Exhibit No.:
Issues: Distribution Infrastructure Policy
Witness: Thomas R. Voss
Sponsoring Party: Union Electric
Type of Exhibit: Rebuttal Testimony
Case No.: EC-2002-1
Date Testimony Prepared: May 10, 2002

# MISSOURI PUBLIC SERVICE COMMISSION

## CASE NO. EC-2002-1

# REBUTTAL TESTIMONY

## OF

## THOMAS R. VOSS

## ON

## BEHALF OF

## UNION ELECTRIC COMPANY
## d/b/a AmerenUE

Exhibit No. 143
Date 7/10/02 Case No. EC-2002-1
Reporter KEM

St. Louis, Missouri
May, 2002

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# REBUTTAL TESTIMONY

# OF

# THOMAS R. VOSS

# CASE NO. EC-2002-1

**Q. Please state your name and business address.**

A. My name is Thomas R. Voss. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

**Q. By whom and in what capacity are you employed?**

A. I am employed by Ameren Services Company as Senior Vice President – Energy Delivery. I have held that position since June 1999.

**Q. Please describe your duties and responsibilities in your current position.**

A. As Senior Vice President – Energy Delivery, I am responsible for the design, construction, operation, and maintenance of the electric and gas distribution systems of Union Electric Company (d/b/a AmerenUE) and Central Illinois Public Service Company (d/b/a AmerenCIPS), the utility operating subsidiaries of Ameren Corporation, and all customer care activities.

**Q. Please describe your education and professional affiliations.**

A. I graduated in 1969 with a Bachelor of Science in Electrical Engineering from the University of Missouri – Rolla. In addition, I am a graduate of the University of Michigan's Public Utility Executive Program and the Westinghouse Advanced Power Systems School in Pittsburgh. In 2001, the University of Missouri - Rolla awarded me with an honorary Professional Degree in Electrical Engineering.

I am a registered professional engineer in Missouri and Illinois. I also hold an electrical contractor's license in St. Louis City and County and have been a member of the Institute of Electrical and Electronic Engineers for over 36 years.

**Q. Please describe your prior work experience.**

A. I began my career with Union Electric in 1969 as a student engineer. After four years in the United States Air Force, I returned to Union Electric as an assistant engineer. From 1975-1987, I held a series of positions including engineer, staff engineer, superintendent and finally district manager. In 1988, I was named manager of Distribution Operating. In July 1998, I was named Vice President Regional Operations – AmerenCIPS. In June of 1999, I was named Senior Vice President – Energy Delivery of Ameren Services Company.

During my career, I had the responsibility for establishing the Network Meter Reading system in the St. Louis metropolitan area and have managed system-wide metering, forestry (i.e. tree trimming and other vegetation management activities) and dispatching. I also was responsible for introducing state-of-the-art outage analysis and supervisory control and data acquisition systems.

**Q. What is the purpose of your testimony?**

A. The purpose of my testimony is three-fold. First, I will discuss the distribution system infrastructure needs of AmerenUE. As part of that discussion, I will discuss (i) how customer distribution and customer service needs have changed; (ii) improvements made to AmerenUE's distribution system and customer service infrastructure during the EARP; and (iii) future infrastructure improvements needed for AmerenUE's distribution and customer service systems. Secondly, I will rebut Staff

Witness Harrison's recommended adjustment to AmerenUE's tree trimming expense. Finally, I will rebut Staff Witness Harrison's recommended elimination of a certain automated meter reading service expense, which he identified in his direct testimony as a one-time, non-recurring expense. In addition, as part of my testimony, I have prepared an **Executive Summary** attached hereto as Appendix A.

**Q. Could you please summarize your testimony regarding the distribution system infrastructure needs of AmerenUE?**

A. Yes. The digital age has greatly enhanced the reliability expectation of AmerenUE's customers. In order to continue meeting these demanding reliability and customer service needs, AmerenUE estimates that it will need to make approximately $600 million dollars in capital expenditures over the next five years on its distribution system. This is over a 5% increase from the $573 million AmerenUE made in capital expenditures during the previous five years.

Throughout the previous five years, AmerenUE was able to: 1) make significant improvements to infrastructure; 2) institute a number of reliability related programs; 3) increase tree-trimming expenditures; 4) enhance its customer call center operations; and 5) reduce the number of customer interruptions by 20%. By doing these things, AmerenUE has been able to keep customer outage minutes down to about 2 hours per customer per year. As a result, AmerenUE was the fourth highest rated utility company in the Michigan National Quality Research Center's Customer Satisfaction Index (ACSI) report. AmerenUE firmly believes that the adequate returns that it was allowed during the Experimental Alternative Rate Regulation Plan ("EARP") were

instrumental in allowing AmerenUE to implement the programs and make the infrastructure improvements that led to positive results identified in the ACSI report.

**Q. Could you please summarize your testimony regarding staff witness Harrison's recommended adjustment to AmerenUE's tree-trimming expense?**

A. Yes. Mr. Harrison has projected that AmerenUE's tree-trimming expenditures will decline from the test year level and remain close to the current four-year average. This is not justifiable. The $4,065,278 reduction from test year tree-trimming spending levels will not permit the continuation of its current level of vegetation management in light of the growing electric system, changing workload requirements and customer driven expectations. At a minimum, tree-trimming expenditures will continue to escalate from current test year levels at a rate of 3% per year. In fact, 1994-95 was the only period during the years 1990-2000 that AmerenUE's tree trimming expenditures declined. This was due to the extraordinary amount of tree-trimming done as a result of the increased growth and the removal of dead trees after the flood of 1993.

