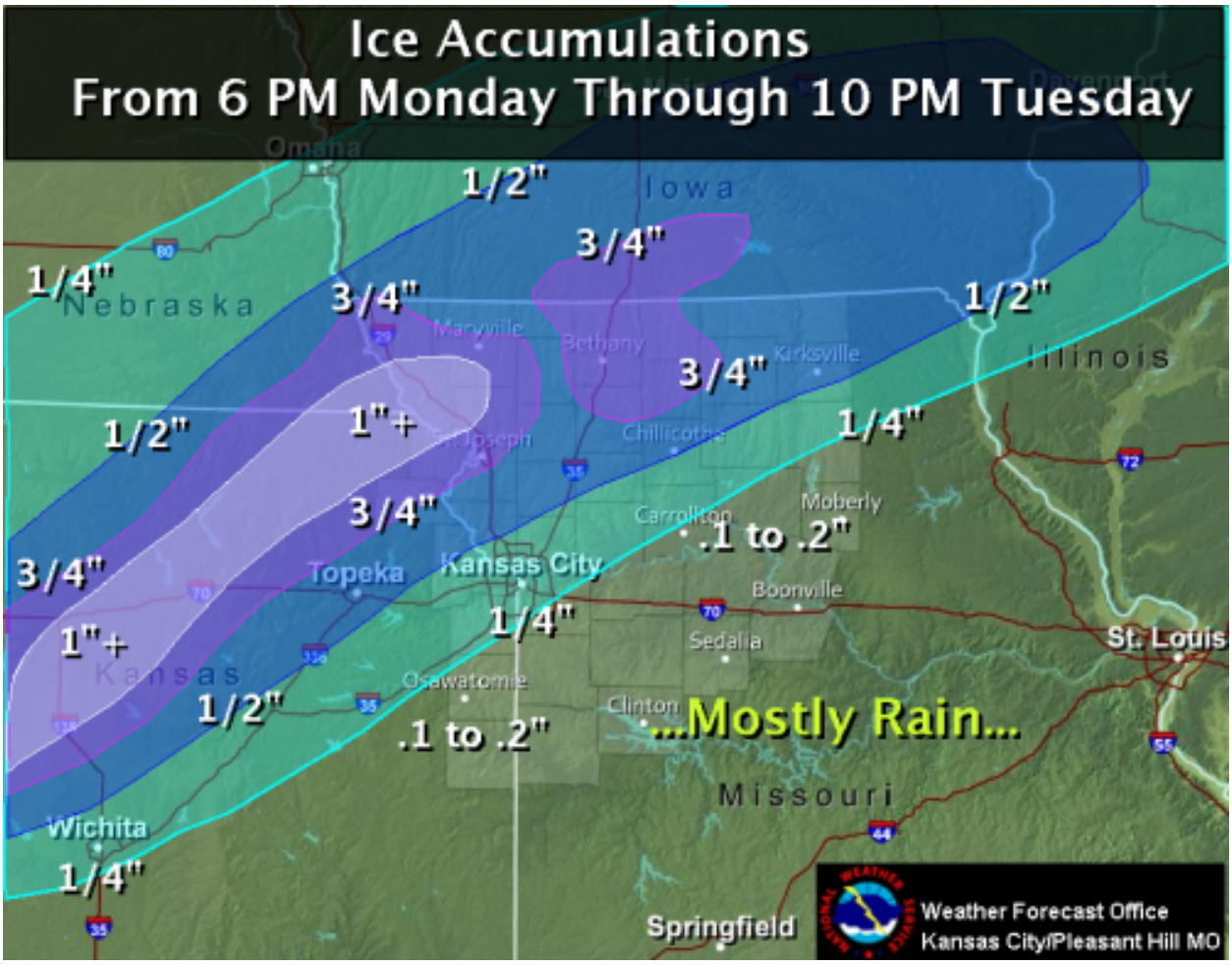
Final Report on

Kansas City Power & Light Company's

Storm Outage Planning and Restoration Effort

following the Ice Storm on December 10 and 11, 2007



Case No. EO-2008-0219
Missouri Public Service Commission Staff
June 17, 2008

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Note 1—provided by KCP&L

Executive Summary

This report examines Kansas City Power & Light Company's (KCP&L's) storm outage planning and restoration efforts following the ice storm that occurred on December 10 and 11, 2007. The report was prepared by Missouri Public Service Commission Staff (Staff) except where noted otherwise. *(Note: All dates in this report are 2007, unless noted otherwise.)* Two days prior to the arrival of this storm, another ice storm had affected other portions of Missouri. The combination of these storms resulted in the loss of electrical service to approximately 240,000 customers in the state. All four investor-owned utilities were affected by these storms, as well as the rural electric cooperatives and municipal electrical systems. Thousands of employees, contractors, and loaned employees from other organizations worked on the restoration efforts. The State Emergency Management Agency (SEMA) Emergency Operations Center was activated from December 9 to December 18.

