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Witness:	Roberta A. McKiddy
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

ROBERTA A. MCKIDDY

CITIZENS ELECTRIC CORPORATION

CASE NO. ER-2002-217

Jefferson City, Missouri
April 2002

****Denotes Proprietary Information****

NP

DIRECT TESTIMONY

OF

ROBERTA A. MCKIDDY

THE CITIZENS ELECTRIC CORPORATION

CASE NO. ER-2002-217

Q. Please state your name.

A. My name is Roberta A. McKiddy.

Q. Please state your business address.

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

Q. What is your present occupation?

A. I am employed as a Public Utility Financial Analyst with the Missouri Public Service Commission (Commission). I accepted this position in May 1998. It should be noted that prior to my appointment to the Financial Analysis Department, I served in an administrative support position with the Utility Services Division, Accounting Department.

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

A. Yes, I was employed by the State Emergency Management Agency for the state of Missouri. I also have previous experience in the areas of accounting, insurance, real estate lending and consumer protection.

Q. What is your educational background?

A. In June 2000, I earned my Masters in Business Administration from William Woods University in Jefferson City, Missouri. In July 1997, I earned my Bachelor of Science in Business Administration with an emphasis in Finance from Columbia College. I

am currently pursuing a second undergraduate degree with emphasis in Accounting. My projected date of completion is October 2002.

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 for the Missouri jurisdictional electric utility rate base for Citizens Electric Corporation (Citizens).

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

A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for Citizens Electric Corporation, Case No. ER-2002-217" consisting of 15 schedules, which are attached to this direct testimony.

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

A. My analysis leads me to conclude that the current cost of capital for Citizens is in the range of 7.08 percent to 7.63 percent with a midpoint of 7.36 percent.

Economic and Legal Rationale for Regulation

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

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

For services that operate efficiently and have the ability to achieve economies of scale, a monopoly is the most efficient form of market organization. Utility companies can supply service at lower costs if the duplication of facilities by competitors is avoided. This allows the use of larger and more efficient equipment and results in lower per unit costs. For instance, it may cost more to have two or more competing companies maintaining duplicate electric distribution systems and providing 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 to a given territory. This also creates a more stable environment for operating the utility company. Utility regulation acts as a substitute for the economic control of market competition and allows the consumer to receive adequate utility service at a reasonable price.

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

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

Q. Please discuss the legal basis for 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 Case (1877),

2. Bluefield Water Works and Improvement Company Case (1923),

3. Natural Gas Pipeline Company of America Case (1942), and

4. Hope Natural Gas Company Case (1944).

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

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

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

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

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

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

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

The Court specifically stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and

> enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. Id. at 692-3.

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

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

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

> The rate-making process . . . , i.e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests. Thus we stated . . . that "regulation does not insure that the business shall produce net revenues" . . . it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock . . . . By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. Id. at 603.

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

A more recent case heard by the Supreme Court of Pennsylvania extends the Hope case 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, v. Pennsylvania Public Utility Commission, 502 A.2d 130, 133-34 (1985), cert. denied, 476 U.S. 1137 (1986).

The Pennsylvania Electric Company case is included in my testimony to illustrate a point which is simply this: captive ratepayers of public utilities should not be forced to bear the brunt of wrongful management which results in unnecessarily higher costs. It should be noted that I do not believe that utility companies should be casually subjected to risk of financial failure in a rate case proceeding. However, in a case of extremely 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, the past, present and projected economic and business conditions must be analyzed in order to calculate a fair and reasonable rate of return.

Historical Economic Conditions

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

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

In 1993, 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 the Federal Reserve believed could not be sustained without experiencing higher inflation. In the first quarter of 1994, the Federal Reserve took steps to try to restrict the economy by increasing interest rates. As a result, on March 24, 1994, the prime interest rate increased to 6.25 percent. On April 18, 1994, the Federal Reserve announced its intention to raise its targeted interest rates, which resulted in the prime interest rate 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 January 31, 1996, the Federal Reserve lowered the discount rate to a rate of 5.0 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), has not exceeded 3.70 percent over the past five years. CPI stood at 1.1 percent for the period ending February 28, 2002 (see Schedule 4-1). While inflation has declined to historically low levels, the unemployment rate has increased in recent months. On February 28, 2001, the unemployment rate stood at 4.2 percent and gradually increased to its current level of 5.5 percent for the period ending February 28, 2002 (see Schedule 7).

The stock market, as measured by the Dow Jones Composite Index, has increased by 20.28 percent between August 7, 1997 and March 21, 2002, while the Dow Jones Industrial Index has increased by 27.99 percent over that same time frame. The stock market has decreased 15.83 percent as measured by The Value Line Geometric Averages Composite Index from August 7, 1997 through March 21, 2002. It should be noted that the Value Line Composite Index is currently an equally weighted geometric average of 1677 companies as compared to the Dow Jones Composite Index, which is a price-weighted arithmetic average of 65 companies.