**Q. Could you please summarize your testimony regarding staff witness Harrison's recommended adjustment to AmerenUE's automated metering expense?**

A. Yes. Mr. Harrison has eliminated the cost of retrofit charges from the automated meter reading expense for the test year stating it is a one-time, non-recurring expense. This is incorrect. $491,801 of the $871,655 expense eliminated by Mr. Harrison is actually an annual charge AmerenUE will continue to pay each year to CellNet (now SchlumbergerSema) through the year 2015.

## I. Infrastructure Improvements

**Q. How have the needs of customers changed over the years with regard to reliability?**

A. A highly reliable source of energy has become critical to all users of the electric system. In this new digital age spawned by the presence of the computer, even momentary outages on the distribution system now can have cataclysmic effects. Data can be lost, processes shut down, transactions can be halted and product can be destroyed by mere momentary power glitches that are common on the nation's electric systems. Just a few years ago, such momentary outages would have gone relatively unnoticed or perceived as a minor inconvenience. But to today's electric service customer, even momentary power glitches can have a negative impact on the customers' overall satisfaction with their utility.

**Q. What level of reliability can be expected from today's distribution system design and technology?**

A. Today, distribution systems are capable of providing, on average, uninterrupted service 99.9% of the time. This is commonly referred to as 3-nines reliability. That means the average customer can expect to experience about 8.75 hours of power outages per year.

**Q. How many hours of power outages per year does the average customer experience on AmerenUE's distribution system?**

A. Ameren has focused a great deal of its resources on minimizing the power outages customers experience per year. Moreover, by integrating the functionality of AmerenUE's supervisory, control, and data acquisition system with its automated

network meter reading system, AmerenUE has been able to track individual customer outage times with unprecedented accuracy when compared to other utilities in the industry. While most utilities continue to estimate, in large part, their customer outage times and the number of customers affected by a given outage, AmerenUE is able to track the actual outage time on each of the approximately 1 million customer meters on its system. By using this increased reporting accuracy, over the last several years, after adjusting for unusual storms, AmerenUE has determined that it has been able to keep total customer power outages down to just 2 hours per customer per year. Even with the unusual storm outages included, AmerenUE has been able to keep total customer outages down to around 3 hours per customer per year.

**Q. How does AmerenUE minimize power outages on its distribution system?**

A. Essentially there are two ways to minimize power outages on the distribution system: 1) lower the number of outage incidents that occur on the distribution system through quality design, preventative maintenance and aggressive tree trimming programs; and 2) decrease restoration response time when outages do occur through the installation of outage analysis systems, automated switching and by having highly trained customer service personnel available to promptly respond to the outage information and calls from customers. In fact, during the EARP period, AmerenUE has made improvements in both of these areas.

**Q. Has the EARP had a positive impact on AmerenUE's ability to maintain or improve the reliability of its distribution system?**

A. Absolutely. In fact, the EARP has allowed AmerenUE to be proactive in the areas of reliability and customer service, rather than reactive like many other utilities who overload lines and substations, delay tree trimming and defer customer service projects.

**Q. Specifically, what has AmerenUE done to enhance the reliability of its distribution system during the EARP period?**

A. The EARP allowed AmerenUE to earn adequate returns and also allowed the company to plan with the assurance that there would be no rate case for a defined period of time. These factors enabled AmerenUE to do a number of things that will minimize the frequency and duration of outages on its distribution system. For example, in 1996, AmerenUE completed the installation of a supervisory, control, and data acquisition ("SCADA") system on its distribution system. The SCADA system has the capability to monitor 200 substations, control automated line switches, and display distribution system maps enhancing AmerenUE's ability to rapidly diagnose outages and restore electric service to its customers. Furthermore, AmerenUE invested a significant amount of capital in a new automated network meter reading system, which was completed in 2000. The automated meter reading system provides AmerenUE with automatic outage reporting information, which can be used in conjunction with the SCADA system information to diagnose and respond to customer outages with increased precision. In addition to these technology improvements initiated to improve distribution system reliability, in 1999 AmerenUE began placing additional emphasis and funding on its vegetation management practices in the St. Louis City and County areas. As illustrated in Schedules 1 and 2 attached hereto, by increasing the funding for vegetation management,

tree-trimming cycle times were reduced resulting in rather dramatic reductions in Average Annual Customer Minutes Out ("AACMO") on the 12 kV distribution system.

**Q. What other ways has AmerenUE attempted to improve the reliability of its distribution system?**

A. AmerenUE has made it a priority to make investments in distribution substations and distribution circuits before critical situations develop. For example, before a crisis situation occurred, AmerenUE constructed the Hall Street Substation to serve the North St. Louis City area as aging, submarine cables beneath the Mississippi River from the Venice Plant in Illinois showed signs of imminent failure. By constructing the Hall Street Substation, AmerenUE provided itself with additional flexibility to serve critical loads in downtown St. Louis on an emergency basis. The importance of this added service flexibility became evident when a street in downtown St. Louis collapsed a few years ago exposing more than 15 underground sub-transmission feeder cables to a long term outage. Moreover, these exposed service cables were the primary source of power for approximately 75,000 customers in downtown St. Louis including a major Metropolitan Sewer Districts sewage treatment plant. Obviously, the added service flexibility provided by the construction of the Hall Street Substation prevented what could have been a disastrous situation.

In 1998, AmerenUE launched three reliability-related programs focused directly on improving the overall reliability of AmerenUE's distribution system. One of the programs focuses on the annual identification of AmerenUE's 50 worst performing distribution feeders. Under this program, once the feeders are identified, a plan is

developed to enhance the performance of each feeder that can be improved through capital upgrade or other means.