The maximum number of KCP&L Missouri customers affected was approximately 54,558. (For comparison purposes, approximately a total of 90,653 KCP&L customers were affected in this event and approximately 305,000 KCP&L customers were affected in the January/February 2002 ice storm.) The KCP&L customer outages began on the evening of Monday, December 10. Storm damage restorations were completed by 9:38 pm on Thursday, December 13. The KCP&L service area was not significantly affected by the ice storm occurring on December 8 and 9. By many measures, KCP&L customers were the least affected of Missouri investor-owned utility customers by the December 2007 ice storm.

KCP&L activated its Emergency Operations Center (EOC) at 5:00 a.m. on Tuesday, December 11. Preparations and personnel assignments were made prior to formal activation of the EOC.

Staff did not receive any KCP&L consumer complaints regarding the ice storm during or following this outage restoration effort. Seven individuals provided public comments regarding this storm outage.

In preparation of this report, Staff reviewed the *Missouri Public Service Commission Staff Report on Restoration Efforts Following Major Ice Storm in Late January of 2002* (issued June 14, 2002) and the recommendations made by Staff in that report.

Commissioner Clayton submitted a Concurring Opinion to the order in the Case (No. EO-2008-0219) that required the preparation of this report. In that Opinion, a number of specific questions were included. Appendix A provides a list of those questions and responses to each question. These responses were developed by KCP&L and reviewed by Staff.

Staff issued the letter included as Appendix B to this report to all the investor-owned electric utilities on January 8, 2008. The information provided in response to this letter provides the basis for portions of this report. Additional information was gathered from other sources, including meetings and communications with the utilities and other entities. The following sections of this report were prepared by KCP&L in response to the Appendix B letter and reviewed/edited by Staff:

Storm Impact on KCP&L Service Area

Restoration/Remedial Actions

Actions to Prevent/Mitigate Future Events

During the development of this report, another weather-related event occurred in the KCP&L service territory. On May 2, 2008, high winds and tornadoes caused significant damage in localized areas. Appendix C (prepared by KCP&L and reviewed/edited by Staff) is a summary report of this event. Outages affected 41,021 Missouri customers. The event began at approximately 1:00 a.m. on Friday, May 2, 2008 and restoration was completed at 8:00 p.m., on Monday, May 5, 2008. A section has been included in this report to compare specific aspects of these two storms.

Staff developed conclusions and recommendations based on the information included in this report. These are included in the report section beginning on page 77.

Storm Details

Storms struck various parts of Missouri over a four day period from December 8 through 12. Staff contacted Dr. Patrick Guinan, Missouri State Climatologist, and researched National Oceanic and Atmospheric Association (NOAA)/National Weather Service (NWS) internet sites regarding these ice storms in Missouri. Dr. Guinan compared these December 2007 storms in scope to those which occurred in 1848, 1924, 1930, 1937, 1957, 1987, and 2002. Dr. Guinan puts the severity of these storms in perspective in the January 2008 issue of the Missouri Ruralist:

> Several weeks ago Missouri experienced its second major ice storm in less than a year with a large part of the state cocooned in ice. The storm reached historical proportions over parts of northwestern Missouri, where some communities in Buchanan, Andrew, Holt, Atchison and Nodaway counties reported ice as thick as 1-inch on trees, power lines, vehicles and just about everything that was exposed to the elements.
>
> Winter storms that deposit a glaze of 0.75 to 1-inch of ice are rare and have about a 1 in 50 year recurrence interval for any given location in Missouri. Historical accounts of major ice storms of this magnitude in Missouri indicate the rarity of these events. According to archived storm reports from the National Climatic Data Center, National Weather Service reports, and various press clippings, only a handful of storms of this magnitude have impacted Missouri.

The winter storm that affected the KCP&L service area started impacting customer service during the evening of Monday, December 10. The active storm conditions that affected KCP&L ended by mid-day on Wednesday, December 12. Approximately 90,653 KCP&L customers were affected (approximately 54,558 in Missouri). For comparison purposes, the January/February 2002 winter storm (ranked as the worst ice storm recorded for the KCP&L service area) affected approximately 305,000 KCP&L customers.

A table detailing Missouri storm history is attached as Appendix D.

The following paragraphs and graphics are excerpts from National Weather Service Reports from the three Missouri reporting stations (St. Louis, Springfield, and Kansas City/Pleasant Hill) and the KCP&L website.

Springfield:

"The second major ice storm of the year impacted much of the Missouri Ozarks and southeast Kansas from Saturday, December 8th to Monday, December 10th. Damaging ice accumulations of three quarters of an inch to one and a half inches occurred from the Joplin, Missouri and Pittsburgh, Kansas areas northeast to the Osceola and Versailles areas. These accumulations downed numerous trees, tree branches, and power lines, resulting in widespread power outages. Lesser accumulations of one quarter to one half of an inch with locally higher amounts near three quarters of an inch fell along the Interstate 44 corridor. This resulted in downed tree branches and scattered power outages."

