

Ameren Central Illinois Light Company Workforce Study Analysis



**Prepared For
Illinois Commerce Commission**

October 2008

**JACOBS
CONSULTANCY**

**Ameren Central Illinois Light
Company
Workforce Adequacy Analysis
Report**

Prepared For

Illinois Commerce Commission

For Jacobs Consultancy



Frank DiPalma

October 2008

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1.0 Executive Summary

Background

The Illinois Commerce Commission (ICC, Commission, or Agency) retained Jacobs Consultancy Inc. (Jacobs Consultancy) to conduct a workforce study analysis of Ameren Central Illinois Light Company (“AmerenCILCO,” “Company,” or “Utility”), as specified by the Illinois Public Utilities Act, Section 4-602. AmerenCILCO is owned by Ameren Corporation.

Ameren Corporation is the parent of three electric utilities in Illinois: AmerenCILCO, Ameren Central Illinois Public Service Company (“AmerenCIPS”), and Ameren Illinois Power Company (“AmerenIP”)—collectively “utilities,” “Ameren,” “Ameren utilities,” or “Ameren’s Illinois utilities”. Ameren effectively acquired Central Illinois Light Company on January 31, 2003.

AmerenCILCO’s electric service territory covers 138 towns in 19 counties, serving approximately 210,178 customers. AmerenCILCO’s service area contains the cities of Peoria, East Peoria, Pekin, Lincoln, the outlying areas of Springfield, and other small communities in Central Illinois. Its distribution system consists of 2,200 miles (25%) of underground circuits and 6,500 miles (75%) of overhead circuits for a total of 8,700 circuit miles.

AmerenCILCO’s field forces currently operate out of one of the following operating centers: Peoria, Eastern, Lincoln, Springfield, and Champaign. AmerenCILCO has one call center located in Peoria that services both gas and electric customers and has been virtual with AmerenCIPS’ Pawnee call center since 2005 and is moving towards being virtual with AmerenIP’s Decatur call center.

Objective and Scope

The objective of the study is to determine the adequacy of the total in-house staffing in each job classification or job title critical to maintaining quality reliability and restoring service in the Utility’s Illinois service territory. The analysis also examines the total number of contractor employees in the same manner as the in-house analysis. The study is broken down into two tasks:

- **Task 1** - The first step in determining the adequacy of the Utility’s workforce was to compute and compare the yearly workforce ratios during the 1995–2006 timeframe for the pertinent job classifications by service area, district, division, or region.
- **Task 2** - The second step in the study consisted of performing a detailed examination of AmerenCILCO workforce adequacy critical to maintaining quality and reliability, and restoring service in the Utility’s Illinois service territory.

As specified in Section 4-602, that critical workforce is defined as:

1. In-house workers, commonly referred to as linemen
2. Customer service call-center employees
3. Meter service or repair employees

Approach

Our approach to Task 1—developing the workforce ratio report—consisted of collecting, rationalizing and performing initial analysis of workforce ratios. In particular, we requested data from AmerenCILCO covering the 1995-2006 time periods on the levels of both in-house and contracted staff in each job classification or job title critical to maintaining quality, reliability, and restoring service. Specifically, data were collected and ratios were calculated for:

1. In-house workers, which consists of overhead and underground line workers and substation workers
2. Customer service call-center staff, which consists of customer service agents
3. Meter service or repair employees, which include electronic technicians, meter readers and metermen
4. Contracted or outsourced employees used to support employees in categories 1, 2, or 3

Our approach to Task 2—assessing workforce adequacy—started with establishing a key study understanding, the definition of the word “adequacy”. Adequacy is defined as the quality of being able to meet a need satisfactorily or being sufficient for the end in view¹. Applying this definition to the Illinois Public Utilities Act, Section 4-602, suggests that a spectrum of staffing possibilities exists. Extremes range from providing sufficient in-house staffing to permit timely completion of all work requirements with no overtime and no use of external resources to depending heavily upon outside contractors to satisfy workload requirements that a static or shrinking in-house workforce is unable to complete in a timely fashion. Jacobs Consultancy does not believe either extreme can be proven to be economic or effective considering all stakeholder needs. In-house workforce adequacy should lie in the middle ground and comprise a blend of resources that cost-effectively maintain reasonable system reliability and service quality, while utilizing outside resources to meet peak workload requirements.

¹ <http://www.thefreedictionary.com/adequacy>

In our workforce adequacy analysis, we examined the existing mix of in-house and contractor workforce in the context of the job functions, level of involvement, and meeting the criteria expressed above. Consequently, we judged the adequacy of the overall workforce on the basis of: system performance, levels of in-house overtime, use of contractors, existing in-house age and skills demographics and workforce plans, customer satisfaction statistics and workload backlog.

To develop the Workforce Study Analysis report, we collected various related documents, conducted interviews of key individuals, visited several AmerenCILCO facilities, and inspected numerous recently completed in-house and outsourced distribution system capital and maintenance work projects. Specifically, in undertaking this analysis, we conducted 57 interviews with over 100 individuals representing both Ameren Illinois Company management and the bargaining units, and reviewed 124 AmerenCILCO documents.

Our detailed analysis includes comparisons of workforce levels against historical reliability indices as well as preventive and corrective maintenance orders indicative in determining workforce adequacy. We also reviewed construction results of work performed by in-house and outsourced labor. Additionally, during the interview phase of our analysis, we interviewed several union officials and bargain unit members. The union representatives articulated various concerns that added additional focus to our workforce adequacy study.

Jacobs Consultancy's study of AmerenCILCO's workforce adequacy focused on a number of discrete assessments:

- **Maintenance and Operations**—included the dispatch function, the call center during normal operations, minor outages and major outages, emergency escalation procedures, troubleshooting, coordination with other emergency agencies, mutual aid arrangements, crew mobilization, utilization of contractor forces, maintenance planning, maintenance cycles, maintenance work accomplishment, backlogs, workplace barriers, staffing adequacy, crew sizes, system inspections, vegetation management, quality control and use of contractors. We also examined the level of technology enablers employed to support this function.
- **Training and Safety**—included the new apprentice and continuing training programs for line workers, meter staff, and call center customer service representatives. We also reviewed the importance of safety in AmerenCILCO's organization, related training and the safety results achieved.
- **Quality Review**—included observations of AmerenCILCO's electric distribution facilities to determine the quality of work performed both by in-house and outsourced personnel. We also examined the quality of outsourced work accomplished by various contracting methods, including lump sum and time and equipment.

- **Call Center**—included call center metrics to gauge the level of customer support, reviewed call center changes, emergency escalation procedures, public agency communication provisions, and customer satisfaction surveys. We also examined the level of technology enablers employed to support this function.

Conclusions

To assess workforce adequacy in each of these areas, we examined as appropriate: staffing levels, use of contractors, overtime, work order backlog, system reliability performance, and customer satisfaction. We then balanced our analysis with AmerenCILCO's philosophy of maintaining an overall level of in-house employees needed to perform core base load work and complete workload peaks and valleys with contractors, while subcontracting lower-skilled work. This section contains our conclusions for each AmerenCILCO workforce category: line and substation workers, the call-center staff and meter service employees.

Line and Substation Workers

The staffing level for linemen has been steadily declining over the 1995 to 2004 period, but seems to have leveled out somewhat in 2005 and 2006 with a complement of 94. While AmerenCILCO has recognized that its workforce is aging and has made efforts to attract and retain apprentices to replace retirees and other workforce decreases, there are too few apprentices in the pipeline to accommodate expected retirements over the near and long term.

The staffing level for journeymen substation electricians and technicians dipped in the late 1990s, but AmerenCILCO proactively added apprentices from 1995 that have contributed to a recovery of staffing levels.

AmerenCILCO faces the same difficulty as many utilities in attracting experienced linemen and substation workers and therefore depends heavily on apprentice programs. One source for new apprentices is meter readers, some of whom are being displaced with the implementation of AMR. However, with a potentially growing backlog of work requests for line workers and an aging workforce, AmerenCILCO will need to carefully consider its near and long-term resource requirements.

Call Center Staff

The company staffs the call center in accordance with the flow of call volume and uses technology to enhance the call center's capability to service customers in an effective and efficient manner. The technologies employed include: Customer Service System, High Volume outage Call Answering System, Integrated Voice Response Unit System, Electronic Workforce

Management & Real Time Adherence System, Automatic Call Distributor, Call Quality Monitoring & Survey System, and Computer Telephony Integration System. AmerenCILCO's call center internal goals and key performance indicators (KPIs) are satisfactory and increasing indicating that the center is managed in an effective and efficient manner. AmerenCILCO's call center in the last five years has seen a decrease in customer satisfaction surveys conducted by Market Strategies International, Inc, J.D. Power & Associates, and Customer Contact Index (CCI). This could be a result of such issues as multiple storms and/or rate increases that are beyond the direct control of the call center.

Meter Services Employees

The meter services staff complement, comprising in-house and contract workers, declined slightly over the 1995 to 2006 period. However, the ratio of customers per meter services employee remained fairly consistent each year throughout the 1995-2006 time frame, averaging over 3,000 customers per employee from 2003 through 2006. The meter services group has increasingly made use of contractors, particularly for the AMR project, to avoid in-house staff reductions. We conclude that AmerenCILCO's meter services' workforce is adequate to provide required services.

Recommendations

Based on our analysis, we conclude that the overall adequacy of AmerenCILCO's workforce has generally been in harmony with its philosophy to maintain an overall level of in-house employees needed to perform core base load work and complete workload peaks and valleys with contractors while subcontracting lower skilled work. However, specifically with respect to line workers, given a constant but potentially increasing backlog of work requests for line workers, a high level of overtime and declining numbers of linemen, coupled with an aging workforce and the need to plan ahead based on a 3-year apprentice program, we offer one overarching recommendation:

Ameren should update the Open Position Action Plan annually to continue to reflect the workforce needs as specified in the Towers Perrin Work Force Projection Study. Once established, the Open Position Action Plan should be aggressively pursued to increase the electric field workforce.

In addition to the above recommendation, we make a number of other recommendations throughout the report. These have been summarized in Appendix A.

2.0 Introduction

2.1 Background

2.1.1 Philosophy on Outsourcing

Every electric utility is expected to extend its service to meet the needs of a growing population. Power needs to be provided in a reliable, safe, and timely fashion. To maintain high standards of service quality and safety, utility managers traditionally have opted for the control of an in-house workforce. As a result, many utilities historically did not have to rely on outside employees to provide support to its staff or rely on others to meet its customers' needs. However, today many regulated distribution utilities have developed strategies to shift risk, reduce costs, and refocus attention on core functions.

At AmerenCILCO, outsourcing has primarily sought increased flexibility in addressing fluctuating workload volumes and subcontracting of lower skilled work. Driven by the need to maintain in-house knowledge of the distribution and transmission system and the desire to have first responders be Company staff to ensure quality service and help preserve brand recognition, distribution system contractors are primarily used to fill workload peaks and perform lower-skilled work. Currently, about 29% of AmerenCILCO's distribution system line work is outsourced.

This approach and level of outsourcing represents a moderate amount from our experience, and places certain obligations on the Utility's management as well as impacts on the Utility's workforce. Management must ensure that the quality of the work completed is consistent with customer service standards, that the cost of the work is reasonably similar to what the work would cost if it were performed by the in-house staff, and that high-quality customer service is provided, while the workforce may see a reduction in the total number of employees and in the breadth of job skills.

Refer to Appendix B for a more complete discussion on the utility industry outsourcing philosophy. In Appendix C, we include: an overview of the events that occurred during the study period that have helped to shape organized labor at AmerenCILCO; a brief review of the history of outsourcing and the type of work activities contracted; and highlight the Contractor Work language contained in the IBEW Local Union 51 agreement.

2.1.2 Service Territory

Ameren Corporation is the parent of three electric utilities in Illinois: Ameren Central Illinois Light Company, Ameren Central Illinois Public Service Company and Ameren Illinois Power Company. Ameren effectively acquired Central Illinois Light Company on January 31, 2003.

2.2 Objective and Scope

The Illinois Commerce Commission (ICC, Commission, or Agency) retained Jacobs Consultancy Inc. (Jacobs Consultancy) to conduct a workforce adequacy analysis of AmerenCILCO, as specified by the Illinois Public Utilities Act, Section 4-602:

Sec 4-602. Electric utility workforce study

- (a) The Commission shall conduct a comprehensive workforce analysis study of each electric utility to determine the adequacy of the total in-house staffing in each job classification or job title critical to maintaining quality reliability and restoring service in each electric utility's service territory. Each report shall contain a yearly detailed comparison beginning with 1995 and ending in 2006 of each electric utility's ratios of:
- (1) In-house workers, commonly referred to as "linemen", to customers;
 - (2) Customer service call-center employees to customers; and
 - (3) Meter service or repair employees to customers
- The ratios shall be reported from each utility's named service area, district, division, outlying area, village, municipality, reporting point, or region. The analysis shall determine the total number of contractor employees for the same timeframe and shall be conducted in the same manner as the in-house analysis.
- (b) The Commission may hold public hearings while conducting the analysis to assist in the adequacy of the study. The Commission must hold public hearings on the study and present the results to the General Assembly no later than January 1, 2009.
- (c) An electric utility shall bear the costs of issuing any reports required by this Section and it shall not be entitled to recovery of any costs incurred in complying with this Section.

The objective of the study is to determine the adequacy of the total in-house staffing in each job classification or job title critical to maintaining quality reliability and restoring service in the Utility's Illinois service territory. The analysis also examines the total number of contractor employees in the same manner as the in-house analysis. The study is broken down into two tasks:

- **Task 1** - The first step in determining the adequacy of the Utility's workforce was to compute and compare the yearly workforce ratios during the 1995–2006 timeframe for the pertinent job classifications by service area, district, division, or region.

- **Task 2** - The second step in the study consists of performing a detailed examination of AmerenCILCO workforce adequacy critical to maintaining quality and reliability, and restoring service in the Utility's Illinois service territory.

As specified in Section 4-602, that critical workforce is defined as:

1. In-house workers, commonly referred to as linemen
2. Customer service call-center employees
3. Meter service or repair employees

2.3 Approach

2.3.1 Workforce Ratio Report

To develop the workforce ratio report, we collected, rationalized and performed an initial analysis on workforce ratios as specified in the Illinois Public Utilities Act, Section 4-602. In particular, we requested data on the levels of both in-house and contracted staff in each job classification or job title critical to maintaining quality reliability and restoring service by examining workforce levels covering the 1995-2006 time period for:

1. In-house workers, commonly referred to as “linemen”
2. Customer service call-center employees
3. Meter service or repair employees
4. Contracted or outsourced full-time equivalent (FTE) employees for each of the above

Since computing the ratio of employees to customers resulted in a very small number that is not practical and informative to use to assess workforce adequacy, we instead augmented the ratio analysis by calculating the number of customers per employee.

We attempted to compute the ratios by operating center as suggested in Section 4-602 of the Illinois Public Utilities Act, but found too many data inconsistencies to draw any meaningful conclusions. With the changes in company ownership, organization structure and integration efforts, AmerenCILCO operated over the period 1995–2006 with varying operating centers. Neither the number of active operating centers nor the division to which they reported was consistent over the time period. As a result, this report will analyze the ratios for the total AmerenCILCO workforce.

In this task, we also noted the job classifications included in each ratio analysis and identified the factors that may have affected the changes in the ratios each year.

Our approach to this task was divided into five subtasks as described below.

Data Collection

We collected data emanating from the initial data requests as provided by the Utility and through our research. This information was made consistent, as practicable, and input into our web-based document control facility (eRoom).

Initial Analysis/Cleaning

In this subtask, we performed our initial analysis on the data provided by AmerenCILCO to support the workforce ratio analysis. We identified any gaps or inconsistencies in the data and identified missing or questionable data. We made appropriate corrections to the data, based on clarifications from AmerenCILCO, to provide a consistent data set.

Additional Data Requests

Based on our Initial Analysis/Cleaning, we formulated additional specific data requests, data explanations and other information deemed necessary for consistent data. AmerenCILCO was requested to provide responses to these additional data requests within a 10-day time frame.

Data Analysis and Cleaning

In this subtask, we incorporated the additional data received into our workforce ratio analysis model and continued data cleaning efforts to assure consistent and meaningful baseline workforce ratios to support further analysis.

Develop Ratio Report

Prior to developing the reports, we coordinated with the Agency to define the workforce ratio report format and content. Following this and completion of the Data Analysis and Cleaning subtask, we proceeded to assemble the ratios and develop the final Workforce Ratio Report.

2.3.2 Workforce Adequacy Analysis

The Illinois Public Utilities Act, Section 4-602 states that the study is to “Determine the adequacy of the in-house staffing in each job classification critical to maintaining quality, reliability and restoring service in each electric utility service territory.”

The key word to conducting the study, then, lies in the word *adequacy*, which can be defined as the quality of being able to meet a need satisfactorily or the quality of being sufficient for the end in view².

Applying this definition to the Illinois Public Utilities Act, Section 4-602, suggests that a spectrum of staffing possibilities exists. Extremes range from providing sufficient in-house staffing to permit timely completion of all work requirements responding to normal work load as well as responding to emergencies, with no overtime and no use of external resources to depending heavily upon outside contractors to satisfy normal and emergency workload requirements that a static or shrinking in-house workforce is unable to complete in a timely fashion.

Jacobs Consultancy does not believe that either of these extremes can be proven to be economic or effective, considering all stakeholders’ interests. We believe that in-house workforce adequacy in the context of the Illinois Public Utilities Act, Section 4-602, should lie in the middle ground and comprise a blend of resources that accomplishes the following:

- Maintain reasonable system reliability and service quality
- Provide a cost-effective solution
- Use outside resources to supplement in-house resources to meet peak workload requirements
- Use outside resources to perform work efforts that require specialized equipment or specialized skill sets that are not economic to maintain in-house
- Permit in-house resources to maintain expertise and knowledge in their core business
- Utilize outside contractors to relieve in-house staff of non-core or non-critical workload
- Provide a reasonable level of regular and overtime opportunities to the in-house workforce
- Use of additional temporary outside resources to supplement in-house workforce and existing contract workers during emergencies

In our workforce adequacy analysis, we examined the existing mix of in-house and contractor workforce in the context of the job functions, level of involvement, and meeting the criteria

² <http://www.thefreedictionary.com/adequacy>

expressed above. Consequently, we judged the adequacy of the overall workforce on the basis of:

- System performance
- Levels of in-house overtime
- Existing in-house age and skills demographics and workforce plans
- Customer satisfaction statistics
- Workload backlog

We have provided in Appendix B an overview of general outsourcing philosophies and AmerenCILCO's specific outsourcing philosophy.

To develop the Workforce Adequacy Analysis report, we collected various related documents provided by the Company, conducted interviews of key individuals, visited several AmerenCILCO facilities and inspected numerous recently-completed in-house and outsourced distribution system capital and maintenance work projects. We also inspected other facilities on the AmerenCILCO system for the purposes of quality and condition assessment. We also reviewed construction results of work performed by in-house and outsourced labor.

Specifically, in undertaking this analysis, we conducted 57 interviews with over 100 individuals representing both Ameren Illinois Company management and the bargaining units, and reviewed 124 AmerenCILCO documents.

Our detailed analysis includes comparisons of workforce levels against historical reliability indices as well as preventive and corrective maintenance orders indicative in determining workforce adequacy. Furthermore, during the interview phase of our analysis we interviewed several union officials and bargain unit members. The union representatives articulated various concerns that added additional focus to our workforce adequacy study.

Our study of AmerenCILCO's workforce adequacy focused on a number of discrete assessments including:

- **Maintenance and Operations**—In reviewing the operations area, we studied the dispatch function and examined linkages to the call center during normal operations and minor and major outages. We traced handling of outages and work notifications and reviewed emergency escalation procedures and provisioning of emergency operations, troubleshooting, coordination with other emergency agencies, mutual aid arrangements, crew mobilization, and utilization of contractor forces. In reviewing the maintenance function, we focused on maintenance planning, maintenance cycles, maintenance work accomplishments, backlogs, workplace barriers, staffing adequacy, crew sizes, system

inspections, vegetation management, use of contractors and quality control. We also examined the level of technology enablers employed to support this function.

- **Training and Safety**—We examined new apprentice and continuing training programs for line workers, meter staff and call center customer service representatives. We sought to observe any training provided to contractors and how their capabilities were assessed. We explored the steps the Utility is taking to attract new line workers. We reviewed the importance of safety in AmerenCILCO's organization, related training and the safety results achieved, and also examined the Utility's safety performance over the 1995-2007 timeframe.
- **Quality Assurance**—The study included a review of the quality assurance and control mechanisms and processes employed by AmerenCILCO in the distribution function, which includes metering, substations, construction and line work.
- **Distribution System Condition Assessment**—This assessment involved visual observations of AmerenCILCO's electric distribution facilities through conducting a random spot inspection to determine the condition of the distribution system. In areas where recent inspection results were available, we compared the findings of the inspection reports and mitigation efforts against our observations
- **Call Center**—We assessed call center metrics, such as call volume, abandonment rates, and call answers statistics to gauge the level of customer support that is present. We reviewed call center changes, such as staffing, training and automation enhancements. We reviewed the process for emergency situations, emergency escalation procedures, public agency communication provisions, and customer satisfaction surveys. We also examined the level of technology enablers employed to support this.

We specifically addressed staffing adequacy in two subsections titled Staffing, which are contained in Section 5.1 Operations and Maintenance and Section 5.4 Call Center.

2.4 Report Organization

Section 1.0 Executive Summary provides an overview of Jacobs Consultancy's key conclusions and recommendations. Only those recommendations identified as directly linked to workforce adequacy are presented in the Executive Summary. Several other recommendations are presented in the body of the report.

The main body of the report is divided into two sections: Section 4.0 Ratio Investigation and Section 5.0 Workforce Adequacy Analysis. In the Ratio Investigation section we include ratio reports for linemen, meter service, and call center employees. In the Workforce Adequacy

Analysis section, assessments were conducted and an analysis made into a variety of areas including operations and maintenance, training and safety, quality review, and the call center.

The Workforce Adequacy Analysis sections contain a background description for each area and an analysis of specific topics. The Findings presented represent strengths, weaknesses, opportunities and threats, which tie directly into the facts obtained from our interviews and review of documents. The Conclusions summarize and represent our assessment of the related findings and our opinion regarding proposed opportunities associated with a specific topic. In some instances our conclusions lead to Recommendations.

3.0 Glossary

A glossary of terms is set out below to familiarize the reader with the acronyms and industry terms used throughout this report.

