Illinois Commerce Commission

Assessment of AmerenCIPS'

Reliability Report and Reliability Performance

for Calendar Year 2005

Pursuant to 83 Illinois Administrative Code 411.140

December 18, 2006

1. Executive Summary

Pursuant to Section 16-125 of the Illinois Public Utilities Act and the Commission's electric reliability rules in 83 Illinois Administrative Code, Part 411, Central Illinois Public Service Company d/b/a AmerenCIPS (AmerenCIPS) filed its annual electric reliability report for calendar year 2005 on May 26, 2006. It filed a revised Page 70 of its report on July 21, 2006, correcting a non-compliant item in the initial report. This document details Staff's assessment of AmerenCIPS' 2005 reliability report and Staff's evaluation of AmerenCIPS' reliability performance for calendar year 2005. *Note that in May 2005 all AmerenUE-Illinois assets were transferred to AmerenCIPS, and that the AmerenCIPS reliability report for 2005 and this document apply to the combined company.*

AmerenCIPS' reported company-wide average interruption frequency index (SAIFI) for 2005 improved nearly 17% from that reported for year 2004, but is slightly worse than in 2003. Its overall SAIFI performance was tied with AmerenIP for fifth place among the eight reporting utilities in 2005, with only two utilities (MidAmerican and Mt. Carmel) posting higher (worse) system-wide SAIFI values in 2005. AmerenCIPS' worst circuit SAIFI for 2005 was nearly 14% better than its worst-in-eight-years figure reported for 2004, but it ranked sixth among the eight reporting utilities, with only MidAmerican and ComEd posting higher (worse) worst-circuit SAIFI values.

AmerenCIPS' reported company-wide average duration of customer interruptions (CAIDI) for 2005 was 21.7% better that it reported for year 2004, reversing a steadily worsening trend since 2000. AmerenCIPS ranked near the middle of the eight-utility group in this category in 2005. AmerenCIPS' worst circuit CAIDI for 2005 was 40% better than what it reported for 2004, but was 25% worse than in 2003. At 1,487 minutes (24.8 hours), AmerenCIPS' worst circuit CAIDI was the third highest among the eight reporting utilities in this category in 2005, with only AmerenIP and ComEd performing worse in this category.

AmerenCIPS listed weather as the most predominant cause of customer interruptions in 2005, causing 41.84% of its total customer interruptions. AmerenCIPS reported tree problems as the cause for only 6.22% of the events and 3.87% of its total customer interruptions, though Staff believes some of the interruptions attributed to weather may have been tree related. Staff did not perform any random inspections of tree conditions in AmerenCIPS service territory in 2006, but did note that tree trimming was well done on several, but not all, of the specific AmerenCIPS circuits it inspected this year. Some of the circuits inspected had a high number of tree trimming problems. AmerenCIPS reported that it is committed to staying on a four-year trimming cycle, but it also needs to assure compliance with 2002 NESC Rule 218 by assuring that all trees near its lines throughout its service territory are trimmed such that there are no tree contacts with its energized primary conductors before it returns to trim them again.

Staff found five National Electrical Safety Code (NESC) violations during its inspections of AmerenCIPS electric circuits this year, all of which pose a threat to service reliability and public safety. AmerenCIPS has resolved three of the NESC violations, and two others,

involving railroad crossing violations, are still pending. Staff also noted the need for more animal guards, the need for more lightning arresters, and several other problems on AmerenCIPS' worst performing and other circuits inspected this year. Many of these problems, which may or may not have contributed to poor performance in 2005, will have adverse effects on reliability and public safety in the future if not corrected. (Photos of some of the structural problems found are included in this report, and summaries of problems noted by Staff on AmerenCIPS circuits inspected this year are included as Attachments "A" through "P"). AmerenCIPS should perform field inspections of all circuits on a regular basis and correct the problems found which can significantly affect reliability or public safety.

Ameren has provided conflicting utility staffing level information to Staff, preventing Staff from drawing meaningful conclusions concerning whether or not each Ameren company is maintaining adequate staffing to provide reliable service to its customers. Perhaps the most troubling aspect of Ameren's staffing data inconsistencies is the implication regarding the possible inaccuracy, unreliability, and uselessness of any data that Staff in both the Energy and Financial Analysis Divisions receives from Ameren in the course of performing its oversight duties for the Commission. A more detailed discussion of this issue is provided at the end of Section 7 of this report. Ameren's staffing levels data is summarized in Attachment "R".

AmerenCIPS listed several ongoing corporate, operating, and maintenance activities that the company is doing to improve reliability, summarized in Section 9 of this report. These are positive steps toward reliability improvement.

AmerenCIPS reported that all remedial work on worst performing circuits described in its 2004 reliability report has been completed.

AmerenCIPS' report includes a discussion of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366 "as a means to more consistently compare reliability performance between utilities and to better identify trends over a period of time." The IEEE 1366 methodology alters reported reliability data by statistically eliminating certain "Major Event Days" (such as days with storms) without regard for the causes of the eliminated service interruptions or the causes of their extended durations. Staff has not accepted this statistical approach allowing utilities to eliminate service interruptions from their reliability statistics. Staff's position on this issue is described in detail in Attachment "Q" to this report.

While the above discussion covers the most significant items in a general way, a total of six specific recommendations are included in this Staff report, summarized beginning on page 44.

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2. Introduction

Beginning with the year 1999, and at least every three years thereafter, 83 Illinois Administrative Code Part 411.140 requires the Commission to assess the annual reliability report of each jurisdictional entity and evaluate its reliability performance. Code Part 411.140 requires the Commission evaluation to:

A) Assess the reliability report of each entity.

B) Assess the jurisdictional entity's historical performance relative to established reliability targets.

C) Identify trends in the jurisdictional entity's reliability performance.

D) Evaluate the jurisdictional entity's plan to maintain or improve reliability.

E) Include specific identification, assessment, and recommendations pertaining to any potential reliability problems and risks that the Commission has identified as a result of its evaluation.

F) Include a review of the jurisdictional entity's implementation of its plan for the previous reporting period.

This document provides Staff's assessment of the annual reliability report covering calendar year 2005 filed by Central Illinois Public Service Company d/b/a AmerenCIPS (AmerenCIPS) on May 26, 2006 (page 70 revised and re-filed on July 21, 2006), and Staff's evaluation of AmerenCIPS' reliability performance for calendar year 2005. ***(Note that in May 2005 all AmerenUE-Illinois assets were transferred to AmerenCIPS, and that the AmerenCIPS reliability report for 2005 and this document apply to the combined company.)*** This report is organized to include all of the above listed requirements.

3. AmerenCIPS' 2005 Customer Base and Service Territory

As of December 31, 2005, AmerenCIPS provided electric service to 393,495 electric distribution customers in Illinois.

AmerenCIPS' service territory covers approximately 20,000 square miles throughout 70 counties in central and southern Illinois. The majority of AmerenCIPS' customer base is located in rural areas, evidenced by providing service to 7% of the state's population while covering over 35% of its surface area. The previous AmerenUE-Illinois service territory, now a part of AmerenCIPS, includes portions of four counties in the St. Louis metro-east part of Illinois.

4. AmerenCIPS' Electric Distribution System

AmerenCIPS' electric distribution system consists of approximately 12,000 miles (89.5%) of overhead conductor and 1,400 miles (10.5%) of underground circuits. The previous AmerenUE-Illinois electric system, now a part of AmerenCIPS, includes approximately 1400 distribution circuit miles. AmerenCIPS reported that it has a total of 1,129 electric distribution circuits.

Code Part 411.120(b)(3)(G) requires the utilities to report on the age of their distribution facilities. Because of different depreciation structures remaining in place for each company, AmerenCIPS reported this information separately for the previous AmerenCIPS and the previous AmerenUE-Illinois.

For the previous AmerenCIPS, AmerenCIPS estimates that the average ages of its distribution equipment range from 3.5 years (for underground services) to 25.9 years (for structures and improvements), with an average age of 17.1 years for poles, towers, and fixtures, and 18.5 years for line transformers. The remaining average distribution equipment (accounting) lives range from 7.6 years (for station equipment) to 56.3 years (for underground conduit), with an average remaining life of 17.9 years for poles, towers, and fixtures, and 11.5 years for line transformers.

For the previous AmerenUE-Illinois, AmerenCIPS estimates that the average ages of its distribution equipment range from 12.2 years (for underground services) to 39.9 years (for structures and improvements), with an average age of 17.9 years for poles, towers, and fixtures, and 34.1 years for line transformers. The remaining average distribution equipment (accounting) lives range from 5.9 years (for line transformers) to 58.7 years (for underground conduit), with an average remaining life of 16.1 years for poles, towers, and fixtures, and 16.1 years for station equipment.

See Tables 15 and 16 (page 36) in AmerenCIPS' annual reliability report for more details.

5. Assessment of AmerenCIPS' 2005 Reliability Report

Central Illinois Public Service Company d/b/a AmerenCIPS (AmerenCIPS) filed its annual electric reliability report for calendar year 2005 on May 26, 2006, as required by Section 16-125 of the Public Utilities Act and the Commission's electric reliability rules in 83 Illinois Administrative Code, Part 411. AmerenCIPS filed a revised Page 70 of its annual reliability report on July 21, 2006, correcting a non-compliant item in the initial report.

Except for one non-compliant item described below, AmerenCIPS' initially filed reliability report contained the information necessary to comply with the requirements of Code Part 411.120(b)(3). The report is generally well organized, with the information sequenced to follow the pattern of Code Part 411. This makes it less difficult to find information in the

report. AmerenCIPS described several specific projects intended to improve system reliability.

AmerenCIPS' initial report was non-compliant with the reporting requirements specified in the Code in one respect:

- The cost for remedial actions taken ("correcting identified maintenance deficiencies") for AmerenCIPS' worst performing circuit V25513 in Elsah & rural (p.70) was not included as required by Code Part 411.120(b)(3)(J).

This non-compliant item was addressed in AmerenCIPS' revised Page 70 of its reliability report filed July 21, 2006.

AmerenCIPS' report includes a discussion of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366 "as a means to more consistently compare reliability performance between utilities and to better identify trends over a period of time." The IEEE 1366 methodology alters reported reliability data by statistically eliminating certain "Major Event Days" (such as days with storms) without regard for the causes of the eliminated service interruptions or the causes of their extended durations. Staff has not accepted this statistical approach allowing utilities to eliminate service interruptions from their reliability statistics. Staff's position on this issue is described in detail in Attachment "Q" to this report.

6. AmerenCIPS' Historical Performance Relative to Established Reliability Targets

Code Part 411.140(b)(4)(A-C) establishes electric service reliability targets that jurisdictional entities (utilities) must strive to meet. These targets specify limitations on customer interruptions as well as hours of interruption that a utility must strive not to exceed on a per customer basis. Code Part 411.120(b)(3)(L) requires each utility to provide a list of every customer, identified by a unique number, who experienced interruptions in excess of the service reliability targets, the number of interruptions and interruption duration experienced in each of the three preceding years, and the number of consecutive years in which the customer has experienced interruptions in excess of the service reliability targets.

In April 2004, AmerenCIPS, along with all other regulated Illinois electric utilities, agreed to report on <u>all</u> interruptions (controllable and uncontrollable) as defined in Code Part 411.20 in relation to the service reliability targets for the reporting periods of 2003 through 2007, and to include the specific actions, if any, that the utility plans or has taken to address the customer reliability concerns.

The customer service reliability targets are listed in Table 1.

Table 1
CUSTOMER SERVICE RELIABILITY TARGETS

Immediate primary source of service operation voltage	Maximum number of interruptions in each of the last three consecutive years	Maximum hours of total interruption duration in each of the last three years
69kV or above	3	9
Between 15kV & 69kV	4	12
15kV or below	6	18

In its 2005 reliability report, AmerenCIPS reported that the following numbers of customers in each of the above categories exceeded the service reliability targets in each of the three preceding years:

- 69kV or above: None
- Between 15kV & 69 kV: None
- 15kV or below: 830

Of the 830 customers exceeding the reliability targets in 2005, AmerenCIPS reported that six *(seven are listed)* exceeded the target for frequency only, 651 exceeded the target for duration only, and 173 exceeded the targets for both frequency and duration. Of the 830 total violations, 744 (89.6%) were in the former AmerenUE territory, with only 86 (10.4%) in the rest of AmerenCIPS. 739 (all but five) of the 744 former AmerenUE customers exceeded the 18-hours interruption duration target in each of the past three years, consistent with AmerenUE's poor CAIDI history.

While still unreasonably high compared to other utilities, the 744 customers exceeding the targets in the former AmerenUE territory was a significant improvement from the 1,381 customers reported by AmerenUE for year 2004 (AmerenUE reported 243 for year 2003). The 86 customers exceeding the targets in the rest of AmerenCIPS compares to 51 reported by AmerenCIPS in 2004 and 104 reported in 2003.

The breakdown of AmerenCIPS reliability target violations by number of consecutive years is shown in Table 2:

Table 2
AmerenCIPS CUSTOMERS EXCEEDING RELIABILITY TARGETS

Consecutive Years	Former AmerenUE Customers	Former AmerenCIPS Customers	Total AmerenCIPS Customers
3	483	79	562
4	215	6	221
5	46	0	46
6	0	1	1
3 or more yrs. totals:	**744**	**86**	**830**

AmerenCIPS investigated each of the reported target violations, determined the causes for the service interruptions, and reported specific actions taken and planned to address these problems. AmerenCIPS' reported actions taken and planned seem reasonable.

It is also noteworthy that AmerenCIPS reported that 5,562 of its customers experienced more than six interruptions in 2005. In the extreme cases, a total of 11 AmerenCIPS customers were reported to be in the 11 to 15 interruptions category in 2005 (compared to 688 customers in 2004), and no customers were reported to be in the 16 to 20 interruptions category in 2005 (compared to 26 customers in 2004). See Section 8 of this report for more information on this, including trends of AmerenCIPS customers experiencing high numbers of interruptions.

7. Analysis of AmerenCIPS' Year 2005 Reliability Performance

Table 3 shows AmerenCIPS' company-wide reliability indices for calendar year 2005 compared to the other seven reporting Illinois electric utilities. This data indicates that AmerenCIPS tied with AmerenIP for fifth in the eight utility group in terms of average frequency of system interruptions (SAIFI) in 2005, and ranked seventh in terms of average frequency of customer interruptions (CAIFI). Only MidAmerican Energy Company and Mt. Carmel Public Utility Company had worse overall SAIFI statistics than AmerenCIPS in 2005. Only MidAmerican Energy Company had a worse overall CAIFI statistic in 2005.

At 112 minutes, AmerenCIPS ranked fourth in the eight utility group in terms of average duration of customer interruptions (CAIDI) in 2005, but made a significant (21.7%) improvement from its CAIDI of 143 minutes in 2004.

Table 3
ILLINOIS UTILITY RELIABILITY INDICES
CALENDAR YEAR 2005

	SAIFI	CAIDI (minutes)	CAIFI
AmerenCIPS	**1.38**	**112**	**2.12**
AmerenCILCO	1.23	165	2.02
AmerenIP	1.38	196	1.81
ComEd	1.18	104	1.95
MidAmerican	1.7719	72.17	2.376
Interstate	0.54	161.5	1.3
Mt. Carmel	1.39	66.19	1.43
South Beloit	0.69	135	1.42

SAIFI: System Average Interruption Frequency Index. This represents the average interruption frequency for all customers on the electric system, including customers who had no interruptions (total customer interruptions divided by total system customers).

CAIDI: Customer Average Interruption Duration Index. This represents, for the group of customers that actually had one or more interruptions, the average interruption duration.

CAIFI: Customer Average Interruption Frequency Index. This represents the average interruption frequency for the group of customers that had interruptions. A CAIFI index much higher than SAIFI suggests that subsets of customers experienced significantly more frequent interruptions than the overall system average.

Note: The comparison of company-wide reliability indices for Illinois electric utilities should indicate relative reliability levels achieved. The reader of this report should, however, keep in mind that each Illinois electric utility has a unique electric system, a unique group of customers, and a unique method of defining, recording, and reporting the interruption data. These differences make precise utility-to-utility comparisons difficult.

Table 4 shows a breakdown of fifteen causes of sustained customer interruptions by cause category, as reported by AmerenCIPS for year 2005. The total of 12,012 interruptions ("events") reported for 2005 is down 16.2% from the 14,328 events reported for AmerenCIPS and AmerenUE combined for year 2004. Similarly, the total of 605,988 customers interrupted in 2005 is down 15.9% from the combined total of 720,597 customers interrupted in 2004.

AmerenCIPS reported that the highest percentages of customer interruptions in 2005 were caused by weather (41.84%), overhead equipment problems (12.81%), "public" (9.03%), and "intentional" (8.97%). AmerenCIPS listed trees as the cause for only 6.22% of the events and 3.87% of the customer interruptions in 2005, though some of the interruptions attributed to weather may have been tree related. Staff did not perform any random inspections of tree conditions in AmerenCIPS' service territory in 2006. Tree trimming looked generally well done on ten of the fifteen AmerenCIPS circuits Staff inspected this year, however. The three most significant exceptions were circuits in 1) Alton, 2) Gibson City, Saybrook, Arrowsmith, & rural, and 3) Rural Springfield, Glenarm, Pawnee, & rural.

Table 4
TOTAL INTERRUPTIONS BREAKDOWN BY CAUSE

Interruption Cause Category	Events	Customers Interrupted	Percent of Events	Percent of Customer Interruptions
Animal Related	1,384	43,421	11.52%	7.17%
Customer	99	5,241	0.82%	0.86%
Intentional	1,670	54,369	13.90%	8.97%
Jurisdictional Entity / Contractor Personnel Errors	65	7,179	0.54%	1.18%
Loss of Supply	17	1,935	0.14%	0.32%
Other	746	5,721	6.21%	0.94%
Overhead Equipment Related	2,358	77,651	19.63%	12.81%
Public	481	54,700	4.00%	9.03%
Substation Equipment Related	56	23,262	0.47%	3.84%
Transmission Outage	25	15,996	0.21%	2.64%
Tree Related	481	12,630	4.00%	2.08%
Tree Related – Tree Broken	267	10,856	2.22%	1.79%
Underground Equipment Related	383	13,997	3.19%	2.31%
Unknown	1,123	25,497	9.35%	4.21%
Weather	2,857	253,533	23.78%	41.84%
TOTALS:	**12,012**	**605,988**	**100.00%**	**100.00%**

Code Part 411.120(b)(3)(I)&(J) requires the reporting utility to list its worst performing circuits (subsection I) and then state (subsection J) what corrective actions are planned to improve those circuits' performance. Table 5 shows the 21 AmerenCIPS circuits with the highest (worst) reliability indices for 2005. The bolded values in the SAIFI, CAIFI, and

CAIDI columns represent the indices that caused the circuit to be a worst performer.

Table 5
AmerenCIPS CIRCUITS WITH HIGHEST SAIFI, CAIFI, & CAIDI
CALENDAR YEAR 2005

Substation	Circuit	SAIFI	CAIFI	CAIDI (minutes)
Hartford	305001	0.06	1.25	**917**
French Village	307005	0.04	1.00	**1487**
Plum	311001	0.06	1.03	**752**
Frey	325004	0.43	1.09	**1330**
Bond	334001	0.30	1.00	**727**
Alby (Alton)	**340001**	**4.24**	***4.24**	132
Rosemont	341002	0.52	1.06	**687**
Lansdowne	342001	0.71	1.54	**738**
Carrier Mills (Carrier Mills)	**S20554**	**7.10**	3.27	20
Astoria (Astoria, Summum, & rural)	**U05595**	**3.62**	***3.62**	58
Eldred	U45536	0.10	1.04	**730**
Hardin	U66515	2.69	**3.45**	195
Principia College (Lockhaven, Millcreek, Piasa Creek, & rural)	**V25504**	**3.91**	***3.91**	167
Principia College (Elsah & rural)	**V25513**	**3.77**	**3.79**	214
Quincy High School	V51002	0.03	1.00	**667**
Winchester South (Alsey, Glasgow, & rural)	**V83505**	**5.57**	***5.57**	46
West Bridgeport	X23505	**3.68**	***3.68**	80
Fisher (Fisher)	**X68506**	**3.63**	***3.63**	152
Gibson City West (Gibson City, Saybrook, Arrowsmith, & rural)	**X75571**	**3.54**	***3.54**	83
Rossville South	Y68582	1.16	1.17	**686**
Shelbyville North (Findlay, Westervelt, & rural)	**Z21564**	**4.32**	***4.32**	117

Notes: *Bond (E. St. Louis) Circuit 334001 was also a worst SAIFI circuit in 2000.*
Hardin (Hardin, Hamburg, & rural) Circuit U66515 was also a worst SAIFI circuit in 2003.
Principia College Circuit V25504 was also a worst SAIFI circuit in 2002.
Winchester South Circuit V83505 was also a worst SAIFI circuit in 2000.
West Bridgeport Circuit X23505 was also a worst SAIFI circuit in 2004, 2000, & 1999.

** Ameren reported that it changed CAIFI to equal SAIFI for these circuits because "indices are based upon end-of-year customer counts which can vary significantly due to circuit reconfiguration."*

As part of his review of AmerenCIPS' 2005 reliability, Staff's Senior Electrical Engineer Jim Spencer inspected the nine AmerenCIPS worst performing circuits which have their circuit numbers indicated in bold in Table 5. Staff also performed spot-checks of prior-year circuit problems on Circuits U04538 (Rural Ashland, Pleasant Plains, & rural) and Y60593 (Rantoul, Gifford, Penfield, & rural); a selected circuit inspection of Circuit V18553 (Rural Springfield, Glenarm, Pawnee, & rural); and inspections of the following five AmerenCIPS "next-worst SAIFI" circuits:

- Kincaid Circuit X91510 (Kincaid, Bulpitt, & Tovey)
- White Hill Circuit T11508 (Cypress & rural)
- Xenia East Circuit Z57516 (Xenia, Iuka, & rural)
- Parks Circuit 332003 (Cahokia)
- Rantoul Circuit Y60548 (Fisher, Dewey, Tomlinson, & rural)

Ameren Services or AmerenCIPS personnel accompanied Staff on twelve of these seventeen circuit inspections and were very cooperative and helpful to Staff in accomplishing the work.

The field inspections allow Staff to verify that work was performed on the circuits as reported by the utilities and to see if there are any apparent reasons for poor performance of these circuits. Staff also notes any problems with the facilities it observes which may pose a threat to future service reliability or to public safety. For example, Staff looks for poor tree trimming practices, broken poles, split crossarms, damaged electrical devices, etc.