St. Louis:

"On Saturday, December 8th a strong, cold high pressure system moved from Canada into the Great Plains. This high pressure system brought some very cold air streaming into the Midwest and Great Plains regions. At 2:00 PM on Saturday, December 8th, temperatures ranged from the mid 30s in Southeast Missouri to the upper teens in Northeast Missouri. As this cold air was settling in across the Bi-State region, a low pressure system developed over the southern plains which drew copious amounts of Gulf moisture up and over the cold air which was locked in at the surface. Subfreezing temperatures across the northern 2/3s of the Bi-State Region combined with this overrunning warm and moist air provided the perfect setup for freezing rain. This is a classic freezing rain upper air profile. Also, there are very steep mid-level lapse rates between 3 and 6 kilometers (10,000-18,000 ft) indicating convective instability. Indeed…thunderstorms with freezing rain and sleet formed after midnight Saturday night. These thunderstorms produced up to 2 inches of sleet across parts of Central and Northeast Missouri and West Central Illinois. Between Saturday evening and Tuesday morning several waves of precipitation affected Missouri and Illinois…bringing up to an inch of freezing rain accumulation…as well as up to 2 inches of sleet in parts of Central and Northeast Missouri which fell after midnight on Sunday morning."

Kansas City/Pleasant Hill:

"A slow moving storm system brought a long duration of freezing rain to a large portion of the nation's mid section. After several rounds of minor snow and ice accumulations over the past week, a major storm system produced one final blow, capping the region with significant ice accumulations. The event began early Monday evening and continued into the early evening hours on Tuesday. Very warm and moist air aloft was brought in ahead of a large storm system moving slowly out of the southwest United States. At the surface, Canadian high pressure which had been in firm control over much of the past week, helped keep temperatures near ground level in the upper 20s to lower 30s. With surface temperatures at or below freezing, combined with a warm layer of air just above the surface, the precipitation fell in the form of freezing rain.

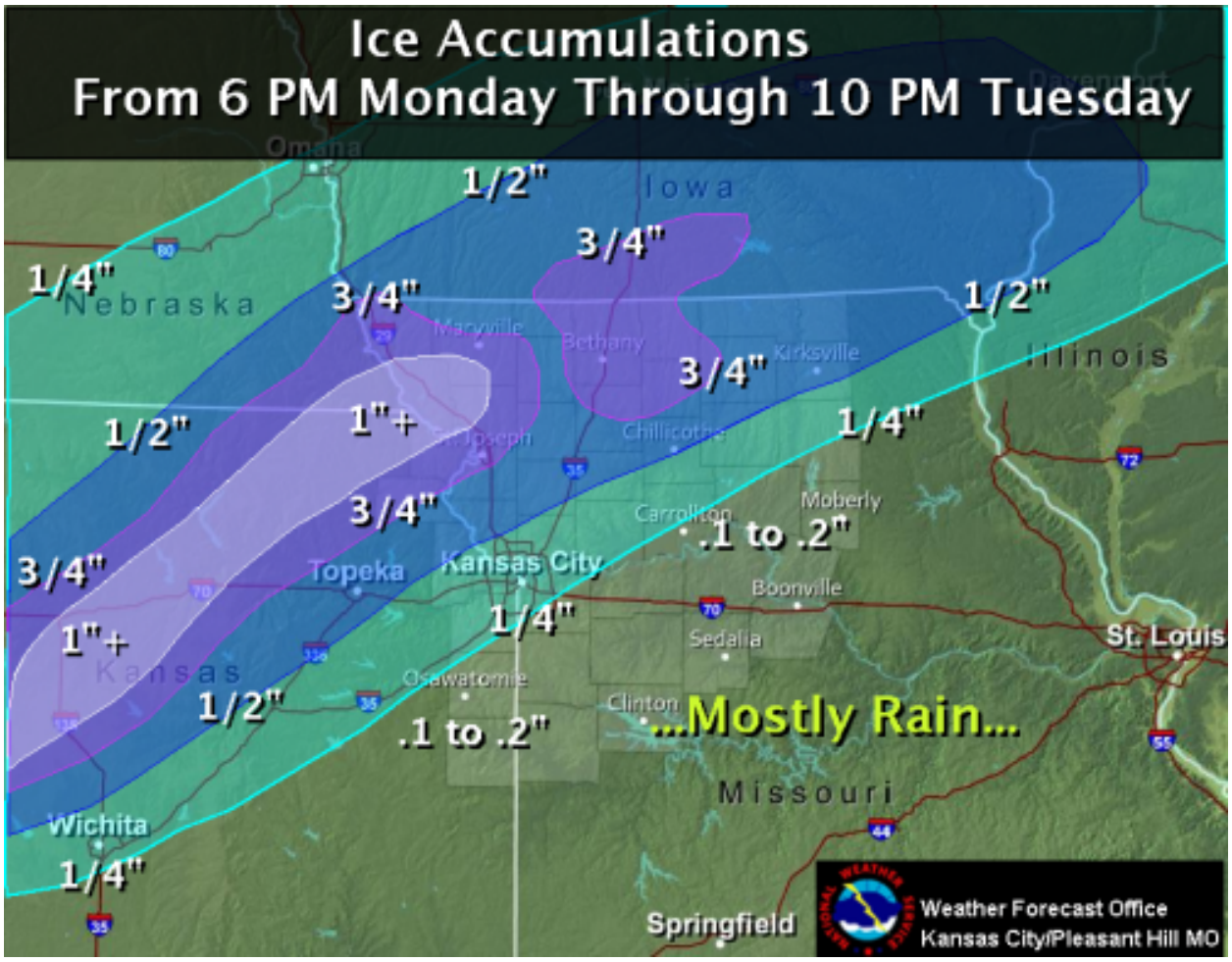
As precipitation rates increased quickly Monday evening, ice rapidly accumulated on many surfaces, especially trees and power lines. Locally, ice accumulation was particularly devastating along and north of the Missouri River extending into adjacent northeast Kansas. Ice accumulations of 3/4" were common, with isolated accumulations around 1" generally north of a line from Atchison, Kansas through Trenton, Missouri to Unionville, Missouri. Further south temperatures warmed during the overnight and by dawn hovered between 32 and 34 degrees. As a result, ice accumulations between 1/4" and 1/2" were noted along the Interstate 70 corridor, with lesser amounts further south.