3.1 Abbreviations

ACD	Automatic Call Distributor
AMR	Automated Meter Reading
ASA	Average Speed of Answer
BBS	Behavior Based Safety
CAIDI	Customer Average Interruption Duration Index
CILCO	Central Illinois Public Service Company
CIS	Customer Information System
CSR	Customer Service Representative
CTI	Computer Telephony Integration
DSCADA	Distribution Supervisory Control and Data Acquisition System
ETR	Estimated Time to Restore
eRoom	Web-based document control facility
eWFM	Electronic Workforce Management & Real Time Adherence
FTE	Full-time equivalent
GIS	Graphic Information System
GPS	Geo Positioning System
HVCA	High Volume outage Call Answering
IBEW	International Brotherhood of Electrical Workers
ICC	Illinois Commerce Commission
IT	Information Technology
IVRU	Integrated Voice Response Unit
KPI	Key Performance Indicators
LIHEAP	Low Income Home Energy Assistance Program

MDT	Mobile Data Terminals
NESC	National Electrical Safety Code
NJATC	National Joint Apprenticeship and Training Committee
OJT	On the Job Training
OAS	Outage Analysis System
QA	Quality Assurance
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
T&E	Time and Equipment
WMIS	Work Management Information System
WO	Work Order

3.2 Common Industry Terms

Automated meter reading (AMR)	The technology of automatically collecting data from metering devices (water, gas, electric) and transferring that data to a central database for billing and/or analyzing.
Automatic Call Distributor	A telephone facility that manages incoming calls and handles them based on the number called and an associated database of handling instructions.
Average Speed of Answer	The timing for answering the call begins when the call is queued for the ACD queue and ends when an agent (either in the primary or overflow ACD queue) answers the call.
Behavior Based Safety	A wide range of programs which focus almost entirely on changing the behavior of workers to prevent occupational injuries and illnesses.
Capacitor	An electrical/electronic device that can store energy in the electric field between a pair of conductors.
Completely self protected transformer (CSP)	Efficiently and effectively disconnect the load from the transformer under overload conditions.
Customer Average Interruption Duration Index (CAIDI)	A distribution circuit reliability measure that represents the average time required to restore service to the average

	customer per sustained interruption.
Customer Average Interruption Frequency Index (CAIFI)	A distribution circuit reliability measure that can be used to describe trends and customer interruptions by showing the number of customers affected out of the total customer base.
Computer Telephony Integration	The use of computers to manage telephone calls.
Customer Information System	A broad set of customer, location, service, asset and financial information.
Customer Service System	A broad set of customer, location, service, asset and financial information
Electronic Workforce Management & Real Time Adherence	A suite of call center workforce management software tools
Energy Management System (EMS)	Electric transmission and generation controls and data acquisition system for managing electric flows on the transmission network and automatically adjusting generation output
Estimated Time to Restore	Represents the best information available at this time.
Full-time equivalent	Number of total hours worked divided by the maximum number of compensable hours in a work year as defined by law
High Volume Outage Call Answering	Automatically take customer electric outage telephone calls and create outage service orders that are then electronically delivered directly to the Outage Management System.
Integrated Voice Response Unit	An automated telephony system that interacts with callers, gathers information and routes calls to the appropriate recipient.
Key Performance Indicators	Quantitative measurements that help an organization measure progress towards goals and identify areas for improvement
Mobile data terminals	A computerized device used in vehicles to communicate with a central dispatch_office.
National Electrical Safety Code	Standard for the safe installation of electrical wiring and equipment

National Joint Apprentice and Training Committee	Oversees uniform standards that are adopted and used nationwide to select and train qualified men and women for the electric industry.
On the job training	Employee training at the place of work while he or she is doing the actual job.
Outage analysis system	A computer system used by operators of electric distribution systems to assist in restoration of power.
Quality assurance	Systematic process of checking to see whether a product or service being developed is meeting specified requirements.
Recloser	A circuit breaker equipped with a mechanism that can automatically close the breaker after it has been opened due to a fault.
Regulator	A device which has the function of maintaining a designated characteristic
Substations	A subsidiary station of an electricity system where voltage is transformed from high to low or the reverse using transformers.
Supervisory Control and Data Acquisition (SCADA)	Electric transmission and generation controls and data acquisition system for managing electric flows on the transmission network and automatically adjusting generation output
System Average Interruption Frequency Index (SAIFI)	A distribution circuit reliability measure that can be used to describe trends and the average number of interruptions that a customer would experience.
Transformer	A device that transfers electrical energy from one circuit to another through inductively coupled electrical conductors.

4.0 Ratio Investigation

Jacobs Consultancy developed the following three ratio reports as specified in the scope of work. The Discussion section explains in more detail how the data provided by AmerenCILCO was adjusted and made consistent to develop the appropriate ratios of customers to employees.

4.1 Ratio Reports

4.1.1 Linemen Employee Ratio Report

Table 1 shows the data used to compute the ratios of customers per linemen employee. Figure 2 illustrates the linemen employee ratio trend during the 1995-2006 time frame for both in-house and contractor employees.

Table 1 - AmerenCILCO Linemen Employee Data

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
AmerenCILCO - All Operating Centers												
Number of Customers ¹	191,770	193,575	194,316	195,228	198,089	199,876	203,282	203,337	205,452	205,544	206,274	209,989
Number of Employees ²												
UG - Crew Leader	3	3	3	3	3	3	3	3	3	3	3	4
UG - Journeyman / Cable Splicer	6	6	7	9	9	7	5	6	6	6	8	7
UG - Apprentice	3	3	2	1	1	3	6	4	4	2	2	2
OH - Crew Leader	28	24	19	22	23	23	19	18	18	16	17	18
OH - Journeyman	82	83	86	76	75	75	66	67	67	66	65	63
OH - Apprentice	14	9	4	2	0	2	3	3	3	2	0	0
Substation - Crew Leader	7	7	7	6	6	6	6	7	7	6	7	8
Substation - Journeyman	17	14	11	11	15	16	16	16	16	16	19	17
Substation - Apprentice	1	0	1	8	4	3	6	5	4	3	1	1
Contract Linemen FTE's ^{4,5}	NA	NA	NA	NA	13	17	21	21	15	33	34	37
Contract Substation FTE's ⁶	NA	NA	NA	NA	NA	NA	0	0	4	3	1	0
Total Linemen In-house Employees ³	161	149	140	138	136	138	130	129	128	120	122	120
Total Linemen Contractor Employees	0	0	0	0	13	17	21	21	19	36	35	37
Total Linemen Employees	161	149	140	138	149	155	151	150	147	156	157	157
Percentage of Linemen In-house Employees	1.00	1.00	1.00	1.00	0.91	0.89	0.86	0.86	0.87	0.77	0.78	0.76
Percentage of Linemen Contractor Employees	NA	NA	NA	NA	0.09	0.11	0.14	0.14	0.13	0.23	0.22	0.24
Ratios⁷												
Customers to Linemen In-house Employees	1,191	1,299	1,388	1,415	1,213	1,148	1,159	1,166	1,217	1,014	1,021	1,022
Customers to Linemen Contractor Employees	NA	NA	NA	NA	116	141	187	190	181	304	293	315
Customers to Total Linemen Employees	1,191	1,299	1,388	1,415	1,329	1,290	1,346	1,356	1,398	1,318	1,314	1,338

Source: DR-009, DR-020, DR-042, DR-043, DR-045, DR-046

Notes:

NA = Not Available

¹ Reflects average number of customers per month.

² Employee data represents AmerenCILCO best efforts estimate of the end of year staffing levels.

³ The Total Linemen In-house Employees does not include Substation Supervisors and Overhead/Underground Supervisors.

⁴ For electric line and underground construction work, contractor invoice data for 1999-2006 was provided on an annual basis and a rough estimate of contractor staffing levels was developed by utilizing \$90/hr for 2005/2006 and dividing by 2080 hours/year. Subsequent year's staffing levels were developed by reducing the \$90/hour by 3% per year. AmerenCILCO does not have the information regarding where the linemen contractors worked by operating center.

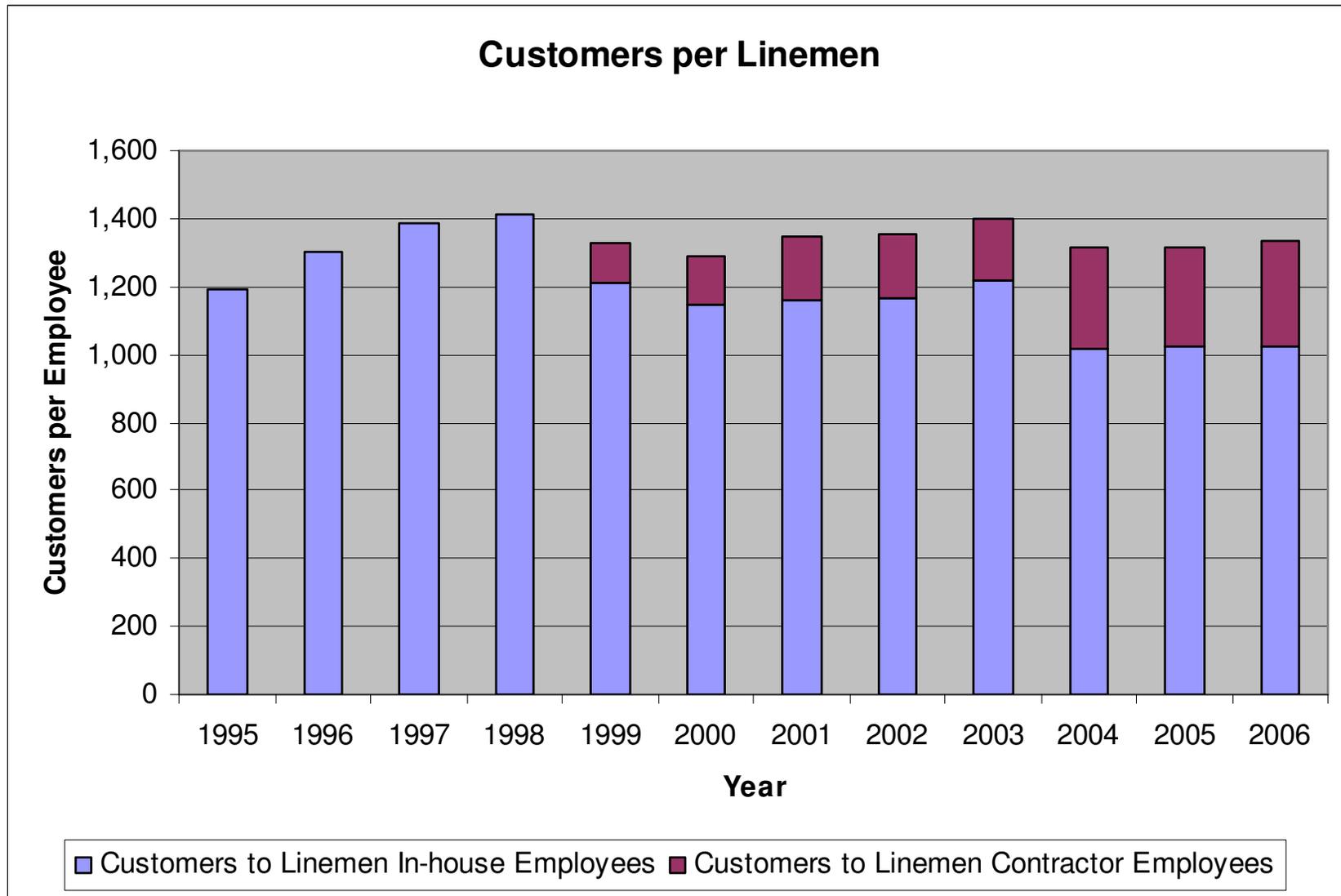
⁵ For the years 1998 and prior AmerenCILCO did contract line distribution work; however, they are not able to quantify the amount contracted.

⁶ AmerenCILCO used contractors for specialized services that would not normally be performed by Substation Electricians and Relay Technicians. Total contractor hours for work normally performed in-house but was contracted were provided for 2001 - 2006 and the FTE equivalent was calculated by dividing the total contractor hours each year by 2080 hours/year. FTE equivalents less than 1 are not included in the ratio analysis.

⁷ The ratio of customers to employees is calculated instead of employees to customers as specified by Illinois Public Utilities Act, Section 4-602.

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Figure 2 - AmerenCILCO Customers per Linemen Ratios



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4.1.2 Call Center Employee Ratio Report

Table 2 shows the data used to compute the ratios of customers per call center employee. Figure 3 illustrates the call center employee ratio trend during the 1995–2006 time frame for both in-house and contractor employees.

Table 2 - AmerenCILCO Call Center Employee Data

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Peoria Call Center												
Electric Customers ¹	191,770	193,575	194,316	195,228	198,089	199,876	203,282	203,337	205,452	205,544	206,274	209,989
Gas Customers ¹	197,431	199,535	200,209	201,094	204,836	205,375	208,469	208,054	208,844	209,510	210,967	212,415
Total Customers ²	389,201	393,110	394,525	396,322	402,925	405,251	411,751	411,391	414,296	415,054	417,241	422,404
Number of Employees ³												
Customer Service Representatives ⁴	87	85	79	47	53	60	86	74	70	59	60	67
Total Call Center In-house Employees ⁵	87	85	79	47	53	60	86	74	70	59	60	67
Total Call Center Contractor Employees ⁶	NA	8	7									
Total Call Center Employees	87	85	79	47	53	60	86	74	70	59	68	74
Percentage of Call Center In-house Employees	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.91
Percentage of Call Center Contractor Employees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.09
Ratios ⁷												
Customers to Call Center In-house Employees	4,474	4,625	4,994	8,432	7,602	6,754	4,788	5,559	5,919	7,035	5,414	5,168
Customers to Call Center Contractor Employees	0	0	0	0	0	0	0	0	0	0	722	540
Customers to Total Call Center Employees	4,474	4,625	4,994	8,432	7,602	6,754	4,788	5,559	5,919	7,035	6,136	5,708

Source: DR-009, DR-020, DR-042, DR-043

Notes:

NA = Not Available

¹ Reflects average number of customers per month.

² Call center employees handle all customer service calls, including both electric and gas customers. Therefore, the ratio analysis uses the total AmerenCILCO customer count instead of only the AmerenCILCO electric customers.

³ The Pekin, Western, and Lacon Operating Centers were closed in 1998. This also resulted in closing the Springfield, Lincoln, and Homer Call Centers and calls being consolidated into Peoria Call Center.

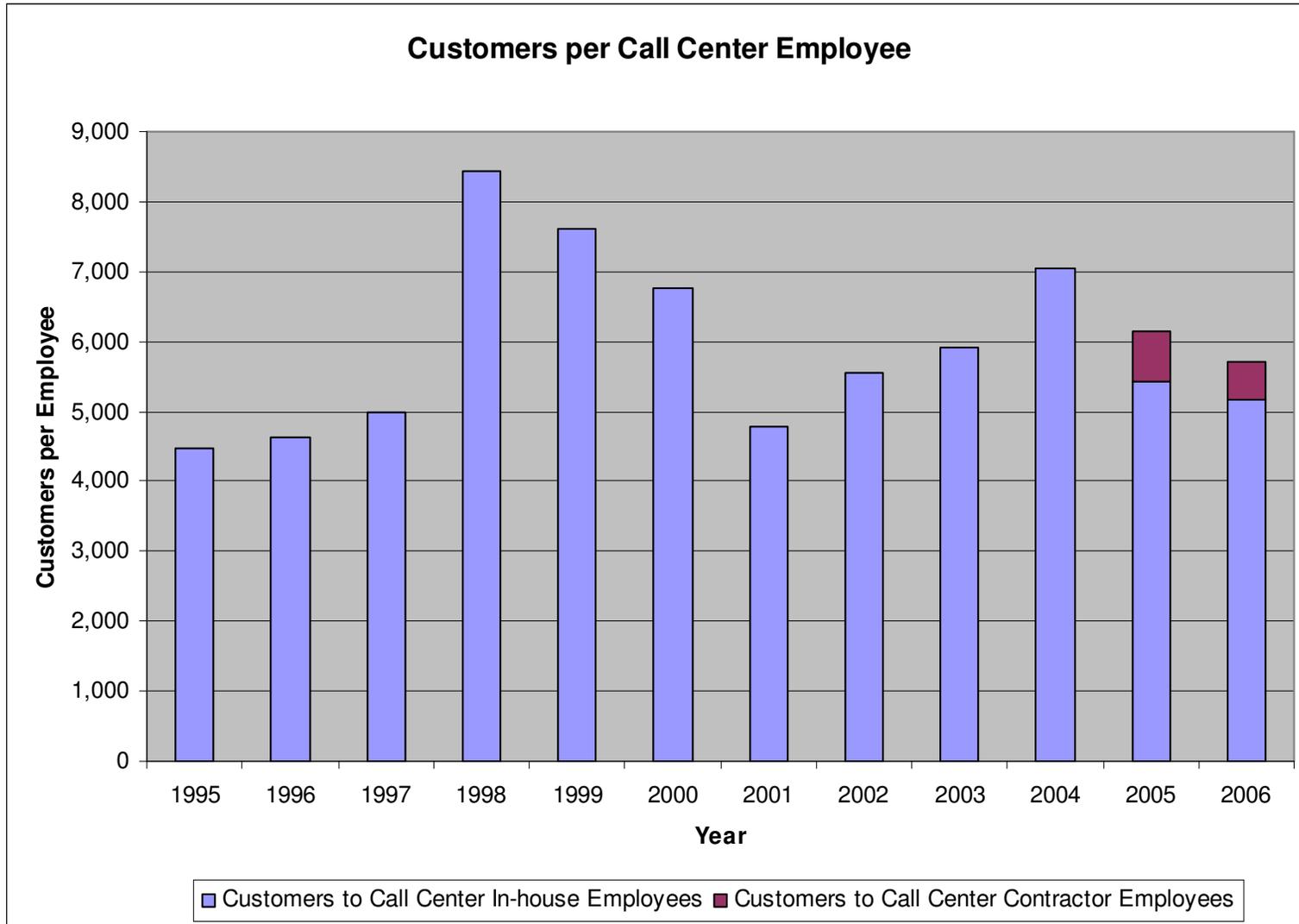
⁴ Customer Service Representatives also include several individuals that undergo training before AmerenCILCO potentially offers them permanent employment.

⁵ Total Call Center In-house Employees includes Customer Service Representatives but does not include Supervisors, General Supervisors, Managing Supervisors, Manager, Director, or VP.

⁶ AmerenCILCO began using contract resources as Customer Service Representatives in 2005. Some contract employees were used in the call center during 1995-2004 but AmerenCILCO did not have a breakdown so they were included in the total employee count.

⁷ The ratio of customers to employees is calculated instead of employees to customers as specified by Illinois Public Utilities Act, Section 4-602.

Figure 3 - AmerenCILCO Customers per Call Center Employee Ratios



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4.1.3 Meter Service Employee Ratio Report

Table 3 shows the data used to compute the ratios of customers per meter service employee. Figure 4 illustrates the meter service employee ratio trend during the 1995–2006 timeframe for both in-house and contractor employees.

Table 3 - AmerenCILCO Meter Service Employee Data

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
AmerenCILCO - All Operating Centers												
Number of Customers ¹	191,770	193,575	194,316	195,228	198,089	199,876	203,282	203,337	205,452	205,544	206,274	209,989
Number of Employees ^{2,3}												
Electronic Tech	3	3	2	2	2	2	1	1	1	1	1	1
Instrument Tech	0	0	0	1	1	1	1	1	1	1	0	0
Journeyman Meterman	24	21	17	14	13	13	9	8	8	7	8	7
Crewleader Metering	0	0	0	0	0	0	0	0	0	0	0	0
Shop Tester	0	0	0	2	2	2	2	2	2	2	2	2
Apprentice Meterman	1	1	1	0	0	0	5	3	3	3	2	4
Meter Reader	27	27	27	27	27	27	15	15	14	14	15	13
Total Meter Service In-house Employees ⁴	55	52	47	46	45	45	33	30	29	28	28	27
Total Meter Service Contractor Employees ⁵	23	24	24	24	25	24	35	34	32	34	39	34
Total Meter Service Employees	78	76	71	70	70	69	68	64	61	62	67	61
Percentage of Meter Service In-house Employees	0.71	0.68	0.66	0.66	0.64	0.65	0.49	0.47	0.48	0.45	0.42	0.44
Percentage of Meter Service Contractor Employees	0.29	0.32	0.34	0.34	0.36	0.35	0.51	0.53	0.52	0.55	0.58	0.56
Ratios ⁶												
Customers to Meter Service In-house Employees	1,734	1,743	1,812	1,833	1,819	1,889	1,451	1,489	1,601	1,497	1,287	1,524
Customers to Meter Service Contractor Employees	725	804	925	956	1,011	1,008	1,539	1,688	1,767	1,818	1,792	1,919
Customers to Total Meter Service Employees	2,459	2,547	2,737	2,789	2,830	2,897	2,989	3,177	3,368	3,315	3,079	3,442

Source: DR-009, DR-020, DR-042, DR-043

Notes:

NA = Not Available

¹ Reflects average number of customers per month.

² Employee data represents AmerenCILCO best efforts estimate of the end of year staffing levels.

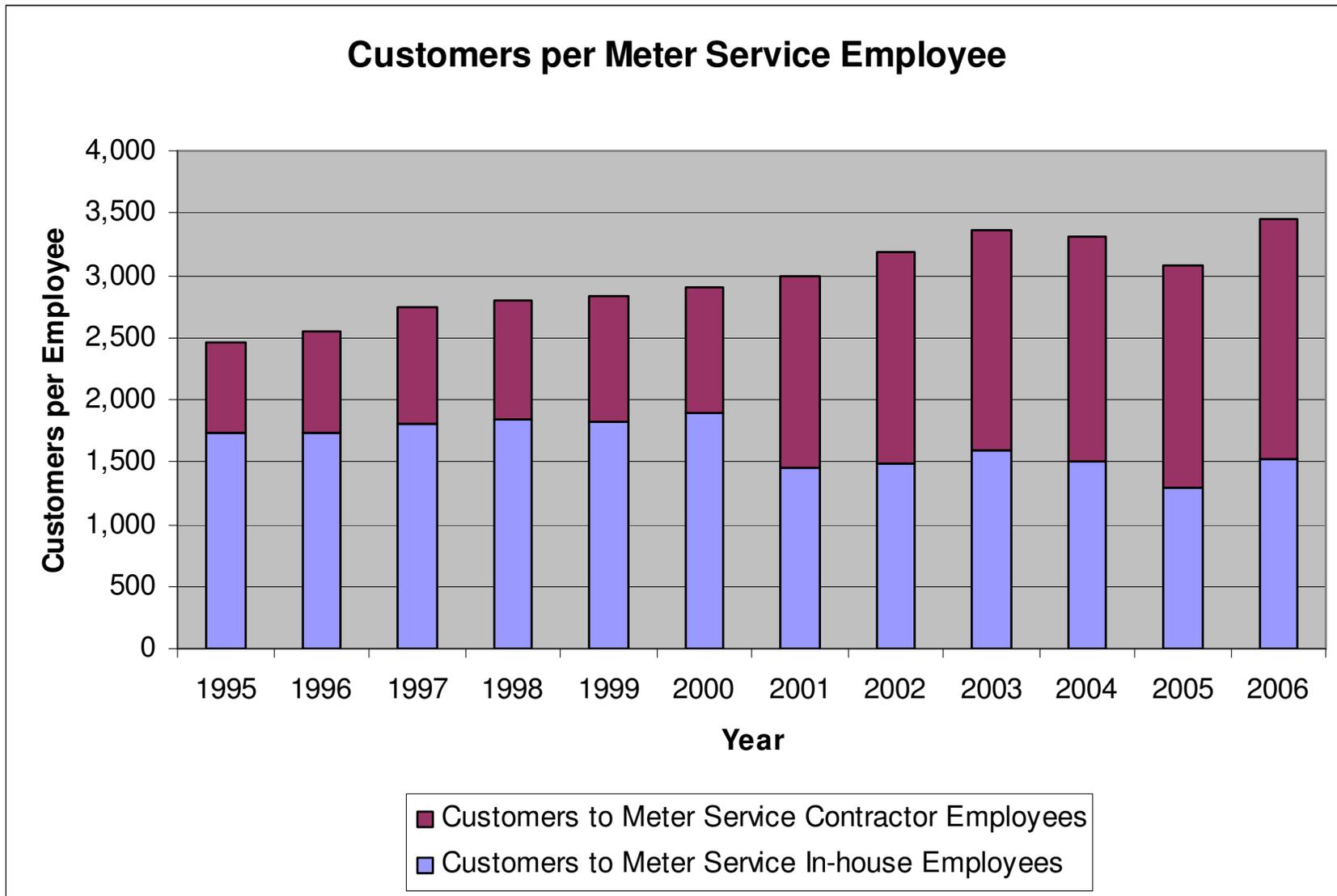
³ Meter on-off employees are linemen, gas service fitters and maintenance cut-off people who are in the gas operations group and some metermen for large poly-phase accounts. The linemen and metermen have already been counted and the gas employees are out of scope.

⁴ Total Meter Service In-house Employees does not include Metering Supervisors.

⁵ Total Meter Service Contractor Employees only includes contract meter reader FTE's. There may be 1 or 2 other metering contractors for a limited time. AmerenCILCO did not provide the information regarding where the contractors worked by operating center.

⁶ The ratio of customers to employees is calculated instead of employees to customers as specified by Illinois Public Utilities Act, Section 4-602.

Figure 4. AmerenCILCO Customers per Meter Service Employee Ratios



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4.2 Discussion

In developing the ratios of customers to employees, we reviewed the staffing level data AmerenCILCO provided by job classification, in-house employees, and contractor employees at year end for each year during the 1995-2006 time period, and made several adjustments to make the ratios consistent and easier to interpret.