In both August and September 2000, energy movements dominated the CPI. After falling by 2.9 percent in August, energy prices shot up 3.8 percent in September, the biggest advance since a 5.6 percent surge in June 2000. The big rise in energy, 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 increases have been contained in the energy sector, economists worried about a spillover effect that could send overall inflation higher, thus setting off alarms to the Federal Reserve.

Despite the economy's downshift, there is as yet no sign that the labor markets are loosening up in a way that will take upward pressure off labor costs. In October 2000, the jobless rate held at 3.9 percent. A further sign of tight labor markets is the speedup in hourly earnings of production workers. For the total labor market, both sides of the equation appear to be at work, but a shrinking labor pool seems to be the chief reason for the recent slowdown in job growth for managerial and professional workers.

A key factor complicating the outlook for inflation and Fed policy for 2001 is productivity. While the structural trend in productivity growth has clearly shifted up, the cyclical slowdown is sure to continue in 2001 since, in the short run, productivity growth tends to follow the pace of the economy. This year is shaping up to be a period of both slower growth and rising core inflation. Tight labor markets will have the potential to lift inflation pressures, while at the same time softer output gains mean short-term productivity growth is likely to slow considerably.

After raising the federal funds rate six times in 1999 and 2000 to hold down inflation in a rapidly growing economy, Fed policy-makers began expressing concern about a slowdown in December 2000. On January 3, 2001, the Federal Open Market Committee decided to lower the federal funds rate by 50 basis points to 6.0 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, and high energy prices sapping household and business purchasing power. On January 31, 2001, the Fed 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 5.0 percent (see Schedule 2). In cutting its benchmark rate by a full point in the first month of 2001, the Fed has taken its most aggressive action to boost the economy since December 1991. The Fed justified its actions by citing eroding consumer and business confidence and rising energy costs.

The Federal Reserve cut the federal funds rate a total of eleven times in 2001 with the last rate cut occurring on December 11, 2001. On December 11, 2001, the federal funds rate was lowered to 1.75 percent. The Federal Reserve left the federal funds rate unchanged at its January 30, 2002 meeting. The Federal Reserve again left the federal funds rate unchanged at its March 19, 2002 meeting citing "the economy is expanding at a significant pace." [Source: MSNBC, "Fed Holds Interest Rate Steady," March 19, 2002, http://www.msnbc.com/news/725818?0dm=C2BHB]

It is expected that the Federal Reserve will take a so-called "neutral bias" at least until its next meeting scheduled to occur on May 7, 2002. It is expected that the Federal Reserve will announce an interest rate increase of at least 25 basis points at that time.

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 Schedule 5-1 and 5.2). Schedule 5-3 shows how closely the Mergent's "Public Utility Bond Yields" have followed the yields of Thirty-Year U.S. Treasury Bonds during the period from 1987 to the present. The average spread for this time period between these two composite indices has been 132 basis points, with the spread ranging from a low of 80 basis points to a high of 249 basis points (see Schedule 6). 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 2002 and beyond?

A. The latest inflation rate, as measured by the *Consumer Price Index-All Urban Consumers* (CPI), was 1.1 percent for the 12-months ended February 28, 2002. *The Value Line Investment Survey: Selection & Opinion*, March 1, 2002, predicts inflation to be 2.0 percent for 2002, 2.6 percent for 2003 and 2.6 percent for 2004. The Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2002-2012*, projects CPI will increase by 2.9 percent in 2001 and expects CPI to increase by 1.8 percent in 2002, 2.5 percent in 2003 and 2.5 percent in 2004 (see Schedule 7).

Q. What are interest rate forecasts for 2002, 2003 and 2004?

A. Short-term interest rates, those measured by Three-Month U.S. Treasury Bills (3-month T-Bills), are projected to average 1.8 percent for 2001 and are expected to average 2.1 percent in 2002, 3.0 percent in 2003 and 3.8 percent in 2004 according to Value Line's predictions. Value Line expects long-term interest rates, those measured by the Thirty-Year U.S. Treasury Bond (30-year T-Bonds), to average 5.6 percent in 2002, 5.9 percent in 2003 and 6.2 percent in 2004. The Congressional Budget Office, in its publication *The Budget and Economic Outlook: Fiscal Years 2002-2012*, projects that short-term interest rates measured by 3-month T-Bills will increase by 4.8 percent in 2001, and expects short-term interest rates measured by 3-month T-Bills to increase by 2.2 percent in 2002, 4.5 percent in 2003 and 4.9 percent in 2004. The Congressional Budget Office has made no projections on 30-year T-Bonds.