Area electricity providers are reporting widespread power outages across eastern Kansas and northwest Missouri this evening. The most hard hit areas extended from near Manhattan, Kansas through St. Joseph, Missouri, and into southwest Iowa, where estimates are that nearly 75% of customers remain without power. Specifically, in communities along and north of US Highway 36, and west of Interstate 35, numerous fallen larger tree branches and downed power lines have been reported. As of 5 PM Tuesday, December 11, providers are estimating that over 165,000 Missouri residents were without electricity.

Precipitation began to wind down Tuesday evening. However, additional power outages and damage were caused as north winds of 15 to 20 mph buffeted northern Missouri through the late evening. As temperatures fell quickly back through the 20s, wet roadways quickly refroze, resulting in widespread black ice. Several multiple vehicle accidents were reported during the evening hours Monday along major interstate routes as travelers suddenly found wet roadways had turned to a thin sheet of ice. Conditions had largely improved by Wednesday morning as roads were treated and dried out. Now the eyes turn toward the potential for accumulating snows across central and southern Missouri Friday night and Saturday."

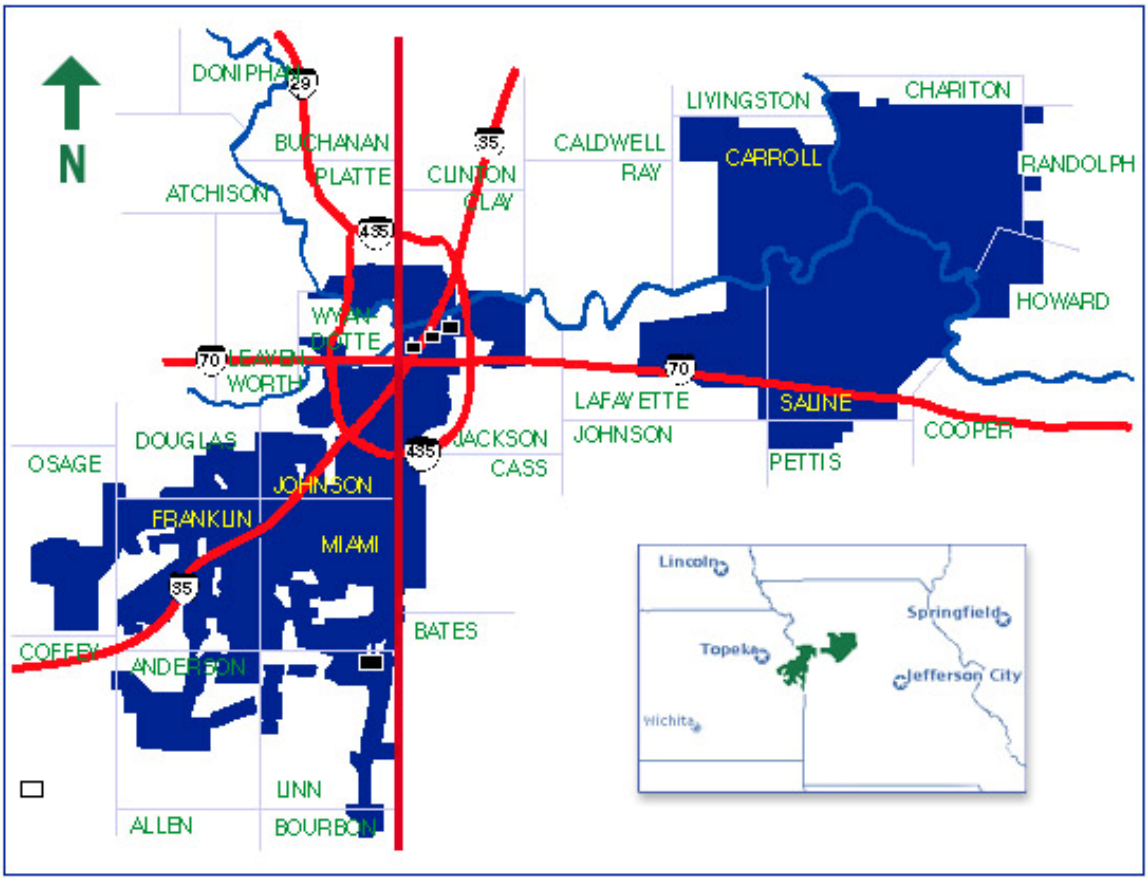
As illustrated in the following figure, the metropolitan Kansas City and other Missouri KCP&L service areas were in the southern potion of the December 10 and 11 ice storm.