4.2.1 Linemen Employee Ratios

Within AmerenCILCO, all in-house crews are assigned work by the operating center, which covers a geographic area. A crew may be assigned any work in that operating center's geographic area of responsibility. Currently AmerenCILCO's field forces primarily operate out of one of the following operating centers: Peoria, Eastern, Lincoln, Springfield, or Champaign. During the 1995-2006 timeframe, AmerenCILCO had as many as eight operating centers. The Western, Lacon, and Pekin operating centers were closed in 1998. At that time, the Western operating center and 75% of the Lacon operating center were consolidated in the Peoria operating center. Similarly, the Pekin operating center and 25% of the Lacon operating center were consolidated in the Eastern operating center.³

Due to IT system changes, AmerenCILCO was unable to access the actual records from the past to provide historical data for the year end electric customers by operating center. In addition, AmerenCILCO was only able to provide linemen contractor data on a total annual basis for 1999-2006 and did not have information by operating center regarding where the linemen contractors worked. AmerenCILCO was also able to confirm that it did contract work between 1995 and 1998, but is unable to quantify the amount.

Outsourced crews are assigned work based on the area of need. An outsourced crew may work in one operating center on a project or multiple projects until the projects are finished; depending on the need, the crew may then be assigned a project or multiple projects in the area of a neighboring operating center. Due to these inconsistencies in data and the consolidation of operating centers, calculating the ratios by operating centers does not help draw any meaningful conclusions. As a result, the linemen employee ratios are calculated based on the total AmerenCILCO customers and linemen employees each year.

The Total Linemen In-house Employees is the sum of the employees in the following job classifications: Underground Crew Leader, Underground Journeyman/Cable Splicer, Underground Apprentice, Overhead Crew Leader, Overhead Journeyman, Overhead Apprentice, Substation Crew Leader, Substation Journeyman, and Substation Apprentice. Substation Supervisor and Overhead/Underground Supervisors are not included in the in-house employee count.

³ DR-042

The Total Linemen Contractor Employees is the sum of the Contract Linemen FTEs and Contract Substation FTEs. The Contract Linemen FTEs are calculated based on contractor invoice data provided by AmerenCILCO. For electric line and underground construction work, contractor invoice data for 1999-2006 was provided on an annual basis (data for the years 1995-1998 were not available), and a rough estimate of contractor staffing levels was developed by utilizing \$90/hr for 2005/2006 and dividing by 2080 hours/year. Previous years' staffing levels were developed by reducing the \$90/hour by 3% per year. During the time period between 1995-2006, AmerenCILCO used contractors for specialized services or non-core work that would not normally be performed by Substation Electricians and Relay Technicians, such as grass mowing, fencing, dissolved gas analysis in oil, and civil work.⁴ Total contractor hours for core work or work normally performed in-house were provided for 2001–2006, and the FTE equivalents were calculated by dividing the total contractor hours each year by 2080 hours/year. FTE equivalents less than 1 are not included in the ratio analysis.

The Total Linemen Employees is the sum of the Linemen In-house Employees and the Linemen Contractor Employees. Using the percentage of in-house employees versus contractor employees, the ratios of customers to employees in these two categories were calculated and summed together to get the overall customers per employee ratios.

As depicted in the customer to linemen employee ratio trend in Figure 2, the total overall customers per linemen ratio has been fairly level, ranging between 1200-1400 customers per employee. Since the linemen contractor data prior to 1999 were not available, we cannot quantify the use of contractors before that time; however, we do know that they were used. The data in subsequent years reflect continuous and increased use of contractors, resulting in the use of fewer in-house linemen even though the overall linemen resources per customer remained stable. In 1999, approximately 9% of linemen employees were contractors and by 2005, that percentage grew to about 24 percent. The lack of linemen apprentices in 2005 and 2006 may also have been caused by the increased use of contractors in those years. The increased use in substation contractors in 2003 and 2004 was due to the special requirement for in-service dates at the Wallace substation and relay testing performed company wide as a follow-up to a 2002 information request from the ICC, respectively.

Several of the dips in total in-house employees can be attributed to events that impacted staffing levels company-wide. In 1995, an early retirement package was offered to both management and represented employees. The dip in 1999 was caused by another early retirement package offered to both represented and management employees, in conjunction with the acquisition by AES and the voluntary severance package offered to management

⁴ DR-046

employees. In 2001, as part of the IBEW Local Union 51 negotiations, an early retirement package was offered to represented-only employees.⁵

4.2.2 Call Center Employee Ratios

Since AmerenCILCO's Peoria call center serves both electric and gas customers across its entire service territory, we used the total AmerenCILCO customer count (instead of only AmerenCILCO electric customers) in computing the ratios of call center employees to customers. There have been several organizational changes to the AmerenCILCO call center during the 1995-2006 timeframe. The Springfield, Lincoln, and Homer call centers were closed and calls were consolidated into the Peoria call center. In addition, the Peoria call center and Pawnee call center have been virtual since 2005, meaning they share the handling of customer calls. However, call center statistics are still tracked by utility.

The Total Call Center In-house Employees is the sum of the customer-facing employees, and in the case of AmerenCILCO's call center, these only include Customer Service Representatives (CSRs). The CSRs also consist of several individuals that undergo training before AmerenCILCO potentially offers them permanent employment. The call center employees in the following job classifications are not included in the ratio analysis: Supervisors, General Supervisors, Managing Supervisors, Manager, Director, and Vice President.

The Call Center Contractor Employees are provided through Contract Resources from the North Carolina Live Agent shop. AmerenCILCO started using Contract Resources in its call center in 2005. These contract employees are assigned to handle special types of calls such as turn on/turn off or delinquent accounts and are generally not used for overflow calls.

The Total Call Center Employees is the sum of the Call Center In-house Employees and the Call Center Contractor Employees. Using the percentage of in-house employees versus contract employees, the ratios of customers to employees in these two categories were calculated and summed together to get the overall customers per employee ratios.

As depicted in the call center employee ratio trend in Figure 3, AmerenCILCO's ratios of customers per call center employee have fluctuated during the 1995-2006 timeframe, ranging from approximately 4,500 to about 8,400 customers per employee. The fluctuations in the ratios are due to organizational changes from the AES acquisition in 1999, and the consolidation of operating centers and call centers in 1997/1998/2000. With the voluntary retirement plans and transfers to other Ameren departments due to call center consolidations, turnover at the call centers has been high.

⁵ DR-020

4.2.3 Meter Service Employee Ratios

Most of the meter service employees serving Illinois also report to the Peoria, Eastern, Lincoln, Springfield, or Tuscola Operating Centers. As discussed above, the changes in operating centers and the lack of consistent data by operating center for the 1995-2006 timeframe makes it difficult to draw meaningful conclusions when the workforce ratios are calculated by operating center. As a result, the meter service employee ratios are calculated based on the total AmerenCILCO customers and metering employees each year.

Meter service employees consist of personnel from the following job classifications: Electronic Tech, Instrument Tech, Journeyman Meterman, Crewleader Metering, Shop Tester, Apprentice Meterman, and Meter Reader. Metering Supervision personnel are not included in the in-house employee count. At AmerenCILCO, meter on-off employees are linemen, gas service fitters, and maintenance cut-off people who are in the gas operations group and some metermen for large poly-phase accounts. The linemen and metermen have been counted and the gas employees are out of scope.

The Total Meter Service In-house Employees is the sum of the meter employees in the job classifications listed above. Total Meter Service Contractor Employees only includes contract meter reader FTEs. There may be 1 or 2 other metering contractors that are used for a limited time. AmerenCILCO did not provide information by operating center regarding where any of the contractors worked.

The Total Meter Service Employees is the sum of the Meter Service In-house Employees and the Meter Service Contractor Employees. Using the percentage of in-house employees versus contractor employees, the ratios of customers to employees in these two categories were calculated and summed together to get the overall customers per employee ratios.

As depicted in the meter service employee ratio trend in Figure 4, the overall total customers per meter service employee ratios have steadily increased each year throughout the 1995-2006 timeframe. The total in-house meter service employees have gradually decreased and been replaced by contractor employees, but not by the same percentage. As a result, the total number of metering resources available per customer appears to also be on a gradual decrease. The general increase in customers per employee may be possible because of improved productivity from the use of the new meter management system, scanners, barcodes, and computerized meter standards, as well as more efficient management of meter routes. The significant drop in in-house meter readers in 2001 is due to the early retirement package that was offered to represented employees as part of the IBEW Local Union 51 negotiations.

4.3 Conclusions

AmerenCILCO has consistently and increasingly utilized outsourcing to augment its linemen, call center employees and meter service workforce throughout the 1995-2006 timeframe.

- Since 1999, the first year the number of linemen contractor employees could actually be quantified, there has been a gradual increase in linemen contractor employees, enabling the overall total customers per linemen ratio to remain fairly level during the 1995-2006 timeframe.
- Several of the dips in total in-house linemen employees can be attributed to events that impacted staffing levels company-wide, such as early retirement offerings and organizational changes caused by the AES acquisition in 1999 and the acquisition by Ameren in 2003.
- AmerenCILCO initiated the use of contract resources in its call center in 2005.
- AmerenCILCO's ratio of customers per call center employee has fluctuated during the 1995-2006 timeframe, ranging from approximately 4,500 to about 8,400 customers per employee. This ratio has been influenced by voluntary retirement plans and transfers to other Ameren departments due to call center consolidations.
- AmerenCILCO's general philosophy with meter service employees has been to replace in-house employees with contractors as necessary.
- The gradual increase in customers per meter service employee may have been made possible due to improved productivity resulting from better metering technology and more efficient management of meter routes.

In general, it appears AmerenCILCO has maintained its workforce by balancing a decreasing number of in-house employees with an increasing number of outsourced employees.

5.0 Assessment Areas

Jacobs Consultancy assessed the areas specified in the scope of work. For each assessment area, we present our analysis in the form of findings, conclusions, and recommendations, as appropriate.

5.1 Operations and Maintenance

5.1.1 Background

Operations

AmerenCILCO's electric control center is located in Peoria, Illinois. The electric and gas functions are divided and handled by different personnel. Distribution is defined as voltages under 100 kV, and the company has 69 substations equipped with Remote Terminal Units (RTUs). Distribution control has two key goals:

1. Operate the system reliably and safely; including high voltage (HV) switching, load monitoring, etc., and
2. Storm restoration, including system recovery from widespread outages.

The Energy Management System (EMS)/Supervisory Control and Data Acquisition (SCADA) system reaches down to 34.5 kV for monitoring and control, and all of AmerenCILCO's sub-transmission lines are monitored. AmerenCILCO has about 60% of its distribution feeders SCADA-equipped and has over 65% of its customers are on distribution feeders with SCADA. This allows the outage analysis system (OAS) to rapidly group related outage calls to the device that has operated speeding the restoration process, as well as provide relevant information back to the call center system(s).

The control center's communication is mainly via radio, with cell phones for back-up and for areas where radio communications are not reliable. AmerenCILCO has recently completed the implementation of piggy-backing on the state police radio system and believes that all dead radio areas have been eliminated. Currently there are mobile data terminals (MDT) in first responders' vehicles for electric, so they can review all work orders and determine if a larger crew is needed. If so, they transfer the work to the work management system (WMS).

The control center has interface with the call center through:

- Direct and automated linkages with Customer Information System (CIS)
- Live Customer Service Agent calls

- High Volume Outage Call Answering System (HVCA), which is linked to the OAS for status and estimated time to restore (ETR)

AmerenCILCO participates in Edison Electric Institute (EEI) Midwest mutual assistance, a group of utilities covering three North to South zones. The initiating utility will request a conference call to discuss crew availability, materials and specific needs during emergencies, or in anticipation of emergencies. The responding utility will usually also send supervisors, safety personnel, trucks and mechanics for equipment.

Maintenance

To properly assess workforce adequacy, we examined the maintenance function with a focus on maintenance planning/cycles, maintenance accomplishments, backlogs, work effort barriers, field worker adequacy, crew sizes, system inspections, vegetation management, the use of contractors, quality control, distribution system condition and technology enablers.

5.1.2 Findings

Maintenance Planning

- AmerenCILCO's maintenance initiative descriptions and schedules are described below:
 - **Weekly Reliability Review Process**—This process was initiated in 2007. The purpose of this program is to systematically identify, review and repair the facilities that caused devices to experience multiple (3 or more) interruptions in the past 12 months.
 - **Tap Fusing Program**—This program began in 2003 as a result of recommendations presented in a reliability improvement study. The program is intended to identify, rank and systematically address all economical tap fusing opportunities. The economics are derived using a factor known as System Avoided Cost Factor (SACF), which represents the cost per kVA-hr of avoided customer outages. AmerenCILCO has spent on the order of \$150,000 annually since 2005 on this program.
 - **Direct Buried Cable Replacement**—This program is aimed at replacing underground cables that have experienced excessive failures. In particular, the program will require:
 - Replacement of individual sections after four failures in a lifetime, or three failures in a lifetime if two occurred within a 12-month period.

- Replacement of all or a subset of the cable sections for an average failure rate of 0.6 failures/section within a 3-year period, or a total of six failures, among all cable sections, within a 3-year period.
- **Distribution Feeder Design**—In 2005, Ameren developed a common distribution feeder design document⁶ that was distributed to all Ameren Illinois utilities. The document sets out the common design parameters and refers to Ameren Construction Standards as the detail reference material.
- **Animal Protection**—The animal protection program is intended to provide additional protection on existing overhead distribution transformers that have experienced animal-related outages. In addition, all new overhead distribution transformers will be fitted with animal protection as needed.
- **ICC Worst Performing Circuits**—This program was implemented several years ago and AmerenCILCO adopted a new process for handling the program in 2007. This program is intended to ensure circuits that appear on the worst performing circuits list of the ICC annual self-assessment receive the appropriate level of review and remedial action. A circuit will appear on this list if it is among the worst 1% of all circuits in an operating area based on reliability indices. These circuits will be inspected and the results recorded on the Circuit and Device Inspection System (CDIS) for tracking, review and remediation. Corrective action will then be entered into the Distribution Operations Job Management (DOJM) work management system.
- **Storm Normalized Worst Performing Circuits**—In 2007, Ameren Illinois Utilities analyzed an additional set of worst performing circuits based on removing outage data that occurred on days considered to be “major event days” based on Institute of Electrical and Electronics Engineers, Inc (IEEE) Major Event Day (MED) definitions. The intent was to further identify circuits that experience poor performance under non-storm conditions.
- **Circuit Inspection Programs**⁷—AmerenCILCO has a 4-year cycle for circuit inspections and has incorporated the ICC-mandated National Electric Safety Code (NESC) inspection in the process. The inspection programs are summarized in the following table.

⁶ DR-007

⁷ DR-004 (DR-347A)

Table 4 - Circuit Inspection Program

Type of Inspection	Facilities Inspected	Cycle Length
Complete overhead circuit inspection and attachment survey	Subtransmission and distribution circuits. All foreign company attachments. Check clearances for NESC compliance.	4 years
Inspections by tree trimmers	Subtransmission and distribution circuits and all associated hardware	4 years
Subtransmission circuits	Subtransmission circuits	2 years
Aerial infrared inspections	Subtransmission circuits	as needed
Pole inspection and treatment	Subtransmission and distribution circuits	12 years
Capacitor inspections	Capacitors	1 year
Regulators inspection / reading	Voltage regulators	6 month
Line recloser inspection / reading	Line reclosers	6 month
UG network inspections	Network transformers and protectors	1 year
Field personnel as-found reports	All facilities Items reported	as found

- **National Electrical Safety Code Corrective Action Plan**—A complete circuit inspection identifying all NESC and reliability deficiencies will be conducted on all Illinois distribution circuits from 2008-2011, with all corrective actions to be completed by 2012. In addition, a ground line inspection will be conducted annually on all poles on circuits identified that year for inspection. Corrective actions will be completed based on AmerenCILCO's National Electrical Safety Code Corrective Action Plan filed with the ICC on 1/31/2008.
- **Circuit Breaker Maintenance**—Oil circuit breakers (OCB) operating at less than 34.5 kV are serviced every 24 months; this includes contact resistance tests, oil dielectric tests, operations checks and mechanism lubrication. These breakers are overhauled every 120 months or after 12 full fault trips. OCBs for capacitor bank switching are inspected every year. Other breaker types, including sulphur-hexafluoride (SF6), air blast and vacuum are maintained on a 1-5 year basis depending on type.
- **Recloser Maintenance**—Single-phase reclosers are replaced every 5 or 10 years for oil or vacuum, respectively, and removed units are refurbished for re-use. Three-phase reclosers are serviced every 3 or 6 years for oil or vacuum, respectively. Internal inspections may be triggered more frequently depending on performance.

- **Regulator Maintenance**—Single phase regulators have at least a 3-year operations, oil dielectric and acidity check. The results of these checks may indicate a required overhaul.
- **Switch Maintenance**—Aside from infrared scans and visual inspections, AmerenCILCO’s switches are not typically scheduled for maintenance.
- **Transformers**—Transformers with high side below 138 kV are tested every 3 years for oil dielectric, oil acidity and head space gas. These are inspected every 10 years for more in-depth tests.
- **Substations**—AmerenCILCO uses a combination of time-based, condition-based, preventative and predictive substation maintenance programs. This is coupled with its reliability-centered maintenance philosophy that examines failure modes and directs corrective and preventative maintenance.
- **Vegetation Management**⁸—AmerenCILCO performs routine maintenance line clearance tree trimming on a 4-year cycle. Mid-cycle trimming is scheduled based on the results of mid-cycle patrols conducted by contractor general foremen, AmerenCILCO vegetation supervisors, and contract job planners and contract trip crew staff. Tree trimming is outsourced and competitively bid.

Crew Scheduling⁹

- Within AmerenCILCO, all in-house crews are assigned work by operating center. Each operating center covers a geographic area. A crew may be assigned any work in that operating center’s area of responsibility. Outsourced crews are assigned work based on the area of need. An outsourced crew may work in one operating center on a project/multiple projects until the projects are finished, and then may be assigned a project or multiple projects in the area of a neighboring operating center depending on need.
- AmerenCILCO supplements company crews with contractor crews. The number of support contractors will vary as required to meet the peaks and valleys of workload.
- Shifts—AmerenCILCO operates several different shift patterns.
 - Line crews (in all areas) work from:
 - 8 am – 4 pm Monday to Friday , or
 - 8 am – 4 pm Tuesday to Saturday

⁸ DR-005

⁹ DR-008

- Troublemens in the Peoria Areas work the following shifts:
 - 8 am to 4 pm Monday to Friday
 - 4 PM to Midnight Monday to Friday
 - Midnight to 8 am Monday to Friday
 - 8 am to 4 pm Saturday to Wednesday
 - 8 am to 4 pm Thursday to Monday
 - 8 am to 4 pm Tuesday to Saturday
- Split Shift Troubleman
 - 8 am to 4 pm Monday to Wednesday
 - 12 am – 8 am Thursday to Friday
- Metering and Substations
 - Generally work 8 am to 4 pm Monday to Friday
 - Switching duty 6 am to 2 pm Monday to Friday and
 - 9 am to 5 pm Monday to Friday

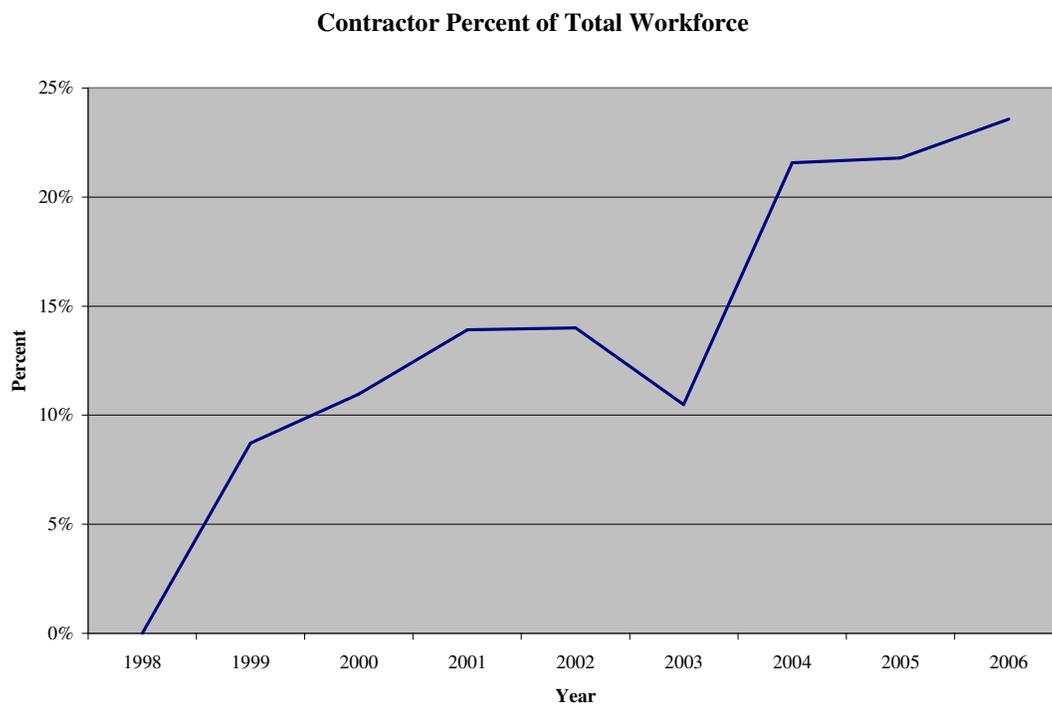
Use of In-House Crews vs. Contractors¹⁰

- In general, for the 1995-2006 time period, line construction core business activities were historically assigned to the AmerenCILCO in-house workforce first, and contractor crews were used to shave peaks and/or complete projects that: are of a larger scale; require special equipment or skills (such as larger directional boring or excavation equipment, larger cable stringing equipment, concrete conduit encasement, etc.); would otherwise tie-up Company resources for an extended period of time; or require extensive travel from one of AmerenCILCO's fixed operating centers. During the 1995-2006 period, AmerenCILCO began to consider contractor resources as an extension of its own workforce for response to large-scale outages. Contractors working on Company properties were expected to give the Utility first consideration for the use of the contractor's resources and respond during these outages.
- Since 1995, AmerenCILCO has continually increased the use of contractors for activities that do not require the high level skill sets possessed by journeymen linemen, including meter reading (both route reads and change of tenant reads), locating, non-pay disconnects and reconnects, pole testing and treating, post construction clean-up (e.g. grounds restoration, leveling, seeding) distribution line survey work, and miscellaneous other lower skill set activities. The mid-1990s contract negotiations resulted in the sharing of historical "electric work" with gas operations personnel, such as electric facility locates, electric disconnect/reconnects and electric succession reads.

¹⁰ DR-038

- The metering area has used a similar philosophy. One major difference is in meter reading. The Company, by attrition, has decreased the number of in-house meter readers over this time period in anticipation of the adoption of automated meter reading. Automated meter reading will be initiated at AmerenCILCO in 2009.
- The substation/relay group has also used a similar philosophy. Activities that do not require the skill sets associated with relay technicians or substation journeyman have been moved to contractors. Examples are foundation construction, fencing repair and installation, and grounds maintenance.
- While AmerenCILCO has maintained its in-house field worker complement, it has increasingly turned to contractors to supplement its workforce. The penetration of contractor FTEs has increased dramatically from 1998 to 2006, as shown in the figure below.

Figure 5 - Contractor Percent of Total Workforce



Workload and Backlogs

- Work is identified from load analysis, distribution circuit peak demand studies, 4kV and 12 kV studies, distribution engineering studies, government highway projects, the top 10 worst performing circuits, and deteriorated facilities.

- A scheduling meeting is conducted each week to review all types of work for the current week and the following week. This meeting includes the electric/gas supervisors, superintendents, engineers, and the work site coordinators
- Monthly staff meetings are held, with the division and operations managers and the reliability group. These meetings are an avenue for participants to discuss safety, human resource and labor issues, and to share ideas between division managers. Decisions can be made but no minutes are kept.
- Critical and non-critical work is scheduled together to ensure a continuous work stream and to assure that all problems on a particular facility are resolved.
- Work site coordinators are responsible for managing all New Business and maintenance work for their respective area. They use the Work Planning System (WPS) to determine what work needs to be scheduled and also hold meetings with the energy application specialist, engineering and operations to finalize the upcoming weekly schedule. Work site coordinators also order material from stores, and locate and contact customers to ensure they are ready for work to begin. They are responsible for coordination between all departments and interact with the supervisor in reviewing the work packages for scheduled work. The work packages consist of permits, maps and the material list.
- AmerenCILCO currently has two work site coordinators. In the northern region, it has 23 linemen (which includes two apprentices, crew leaders and six contractors), 10 cable splicers in the underground group and in the eastern region, it has 25 linemen (which includes two apprentices, crew leaders and four contractors). Currently there is a pilot program in Maryville, and one in St. Louis, to see if the work site coordinator function should be added on a corporate basis.
- Over the 2004 to 2007 period¹¹, the work backlog remained relatively flat—ranging from 22% to 25% as AmerenCILCO strived to complete work orders through optimized crew scheduling and use of contractors to fill in when necessary. In our experience, this level of backlog workload can be considered normal. The following figures illustrate backlog first in terms of hours (Figure 2) and then in terms of hours as a percent of total hours worked (Figure 3) from 2004 to 2007¹².