Summaries of items noted by Staff during the field inspections of the selected AmerenCIPS distribution circuits this year are included in this report as Attachments "A" through "P". *(As mentioned to AmerenCIPS when providing them with a copy of these summaries in September 2006, the summary for each of the circuits inspected represents typical observations noted by ICC Staff during the field inspections and is not intended to represent all of the problems or potential problems that may exist on each circuit. Also, Staff's inspections are not intended to take the place of the more thorough, detailed inspections that should be performed periodically by the utility company.)*

There were some mapping errors and some cases where roads and/or towns were not labeled on the circuit maps provided by AmerenCIPS again this year, but these problems were fewer than in past years. The fuzzy print problem noted last year has apparently been resolved. AmerenCIPS should be commended for the progress it has made in these areas. It should continue its efforts to improve its circuit maps and make them more user friendly.

AmerenCIPS Circuit U05595 is a 12 kV circuit serving Astoria, Summum, and rural areas between those communities and southeast of Astoria. It was a worst performing circuit in 2005, with AmerenCIPS listing overhead equipment (39%), "unknown" (32%), and underground equipment (28%) as the predominant causes of customer interruptions.

Much of AmerenCIPS' discussion was about the circuit being "subject to numerous lightning storms during 2005", however, and mentioned that a "substantial portion of the circuit is rural with considerable lightning exposure" and that there were "a limited number of lightning arresters". Staff inspected this circuit on March 2, 2006, noting some structural problems and one NESC violation involving the lack of a strain insulator below the AmerenCIPS 12 kV primary in an ungrounded downguy from a Spoon River Electric Cooperative overcircuit on the same pole. (Spoon River Electric Cooperative subsequently corrected the NESC violation.) Tree trimming looked good and the fused taps looked okay. Very few animal guards were noted in Summum, and more lightning arresters are needed in the rural areas. Many of the roads were not labeled on the circuit maps provided. See Attachment "A" for a summary of Staff's field notes. Figure 1 shows one of the problems noted on this circuit.

Figure 1 (Photo 06-CIP790)
Badly split crossarm & crossarm brace (lightning damage), Circuit U05595, north of US Hwy. 24, east of Astoria

Circuit Z21564 is a 12 kV circuit serving Findlay, Westervelt, and a rural area between those communities and south to the north edge of Shelbyville. This was a worst performing AmerenCIPS circuit in 2005, with overhead equipment (49%) and the public (39%) listed as the primary causes of customer interruptions. Staff inspected this circuit on March 10, 2006, noting that the structures looked very good, generally, with many new poles and crossarms. There were many "extra" lightning arresters throughout the circuit, but more animal guards are needed. Tree trimming looked good in most of the circuit, but Staff noted several scattered tree conflicts in Findlay. Staff's field notes are summarized in Attachment "B".

Staff inspected a portion of AmerenCIPS' 12 kV Circuit X91510, which serves Kincaid, Bulpitt, and Tovey, on March 10, 2006. While not on AmerenCIPS' worst performing circuits list for 2005, this circuit was one of AmerenCIPS' next ten worst SAIFI circuits, with a SAIFI of 3.33. The portion of the circuit inspected (for which maps were provided) looked very good overall. There were some close trees, but trimming was in progress on the date of the inspection. There were few animal guards. ***There were 4 to 5 miles of additional exposure on this circuit west of Tovey in 2005, where most of the problems were, but AmerenCIPS did not provide maps for that portion of the circuit.*** See Attachment "C" for a summary of Staff's field notes.

Circuit T11508 was another "next-worst SAIFI" AmerenCIPS circuit in 2005, with a SAIFI of 3.07. Staff inspected this 12 kV circuit, which serves Cypress and a small rural area mostly south of Cypress, on March 13, 2006. Some portions of the circuit are cross-country and not readily accessible. Tree trimming looked okay, and there were many animal guards. Many of the roads were not labeled on the circuit maps provided. Staff's field notes are summarized in Attachment "D". An example of one of the problems Staff noted on this circuit is shown in Figure 2.

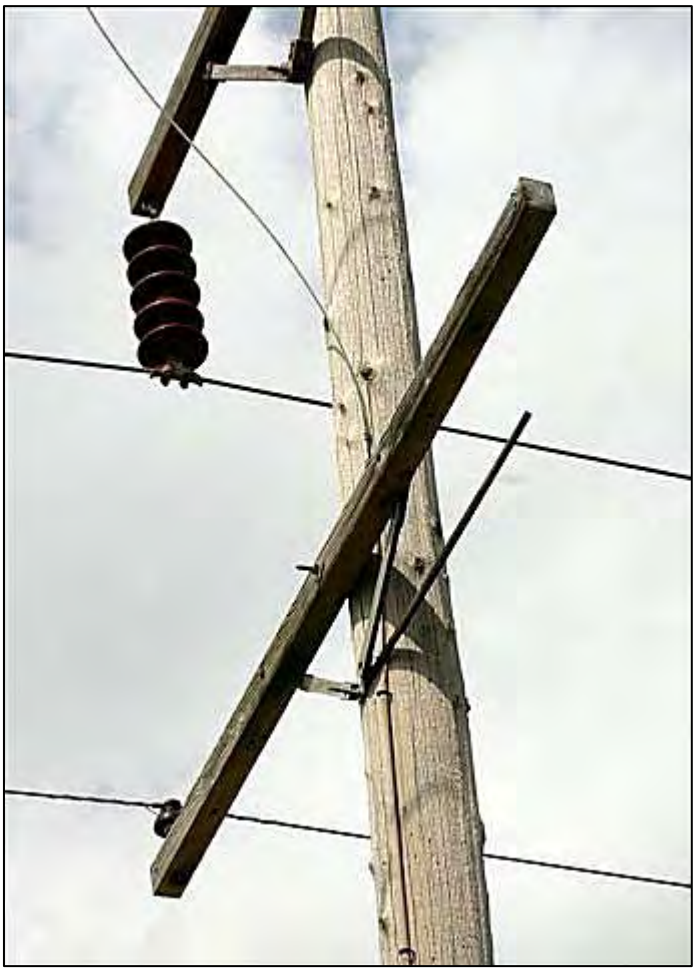


Figure 2 (Photo 06-CIP842)
Split wood crossarm brace, Circuit T11508, on SR 37 north of Cypress

Carrier Mills 4 kV Circuit S20554 was an AmerenCIPS worst performing circuit in 2005, with the highest SAIFI (7.10) of all AmerenCIPS circuits in 2005. It serves a southwestern portion of Carrier Mills. The portion of the circuit on the maps AmerenCIPS provided to Staff was converted to 12 kV about January 1, 2006, due to load growth and the failure of a substation transformer. Circuit maps for the 4 kV feeder along Walnut Street east from the substation and all of its taps (all part of the same circuit in 2005) were not provided. AmerenCIPS reported that 46% of the customer interruptions on this circuit in 2005 were attributed to "jurisdictional" (Ameren employee & contractor errors), while another 46% of

the interruptions were split equally between "other" and "unknown" causes. On March 13, 2006, Staff inspected the portion of this circuit (12 kV now) for which maps were provided, finding only one notable problem (see Attachment "E"). The structures looked good and several new poles were noted. Animal guarding and tree trimming were both well done.

Xenia East Circuit Z57516 is a 12 kV circuit serving Xenia, Iuka, and a rural area between those communities and east of Xenia. This was one of AmerenCIPS' "next-worst SAIFI" circuits in 2005, with a SAIFI of 2.84. During the inspection of this circuit on March 14, 2006, Staff noted that tree trimming looked good (saw fresh cuts) and several new poles were noted. More lightning arresters are needed in the rural feeder portion of the circuit. Animal guarding was very spotty, with very few animal guards in Iuka. See Attachment "F" for a summary of the few problems Staff noted on this circuit. Figure 3 shows a badly woodpecker damaged pole on this circuit.

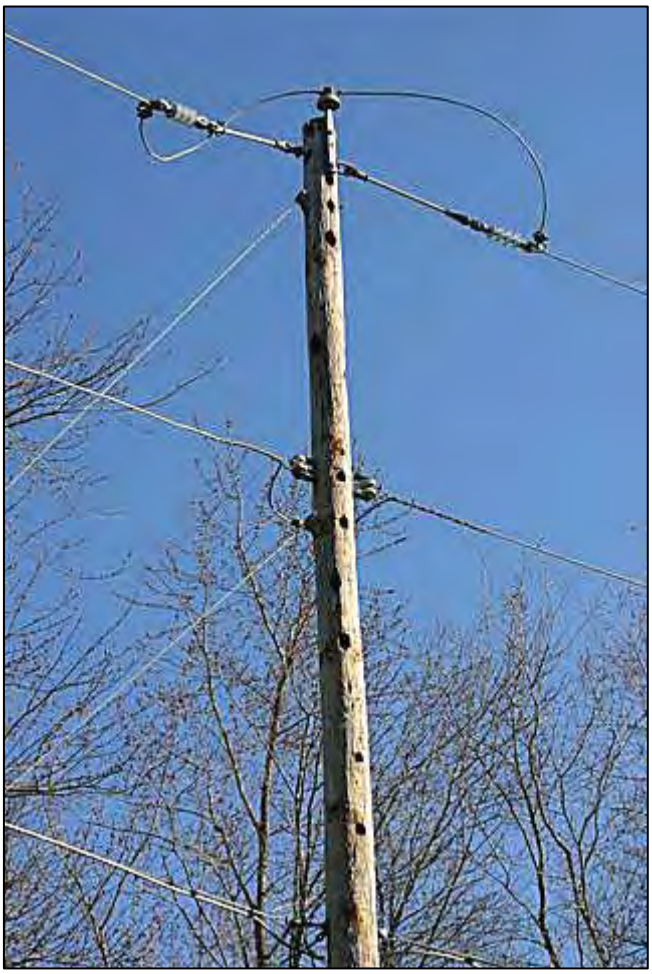


Figure 3 (Photo 06-CIP843)
15(+) woodpecker holes in pole,
Circuit Z57516, Enterprise Ave., Iuka

Winchester South Circuit V83505 is a 12 kV circuit serving Alsey, Glasgow, and rural areas between those communities, north of Alsey, and west of Glasgow. This was an AmerenCIPS worst performing circuit in 2005 and in 2000, with 55% of the customer interruptions in 2005 attributed to "unknown" causes (*Staff is always concerned when the causes for more than half of the circuit interruptions are unknown*). Staff inspected this circuit on March 15, 2006, noting that most of the tree trimming looked okay and that several new poles and crossarms are scattered throughout the circuit. There were several shell rotted poles, however, and more lightning arresters should be installed in the long rural exposures. Animal guards were noted only occasionally, and more are needed. A summary of Staff's field notes is included as Attachment "G", and two of the problems noted are shown in Figures 4 through 6.

Figure 4 (Photo 06-CIP846)
Badly shell rotted pole,
Circuit V83505, Alsey-Glasgow Rd.

Figure 5 (Photo 06-CIP848)
7.2 kV primary rubbing against tree,
Circuit V83505, Jackson St., Glasgow

Figure 6 (Photo 06-CIP849)
7.2 kV primary rubbing against tree,
Circuit V83505, Jackson St., Glasgow (same location as Figure 5)

AmerenCIPS Circuit 332-003 is a 4 kV circuit serving a southeastern portion of Cahokia (formerly a part of AmerenUE service territory). This circuit was one of AmerenCIPS' "next-worst SAIFI" circuits in 2005, with a SAIFI of 3.36. When Staff inspected this circuit on April 4, 2006, the only problems noted were missing guy markers at two locations (see Attachment "H"). The circuit is located mostly in back easements.

Alby 4 kV Circuit 340-001 was an AmerenCIPS worst performing circuit in 2005, serving a southwestern portion of Alton (formerly a part of AmerenUE service territory). The customer interruptions in 2005 were attributed nearly equally to broken trees (28%), overhead equipment (26%), public (23%), and underground equipment (23%). When inspecting this circuit on April 5, 2006, Staff noted many tree clearance problems and a few structural problems, as summarized on Attachment "I". AmerenCIPS reported that several poles were replaced in 2005, with some others scheduled for replacement in 2006. See Figures 7 through 11 for examples of some of the problems Staff noted on this circuit.

Figure 7 (Photo 06-CIP894)
Tree into primary,
Circuit 340-001, Forest Dr., Alton

Figure 8 (Photo 06-CIP892)
Large broken limb on primary,
Circuit 340-001, Forest Dr., Alton

Figure 9 (Photo 06-CIP888)
Badly split & deteriorated crossarm,
Circuit 340-001, Douglas St., Alton

Figure 10 (Photo 06-CIP882)
Primary through trees,
Circuit 340-001, Shaw Ave., Alton

Figure 11 (Photo 06-CIP881)
Trees into primary & vines up transformer pole,
Circuit 340-001, Gesche St., Alton

AmerenCIPS Circuit V25504 is a 12 kV circuit serving Lockhaven, Millcreek, Piasa Creek, and a rural area between those communities and Elsah to the west. This was a worst performing circuit in 2005, repeating in that category from 2002. The primary causes for the customer interruptions in 2005 were overhead equipment (56%) and broken trees (26%). Staff inspected this circuit on April 5, 2006, finding several new poles scattered throughout the circuit. Animal guarding was generally well done, and no tree trimming problems were noted. Staff's inspection field notes are summarized on Attachment "J". Figure 12 shows one problem noted, a pole with more than ten woodpecker holes.

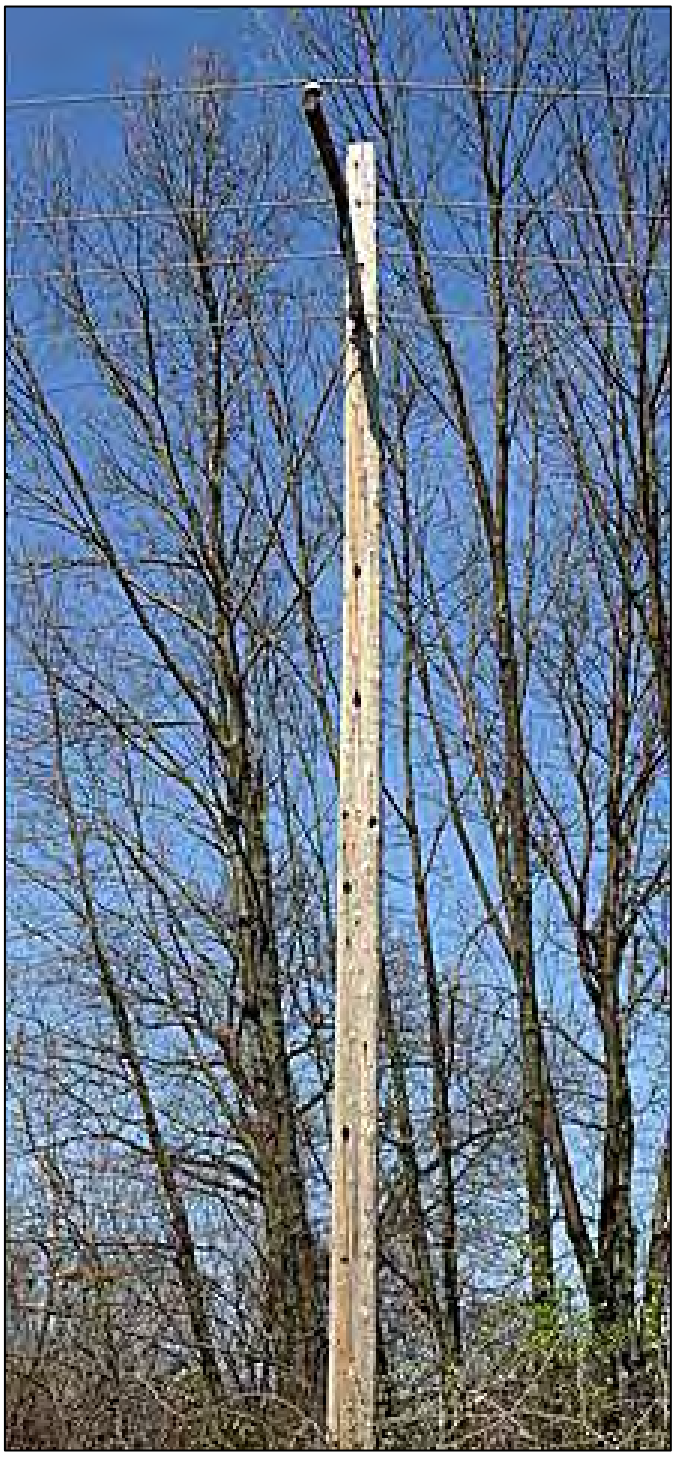
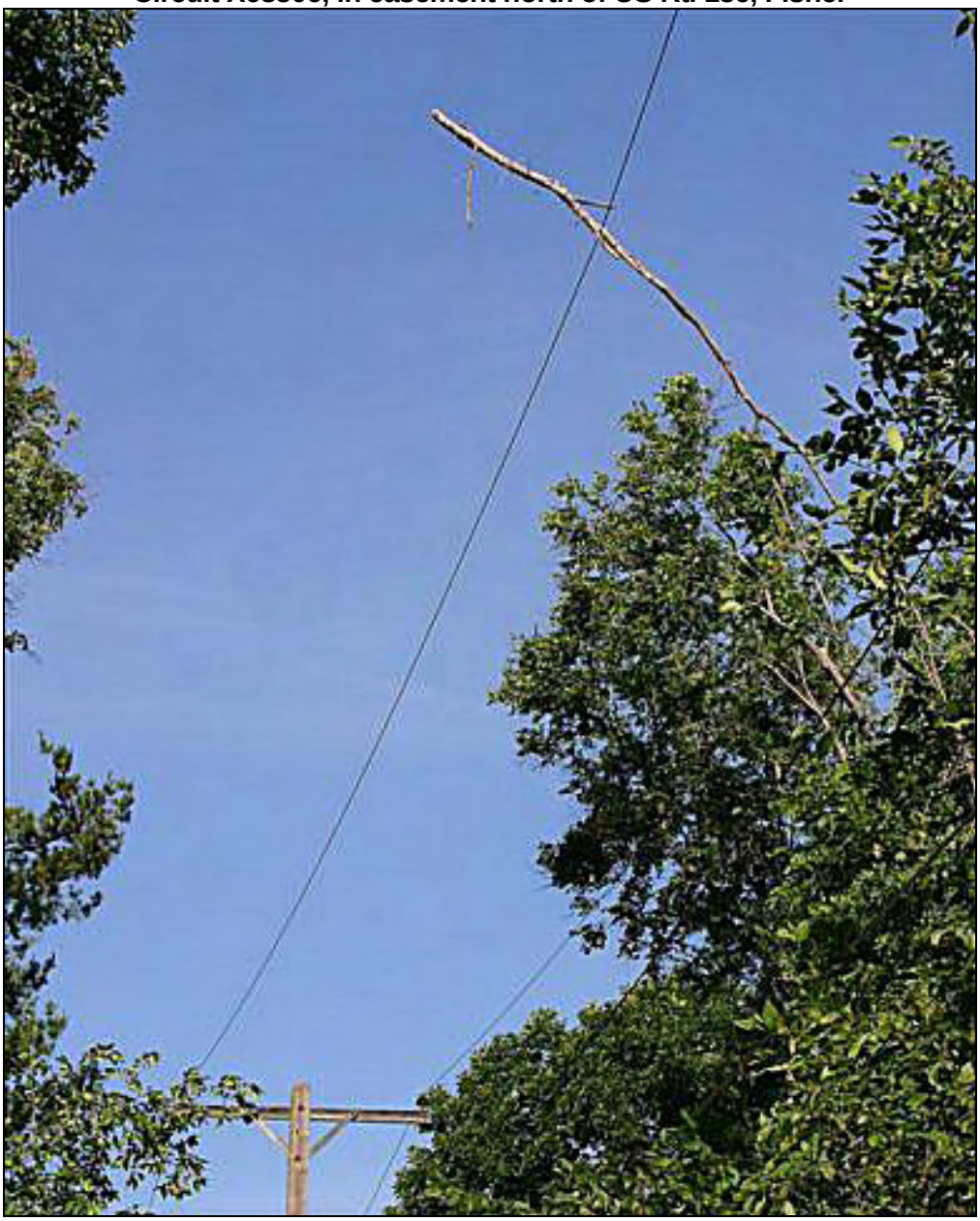


Figure 12 (Photo 06-CIP897)
10(+) woodpecker holes in pole, Circuit V25504, Elsah Hills Rd., west of Mill Creek

Staff also inspected 12 kV Circuit V25513, serving Elsah and a rural area north of Elsah, on April 5, 2006. This was an AmerenCIPS worst performing circuit in 2005, with broken trees (53%) and weather (46%) listed as the predominant causes of the customer interruptions. Tree trimming was well done, and few problems were noted (see Attachment "K").

AmerenCIPS Circuit X68506 serves the town of Fisher and was a worst performing circuit in 2005. Broken trees (55%), "unknown" (28%), and tree contact (12%) were listed as the primary causes of customer interruptions in 2005. Staff inspected this 7.2 kV delta circuit on June 12, 2006, finding the trees to be well trimmed, but no animal guards on the transformers. Few other problems were noted (see Attachment "L"). AmerenCIPS reported that a new substation to be completed in 2006 will remove considerable distribution exposure from the customers in Fisher. One of the problems Staff noted in Fisher is shown in Figure 13.

Figure 13 (Photo 06-CIP1051)
Broken tree limb on primary,
Circuit X68506, in easement north of US Rt. 136, Fisher



Staff also inspected AmerenCIPS Circuit Y60548 on June 12, 2006. This 12 kV circuit serves Fisher, Dewey, Tomlinson, and a rural area between and east of those communities to the western edge of Rantoul. This circuit was an AmerenCIPS "next-worst SAIFI" circuit in 2005 and was a worst performing circuit in 2002. During its inspection, Staff noted that tree trimming looked good, but there were few animal guards. More lightning arresters are needed in the rural areas, but very few structural problems were noted (see Attachment "M").

Circuit X75571 was an AmerenCIPS worst performing 12 kV circuit in 2005, serving the extreme western edge of Gibson City, Saybrook, Arrowsmith, and rural areas between those communities. Overhead equipment problems (59%) and weather (28%) were listed as the predominant causes of customer interruptions in 2005. Staff noted many new poles and crossarms during its inspection on July 13, 2006, and that the circuit looked good structurally, overall, with only a few exceptions noted. There were quite a few scattered tree trimming problems. More animal guards are needed, and more lightning arresters are needed in the long rural sections. Staff's field notes are summarized in Attachment "N". Figures 14 through 17 are examples of some of the problems found during the circuit inspection.