December 10-11, 2007 Ice Storm



The KCP&L service area map shown below can be used in conjunction with the December 10 and 11, 2007 Ice Storm graphic illustration to visualize the specific storm impacted areas.

KCP&L Service Areas



Storm Restoration Planning

KCP&L maintains a Storm Evaluation & Restoration Plan (SERP). This document consists of approximately 375 pages of detailed instructions for personnel who are designated as part of the emergency organization. Most of this document was last revised on December 5, 2006; however some portions were revised as recently as March 2, 2007.

KCP&L initiated preliminary actions for activation of the SERP on Friday, December 7. Internal communications continued through the weekend of December 8 and 9. On Monday, December 10, the decision was made to activate the Emergency Operations Center (EOC) at 5:00 a.m. on Tuesday, December 11. This decision was based on the current weather forecast. Distribution Systems Operations and Field personnel were assigned to work through the nighttime hours of the evening of December 10 and early morning hours of December 11.

KCP&L classifies storms as Class I, II, III, or IV, based on measures of system storm damage. The SERP is activated for Class III and IV storms. Table 1 provides classification details for storms.

Storm Classification Table

CLASS	CUSTOMER OUTAGES	RESTORATION TIME
I	**Less than 5,000**	**2 to 12 hours**
II	**5,000 to 15,000**	**12 to 24 hours**
III	**15,000 to 50,000**	**24 to 48 hours**
IV	**Greater than 50,000**	**Greater than 48 hours**

The SERP contains the following sections and subsections.

- General Information
- Storm Damage Analysis
- System Restoration Organization
  - Organization Charts
  - Position Descriptions and Responsibilities
- Implementation Activities
- Organizational Operating Procedures
  - Communications
  - Customer Relations
  - Evaluation and Information
  - Manpower
  - Reception, Staging, and Integration
  - Distribution System Restoration
  - Power System Restoration
  - Support Services
  - Resource Protection
  - Telecommunications
  - Accounting Procedures
  - Computer Support
  - SERP Maintenance

As stated in the SERP, its purpose is "to establish standing operating procedures for the efficient and rapid restoration of service over a wide range of storm damage conditions". The SERP "is intended to provide guidelines for maximizing the Company's effort to effectively respond to any distribution or transmission storm damage emergency". The SERP program as it exists today was a result of recommendations from KCP&L's Storm Restoration Committee and the Staff following a significant ice storm in March 1984. The SERP was revised following storms in 1996, 2000, 2002, and as necessary at other times. As of the date KCP&L responded to Item E in Appendix B, no changes had been made to the SERP based on the December 2007 ice storm experience.

This section provided by KCP&L

Storm Impact on KCP&L Service Area

List of Communities Affected in Missouri

The following is an alphabetical listing of the counties and the cities affected:

Cass County

Belton			

Clay County

Avondale	Claycomo	Gladstone	Kansas City
North Kansas City	Oaks	Oakview	Oakwood
Oakwood Park	Pleasant Valley	Randolph	

Jackson County

Grandview	Kansas City	Raytown

Platte County

Houston Lake	Kansas City	Lake Waukomis	Parkville
Platte Woods	Riverside	Weatherby Lake	

Number of Customers Affected

In total there were approximately 54,558 Missouri customers affected. The breakdown of individual customer interruptions (i.e., outages) by facility classes and damage types are as follows.