¹¹ Data only available from mid-2003 due to accounting system change.

¹² DR113

Figure 6 – Historical Work Backlog

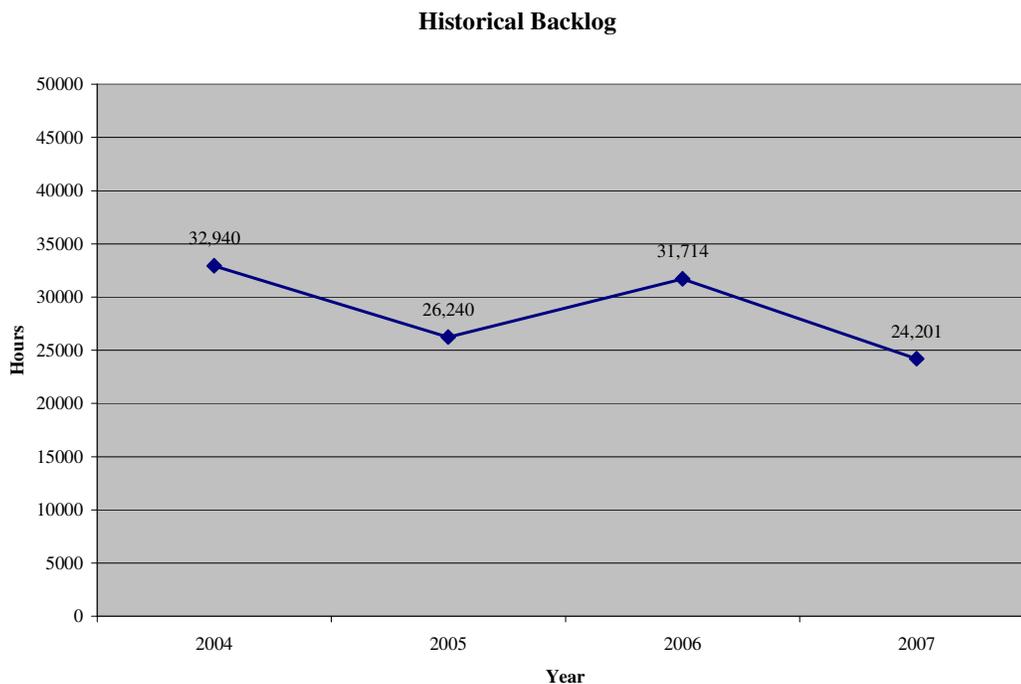
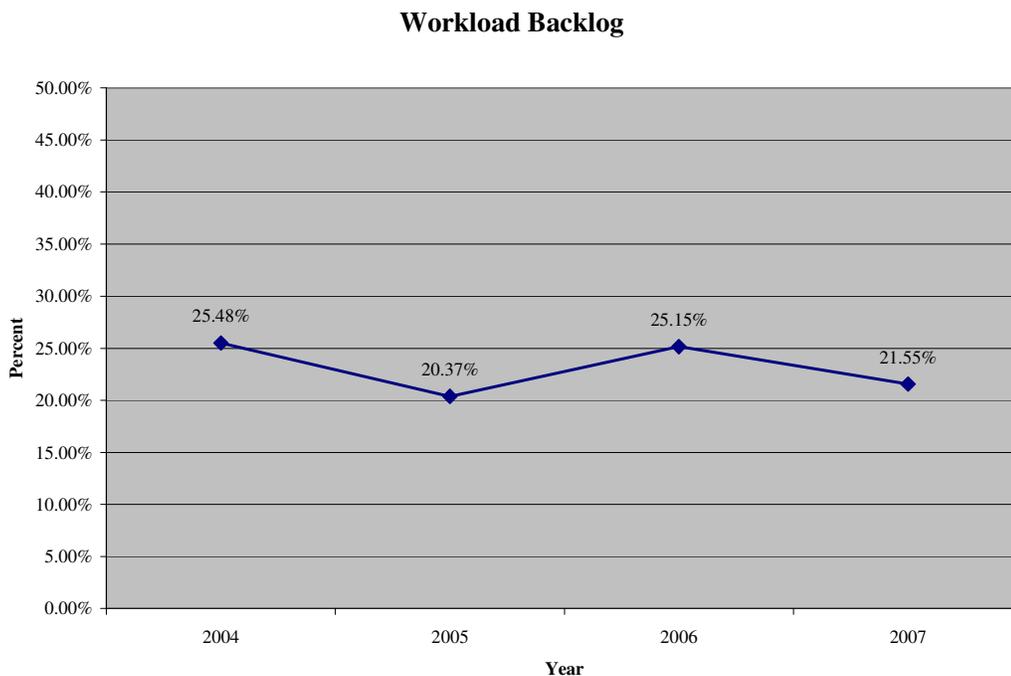


Figure 7 – Workload Backlog



- Although the backlog was somewhat reduced in 2007, given the increasing levels of overtime and the additional workload being created as a result of the ICC-mandated reliability inspection programs, it is unlikely that AmerenCILCO will be able to maintain the backlog at the 2007 level. Thus, there is a risk based on these factors that the backlog may increase in coming years without an increase in its internal workforce or use of contractors.

Staffing¹³

- Ameren contracted Towers Perrin to develop a workforce projection for its Illinois Energy Delivery Groups in 2006. The study reviewed a wide range of job and position classifications and considered attrition, retirements and replacement required to maintain a level workforce. Specifically, the study recommended the following:

Table 5 - Workforce Projections

Group	Employee Count 1/1/2006	Annual Additions Next 15 years
Craft Workers – Electric	699	25-35
Craft Workers – Gas	455	20-25
Customer Service (non-union)	163	5-7
Customer Service (union)	139	5-7
Engineers	41	1-2
Leadership	62	2-4
Operatives	155	6-8
Professionals	72	2-4
Support (non-union)	48	1-3
Support (union)	81	3-5
Technicians (non-union)	28	1-2
Technicians (union)	87	2-3
First Line Supervisors	132	3-5 (next 6 years) 6-9 (next 9 years)
Total	2,030	82-119

- AmerenCILCO, as part of the Ameren Illinois Utilities, was included in a 2006 workforce planning study covering substation workers and relay services employees. The study included projections of employee exits in the Illinois workforce due to retirements, deaths and voluntary and involuntary termination. Ameren is pursuing workforce development initiatives in trade and craft schools, colleges and universities as a result of the study.
 - Substations - The study focused on the then current demographics and the assumption that the core workforce to handle preventative and corrective maintenance, construction activities and various operational activities would remain constant. Staffing is geared toward 70% maintenance and 30%

¹³ DR-009 revised

construction. The level of staffing required was also influenced by the results of the recommendations of the Substation Maintenance Strategy Team, whose review was completed at the end of 2006. That study indicated that the complement of substation electrical workers would be in excess of approved levels while new apprentices were added to capture the knowledge of the more mature demographic pool. The study also anticipated that actual workforce levels would return to budgeted levels by 2012.

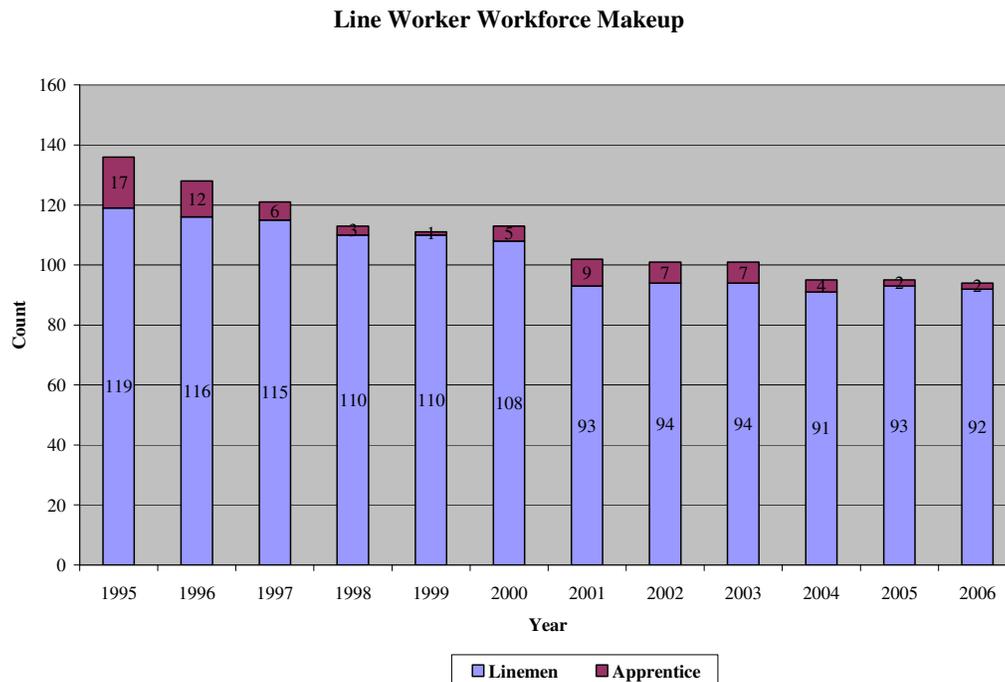
- System Relay Services – This study was conducted in a similar fashion to the study for substations described above. The results indicated that in 5 years of the 10-year study period, this group would be under budgeted staff levels. The report stressed the importance of providing training on a fairly continuous basis to permit the new employees to gain the experience needed prior to mature staff retirements.
- There were significant staff level changes (primarily reductions) during the period of changes in ownership of the Illinois utilities in the late 1990s and early 2000s. For Central Illinois Light Company (CILCO), in April 1999, a Voluntary Early Retirement Program (VERP) was offered to non-management employees which 86 of the 117 eligible people accepted. In June 1999, a similar VERP was offered to management employees previously not included in the April 1999 offering. A total of 141 out of the 156 eligible employees accepted the offer. In November 2000, another VERP was offered to specific non-management employees. A total of 41 of the 102 eligible employees accepted this offer. In January 31, 2003 the acquisition of CILCO by Ameren occurred with several individuals electing to take the severance package and several individuals/functions transferred to AMS. While 69 CILCO employees elected to take the severance package offered by Ameren after the CILCO acquisition in 2003, none were electric field employees. There were further reductions when a severance package was offered in 2006, but none were electric field personnel. Additionally, beginning in 2003, approximately 200 employees of CILCO's generation subsidiary AmerenEnergy Generating Company (AERG) are excluded from the employee counts for CILCO¹⁴. During 1995 to 2006 period, very few, if any, staff additions were made and few, if any, new apprentices were added to the workforce.

Line workers

- The in-house line worker staff complement, including apprentices, is depicted in the following figure.

¹⁴ DR-020

Figure 8 - Line Worker Workforce Makeup



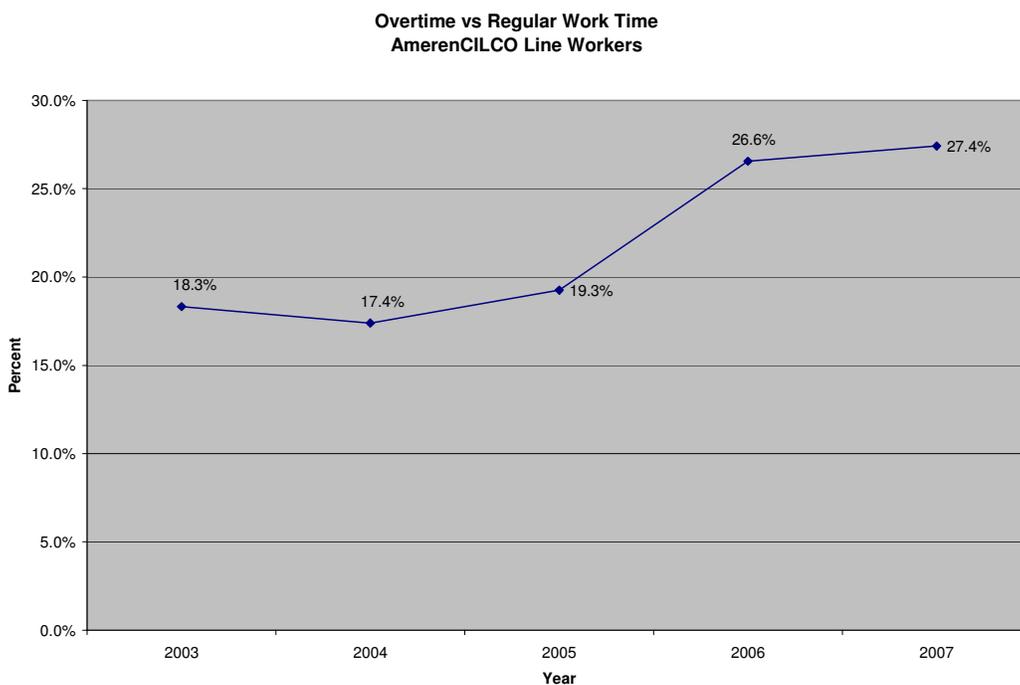
- The staffing level for linemen has been steadily declining over the 1995 to 2004 period and seems to have leveled out somewhat in 2005 and 2006 with a complement of 94. While AmerenCILCO has recognized that its workforce is aging and has made efforts to attract and retain apprentices to replace retirees and other workforce decreases, it appears that there are too few apprentices in the pipeline to accommodate expected retirements over the near and long term.
- The composition of apprentices has varied historically, but the 2006 level of 2 is significantly below historical averages. It should be noted that the Company has added apprentices subsequent to 2006 including 4 for overhead lines, 5 in underground with a 6th in underground currently being selected.

Figure 9 - Line Worker Apprentice Level



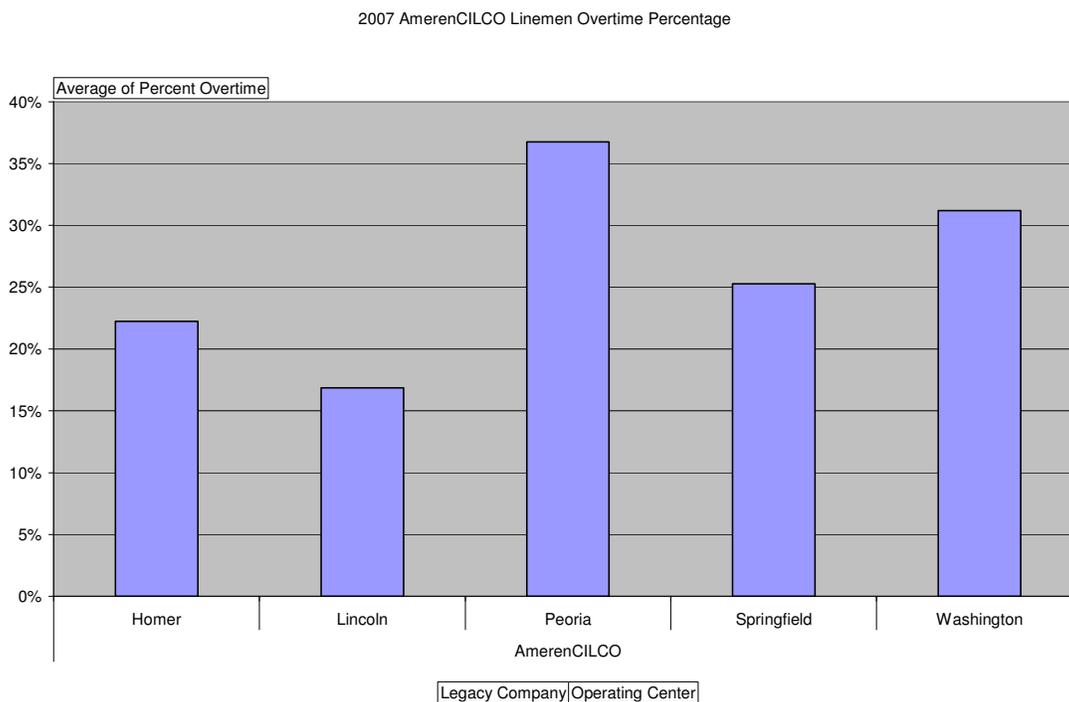
- Figure 10 tracks how overtime has increased steadily from about 17% in 2004 to 27% in 2007. Several major storms during 2006 and early 2007 may have contributed to the rise in overtime for those two years. Percent overtime results from the ratio of actual overtime hours worked to straight time. The results described are consistent with figures reported during our interviews, but are high compared to industry averages, and underscores that the level of the workforce has been allowed to decline too far to handle current workload.

Figure 10 - Line Worker Overtime vs. Regular Work Time



- Overtime varies significantly among operating centers, as depicted in the following figure.

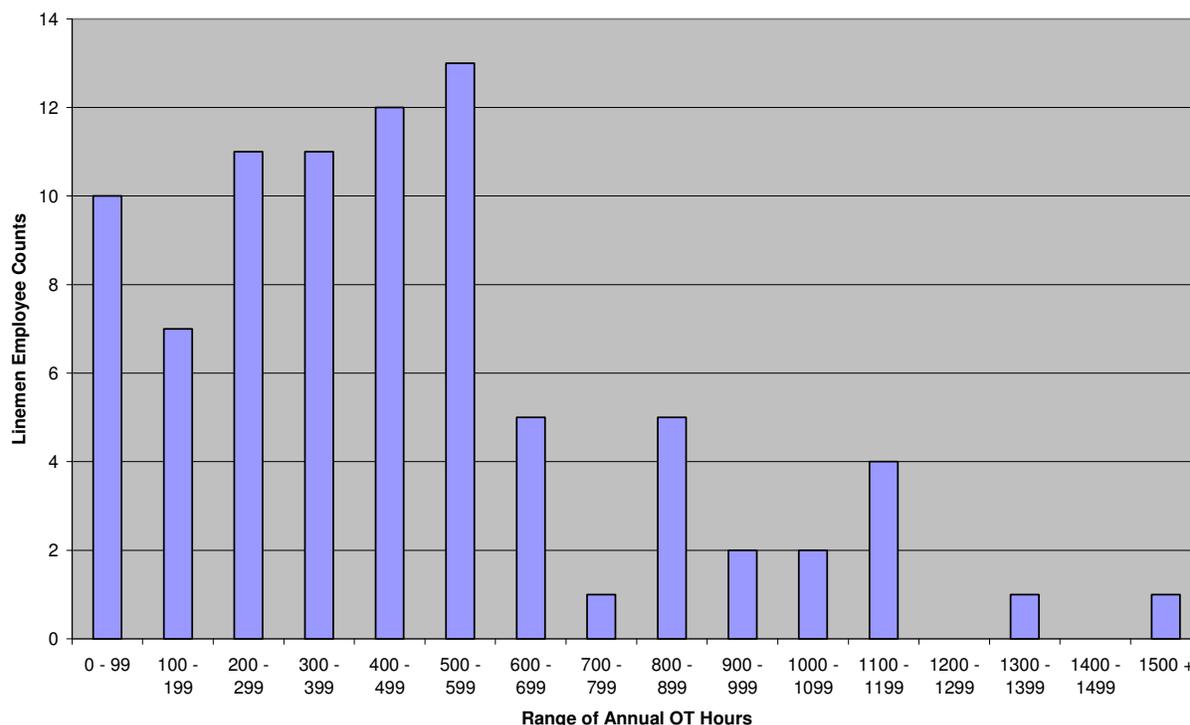
Figure 11 - Linemen Overtime by Operating Center



- During the interview process, we heard that significant overtime was commonplace, in some instances amounting to in excess of 1000 hours of overtime annually. While the level of overtime is high, it is clustered in the range of 100-600 annual hours of overtime, representing from 5% to 29%¹⁵, as depicted in the following figure. Overtime is in the 15% to 20% range as a typical industry practice.

Figure 12 - Linemen Annual Overtime Hours

2007 AmerenCILCO Linemen Annual Overtime Hours



- While overtime for AmerenCILCO crews has increased, the use of contractors has also increased, further illustrating that the workforce needs to be increased.

¹⁵ Based on 2080 annual work hours

Figure 13 - Linemen In-house vs. Contractor Complement



- AmerenCILCO has stated that it utilizes its system performance in terms of reliability and other indices to determine areas of focus. In the following two figures, we show the relationships between staff level changes (journeymen, apprentices and contract workers) and changes in reliability for System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI).

Figure 14 - SAIFI vs. Linemen

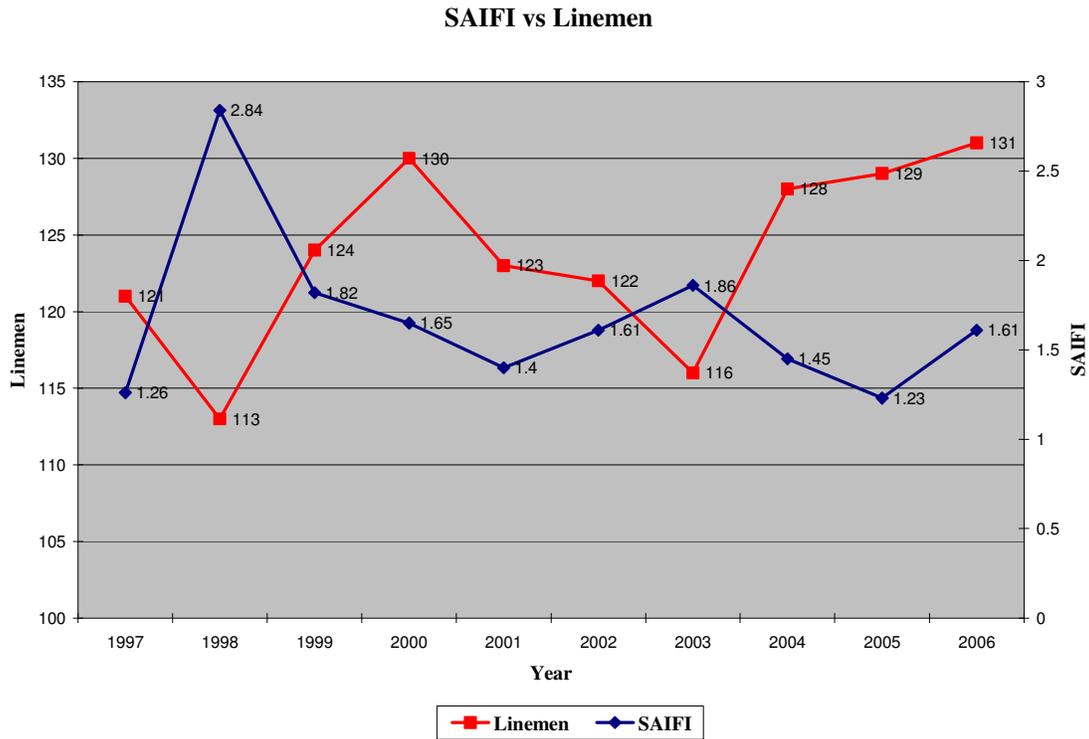
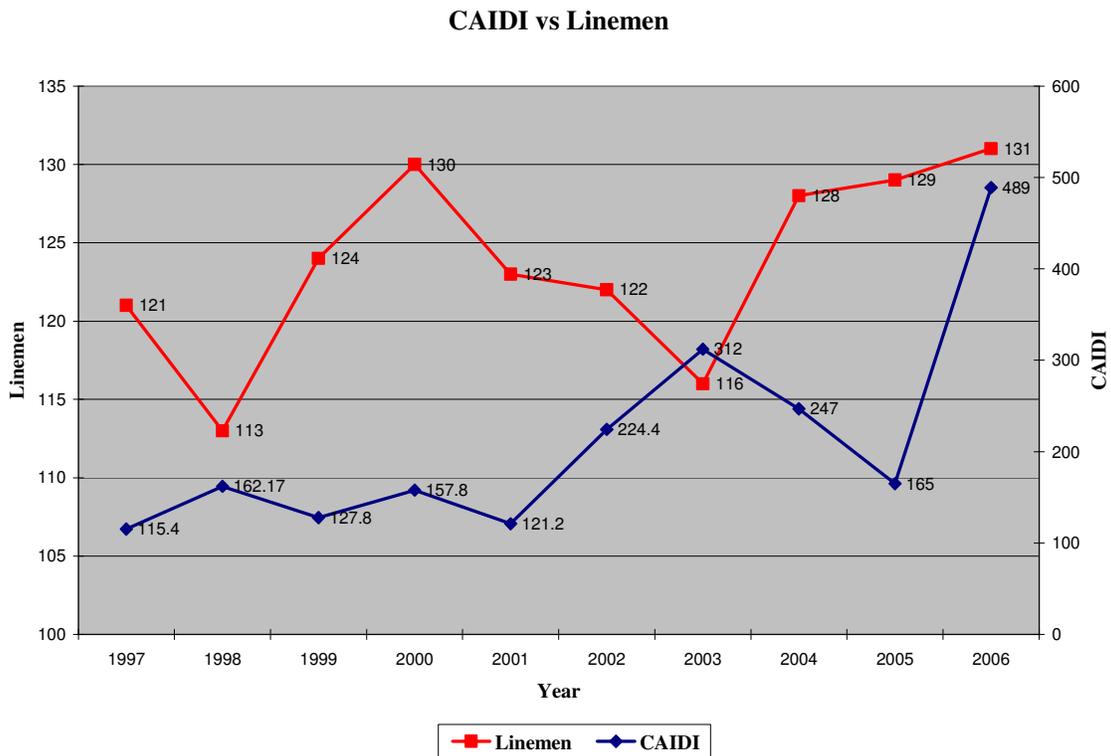


Figure 15 - CAIDI vs. Linemen



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- As depicted in the preceding figures, the number of linemen (journeymen, apprentices and contract workers) has generally increased. In terms of commonly used electric industry measures, SAIFI has decreased (improved) and CAIDI has increased (worsened), even excluding 2003 and 2006 where there were major events. An increase in CAIDI indicates increasing restoration duration. As shown above, CAIDI has tended to increase following a reduction in linemen count and has tended to decrease (improve) following an increase in linemen workers. It should be noted, however, that this metric is driven by a number of factors, among which is workforce size and the resulting ability to respond.
- Another set of measures used by AmerenCILCO to validate its overall service level include customer satisfaction surveys. Overall customer satisfaction survey results are reported in the Call Center section of this report. With regard to reliability, the ICC mandates that the Utility provide a survey¹⁶ that captures customer sentiment toward their satisfaction with AmerenCILCO's level of "providing electric service." We have reproduced the results from this survey in the following table for 2002 through 2006.

