.71%**

Notes: Column 1 = Estimated Dividends Declared per share represents the average actual and projected dividends for 2000 and 2001.

Column 3 = (Column 1 / Column 2).

Column 5 = (Column 3 + Column 4).

Sources: Column 1 = The Value Line Investment Survey: Ratings & Reports, January 5 and March 9, 2000.

Column 2 = Schedule 24.

Column 4 = Schedule 23.

Schedule 25

11/01/2001

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

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

Company Name	(1) Risk Free Rate	(2) Company's Value Line Beta	(3) Market Risk Premium	(4) Market Risk Premium	(5) CAPM Cost of Common Equity (High)	(6) CAPM Cost of Common Equity (Low)
Cinergy	5.54%	0.60	9.41%	7.80%	11.19%	10.22%
Constellation Energy Group	5.54%	0.50	9.41%	7.80%	10.25%	9.44%
Potomac Electric Power	5.54%	0.50	9.41%	7.80%	10.25%	9.44%
Average		**0.53**			**10.56%**	**9.70%**

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 yield on 30-Year U.S. Treasury Bonds. The approriate rate was determined to be 5.54% for the period ending December 11, 2000 as published on the Marketwatch website (www.marketwatch.com).

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, Ratings and Reports, April 5 and March 9, 2001.

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 was determined to be 9.41% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2000 Yearbook for the period 1990 - 1999.

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 was determined to be 7.80% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2000 Yearbook for the period 1926 - 1999.

Schedule 2C

Union Electric Company
d/b/a AmerenUE
CASE NO. EC-2002-1

Pro Forma Pre-Tax Interest Coverage Ratios for Union Electric Company

	9.04%	9.54%	10.04%
1. Common Equity (see Schedule 10)	$2,570,652	$2,570,652	$2,570,652
2. Earnings Allowed (ROE * [1])	$232,387	$245,240	$258,093
3. Preferred Dividends (see Schedule 12)	$8,817	$8,817	$8,817
4. Net Income Available ([2] + [3])	$241,204	$254,057	$266,910
5. Tax Multiplier (1 / { 1 - Tax Rate })	1.6231	1.6231	1.6231
6. Pre-Tax Earnings ([4] * [5])	$391,493	$412,354	$433,216
7. Annual Interest Costs (see Schedule 11-1)	$118,784	$118,784	$118,784
8. Avail. for Coverage ([6] + [7])	$510,277	$531,138	$552,000
9. **Pro Forma Pre-Tax Interest Coverage** ([8] / [7])	**4.30 x**	**4.47 x**	**4.65 x**

Electric Utility Financial Ratio Benchmarks - Pretax Interest Coverage (x)

Standard & Poor's Corporation's Utility Rating Service 6/7/2000	**"AA"**	**"A"**	**"BBB"**
	4.17x	3.40x	2.33

Schedule 27

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

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 $$RR = O + (V - D)R$$

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

RR = 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 = $iL + dP + kE$ 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

UNION ELECTRIC COMPANY
d/b/a AmerenUE
CASE NO. EC-2002-1

Weighted Cost of Capital as of December 31, 2000
for Union Electric Company (Consolidated Basis)

Capital Component	Percentage of Capital		Embedded Cost	Weighted Cost of Capital Using Common Equity Return of: 9.04%	9.54%	10.04%
Common Stock Equity	57.30%	57.30%	-----	5.18%	5.47%	5.75%
Preferred Stock	3.46%	3.46%	5.72%	0.20%	0.20%	0.20%
Long-Term Debt	39.24%	39.24%	7.00%	2.75%	2.75%	2.75%
Short-Term Debt	0.00%		0.00%	0.00%	0.00%	0.00%
Total	**100.00%**			**8.13%**	**8.42%**	**8.70%**

Schedule 29

11/01/2001

Exhibit No.:	
Issues:	*Rate of Return*
Witness:	*Ronald L. Bible*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Direct Testimony*
Case Nos.:	*EC-2002-1*
Date Testimony Prepared:	*March 1, 2002*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

RONALD L. BIBLE

UNION ELECTRIC COMPANY
d/b/a AMERENUE

CASE NO. EC-2002-1

Jefferson City, Missouri
March 2002

3
EXHIBIT
4/16/02 KRm

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RONALD L. BIBLE

UNION ELECTRIC COMPANY

d/b/a AMERENUE

CASE NO. EC-2002-1

DIRECT TESTIMONY

OF

RONALD L. BIBLE

UNION ELECTRIC dba AMERENUE

CASE NO. EC-2002-1

Q. Please state your name, occupation and business address.

A. My name is Ronald L. Bible. I am employed by the Missouri Public Service Commission (MoPSC) as the Manager of the Financial Analysis Department. My business address is 200 Madison, Jefferson City, Missouri 65102.

Q. Please describe your educational and professional background.

A. In 1981, I earned a Master of Business Administration degree with an emphasis in Finance and Investments from the Southern Illinois University at Edwardsville, Illinois. In 1976, I earned a Bachelor of Arts degree in Social Science from Colorado State University, Ft. Collins, Colorado.

Q. What is your work experience?

A. I was employed by Credit Union National Association from 1995 to 1997 and by American Express from 1991 to 1995 as a Financial and Investment Analyst/Planner. Prior to that, I was with Voluntary Hospitals of America and Hospital Corporation of America where I performed statistical and financial analysis. Previous to these positions, I was an officer in the United States Air Force and was responsible for a unit that provided statistical analysis.

Q. Have you previously filed testimony before this Commission?

A. Yes. I have testified before the MoPSC a number of times addressing issues including rate of return, proposed financings, and merger and acquisition issues. I have previously filed testimony in this case.