This section provided by KCP&L

Facility	Customer Interruptions	% of Customer Interruptions to Total
Feeder	37,758	69%
Lateral	15,370	28%
Secondary & Service	1,430	3%
Total	**54,558**	**100%**

Type of Damage	Customer Interruptions	% of Customer Interruptions to Total
Blown Fuse	1,451	3%
Broken, Faulted, Loose, Slack, Shorted	1,871	3%
Limb on line	22,643	42%
Wire Down	9,793	18%
All Other	18,800	34%
Total	**54,558**	**100%**

System Damage

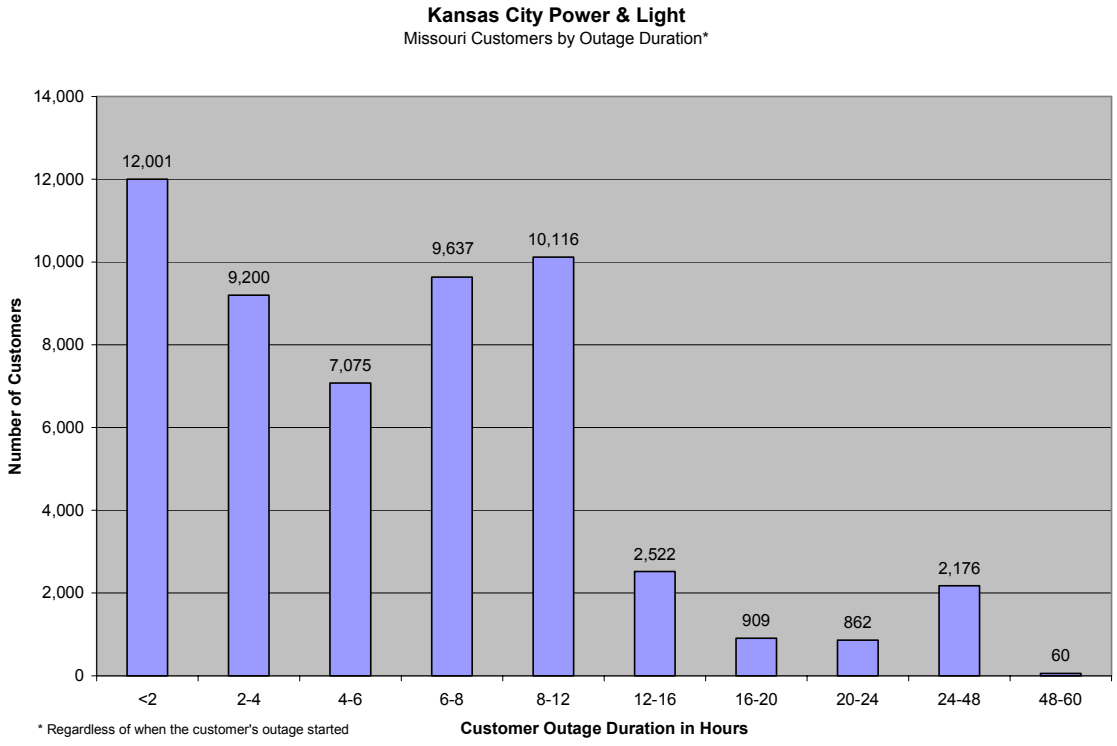
There were total of 502 system outages. The breakdown of **system outages** by facility classes and damage types are as follows.

Facility Level	Number of Outages	% of Outage Counts to Total
Feeder	57	11%
Lateral	266	53%
Secondary & Service	179	36%
Total	**502**	**100%**

This section provided by KCP&L

Type of Damage	Number of Outages	% of Outage Counts to Total
Blown Fuse	26	5%
Broken, Faulted, Loose, Slack, Shorted	49	10%
Limb on line	92	18%
Wire Down	248	49%
All Other	87	17%
Total	**502**	**100%**

The largest contributors to outages were ice and trees. With approximately 391 outages, this represented approximately 78% of the total outages. The cause codes for the remaining 22% of outages were "defect", "vehicle", "safe-work", "trimmer", and "unknown" causes.



This section provided by KCP&L

This chart represents the number of customers and the length of their outage duration. For example, there were 12,001 customers who experienced an outage of less than 2 hours, regardless of when their outage started during the storm. Of the 54,558 customers affected, 48,029, or 88% were restored within 12 hours of their outage occurrence, 52% were restored within 6 hours of their outage occurrence and 39% were restored within 4 hours of their outage occurrence. When KCP&L realized that the Dodson service territory was being hit hard, all available contractors already on the premises were sent their first.

Extent of the Interruptions

KCP&L began receiving customer outage reports in the evening on December 10. At the height of the storm on December 11, approximately 19,602 Missouri customers were without power. All Missouri customers were restored by 9:38 pm on Thursday, December 13.

The following table shows the number of customers restored over the event. In the first 24 hours of the storm, 46,746 of 54,558 customers were restored.

Date	Time Frame	Number of Customers Restored
Monday, December 10 -	First 8 Hours	9,727
Thursday, December 13	9-16 Hours	23,164
	17-24 Hours	13,855
	25-32 Hours	2,246
	33-40 Hours	2,148
	41-48 Hours	2,785
	49 Hours-End of Event	633
TOTAL		**54,558**

This section provided by KCP&L

Third Party Assistance

On December 7, the Reception, Staging and Integration (RS&I) section of KCP&L's Storm Evaluation and Restoration Plan (SERP) started calling line contractors to check on their availability should the storm hit Kansas City. The following companies were contacted: Capital, CLS, PAR, BBC, Henkels & McCoy and SPE Utility Contractors. Many were already committed to other utilities that had already been hit with winter weather. Ameren, the Empire District Electric Company and Westar Energy were contacted several times to see if they would be utilizing all of the line contactors they had requested. An additional 6 line contractors were contacted when these earlier calls were not productive, resulting in approximately 100 additional crews available to KCP&L if needed. There were already 24 line contractor crews and 40 vegetation contractor crews on KCP&L property that were used.