Table 6 - ICC Mandated Customer Reliability and Satisfaction Study
Overall Satisfaction with "Providing Electric Service"
0-10 scale, total satisfied scores = 6-10

Year	Residential	Non-Residential
2002	8.42	8.59
2003	8.31	8.47
2004	8.32	8.61
2005	8.24	8.60
2006	7.91	8.46

(Illinois Customers Only)
 0-10 scale, mean scores

- Ameren recognized that it needed to create and fill workforce positions and provided its Illinois Open Position Action Plan¹⁷ as summarized below for linemen:

¹⁶ DR-032

¹⁷ DR-011

Table 7 - Ameren Illinois Open Position Action Plan¹⁸

Division	Journeyman Linemen		Apprentice Linemen	
	Per Plan	Actual	Per Plan	Actual
1	6	6	2	2
2	5	5	2	2
3	7	6	4	4
4	7	7	2	2
5	3	3	1	1
6	8	6	2	4
7	3	4	1	0
Total	39	37	14	15

- It appears that Ameren Illinois is following the Open Position Action Plan by hiring 52 new electric line staff in the first nine months of implementation.
- The Towers Perrin Work Force Projection Study indicated an addition of 25-35 electric craft workers annually for the next 15 years¹⁹.

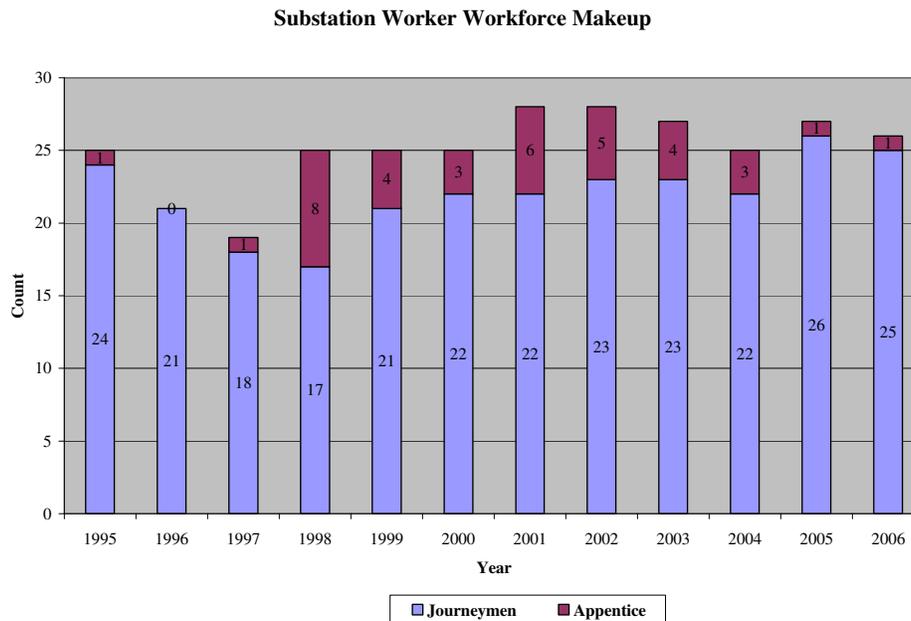
Substation Workers

- The staffing level for journeymen substation electricians and technicians dipped in the late 1990s, but AmerenCILCO proactively added apprentices from 1995 that have contributed to a recovery of staffing levels at about the same level as in 1995.

¹⁸ The Open Action Plan as specified by Ameren Illinois does not cover a specific timeframe.

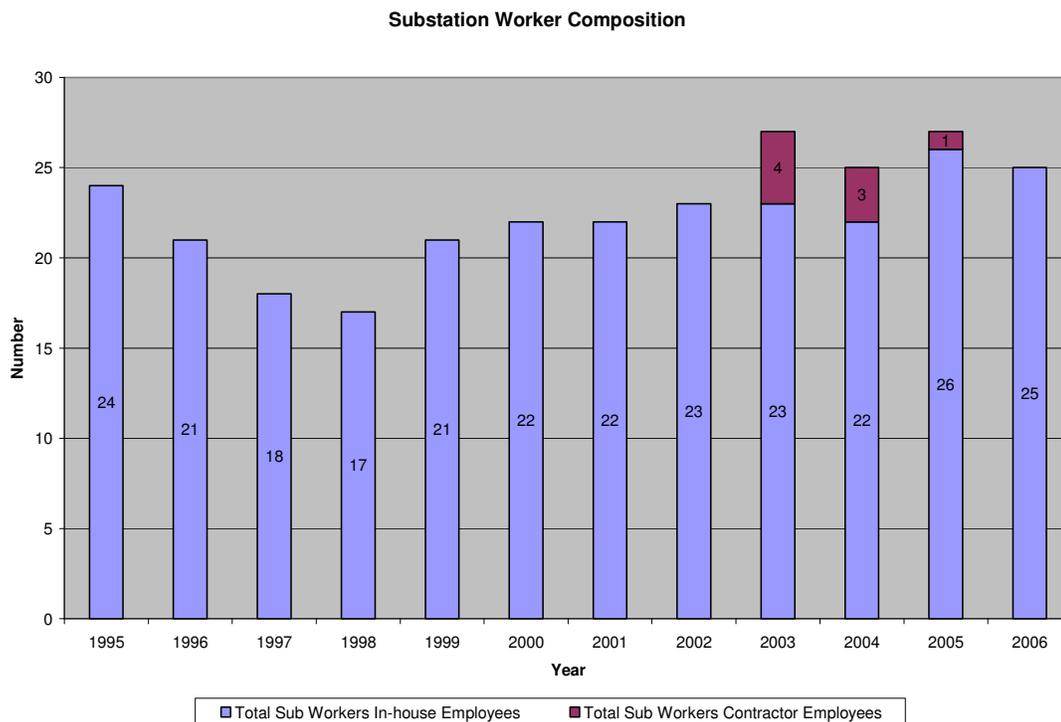
¹⁹ DR-011

Figure 16 - Substation Worker Workforce Makeup



- The Company has used contractors in the substation area, but mostly for civil work such as foundations, fencing, etc and larger construction projects. As shown in Figure 13, the use of contractors was fairly limited.

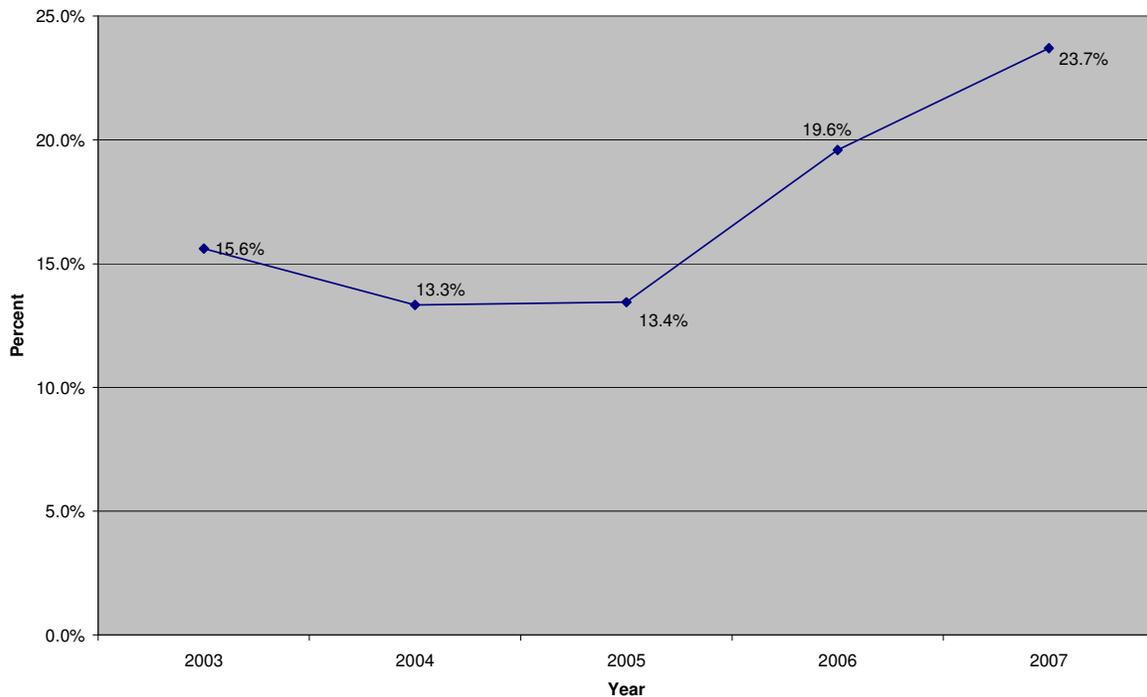
Figure 17 - Substation In-house vs. Contractor Complement



- About 60% of substation work is done in-house, including 100% of substation inspections.
- The overall workload has increased due to a number of factors, including assignment of the substation switchyards at the Duck Creek and Edwards power plants, belonging to Ameren Energy Resources Generating Facilities, to the AmerenCILCO wires operation without transfer of the existing substation workers.
- The level of substation worker overtime has been increasing since 2005 (as depicted in the figure below), reaching nearly 24% in 2007. **The sharp increase in overtime in 2007 was exacerbated by a large special relocation project at AmerenCILCO's Wallace Substation.** Aside from workload increases, storms have contributed to overtime growth.
- Some overtime is planned as part of the budget process.

Figure 18 - Substation Overtime vs. Regular Work Time

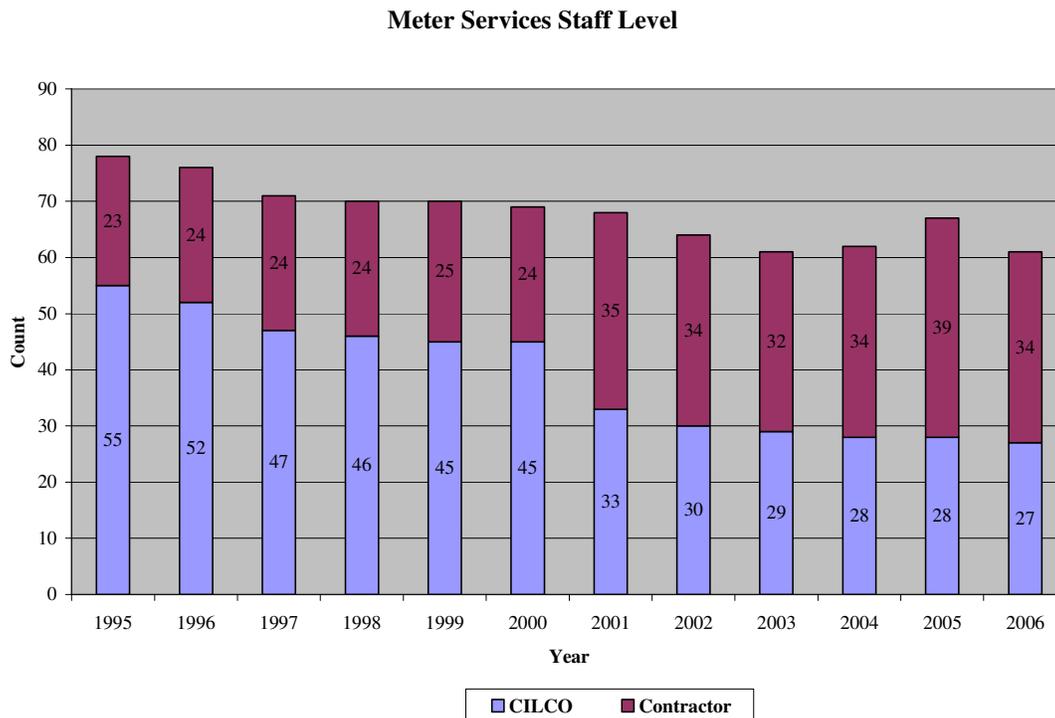
AmerenCILCO Substation Overtime vs Regular Work Time



Meter Service Workers

- AmerenCILCO is in the process of implementing automated meter reading (AMR). Knowing that AMR was coming, the Company elected to reduce the meter reader staff by attrition so that there would be few or no layoffs. Many of the readers have and will elect transfers to apprentice programs in other jobs within the Company. AmerenCILCO has steadily increased the use of contractors for meter readings to provide adequate meter reading staff while AMR is implemented. These resources would be the first choice for layoffs, thus not impacting in-house employees.
- The meter services staff complement has declined from 78 in 1995 to 61 in 2006, as depicted below.

Figure 19 - Meter Services In-house vs. Contractor Complement



- The ratio of customers per meter services employee has generally increased each year throughout the 1995-2006 timeframe, growing from about 2,500 customers per employee in 1995 to about 3,400 customers per employee by 2006.

Technology Enablers

- The work management system DOJM, purchased and implemented in the mid-1990s by Ameren UE, was adopted by AmerenCILCO at the time of its merger into Ameren. Jobs are designed, estimated, and reported (materials and time) through DOJM, which tracks required dates and contingencies (customer approval, etc.) throughout the life cycle of a distribution construction project/job. DOJM also has a personal computer (PC)-based design/estimating system known as Personal Computer Design system that allows a bill of materials for a job/project to be assembled/built offline and then uploaded to DOJM. DOJM also has a PC-based Work Prioritization and Scheduling system known as WPS. WPS allows prioritization and scheduling of date-driven customer and project work contained in DOJM
- AmerenCILCO has deployed mobile data terminals (MDTs) in individual first responder line trucks. In addition, AmerenCILCO is beginning to provide line crews with MDTs and/or laptops with circuit maps loaded into them.

- Dispatch is done from the Peoria dispatch and control center via radio.
- Crews pick up DOJM work orders at the service centers in the morning. The line supervisors will have reviewed and prioritized the work orders and assigned in-house or contract crews as needed. Upon completion, the work orders are closed out in DOJM by clerks at the service center.
- First responder and trouble work orders are dispatched to the MDTs in the individual first responder line trucks. The troubleshooter will choose jobs from the system, and upon completion these work orders are cleared via MDT. If priorities change, dispatch will contact the troubleshooter to shift work priorities. If the first responder determines that additional crews are required, he/she will utilize the MDT which will result in a work order being created in DOJM and subsequently dispatched to line crews. If the situation required immediate attention, he/she would contact dispatch via radio to have crews assigned.
- The EMS/SCADA system's reach is down to 34.5 kV for monitoring and control. This allows the Outage Management System to rapidly group related outage calls to the device that has operated and speeds the restoration process, as well as provide relevant information back to the call center system(s).
- AmerenCILCO is currently deploying automated meter reading capabilities through CellNet. This system will result in more efficient and accurate meter reads and will free up meter readers to fill other positions within the Company.
- The table below lists the key applications.

Table 8 – Key IT Applications²⁰

Application	Description	Supplier
Distribution SCADA	Referred to internally as DDOS. This is the Distribution Dispatch system utilized to monitor (real-time) and control our electric distribution substations. It also provides map viewing, capacitor control, and other functionality for Distribution Dispatch. Significant telecommunications infrastructure (wired and wireless) providing the information/data from substations. The system was custom built in the early 1990s and expanded in use and functionality since that time. This system also interfaces directly to mainframe OAS for Feeder outage notification, geographical display of outages, and GIS for maps/information.	---
Work Management	DOJM (Distribution Operations Job Management). DOJM is the mainframe based work management system for Gas and Electric construction jobs (crew work). Jobs are designed, estimated, and reported (materials and time) through DOJM. DOJM tracks required dates and contingencies (customer approval, wiring OK, etc.) throughout the life cycle of a distribution construction project/job. This system was purchased and implemented in the mid 1990s. The system is maintained in house and its use and functionality have been expanded since that time. DOJM also has a PC based design/estimating system known as PCDS. PCDS allows a bill of materials for a job/project to be assembled/built offline and then uploaded to DOJM. DOJM also has a PC based Work Prioritization and Scheduling system known as WPS. WPS allows prioritization and scheduling of date driven customer and project work contained in DOJM.	In-house
GIS (Geographic Information System)	The system is referred to as AM/FM, or FRAMME. In Illinois, there are two of these systems in operation. The Ameren system was purchased and built in the late 1990s and contains CILCO and CIPS information. The IP System also built in the 1990s contains IP information. The systems are both Intergraph based vendor systems customized at the time of implementation. The systems are both supported in house. Each AM/FM system serves as the basis for maps, outage analysis circuit models, circuit analysis models, gas analysis models, and mobile maps for field resources. We are currently engaged in a project to upgrade the two systems to a common system based on Intergraph's latest technology/system.	Intergraph

²⁰ DR-024

<p>General Ledger</p>	<p>Millennium is the mainframe tool used by Ameren to query General Ledger data. The General Ledger system, in turn, is an on-line computer software system purchased from GEAC, formerly Dun & Bradstreet Software. The system combines accounting transactions from systems throughout the Company, such as Accounts Payable, Stores, Customer Accounts and Payroll. Accounting entries called Journals are processed monthly to create the official accounting records of the Company for audit and tax purposes. Company financial reports are produced from the General Ledger system monthly, immediately after the books are closed. In addition, ad hoc and interim reports, tailored to individual departments, are available. Accounting information can be viewed on-line through either mainframe terminals or personal computers tied to the mainframe. The system has at least two prior years of account activity in addition to the current year. Journal detail for the current year is also available on-line. The General Ledger system is coordinated with the Work Order System, which contains detailed project information on-line.</p>	<p>GEAC, Millennium</p>
<p>OAS (Outage Analysis System)</p>	<p>This is a mainframe based system for Electric outages, Emergencies, Gas Leaks, Daily Orders (move in/out), Meter work, etc. Customer outage calls are entered by reps and VRU (internal and external). OAS analyzes calls to group orders and predict likely outage location. The system was implemented in 1993 and extensively modified since then. The system is supported in house. Modifications to the system include presentation of outage information directly to customers through Ameren.com, integration with the CIS system for daily orders, integration with a map viewing system to present a graphical view of outages, automatic email/text paging of Field supervision at defined outage levels, etc... OAS also serves as the basis for the Mobile Data Terminal application. Laptops in the trucks utilize wireless connections to access the same screens and information as internal office users. Extensive Reliability reporting and analysis (scorecards, metrics, etc.) have been developed and utilize the OAS data.</p>	
<p>Map Viewing</p>	<p>This system extracts data from the GIS systems and is utilized in the office and on mobile data terminals to view the Electric and Gas Distribution facility maps. The system is a vendor maintained system with custom interfaces for our GIS data.</p>	<p>Byers</p>
<p>AMR (Automated Meter Reading)</p>	<p>Automated Meter Reading provides daily and cycle meter readings in selected areas of Illinois. The data is interfaced to CIS (for billing purposes) and OAS for operational purposes such as Power Outage Notifications</p>	<p>CellNet</p>
<p>Meter Data Management</p>	<p>This system is a vendor based system. The system is utilized to determine Market Value and ISS (Interim Supply Service) rates. This data also feeds into CSS. The use of this system is currently being expanded for a Meter Data Management system (MDM) to handle the every increasing volume of interval meters in Illinois. The system also includes missing data estimating routines</p>	<p>Loadstar</p>

Circuit and Device Inspection (CDIS)	Referred to internally as CDIS (Circuit and Device Inspection system). This system utilizes the GIS database to manage periodic device and circuit inspections. The system manages the schedule and initiates orders for Field inspection. Device inspection orders are passed to the OAS system to be worked on Mobile Data Terminals. The Circuit inspections are interfaced with map viewer for GPS (walking) based field inspection through use of a tablet computer. The field inspection results are collected and stored in the GIS database. Necessary repair orders are automatically generated and passed to DOJM for engineering and construction to resolve	
Distribution Engineering Workstation (DEW)	DEW is an open architecture electrical distribution system analysis software package. The program uses data from the AM/FM GIS and Transformer Load Management systems to model the electric distribution system. Engineers use these models to perform analysis in order to ensure the safe, reliable, and efficient operation of the distribution system. DEW is used to perform the following types of analyses at Ameren: Load Estimation, Power Flow, Protective Device Coordination, Fault Current, Voltage Flicker, Phase Balancing, and Capacitor Placement.	---
EMPRVE (EDS Maintenance Process Re-engineering)	Referred to internally as EMPRV. This is the corporate solution for equipment (substation, fleet) maintenance, and management. EMPRV tracks the assets and directs periodic maintenance, inspection, and repair activities. EMPRV has also recently been enhanced to support the Large Capital projects scheduling, tracking and management in Energy Delivery Technical Services (EDTS) for large project (Substations, Transmission lines, etc) management.	
Supply Service Systems	Ameren has several systems that manage the procurement and payment of materials, supplies, and services. These systems are based on Oracle's software suite and include Sourcing, Contractor Cost Tracking and Management, Iprocurement, Supplier portal, Accounts Payable, Accounts Payable Imaging, and Procurement/payment analytics.	
Budgeting	This is a computer based capital and O&M budgeting and financial reporting system.	CompeteSof
Projects/Assets	PowerPlant is a tool that facilitates major construction project setup, maintenance and tracking. It is also used as an asset management tool to unitize property units, act as a cost repository, assist in project and asset management, facilitate queries and produce reports.	---
Human Resources	Personnel information and time tracking and reporting.	Peoplesoft and TRIS

5.1.3 Conclusions

Operations

AmerenCILCO employs a state-of-the-art control center in Peoria, Illinois, to monitor and control the distribution system in Ameren Illinois Division I. The Utility's SCADA reaches down to the 34.5 kV system and covers all of its distribution substations. SCADA interfaces directly with the mainframe OAS for feeder outage notification and geographical display of outages.