The current rates for the period ending February 28, 2002 are 1.76 percent for 3-month T-Bills and 5.45 percent for 30-year T-Bonds, as noted on the Federal Reserve website.

Q. What are the growth expectations for real Gross Domestic Product (GDP) in the future?

A. GDP is a benchmark utilized by the Commerce Department to measure economic growth within the United States' borders. Real GDP is measured by the actual Gross Domestic Product; adjusted for inflation. Value Line stated that real GDP growth is projected to increase by 1.1 percent in 2001, and expects real GDP to increase by 1.5 percent in 2002, 3.4 percent in 2003 and by 3.5 percent in 2004. The Congressional Budget Office, in its publication *The Budget and Economic Outlook: Fiscal Years 2002-2012*, stated that real GDP is expected to increase by 2.4 percent in 2001 and expects real GDP to increase by 0.8 percent in 2002, 4.1 percent in 2003 and 3.7 percent in 2004 (see Schedule 7).

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

A. In summary, when combining the previously mentioned sources, CPI is expected to be in the range of 1.8 to 2.6 percent, increase in real GDP in the range of 0.8 to 4.1 percent and long-term interest rates are expected to range from 5.6 to 6.2 percent. *The Value Line Investment Survey: Selection & Opinion*, March 1, 2002, states that:

> **Economic Growth:** The recession, which evolved last year and, for a short while, was exacerbated by the tragic events of September 11th, now seems to be passing from the scene. The nominal uptick in fourth-quarter 2001 GDP is likely to be followed by a moderately higher rate of growth in the first and second quarters of this year. Our sense is that the economic pace will then accelerate during the second half, with growth averaging 3.0%-3.5% over the final six months of 2002. We would then

> expect this rate of improvement to average about 3.5% in 2003. We project a further modest uptick in the rate of growth, to 3.5%-4%, by the mid-to-late years of this decade.
>
> **Interest Rates:** The Federal Reserve lowered rates in rapid succession in 2001, as it sought to limit the scope of the recession and to bring the falloff in the economy to as quick as end as possible.
>
> . . . . . We believe the nation's central bank will keep borrowing costs at current levels through the summer and into the fall if our forecast of a gradual acceleration in economic activity is on the mark.
>
> **Conclusion:** We think that the stock market will ultimately respond to the basic fundamentals of the economy, interest rates, and earnings. As we have noted, the economy is likely to rebound soon; interest rates remain favorable; and earnings should soon start to revive. Thus, while external events, such as terrorist attacks and wars, will take place and short-term upheavals will result, the market's generally positive fundamentals will probably enable stocks to rise in 2002.

S&P states the following in the March 6, 2002, issue of *The Outlook*:

> The rally since September has had to contend with more than its share of restraints, including continued weakness of information technology investment spending and high P/E ratios, as well as worries about the next stage in the war on terrorism, fallout from the Enron collapse and a possible Middle East blowup.
>
> Also, until recently, it wasn't clear that the recession had ended, and it was widely believed that the early part of an expansion phase would be sluggish. Now, economists are wondering whether there was a recession, and are ratcheting up their GDP forecasts for the March quarter (S&P's chief economist David Wyss currently expects 4% growth).
>
> The surprising vigor of the business upturn has sent bond yields higher and fanned fears that the Fed will soon push short-term interest rates upward. Wyss, who hadn't expected a fed funds hike until August or September, now thinks a boost is possible in June.

Staff relies on information published by Value Line and Standard and Poors because these sources have historically provided a reliable prediction of where the economy may be

heading. Staff also relies on information published by Value Line and Standard and Poors because they are considered credible sources of information, widely recognized and relied upon by both the financial and investing communities. Recently, the reliability of information published by Standard and Poors has come into question in light of the Enron debacle. However, one must keep in mind that the analyses performed by Standard and Poors rely upon financial information provided to them by the companies, which they monitor and provide ratings. Likewise, Staff must rely upon the accuracy of information provided to them by a regulated utility in the context of a rate case. Granted, there will be times when an analyst may be overly optimistic about the performance of a particular company. Likewise, there will be times when an analyst may be overly pessimistic about the performance of a particular company. Overall, however, one must look to the long-term reliability of the information published to the consuming public. The efficient market hypothesis is based on the premise that securities are typically in equilibrium, meaning they are fairly priced in the sense that the price reflects all publicly available information on each security.