Company	FTEs	Number of Crews	Type of Contractor
Capital	18	5	Line
CLS	21	9	Line
PAR	41	10	Line
Nelson	60	21	Vegetation
Wright	56	19	Vegetation

In addition to RS&I's efforts, the KCP&L Director of Field Operations, worked with the Midwest Mutual Assistance Group on several conference calls throughout the storm. Due to the impact the storm was having to neighboring utilities resulting in local contractors being unavailable, KCP&L proactively contacted Dayton Power & Light in Ohio and utilities in Michigan. Arrangements were made to have crews leave on Tuesday morning for Kansas City. Wednesday morning, when it was determined the main part of the storm had passed; KCP&L was able to work with the companies that had committed to providing help to KCP&L and Aquila, Inc., redirecting 80 FTEs to Aquila, Inc.

This section provided by KCP&L

After working on locating manpower, RS&I worked with their list of hotels and found accommodations throughout the metro area. RS&I maintains contact with many hotels. The hotels understand KCP&L's needs and also understand there is a possibility that their rooms will not be needed. Hotels were contacted on December 9 and 10. In all, 10 hotels were contacted, resulting in 428 double rooms and 229 king rooms available and ready for use.

This section provided by KCP&L

Restoration/Remedial Actions

RESOURCES UTILIZED

Manpower

The table below details the total Company manpower, both KCP&L and Contractors, used during the event.

Manpower (Total Company)

Classification	KCP&L	Contractors	Total
Linemen	210	80	290
Field Mgt	39		39
Tree Trimmers		106	106
EOC/Dispatch	58		58
Stores	30		30
SERP	143		143
Call Center	54		54
Customer Relations	4		4
IT	18		18
Misc	25		25
TOTAL	**581**	**186**	**767**

Material (Total Company)

Major Material Items Used	Total Quantity
Wire and Cable	**9.8 Miles**
Crossarms	**16**
Poles (Distribution only)	**10**
Switches	**9**

This section provided by KCP&L

In preparation for the storm, Material Services:

- Reviewed inventory in "free stock" at Front and Manchester facility and all satellite locations. Material was ordered to bring stocking levels to maximum
- Checked emergency inventory
- Worked with main vendor to obtain items needed in preparation of a storm (ice grips, gloves, etc.)
- Ran an Emergency Storm Tracking query in PeopleSoft to obtain past storm usage information, along with current on hand balances and any open purchase orders for any emergency items
- Reviewed the Metro Storm Emergency Plan with department employees
- Started holding daily stand-up meetings at 7:30 AM and 3:45 PM to communicate status of approaching storm and work being done with the team. Continued this practice throughout storm
- Obtained a storm Work Request (WR)# to charge material and time

Financial Expenditures

Restoration costs for a major storm are captured in our PeopleSoft financial system using unique accounting codes. Use of these codes facilitates consolidation and analysis of storm restoration costs. These costs consist of Company internal labor, management and bargaining unit, straight time and overtime (if applicable), Company vehicular/equipment costs, material costs, meals, and if applicable, tree contractor costs, electrical contractor costs, and "other" (foreign) utility costs (labor and non-labor, equipment, material, etc.). All of these costs are processed in the normal manner in KCP&L's accounting systems.

The December 2007 ice storm had a cost of $2.236 million ($1.364 million Missouri) as of January 31, 2007. This figure includes labor (both KCP&L and Contractor), material, equipment (fleet), meals and mileage (for the Storm Evaluation and Restoration Plan (SERP) teams), and includes both operations and maintenance costs and capital costs.

This section provided by KCP&L

Special Circumstances Encountered – Direct wire meters

KCP&L's policy is to cut meters straight through only if the customer's meter can or weatherhead is damaged beyond immediate repair by the crew but the service entry cable is in operable condition. Cutting a meter straight through means wiring the meter can so that the building has power but no meter to register the usage. When this situation occurs in a storm, the address is recorded and sent to Distribution System Operations (DSO). The DSO passes the address on to the Correspondence Desk in the Customer Care Center. The Correspondence Desk then writes the customer a letter stating that the customer needs have the situation repaired by a qualified electrician, have a city inspection done and get a permit issued on the repair within 10 days. After 10 days a service planner goes to the address and inspects the service entrance. If the repairs are done and the paperwork is complete (city inspection and permit) then the service planner orders the meter re-set. If, after 10 days the work is not complete, the service planner hangs a tag on the service instructing the customer that they have 10 more days to complete the work. If the work is completed sooner than 10 days, the customer has a number to call and the service planner will come out and inspect the situation. After 20 days, and the work is not completed, the service planner orders the service halted. The customer then has to contact KCP&L and follow the process to get the service restored. The December ice storm resulted in 20 Missouri wire directs.