Figure 14 (Photo 06-CIP1080)
Trees growing into primary,
Circuit X75571, northwest of Saybrook

Figure 15 (Photo 06-CIP1082)
Lightning damaged pole,
Circuit X75571, northwest of Saybrook

Figure 16 (Photo 06-CIP1085)
Trees into primary, with burning,
Circuit X75571, Harrison St., Saybrook

Figure 17 (Photo 06-CIP1084)
Walnut trees into primary,
Circuit X75571, State St., Saybrook

On July 28, 2006, Staff inspected AmerenCIPS' 12 kV Circuit V18553, which serves a rural area south of Springfield, Glenarm, a small western portion of Pawnee, and a rural area between Glenarm and Pawnee. This circuit is also the source for two 4 kV circuits (V19001 and V19002) in Pawnee. This circuit was neither a worst performing circuit nor one of AmerenCIPS' "next-worst SAIFI" circuits in 2005, but was chosen for inspection because of a report of three poles falling over in recent years. Staff's field notes are summarized in Attachment "O". There were several tree trimming problems, there were no lightning arresters except at transformers and other devices, and more lightning arresters are needed in the rural areas. Many new poles and crossarms were noted. One pole was broken at the ground line and was leaning into the trees. One NESC violation was also noted, involving a railroad crossing with a single crossarm on one side of the crossing span. (*AmerenCIPS added the required second crossarm at this location on August 17, 2006, following Staff's notification to them of the code violation*). See Figures 18 through 23 for examples of some of the problems Staff noted on this circuit.

Figure 18 (Photo 06-CIP1123)
Tree into primary, with burning,
Circuit V18553, Main St., Glenarm

Figure 19 (Photo 06-CIP1126)
Lightning damaged crossarm,
Circuit V18553, New City Rd., south of Springfield

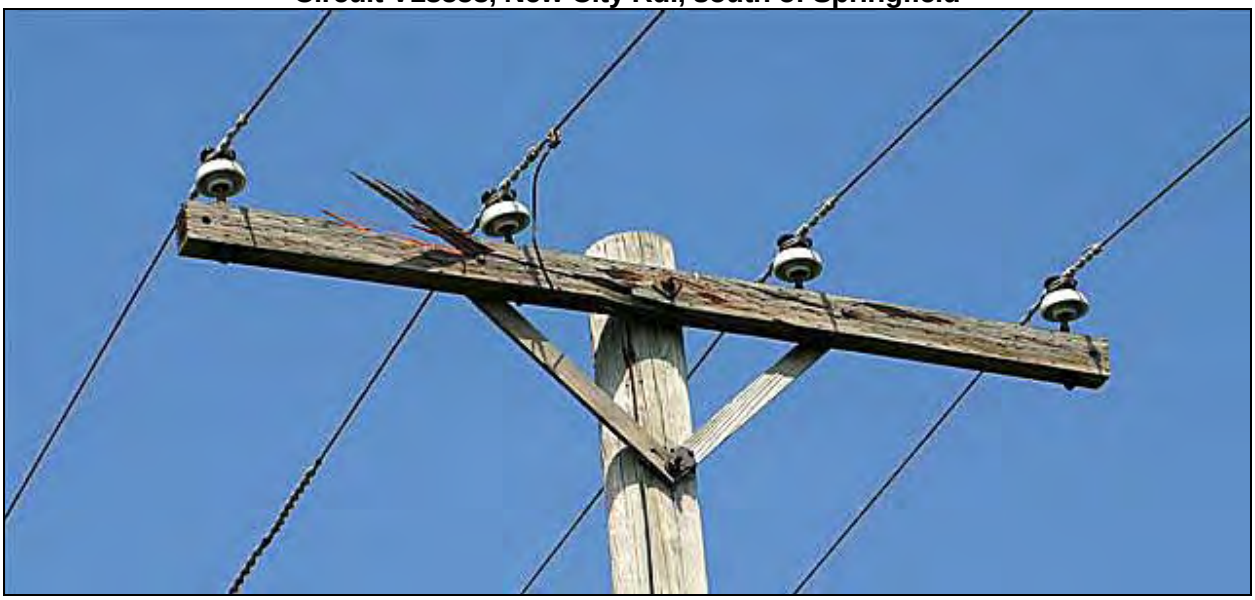


Figure 20 (Photo 06-CIP1115)
Broken wood brace & badly deteriorated crossarm,
Circuit V18553, Jolene Rd., east of Glenarm

Figure 21 (Photo 06-CIP1131)
Silver maple tree into primary, with burning,
Circuit V18553, New City Rd., south of Springfield

Figure 22 (Photo 06-CIP1116)
2 trees into primary, with burning,
Circuit V18553, E. Glenarm Rd., east of Glenarm

Figure 23 (Photo 06-CIP1134)
Pole broken at groundline & leaning into trees,
Circuit V18553, New City Rd. at Pond Rd., southeast of Springfield

Staff also performed spot checks of five AmerenCIPS circuits during 2006, consisting of follow-ups on problems noted on two circuits during 2005 inspections and new problems discovered on three AmerenCIPS circuits that are not associated with other circuit inspections performed by ICC Staff. These circuit spot checks are summarized on Attachment "P". Results were mixed on the follow-ups of prior year problems, with some of the needed corrections made and others not, as indicated on Attachment "P". Among the new problems Staff discovered on three AmerenCIPS circuits were additional NESC violations at three locations, two involving the lack of double crossarms at railroad crossings, and one involving the lack of double crossarms at an interstate highway crossing. Photos of some of the new AmerenCIPS circuit problems discovered are shown in Figures 24 and 25.

Figure 24 (Photo 06-CIP1149)
Single-phase deadend pole with badly split top,
Circuit Y97514, CH 18 west of Rt. 45, south of Savoy

Figure 25 (Photo 06-CIP1151)
Disconnected wood crossarm brace & deteriorated pole top,
Circuit Y97514, Rd. 700E, southwest of Champaign

In summary, Staff's field inspections this year revealed recent improvements on about half of the AmerenCIPS circuits inspected, evidenced by a scattering of new poles and crossarms in the circuits. The actions AmerenCIPS has taken or reported that it plans to take on its worst performing circuits, including adding sectionalizing fuses on some circuits, seem to address the reliability issues reasonably well. The quality of tree trimming Staff observed varied by circuit, with three of the circuits inspected having significant problems. While there were some scattered tree conflicts, tree trimming was generally well done on most of the other circuits inspected. The exceptions are noted in Staff's field note summaries. Additional animal guards are needed on more than half of the circuits inspected. More lightning arresters are also needed on several of the circuits, especially in rural areas.

Staff noted NESC violations at five locations during its inspections of AmerenCIPS circuits this year, one involving the lack of a guy strain insulator in an ungrounded downguy, and the other four involving single wood crossarms supporting AmerenCIPS' primary circuit crossings over railroads or limited access highways. All of these safety code violations pose a risk to service reliability and public safety. *(Double crossarms have been required for all railroad crossings in Illinois where wooden crossarms and pin-type insulators are used since General Order 30 was adopted on October 12, 1916. Double crossarms have been required for all limited access highway crossings where wooden crossarms and pin-type insulators are used since Illinois Administrative Code 305 was revised to adopt the 1984 edition of the NESC on July 25, 1985).*

The NESC violations Staff noted in AmerenCIPS' service territory in 2006 are summarized in Table 6. Staff recognizes, however, that these are not the only NESC violations on the AmerenCIPS circuits it inspected this year. Some of the deteriorated structures, for example, would not meet the strength requirements of NESC Table 253-2, footnote 3. As another example, many of the missing guy markers Staff notes are violations of NESC Rule 264.E and can have a detrimental effect on reliability as well as public safety. AmerenCIPS has resolved three of the NESC violations listed in Table 6, and needs to resolve the others within a reasonable time. AmerenCIPS should also assure that watching for and noting NESC violations of these and other types are included in its circuit inspection program and that all violations found are resolved in a timely manner.

Table 6

Summary of 2006 NESC Violations Noted by ICC Staff -- AmerenCIPS

Circuit-- Date Inspected	*Item Description*	*Photo(s)*	*Location*	*Date Utility Notified*	*Date Violation Resolved*
U05595-- 3/2/06	**Code violation (NESC 279.A.2):** No strain insulator below 12 kV primary in downguy from overcircuit. *Downguy owned by Spoon River Electric Cooperative, per AmerenCIPS. Spoon River installed strain insulator in downguy on 5/31/06, per AmerenCIPS.*	107-0791, 792	At pole B4673 (3rd pole east of Sta. 12701) on US Hwy. 24, east of Astoria. (Map 5--Astoria, Summum, & rural).	3/2/06 9/7/06	5/31/06
Line No. 061-74 (34 kV) -- 4/4/06	**Code structural strength violations (NESC 261.D.4.c):** Single wood crossarms with vertical post insulators supporting a 34 kV crossing of a railroad, on both sides of the railroad crossing. (Double crossarms required).	108-0878	Along St. Clair Ave. at the crossing of the Illinois Terminal RR and the Illinois Central RR, National City. (See AmerenIP Circuit R78300 map 5 of 5).	4/4/06 9/7/06	
333-001 (4 kV) -- 4/4/06	**Code structural strength violation (NESC 261.D.4.c):** Single wood crossarm supporting a 3-phase crossing of a railroad, on the north side of the railroad crossing. (Double crossarms required).	108-0879	Along St. Clair Ave. at Packer Ave. (south of the location shown in Photo 108-0878), National City.	4/4/06 9/7/06	
V18553-- 7/28/06	**Code structural strength violation (NESC 261.D.4.c):** Single wood crossarm supporting a 3-phase crossing of a railroad, on the east side of the railroad crossing. (Double crossarms required). *AmerenCIPS installed double crossarms on the east side of the crossing on 8/17/06.*	111-1127, 1128	On pole G3410 on New City Rd. on the east side of the railroad crossing. (Map 5--Rural Springfield, Glenarm, Pawnee, & rural).	7/31/06 8/2/06	8/17/06
Y97514-- 8/14/06	**Code structural strength violation (NESC 261.D.4.c):** Single wood crossarm supporting a 3-phase crossing of a limited access highway, on the east side of the crossing (double arms required). *AmerenCIPS installed double crossarms on the east side of the crossing on 9/8/06.*	111-1152	Crossing of I-57 at CH 18, south of Champaign.	8/14/06 9/5/06 9/7/06	9/8/06

Example photographs of some of the code violations Staff noted are provided in Figures 26 through 29.

Figure 26 (Photo 06-CIP791A)
No strain insulator in ungrounded downguy (NESC violation), Circuit U05595, US Hwy. 24 east of Astoria

Figure 27 (Photo 06-CIP879)

Single wood crossarm supporting 3-phase crossing of a railroad (NESC violation), Circuit 333-001, St. Clair Ave. at Packer Ave., National City

Figure 28 (Photo 06-CIP1128)

Single wood crossarm supporting 3-phase crossing of a railroad (NESC violation), Circuit V18553, New City Road, south of Springfield

Figure 29 (Photo 06-CIP1152)

Single wood crossarm supporting a crossing of a limited access highway (NESC violation), Circuit Y97514, Interstate 57 at CH 18, south of Champaign

AmerenCIPS should investigate all of the problems noted during Staff's circuit inspections, as well as those discovered by its own inspections, and take appropriate remedial actions addressing any problems on those circuits, whether or not noted by Staff, which can significantly affect service reliability or public safety.

AmerenCIPS stated in its reliability report that it is committed to maintaining a four-year tree trimming cycle and that the customer communications aspects of its Vegetation Management Program have been successful. Staff did not perform any random inspections of tree conditions in AmerenCIPS service territory in 2006, but did note that tree trimming was well done on several, but not all, of the specific AmerenCIPS circuits it inspected this year. Some of the circuits inspected had a high number of tree trimming problems, as has been noted previously and in the summaries of Staff's circuit inspection notes. It should be mentioned, however, that Staff's inspections of tree conditions in AmerenCIPS service territory during 2006 have been very limited and have covered a very small portion of AmerenCIPS' service territory.

2002 NESC Rule 218(A)(1) and its associated note state the following:

> "Trees that may interfere with ungrounded supply conductors should be trimmed or removed.

NOTE: Normal tree growth, the combined movement of trees and conductors under adverse weather conditions, voltage, and sagging of conductors at elevated temperatures are among the factors to be considered in determining the extent of trimming required."

In addition to maintaining a four-year trim cycle, as AmerenCIPS has committed to do, it also needs to assure compliance with 2002 NESC Rule 218. To be in compliance with 2002 NESC Rule 218, AmerenCIPS needs to assure that all trees near its lines throughout its service territory are trimmed such that there are no tree contacts with its energized primary conductors before it returns to trim them again.

Ameren has provided conflicting utility staffing level information to Staff, preventing Staff from drawing meaningful conclusions concerning whether or not each Ameren company is maintaining adequate staffing to provide reliable service to its customers. Because of Ameren's indication that staffing information it provided annually prior to 2004 in response to Staff's data requests was not comparable with data for 2004 and 2005, Staff sent a new request to Ameren on November 2, 2006, asking for employee staffing levels information that was comparable year-to-year for each of its Illinois utilities for years 1997-2005. Ameren provided the requested information on November 21, 2006, stating "we believe this is the best apple-to-apple comparison available for this period of time". Ameren met with Staff to further discuss the data on December 18, 2006. This year-to-year staffing levels information and the data provided in earlier annual data request responses are shown for comparison in Attachment "R" to this report.

The new information Ameren provided indicates that the numbers of electric operating employees have fluctuated year-to-year for each of the Ameren utilities, but the staffing trends based on that information have not given Staff cause for alarm concerning each company's ability to maintain acceptable reliability of its electric system. The staffing level data previously provided by the Ameren companies in response to annual reliability data requests, however, bear little resemblance to Ameren's more recent data and lead Staff to much more worrisome conclusions. Because of the conflicting data provided by Ameren, Staff is unable to determine whether or not changes in each of the Ameren companies' staffing levels are negatively affecting the reliability of its electric system and service to its customers.

Even more troubling is the extreme inconsistency in the data provided by Ameren. The new data for total number of employees *for each company*, for example, differs by several hundred employees from the employee totals Ameren provided in April 2006, even for the most recent two years reported, 2004 and 2005. Ameren's new data indicates that AmerenUE-Illinois had 185 employees at the end of 2005, when that utility did not even exist at that time. As an example of the inconsistencies in Electric Operating employees data, the new data for AmerenCILCO indicates that its Electric Operating headcount went from 113 in 1997 to 143 in 2003 (an increase of 30 employees) and to 136 in 2005 (an overall increase of 23 employees). Ameren's previous information for AmerenCILCO Electric Operating, however, indicated headcounts of 327 in 1997, 274 in 2003 (a decrease

of 53 employees), and 105 in 2005 (an overall decrease of 222 employees). Because of these huge inconsistencies in the Ameren data, it is impossible for Staff to evaluate the effects changes in staffing levels might have had on electric reliability and customer service at any of the Ameren companies.

Perhaps the most troubling aspect of Ameren's staffing data inconsistencies is the implication regarding the possible inaccuracy, unreliability, and uselessness of any data that Staff in both the Energy and Financial Analysis Divisions receives from Ameren in the course of performing its oversight duties for the Commission. It should be a simple matter for Ameren to determine and report consistently how many employees it has in each utility. Since it has not, and perhaps cannot, Staff wonders if any of Ameren's other data is accurate or reliable. It seems obvious to Staff, for example, that rate case information is not nearly as straightforward as employee headcounts. Can any of Ameren's data be relied upon?

It remains important that each of the Ameren companies maintains adequate staffing levels to provide reliable service to its customers. From the data Ameren has provided, Staff is not able to determine if Ameren is doing so.

8. Trends in AmerenCIPS' Reliability Performance

Figure 30 shows a comparison of the company-wide SAIFI values reported by the Illinois utilities for years 2001 through 2005. AmerenCIPS' company-wide SAIFI performance in 2005 improved from 2004, but it was tied with AmerenIP for fifth place in the eight utility group, with only MidAmerican Energy Company and Mt. Carmel Public Utility Company posting higher (worse) system-wide SAIFI values in 2005.

Figure 30

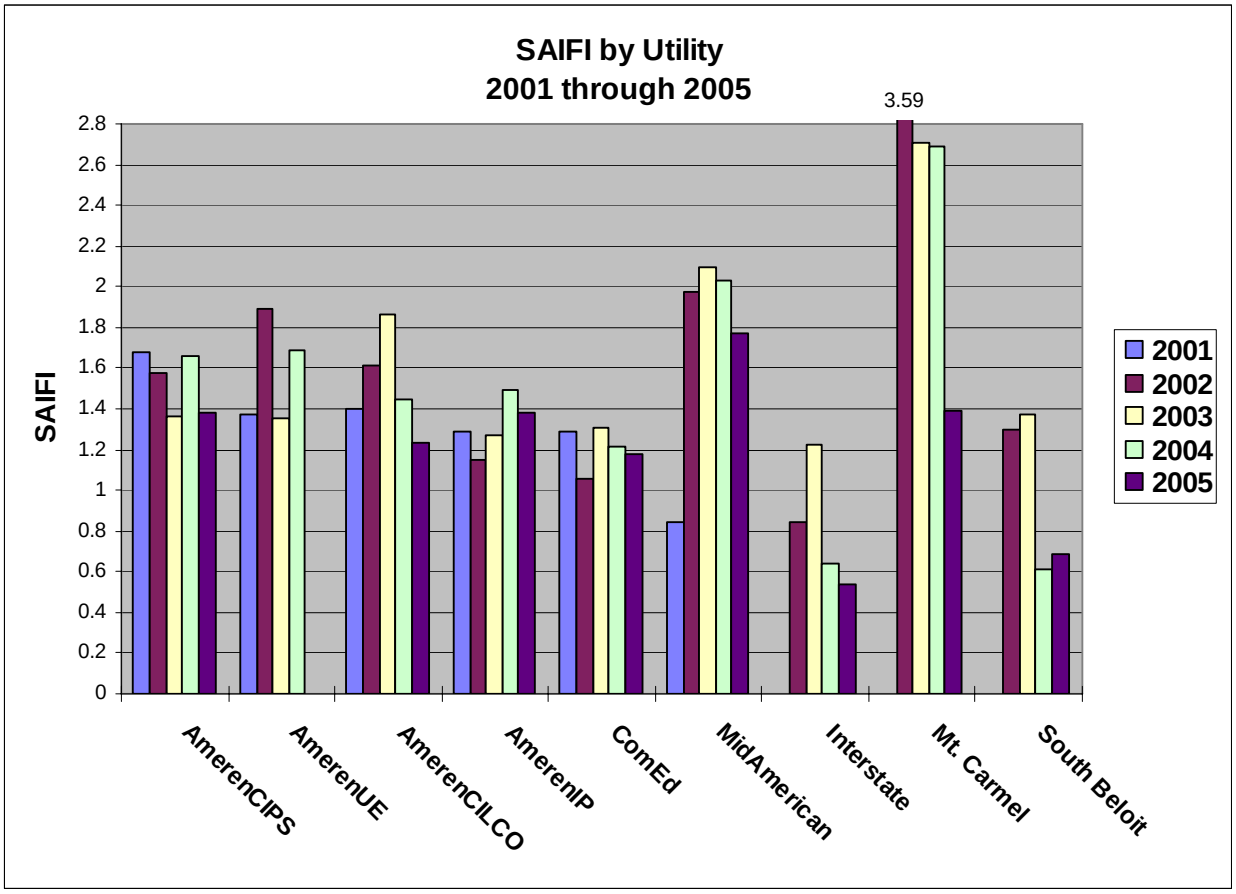


Figure 31

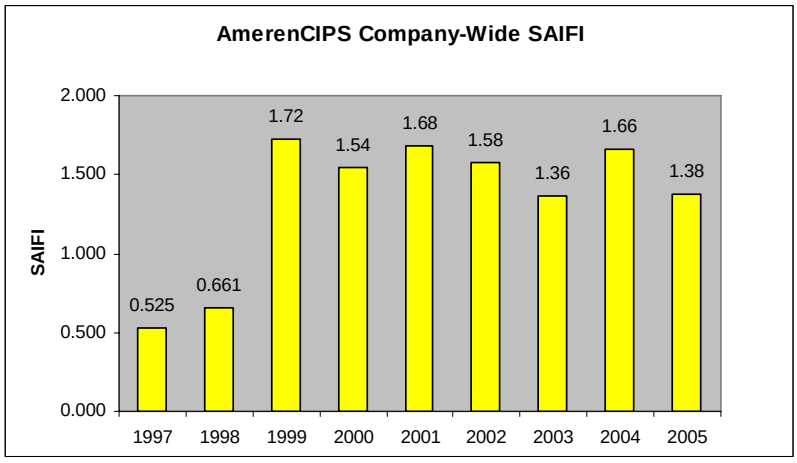


Figure 31 shows AmerenCIPS' company-wide SAIFI indices over the past nine years. Though erratic over the nine-year period, AmerenCIPS' reported overall SAIFI shows a slightly improving trend from 1999 through 2005. AmerenCIPS' 2005 company-wide SAIFI performance improved by nearly 17% from year 2004, and is only slightly worse than it reported for 2003.

Figure 32 shows a comparison of SAIFI values for each company's single worst performing circuit as reported by the Illinois utilities for years 2001 through 2005. AmerenCIPS' reported worst-circuit SAIFI performance for 2005 improved from 2004, but it ranked sixth in the eight utility group, with only MidAmerican Energy Company and ComEd (barely) posting higher (worse) worst-circuit SAIFI values in 2005.