This belief can be further supported through the writings of Dr. Jeremy J. Siegel. Dr. Jeremy J. Siegel, Professor of Finance - the Wharton School of the University of Pennsylvania, gives the following example of a time when the economy entered "uncharted waters" in his book *Stocks for the Long Run*:

> In the summer of 1958, an event of great significance took place for those who followed long-standing indicators of stock market value. For the first time in history, the interest rate on long-term government bonds exceeded the dividend yield on common stocks.
>
> *Business Week* noted this event in an August 1958 article entitled "An Evil Omen Returns," warning investors that when yields on stocks approached those on bonds, a major market decline was in

> the offing. The stock market crash of 1929 occurred in a year when stock dividend yields fell to the level of bond yields. The stock crashes of 1907 and 1891 also followed episodes when the yield on bonds came within one percent of the dividend yield on stocks.
>
> Prior to 1958, the dividend yield on stocks had always been higher than long-term interest rates, and most analysts thought that this was the way it was supposed to be. Stocks were riskier than bonds and therefore should command a higher yield in the market. Under this reasoning, whenever stock prices went too high and brought dividend yields down to that of bonds, it was time to sell.
>
> But things did not work that way in 1958. Stocks returned over 30 percent in the 12 months after dividend yields fell below bond yields, and continued to soar into the early 1960s. There were good economic reasons why this famous benchmark fell by the wayside. Inflation increased the yield on bonds to compensate lenders for rising prices, while investors regarded stocks as the best investment to protect against the eroding value of money. As early as September 1958, *Business Week* noted that "the relationship between stock and bond yields was clearly posting a warning signal, but investors still believe inflation is inevitable and stocks are the only hedge against it."

For these reasons, Staff looks to Standard and Poors' and Value Line's predictions about the economy to further support the reasonableness of its rate of return recommendation.

Business Operations of Citizens Electric Corporation

Q. Please describe Citizen's business operations.

A. Citizens Electric Corporation is a non-profit electric distribution cooperative in Ste. Genevieve, Missouri. The company purchases all of its power through a wholesale supplier on the unregulated market. Citizens purchases all of its power currently from Union Electric Company through its subsidiary, Ameren Energy Marketing Company (AEM). Citizens serves approximately 24,332 customers in four counties located in southeast

Missouri. These counties include Ste. Genevieve, Perry, northern Cape Girardeau and the southeast corner of St. Francois. The company finances its operations through loans from the Rural Utilities Service (RUS), the National Rural Utilities Cooperative Finance Corporation (CFC), and Rural Utilities Services Guaranteed Federal Financing Bank (FFB) and through retained earnings (i.e., margins). Citizens' total utility plant at December 31, 2001 was approximately $86,654,285 with total operating revenues/patronage capital of approximately $49,613,606.

Q. Please provide some historical financial information for Citizens.

A. Schedule 8 presents historical capital structures for Citizens from 1997 to 2000. Citizens' common equity ratio has remained rather steady from 1997 through 2000 ranging from a low of 59.40 percent in 2000 to a high of 62.49 percent in 1998 (see Schedule 8).

Citizens' times interest earned ratio (TIER) has ranged from a low of 2.11 times in 2000 to a high of 3.59 times in 1997. Citizens' average TIER for the years 1997 through 2001 is 2.94 times. Citizens' debt service coverage ratio (DSC) has ranged from a bw of 2.16 times in 2000 to a high of 2.98 times in 1997. Citizens' average DSC for the years 1997 through 2001 is 2.61 times (see Schedule 11).

Citizens' operating times interest earned ratio (OTIER) has ranged from a low of 2.16 times in 2000 to a high of 3.69 times in 1997. Citizens' average OTIER for the years 1997 through 2001 is 2.98 times. Citizens' operating debt service coverage ratio (ODSC) has ranged from a low of 2.17 times in 2000 to a high of 3.00 times in 1997. Citizens' average ODSC for the years 1997 through 2001 is 2.61 times (see Schedule 12).

Citizens' return on year-end rate base (ROR) has ranged from a low of 4.82 percent in 2000 to a high of 6.97 percent in 1997. Citizens' average return on year-end rate base for the years 1997 through 2001 is 6.06 percent (see Schedule 13).

Mortgage Requirements of RUS and CFC

Q. What mortgage loan requirements must Citizens' meet in order to avoid defaulting on approved loans and to remain eligible for new loans?

A. Citizens must maintain a times interest earned ratio (TIER) of at least 1.25 times and a debt service coverage ratio (DSC) of 1.25 times. Citizens must also maintain a operating times interest earned ratio (OTIER) of at least 1.10 times and an operating debt service coverage ratio (ODSC) of 1.10 times. Citizens must achieve these average coverage ratios in the best two out of three most recent calendar years in order to be eligible for new loans. [Source: Citizens response to Staff Data Request No. 3805.]