A second program, called the lightning protection plan, also was initiated. This program involves the identification of AmerenUE's worst performing sub-transmission feeders (sub-transmission is 34kV up to, but not including, 138kV). Once identified, a study is conducted to determine whether the addition of shield wires or lightning arrestors will have a positive impact on the sub-transmission feeder reliability. If so, a capital investment is made to install shield wire or lightning arrestors as applicable.

The third program launched is called the Underground Residential Distribution cable program. This program tracks underground cable failures in residential subdivisions. Once the same underground cable fails twice in a residential subdivision, the entire cable is replaced. Prior to this program, regardless of the number of previous failures, only the failed section would have been replaced by splicing in a new section of cable.

In addition to these ongoing reliability related programs, AmerenUE continues to invest significant resources in automated switches to limit the duration of power outages that do occur on its distribution system. Through the use of automated switches, AmerenUE can isolate faults on the distribution system without the delays associated with having to dispatch personnel to remote locations to perform manual switching operations. With this automated switching capability, the number of customers affected by a particular outage also can be significantly reduced. Consequently,

investment in new automation technology will continue to increase into the future as will the annual operating expenses for existing automation systems.

AmerenUE also has installed mobile data terminals in the trucks of all its emergency responders. Even though the introduction of the mobile data terminal technology required AmerneUE to make a significant initial investment, the terminals have already proven to be invaluable in reducing the length of power outages.

More recently, in May 2001, Ameren implemented a program with its outside vegetation management contractors for reporting overhead distribution system damage. The program involved training all vegetation management crews in identifying potential overhead reliability problems while performing normal maintenance feeder trimming. From June 2001 through December 2001, over 400 Forestry Overhead Damage Reports have been processed for AmerenUE's service area in Missouri.

**Q. Has the EARP had a positive impact on AmerenUE's ability to implement projects designed to enhance customer service?**

A. Yes, it has. Again, because of the adequate returns that AmerenUE has earned during the EARP, AmerenUE was able to complete a number of projects during the EARP period to specifically enhance customer service.

**Q. Can you describe in more detail, the projects AmerenUE has completed to enhance customer service?**

A. Yes. As I mentioned earlier in my testimony, AmerenUE made a significant capital investment in a new automated network meter reading system. In fact, AmerenUE was the second major utility in the country to install such a system and the first major utility to use the automated network meter reading system for outage analysis

purposes. In addition to automatic outage reporting, the automated meter reading system provides a number of other customer service benefits. First, the new automated meter reading system reduces the need for AmerenUE personnel to intrude upon customer property to read the meter. Second, by having remote access to meter readings, the number of estimated bills has been reduced due to lack of meter accessibility. Third, the automated meter reading system provides AmerenUE with the ability to offer an adjustable billing date option to customers so they can choose billing dates that more appropriately correspond to their income schedules. Finally, the automated meter reading system also provides AmerenUE with the capability to track individual customer usage on a daily basis over a 60 day period to help customers better understand their usage patterns. This customer usage information is made available to AmerenUE's customers at their request.

AmerenUE also has made a significant capital investment in a new customer billing system. The new customer billing system is designed to improve how AmerenUE can bill all of its customers. For example, the new billing system facilitates the adjustable bill date option mentioned above. The new system also allows customers to check the status of their accounts and pay their energy bills electronically through the internet. While the system began billing AmerenUE's largest customers in 1999, AmerenUE will use the new billing system for all of its customers beginning in May 2002.

AmerenUE also has focused on improving its customer call center capabilities. In an effort to keep call answer response times down, AmerenUE added 19 additional call takers in 2001. The addition of these new call takers already has had a

positive impact on customer satisfaction. Moreover, AmerenUE has contracts in place with outside call center operations to handle emergency overflow calls during unexpectedly high call volume periods commonly associated with major storms. This allows customers to report their outages and receive estimated restoration information much more rapidly than they would otherwise be able to during these emergency periods. In fact, these enhanced customer call center capabilities were implemented with resounding success during the major ice storm recently experienced throughout the majority of the western portion of Missouri this past winter. As can be seen in Schedule 3 attached hereto, the average speed to answer ("ASA") approximately 18,000 trouble calls related to the ice storm by AmerenUE call center representatives was less than 28 seconds and just 51 seconds for those calls routed to outside call center operations.

**Q. Have the reliability and customer service improvement efforts undertaken by AmerenUE resulted in higher levels of satisfaction among AmerenUE's customers?**

A. Yes. In fact, earlier this year, Ameren received a very favorable rating in the Michigan National Quality Research Center's widely respected survey, the American Customer Satisfaction Index (ACSI) report. Of all surveyed utilities in the country, collectively covering 75 percent of all U.S. households, Ameren was the fourth highest rated company. Ameren's ACSI rating of 78 points was close to the highest-rated utility (80 points), significantly above the average for the utility industry (69 points), and significantly above the average ratings of other industries, such as hotels (71 points), telecommunications (70 points), hospitals and newspapers (68 points each), and broadcasting TV (61 points).

**Q. Has AmerenUE's participation in the EARP had a negative impact on system reliability and customer satisfaction?**

A. No, it has not. Attached hereto as Schedules 4, 5 and 6 are three charts that clearly illustrate that there has been no negative impact on customer satisfaction or system reliability during the EARP period. In fact, Schedule 4 clearly illustrates a marked improvement in customer satisfaction during the EARP period.