Maintenance

AmerenCILCO has a robust maintenance planning function that meets or exceeds industry norms. The maintenance planning function specifies depth and frequency of line and substation inspections, NESC code compliance, switching and control equipment maintenance intervals. The Company's maintenance planning function makes use of triggering mechanisms to identify required remedial maintenance work. These triggering mechanisms include reliability performance and component operating trends. For example, the ten worst performing circuits are identified for remediation on an annual basis, device performance degradation and underground cable replacement needs.

Staffing

AmerenCILCO has recognized that its workforce is aging and has recently made efforts to increase its journeyman levels and to attract and retain apprentices to replace retirees and other workforce decreases by conducting the Towers Perrin Work Force Projection Study and following the Open Position Action Plan.

The Towers Perrin Work Force Projection Study indicated an addition of 25-35 electric craft workers annually for the next 15 years. The recently fulfilled Open Position Action Plan appears to have satisfied the first year's recommended additions.

AmerenCILCO states that its policy is to maintain an overall level of in-house employees needed to perform core base load work and complete workload peaks and valleys with contractors while subcontracting lower skilled work. However, the penetration of contractor FTEs has increased dramatically from 1998 to 2006, and in 2006 accounted for approximately 25% of the total workforce.

The staffing level for in-house journeyman linemen and apprentices has declined from 136 in 1995 to 94 in 2006, and overtime has increased steadily from about 17% in 1999 to 27% in 2007. Contractor use has dramatically increased from 8% in 1999 to 25% in 2006.

The staffing level for journeymen substation electricians and technicians dipped in the late 1990s, but AmerenCILCO proactively added apprentices to reinforce the staffing. In 2006, the substation staffing level was about the same as in 1999. The level of overtime among substation workers has averaged about 17% over the 1999 to 2006 period. AmerenCILCO faces the same difficulty as many utilities in attracting experienced linemen and substation workers, and therefore depends heavily on apprentice programs. One source for new apprentices is meter readers, some of whom are being displaced with the implementation of

AMR. While the Utility has basically maintained its in-house field worker complement, it has increasingly turned to contractors to supplement its workforce.

The meter service group—which consists of in-house and contracted meter technicians, meter on-off employees and meter readers—has been declining at a fairly consistent rate over the 1995 to 2006 period. However, with the implementation of AMR, the number of meter readers and meter technicians is expected to decrease. Thus, overall meter service group levels will continue to decline in the future.

Line crews are responsible for restocking their trucks each morning from the storeroom. This can account for up to one hour of time that they are not in the field. However, some line crews indicated that they prefer to handle the truck stock themselves as opposed to depending on stock clerks to stage the necessary material on the loading dock.

Line supervisors spend about 40% of their day in the service center handling scheduling and other paperwork. They spend the balance of an average day in the field, either reviewing new project requirements or visiting and reviewing line crew work. The use of Work Site Coordinators to offload some of the office and clerical work has contributed to the ability of the line supervisors to spend more time in the field pre-planning jobs, following up on crew and contractor progress, and safety.

Work Scheduling and Backlog

AmerenCILCO conducts a series of meetings each month to address workload requirements and to balance the workload across crews and define the level of contractor involvement that is required. These meetings include: weekly workload planning, monthly meetings to review project requirements and timing, and monthly meetings to balance the workload among in-house crews and contractors. Work backlog has been comparable to typical utility performance, ranging between 22% and 25% from 2004 to 2007.

Technology Enablers

AmerenCILCO has a robust set of integrated applications that serve to support the maintenance, dispatch and operations functions. AmerenCILCO continues to expand and integrate functionality to leverage information technology to enhance productivity and effectiveness. For example, AmerenCILCO is studying expanding the implementation of MDTs for the line crews to enhance their communications and productivity potential.

5.1.4 Recommendations

- 5.1.1 Ameren should update the Open Position Action Plan annually to continue to reflect the workforce needs as specified in the Towers Perrin Work Force Projection Study. Once established, the Open Position Action Plan should be aggressively pursued to increase the electric field workforce.
- 5.1.2 Ameren Illinois should articulate and implement a staffing strategy that promotes consistent in-house and outsourced worker utilization between various divisions and operating centers.

5.2 Training and Safety

5.2.1 Background

The training and safety function is an essential human resource support component of any business. Working safely means the workers leave the workplace in the same condition as when the workday began, while training refers to the acquiring of knowledge, skills and competencies resulting from teaching. In the electric distribution industry, training forms the core of apprenticeships and provides the backbone for technical education. Apprentice programs supply the training for the initial qualifications, while refresher training provides the opportunity for continued technical development. At AmerenCILCO, electric technical training consists of a combination of both training in the classroom and on the job.

The quality and effectiveness of the training and safety function is one of the most enduring sources of a sustainable, competitive advantage for companies today. Without a well-trained and safe workforce, it would be difficult for any utility to attract new employees, maintain satisfied customers and develop supportive shareholders. Thus an organization gains a competitive advantage amongst its key stakeholders by encouraging and creating a safe environment and by training its people and allowing them to use their expertise and ingenuity to meet clearly defined objectives.

5.2.2 Findings

Training

- AmerenCILCO technical training is performed at two training facilities, one located in Decatur, Illinois and the other, referred to as Dorsett, is located in Maryland Heights, Missouri. Prior to December 2007, all AmerenCILCO training was conducted in the Dorsett facility or the AmerenIP training facility. However, a recently-introduced Ameren Illinois business model now has all training for linemen apprentices, both overhead and underground as well as polyphase meter journeyman, performed in Decatur. The

Decatur facility formerly had been the training location for AmerenIP. All substation training currently takes place in Dorsett.

- AmerenCILCO electric technical training, except for substation mechanic training, is a responsibility of the Director—Gas Operations. This position is a direct report to one of two Vice Presidents of Regional Operations. The permanent electric training organization consists of a superintendent of training and four supervisory trainers. In addition, bargaining unit journeyman linemen are used to supplement the training workforce. All trainers have an extensive background in electric power distribution operations.
- Substation training is the responsibility of the Vice President of Electric Delivery Technical Services (EDTS) and is conducted by a substation supervisor with the support of several journeyman substation mechanics to supplement the training workforce. The apprentice program for substation journeymen has recently been standardized at three years. Previously, it had been a 4-year program at AmerenCILCO.
- Unique to the journeyman linemen conducting training on an ad hoc basis is the fact that trainers are selected based on qualifications as opposed to seniority. This helps assure that they are skilled in current technical requirements, as well as being able to effectively deliver the training.
- Course preparation is supported by training course development facilitators located in other departments within Ameren. This, combined with the input from the subject matter expert trainers, helps to ensure that the program content is properly structured with good substance for instruction.
- Safety related technical training is coordinated by division safety specialists and may be taught at either a training facility or an operating center.
- AmerenCILCO has created an Executive Apprentice Committee to oversee the apprentice program. The committee consists of three management members and three union members. The committee is supported by a trainer who acts as a liaison between the committee and the training curriculum, as well as work site coordinators who help monitor the trainees' progress in the field.
- Ameren Illinois is working towards having one 3-year apprentice program for journeyman linemen. Until recently the AmerenCILCO apprentice linemen program had been four years, while the AmerenCIPS and AmerenIP programs were three years. In addition to standardizing the program length, Ameren Illinois will also standardize the training content. Also recently, the Company has been able to standardize the apprentice polyphase meter journeyman training at three years, which previously had been a 4-year program at AmerenCILCO.

- Apprenticeships electric operations serve to teach new employees required skills. Apprenticeship training includes classroom training and on-the-job activities. Knowledge transfer occurs when apprentices are assigned to work side-by-side with journeyman for on-the-job training.
- Each linemen apprentice attends one 3-week course, four 2-week courses, and one 1-week course over three years. AmerenCILCO belongs to the National Joint Apprenticeship and Training Committee (NJATC) and uses their training templates. NJATC is a joint program between the National Electrical Contractors Association (NECA) and the International Brotherhood of Electrical Workers (IBEW) and has clearly demonstrated a cost-effective way to train qualified craft workers.
- When hiring into the apprentice program the applicant's previous knowledge and experience may be helpful in securing a position, but it will not advance him or her in a pay grade. However, when AmerenCILCO is able to hire experienced journeyman linemen, the current labor agreement permits hiring into the journeyman rate. Unfortunately, attracting seasoned journeyman linemen in the current competitive employment marketplace has proven difficult.
- Given the current 4-year (soon to be 3-year) apprentice training program, AmerenCILCO has to hire in advance of known journeyman retirements or hire experienced journeyman linemen if it wishes to maintain its current journeyman employment levels and in-house technical skills. This practice helps to develop staff so they are ready when needed and also supports knowledge transfer.
- Until the current year, the AmerenCILCO organization had not hired a new apprentice in 7 years. In 2001 (the last year an apprentice was hired before this year), the total number of overhead journeyman linemen (including crew leaders) totaled 85. Today the total stands at 68, a reduction in staff of over 38 percent. However, the reduction in staff is actually greater from a skills gap perspective. Given the apprentice program, plus the reality that it takes another 3 years at a minimum to create a fully versed journeyman linemen, it will be at least 6 years until the newly hired apprentice is as technically qualified as the linemen leaving the journeyman position. Thus, from a skills gap perspective, assuming only 2% journeyman linemen attrition, the effective linemen workforce could be as low as 56 employees before the impact of the recently hired apprentices is fully felt.

Table 9 - Linemen Apprentice Staffing Levels²¹

AmerenCILCO Linemen Apprentices														
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1st Year	2					2	2							4
2nd Year	2	2					1	2						
3rd Year	5	2	2					1	2					
4th year	5	5	2	2					1	2				
Total Apprentices	14	9	4	2	0	2	3	3	3	2	0	0	0	4
Linemen ¹	110	107	105	98	98	98	85	85	85	82	82	81	69	68
Linemen Leaving ²		8	7	9	2	0	13	0	0	4	2	1	12	1

¹ Linemen numbers include crew leaders who are also journeyman linemen.

² Note that the Linemen leaving is the total number of linemen leaving the linemen job position. Some numbers left the company and some moved to other job positions within the company.

Source: DR-055

- The above table describes the number of linemen apprentices for the 10-year period under study, as well as for 2007 and 2008. It includes a breakdown by year showing how the apprentices have progressed through the program. It also includes for each year the number of journeyman linemen leaving the Utility for any reason.

Table 10 - Substation Apprentice Staffing Levels

AmerenCILCO Substation Apprentices														
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1st Year				1		1	3				1			2
2nd Year				2 ⁴	1		1	3				1		
3rd Year			1 ³	6 ⁴	2	1	1 ⁶	1	3				1	
4th Year	1				6	1 ⁵	1	1	1	3				1
Total Apprentices	1	0	1	9	9	3	6	5	4	3	1	1	1	3
Electricians ¹	24	21	18	17	17	22	22	23	23	22	26	25	23	25
Electricians Leaving ²		4	3	1		2	1		1	2		2	2	

¹ Electrician numbers include relay technicians and crew leaders who are also journeyman electricians.

² Note that the Electricians leaving line is the total number of electricians leaving the electrician job position. Some numbers left the company and some moved to other job positions within the company.

³ 1997 - 1 apprentice accelerated based on qualifications and performance.

⁴ 1998 - 7 apprentices accelerated based on qualifications and performance.

⁵ 2000 - 1 apprentice accelerated to journeyman classification based on qualifications and performance.

⁶ 2001 - 1 apprentice accelerated based on qualifications and performance.

Source: DR-130

- The above table describes the number of substation apprentices for the 10-year period under study, as well as for 2007 and 2008. It includes a breakdown by year showing how the apprentices have progressed through the program, and also includes for each year the number of substation mechanics leaving the Utility for any reason.
- A significant undertaking for the Decatur training facility this year was conducting a three day rubber gloving training session. The training was required as a result of the 2007 negotiations, where the Company successfully negotiated with the AmerenCILCO bargaining unit, IBEW local Union No. 51, the ability to work on energized 5kv-15kv lines using rubber gloving. This practice already exists in AmerenCIPS and AmerenIP.
- Historically, linemen refresher training consists of three days of training in the training center on a 4-year cycle. Refresher training topics include: worker protection, grounding, capacitor banks, transformer hookup, troubleshooting and installing meters,

²¹ DR-055, DR-092

underground troubleshooting and the use of phasing. There has been no refresher training conducted in the first half of this year, but plans are to resume training in the last quarter of 2008.

- Going forward, the Company plans to take the linemen refresher training to the field operating centers and conduct one day of training every two years on a 4-year cycle. To accomplish this, it is anticipated that an additional trainer will be hired.
- AmerenCILCO has a total of \$782,000 budgeted for the electric utility business training, of which approximately \$409,000 is planned to be spent on field crew and operator training.
- Outsourced service providers, such as electrical contractors, are not trained by Ameren Illinois. Management requires that the service provider retain and provide a qualified workforce. The training centers, however, do provide training to non-electrical contractors such as substation entering training and meter replacement training. In addition, periodically training is provided to firemen and police on working around energized conductors.
- The Company is instituting efforts with community colleges, chambers of commerce and community groups to develop and enhance a feeder program for new hires.

Safety

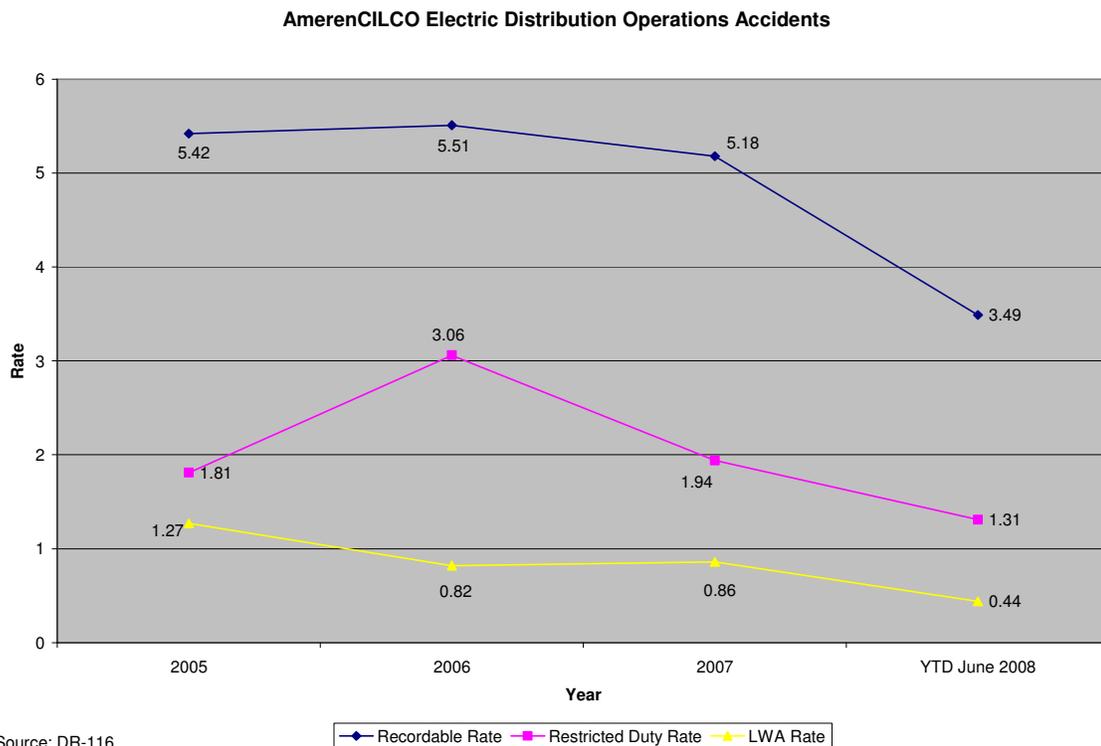
- The Ameren Illinois safety organization consists of six division safety specialists and five safety advocates. Although the safety specialists are direct reports to the division manager, they also have a dotted line or indirect reporting relationship to a lead safety specialist who works directly for the Company president.
- The division safety specialists, along with the division managers, act as the lead division safety persons. Job responsibilities and activities include: development of the division safety plan, implementation of the safety plan, training, coordinating safety committees and coaching supervisors. In general, the division safety specialists have an in-depth expertise in safety as well as specific knowledge in electric distribution safety.
- The main role of the safety advocate position is to be out in the field full-time interacting with field coworkers. Their interaction includes: job briefings, review of safety practices and providing field safety feedback. Ameren Illinois is in the process of formalizing the field safety advocates feedback to enhance their knowledge of field safety issues. A safety advocate supervisor's background is generally skilled crafts with extensive knowledge of electric field work. Interviews with field employees revealed that the role of safety advocate has been well received.
- Ameren Illinois coordinates some safety activities with Ameren Missouri, but does not get specific safety direction from them. The Illinois safety organization provides safety

assistance including accident investigation and preparation of safety materials to the Substation group, which reports to Ameren Missouri.

- Safety training occurs at the operating centers and the Decatur and/or Dorsett training facilities. Training is provided by the first-line supervisor or the safety specialist or some combination thereof. The division safety specialists are tasked with ensuring that appropriate required and discretionary safety training has been accomplished.
- In 2007, the Company initiated the SAFESTART program, which reminds employees to stop and think about the tasks at hand and their states of mind. For example, a poster reminds employees that rushing, frustration, fatigue and complacency can "cause or contribute to these critical errors" such as "eyes not on task," "mind not on task," "line-of-fire" and "balance/traction/grip," which increase the risk of injury. Much of the training associated with this program is conducted by bargaining unit employees.
- Represented employees are keenly aware of the Company's emphasis on safety, but some feel it is being driven by the numbers and take exception to the use of discipline for safety violations. Several interviewees opined that supervisors pay insufficient attention to safety when there is a large work backlog or when they are under emergency storm conditions. These opinions could not be substantiated by interviews with management employees. In general, the bargaining unit employees interviewed responded well to the Utility's recently-initiated the SAFESTART program.
- The Company has in effect a safety policy called "The Rules to Live By." This document embodies work rules that are critical or fundamental to safety work practices and potentially could danger employee health and safety if ignored. "The Rules to Live By" document clearly states that not following these rules will result in immediate progression to Step Four of the five step disciplinary process, which will result in immediate suspension. At the same time, the Utility is asking employees to discuss near accident misses so that others can learn. Certain union members indicated they are fearful to present this information because it could result in discipline. The Company is making an effort to overcome union fears when talking about near misses, but cannot guarantee that disciplinary action will not be taken as OSHA expects discipline to be given when employees break certain rules. The Company is attempting to develop a plan that meets both objectives.
- The Company exceeds OSHA's annual inspection requirement by performing safety inspections quarterly. Ameren refers to their safety inspection program as Job Behavioral Observations, and its goal is to have first-line supervisors conduct safety inspections at least monthly. For each field inspection, a report of what is observed is completed and entered into a database. Observations include both obvious safety omissions like hardhats, use of wheel chocks, position of the vehicles, etc. and more of electric safety observations like approach distances, voltage and grounding work practices, compliance with Worker Protection Assurance (WPA) work practices, etc.

- Ameren does not supply safety training to their contractors. They contractually require that the contractor comes to them with a viable safety training program in place and can meet the safety requirements for the contracted work.
- Formal safety training includes: hazard communications, asbestos, emergency evacuation training, confined space entry, fire extinguisher, first aid/CPR training, PCB & Oil Spill Training, CDL and defensive driver training, plus other programs provided on an annual or periodic basis.
- The figure below shows the recordable injury rate, the restricted duty rate and the LWA rate (lost work days away) for AmerenCILCO between 2005 and 2008 year to date. All three rates result from a comparison of the number of injuries to the number of hours worked and describe progressively the severity associated with Company accident experience.

Figure 20 - Electric Distribution Operations Accidents



- From the preceding figure it can be seen that:
 - The recordable injury rate is relatively flat through 2007; however, it appears to be trending sharply lower YTD June 2008.

- The restricted duty rate spiked upwards in 2006, but is trending lower in 2007 and YTD June 2008.
- The LWA rate has declined from 2005's experience and the decline is continuing through YTD June 2008.
- The Company's safety department indicated that Ameren Illinois does not specifically have safety benchmarking data used to compare the Illinois electric operations with other utilities. It does participate and possess benchmark information from the Edison Electric Institute Safety Survey that provides for provide general safety comparisons. This survey includes both Missouri and Illinois Ameren Energy Delivery and consists of gas, electric and corporate Company data and not just Illinois electric distribution operations.

5.2.3 Conclusions

Training

Typically in the electric distribution industry, the apprentice linemen training course covers a three year period consisting of both classroom and in-house training. At AmerenCILCO, the linemen apprentice program had been four years in length and the substation training program is three years in length. However, Ameren recently concluded negotiations with the union representing AmerenCILCO employees changing the linemen apprentice program to three years. This standardizes the apprentice program at three years within the Ameren Illinois Utilities. While the standardized program length is desirable, the length of time between when an apprentice is hired and is fully qualified presents an organizational challenge. Since 2001, the total number of journeyman linemen has been reduced from 85 to 68. However, from an in-house technical skills and skill gap perspective, the reduction is even greater due to the length of time required to develop an effective employee. Given the reluctance to place into position and train apprentices in advance of anticipated needs, the Utility will experience difficulties in maintaining in-house technical skills. Assuming there is a desire to maintain the in-house technical competency, the Company should enhance its ability to forecast future staffing requirements and hire accordingly.

AmerenCILCO's approach to utilizing qualified bargaining unit members as linemen training instructors helps assure that they are skilled in current technical requirements, as well as being able to effectively deliver the training.

Safety

Safety, as stated by all levels of management and bargaining unit personnel, is a leading AmerenCILCO objective. Based on our experience, the emphasis placed on safety is

consistent with what other utilities are requiring in today's workplace. The Company promotes a proactive Safestart Program while maintaining employee accountability, and also conducts extensive safety training and inspections.

In contrast to the emphasis on safety, the Company participates in minimal benchmarking to compare itself to other electric distribution utilities. Benchmarking can result in the identification of best practices, which may ultimately present safety efficiency and effectiveness opportunities.

5.2.4 Recommendations

- 5.2.1 Improve ability to forecast future bargaining unit employee retirements by annually conducting an informal survey of journeymen linemen and substation mechanics. This nonbinding survey should ask about the potential retirement plans of those who are within four years of retirement age.
- 5.2.2 Participate in an ongoing safety benchmarking survey with comparable electric distribution utilities, so that best practices may be identified and analyzed, and uncover opportunities for AmerenCILCO to proactively pursue.
- 5.2.3 Re-title the Director—Gas Operations position to reflect his Ameren Illinois electric technical training responsibilities.

5.3 Quality Assurance

5.3.1 Background

Formalized and documented quality assessment and control process for substations, distribution lines, meter reading and vegetation management are essential to ensure that the construction and maintenance of the system meets specification and safety standards. This is particularly critical where contracted services are employed, as is the case at AmerenCILCO. The quality assurance processes for substations, distribution lines, meter reading and vegetation management are discussed below.

5.3.2 Findings

Substations

- If substation work is contracted out, AmerenCILCO's relay crews will test the equipment before commissioning.

- Maintenance work is not normally contracted, but when it is contracted, a specific inspection order is generated and the results of the inspection by the Company's supervisor or maintenance engineer are documented in a database.
- Contracted construction inspections are the responsibility of the job engineer. Electric Delivery Technical Services (EDTS) are periodically requested to assist in conducting the inspection work. Construction engineers also have project midpoint inspection checkpoints where work is halted for the inspection, which includes job quality and conformance to standards and specifications. Construction engineers have a log to capture findings.
- AmerenCILCO substation staff conducts monthly substation inspections. This group is looking at implementing hand-held computer units to better automate and capture inspection data for trend and failure analysis.

Distribution Line Work

- The Quality Assurance Auditor primarily inspects overhead distribution, but also will review some underground installations and some 69 kV and 34.5 kV. The Auditor usually audits 15-20 jobs weekly. These jobs are either randomly sampled out of DOJM, provided by the local supervisor or samples provided by the engineering group. The Auditor uses a Quality Assurance (QA) checklist of 10-15 items that are most commonly found to be wrong. QA findings are put into a database and reports are sent to division managers and vice presidents. If maintenance items are noted, they are entered into DOJM for scheduling. The Auditor is not able to review corrective work due to time limitations and expects once an additional inspector is hired, they can begin auditing corrective maintenance. There may be a QA process gap in that lessons learned through this audit program may not be transmitted to the training center for inclusion in refresher courses.
- Line supervisors do spot checking on jobs as part of their NESC and line inspections.
- There is a Quality Assurance Group with two auditors that was initiated in December 2007. Their charter is to inspect mostly construction jobs executed by both in-house and contract crews to review standards compliance and NESC compliance. They inspect significantly less than 10% of the jobs.
- The Operations Supervisor will perform quality and safety checks while in the field, typically only several hours daily.