Q. How are the TIER and DSC ratios calculated?

A. The formulas for calculating TIER and DSC as defined by RUS and CFC are as follows:

TIER = (Form 7, Part A, Line 15 + Form 7, Part A, Line 28) / (Form 7, Part A, Line 15)

Where:

Form 7, Part A, Line 15 = Interest Expense on Total Long-term Debt of the Electric System, except that such Interest Expense shall be increased by 1/3 of the amount, if any, by which the Restricted Rentals of the Electric System exceed 2 percent of the Borrower's Equity

Form 7, Part A, Line 28 = Patronage capital & operating margins of the Electric System, (which equals operating revenue and patronage of Electric System operations, less total cost of electric service, including Interest Expense on Total Long-term

Debt of the Electric System) plus cash received from the retirement of patronage capital by suppliers of electric power and by lenders for credit extended for the Electric System

DSC = (Form 7, Part A, Line 12 + Form 7, Part A, Line 15 + Form 7, Part A, Line 28) / (Total Debt Service Billed*)

Where:

Form 7, Part A, Line 12 = Depreciation and Amortization Expense of the Electric System

Form 7, Part A, Line 15 = Interest Expense on Total Long-term Debt of the Electric System, except that such Interest Expense shall be increased by 1/3 of the amount, if any, by which the Restricted Rentals of the Electric System exceed 2 percent of the Borrower's Equity

Form 7, Part A, Line 28 = Patronage capital & operating margins of the Electric System, (which equals operating revenue and patronage of Electric System operations, less total cost of electric service, including Interest Expense on Total Long-term Debt of the Electric System) plus cash received from the retirement of patronage capital by suppliers of electric power and by lenders for credit extended for the Electric System

Total Debt Service Billed = Debt service billed which equals the sum of all payments of principal and interest required to be made on account of Total Long-term Debt of the Electric System during the calendar year, plus 1/3 of the amount, if any, by which Restricted Rentals of the Electric System exceed 2 percent of the Mortgagor's Equity (RUS Form 7, Part O, Line 13)

Q. What is the significance of the TIER and DSC ratios?

A. The TIER ratio is an earnings adequacy measure with respect to the company's ability to make interest payments on outstanding debt. The DSC ratio is a similar earnings adequacy measure, but it concerns total debt service (interest and principal payments).

Determination of the Cost of Capital

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

A. The total dollars of capital for the utility company are determined for a specific point in time. This total dollar amount is proportioned into each specific capital component (i.e., equity, debt, etc.). 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 component. The individual weighted costs are summed to arrive at a total weighted cost of capital. This total weighted cost of capital is synonymous with the fair rate of return for the utility company.

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

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

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

Capital Structure and Embedded Costs

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

A. I have employed an actual capital structure for Citizens. Schedule 9 presents Citizens' actual capital structure and associated capital ratios as of December 31, 2001. The resulting capital structure consists of 55.41 percent margins and equities and 44.59 percent long-term debt and 0.00 percent short-term debt (see Schedule 9).

Q. What is the embedded cost of long-term debt for Citizens at December 31, 2001?

A. I determined the embedded cost of long-term debt at December 31, 2001 for Citizens to be 6.04 percent (see Schedule 10).

Financing Cooperatives

Q. How do cooperatives finance their operations?

A. Cooperatives finance their operations much like other businesses with the use of equity and debt capital. Users of the cooperative's services (i.e., members) provide equity capital to finance the cooperative in proportion to their use of the services. Most cooperatives also provide a way to provide a return on equity to its members over a period of time.

Q. How do cooperatives obtain equity capital?

A. Cooperatives obtain equity capital in three ways:

1. direct investment
2. retaining a portion of net income
3. retaining a portion of proceeds from the sale of services as per-unit capital retains.

Direct investment of equity is usually obtained through the purchase of stock in the company. Common stock is an important source of investment obtained through cooperative membership. Other types of direct investment include membership fees, membership certificates, and capital certificates.

Retained Net Income represents the proceeds from net earnings (i.e., net margins) retained by the cooperative to provide equity capital. Part of the cooperative's net income is usually paid to members in cash, with the remainder held as retained patronage refunds. These refunds are accumulated until sufficient capital is available to finance facilities and operations. When that level is attained, the cooperative's board of directors can decide to repay a portion of equity capital to its members.

Per-unit capital retains are primarily used by marketing cooperatives. Per-unit capital retains are obtained through deductions from sales proceeds. As with retained patronage dividends, when sufficient equity capital has been accumulated, the cooperative's board of directors can decide to return a portion of allocated equity to members. Revolving fund financing is what the return of capital is called by a cooperative. [Source: "Understanding Cooperatives: Financing Cooperatives," Cooperative Information Report 45, Section 7, U.S. Department of Agriculture]

Cost of Equity

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

A. The discounted cash flow (DCF) model is the primary tool normally used by Staff to determine a company's the cost of equity. However, in the case of an electric

cooperative, the DCF is not a feasible model to employ due to the fact that an electric cooperative's stock is not publicly traded and does not pay a dividend. Therefore, a times interest earned ratio (TIER) approach is required.