**Q. Has AmerenUE projected the amount of capital investments that it will be making over the next five years to maintain or enhance the reliability of its distribution system and improve the satisfaction of its customers?**

A. Yes. The capital investment AmerenUE has projected that it will need to make over the next five years to maintain or improve distribution system reliability and customer satisfaction levels is significant. In fact, the distribution system construction budget for the next five years is projected to increase at approximately 133% of depreciation as new distribution substations are built, existing distribution lines are improved and old distribution equipment is replaced, through the implementation of existing reliability programs more specifically described earlier in my testimony. Currently, AmerenUE projects capital expenditures for its distribution system to top $600 million over the next five years. This is over a 5% increase from the approximately $573,000,000 expended by AmerenUE on capital expenditures during the last five years.

## II. Tree Trimming Expenditures

**Q. In the direct testimony of Paul R. Harrison, staff witness for the Missouri Public Service Commission, Mr. Harrison has projected that AmerenUE's**

**tree-trimming expense will decline from the test year level and remain close to the current four-year average. Do you agree with Mr. Harrison's projection?**

A. No, I do not. Staff's recommended $4,065,278 reduction in the tree-trimming expense reflected in the test-year is not justifiable since it is inconsistent with historic spending levels. Contrary to Staff's conclusion that tree-trimming expenditures will decline from the test year level and remain close to the current four-year average, I anticipate that tree-trimming expenditures will actually continue increasing from the test year level. Tree-trimming expenses are anticipated to increase from the current test year level to accommodate system growth, changing workload responsibilities and a number of customer driven expectations. In fact, AmerenUE's tree-trimming expense has increased every year except one during the years 1990-2000. Furthermore, the single decline in expenditures from 1994 to 1995 only occurred because of the tremendous amount of extraordinary tree-trimming that AmerenUE had to perform in order to address both increased growth and the removal of dead trees after the flood of 1993.

**Q. What level of system growth and changing workload responsibilities are occurring and how will that result in increased tree-trimming expenditures?**

A. AmerenUE service territories, especially in the surrounding counties outside St. Louis, have changed and continue to change from a typical rural type setting toward a more urban type environment. Because of the increased manpower and trimming techniques required for urban areas, tree-trimming expenses escalate as more rural lines are enveloped by urban sprawl into an urban setting. The effect of urban sprawl continues to present new challenges and expenses for tree-trimming in terms of both additional line miles and easement types. Generally, when comparing a typical

urban easement to a rural easement, the urban easement is more restrictive in terms of width and in terms of its accessibility for using modern equipment such as aerial buckets, mowers, and other mechanical type equipment. For example an urban setting generally presents a more formal landscaped environment, necessitating a more frequent and labor intensive maintenance program.

The US Census Bureau Report also validates the increase in AmerenUE's capitalized tree-trimming expenditures and corresponding increase in pole miles. In fact, during the 10 year period from 1990 to 2000, the US Census Bureau figures show the population in St. Charles, Jefferson, Franklin, Warren and Lincoln counties in Missouri increasing by 33.3%, 15.6%, 16.4%, 25.6%, and 34.8% respectively. Although AmerenUE does not exclusively provide electric service to all these counties, the broad population trend and corresponding electrical infrastructure needed to provide service in these areas is evident and continues to grow.

Moreover, when AmerenUE constructs a new transmission or distribution line, the initial tree-trimming expense to clear the right of way is capitalized in the cost of the line. Again, during the ten year period (1990-2000), in addition to the O&M tree-trimming expenditures, AmerenUE in Missouri incurred in excess of $10,500,000 in capitalized tree-trimming expenditures. However, after these new lines are put in service, the ongoing tree-trimming maintenance gets placed into the base workload for vegetation management, thus increasing in corresponding fashion future tree-trimming O&M expenditures. Because the number of pole miles in AmerenUE Missouri for both transmission and distribution have increased by 25.7% (period 1988 to 2001), it is only logical that there would also be a corresponding increase in tree-trimming workload

requirements and expenditures. These are important considerations since tree-trimming, as opposed to overhead pole-line hardware, must be maintained on a shorter, more cyclic basis thus increasing both present and future expenditures.

**Q. What expectations do AmerenUE customers and communities have in regards to utility tree-trimming?**

A. AmerenUE customers and communities expect us to be good stewards of the environment. AmerenUE has, and continues to demonstrate its commitment to being a good steward of the environment through its participation in nationally recognized programs such as Tree Line USA and Project Habitat.

Ameren recently received its third consecutive Tree Line USA award from the National Arbor Day Foundation. This annual award is based on a utility-demonstrated commitment to quality tree care, annual worker training and public education and tree planting programs. Ameren was one of 82 utilities nationally (incl. IOU's, Muni's and Coop's) to receive this award in 2001, which received national recognition in the Wall Street Journal. The National Arbor Day Foundation also recognizes communities that AmerenUE serves with a separate program called Tree City USA. Together, both of these national programs promote and encourage proper urban forestry practices. In addition to these nationally recognized programs, Ameren recently initiated a program called Environmental Connection's. This program is a continuation of the former Greenleaf Program established in 1989 by AmerenUE to encourage reforestation and landscaping. Through the Environmental Connection's and Greanleaf Programs, Ameren Corporation has donated more than $835,000 in corporate grants to non-profit organizations in our service area during the period of 1989 to 2001.

Ameren also is a charter member of Project Habitat. Project Habitat is a program sponsored by BASF Corporation that recognizes organizations that control

unwanted vegetation and enhance wildlife through vegetation management practices. Project Habitat partners include the following organizations: Butterfly Lovers International, Quail Unlimited, National Wild Turkey Federation, Quality Deer Management Association and Buckmasters.