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

A. My testimony is presented to provide a recommendation to the Commission as to a fair and reasonable rate of return (cost of capital) to be applied to the rate base for Union Electric Company d/b/a AmerenUE (AmerenUE). I address the same issues I addressed in my previous filing for this case.

Q. Have you prepared any schedules to your analysis of the cost of capital for AmerenUE?

A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for Union Electric d/b/a AmerenUE, Case No. EC-2002-1" consisting of 26 schedules which are attached to this direct testimony (see Schedule 1).

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

A. My analysis leads me to conclude that the cost of capital for AmerenUE is in the range of 8.01 to 8.61 percent.

Q. What range are you proposing for the return on common equity (ROE) for AmerenUE?

A. I estimate AmerenUE's return on common equity to be in the range of 8.91 percent to 9.91 percent with a midpoint of 9.41 percent.

Economic and Legal Rationale for Regulation

Q. Why are the prices charged to customers by utilities such as AmerenUE 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 which results in lower per unit costs. For instance, it may cost more for two or more competing companies to maintain duplicate electric distribution systems to provide competing residential services to one household. 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 within 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 distribution utility companies such as AmerenUE provide electric distribution services essentially under a monopoly franchise. Therefore, it is clear that AmerenUE 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. What is your understanding of the legal 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 legal 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 conceptual 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";

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

4. A fair and reasonable return can change with economic conditions and capital markets.

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.

Hope 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 further clarifies the *Hope* decision beyond 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).

Pennsylvania is included in my testimony to illustrate the following point: captive ratepayers of public utilities should not be forced to bear the brunt of poor or inept management that results in unnecessarily higher costs. I do not believe that utility companies should be casually subjected to risk of financial failure in a rate case proceeding. However, in the case of poor management, I do not believe it would always be appropriate for a regulatory agency to provide sufficient funds 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.

The courts today still believe that a fair return on common equity should be similar to the return for a business with similar risks, but not as high as a highly profitable or speculative venture requires. 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 the courts have determined that a reasonable return may vary over time as economic and business conditions change. Therefore, it is important to take into consideration the concepts presented by the U. S. Supreme Court, as well as, the historical and projected economic conditions and the business operations of a utility in order to calculate a fair and reasonable rate of return.

Historical Economic Conditions

Q. Please discuss the relevant historical economic conditions in which AmerenUE 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). The Federal

Reserve tries to achieve its monetary policy objectives by controlling the Discount Rate (the Discount Rate is the rate at which member banks borrow directly from the Federal Reserve) and the Fed Funds Rate (the Federal Funds Rate is the interest rate that banks charge each other for overnight lending). At the end of 1982, the U.S. economy was in the early stages of recovery from 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 also 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 of 1990, when the economy entered into a recession.

In December of 1990, the Federal Reserve responded to the slumping economy by lowering the Discount Rate to 6.50 percent. 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 result of lowering the Prime Interest Rate to 6.00 percent. (See Schedule 3.)

In 1993, newly elected President Clinton implemented a plan to raise additional revenues, by increasing certain corporate and personal income tax rates, but perhaps the most important factor for the U.S. economy in 1993 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 which 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 and 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 being increased to 6.75 percent. The Federal Reserve took action 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 0.25 percentage points on two different occasions. This had the effect of lowering the Prime Interest Rate to 8.50 percent. On November 17, 1998, the Federal Reserve lowered the Discount Rate to a rate of 4.50 percent.

The Federal Reserve continued its cycle of raising and lowering interest rates since 1998. In August 1999, the Federal Reserve began raising the Discount Rate. Increases continued until January 2001, when the Federal Reserve began lowering interest rates to help stimulate a slowing economy. The Discount Rate reached 1.25 percent in December 2001. The Prime Interest Rate followed a similar pattern, reaching 4.84 percent in December 2001.

The actions of the Federal Reserve over the last five years have been primarily focused on keeping the level of inflation under control, and they have been successful. The inflation rate, as measured by the *Consumer Price Index - All Urban Consumers* (CPI), was at a high of 3.70 percent in March 2000. The increase in CPI

stood at 3.30 percent for the period ending December 31, 2000 (see Schedule 4-1). What is significant about the low inflation rate is that while inflation has been at historically low levels, the unemployment rate has also dropped to historically low levels. In January 1993, the unemployment rate stood at 7.30 percent and gradually dropped to 4.20 percent for the period ending February 28, 2001. Since then, the unemployment rate has risen to 5.60 percent as of January 2002, due largely to a slowing economy (see Schedule 6).

The combination of low inflation and low unemployment has led to a prosperous economy, as evidenced by the real gross domestic product of the United States. Over the time period of 1993 through the present, real GDP has increased every quarter, although at a slower level as of recently. The stock market, as measured by the Dow Jones Composite Index, has increased by 81.23 percent between August 1, 1996 and February 22, 2001, while the Dow Jones Industrial Index has increased by 88.16 percent over that same time frame. The stock market has increased 18.36 percent as measured by The Value Line Geometric Averages Composite Index from August 1, 1996 through February 22, 2001. It should be noted that the Value Line Composite Index is an equally weighted geometric average of 1,594 companies as compared to the Dow Jones Composite Index, which is a price-weighted arithmetic average of 65 companies. Although the stock market has increased significantly since August 1, 1996, it should be noted that the stock market suffered set backs last year when looking at calendar year returns for the major indexes.

In both August and September 2000, energy movements dominated the CPI. After falling by 2.90 percent in August, energy prices shot up 3.80 percent in September, the biggest advance since a 5.60 percent surge in June 2000. The big rise in