TIER Approach

Q. Please describe the TIER approach.

A. The TIER approach is a debt-servicing approach for deriving the cost of equity. You begin with the basic formula for determining a times interest earned ratio, which is as follows:

TIER = Earnings Before Interest and Taxes / Total Interest Expense

Earnings before interest and taxes (EBIT) would be equivalent to the total dollar return on equity. By simple substitution, one could begin with the mortgage loan requirements (i.e., times interest earned ratio or TIER) and multiply by the company's actual interest expense to arrive at a total dollar return on equity (or EBIT). You would then take the total dollar return on equity (or EBIT) and divide by the total equity capital to arrive at the percentage return on equity on a pre-tax basis. For example:

	TIER = 2.00	TIER = 2.25
Total Interest Expense	$ 1,444,902	$ 1,444,902
Multiply by TIER	2.00	2.25
Dollar Return on Equity	$ 2,889,804	$ 3,251,030
Total Equity Capital	$ 36,439,109	$ 36,439,109
Percentage Return on Equity	7.93%	8.92 %

This range of return on equity of 7.93 percent to 8.92 percent is the company specific range of cost of equity for Citizens (see Schedule 14).

Recommended TIER Allowance

Q. What TIER allowance is Staff recommending in this case as it relates to overall rate of return?

A. As stated earlier in this testimony, Citizens is required to maintain a times interest earned ratio (TIER) of at least 1.25 times and a debt service coverage ratio (DSC) of 1.25 times. Citizens is also required to maintain an operating times interest earned ratio (OTIER) of at least 1.10 times and an operating debt service coverage ratio (ODSC) of 1.10 times. To meet these required ratios, Citizens is required to achieve these average coverage ratios in the best two out of three most recent calendar years in order to avoid defaulting on current loans and remain eligible for new loans. [Source: Citizens response to Staff Data Request No. 3805.]

Company witness Daniel Rodamaker states in his prepared direct testimony:

> Q. Mr. Rodamaker, has Citizens met the TIER criterion for 2000 and 2001?
>
> A. Yes. Citizens maintained a tier of 3.44 in 1999 and 2.31 in 2000. Through the nine months of 2001, the TIER is 3.32.
>
> Q. You referred to a TIER of 1.25 which Citizens must maintain. Is this the TIER level that RUS and CFC recommend for their borrowers?
>
> A. RUS and CFC recommend that we benchmark against other electric cooperatives. According to RUS' "Borrower Statistical Profile" dated 9/7/01, the U.S. median TIER at 12/31/00 was 2.04. The 1.25 I referred to above is the bottom line as far as their policies are concerned, and as I indicated, this minimum requirement is in the Security Agreements. With a TIER of 1.75 or better, the borrower does not endanger its mortgage relationship. In addition, a higher level of earnings has a favorable impact on Citizens' cash position and can improve its equity position.

Staff believes in order to recommend an appropriate TIER allowance in this case, it is necessary to review Citizens' last major rate case, Case No. ER-83-61. At that time, REA and CFC required Citizens to maintain a TIER ratio of at least 1.5 times and a DSC ratio of at least 1.25 times. In Case No. ER-83-61, Staff witness Bruce Schmidt recommended that Citizens be allowed to earn a TIER in the range of 2.00 times to 2.25 times. Staff witness Bruce Schmidt cited the following as his rationale for such a recommendation:

> I believe that a TIER ratio in the range of 2.00 to 2.25 is reasonable and will allow Citizens Electric to obtain REA and CFC financing as well as giving them an opportunity to increase their equity to total capitalization ratio over time. I also believe, though, that in order for Citizens Electric to be able to achieve earnings of these level's some consideration needs to be given to the pro forma operating conditions which they company will be facing. Citizen's embedded cost of debt financing is going to increase over time as low rate REA loans are retired and replaced with higher cost CFC and REA loans. The company will be faced with increasing depreciation expense as long as investments in comparable and new amounts of plant are more costly than the old plant being retired. Finally, if it is necessary for Citizens' equity to total capitalization ratio to grow, the level of equity financing used must increase at a higher rate than the level of debt financing used. If it is appropriate for a company to grow in terms of total plant and the capital necessary to finance growth, then earnings must be maintained at a level to allow this growth to maintain access to the least costly financing methods. It is for these reasons that I am recommending the upper end (2.25 TIER) of the above range that I feel is reasonable.