**Q. Are there other reasons why the tree-trimming costs for AmerenUE have increased and are anticipated to increase over the next several years?**

A. Yes. Due to the significantly higher flows on the Ameren transmission system as a result of the Federal Energy Regulatory Commission's issuance of Order No. 888, greater attention has been focused on vegetation management within Ameren's transmission line corridors. Because Ameren's transmission system is so heavily loaded, the impact of a tree-related outage also intensifies since it could result in a loss of stability on the entire transmission system. Furthermore, to alleviate the loading levels on its transmission system, AmerenUE is planning to construct a number of new transmission lines over the next five years. As more miles of transmission line are built, the more miles of line that must be kept free of vegetation exposure through increased tree trimming and vegetation management expenditures.

**Q. At what rate do you see tree-trimming expenditures increasing over the next five years?**

A. To maintain or improve customer outage statistics on AmerenUE's transmission and distribution systems, it will be necessary for tree-trimming expenditures to increase beyond normal inflationary costs going forward. There are several reasons for this expectation. First of all, for a typical 3 man tree-trimming crew, over 80% of the total tree-trimming costs are related to labor. Because the majority of our contractors

employ union tree-trimmers, who traditionally receive a salary increase of 3% or more per year, it is reasonable to expect that AmerenUE's tree-trimming costs will also rise by a similar percentage. Second, the equipment portion of the existing vegetation management contracts will need to be negotiated at the end of 2002 and may increase costs. And third, the increasing pressure placed on AmerenUE by its customers to provide service free of even momentary interruptions will require AmerenUE to place more emphasis on its vegetation management practices thereby increasing expenditures.

**Q. Will AmerenUE be able to maintain a proper level of tree-trimming if the Mr. Harrison's level of tree-trimming expenditures are employed?**

A. No, I do not believe that we could. If AmerenUE adopted the projected spending levels for tree-trimming suggested by Mr. Harrison, significant reductions in tree-trimming schedules would have to be made. This will likely result in increased power interruptions, lower levels of customer satisfaction, increase customer complaints and could negatively impact public safety. Moreover, lengthening tree-trimming cycles in the short term to levels that can be supported by staff's recommended funding levels could end up significantly increasing tree-trimming expenditures in the long run. As tree-trimming cycle times increase, tree branches grow thicker and foliage gets denser, causing the eventual tree-trimming process to become more costly.

## III. Automated Meter Reading Service Expense

**Q. On page 11 in the direct testimony of staff witness Paul R. Harrison, Mr. Harrison eliminates, among other things, the cost of retrofit charges ($871,655) from automated meter reading costs for the test year. He states as support for this**

**adjustment that these retrofit charges are a one-time, non-recurring cost to adapt the manual meters to the automated/electronic meters. Is this correct?**

A. No, this is not correct. Mr. Harrison has mistakenly assumed that the information provided in response to DR 45, Part 1 for retrofit cost is a one-time, non-recurring expense. In fact, only $379,854 of $871,655 can be characterized as a one-time, non-recurring expense. The remaining $491,801 is an annual expense AmerenUE will continue to incur over the life of the 20 year contract AmerenUE has with SchlumbergerSema. (SchlumbergerSema assumed the contract from CellNet when they acquired CellNet in a bankruptcy proceeding.)

**Q. Why is the $491,801 an annual expense versus a one-time, non-recurring expense?**

A. Under the base contract AmerenUE entered into with CellNet (now SchlumbergerSema) in 1995, AmerenUE agreed to pay for retrofitting its meters in the St. Louis metropolitan area in the form of annual payments over the life of the contract rather than as one-time payments as the meters were retrofitted. Consequently, each year through the year 2015, AmerenUE will be making a payment of approximately $491,801 to SchlumbergerSema for retrofitting the meters.

**Q. Is the annual payment of $491,801 subject to change?**

A. Yes. In accordance with the contract, this cost is subject to increase slightly each year in proportion to the Gross Domestic Product Deflator Index.

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

A. Yes.

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

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

**AFFIDAVIT OF THOMAS R. VOSS**

**STATE OF MISSOURI** )
) **ss**
**CITY OF ST. LOUIS** )

Thomas R. Voss, being first duly sworn on his oath, states:

1. My name is Thomas R. Voss. I work in St. Louis, Missouri and I am employed by Ameren Corporation as Senior Vice President – Energy Delivery.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 19 pages, Appendix A and Schedules 1 through 6, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

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

Thomas R Voss
Thomas R. Voss

Subscribed and sworn to before me this 3rd day of May, 2002.

Debby Anzalone
Notary Public

My commission expires:

DEBBY ANZALONE
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: April 18, 2006

# EXECUTIVE SUMMARY

## Thomas R. Voss

***Senior Vice-President – Energy Delivery, at Ameren Services, who is responsible for the design, construction, operation, and maintenance of the electric and gas distribution systems of AmerenUE and AmerenCIPS, and all customer care activities***

* * * * * * * * * *

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# Tree Growth for St.Louis City/County 12kV Feeders