Figure 32

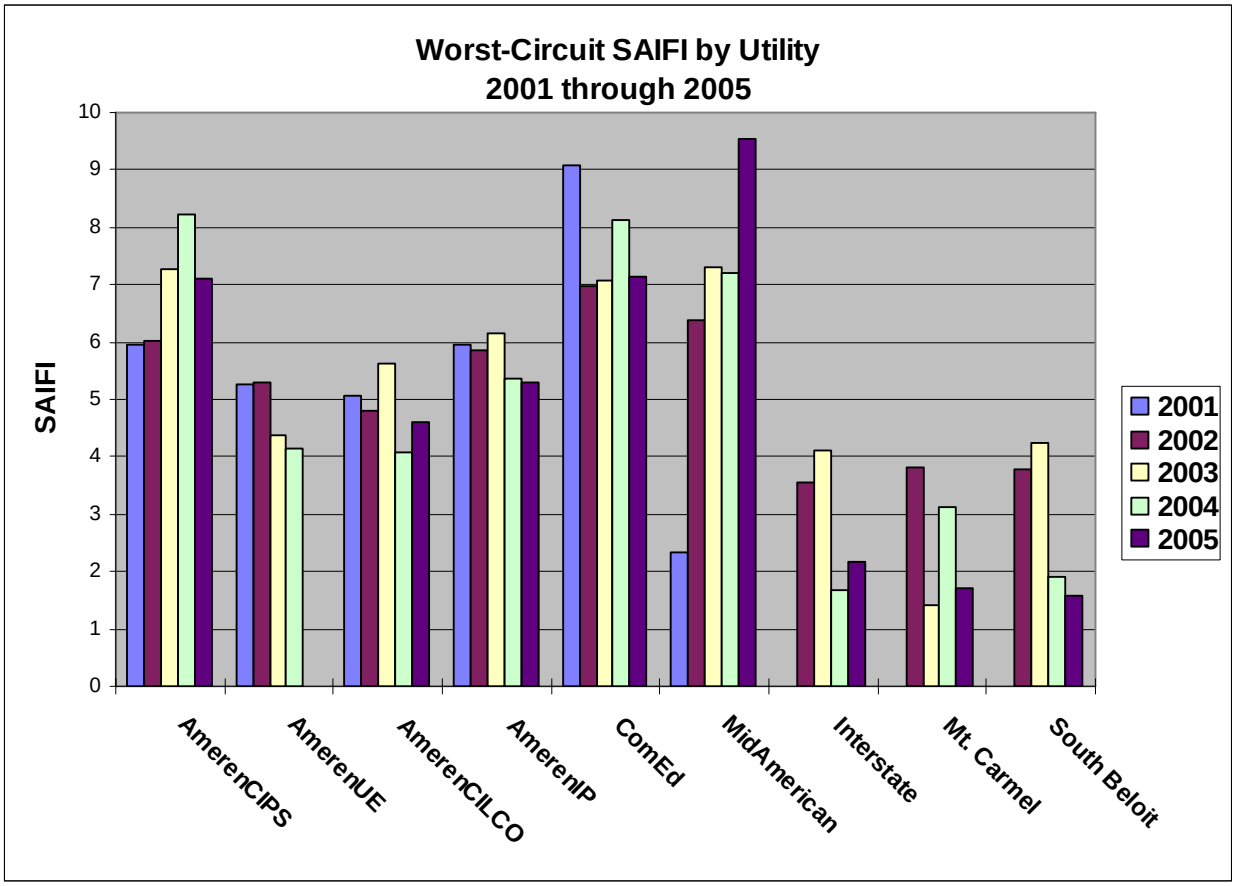


Figure 33

Figure 33 shows the SAIFI index of AmerenCIPS' single worst performing circuit as reported in each of the last eight years. While AmerenCIPS improved in this category nearly 14% in 2005 from its worst-in-eight-years figure in 2004, the eight-year trend has been nearly flat with year to year variances resembling a roller coaster.

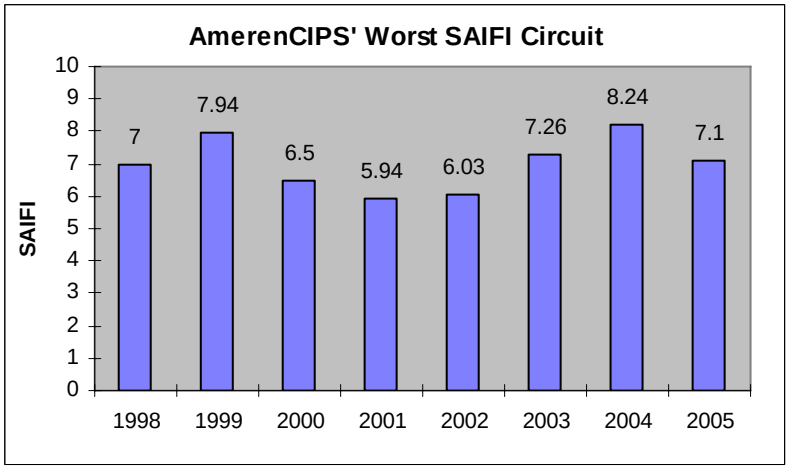


Figure 34 shows a comparison of company-wide CAIDI values reported by the Illinois utilities for years 2001 through 2005. At 112 minutes, AmerenCIPS' reported 2005 company-wide CAIDI performance improved more than 21% from year 2004, but it retained its prior-year ranking near the middle (slightly better than average in 2005) of the utility group in this category in 2005.

Figure 34

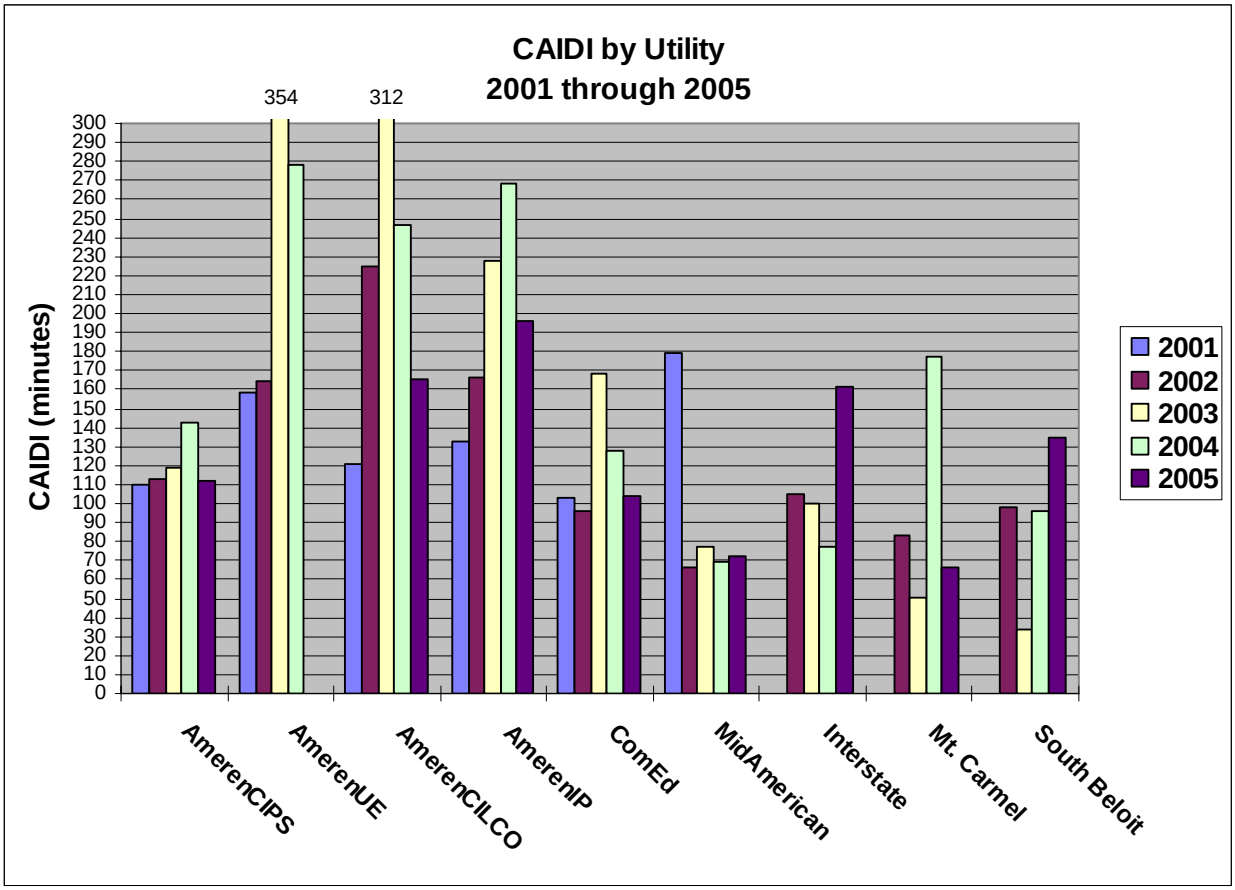


Figure 35

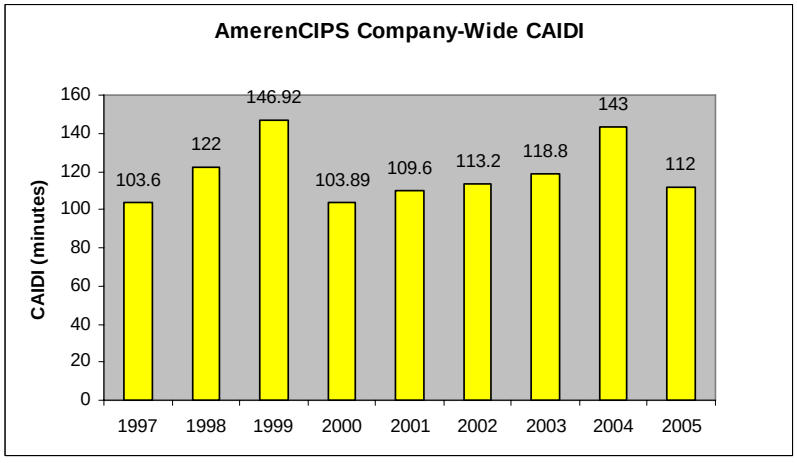


Figure 35 shows AmerenCIPS' company-wide CAIDI statistics over the past nine years. AmerenCIPS' reported overall CAIDI showed a generally worsening trend before it improved greatly in year 2000. It then steadily worsened again until the improvement in 2005. AmerenCIPS' reported overall CAIDI for 2005 is 21.7% better than it reported for year 2004 and 5.7% better than in 2003.

Figure 36 shows a comparison of CAIDI values for each company's single worst performing circuit as reported by the Illinois utilities for years 2001 through 2005. AmerenCIPS' reported worst-circuit CAIDI performance for 2005 (1487 minutes) is the third highest in the eight-utility group, with only AmerenIP (1968 minutes) and ComEd (1722 minutes) reporting higher worst circuit CAIDI statistics in 2005.

Figure 36

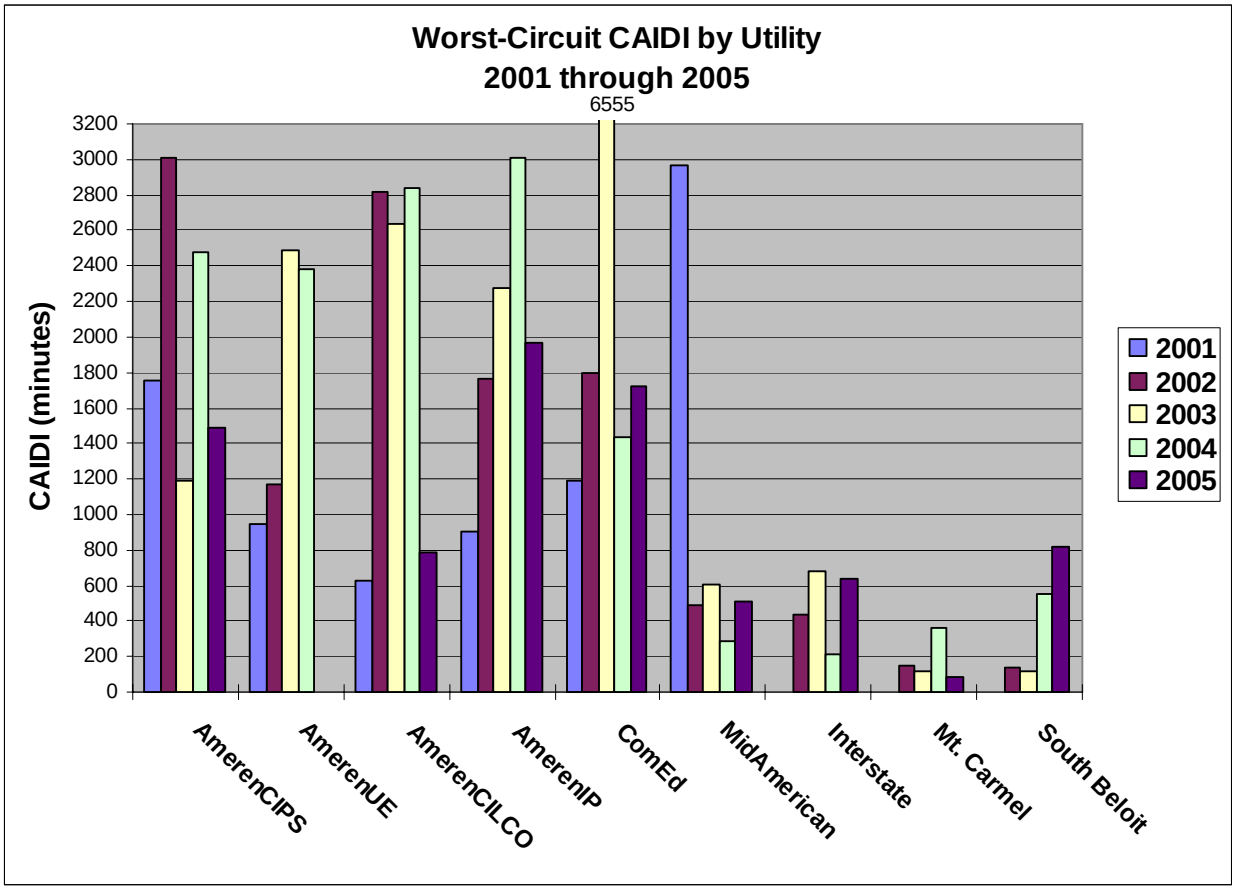


Figure 37

Figure 37 shows the CAIDI index of AmerenCIPS' single worst performing circuit in each of the last eight years. This statistic for AmerenCIPS has been very erratic during the eight year period. AmerenCIPS' reported worst-circuit CAIDI for 2005 is 40% better than what it reported for year 2004, but 25% worse than it reported in 2003.

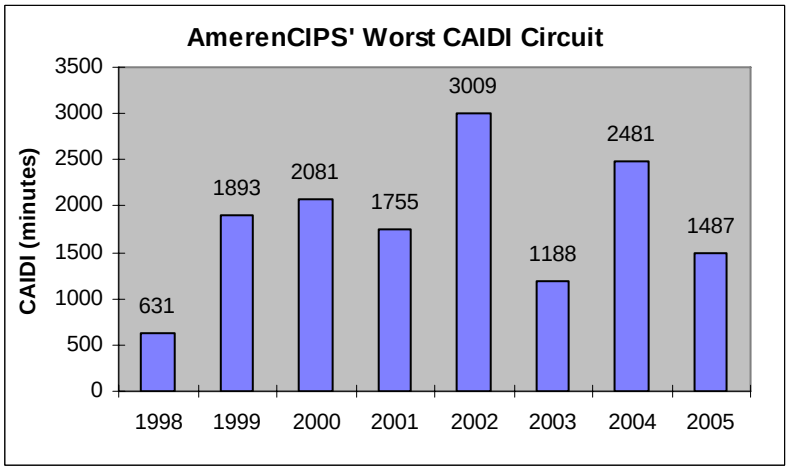


Table 7 shows the number and percentage of AmerenCIPS customers who experienced no service interruptions or less than four service interruptions for each of years 2000 through 2005. This information is also presented graphically in Figure 38. *Note that the AmerenCIPS total customer count increased by 63,159 in 2005, mostly due to the inclusion*

of former AmerenUE customers. Based on the percentage of total customers served in each year, the numbers for both of these groups of AmerenCIPS customers improved in 2005 from the prior year. 2005 was the only year in the 2000-2005 period in which more than a third of AmerenCIPS' customers experienced no interruption of service.

Table 7
AmerenCIPS Customers with No Interruptions or Less Than Four Interruptions

Year	Total Customers	Customers with No interruptions		Customers with < 4 interruptions	
2000	323,898	93,753	28.95%	278,449	85.97%
2001	326,578	84,147	25.77%	280,493	85.89%
2002	328,154	84,383	25.71%	289,958	88.36%
2003	327,033	101,240	30.96%	293,555	89.76%
2004	330,336	92,829	28.10%	278,371	84.27%
2005*	393,495	131,739	33.48%	351,280	89.27%

Figure 38

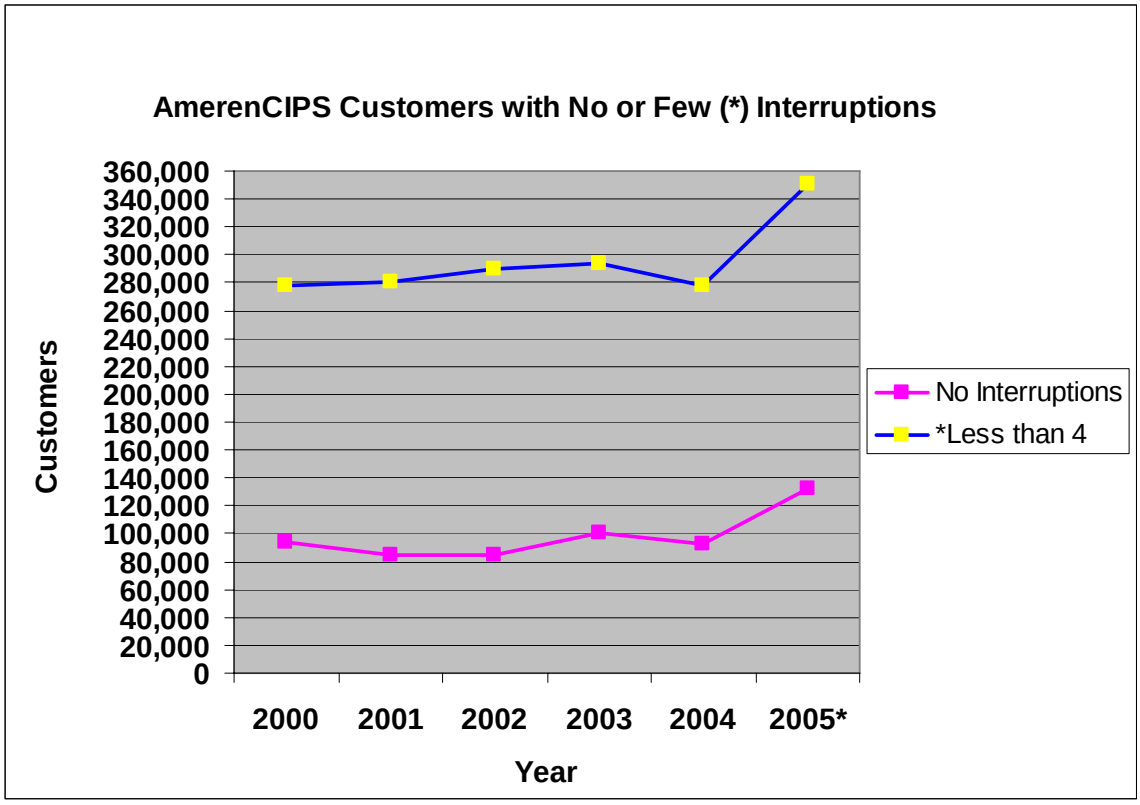


Table 8 shows the number and percentage of AmerenCIPS customers who experienced more than six and more than ten service interruptions for each of years 2000 through 2005. This information is also presented graphically in Figures 39 and 40. Note that the numbers and percentages of AmerenCIPS customers in both of these categories year-to-year have

been very erratic, but in 2005 the numbers and percentages of AmerenCIPS customers in both of these high number of interruptions categories showed much improvement from the prior year. A total of 5,562 AmerenCIPS customers (1.41% of AmerenCIPS' customers) experienced more than six service interruptions in 2005, down from 2.38% of AmerenCIPS' customers in this category in 2004. A total of 11 AmerenCIPS customers experienced more than ten service interruptions in 2005, down from 704 customers in 2004.