The Stipulation and Agreement approved by the Commission's Report and Order dated, April 19, 1983, allowed Citizens a rate increase of $1,296,514, which was approximately the midpoint of the revenue requirement proposed by Staff based on the TIER recommendation proposed by Bruce Schmidt.

In rate cases involving investor-owned utilities, Staff normally develops an estimate for return on equity (ROE) and performs a TIER calculation to determine the reasonableness

of its ROE recommendation as it relates to the company's ability to generate sufficient funds necessary to meet its indenture requirements. In this case, the TIER requirements, as defined by RUS (1.25 times), will produce an estimated return on equity for Citizens of only 4.96 percent. It is Staff's opinion that this return on equity will be insufficient to allow Citizens the opportunity to attract investment by its members. Staff believes members will take their investment elsewhere if the return provided by the cooperative is less than that which could be received through alternative investments. This lack of investment by its members could result in a higher cost of service through potential misallocation of resources and operating inefficiencies, and also produce a decline in revenues necessary to meet the company's indenture requirements.

In addition, Company witness Georgia Piefer states in her direct testimony three reasons that support Citizens' request for a rate increase:

1. increase in plant and debt, with corresponding increase in expenses (i.e., interest expense, depreciation expense and property tax expense

2. increased costs, which include rising labor costs and general inflationary increases

3. facility additions and improvements necessary to maintain efficient operations and reliability of service.

Citizens' interest expense and long-term debt obligations over the past five years is as follows:

	1997	1998	1999	2000	2001
Interest Expense	$946,849	$1,061,253	$1,163,879	$1,369,848	$1,444,902
Long-term Debt	$19,534,393	$18,544,148	$22,513,920	$23,671,166	$29,323,259

It is projected that Citizens interest expense in 2002 through 2006 will be:

	2002	2003	2004	2005	2006
Interest Expense	** P				**
Long-term Debt	** P				**

[Source: Follow-up Response to Staff Data Request No. 3801, Citizens' Financial Forecast - Ratios – RUS Form 325A dated February 14, 2002.]

Company witness Daniel Rodamaker stated in his direct testimony that, "Citizens' five- to ten-year work plan has it spending over $30 million on capital construction in the next five years." His testimony also states that Citizens "anticipates borrowing $15 million from FFB in the next three years." According to budget projections provided by the Company, Citizens will require additional borrowings of ** P **, ** P ** and ** P **, respectively in Year 2002, 2003 and 2004, to assist in financing the capital construction projects identified by Mr. Rodamaker in his direct testimony [Source: Follow-up Response to Staff Data Request No. 3801, Citizens' Plant Investment and Loan Fund Requirements – RUS Form 325G dated February 14, 2002]. The total interest expense noted above includes the projected interest expense associated with these additional borrowings. Citizens' budget projections also indicates that Total Utility Plant at year-end 2001 will be $86,654,285 and will increase to ** P ** by year-end 2006. It is Staff's opinion that the capital construction proposed by Citizens will serve to meet its statutory obligation to provide reliable service.

In addition, Mr. Rodamaker direct testimony states:

> In addition to these capital expenditures, one characteristic of operating on the cooperative plan is returning excess revenues

> above the cost of delivering service to its customers in the form of capital credits on a proportionate basis. The capital is retained and used by Citizens and invested in additional plant. This, in turn, reduces the amount of money Citizens needs to borrow. Citizens' Bylaws state that such funds are furnished by consumers as capital and that retirement can be made only if the financial condition of the Corporation would not be impaired . . . Citizens has an obligation to make retirements because consumers have furnished capital under a plan that promised retirements. Citizens has retired approximately $10,010,922 of capital credits to its member/owners. Citizens currently has plans to retire approximately $1,000,000 annually in capital credits . . .

This evidence plus Mr. Rodamaker's contention that RUS recommends electric cooperatives maintain a TIER comparable to the industry average causes Staff to believe Citizens' return on equity should be based on a TIER ratio in the range of 2.00 to 2.25 percent, which is the level currently allowed for Citizens by this Commission. This will produce an estimated return on equity in the range of 7.93 percent to 8.92 percent, with a midpoint of 8.425 percent (see Schedule 14). An estimated return on equity in the range of 7.93 percent to 8.92 percent should generate a dollar return on equity between $2,889,804 and $3,251,030 based on Citizens' current total interest expense at December 31, 2001 (see Schedule 14). Staff believes this will be sufficient to allow Citizens the opportunity to continue to attract investment by its members, as well as meet its debt servicing obligations.

Reasonableness of Return on Equity Proposed for Citizens

Q. How does the estimated range for return on equity recommended in this case compare to the estimated range for return on equity recommended for investor-owned electric utilities regulated by the Missouri Public Service Commission?