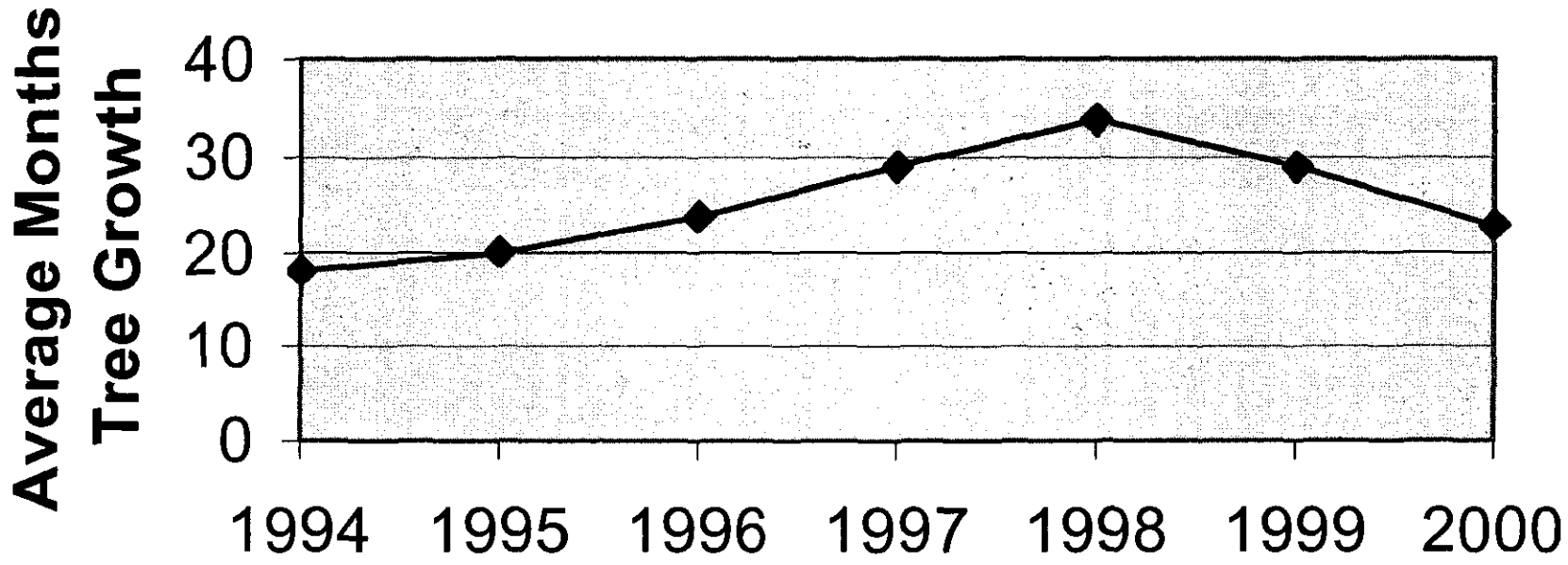
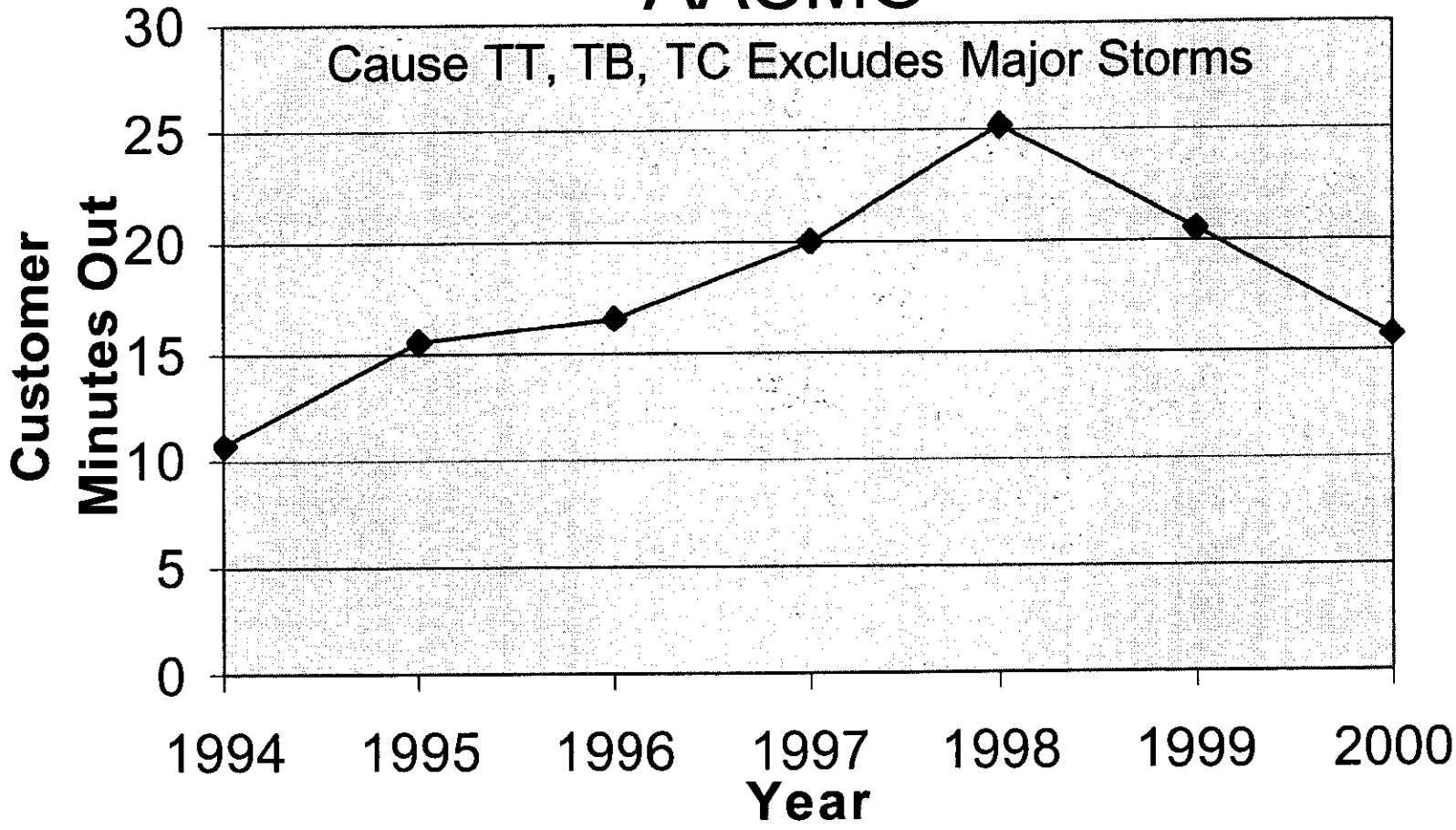