Table 8
AmerenCIPS Customers with More Than Six and More Than Ten Interruptions

Year	Total Customers	Customers with > 6 interruptions		Customers with > 10 interruptions	
2000	323,898	8,726	2.69%	331	0.10%
2001	326,578	4,445	1.36%	55	0.02%
2002	328,154	6,343	1.93%	699	0.21%
2003	327,033	2,668	0.82%	66	0.02%
2004	330,336	7,846	2.38%	704	0.21%
2005*	393,495	5,562	1.41%	11	0.003%

Figure 39

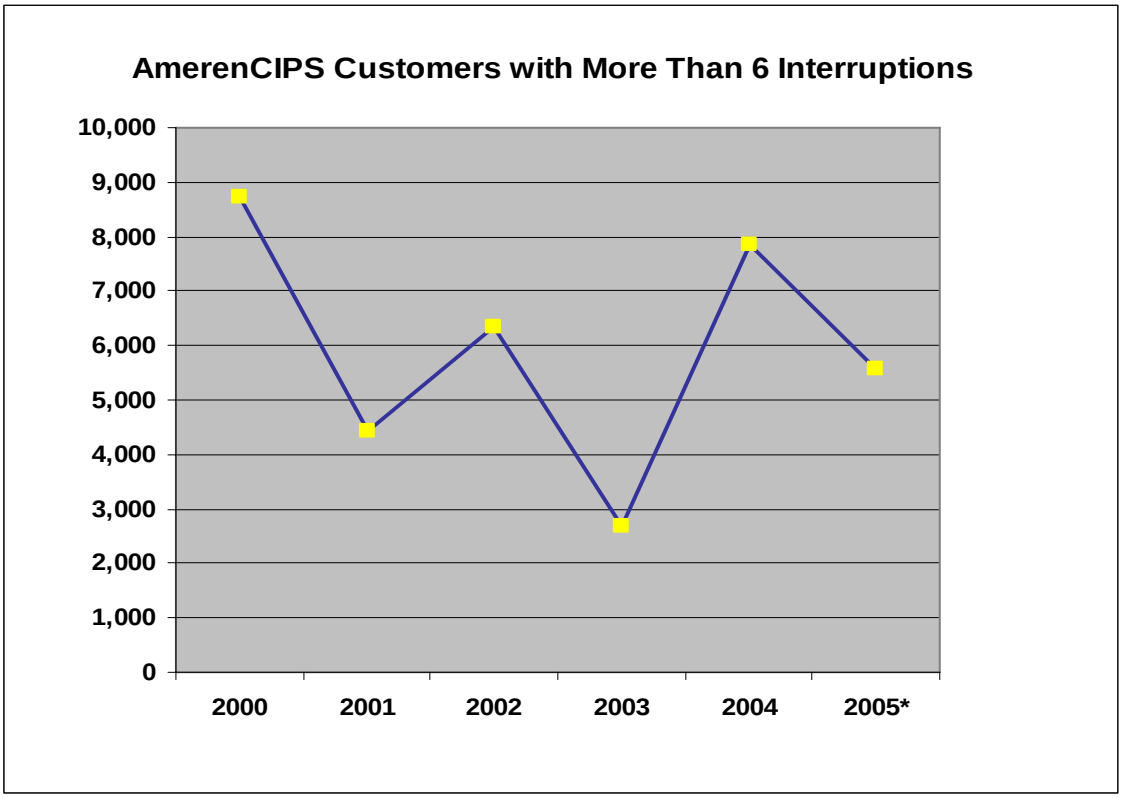
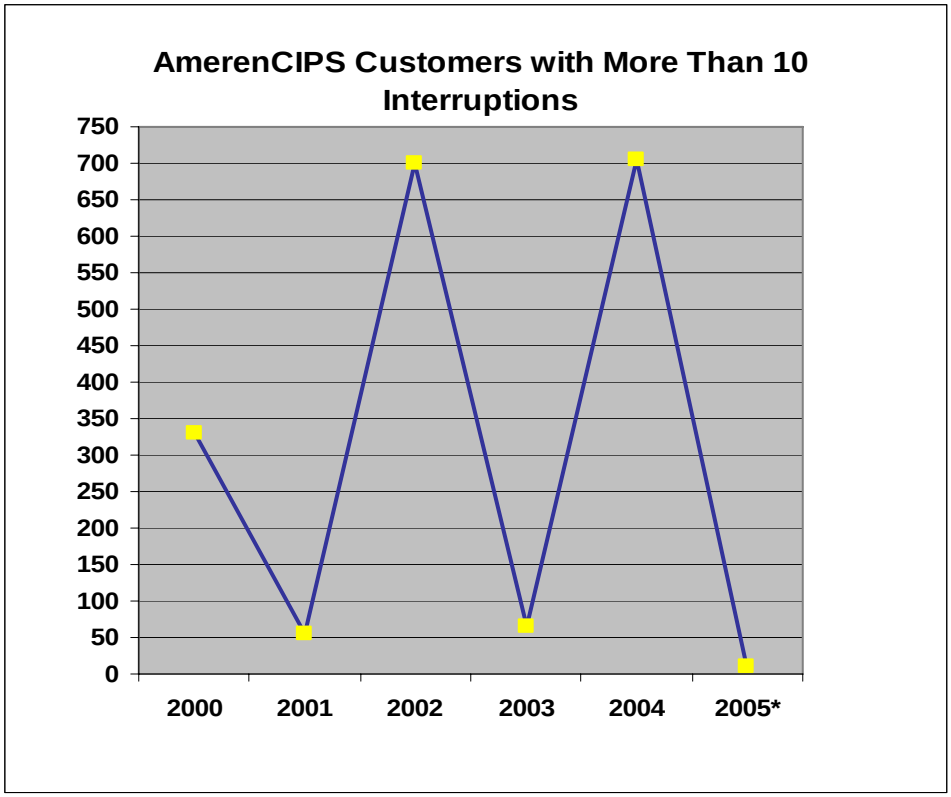


Figure 40



Overall, the statistics provided in AmerenCIPS' 2005 reliability report indicate a significant improvement of both the frequency and duration of customer interruptions compared to its similar data reported for 2004. The number of AmerenCIPS customers experiencing high numbers of interruptions in 2005 also decreased significantly from what it reported for 2004. Even with these improvements from 2004, however, the AmerenCIPS overall SAIFI performance in 2005 was worse than average when compared to other utilities. AmerenCIPS' company-wide CAIDI for 2005 was slightly better than average, but its worst circuit CAIDI was worse than average compared to other utilities.

9. AmerenCIPS' Plan to Maintain or Improve Reliability

Specific plans described in AmerenCIPS' 2005 annual reliability report to maintain or improve reliability include the following:

- AmerenCIPS reported that it will continue to install additional tap fuses in 2006, utilizing its program to analyze circuit design and outage history to determine which circuits will benefit most from additional fusing. This additional protection is designed to reduce SAIFI.

- AmerenCIPS will complete routine and corrective substation maintenance projects in 2006 that are identified through the practices and processes currently in place.

- Several projects stemming from capacity planning will be implemented in 2006 to reduce the risk of equipment failure due to overload, to improve reserve capability and thereby reduce outage duration, and to upgrade facilities to address condition issues.

- Five SCADA controlled switch installations on the subtransmission system are presently scheduled for 2006. The SCADA controlled switches provide remote monitoring and facilitate sectionalizing the system to isolate a problem and minimize service restoration time.

- AmerenCIPS will continue the Pole Inspection and Treatment Program in 2006, focused on transmission and subtransmission circuits (with only occasional inclusion of a 12 kV or lower voltage primary backbone feeder). In 2006, AmerenCIPS plans to inspect approximately 6,000 poles, C-truss nearly 200 poles, and replace another 100 poles. This program is on a 12-year cycle.

  Staff believes that all 12 kV and lower voltage primary distribution circuits should be included in the focus of this program. Without a distribution circuit focus, the effects of this program on customer service reliability improvement will be very limited.

- AmerenCIPS reported that it is committed to maintaining a four-year tree trimming cycle. Complete trimming is scheduled on 188 circuits in 2006.

  Staff noticed that trimming was well done on several, but not all, of the AmerenCIPS circuits it inspected in 2006. Some of the circuits inspected had a high number of tree trimming problems. In addition to maintaining a four-year trim cycle, as AmerenCIPS has committed to do, it also needs to assure compliance with 2002 NESC Rule 218 by assuring that all trees near its lines throughout its service territory are trimmed such that there are no tree contacts with its energized primary conductors before it returns to trim them again.

- AmerenCIPS will continue to identify and develop work plans on subtransmission circuits where lightning protection enhancements can provide major benefit.

  As Staff noted in its assessment report last year, it is again notable that this program is for subtransmission circuits and AmerenCIPS makes no mention of improving lightning protection on its <u>distribution</u> circuits. Staff noted several distribution circuits in need of more lightning arresters in the rural areas during its circuit inspections in 2006, and has done so for several years. AmerenCIPS has advised Staff that it has no lightning protection program addressing distribution circuits.

- AmerenCIPS will continue to retrofit animal protection on circuits, portions of circuits, or substations identified as affected by or susceptible to animal intrusion.

Additionally, animal protection will continue to be installed on all newly installed transformers and transformers that have experienced an interruption due to animal intrusion.

Except for new transformers, AmerenCIPS' stated policy is "to install animal protection at the time an animal outage occurs." Staff noted that additional animal guards are needed on several of the circuits it inspected this year. AmerenCIPS needs to take a more proactive approach to animal protection in its existing electric system, rather than waiting for animal-caused interruptions to occur before installing the needed animal guards.

- AmerenCIPS patrols distribution circuits and addresses problems as they are identified. The cycle length varies by local operating center. In addition to routine circuit inspections, tree trimming personnel report deficiencies and other concerns during their regular 4-year maintenance trims. ICC Worst Performing Circuits are also patrolled when local engineering determines the need for additional information.

  Note: In its 2004 reliability report, AmerenCIPS reported that "a Circuit Patrol Team has been formed to develop and implement a standard schedule to patrol sub-transmission and distribution circuits to improve and maintain circuit performance. This team will provide a policy and schedule for regular circuit inspections that will be implemented Ameren-wide when it completes its work in 2005." ***Ameren has advised Staff that it does not plan to complete the necessary training and rollout of its new circuit inspection program until the end of January 2007.***

The AmerenCIPS reported annual expenditures for its distribution system, distribution tree trimming, and transmission system for years 2001 through 2005, and the 2006 through 2008 budgets for these categories, are provided in Table 9. **(*All of the data in Table 9 for each year are combined totals including the previous AmerenUE-IL data*).** This information for the distribution system and for distribution tree trimming is also represented graphically in Figures 41 and 42, respectively.

Table 9

Year	Distribution (x1,000)			Dist. Tree Trimming (x1,000)	Transmission (x1,000)		
	Capital	O & M	Total		Capital	O & M	Total
2001	$29,945	$46,639	$76,584	$8,196	$14,100	$4,351	$18,451
2002	$35,978	$52,023	$88,001	$10,708	$14,808	$5,021	$19,829
2003	$29,816	$47,686	$77,502	$11,377	$14,304	$7,561	$21,865
2004	$44,731	$42,077	$86,808	$10,788	$6,808	$3,550	$10,358
2005	$45,414	$47,755	$93,169	$10,220	$11,165	$7,865	$19,030
2006 Budget	$48,148	$59,020	$107,168	$10,269	$12,180	$8,490	$20,670
2007 Budget	$54,269	$60,188	$114,457	$10,577	$9,657	$8,939	$18,596
2008 Budget	$53,052	$61,391	$114,443	$10,894	$8,932	$9,117	$18,049

Figure 41

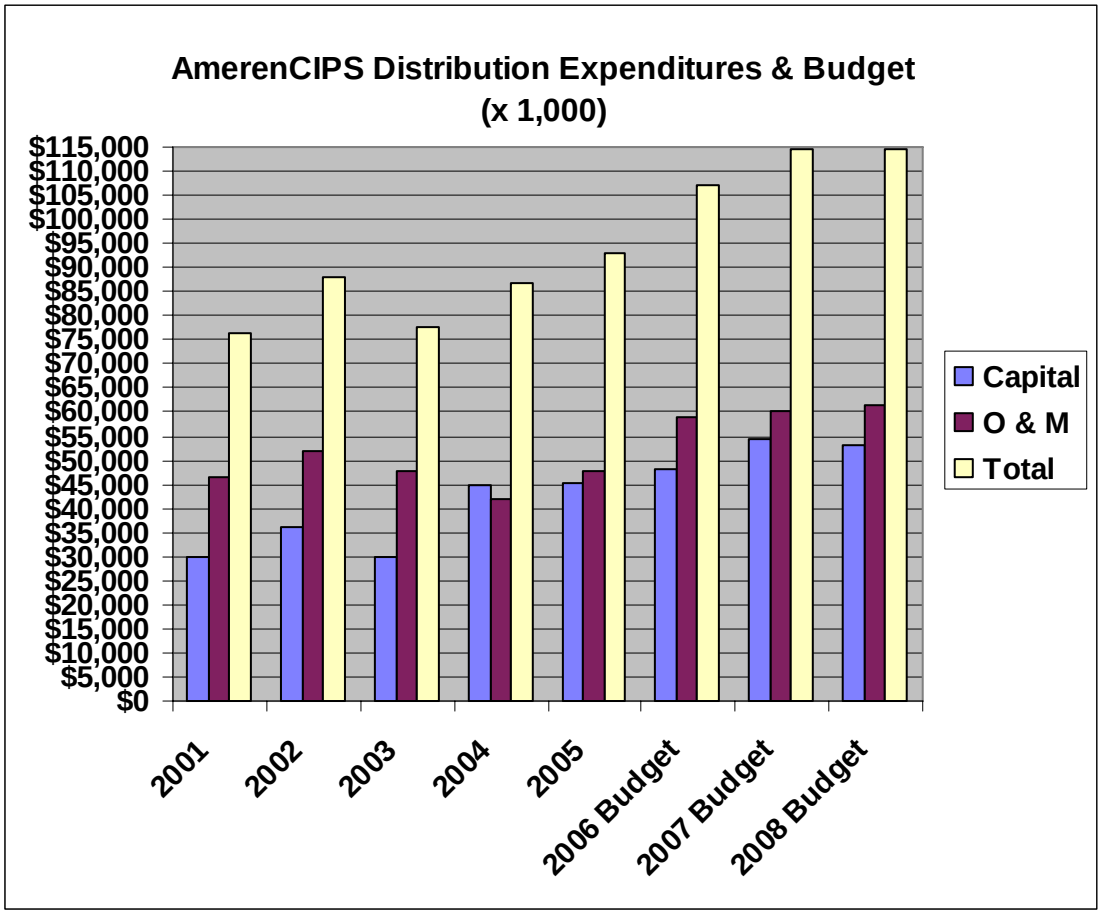
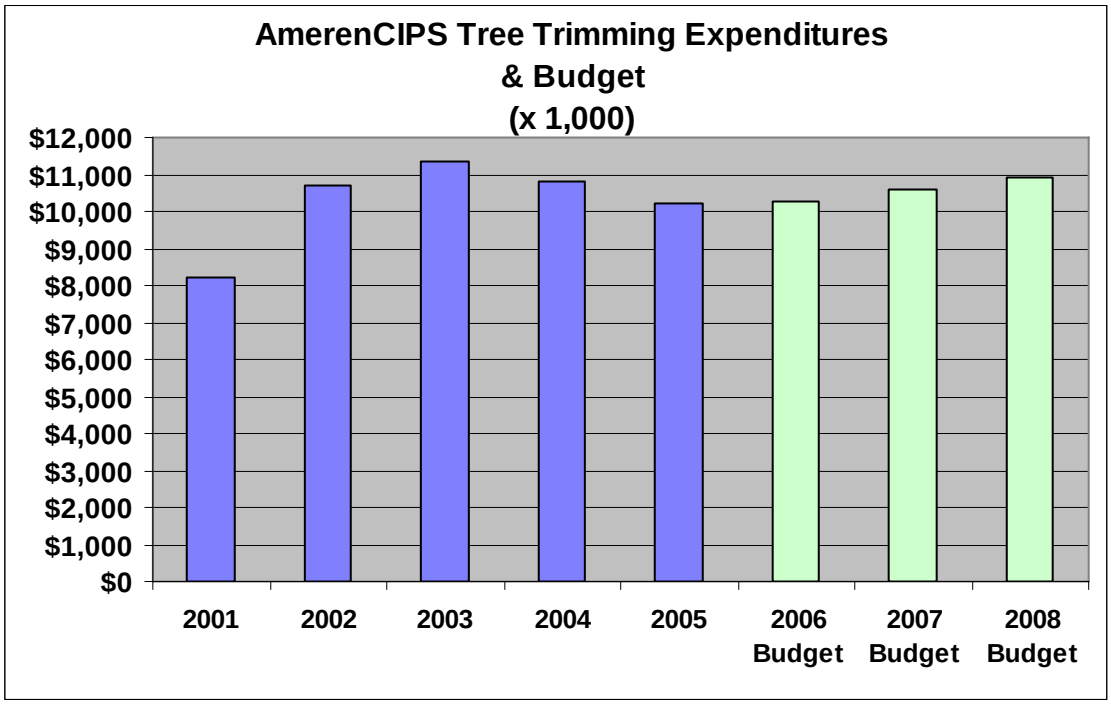


Figure 42



AmerenCIPS provided a description of actions taken or planned for each of the worst performing circuits listed in its 2005 reliability report. Each of the problems described in the outage history for each circuit was addressed in some way by the described actions taken or planned. AmerenCIPS' reported actions taken or planned for each circuit seemed reasonable, but it should also address any additional problems revealed on each of the circuits during Staff's circuit inspections.

10. Potential Reliability Problems and Risks

One of the more common problems Staff noted during its inspections of AmerenCIPS circuits again this year was the need for more lightning arresters in the rural areas of several of the circuits. In many cases, structural lightning damage is evident in the areas of long rural exposure which have infrequent lightning arrester placement. The lack of adequate lightning protection on rural circuits will cause many of the interruptions attributed to weather. AmerenCIPS should take a more active role in determining circuits or portions of circuits that are deficient in lightning protection and in correcting those deficiencies.

Additional animal guards are needed on more than half of the AmerenCIPS circuits Staff inspected this year. Animals were listed as the cause for 11.52% of AmerenCIPS' total service interruptions (events) in 2005. AmerenCIPS needs to take a more proactive approach to animal protection in its electric system, rather than waiting for animal-caused interruptions to occur before installing the needed animal guards.

AmerenCIPS listed trees as the cause for only 6.22% of the events and 3.87% of the customer interruptions in 2005. Staff did not perform any random inspections of tree conditions in AmerenCIPS service territory in 2006, but did note that tree trimming was well done on several, but not all, of the specific AmerenCIPS circuits it inspected this year. Some of the circuits inspected had a high number of tree trimming problems, as has been noted previously and in the summaries of Staff's circuit inspection notes. Many of the interruptions AmerenCIPS attributed to weather in 2005 may have also been tree related. AmerenCIPS reported that it is committed to stay on a four-year tree trimming cycle, but it also needs to assure compliance with 2002 NESC Rule 218. To be in compliance with 2002 NESC Rule 218 and to minimize the risk of tree-related interruptions, AmerenCIPS needs to assure that all trees near its lines throughout its service territory are trimmed such that there are no tree contacts with its energized primary conductors before it returns to trim them again.

AmerenCIPS should investigate all of the problems noted during Staff's circuit inspections, as well as those discovered by its own inspections, and take appropriate remedial actions addressing any problems on those circuits, whether or not noted by Staff, which can significantly affect service reliability or public safety.

11. Review of AmerenCIPS' Implementation Plan for the Previous Reporting Period

With one exception, AmerenCIPS reported that the remedial actions to be done in 2005 for each of its year 2004 worst performing circuits, as described in its 2004 reliability report, were accomplished. (*The one exception involves the project to reroute Circuit X23505 in Bridgeport to avoid tree exposure in a city park. In its 2004 reliability report AmerenCIPS stated that this project was scheduled for completion by December 2005. The project was delayed by problems in obtaining necessary permits and, in its 2005 report, AmerenCIPS stated the work would be completed no later than August 2006. This project has since been rescheduled and reported completed as of November 21, 2006.* Upon reviewing the status of these planned actions for each circuit, Staff finds the corrective actions taken by AmerenCIPS to be reasonable.

12. Summary of Recommendations

- First, AmerenCIPS should do whatever is necessary to maintain a four-year (minimum) tree trimming cycle that is also in compliance with 2002 NESC Rule 218 throughout its service territory. Staff noted that tree trimming was well done on several, but not all, of the AmerenCIPS circuits it inspected this year. Some of the circuits inspected had a high number of tree trimming problems, however. AmerenCIPS needs to assure that all trees near its lines throughout its service territory are trimmed such that there are no tree contacts with its energized primary conductors before it returns to trim them again.

- Second, AmerenCIPS should continue to add animal guards and tap fuses on its distribution circuits to minimize interruptions and the number of customers affected when interruptions occur.

- Third, AmerenCIPS should install additional lightning protection on its rural circuits that display signs of lightning damage, as Staff also recommended in prior years.

- Fourth, AmerenCIPS should investigate all of the problems noted during Staff's inspections of worst performing and other circuits (see Attachments "A" through "P") and take appropriate remedial actions addressing any problems on those circuits, whether or not noted by Staff, which can significantly affect service reliability or public safety.

- Fifth, AmerenCIPS should follow through with its action plans listed in its Supplemental Report (as a minimum) in an effort to prevent those customers who experienced interruptions in excess of the service reliability targets in each of the last three or more years from exceeding the targets again.

- Sixth, AmerenCIPS should perform field inspections of all circuits on a regular basis and correct the problems found which can significantly affect reliability or public safety.

Attachment "A"

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/2/06**
Circuit:	**U05595 (Astoria, Summum, & rural)**	**Inspector:**	**J. D. Spencer, w/ Bev Hall (Ameren)**
Gen. Notes:	This was a worst performing 12 kV circuit in 2005, serving Astoria, Summum, and rural areas between these communities and southeast of Astoria. Tree trimming looked good. Animal guards were plentiful in Astoria, but there were very few in Summum. More lightning arresters are needed in the rural areas. The fused taps looked okay. There were several mapping errors. ***Many of the roads were not labeled on the circuit maps provided.*** ***One NESC violation was noted.***		

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 23	Missing primary downguy		South St. between Jefferson & Adams Sts., Astoria (at Sta. 13157).
4	Missing primary downguy		Pine St. at north end of primary, Astoria (at Sta. 12902).
5	**Code violation (NESC 279.A.2):** No strain insulator below 12 kV primary in downguy from overcircuit. *Downguy owned by Spoon River Electric Cooperative, per AmerenCIPS.* *Spoon River installed strain insulator in downguy on 5/31/06, per AmerenCIPS.*	107-0791, 792	At pole B4673 (3rd pole east of Sta. 12701) on US Hwy. 24, east of Astoria.
6	Badly shell rotted pole		Pole CT21293, 4 spans from west end of circuit (road not labeled on map)
6	Shell rotted pole		Pole CT21292, at Sta. 12736 (road not labeled).
8	Missing guy marker		2 spans east of Sta. 12707 on Apple Orchard Rd. (235N) (road not labeled on map).
8	Badly shell rotted pole & bad crossarms		Corner of Apple Orchard Rd. (650E) & east-west road at tap to Sta. 12710 (neither road labeled on map).
8	Missing guy marker		On US Hwy. 24 (not labeled on map) at pole B4661.
9	Badly split crossarm & crossarm brace (pole also lightning damaged at bottom)	789, 790	Pole CT21287 in tap going northwesterly cross-country from US Hwy 24.
9	2 shell rotted poles		Poles CT21290 & CT21291 on both sides of an east-west road not labeled on map.
9	Missing guy marker		On CH 2 at 2nd pole north of US Hwy. 24 (at north end of circuit).
11	Lightning damaged wood crossarm brace	786	At pole B4636 on US Hwy. 24, 4 spans northeast of east-west road not labeled on map.
11	Split (lightning damaged) crossarm	787, 788	At pole B4635 on US Hwy. 24, 5 spans northeast of east-west road not labeled on map.
11	Lightning damaged wood brace		At pole B4632 on US Hwy. 24, 8 spans northeast of east-west road not labeled on map.
11	2 split wood crossarm braces	785	At pole B4631 on US Hwy. 24, 9 spans northeast of east-west road not labeled on map.
12	Badly shell rotted pole		Pole B4698, 2 spans east of CH 2 (800E) on east-west road not labeled on map.
12	Badly deteriorated crossarm		At pole B4862 on the east side of CH 2 at east-west road not labeled on map.
15	Split (lightning damaged) wood brace		At pole B4605 on US Hwy. 24, one span southwest of Clayton Ln. (410N) (not labeled on map).
17	Missing guy marker		At Sta. 12719 on east-west road not labeled on map.
18	Woodpecker hole in pole (about halfway up pole)		On US Hwy. 24 at approximately pole B4579.
19	Shell rotted pole & badly deteriorated crossarm	784	On US Hwy. 24 at approximately pole B4577.
19	Missing guy marker		On the north side of Sand Branch Rd. (incorrectly labeled Main St. on map) at pole R112, Summum.
22	2 missing guy markers		At pole 106213 on US Rt. 24 at the south edge of Summum.
22	Missing primary downguy		At pole R113 (Sta. 12792) on Turner Rd. (545N) (incorrectly labeled as Mulberry on map), Summum.
22	Missing primary downguy		At pole R12 (Sta. 12808) on Turner Rd. (545N) just east of Hammack Rd., Summum.
22	Missing primary downguy		At pole R145 (Sta. 12801) on Sand Branch Rd. (labeled incorrectly as Sand Beach Rd. on map) just west of Woodland Rd. (not labeled on map), Summum.
23	Missing primary downguy		At pole R164 (Sta. 12806), on Woodland Rd. just south of Ogden Rd. (neither road labeled on map), Summum.