A. The estimated range for return on equity of 7.93 percent to 8.92 percent recommended for Citizens in this case is comparable to what Staff has recommended in its most recent electric rate cases. In the rate case filed by The Empire District Electric Company, Case No. ER-2001-299, Staff recommended an estimated range for return on equity of 8.50 percent to 9.50 percent. This estimated range for return on equity was based primarily on a company-specific discounted cash flow analysis since Empire was a publicly traded company and paid a cash dividend on its common stock. In this case, the Commission approved a return on equity of 10.0 percent in its final Report and Order.

In the rate case filed by Missouri Public Service, Case No. ER-2001-672, Staff recommended an estimated range for return on equity of 9.43 percent to 10.43 percent. This estimated range for return on equity was based primarily on a comparable companies analysis since Missouri Public Service (MoPUB) is not a publicly traded company, does not pay a dividend, and whose parent company is too highly diversified into unregulated activities (i.e., Aquila). This case was settled through Stipulation and Agreement with the overall settlement dollars based on an estimated return on equity within Staff's recommended range.

Q. Did you perform an analysis of Citizens' resulting pre-tax interest coverage ratios?

A. Yes. As stated earlier, Citizens has maintained a TIER in the range of 2.11 times to 3.59 times with an average over the past five years of 2.94 times. Citizens has maintained a DSC ratio in the range of 2.16 times to 2.98 times with an average of 2.61 times (see Schedule 11). If allowed to earn a TIER in the range of 2.00 times to 2.25 times as recommended by Staff, Citizens should be able to generate sufficient funds to meet its

current indenture requirements plus provide for some level of growth in its operations and meet rising costs which will likely be associated with future debt financing and replacement of plant assets.

Q. Did you perform an analysis of Citizens' OTIER and ODSC ratios?

A. Yes. Citizens' OTIER ranged from a low of 2.16 times in 2000 to a high of 3.69 times in 1997 with an average over the past five-year period of 2.98 times. Citizens' ODSC ranged from a low of 2.17 times in 2000 to a high of 3.00 times in 1997 with an average over the past five-year period of 2.61 times. (see Schedule 12)

Q. How do Citizens' coverage ratios compare to other electric cooperatives?

A. According to the "Borrower Statistical Profile" developed by RUS, the median TIER for electric cooperatives at December 31, 2001 is 2.04 times and the median DSC is 1.99 times. The median OTIER for electric cooperatives at December 31, 2000 is 1.66 times. The median ODSC for electric cooperatives at December 31, 2000 is 1.78 times. Therefore, Citizens' coverage ratios are somewhat higher than the industry medians for other electric cooperatives.

Q. Did you perform an analysis of Citizens' historical rates of return on rate base?

A. Yes. Citizens' historical rates of return on rate base ranged from a low of 4.82 percent in 2000 to a high of 6.97 percent in 1997. Citizens' average rate of return on rate base over the past five-year period (1997 through 2001) was 6.06 percent (see Schedule 13).

Q. How do Citizens' historical rates of return on rate base compare to other electric cooperatives?

A. According to the "Borrower Statistical Profile" developed by RUS, the median rate of return on rate base for electric cooperatives at December 31, 2000 is 5.04 percent. In comparison, Citizens' rate of return on rate base is somewhat lower than the industry median for other electric cooperatives at 4.82 percent for the period ending December 31, 2000.

The median rate of return on rate base for electric cooperatives at December 31, 2001 developed by RUS was not available to Staff at the time of this filing. Staff did, however, calculate the return on rate base for Citizens for the period ending December 31, 2001 to be 6.46 percent.

Rate of Return for Citizens

Q. Please explain how the returns developed for each capital component are used in the ratemaking approach you have adopted to be applied to Citizens' Missouri electric utility operations.

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

It is my responsibility to calculate and recommend a rate of return that should be authorized on the Missouri jurisdictional electric utility rate base for Citizens. Under the cost of service ratemaking approach, a weighted cost of capital in the range of 7.08 to 7.63 percent (with a midpoint of 7.36 percent) was developed for Citizens' Missouri electric utility operations (see Schedule 15). This rate was calculated by applying an embedded cost

of long-term debt of 6.04 percent and an estimated range for return on equity of 7.93 percent to 8.92 percent (with a midpoint of 8.425 percent) to a capital structure consisting of 0.00 percent short-term debt, 44.59 percent long-term debt and 55.41 percent margins and equities. Therefore, I am recommending that Citizens Electric Corporation's Missouri electric utility operations be allowed to earn a return on its original cost rate base in the range of 7.08 to 7.63 percent with a midpoint of 7.36 percent.

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

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.