**Figure 2**

SCHEDULE 1

# 12 kV St. Louis City/County AACMO




SCHEDULE 2

# CALL CENTER ACTIVITY DURING MISSOURI ICE STORM

*(JANUARY 29 AND 30, 2002)*

**AMERENUE** Incoming Lines:

| | |
|---|---|
| 342-1000 | 46 Lines |
| 342-1111 | 70 Lines |
| 1-800 | 164 Lines |
| Total: | 280 Lines |

**Calls Handled by Ameren Call-takers:**

| | TROUBLE CALLS | | | | ALL CALLS | | | |
|---|---|---|---|---|---|---|---|---|
| | Offered | Abandoned | % Answered | ASA (Min:Sec) | Offered | Abandoned | % Answered | ASA (Min:Sec) |
| 01/29/02 | 1371 | 1 | 99.93 | 0:06 | 7346 | 69 | 99.06 | 0:11 |
| 01/30/02 | 6102 | 43 | 99.30 | 0:28 | 12793 | 1011 | 92.10 | 1:16 |
| 01/31/02 | 6432 | 104 | 98.38 | 0:24 | 12576 | 1230 | 90:22 | 1:29 |
| 02/01/02 | 2741 | 51 | 98.17 | 0:25 | 8250 | 608 | 93.14 | 1:05 |
| 02/02/02 | 655 | 2 | 99.70 | 0:12 | 1992 | 23 | 98.86 | 2:05 |

**FIRST CONTACT, CHARLOTTE, NC (OUTSOURCED CALLS)**

**Calls Handled by First Contact Call-takers:**

| | Offered | Abandoned | % Answered | ASA (Min:Sec) |
|---|---|---|---|---|
| 01/29/02 | 160 | 0 | 100.00 | 0:01 |
| 01/30/02 | 172 | 24 | 88.76 | 0:51 |
| 01/31/02 | 110 | 7 | 99.94 | 0:07 |
| 02/01/02 | 101 | 1 | 99.99 | 0:07 |
| 02/02/02 | 30 | 7 | 76.67 | 0:28 |

**VRU (INTERACTIVE VOICE RESPONSE UNIT)**

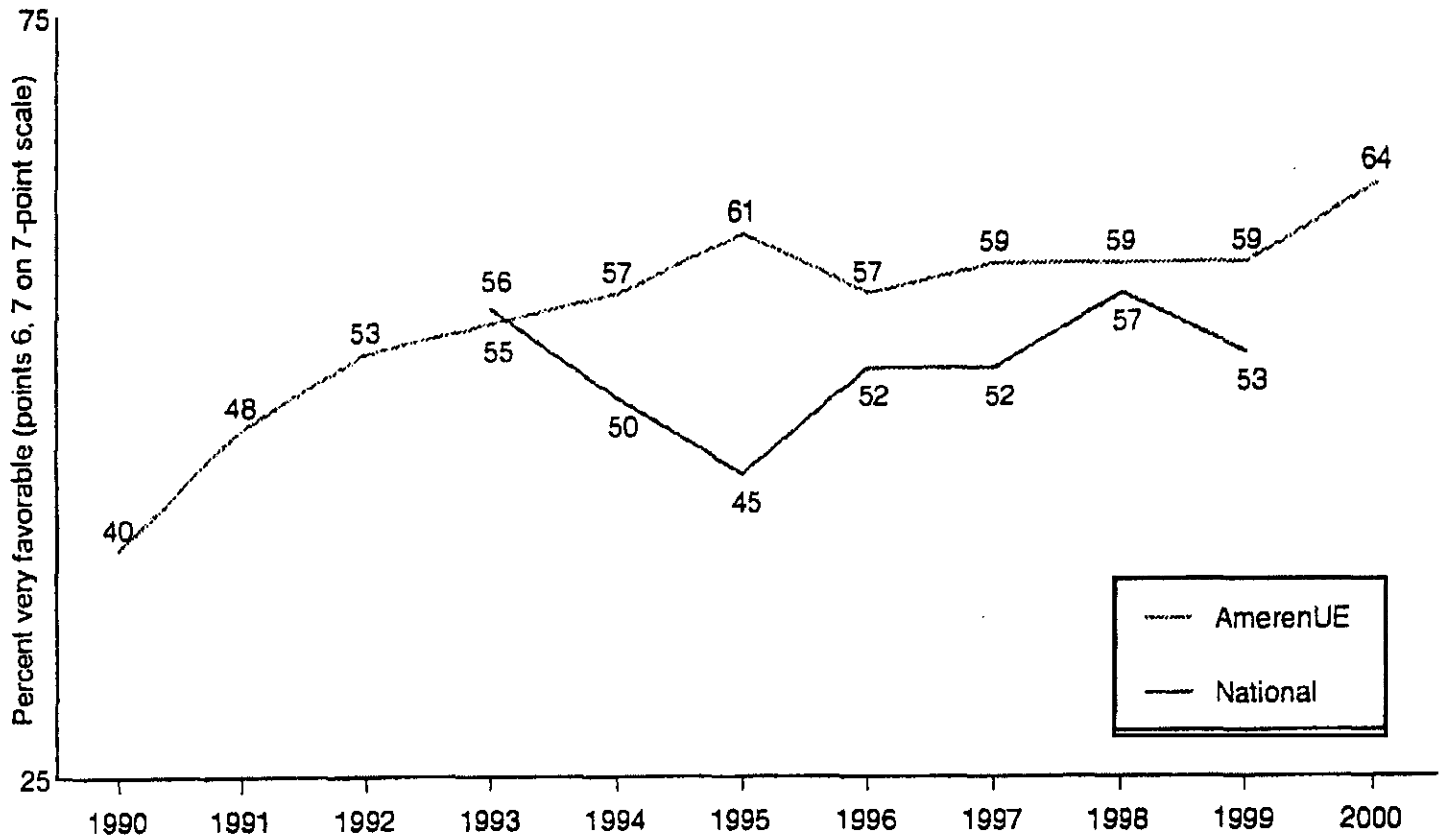
| Calls Handled by VRU: | |
|---|---|
| 01/29/02 | 353 |
| 01/30/02 | 2255 |
| 01/31/02 | 2750 |
| 02/01/02 | 914 |
| 02/02/02 | 98 |