Attachment “B”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/10/06**
Circuit:	**Z21564 (Findlay, Westervelt, & rural)**	**Inspector:**	**J. D. Spencer, w/ Riley Adams (AmerenCIPS)**
Gen. Notes:	Circuit Z21564 was a worst performing 12 kV circuit in 2005, serving Findlay, Westervelt, and a rural area between those communities and south to the north edge of Shelbyville. Structures looked very good, generally, with many new poles & crossarms. There are many "extra" lightning arresters throughout the circuit. There are few animal guards…more are needed. Tree trimming looked good in most of the circuit, but several scattered conflicts were noted in Findlay. There were some inaccessible and some underground circuit sections.		

Map No.	*Item Description*	*Photo(s)*	*Location*
2 of 39	Missing primary downguy		At Sta. 12566 south of Eversole St. in the alley between W. 2nd & W. 3rd Sts., Westervelt.
2	Missing guy marker		At Sta. 12794 north of Walnut St. in the alley west of W. 4th St., Westervelt.
2	Missing primary downguy		At Sta. 12605 north of Walnut St. in the alley between W. 3rd & W. 4th Sts., Westervelt.
2	Missing primary downguy		At Sta. 12599 north of Walnut St. in the alley between W. 2nd & W. 3rd Sts., Westervelt.
2	Missing primary downguy		At Sta. 12592 north of Walnut St. in the alley between W. 1st & W. 2nd Sts., Westervelt.
2	Missing primary downguy		At Sta. 12582 on Walnut St. just west of Main St., Westervelt.
4	Missing guy marker		Southwest corner of CH 18 & Rd. 1525E (CH 41)
5	Trees close to primary		On Rd. 1775N near Sta. 12594 (house # 277--west of creek).
5	Missing guy marker		On Rd. 1775N at pole N7614 (east of creek).
8	Woodpecker hole in pole		Pole N7621 on Rd. 1775N (4 spans west of Rd. 1625E).
8	Woodpecker hole in pole top		Pole N7622 on Rd. 1775N (3 spans west of Rd. 1625E).
11	Missing primary downguy		At pole CT6793 (Sta. 12536) on Rt. 128 south of Rd. 1650N.
19	Missing guy marker		At pole N4509 on CH 5, 1 span north of Rd. 1700N.
23	Pine trees close to primary	108-0841	On Rd. 1600N west of Corps of Engineers Dr., between poles N4639 & N4640.
30	Split wood crossarm brace		At pole N4450 on Rd. 1785N just west of creek.
33	Trees very close to primary		In 1st span east of Rd. 2075E on road not labeled on map (between poles N4406 & CT16768).
38	Trees into primary		1st span south of W. South 2nd St. in the alley between S. Park & S. Bates Sts., Findlay.
38	Missing primary downguy		On S. Park St. north of W. South 2nd St. at Sta. 6166, Findlay.
38	Trees close to primary		1st span south of W. South 2nd St. in the alley between S. Wall & S. Park Sts., Findlay.
38	Trees into primary		On S. Wright St. in 2nd span north of W. South 3rd St., Findlay.
38	Cedar tree very close to primary		On S. Mausey St. south of E. South 3rd St., Findlay.
38	Cedar tree very close to primary		Just west of S. Mausey St. in the alley south of E. South 3rd St., Findlay.
38	Missing guy marker		On S. Mausey St. at primary corner north of E. South 3rd St., Findlay.
38	Missing primary downguy		At pole HD28 east of S. Dazey St. in the alley south of E. South 1st St., Findlay.
38	Badly deteriorated pole top		Southeast corner of S. Dazey & E. South 1st Sts., Findlay.
38	Trees close to primary		Along N. Wall St. on both sides of W. North 2nd St., Findlay.
38	Shell rotted guy stub pole		On east side of N. Wright St. at W. North 2nd St., Findlay.
38	Pine trees very close to primary		East of N Dazey St. in the easement north of E. North 3rd St., Findlay.
39	Trees close to primary		South of E. South 2nd St. on S. Madison St., Findlay.
39	Missing guy marker		In the alley west of S. Madison St. just north of E. South 3rd St., Findlay.

Attachment “C”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/10/06**
Circuit:	**X91510 (Kincaid, Bulpitt, Tovey)**	**Inspector:**	**J. D. Spencer, w/ Riley Adams (AmerenCIPS)**
Gen. Notes:	This was a next-worst performing 12 kV circuit in 2005, serving Kincaid, Bulpitt, and Tovey. The portion of the circuit inspected (for which maps were provided) looked very good overall. There were some close trees, but trimming was in progress on the date of the inspection. There were few animal guards. ***There were 4 to 5 miles of additional exposure on this circuit west of Tovey in 2005, where most of the problems were, but circuit maps were not provided for that portion of the circuit.***		
Map No.	***Item Description***	***Photo(s)***	***Location***
1 of 5	Trees very close to primary		Corner of Columbus & Borrah Aves., Tovey.
1	Missing primary downguy		At pole SD198 on Linkins Ave. east of Callaway Ave., Tovey.
2	Trees close to primary		In 2nd span west of Harold Ave. on Crowder Ave., Tovey.
2	Deteriorated pole top (guy stub pole)		Southeast corner of Borrah & Harold Aves., Tovey.
2	Tree close to primary		On Borrah Ave. in 2nd span west of Murray Hill Ave., Tovey.
2	Tree close to primary		On Linkins Ave. in 1st span east of Murray Hill Ave., Tovey.
4	Trees close to primary		East of Commonwealth Ave. near pole KH476 in the alley north of Cedar St., Kincaid.
4	Missing primary downguy		At pole KH426 just west of Commonwealth Ave. in the alley north of Elm St., Kincaid.
4	Missing primary downguy		At pole KH411 on Chestnut St. west of Highland St., Kincaid.
4	Trees close to primary		In 1st span south of George St. on Garrison St., Bulpitt.

Attachment “D”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/13/06**
Circuit:	**T11508 (Cypress & rural)**	**Inspector:**	**J. D. Spencer, w/ Dave Short (AmerenCIPS)**
Gen. Notes:	This was a next-worst performing 12 kV circuit in 2005, and was a worst performing circuit in 2002, 2000, & 1998 (CAIDI in 1998). The circuit serves Cypress and a small rural area mostly south of Cypress. Some portions of the circuit are cross-country and not readily accessible. Tree trimming looked okay, and many animal guards were noted. ***Many of the roads were not labeled on the circuit maps provided.***		
Map No.	***Item Description***	***Photo(s)***	***Location***
2 of 9	Missing guy marker		On Whitehill Rd. (not labeled on map) at tap to Sta. 1231, just west of Hwy. 37.
2	Woodpecker holes in pole		On Snell Ln. (not labeled on map) 1 span south of Potomac Ln. (not labeled on map) in tap to Sta. 1303.
2	Woodpecker hole near pole top		On Snell Ln. (not labeled on map) 1 span north of Sta. 1303 in tap going south from Potomac Ln. (not labeled on map).
3	Woodpecker hole in pole top		Pole FC237 on N-S road (not labeled on map--near SE corner of map).
3	Deteriorated pole top (guy stub pole)		Pole FC239 on N-S road (not labeled on map--near SE corner of map).
3	2 woodpecker holes in pole top		Pole FC238 at corner of N-S road & E-W road (neither road labeled on map--near SE corner of map).
3	Missing guy marker		At pole FC239 on E-W road (not labeled on map--near SE corner of map).
3	Missing guy marker		At pole FCT12538 on SR 37.
4	Missing guy marker		At pole FC265 on SR 37, 1span north of Dongola Rd. (not labeled on map).
4	Missing guy marker		At pole FC149 on Railroad St. at tap to Sta. 2221, Cypress.
5	Missing guy marker		At pole FC150 on Railroad St. 1 span south of Sta. 2218, Cypress.
5	Missing primary downguy		On Lentz St. 1 span north of Casper St., Cypress.
5	Missing primary downguy		On Casper St. 1 span west of Lentz St., Cypress.
5	Missing guy marker		At pole FCT19584 in the alley west of 3rd St. at the tap to Sta. 1788, Cypress.

Attachment "D" (continued)

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/13/06**
Circuit:	**T11508 (Cypress & rural)**	**Inspector:**	**J. D. Spencer, w/ Dave Short (AmerenCIPS)**
Map No.	***Item Description***	***Photo(s)***	***Location***
5	Missing guy marker		At pole FCT19871 on Carter St. 1 span west of Sta. 2076, Cypress.
5	Missing guy marker		At pole FCT21860 just south of Mt. Pisgah Rd., Cypress.
5	Missing guy marker		At pole FC155 in N-S section of circuit east of SR 37, Cypress.
6	Missing guy marker		At pole FC183 on Mt. Pisgah Rd., north of Cypress.
6	Split wood crossarm brace	108-0842	At pole FCT26725 on SR 37, north of Cypress (underbuild on 69 kV line).
9	Missing guy marker		At pole FCT28487 on SR 37, north of Cypress (at north end of circuit).

Attachment "E"

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/13/06**
Circuit:	**S20554 (Carrier Mills)**	**Inspector:**	**J. D. Spencer, w/ Dave Short (AmerenCIPS)**
Gen. Notes:	This was a worst performing 4 kV circuit in 2005, serving Carrier Mills. ***The portion of the circuit on the maps provided was converted to 12 kV about 1/1/06. Circuit maps for the 4 kV feeder along Walnut St. east from the substation and all of its taps (all part of the same circuit in 2005) were not provided.*** For the portion of the circuit inspected (12 kV now), the structures looked good and there were several new poles. Animal guards were plentiful. No tree trimming problems were noted.		
Map No.	***Item Description***	***Photo(s)***	***Location***
2 of 2	Missing primary downguy		1 span west of Mills St. on Clark St., Carrier Mills.

Attachment "F"

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/14/06**
Circuit:	**Z57516 (Xenia, Iuka, & rural)**	**Inspector:**	**J. D. Spencer, w/ Ron Bailey (AmerenCIPS)**
Gen. Notes:	This was a next-worst performing 12 kV circuit in 2005, serving Xenia, Iuka, and a rural area between those communities and east of Xenia. Tree trimming looked good (saw fresh cuts). Need more lightning arresters in rural feeder portion of circuit. Animal guarding was spotty--very few animal guards were noted in Iuka. Several new poles were noted. There were very few problems overall.		
Map No.	***Item Description***	***Photo(s)***	***Location***
1 of 32	15(+) woodpecker holes in pole	108-0843	1 span east of Locust St. on Enterprise Ave., Iuka.
2	Blown lightning arrester		At Sta. 15504 on City Park Dr., Iuka.
25	10 large woodpecker holes in pole	844	Northwest corner of West & Mulberry Sts., Xenia.
25	3 woodpecker holes in pole		Pole 29314 on Leadtree Ln. (Rd. 200N), Xenia.
27	Missing primary downguy		1 span east of Fairfield St. on East St., Xenia.
31	Badly leaning primary pin--2nd from field side		At pole G7483, 1 span west of tap to Sta. 13885 on Old US Hwy. 50.

Attachment "G"

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/15/06**
Circuit:	**V83505 (Alsey, Glasgow, & rural)**	**Inspector:**	**J. D. Spencer, w/ Melvin McDonald (AmerenCIPS)**
Gen. Notes:	This was a worst performing 12 kV circuit in 2005, repeating in that category from 2000. The circuit serves Alsey, Glasgow, and rural areas between those communities, north of Alsey, and west of Glasgow. Most of the tree trimming looked okay, with two isolated problems noted. Need more lightning arresters in long rural exposures. Animal guards were noted only occasionally--need more. Several new poles & crossarms were scattered throughout the circuit. There were several shell rotted poles (worst cases were noted).		
Map No.	***Item Description***	***Photo(s)***	***Location***
1 of 22	Broken downguy		On CR 700E (525E on map) at tap to Sta. 13115.
2	Broken downguy		On CR 700E (525E on map) at tap to Sta. 13112.
2	Pine trees close to primary		On Rd. 175N in 3rd span from east end of circuit.

Attachment “G” (continued)

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**3/15/06**
Circuit:	**V83505 (Alsey, Glasgow, & rural)**	**Inspector:**	**J. D. Spencer, w/ Melvin McDonald (AmerenCIPS)**
Map No.	***Item Description***	***Photo(s)***	***Location***
4	Missing guy marker		At Sta. 13095 in spur going west from CH 7 (Rd. 200N).
5	Lightning damaged crossarm		At pole K3980 on CH 7 (Rd. 200N).
6	Lightning damaged crossarm		At pole K3974 on CH 7 (Rd. 200N).
6	6(+) woodpecker holes in pole		Pole K3973 on CH 7 (Rd. 200N).
7	Shell rotted pole		Pole IAT229 (at Sta. 13085) on CH 7 (Rd. 200N).
7	Missing guy marker		At pole IA93 on CH 7 (Rd. 200N).
7	Shell rotted pole		Pole IA92 on CH 7 (Rd. 200N).
7	Missing primary downguy		At pole IA89 (Sta. 13076) on the south side of Market St.
8	Woodpecker hole in pole		Pole IA100 on Exchange St. (CH 5).
8	Woodpecker hole in pole		Pole IA99 on Exchange St. (CH 5).
9	**Primary rubbing against tree (with line hose).** *AmerenCIPS removed the tree the week of 3/27/06.*	108-0847, 848, 849	On N. Jackson St. at State St., Glasgow.
9	Badly rotted guy stub pole		Southwest corner of State & Washington Sts., Glasgow.
10	Badly shell rotted pole		Pole TIA168 on Market St., east of Glasgow.
10	Shell rotted pole		Pole K3958 on Market St., east of Glasgow.
10	Shell rotted pole & bad pole top		Pole K3954 just south of Market St. (CH 7) on unlabeled N-S road.
11	3 badly shell rotted poles		Poles K3941, K3942, & K3943 on CH 7 (Alsey-Glasgow Rd.).
13	Badly shell rotted pole	845, 846	Pole K3939 on CH 7 (Alsey-Glasgow Rd.).
14	Missing guy marker		At pole AG89 (Sta. 12813) at end of spur going west along Street No. 2, Alsey.
15	Missing guy marker		At pole AG113 on Brick Rd. west of Pearl St., Alsey.
15	Missing primary downguy		1 span north of Brick Rd. on Diamond Dr., Alsey.
16	Missing guy marker		1st pole north of Church Blvd. on Alsey-Smith Rd., Alsey.
16	Missing primary downguy		1st pole west of Park St. on Main St., Alsey.
16	Missing guy marker		On guy stub pole on the west side of Alsey-Smith Rd. at Cottonwood Dr., Alsey.
16	Missing guy marker		On guy stub pole on the north side of Street No. 2, north of Sta. 12816, Alsey.
16	Windshake pole		At southeast corner of Alsey-Smith Rd. & Pine St., Alsey.
16	Missing primary downguy		At northeast corner of Alsey-Smith Rd. & Pine St., Alsey.
16	Missing guy marker		At southeast corner of State Hwy. 106 & Rd. 300N.
18	2 missing guy markers		At pole K3888 on State Hwy. 106.
18	Missing guy marker		At pole K3887 on State Hwy. 106.
19	Missing guy marker		At northeast corner of State Hwy. 106 & Rd. 525N.
19	Wood brace detached from crossarm (road side)		1 span east of State Hwy. 106 on Rd. 525N.
21	Missing guy marker		At pole K3920 (Sta. 11828) on Rd. 300N.
21	Missing guy marker		At pole CT21642 on Rd. 300N.
22	Split crossarm		At pole K3866 on Rd. 525N (not labeled on map).
22	4 missing guy markers		At pole K3843 on Rd. 525N at N-S road (neither road labeled on map), just west of Winchester Sub.

Attachment “H”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS (former AmerenUE territory)**	**Date:**	**4/4/06**
Circuit:	**332-003 (Cahokia)**	**Inspector:**	**J. D. Spencer, w/ Mike Tautphaeus (Ameren)**
Gen. Notes:	This was a next-worst performing 4 kV circuit in 2005, serving a southeastern portion of Cahokia (formerly AmerenUE service territory). The circuit is mostly in back easements. The only problems noted were missing guy markers in two locations.		

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 2	Missing guy marker		In easement north of St. Christopher St. at tap to Sta. 2476, Cahokia.
1	Missing guy marker		In easement between King & Marion Sts. at tap to Sta. 4268, Cahokia.

Attachment “I”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS (former AmerenUE territory)**	**Date:**	**4/5/06**
Circuit:	**340-001 (Alton)**	**Inspector:**	**J. D. Spencer, w/ Mike Tautphaeus (Ameren)**
Gen. Notes:	This was a worst performing 4 kV circuit in 2005, serving a southwestern portion of Alton (formerly AmerenUE service territory). There were many tree clearance problems. A few structural problems were noted.		

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 5	Broken limb on primary		Northeast of Sta. 318 near south end of Fairmount Dr. South.
1	Trees very close to primary		Between Stas. 5480 & 623 on Fairmount Dr. South.
1	Vines up transformer pole	108-0889	At Sta. 1898 on Fairmount Dr. South.
1	Trees into primary		Just east of Sta. 2585 on Fairmount Dr. South.
1	Missing guy marker		At Sta. 128 on Danforth St. just west of Fairmount Dr. South.
1	Missing guy marker		At Sta. 486 at west end of circuit.
1	Missing guy marker		At Sta. 316 on Danforth St. west of Pond Way.
1	Broken white pine limbs on primary	896	On Pond Way north of Danforth St. (at Sta. 3066).
1	Trees into primary		Just south of Danforth St. on Fairmount Dr. South.
1	Oak tree into primary	895	Between Stas. 1324 & 1969 on Forest Dr. north of Danforth St.
1	Tree limbs into primary (Tulip tree?)	893, 894	Forest Dr. just north of Sta. 1192 (north of Pond Way Dr.)
1	Primary burning white pine tree	890	Just west of Forest Dr. on Logan Rd.
1	Missing guy marker & broken limb on primary (at pole)		West of Sta. 1019 on Logan Rd.
1	Large broken limb on primary	891, 892	Just north of Logan Rd. on Forest Dr.
2	Trees into primary		Just north of Logan Rd. on Fairmount Dr. North.
2	Missing primary downguy		Just south of Sta. 3503 on Forest Dr. (not labeled on map)
3	Evergreen tree very close to primary		East of Fairmount Ave. in the easement north of Douglas St.
3	Badly split & deteriorated crossarm	887, 888	At Sta. 837 on Douglas St. west of Lincoln St.
3	Trees into primary	886	West of Lincoln St. in the alley north of Douglas St.
3	Trees very close above primary		East of Lincoln St. in the alley north of McPherson St. (between Stas. 1674 & 2619).
3	Trees very close to primary		On McPherson St. just east of Lincoln St.
3	Trees close to primary		On Douglas St. just east of Lincoln St.
3	Trees close to primary		On Douglas St. between Stas. 3301 & 571.
3	Missing guy marker		Northwest corner of McPherson & State Sts.
3	Deteriorated crossarm	885	Southeast corner of State St. & Douglas Pl.
3	Trees growing into primary		Along Douglas Pl. near & between Stas. 4376 & 1970.
3	2 missing guy markers		On Jefferson Ave. at the tap going north along Mack St.
3	Primary through tree	882	In tap going west from McInerny Ave. to Sta. 1147, along Shaw Ave. (not labeled on map).
3	Trees very close to primary		On North St. east of Jefferson Ave.
3	Trees into primary	883, 884	On Windward Pl. at Sta. 4996, north of Shelley St.
4	Trees into primary & vines up transformer pole	880, 881	On Gesche St. at Sta. 3514 & in span south of Sta. 3514 (north of Madison Ave.)

Attachment “J”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**4/5/06**
Circuit:	**V25504 (Lockhaven, Millcreek, Piasa Creek)**	**Inspector:**	**J. D. Spencer, w/ Mike Tautphaeus (Ameren)**
Gen. Notes:	This was a worst performing 12 kV circuit in 2005, repeating in that category from 2002. It serves Lockhaven, Millcreek, Piasa Creek, and a rural area between those communities and Elsah to the west. There are several inaccessible cross-country areas. Several new poles are scattered throughout the circuit. Animal guarding was generally well done. No tree trimming problems were noted.		

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 13	2 missing guy markers		At pole CT22477 on Beltree Rd.
6	10(+) woodpecker holes in pole	108-0897	Pole 76668 on Elsah Hills Rd.
6	2 woodpecker holes in pole top		Pole 76664 on Elsah Hills Rd.
11	Missing guy marker		At pole 239639 on Beltree Rd.

Attachment “K”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**4/5/06**
Circuit:	**V25513 (Elsah & rural)**	**Inspector:**	**J. D. Spencer, w/ Mike Tautphaeus (Ameren)**
Gen. Notes:	This was a worst performing 12 kV circuit in 2005, serving Elsah and a rural area north of Elsah. Tree trimming was well done. There were some inaccessible areas.		

Map No.	*Item Description*	*Photo(s)*	*Location*
2 of 8	Missing guy marker		At pole K10388 on Croxford Rd.
6	2 woodpecker holes in pole top		Pole GI62 on Mill St. south of Sisal St., Elsah.
7	11(+) woodpecker holes in pole	108-0898	Pole GI158 on CH 23 north of Elsah.

Attachment “L”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**6/12/06**
Circuit:	**X68506 (Fisher)**	**Inspector:**	**J. D. Spencer, w/ Steve Hickey**
Gen. Notes:	This was a worst performing 7.2 kV delta circuit in 2005, serving the town of Fisher. The trees were well trimmed. There were no animal guards on the transformers.		

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 3	Missing primary downguy		On Franklin St. at the end of the tap going east from 3rd St.
3	Broken limb on south phase of primary	110-1051	On the east side of Pickett Dr. in the easement north of US Rt. 136 (Division St.)

Attachment “M”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**6/12/06**
Circuit:	**Y60548 (Fisher, Dewey, Tomlinson, & rural)**	**Inspector:**	**J. D. Spencer, w/ Steve Hickey**
Gen. Notes:	This was a next-worst performing 12 kV circuit in 2005, and it was a worst performing circuit in 2002. The circuit serves Fisher, Dewey, Tomlinson, and a rural area between and east of those communities to the western edge of Rantoul. Tree trimming looked good, but there were few animal guards. More lightning arresters are needed in the rural areas. Very few structural problems were noted.		