Metering

- In metering, contractors are under an incentive program for meter read accuracy.

Vegetation Management

- Vegetation management is entirely out-sourced. AmerenCILCO uses a 3-pronged inspection process:
 1. The vegetation contractors' management prepares and submits a formal written audit per crews each month.
 2. AmerenCILCO supervisors review these reports and field check 10% of the audits.
 3. AmerenCILCO supervisors conduct monthly drive-by audits of contractor crews to monitor compliance with safety, standards, performance and invoicing.

5.3.3 Conclusions

Based on the inspection results described above, we conclude AmerenCILCO has a formal but not completely documented quality assessment and control process for substations, distribution lines, meter reading and vegetation management.

Ameren Illinois has recently created the position of Quality Assurance Inspector and currently has two Quality Assurance inspectors for all of Ameren Illinois. While we applaud this program, we believe that the current number of inspectors is inadequate to perform quality assurance reviews across all three Ameren Illinois companies.

5.3.4 Recommendations

- 5.3.1 Establish a formalized documentation process for the quality assessment and control process employed by AmerenCILCO.
- 5.3.2 Increase the number of Quality Assurance inspectors, above the current level of two, to permit a larger sample of the system to be inspected annually for quality.

5.4 Distribution System Condition Assessment

5.4.1 Background

During the discovery and interview process, we got the impression that maintenance activities may have been less than adequate over the 1995 to present period. Our concern was if maintenance work has not been adequately accomplished over a prior number of years, the condition of the distribution system could be declining. This could necessitate devoting additional resources to remediate existing conditions on the system as well as to assure that the on-going maintenance program is on track and maintenance is being performed in a timely fashion.

Distribution Overhead Lines

We developed a random sample of AmerenCILCO's circuits, including worst performing circuits, to be visually inspected. This sample was developed using a group of recent work orders to identify specific poles to be reviewed. Our inspectors extended their review to a number of poles adjacent to the specified work order poles. In addition, we randomly selected several other circuits in AmerenCILCO's service area for inspections. We believe that the results of the resulting visual inspections are representative of the overall AmerenCILCO distribution system. Jacobs's inspectors were accompanied by Company engineers and other staff who provided transportation and locating services for the subject facility inspections. We examined a total of 715 poles covering 22 circuits across the AmerenCILCO service area.

We developed and employed a tailored Circuit Inspection Form and the results of the inspections were documented in a database for analysis. For each pole, we visually inspected and recorded the following information:

Table 11 - Circuit Inspection Methodology

Inspection Item	Methodology
Location	Roadside or in the right-of-way
Pole Condition	Visual check for damage, leaning and sounding the pole for rot at the butt and at about 4 feet up.
Number of phases	Number
X-Arms	Type and condition
Insulators	Condition
Devices	Type and condition
Conductor/Shield	Condition
Guy/Anchor	Type and condition
Attachments	Type
ROW condition	Encroachment of vegetation along the span from the prior pole to the subject pole

Substations

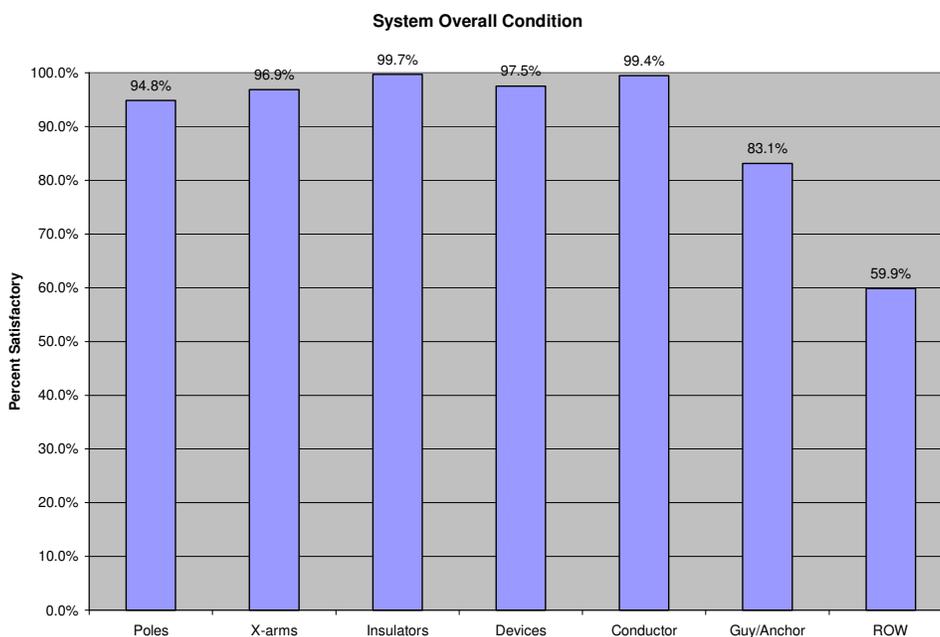
As part of the distribution system inspection process, the inspectors inspected four distribution substations that were within the circuit selections for AmerenCILCO.

5.4.2 Findings

Distribution Overhead Lines

- AmerenCILCO's distribution system appears to be in good condition electrically and mechanically based on the inspection results shown below.

Figure 21 – Summary of System Inspection Results



- Details of the inspection results are shown in the table below.

Table 12 - Details of Inspection Results

Pole Condition	Count	Percent
0-Satisfactory	678	94.8%
1-Upper Pole Decay	16	2.2%
2-Ground Line Decay	11	1.5%
3-Termite Damage	2	0.3%
4-Slight Lean (< 15 deg)	27	3.8%
5-Severe Leaning (> 15 deg)	2	0.3%
6-Broken	0	0.0%
7-Treated (Wrap, etc)	0	0.0%
8-C-Trussed	0	0.0%
9-Adjacent Pole (Old & Needs Removal)	1	0.1%
10-Other	7	1.0%

Insulator Condition	Count	Percent
0-Satisfactory	713	99.7%
1-Contaminated, Residue	0	0.0%
2-Visible Crack	0	0.0%
3-Broken	0	0.0%
4-Leaning	0	0.0%
5-Tie Unraveled	0	0.0%
6-Pin Pull/Pushing Thru Arm	0	0.0%
7-Pin Broken	0	0.0%
8-Pin corroded	2	0.3%
9-Other	0	0.0%
	715	100.0%

X-Arm Type	Count	Percent
0-Wooden (Single)	258	33.2%
1-Wooden (Double)	147	18.9%
2-Stand-Off-Metal	12	1.5%
3-Stand-Off- Poly	1	0.1%
4-Stand-Off w/ Squirrel Guard	0	0.0%
5-Alley Arm	2	0.3%
6-None	353	45.4%
7-Other - list	4	0.5%
	777	100.0%

X-Arm Condition	Count	Percent
0-Satisfactory	741	96.9%
1-Split	21	2.7%
2-Burnt/Rotted	2	0.3%
3-Termite Damage	1	0.1%
4-No Braces (on X-arm)	0	0.0%
5-Failing @ Thru-Bolt	0	0.0%
6-Broken	0	0.0%
7-Corroded	0	0.0%
8-Other	0	0.0%
	765	100.0%

Device	Count	Percent
0-None	332	24.8%
1-Fuse (Cut-Out)	353	26.4%
2-Arrestor	305	22.8%
3-XFMR	256	19.1%
4-Capacitor-Fixed	1	0.1%
5-Capacitor-Switched	2	0.1%
6-Regulator (No.)	3	0.2%
7-Recloser/Sectionalizer	8	0.6%
8-Disconnects-Single Blade	0	0.0%
9-3-Phase Tie Switch (Type)	77	5.8%
10-Riser on Pole	0	0.0%
11-Other - List	0	0.0%
	1337	100.0%

Device Condition	Count	Percent
0-Satisfactory	985	97.5%
1-Corrosion, Rust, Pitting	14	1.4%
2-Bushing Broken/Cracked	0	0.0%
3-Arrestor - Missing	0	0.0%
4-Arrestor - Obsolete	1	0.1%
5-Arrestor - Long Lead	0	0.0%
6-Arrestor/Failed/Damaged	4	0.4%
7-Hardware Hanging	0	0.0%
8-XFMR Disc'd (Needs Remov	0	0.0%
9-Riser Pothead/Connection Pi	0	0.0%
10-Riser w/o Ventilation	1	0.1%
11-Other	5	0.5%
	1010	100.0%

Conductor Condition	Count	Percent
0-No Visible Problems	712	99.4%
1-Conductor Sag	2	0.3%
2-Tight Phase Separation	0	0.0%
3-Poss Clearance Violation	1	0.1%
4-Clamps Worn/Loose	0	0.0%
5-Ties Unraveled	0	0.0%
6-Pitted,Corrosion	1	0.1%
7-Strands Broken	0	0.0%
8-Some Melting	0	0.0%
9-Guy, Other Contact	0	0.0%
10-Ground Wire Cut or Missing	0	0.0%
11-Other	0	0.0%
	716	100.0%

Shield Wire Condition	Count	Percent
0-Satisfactory	395	98.8%
1-No Shield Wire	314	44.0%
2-Shield Wire < 45 Degrees	0	0.0%
3-Shield Wire > 45 Degrees	1	0.3%
4-Corrosion	4	1.0%
5-Broken Strands	0	0.0%
6-Other - List	0	0.0%
	400	100.0%

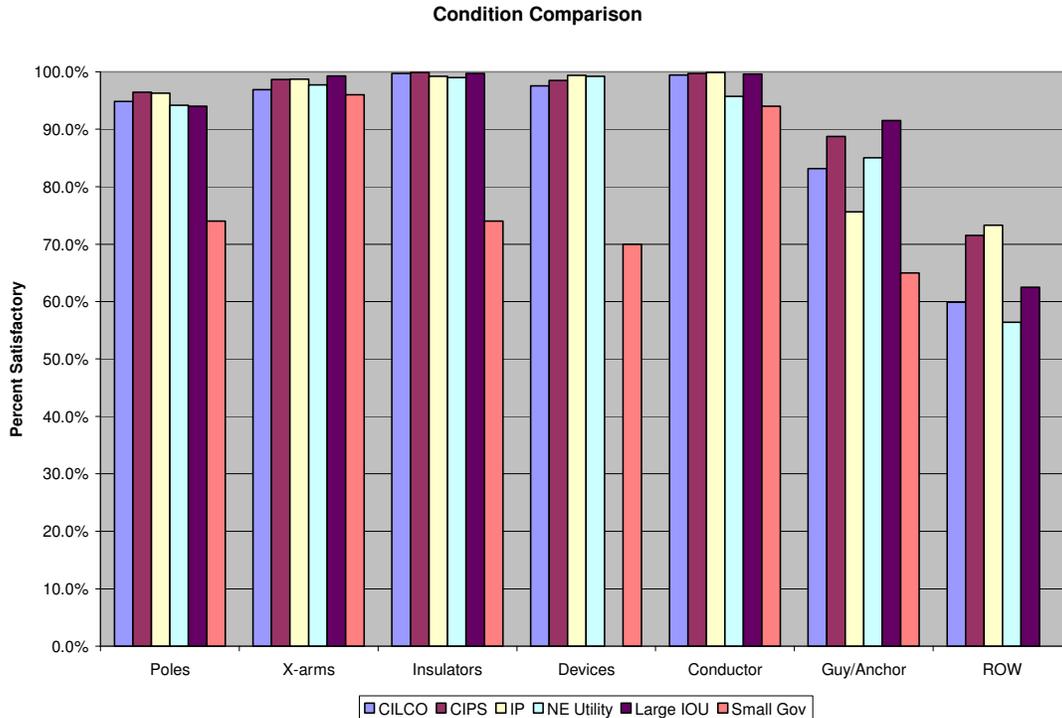
ROW Condition	Count	Percent
0-Clear (No trees or Underbrush)	323	45.2%
1-Trees/Limbs >8'	105	14.7%
2-Trees/Limbs 3>d<8'	117	16.4%
3-Trees/Limbs < 3'	119	16.6%
4-Trees/Limb Contact	51	7.1%
5-Danger Tree	0	0.0%
6-Underbrush w/in 3'	0	0.0%
7-Vines, Moderate	0	0.0%
8-Vines, Severe	0	0.0%
9-Other	0	0.0%

Guy/Anchor Condition	Count	Percent
0-Satisfactory	261	83.1%
1-Guy Wire Strands Broken	3	1.0%
2-Guy Rusted	22	7.0%
3-Anchor-Tight	0	0.0%
4-Anch - Loose or Broken	0	0.0%
5-Guy Missing or Deteriorated	0	0.0%
6-Slack Span on Stub	0	0.0%
7-Guard Defective/Missing	16	5.1%
8-Other	9	2.9%

Attachments	Count	Percent
1-Telephone	349	48.8%
2-CATV	390	54.5%
3-Unknown	8	1.1%
4-Pole Extender	1	0.1%
5-Secondary	280	39.2%
6-Service	386	54.0%
7-Street Light/Spotlight	139	19.4%
8-Other	13	1.8%
	715	100.0%

- AmerenCILCO's overhead electric distribution system condition compares favorably with several other utilities²² for which we have conducted condition assessments.

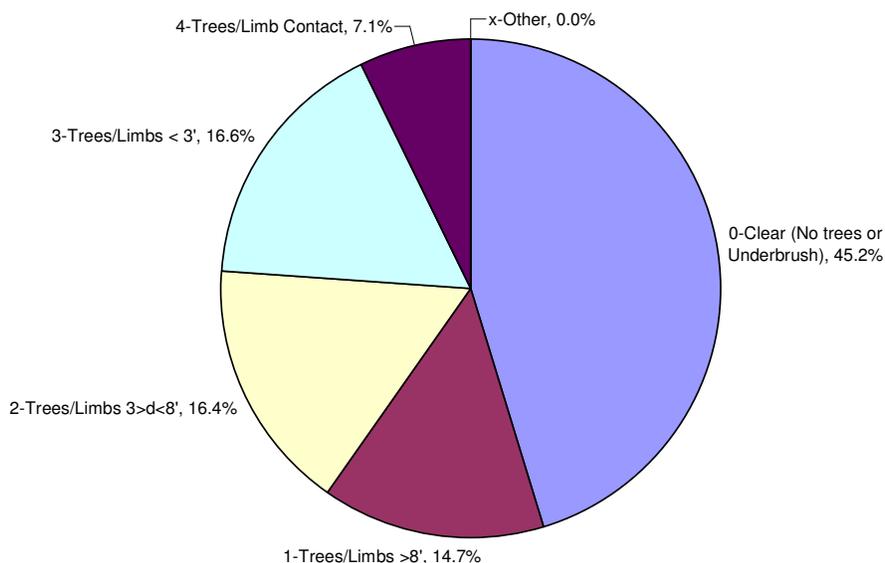
Figure 22 - System Condition Comparison



- However, vegetation encroachment is a concern (as illustrated in the diagram below).

²² The New England Utility is mid-sized, the Large IOU and the Small Government utilities cannot be identified as per contractual confidentiality agreements.

Figure 23 - Status of Vegetation Encroachment



- While 59.9% of the ROW is clear of vegetation or with vegetation beyond 8 feet; this is below results for other large Investor Owned Utilities.²³
- Additionally, based on our physical inspection, over 23.7% of the circuits have vegetation in direct contact with the conductor or within 3 feet, posing an immediate risk. The overall ROW condition is depicted in the following:

Table 13 - ROW Condition

ROW Condition	Percent	Risk Factors
0-Clear (No trees or Underbrush)	45.2%	
1-Trees/Limbs >8'	14.7%	Risk factor in 3-5 years
2-Trees/Limbs 3>d<8'	16.4%	Risk factor in 1-3 years
3-Trees/Limbs < 3'	16.6%	Immediate Risk Factor
4-Trees/Limb Contact	7.1%	
x-Other	0.0%	

²³ Many investor owned utilities right of way is maintained at better than 62% clear or with vegetation beyond 8 feet.

Distribution Substations

- In general the condition of the distribution substations appeared adequate. The inspector’s impression ratings ranged from fair to excellent. In some cases, fence and/or access gate grounding was inadequate. Mostly, the substation yards were clean and well maintained, but there were a few exceptions. Details of the inspections are shown in the following table.

Table 14 - Distribution Substation Condition

Sub ID	Name	# of Xfmrs	Oil Leaks	Fence	Fence grounds	Gate grounds	Overall Appearance	Comments
B81	Groveland	2	0	Satisfactory	Yes	Yes	Good	Some bird nests around fan motors on transformers
D35	Henry	1	0	Good	Yes	No	Good	Gate ground broken off at bottom
	Ozark	1	0	Rusty	Yes	No	Good	Gates not grounded to posts, some vegetation intrusion under fence
B25	Williams Field	1	0	Good	Yes	Yes	Excellent	Birdnests in structure

5.4.3 Conclusions

AmerenCILCO’s overhead distribution plant appears to be in good mechanical and electrical condition. Several of the circuits that we examined—mainly in the Northern AmerenCILCO area—had been inspected by contract inspector crews who were executing the ICC mandated NESC inspections. We noted a number of instances where defects in pole structure or cross arms were not noted as part of their inspection data.

Since AmerenCILCO is on a 4-year vegetation trim cycle, we would expect to see some limbs within 3 feet of the conductor or in contact; however, 23.8% of the circuits were in contact with vegetation. The results appear to indicate that the trim program may be somewhat behind in execution. In some areas where there are fast-growing species, more aggressive trim programs may be needed.

AmerenCILCO’s distribution substations appear to be in adequate electrical and mechanical condition; however, fence and gate grounding should be examined during regular inspections and these parameters should be added to inspection procedures if not presently included.

5.4.4 Recommendations

- 5.4.1 The company should continue to enhance its quality control program for outsourced circuit inspections to assure that all defects are noted.
- 5.4.2 AmerenCILCO should review its monitoring of vegetation encroachment to assure that a 4-year trim cycle is sufficient to minimize tree contact or near proximity to overhead conductors.

5.4.3 AmerenCILCO should review its substation inspections to assure the adequacy of fence and gate grounds.

5.5 Call Center

5.5.1 Background

Ameren has integrated its customer service function into a single department and has created a virtual call center with locations in Peoria, Pawnee and Decatur that services all the Ameren Illinois service territory. Ameren has both electric and gas customers, and Ameren Customer Service Representatives (CSR) can answer calls from all customer types and service areas. There are four groups within the call center: General Residential, Solution, Monitoring and Business. There is a brief description of the Solution, Monitoring and Business functions below.

The call center uses numerous shifts to cover call volume. Since the call centers are virtual (having the ability to answer calls from all Ameren customers), there is 24-hour coverage with Pawnee and Decatur employees covering the times when the AmerenCILCO call center is closed. There are three toll-free numbers for customers to call, and these are routed to the call center automated call distributor. The call center has participated in Ameren Emergency Operation exercises and training. The Company has numerous major technology enablers that help the call centers perform their mission. The call center has been J.D. Power and Associates certified for providing “An Outstanding Customer Service Experience.”

The Solution Center aids in specific functions of the Contact Center. The main objective of the Solution Center is to perform back-office off-the-phone tasks that can significantly impact Customer Service. The designated tasks have centralized processes that define the roles and responsibilities of the Solution Center employees.

The Monitoring Group is responsible for the Quality Assurance Program, which provides consistent and unbiased feedback to employees in a timely manner. The main objective of the Quality Assistant is to assist with the quality monitoring process. Monitoring is viewed as a way to improve the relationship between the employee, the customer and Ameren.

The Business Group responds to all customer inquiries, both verbal and written, in a manner that strives to assure that customers are treated with the utmost concern, respect, courtesy and sensitivity, while also treating each customer fairly and equitably.

5.5.2 Findings

Staffing²⁴

- The call center is staffed with approximately 69 employees. AmerenCILCO uses Manpower, Inc, an employment services company, as the way to source new employees. Each Manpower staff undergoes 17-25 weeks of training, which serves as the screening process enabling the call center to make an offer of permanent employment. The Utility uses a lab environment for training. The Company has three home agents who are the first agents used during emergencies. AmerenCILCO call center has experienced an average turnover rate of 23% annually, which is in line with industry standards.

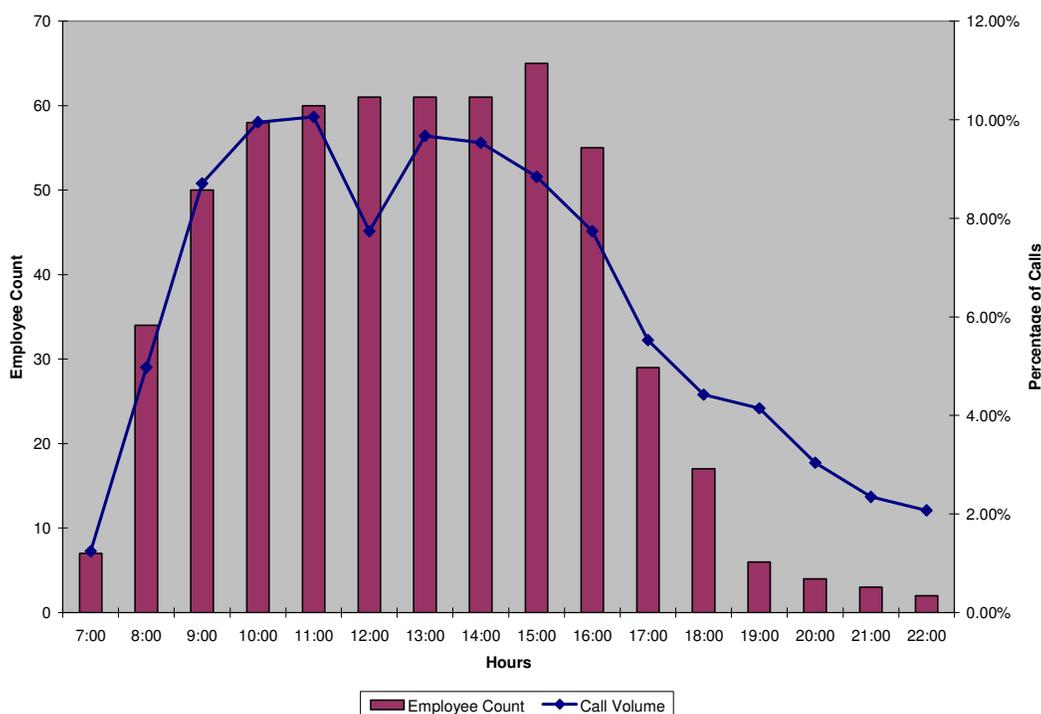
Scheduling²⁵

- The first shift begins at 6:55 am and AmerenCILCO brings on additional CSRs every 30 minutes thereafter. The Company has an electronic workforce management system and call center optimization software that looks at half-hour increments and historical call patterns to determine the total number of FTEs needed and to determine shift assignments, but prefers to make incremental adjustments to staff based on known issues.
- We analyzed how the CSR's shifts were scheduled to determine the adequacy of staff during the peak call times.

²⁴ DR-111 DR-110

²⁵ DR-064

Figure 24 – Call Center Hourly Staffing



- As can be seen in the above figure, the addition of CSRs is consistent with the typical hourly increase in call volume.²⁶

Technology²⁷

- The Company uses numerous main systems to enable the call center personnel to better serve the customer. These systems are integrated with other company systems such as meter reading, outage management and service order. Below is a brief description of each system.

Customer Information System – Referred to internally as CSS (Customer Service System). This system is Accenture’s Customer System that was originally installed in 1998 and was extensively modified to support internal and mandated regulatory needs (such as Illinois Deregulation). The system is maintained in- house and provides the following (not limited to) functionality: Active/Final Collections, Bankruptcy, Budget Billing, Bill Presentation/Printing, Billing, Cancel Adjust/Cancel Rebill, Cash Processing, Charge Offs, Collection

²⁶ Teletraffic Modeling for Personal Communications Services Derek Lam, Donald C. Cox, Jennifer Widom Electrical Engineering & Computer Science Depts. Stanford University

²⁷ DR-024

Agencies, Collection Arrangements, Orders (Connects, Cuts, Disconnects, Investigations, etc.), Deposits, Deregulation, Dollar More, DSS Billing (Dereg), EFT, Energy Assistance includes eLI HEAP, GL/Revenue Reporting, Landlord Agreements, Lighting, Marketing Campaign, Medical Equipment Registry [MER], Non-service accounts, Payment Agreements, Refunds, Revenue Protection, Summary Billing, Taxes, USMS Billing, etc. The CSS system is interfaced with OAS, GIS, DOJM, eCustomer, etc, and is also viewable (internally on our intranet) through the eCSS system. Numerous other smaller systems and software are utilized within CSS to accomplish its operations and functions.