**21ST CENTURY HIGH VOLUME CALL OVERFLOW SYSTEM:**

| Calls Handled by 21st Century: | |
|---|---|
| 01/29/02 | None |
| 01/30/02 | 32 |
| 01/31/02 | None |
| 02/01/02 | None |
| 02/02/02 | None |

SCHEDULE 3

# Favorability–Ameren Residential vs. National: 1990-1999



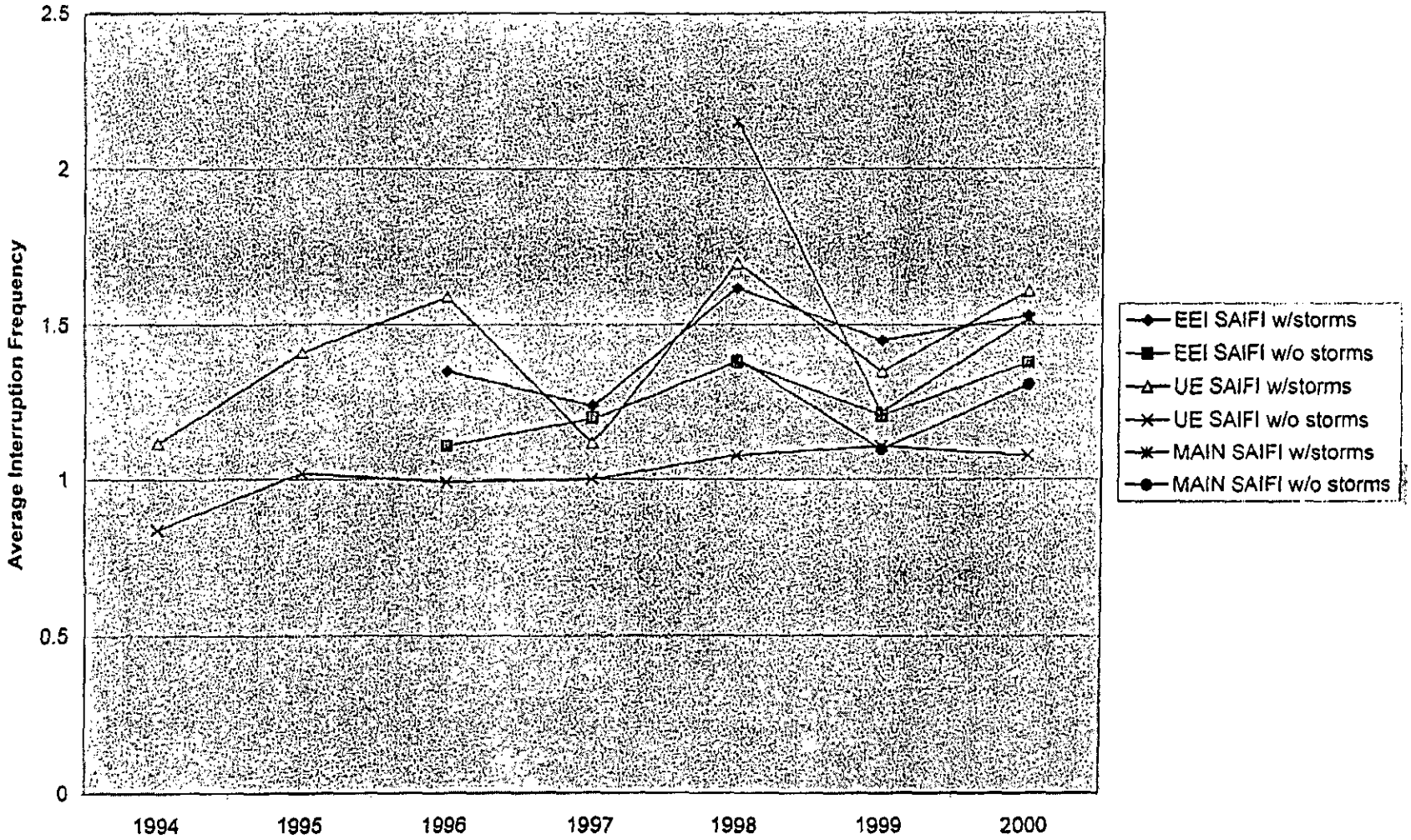

Note: Ameren data through 1997 is UE data; 2000 data point is for "Satisfaction" measure (1Q only)

SCHEDULE 4

*Source: Cambridge Research Institute*

SCHEDULE 5

## System Average Interruption Frequency Index 1994-2000



SCHEDULE 6

## Customer Average Interruption Duration Index 1994-2000