Map No.	*Item Description*	*Photo(s)*	*Location*
3 of 33	Missing guy marker		On US Rt. 136 (Division St.) at the tap going north on 5th St., Fisher.
5	Minor lightning damage to pole		Pole R7813 on County Rd. 600, south of Fisher.
7	Badly shell rotted pole	110-1052	Southwest corner of Sangamon & 1st Sts., Fisher.
7	Badly shell rotted pole	1053	1st pole north of Sangamon St. on 1st St., Fisher.
25	Lightning damaged crossarm		2nd pole east of Rd. 1300E on County Rd. 2900.

Attachment “N”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**7/13/06**
Circuit:	**X75571 (Gibson City, Saybrook, Arrowsmith, & rural)**	**Inspector:**	**J. D. Spencer, w/ Ken Kirchner**
Gen. Notes:	This was a worst performing 12 kV circuit in 2005, serving the extreme western edge of Gibson City, Saybrook, Arrowsmith, and rural areas between those communities. There are several inaccessible cross-country sections. Many new poles & crossarms were noted. Overall, the circuit looked good structurally, with only a few exceptions noted. There were quite a few scattered tree trimming problems. More animal guards are needed. More lightning arresters are needed in the long rural sections.		

Map No.	*Item Description*	*Photo(s)*	*Location*
2 of 39	Trees close to primary		North of W. Crosson St. on Main St., Arrowsmith.
2	Tree very close to primary	110-1078, 1079	Fry St. just east of Main St., Arrowsmith.
2	Walnut trees close to primary		Just north of Ulmer St. in the easement east of Main St., Arrowsmith.
2	Spruce tree very close to primary	1077	South of Ulmer St. in the easement east of Main St., Arrowsmith.
6	Oak tree close to primary		Just east of pole R8673 on Rd. 1100N.
8	Badly shell rotted pole		Pole CT22619 in spur going south from Rd. 1075N.
8	Missing guy marker		At pole CT22623 at end of spur going south from Rd. 1075N.
13	Trees growing into primary	1080	Just north of pole R8333 (at creek) on Rd. 3700E.
15	Lightning damaged pole	1081, 1082	Pole R8360 on Rd. 3700E (3 spans south of Rd. 1300N).
18	Trees very close to primary		Along Harrison St. between poles DK241 & DK 239 (2 spans), Saybrook.
18	Trees into primary		Just east of pole DK238 on Harrison St., Saybrook.
18	Trees close to primary		Between poles DK230 & DK229 on Harrison St., Saybrook.
18	Trees into primary, with burning	1085	Harrison St. east of pole DKC225, east of N&W RR, Saybrook.
19	Trees very close to primary		Between poles DKC159 & DKC161 on Cortland St. at Oak St., Saybrook.
20	Trees very close to primary		Along Main St. between poles DK365 & DK43 (3 spans), Saybrook.
20	Trees very close to primary		All along Clay St. east of Main St., Saybrook.
20	Old lightning damage to pole top (not too bad)		Pole DKC307 on Jackson St., Saybrook.
20	Missing primary downguy		At pole DK270 east of State St. in easement north of Lincoln St., Saybrook.
20	Trees very close to primary		Along Main St. just north of W. Union St. (2 spans), Saybrook.
20	Trees into primary		Along Harrison St. just west of Jefferson St., Saybrook.
20	Trees into primary		Along Jefferson St. just south of Harrison St., Saybrook.
20	Sycamore tree very close to primary		Just north of Walnut St. on Jefferson St., Saybrook.
20	Missing primary downguy		At pole DK329 on Monroe St. just south of Harrison St., Saybrook.
21	Walnut trees into primary	1083, 1084	North of Locust St. at State St., Saybrook.
21	Trees growing into primary		Between poles DK428 & DK91 (5 spans) along Main St., Saybrook.
21	Oak tree very close to primary		Between poles DK352 & DK 353 just east of Main St., Saybrook.
23	Trees into primary		Between poles DK334 & DK335 on Lincoln St., Saybrook.
23	Soft maple tree very close to primary		Along Grant St. at Harrison St., Saybrook.

Attachment “O”

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**7/28/06**
Circuit:	**V18553 (Rural Springfield, Glenarm, Pawnee, & rural)**	**Inspector:**	**J. D. Spencer, w/ Greg Rockrohr**

Gen. Notes: This is a 12 kV circuit selected for inspection because of a report of 3 poles falling over in recent years. The circuit serves a rural area south of Springfield, Glenarm, a small western portion of Pawnee, and a rural area between Glenarm & Pawnee. **This circuit is also the source for 4 kV circuits V19001 and V19002 in Pawnee, for which circuit maps were not initially provided.** There were several tree trimming problems, as noted. There were no lightning arresters except at transformers & other devices. Need more arresters in rural areas. Many new poles & crossarms were noted. There were some mapping errors. ***One NESC violation was noted.***

Map No.	*Item Description*	*Photo(s)*	*Location*
1 of 22	Split crossarm		On pole IB39 on Rhodes St. west of Main St., Glenarm.
1	Missing guy marker		At pole IB38 on Rhodes St. east of Main St., Glenarm.
1	Missing primary downguy		At pole IB33 west of Main St. in the alley north of Rhodes St., Glenarm.
1	Tree into primary, with burning	111-1123	On Main St. just south of the alley north of Rhodes St., Glenarm.
1	Silver maple trees into primary	1124, 1125	In the alley north of Rhodes St. on both sides of Main St., Glenarm.
1	Missing primary downguy		At pole IB30 east of Main St. in the alley north of Rhodes St., Glenarm.
1	Missing primary downguy		At pole IB20 east of Main St. in the alley north of Robb St., Glenarm.
1	Trees very close to primary		Along Main St. north of Judd St., Glenarm.
1	Tree into primary	1122	Between poles IBT47 & IBT45 on Glenarm Rd., Glenarm.
1	Maple tree very close to primary		Between poles 417341 & 417342 near end of tap feeding south from Glenarm Rd., on the west side of Old Rt. 66, Glenarm.
2	Split & deteriorated crossarm	1120, 1121	On pole Y5237 on Old Rt. 66 east of Manning Rd.
5	Lightning damaged crossarm	1126	On pole G4018 on New City Rd. west of Old Rt. 66.
5	**Code structural strength violation (NESC 261.D.4.c):** Single wood crossarm supporting a 3-phase crossing of a railroad, on the east side of the railroad crossing. (Double crossarms required). *AmerenCIPS installed the required second crossarm on the east side of the crossing on 8/17/06.*	1127, 1128	On pole G3410 on New City Rd. on the east side of the railroad crossing.
6	Trumpet vine up pole & missing guy marker	1129	1st pole north of CR 8 1/4 (pole G3538) on Stout Rd.
7	Hanging wood brace		On pole OPT224 on E. Glenarm Rd. 1 span west of tap going south to Sta. 5796.
7	Missing guy marker		On guy stub pole Y5087 on E. Glenarm Rd. at the tap going south to Sta. 5796.
11	Split wood brace	1130	On pole Y5264 on New City Rd., 1 span east of Old Rt. 66.
11	2 shell rotted poles		Poles CT21513 & CT21515, 3 & 5 spans east of Old Rt. 66 on New City Rd.
12	Missing guy marker		On guy stub pole Y5043 at the corner of Dickey & Joline Rds.
12	Nut loose on primary pin		On pole OPT148 on Joline Rd., 1 span north of Dickey Rd.
13	Broken wood brace & badly deteriorated crossarm	1115	About pole OPT165 on Joline Rd. (too few poles shown on map).
13	Woodpecker hole in pole top (above crossarm)		About pole OPT170 on Joline Rd. (too few poles shown on map).
13	Broken ground wire		About pole OPT173 on Joline Rd. (too few poles shown on map).
13	Woodpecker hole in pole top (above crossarm)		About pole OPT175 on Joline Rd. (too few poles shown on map).
13	Woodpecker hole in pole top (above crossarm)		About pole OPT185 on Joline Rd. (too few poles shown on map).

Attachment “O” (continued)

Summary of Distribution Circuit Field Inspection by ICC Staff			
Utility:	**AmerenCIPS**	**Date:**	**7/28/06**
Circuit:	**V18553 (Rural Springfield, Glenarm, Pawnee, & rural)**	**Inspector:**	**J. D. Spencer, w/ Greg Rockrohr**

Map No.	*Item Description*	*Photo(s)*	*Location*
13	Woodpecker hole in pole top (above crossarm)		About pole OPT190 on Joline Rd. (too few poles shown on map).
13	Blown lightning arrester (field side)		Pole OPT197 on Joline Rd. 1 span south of E. Glenarm Rd.
13	Missing guy marker		On guy stub pole Y5072 on the north side of E. Glenarm Rd. at Joline Rd.
14	Trees into primary		Between poles CT21520 & CT21521 on New City Rd. (just east of Sta. 5872).
14	Broken & hanging wood crossarm brace		On pole CT21521 on New City Rd.
14	Broken wood brace & missing guy marker		At pole CT21523 on New City Rd. (at tap to Sta. 5873).
14	Missing wood crossarm brace (road side)		On pole CT21525 on New City Rd. (at Sta. 5874).
14	Silver maple tree into primary, with burning	1131	Between poles CT21530 & CT21531 on New City Rd.
14 & 17	Black locust tree into primary, with burning	1132, 1133	Between poles CT21531 & CT21532 on New City Rd.
16	Broken wood brace & bad pole top		Pole CT21563 on E. Glenarm Rd., 3 spans west of Warrington Rd.
16	2 trees into primary, with burning	1116, 1117, 1118, 1119	E. Glenarm Rd. at Warrington Rd.
16	3 missing guy markers		2 at pole CT21568 (Sta. 5790) on E. Glenarm Rd. & 1 at the secondary pole to the south.
16	Loose nut on primary pin		On pole CT21570 on E. Glenarm Rd.
16	Split wood brace (field side)		On pole CT21572 on E. Glenarm Rd.
17	Trees into primary, with burning		On New City Rd. just west of Pond Rd.
17	Broken pole--at ground line. *AmerenCIPS temporarily secured the broken pole on 8/2/06 & replaced it on 8/17/06.*	1134, 1135, 1136, 1137	On New City Rd. at Pond Rd.
17	Trees into primary, with burning		On New City Rd. just east of Pond Rd.
17	Shell rotted pole		Pole CT21537 on New City Rd. 1 span east of Pond Rd.
18	Missing guy marker		SE corner of W. 13th St. & the alley north of Washington St. (not labeled on map), Pawnee.
18	Split pole top		Pole OPT15 on W. 13th St., Pawnee.
18	Pine tree very close to primary		In 2nd span west of N. Pawnee Rd. in tap feeding west to Sta. 5777.
18	Oak tree close to primary		In 2nd span west of N. Pawnee Rd. in tap feeding west to Sta. 5777.
19	Missing guy marker		At pole OPT101 (Sta. 5784) on Dickey Rd.
19	Missing guy marker		At pole OPT99 on Dickey Rd.
20	Missing guy marker		At pole CT21573 (Sta. 5792) on E. Glenarm Rd.
21	2 missing guy markers		At pole CT21556 at tap to Sta. 5891on N. Pawnee Rd.
22	Hanging wood brace (north side) & disconnected wood brace	1113, 1114	Along railroad west of Pawnee substation, near 9th St., Pawnee.

Attachment "P"

Summary of Distribution Circuit Spot Checks by ICC Staff			
Utility:	**AmerenCIPS**	**Dates:**	**3/2/06**
Circuits:	**U04538 (Rural Ashland, Pleasant Plains, & rural); 34 kV Line 061-74 (National City); 333-001 (National City); Y60593 (Rantoul, Gifford, Penfield, & rural); Y97514 (south of Champaign)**	**Inspector:**	**J. D. Spencer, w/ Bev Hall (Ameren--3/2), w/ Mike Tautphaeus (Ameren--4/4), w/ Steve Hickey (6/12), & w/ Ron Roof (Ameren--8/14)**
Gen. Notes:	These are 2006 spot-checks of AmerenCIPS circuits, consisting either of follow-ups on prior year circuit problems or of new problems found that are not associated with other circuit inspections performed by ICC Staff. Staff's notes resulting from its 2006 inspections are shown in the item descriptions below in blue and red font. ***New NESC violations are noted at three locations.***		

Circuit--Date	*Item Description*	*Photo(s)*	*Location*
U04538--3/2/06	Verified correction of prior year NESC clearance violation-- inadequate primary clearance to overhead guy wire deadended on same supporting pole. *Overhead guy attachment lowered on pole, clearance okay now.*	P4 (2005)	Just west of Lincoln St. on 4th St., Pleasant Plains (map 10d).
	Checked on correction of broken ground wire & ground rod partially pulled out of ground. ***No change as of 3/2/06.***	P5 (2005)	At north end of circuit on County Hwy. 9C, south of Pleasant Plains (map 14)..
	Checked on correction of broken ground wire & pole damaged at ground line. ***No change as of 3/2/06.***	P1 (2005)	East of Jackson St. on Main St., Pleasant Plains (map 14c).
Line No. 061-74 (34 kV) -- 4/4/06	**Code structural strength violations (NESC 261.D.4.c):** Single wood crossarms with vertical post insulators supporting a 34 kV crossing of a railroad, on both sides of the railroad crossing. (Double crossarms required).	108-0878	Along St. Clair Ave. at the crossing of the Illinois Terminal RR and the Illinois Central RR, National City. (See AmerenIP Circuit R78300 map 5 of 5).
333-001 (4 kV) -- 4/4/06	**Code structural strength violation (NESC 261.D.4.c):** Single wood crossarm supporting a 3-phase crossing of a railroad, on the north side of the railroad crossing. (Double arms required).	108-0879	Along St. Clair Ave. at Packer Ave. (south of the location shown in Photo 108-0878), National City.
Y60593--6/12/06	Checked on correction of lightning damaged pole top. ***No change as of 6/12/06.***	K8 (2005)	East of Rd. 2000E on Rd. 2800N (map 7).
	Checked on correction of lightning damaged pole. ***No change as of 6/12/06 (not very bad).***		South of Rd. 2800N on Rd. 2000E (map 7).
	Checked on correction of badly split pole top. ***No change as of 6/12/06.***	K6, K7 (2005)	At line corner just north of Sta. 6354 (map 8).
	Checked on correction of blown lightning arrester. *Okay now.*		At Sta. 6354 (map 8).
	Checked on correction of soft maple tree into primary. *Okay now.*	K9 (2005)	Just east of Sta. 4991 on Summit St., Gifford (map 12c).
	Checked on correction of ash tree into primary. *Okay now.*	K10 (2005)	Just east of West St. on Summit St., Gifford (map 12c).
	Checked on correction of trees into primary. *Okay now.*		Just west of West St. in tap to Sta. 5008, Gifford (map 12c).
	Verified correction of prior year NESC structural strength violation-- single wood crossarm supporting a 3-phase crossing of a railroad, on one side of the railroad crossing. (Double crossarms required). *Second crossarm added, okay now.*	K11, K12 (2005)	West side of railroad crossing span on Griffith St. west of Main St., Gerald (map 16).
Y97514--8/14/06	Single-phase deadend pole with badly split top.	111-1149, 1150	1st pole west of Rt. 45 on CH 18, south of Savoy (south of Willard Airport).
	Disconnected wood crossarm brace & deteriorated pole top	1151	On Rd. 700E just north of the intersection with Rd. 1000N (Ch 18), southwest of Champaign.
	Code structural strength violation (NESC 261.D.4.c): Single wood crossarm supporting a 3-phase crossing of a limited access highway, on the east side of the crossing (double arms required). *AmerenCIPS installed double arms on the east side of the crossing on 9/8/06.*	1152	Crossing of I-57 at CH 18, south of Champaign.

Discussion of Ameren's Use of Major Event Days and The Institute of Electrical and Electronics Engineers' Standard 1366-2003 In its Annual Reliability Reports

By the Engineering Program Staff,
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The Commission's electrical engineering staff ("Staff") worries that engineers working for utilities in this country have created Standard 1366, and that utilities such as Ameren are using Standard 1366 in an attempt to avoid acknowledging utility responsibility for many of the electric service interruptions that consumers experience. Of course, that is not how AmerenCILCO, AmerenCIPS, and AmerenIP are selling Standard 1366. Instead, these Ameren utilities characterize Standard 1366 as a tool for making better comparisons between utilities and identifying reliability trends over time. However, the Ameren sales pitch does not change the fact that Standard 1366 alters reliability statistics by eliminating recognition of electric service interruptions during storms (or "Major Event Days" as Standard 1366 likes to call them) without regard to the cause of the interruptions or the cause of their extended duration. It may be that Standard 1366 could so alter the reliability indices of a poorly maintained utility that it would appear to be a well maintained utility. Staff believes that the Commission should consider any statistical reliability data that Standard 1366 has altered to be suspect and untrustworthy.[1]

Adding to Staff's concerns about IEEE Standard 1366-2003 is a statement in Annex B, Section B.5.1 of the standard explaining that members of IEEE's Distribution Design Working Group chose its 2.5 Beta method after reaching a consensus on the appropriate number of days that Standard 1366 should identify as Major Event Days. It seems that IEEE specifically designed Standard 1366 to identify the number of Major Event Days per year that its members collectively felt was desirable. Put another way, IEEE chose the answer it wanted and then designed a standard to get it. Section B.5.1 then goes on to say that, in practice, IEEE committee members have found that the number of Major Event Days that Standard 1366 identifies is even larger than the number they prescribed. Staff thinks IEEE's process may have resulted in a standard that is a bit more self-serving than the Commission should be willing to tolerate.

[1] "It is important that we view all statistics and sets of data with a critical eye and apply common sense and intuition about the problem to our decision format before arriving at a conclusion." [William Mendenhall & James E. Reinmuth, Statistics for Management and Economics 9 (Carol Beal ed., Duxbury Press, 1978)]
"There are three kinds of lies: lies, damned lies, and statistics." [British Prime Minister, Benjamin Disraeli (1804-1881)]

Below is an excerpt from AmerenIP's 2005 reliability report. The excerpt is Ameren's explanation of Standard 1366. Staff's analysis of Ameren's presentation of Standard 1366 and the problems it might create for consumers follows the excerpt. Staff's analysis contains other references to AmerenIP's 2005 reliability report, but Staff notes that AmerenCILCO and AmerenCIPS have sections of their reliability reports that are similar to the sections referenced below and Staff's comments are applicable to all three reports.

Excerpt from AmerenIP's 2005 Reliability Report, pages 1 and 2

The Institute of Electronic and Electrical Engineers ("IEEE") adopted Standard 1366 as a means to more consistently compare reliability performance between utilities and to better identify trends over a period of time. The System Average Interruption Duration Index ("SAIDI") is used in this calculation. The IEEE methodology calls for segregating Major Event Days (MED), i.e. days where SAIDI is more than two-and-a-half standard deviations greater than the five-year average daily SAIDI, from other days. Unlike the ICC reliability indices, the IEEE reliability indices include all outage types; therefore, all outages identified in 83 Illinois Administrative Code 411, Section 411.20 Definitions, are included in the calculation. As a result, IEEE indices might be lower or higher than the ICC indices depending on how many MED's are identified. The IEEE normalized data is used to assess overall performance and trends, while MED performance is assessed separately to identify lessons learned and implement work plans, policies and processes to improve performance.

AmerenIP's System Average Interruption Frequency Index ("SAIFI") and Customer Average Interruption Duration Index ("CAIDI") demonstrate the significant impact of outages from the days in 2005 that were MED's, as seen in Figure 1 and Figure 2. The majority of these MED's were due to weather events.

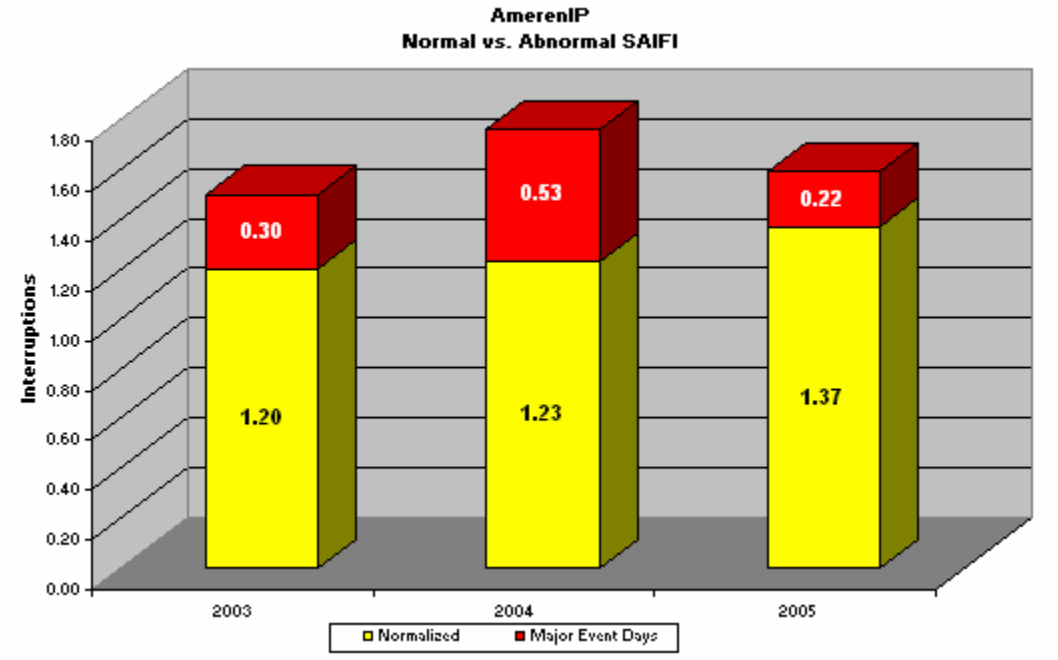

Figure 1 Normalized SAIFI Data

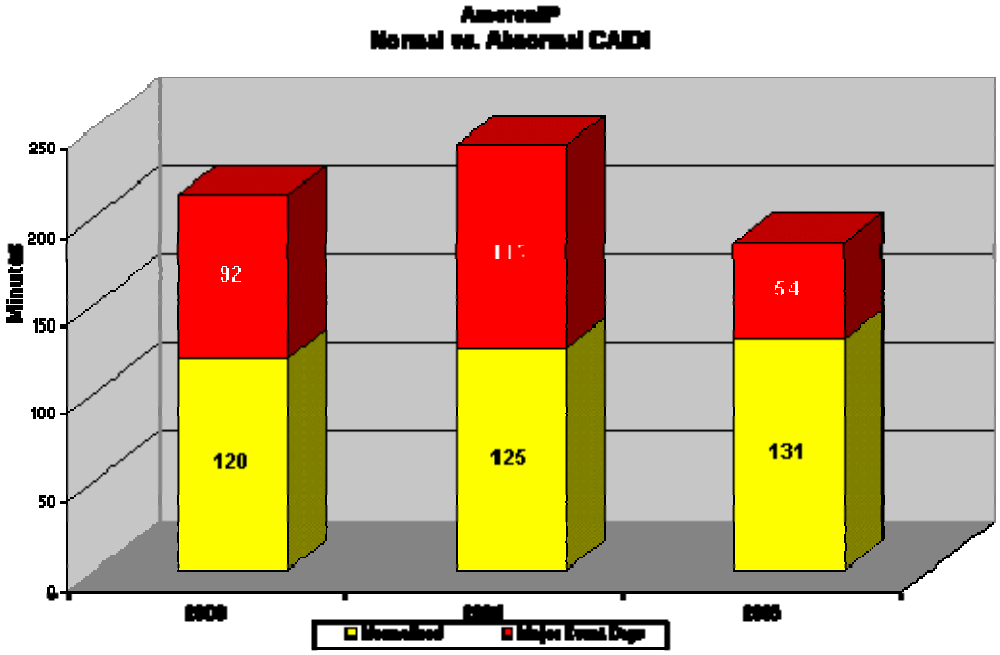

Figure 2 Normalized CAIDI Data

Staff's Analysis

The electric utility industry has long understood that utility regulatory commissions are disadvantaged by their near total reliance on the utilities they regulate for all the data necessary to monitor the operation of those utilities. Regulatory commissions simply do not have the resources to create their own data or verify data supplied by utilities. The Illinois Commerce Commission certainly fits this description.