VRU – Voice Response Unit. This internal system accepts customer calls, prompts them to determine the nature of their call and either completely handles the call or directs the call to a customer service rep. Calls completely handled within the VRU include reporting outages, obtaining basic account information (balance and payment info), etc. An external vendor-managed VRU system is also engaged when call volume exceeds specified levels. The vendor VRU handles high volume outage calls and passes them back to the OAS system.

CSS Data Warehouse – CSS data were recently extracted into this data warehouse. The Oracle Answers-based system is utilized to analyze customer revenue and usage information.

eCustomer –This system allows customers to perform transactions on their accounts through Ameren.com. The system is interfaced with CSS and provides the following functions: View Bill, Pay Bill online, View Account activity and payments, change email address, change phone numbers, change billing address, turn on service, turn off service, Request copy of bill, signup for budget billing, stop budget billing, etc. The system also provides landlords the ability to manage their service locations.

High Volume Overflow Application (HVOA) –Stericycle phone lines are integrated into Ameren’s overall Call Center phone line design such that calls automatically overflow to the Stericycle IVRs during high volume periods. This is an application that receives customer calls when internal Ameren IVR and customer contact center lines are full. Customers can log a power outage call, receive an estimated restoration time for an existing outage, and be transferred to a contact center representative for emergency orders. Call overflow capacity is 15,000 calls per hour through summer 2007, and 30,000 calls per hour after summer 2007.

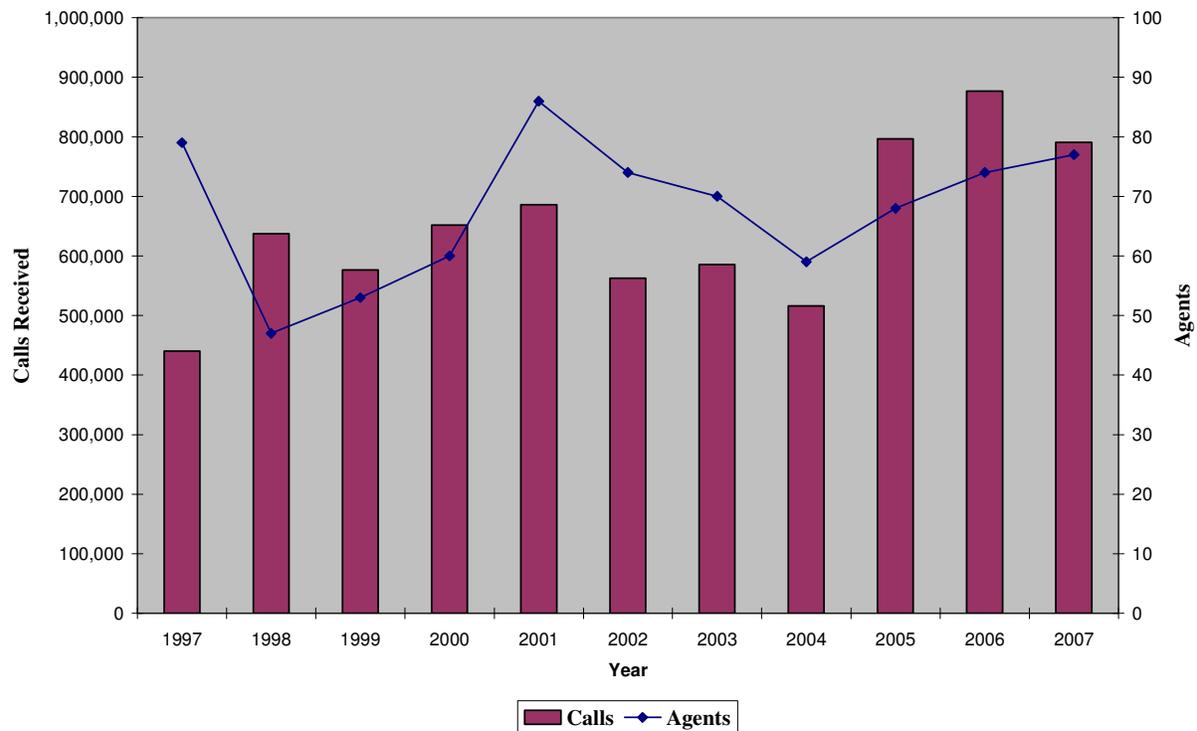
Performance²⁸

- Customer contact call center performance is typically evaluated on the basis of key measures such as:
 - Average Speed of Answer (ASA)
 - Service Level (%)
 - Rate of Abandoned Calls (%)
- Each of these measures is highly susceptible to the influence of factors such as the number of customer service representatives available to handle calls and the average or longest duration of typical calls. Both of these factors are dependent on the circumstances and events being encountered. During normal operations, the number of customer service representatives may or may not be adequate, depending on the time of the event, the day(s) on which it occurs or the duration involved. Similarly, it is not unusual for the duration of calls to be longer during emergency situations as explanations tend to take longer than under routine conditions. We have excluded the automated agent so we can evaluate the performance of the live agents.
- The company has set goals for :
 - ASA—calls answered in 60 seconds or less.
 - Service Level—AmerenCILCO does not track service level and they expect every call to be answered in 60 seconds or less.
 - Abandonment Rate—The number of calls that were not answered.

²⁸ DR-062

Figure 25 – Total Calls Received by Live Agents

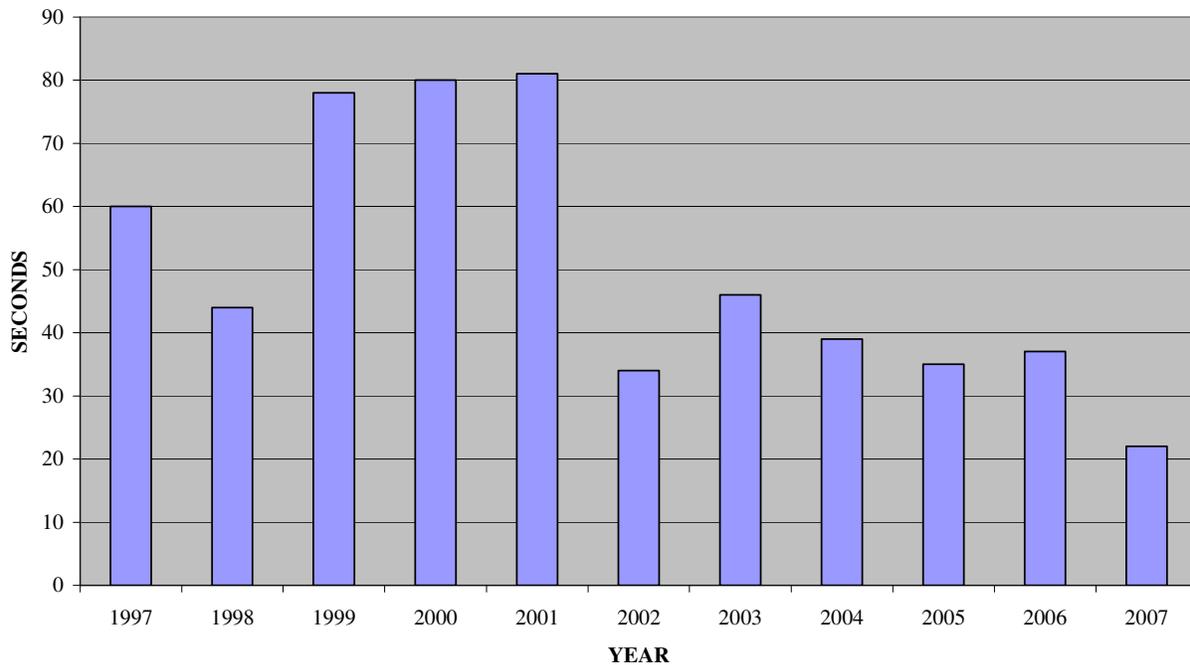
CALLS RECEIVED vs LIVE AGENTS



- As the total number of calls received by the live agents is on a slight upward trend and has increased so has the number of live agents.

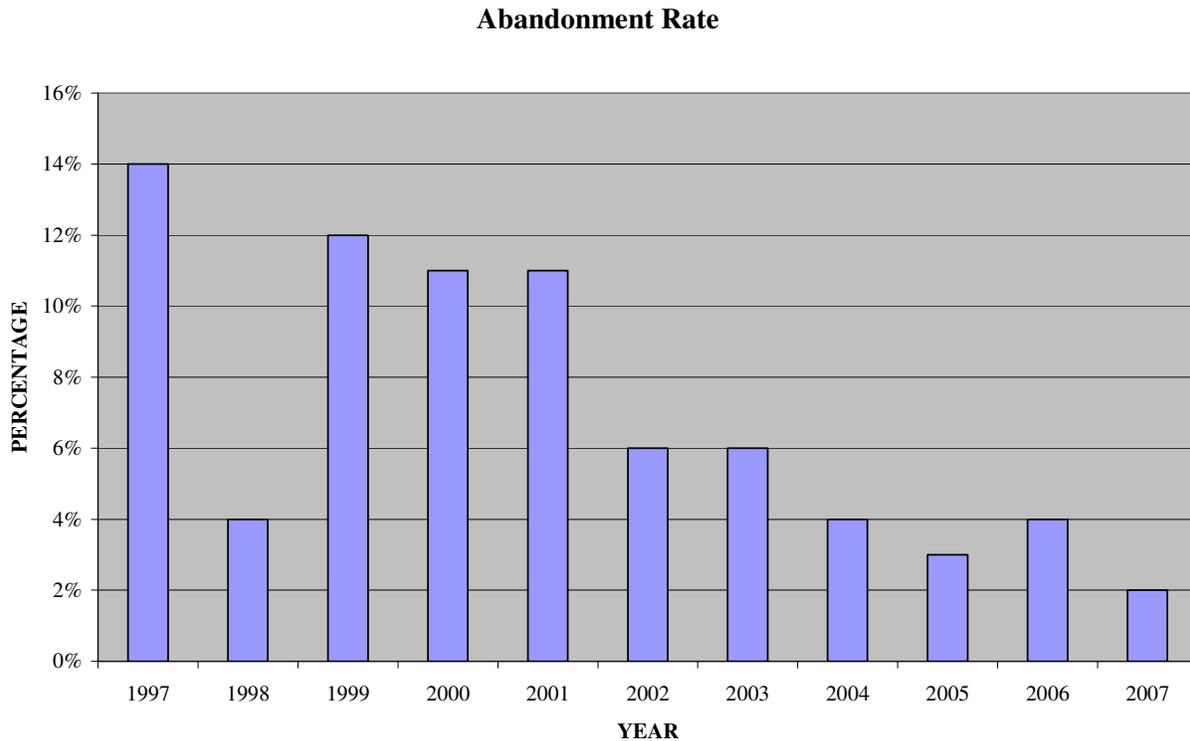
Figure 26 - Live Agent Average Speed of Answer

AVERAGE SPEED of ANSWER



- The average speed of answer has been below the company's goal of 60 seconds in 8 of the 11 years and is on a downward trend.
- Service level for the company is expected to be 100% of the calls answered within 60 seconds; the company has matched or exceeded its goal in 8 of 11 years.

Figure 27 - Live Agent Abandonment Rate



- The abandonment rate is decreasing but has met the industry average for utility inbound call centers of 3.5%²⁹ only twice. They have met the state mandated levels of 10%³⁰ for 7 of the 11 years.
- AmerenCILCO participates in three benchmark studies:³¹
 - Market Strategies International, Inc.
 - J.D. Power & Associates
 - Customer Contact Index
- The Utility has received a satisfactory rating in each of the studies, but has shown a continued decrease in customer satisfaction. Below is the result of the studies.

²⁹ Purdue University Call Center Benchmark Study @ 2006

³⁰ DR-028

³¹ DR-083

**Table 15 - Market Strategies International Overall Customer Satisfaction
Ameren CILCO**

Year	Residential
2005	7.58
2006	7.58
2007	6.61

0-10 scale, total satisfied scores = 6-10

Table 16 - J.D. Power & Associates Overall Customer Service Index Score

Year	Residential Electric	Business Electric ³
2003	100 (old); 725 (new)	n/a
2004	96 (old); 762 (new)	102 (old); 657 (new)
2005	94 (old); 737 (new)	104 (old); 674 (new)
2006 ¹	663	648
2007 ²	602	655

1. In 2006, J.D. Power & Associates moved from giving index scores based on a centered-to-100 scale, to giving scores based on a maximum 1000 point scale, in order to provide improved reporting and trending capabilities. Whereas the "high" scores on the centered-to-100 scale were normally in the 110-120 range, the "high" scores on the maximum 1000 point scale typically range from 690-770. Due to the change, some index scores from prior years were recalculated using the maximum 1000 point scale, in order to make an "apples-to-apples" comparison.
2. In 2007 Ameren only reported the J. D. Power & Associates numbers for Ameren Illinois and not individual companies.
3. The Business Electric customer service index is for Ameren Illinois not the individual companies.

**Table 17 – Customer Contact Tracking Study
Overall Customer Satisfaction with Electric Utility**

Year	Overall Satisfaction
2004	89%
2005	89%
2006	86%
2007*	82%

* In 2007 the Customer Contact Index was reported for Ameren Illinois and not individual companies.

5.5.3 Conclusions

The company staffs the call center in accordance with the flow of call volume and uses technology to enhance the call center's ability to service customers in an effective and efficient manner. The technologies employed include: Customer Service System, High

Volume outage Call Answering System, Integrated Voice Response Unit System, Electronic Workforce Management & Real Time Adherence System, Automatic Call Distributor, Call Quality Monitoring & Survey System, and Computer Telephony Integration System. AmerenCILCO's call center internal goals and KPI are satisfactory and increasing indicating that the center is managed in an effective and efficient manner. AmerenCILCO's call center in the last five years has seen a decrease in customer satisfaction surveys conducted by Market Strategies International, Inc, J.D. Power & Associates, and Customer Contact Index. This could be a result of issues such as multiple storms and/or rate increases which is beyond the direct control of the call center. As noted in the Market Strategies 2007 report³² "The influence of electric rate increases and storm outages together is also being measured in the growing negative perceptions of Ameren's customer service processes, including performance of employees, general accessibility, and billing. All have experienced significantly declining performance in total positive response compared to one year ago". And "The rate increases are mentioned prominently by more than one-half of customers as the primary reason behind their unfavorable impressions of Ameren in 2007."

5.5.4 Recommendations

None.

³² DR-083

Appendix A

List of Recommendations

Section	No.	Recommendation
Operations & Maintenance	5.1.1	Ameren should update the Open Position Action Plan annually to continue to reflect the workforce needs as specified in the Towers Perrin Work Force Projection Study. Once established, the Open Position Action Plan should be aggressively pursued to increase the electric field workforce.
	5.1.2	Ameren Illinois should articulate and implement a staffing strategy that promotes consistent in-house and outsourced worker utilization between various divisions and operating centers.
Training & Safety	5.2.1	Improve ability to forecast future bargaining unit employee retirements by annually conducting an informal survey of journeymen linemen and substation mechanics. This nonbinding survey should ask about the potential retirement plans of those who are within four years of retirement age.
	5.2.2	Participate in an ongoing safety benchmarking survey with comparable electric distribution utilities, so that best practices may be identified and analyzed, and uncover opportunities for AmerenCILCO to proactively pursue.
	5.2.3	Re-title the Director— Gas Operations position to reflect his Ameren Illinois electric technical training responsibilities.
Quality Assurance	5.3.1	Establish a formalized documentation process for the quality assessment and control process employed by AmerenCILCO.
	5.3.2	Increase the number of Quality Assurance inspectors, above the current level of two, to permit a larger sample of the system to be inspected annually for quality.
Distribution System Condition Assessment	5.4.1	The company should continue to enhance its quality control program for outsourced circuit inspections to assure that all defects are noted.
	5.4.2	AmerenCILCO should review its monitoring of vegetation encroachment to assure that a 4-year trim cycle is sufficient to minimize tree contact or near proximity to overhead conductors.
	5.4.3	AmerenCILCO should review its substation inspections to assure the adequacy of fence and gate grounds.

Appendix B

Background

Every electric utility is expected to extend its service to meet the needs of a growing population. Power is needed to be provided in a reliable, safe, and timely fashion. To maintain high standards of service quality and safety, utility managers traditionally have opted for the control of an in-house work force. As a result, many utilities did not have to rely on others to provide support to its staff or rely on others to meet its customers' needs.

In view of regulatory reform and restructuring, many regulated distribution utilities developed strategies to shift risk, reduce costs, and refocus attention on core functions. Core functions are the tasks the utility and its in-house workforce perform best. Utility management decisions to outsource raise questions about the relationships between the distribution utility and its employees, the external service providers, the regulators and the ultimate customer. This report focuses on the relationship between the distribution utility, its workforce and customers.

Outsourcing can be defined as creating a long-term, results-oriented relationship with an external service provider for activities traditionally performed within the company. Usually, the term "outsourcing" applies to a complete business process, where some degree of managerial control and risk are shared by the service provider. This compares to the relatively straightforward procurement of goods or services where support is rendered, but the company continues to assume the risks and takes management responsibility for the requested service.

Outsourcing Philosophy

Essential distribution functions include distribution system planning: the construction, operation, and maintenance of the distribution circuits and substations; connection of new residential, commercial, and industrial customers; and the monitoring and emergency restoration of the distribution system. Most utilities contract out a portion of construction and maintenance of the distribution system, including functions like tree trimming and other right of way maintenance as well as distribution line and substation construction. All essential distribution functions are potential candidates for outsourcing. The business benefits that can be achieved through outsourcing are well documented and have been proven by past experience, both within and outside the utility industry. These benefits include:

- Cost savings are typically achieved by lower labor costs, increased productivity, and economies of scale delivered by an outsource service provider.
- Performance improvement is generally delivered through the use of technologies and business processes that may be better than those employed by the utility, and where the

service provider can invest and focus on functions that are core to its business, but not core to the utility that chooses to outsource them.

- Increased flexibility/scalability is provided through contract terms that support different levels of business activity, allowing costs to fluctuate with changing volumes of work. This is a key benefit for utilities with fluctuating activity volumes.
- Access to innovation and best practices is made available by the service provider whose primary business is to support specific business functions. This focus allows them to build expertise and access a broader market of clients, enabling them to identify and leverage good ideas from a wide base of exposure.
- Access to a labor force is supplied by a service provider who focuses on specific functions, hires resources specifically for these functions, and provides greater career development opportunities associated with the performance of a specific type of work, may lead to enhanced efficiencies.

At AmerenCILCO, outsourcing has primarily sought increased flexibility in addressing fluctuating workload volumes and subcontracting of lower skilled work. Driven by the need to maintain in-house knowledge of the distribution and transmission system and the desire to have first responders be company staff to ensure quality service and help preserve brand recognition, distribution system contractors are primarily used to fill workload peaks and perform lower skilled work. Currently, about 29% of AmerenCILCO's distribution system line work is outsourced.

This approach and level of outsourcing represents a moderate amount from our experience, and places certain obligations on the Utility's management as well as impacts on the Utility's workforce. Management must ensure that the quality of the work completed is consistent with customer service standards, that the cost of the work is reasonably similar to what the work would cost if were performed by the in-house staff, and that high quality customer service is provided, while the workforce may see a reduction in the total number of employees and a reduction in the breadth of job skills. Unions may attempt to erect barriers to outsourcing through their negotiated labor agreements by seeking language which may prohibit or greatly limit the Company's ability to outsource. In addition, unions may seek to gain support for their position by using their political influence concerning job loss.

Appendix C

Organized Labor

This appendix presents an overview of the events that occurred during the study period which have helped to shape organized labor at AmerenCILCO. We will first list the extensive organizational changes and then the more typical utility technological enhancements that have taken place. We then briefly review the history of outsourcing and the type of work activities contracted. Finally, we will highlight the subcontractor contract language contained in the IBEW Local Union 51 agreement, which with some minor exceptions has remained unchanged throughout the study period.

Events Impacting Workforce Employment

Over the study period AmerenCILCO employees were impacted by mergers, industry restructuring, and organizational changes. In addition, the workforce was directly affected by numerous material, equipment and automation changes.

A chronology of major events impacting the workforce included:

- 1995: CILCO was organized as a traditional utility with gas and electric operations and generation; and consisted of 1487 utility employees.
- 1995-1996: early retirement packages were offered reducing layers of management and Company employment to 1221.
- 1997-1998: company was reorganized into three business units: local distribution for operations and maintenance work, customer service for customer contact activities, and technical services for construction work. Also, three operations centers were closed.
- 1999: AES Corporation purchased CILCO; initiating a vastly different management philosophy which included: reduced layers of management, increase supervisory spans of control, self-directed teams, and elimination of the three-business-unit concept.
- 1999-2001: early retirement packages were offered, reducing Company employment to 900.
- 2003: Ameren Corp. purchased CILCO; reestablishing a more traditional utility management structure: increase supervision, Ameren technical systems, Ameren distribution dispatch operations, corporate functions centralized in St. Louis, and generation facilities transferred to unregulated subsidiary.
- 2005-2006: Ameren acquired Illinois Power, resulting in the establishment of seven divisions and the co-mingling of AmerenCILCO and AmerenIP employees in Division I, III, and IV.

Throughout the study period, various material, vehicle, equipment and automation improvements were made. Some major improvements included:

- Material handling bucket trucks, track type trenchers, radar fault detectors, etc.
- Increased use of directional drilling by contractor crews as an alternative to open trenching.
- CILCO customer service system
- Contact center communications system
- Automated mapping and customer order system
- Processing scheduling of service personnel utilizing mobile data terminals
- AmerenCILCO customer service system
- Upgrade in contact center communications system
- Outage assessment system including managing of daily service orders
- Planning and prioritization system

Outsourcing History and Activities

In general, line construction core business activities have been assigned to the AmerenCILCO employees first and contractor crews have been used to help smooth out workload peaks and valleys. Typically, contractors would be assigned projects of a larger scale, projects requiring special equipment or skills, work activities that would tie up in-house resources for an extended period or require extensive travel from an operating center. Gradually, contractor resources became an extension of the AmerenCILCO workforce in responding to large-scale outages. Contractors were expected to give the company first consideration for the use of their resources in responding to outages if they were working on AmerenCILCO projects.

In addition, the Company has increased the use of contractors for activities that do not require the high skill levels possessed by journeyman linemen, relay technicians and substation journeymen. Typical linemen-related lower skilled work that has been outsourced includes: meter reading, underground line locating, non-pay disconnects and reconnects, pole testing and treating, and clean up after construction completion. Similarly, lower rated substation related work that has been moved to contractors includes: foundation construction, fencing repair and installation, grounds maintenance, etc.

AmerenCILCO has also negotiated a sharing of what had been traditionally considered electric work with its gas operating personnel. Work activities that can be performed by either discipline include: electric facility locates, electric disconnect/reconnects an electric succession reads.

In the meter reading area, the number of in-house meter readers has been reduced in anticipation of the adoption of automated meter reading (AMR). By replacing meter reading vacancies with contractors, the transition to an AMR environment should ultimately have less impact on the workforce.

Labor Agreement Contracting Language

The bargaining unit employees of AmerenCILCO are members of IBEW Union Local 51. The section of the labor agreement between the parties concerning contracting of work is Article VII Paragraph 1. This article basically states that the Company will not contract out any work which is ordinarily and customarily done by its regular employees, if as a result of the contracting it is necessary to lay-off, cause involuntary transfers or reduce the rate of pay of any employees who customarily performed the work.

In the most recently concluded negotiations, which took place in 2007, it was further agreed that when the Company needs staffing for emergency conditions, it will first attempt to contact all qualified bargaining unit employees and then contractors who pay at a minimum an equivalent wages and benefits. If those resources for the emergency condition are inadequate, the Company would then contract with qualified Mutual Aid Assistance providers and then any qualified contractors or individuals. The understanding is this last group would not have to conform with wage or benefits requirements, and that they would be the first to be released as emergency work subsides.