Now, the Ameren utilities want to begin with electric service reliability data the Commission cannot verify and use statistical methods to manipulate it in ways that may produce deceptive results. The Commission should view this proposal with skepticism. Staff believes it unlikely that Ameren would propose to the Commission a method of viewing electric service reliability data that has any credible potential to reveal flaws in Ameren's operations. A remaining possibility is that Ameren wishes to make its service reliability look better than it is.

Part of the excerpt from AmerenIP's 2005 report in the previous section of this paper states that utilities separately assess Major Event Day performance to identify lessons learned and implement work plans, policies, and processes to improve performance.[2] Staff notes that while Ameren has been quick to use Major Event Days to reduce the

[2] Cheryl Warren, an expert on Standard 1366-2003, agrees that, ". . . the major event days should be reviewed separately to assess performance during that very different operating condition." [Cheryl Warren, *The Impact of Regulatory Policy on Reliability,* December 1, 2003.]

number of electric service interruptions for which it takes responsibility, it has included nothing in its reliability report that addresses lessons learned, work plans, or new policies and processes from Major Event Days. Staff finds this selective treatment illuminating.

The Commission should take note from Figures 1 and 2 in the above excerpt that Ameren's manipulation of the SAIFI and CAIDI indices by using Standard 1366 would seem to eliminate a significant number of electric service interruptions and cause their average duration to drop by nearly half in 2004. The Commission should also note Ameren's first hint in the last paragraph of the excerpt that it intends to place the blame for many electric service interruptions on "weather" and not on itself or its electricity delivery facilities. This theme runs throughout AmerenIP's report. Further, the Commission should note that Ameren has combined many separate causes together into one cause that it has chosen to call weather. Those many separate causes include tornados, floods, winds, excessive heat, excessive cold, and ice storms.

According to Cheryl Warren, an expert on the subject, "Major Event Days" represent days in which the utility's operating capability and system design is exceeded.[3] Staff certainly acknowledges that events occur that are outside utility control and that cause electric service interruptions. However, Staff is concerned that no one has offered any convincing studies demonstrating that the condition of a utility's delivery system and the number of employees a utility has available to perform service restoration work do not affect Standard 1366's identification of Major Event Days. Staff worries that Major Event Days are simply days on which a particular utility's delivery system could not withstand the conditions that existed on that day without regard to how well or poorly a utility has maintained its facilities and without regard to the adequacy of a utility's restoration resources. It is not clear to Staff that the number of Major Event Days identified by Standard 1366 per year will remain unaffected if a utility chooses to ignore necessary maintenance of its facilities and downsizes its workforce to an inadequately small size. It seems to Staff that Standard 1366 may eliminate enough electric service interruptions from the reliability data of a poorly maintained utility to cause the resulting reliability indices to portray the utility's service reliability much better than that experienced by the utility's customers and possibly more comparable to the service reliability of a well maintained utility.

Some examples might help to explain Staff concerns. Consider a utility that has failed to adequately test older delivery system wood poles and replace those poles that have lost too much strength. Staff is concerned that the only time this utility failure will become evident is on days when the wind is blowing extraordinarily strong. Staff is also concerned that Standard 1366 might identify such a day as a Major Event Day and exclude electric service interruptions during that day from the reliability indices, when the real cause of the service interruptions was bad poles. The resulting reliability indices could hide a serious reliability problem.

[3] Cheryl Warren, *The Impact of Regulatory Policy on Reliability,* December 1, 2003.

Staff finds a significant number of weakened, split, and damaged wooden crossarms and loose and broken crossarm braces during its worst performing circuit inspections each year. Crossarms in such condition can fail under loads that they should have been able to support and can allow insulator pins to slip from their mounts and drop wires. These damaged crossarms and broken braces remain in service because the utility has not found them through inspection and replaced them. Bad crossarms combined with bad poles could significantly increase the number of service interruptions during storms and might cause Standard 1366 to identify the day as a Major Event Day, when the real cause of the interruptions was no crossarm inspection and maintenance.

Lightning arrestors are another potential problem that Major Event Days might hide. If a utility failed to install lightning arrestors at close enough intervals on its electric delivery lines and then failed to inspect and replace lightning arrestors that had failed, it is quite probable that the delivery system would experience excessive damage from lightning during storms. When combined with other utility failures like the failure to test and replace old wood poles or to inspect and replace wooden crossarms, a system wide lightning arrestor problem might help cause Standard 1366 to identify an occurrence as a Major Event Day, when the truth was that the utility's delivery system was not able to withstand the occurrence because of inadequate maintenance. Other problems on electric delivery lines such as inadequate tree trimming, broken ground wires, and loose hardware on poles that a utility has allowed to exist might also help trigger the identification of a Major Event Day.

A utility with a good maintenance program could significantly reduce or find and repair all of the potential service interruption causes discussed above: rotten or damaged poles; decayed and damaged crossarms; lightning damage to structures and equipment; trees growing into high voltage wires, poor grounds, and loose hardware. In other words, a good maintenance program could reduce the number of electric service interruptions during storms and might reduce the number of Major Event Days that Standard 1366 identifies.

Standard 1366 identifies Major Event Days using the electric service reliability index called System Average Interruption Duration Index ("SAIDI"). Since a shortage of available workers for service restoration could lengthen the duration of interruptions during storms, it seems entirely likely that decisions by a utility to reduce the number of workers it employs to inadequately low levels might have an important influence on the selection of Major Event Days. It is common knowledge that one of Ameren's efforts after each merger with another utility was employment reduction. It is also true for AmerenCILCO and AmerenIP that the former owners of those utilities engaged in a number of employment reduction efforts such as early retirement. Staff does not know the extent to which employment reduction to unreasonable low levels may be contributing to the lengthening of electric service interruptions in all of Ameren's service territories in Illinois, but Staff is concerned about the possibility.

Ameren could choose not to exclude interruptions from its IEEE reliability calculations that have nothing to do with an event leading to a Major Event Day, but has elected not

to do so. This fact might lead one to conclude that the motivation behind Standard 1366 is simply to reduce the number of interruptions for which Ameren must accept responsibility. Because Standard 1366 is a statistical exercise that, by design, takes no notice of the cause of electric service interruptions, it excludes interruptions from reliability data that the utility knows were not caused by extreme weather or any other factor beyond its control. In response to a Staff data request, Ameren included a table that shows that AmerenCIPS excluded interruptions during two Major Event Days in 2005 from its IEEE reliability calculations and those excluded interruptions included some categorized as "Animal Related", "Other", "Unknown." Preventative equipment exists for animal related interruptions, and AmerenCIPS could have used it. The interruptions categorized as "Other" and "Unknown" preclude Staff comment other than the obvious observation that AmerenCIPS did not place them in a category that would have indicated they were outside its control.

Returning to the AmerenIP reliability report for 2005 and turning to the section covering requirements under Subsection 411.120(j) of Part 411, Staff notes that Ameren has included graphics and text calling attention to the contribution that weather played as the cause of many circuits being worst performers. These graphs, in combination with other information in AmerenIP's report, may be an attempt to lull the Commission into disregarding many electric service interruptions related to the effects of weather on AmerenIP's electric delivery systems and perhaps missing some important indicators of possible utility maintenance shortcomings or excessive personnel reductions.

Staff has taken some information from the graphs and the accompanying text in the AmerenIP report that might help explain why Staff is concerned about attempts to blame electric service interruptions on the weather. The table below contains rows that identify a worst-performing circuit and list the following: the percent of electric service interruptions on the circuit that AmerenIP attributed to weather; the percent of total customer interruption minutes in the circuit that AmerenIP attributed to weather; and an excerpt from the accompanying text in the AmerenIP report that explains what action AmerenIP took to improve reliability. The Commission may find it interesting that while AmerenIP attributes a large percentage of the interruptions to weather, it then goes on to explain in many cases that it found it necessary to perform a significant amount of maintenance to the old or inadequate equipment on the circuit, including poles, crossarms, fuses, and lightning arrestors.

Worst-Performing Circuit
Information Taken From AmerenIP's 2005 Reliability Report

Circuit I.D.	Interruptions Due To Weather %	Customer Interruption Minutes Due To Weather %	Excerpts From AmerenIP Description
H10843	56	59	More than 3,000 poles were tested on this

Circuit I.D.	Interruptions Due To Weather %	Customer Interruption Minutes Due To Weather %	Excerpts From AmerenIP Description
			117-mile circuit. As a result, many poles will be replaced and some will be restored. Several crossarms, braces, and hardware issues will also be addressed.
J71129	87	93	Corrective work plans include removing several coiled stingers, installing animal protection at 131 locations, installing a few additional lightning arresters, replacing missing or loose hardware, replacing 5 old poles and installing 3 additional poles.
J84124	82	91	A priority pole was replaced in June 2005, seventeen poles were reinforced with C-truss in September 2005, and a complete circuit-wide trim was completed in August last year. A patrol was also performed in the late summer of 2005 and several maintenance items, including lightning arrester replacement, were completed in early 2006 at a cost of $7,000. The Company is currently working on replacing a buck pole and addressing an identified tree issue at an approximate cost of $5,000; this work will be completed by July 2006.
K32915	26	38	A total of nineteen poles were replaced between the second half of 2005 and April 2006.
L17101	26	51	Eighteen poles and two crossarms will be replaced and other minor repairs will be implemented. The Company will also upgrade the circuit protective coordination scheme by adding one set of three reclosers and 13 tap fuses.
M81402	38	82	As a result, several poles will be replaced or restored. Corrective maintenance items include replacing defective or missing hardware, installing missing guy guards, and replacing several crossarms.
R20502	93	99	A review of the protective coordination yielded a total of 10 additional fuses and one additional set of reclosers; this work was

Circuit I.D.	Interruptions Due To Weather %	Customer Interruption Minutes Due To Weather %	Excerpts From AmerenIP Description
			completed in May 2006 at an approximate cost of $10,800. A circuit inspection and pole testing showed that several poles needed reinforcement and in excess of 40 other poles should be replaced. In addition, numerous maintenance items were identified.
R58932	51	94	A field check of the circuit in early 2006 showed that in addition to a few minor maintenance items, replacement of two spans of old copper single phase primary, nine poles, and the addition of four fuses would be beneficial.
R78300	20	37	All 487 poles on this ten-mile circuit were inspected. As a result, four poles will be replaced and several maintenance items, including broken, missing, or defective hardware will be replaced.
R94271	87	81	A section of overhead electric line will be removed from a wooded creek area to a location along HH Road to improve access and reliability. This work will be completed by fall 2006 at a cost of approximately $11,000; two structures will be replaced at a cost of $20,000 by fall 2006; various other maintenance projects including lightning arrester replacement, additional tap fuses, etc. will also be completed during the fall at an additional cost of $15,000.
R99180	100	100	Field review of the circuit in early 2006 showed that maintenance work, including replacement of some lightning arrestors and cross arms, was warranted. It also appears that replacement of approximately seventeen poles, and the addition of five sets of lightning arresters and three fuses would be beneficial.

Weather likely was not the cause of many of the interruptions that AmerenIP blamed on it. What is more likely is that AmerenIP had not adequately maintained the circuits and they were just not able, in their deteriorated condition, to withstand the normal forces that nature brought against them. An illustration of similar circumstances related to an

automobile might help with understanding of this idea. Let's suppose that a driver ignores the tires on his car until they lose all their tread and become bald. Then, let's suppose that the driver finds himself spinning out of control and crashing into a deep ditch during a pouring rain storm. Was this accident caused by the rain storm or the driver's poor maintenance of his automobile? Most likely, the tires simply could not maintain contact with the road surface at the speed they were driven and prevent the spin because they were slick and hydroplaned on the wet road. The driver had asked worn out tires to perform a function of which they were no longer capable. Certainly the weather played a role in the accident, but blaming the weather and not the worn out tires would be a dangerous mistake. Staff thinks that AmerenIP is making the same mistake with its electric delivery system.

The table below shows that all three Ameren utilities have reported weather to be the number one cause if interruptions and interruption duration. It is also interesting to note that overhead equipment is shown in every case to be the number two cause. Staff engineers have always known that line repair workers have great discretion in the field when they select the cause of interruptions for reporting purposes. Verification by utility supervisors of each line crew's cause selection shortly after the interruption would be difficult and is not generally practiced. Verification many months later by Staff engineers is practically impossible. For that reason, Staff engineers worry that many of the interruptions a utility reports as caused by weather may actually have been caused by trees or by failed equipment.

Top Four Interruption Causes for Ameren Utilities
As Shown in Figures 5 and 6
In 2005 Ameren Reliability Reports

	#1 Cause	#2 Cause	#3 Cause	#4 Cause
AmerenCILCO Interruption Frequency	Weather 26%	Overhead Equipment 18%	Intentional 12%	Public 10%
AmerenCILCO Interruption Duration	Weather 41%	Overhead Equipment 13%	Public 12%	Underground Equipment 11%
AmerenCIPS Interruption Frequency	Weather 42%	Overhead Equipment 13%	Intentional 9%	Public 9%
AmerenCIPS Interruption Duration	Weather 53%	Overhead Equipment 10%	Public 8%	Intentional 7%
AmerenIP Interruption Frequency	Weather 41%	Overhead Equipment 12%	Intentional 12%	Animal 8%
AmerenIP Interruption	Weather	Overhead Equipment	Intentional	Trees

	#1 Cause	#2 Cause	#3 Cause	#4 Cause
Duration	61%	8%	7%	5%

Conclusion

The Commission should ask itself if Ameren has an ulterior motive for pushing the Institute of Electrical and Electronics Engineers' Standard 1366-2003. Staff's answer is yes, absolutely.

If Ameren utilities could classify a significant number of the electric service interruptions their customers experience as caused by the weather and use a method supported by a long established and internationally recognized engineering organization to make many of those weather interruptions disappear from their statistics, then they could report reliability to the Commission that their customers could only wish for, but had never actually seen. Staff is concerned that Ameren wants to do exactly that and is attempting to use the Institute of Electrical and Electronics Engineers' Standard 1366-2003 for that purpose.

Staff does not have complete knowledge of Ameren's maintenance programs or workforce adequacy. However, Staff does know that not all Ameren utilities have distribution circuit inspection programs or distribution pole inspection and replacement programs.[4] Staff also knows of the equipment and tree trimming problems on Ameren distribution lines that Staff has documented by inspection and has reported to the Commission for several years. These facts cause Staff to remain concerned about the large numbers of interruptions classified as caused by weather on Ameren's electric distribution system.

Utilities that choose to adequately maintain their electric delivery facilities and workforces might significantly reduce the number and duration of electric service interruptions that their customers experience during storms. The reductions could cause Standard 1366 to identify fewer Major Event Days. Conversely, utilities that fail to adequately maintain their electric delivery systems and workforces might increase the number and duration of electric service interruptions that their customers experience during storms and cause Standard 1366 to identify more Major Event Days. With a larger number of Major Event Days, the utility with the inferior maintenance programs or too-small workforce might appear in the resulting reliability statistics to be performing better than the utility with the superior maintenance program and bigger workforce.

The disturbing possibility that Standard 1366 could alter reliability statistics to favor utilities with poor maintenance programs and inadequate workforces seems to Staff to make Standard 1366 unsuitable for Commission use.

[4] Ameren has made a commitment to Staff that it will begin a distribution inspection program by the start of 2007 and has told Staff that this new program will include pole inspections, but only for poles on three-phase main feeders coming out of substations, not for poles on single-phase lines such as would serve residential and many rural areas. Ameren made this commitment only under pressure from Staff.

If, as utilities would have the Commission believe, Standard 1366 is a tool designed to allow utilities to make better comparisons and to identify reliability trends over time, it seems peculiar to Staff that those same utilities would try so hard to push regulatory authorities such as the Commission into adopting its use. Staff certainly has no concerns about utilities using Standard 1366 internally for their own reliability improvement purposes, but Staff is concerned about its use by the Commission.

If utilities developed a method of identifying electric service interruptions that were caused by weather conditions that clearly exceeded the design criteria of their distribution systems and backed up their claims for each occurrence with verifiable weather information, then Staff would be willing to consider reliability indices calculated after those interruptions were removed from the data. Standard 1366 fails this test. Standard 1366 appears to be nothing more than statistical manipulation of data to achieve a predetermined result. One way of explaining how Standard 1366 works is that it examines utility service restoration activities and removes from the data any instances where the utility performs particularly poorly. Standard 1366 does not consider the cause of interruptions, it knows nothing of the cause, and it cares nothing about the cause. In fact, if Ameren decided to open all its switches, shut its utility systems down, and go on holiday for a week, Standard 1366 would blindly label the event as a Major Event Day and eliminate it from the reliability data.

Staff has made its thoughts on Standard 1366 known to Ameren and other utilities in the past. The Director of the Commission's Energy Division has expressed Staff's concerns about Standard 1366 to large groups at national training events and other gatherings. To Staff's knowledge, no utility or the Institute of Electrical and Electronics Engineers has responded to Staff's concerns by performing a comprehensive study to prove that utility decisions on matters such as maintenance adequacy and workforce size do not affect the number of Major Event Days that Standard 1366 identifies each year. No one has ever offered convincing evidence that Standard 1366 will not favor a utility with a poor maintenance program or a workforce that is too small by identifying more Major Event Days than it would for a similar utility with a good maintenance program and an adequate workforce.

Staff urges the Commission to reject Standard 1366.

Ameren Companies Headcount Summaries 1997-2005

AmerenIP	1997		1998		1999		2000		2001		2002		2003		2004		2005	
Total Company	2330	3630	2386	3788	2403	2978	2301	2656	1930	2582	1870	1883	1806	1809	967	1723	968	1275
Forestry	15	15	13	17	13	17	3	7	3	8	3	11	2	5	1	8	0	0
Electric Operating	330	277	413	311	441	358	443	386	422	383	402	370	393	384	319	383	314	377
Electric Engineering & Planning	269	237	259	253	273	242	234	230	216	215	205	199	199	199	107	195	104	112
Customer Service	159	152	166	157	175	167	154	148	153	141	146	134	157	146	122	130	132	132

Ameren CIPS	1997		1998		1999		2000		2001		2002		2003		2004		2005	
Total Company	N/A	2219	688*	1797	654*	1757	635*	903	593*	900	574*	878	500*	764	605	753	666	801
Forestry	N/A	20	3	14	3	10	3	9	3	10	3.5	10	3.5	5	4	0	0	0
Electric Operating	N/A	391	489	371	442	356	430	364	401	365	395	360	360	327	226	320	286	356
Electric Engineering & Planning	N/A	109	95	78	77	78	80	69	81	66	78	63	70	52	46	54	57	49
Customer Service	51	53	45	45	53	53	46	47	50	59	51	61	50	51	43	53	41	41

AmerenCILCO	1997		1998		1999		2000		2001		2002		2003		2004		2005	
Total Company	1376	1288	1254	1303	1272	1037	779	1002	708	925	696	910	561	646	403	561	389	527
Forestry	1	6	1	6	1	4	1	1	1	1	1	1	1	1	0	0	0	0
Electric Operating	327	113	402	128	356	133	310	141	310	138	301	143	274	143	107	133	105	136
Electric Engineering & Planning	32	18	39	17	38	21	13	17	16	15	17	16	17	20	18	19	18	20
Customer Service	141	28	130	26	114	46	116	47	68	39	64	34	62	36	48	50	47	46

AmerenUE-IL (Alt & ESL Only)	1997		1998		1999		2000		2001		2002		2003		2004		2005	
Total Company	115*	157	102*	266	99*	253	102*	269	93*	322	84*	318	73*	290	90	280	0	185
Forestry	N/A	0	0.6	0	0.6	0	1	0	1	0	1	0	1.2	0	1	0	0	0
Electric Operating	66	70	63	68	63	65	67	64	62	64	54	67	50	62	36	61	0	3
Electric Engineering & Planning	N/A	10	10	10	10	10	10	13	10	12	10	12	9	10	2	8	0	0
Customer Service***** **(all of UE)**	111	8	115	96	112	93	126	97	164	107	165	103	163	99	0	97	0	94

Ameren Services	1997		1998		1999		2000		2001		2002		2003		2004		2005	
Total Company	N/A	1333	N/A	1288	N/A	1325	N/A	1347	N/A	1406	N/A	1397	N/A	1312	1279	1497	1267	1813
Forestry	N/A	2	N/A	4	N/A	4	N/A	4	N/A	5	N/A	5	N/A	5	29	6	32	10
Electric Operating	N/A	15	N/A	16	N/A	15	N/A	12	N/A	12	N/A	12	N/A	17	398	20	392	51
Electric Engineering & Planning	N/A	138	N/A	140	N/A	144	N/A	149	N/A	164	N/A	148	N/A	132	234	141	233	192
Customer Service	N/A	94	N/A	4	N/A	5	N/A	2	N/A	2	N/A	0	N/A	0	0	0	0	0

Notes: 1) Data in highlighted columns are from annual data request responses. New (11/21/06) data are in un-highlighted columns.
2) Exclusive of forestry if noted *.