This section provided by KCP&L

OUTAGE TRACKING / CREW DISPATCHING

Outage Management System

The Outage Management System (OMS) allows KCP&L to track outages, manage crews more effectively and speed restoration. The OMS:

- Predicts outage device and location
- Automates workflow and schedules crews in the most efficient manner
- Dynamically manages status of crews and assignments
- Provides paperless recording of trouble calls, assignments and resolution of outages, non-outages and customer meets
- Updates CIS+ records so Care Center Representatives and customers can see status updates

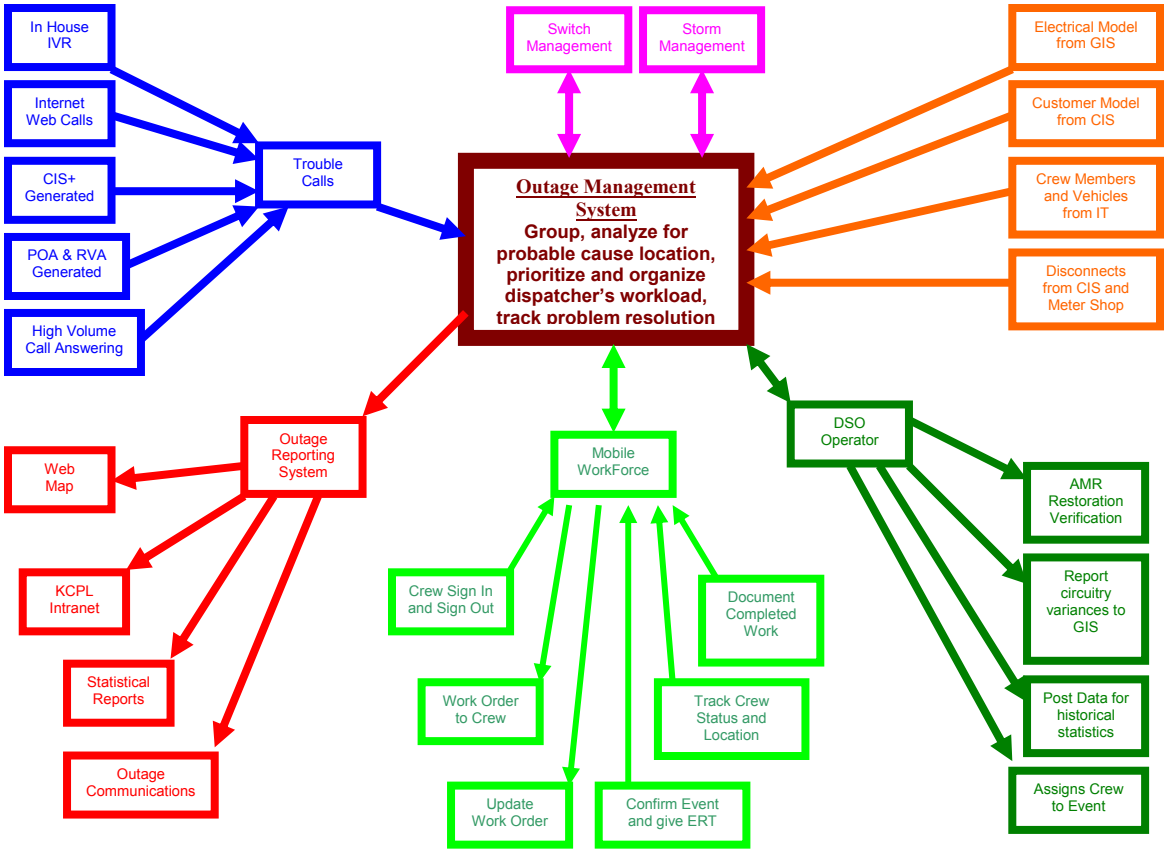
Several inputs feed KCP&L's OMS – CIS+ tickets from Call Center, Automated Meter Reading System, Interactive Voice Recognition (IVR), Twenty First Century, and Web entry calls. (see Outage Management System Interfaces diagram on page 20) The OMS feeds other systems such as the Outage Reporting System (ORS). Both the OMS and ORS are the Company's central repositories for all outage and non-outage calls. KCP&L collects standard data on every outage and non-outage regardless if it is storm related or not.

Calls that contain trouble codes describe the Problem, Condition, Action needed and Priority. This information is analyzed to determine probable source of problem and groups outages with a common source. The summary, supporting details and predicted priority are presented to the Dispatcher through the Outage Management System. Sixty-three items are checked daily and weekly to insure that all parts (including backup systems) of the Outage Management System are functioning correctly. The calls received are reconciled daily to ensure that all calls are accounted for in the OMS.

The Power Outage Application (POA) automatically generates trouble tickets directly from the OMS, often before the customer calls to report the outage. With the CellNet Automated Meter Reading (AMR) system, a signal (or ping) can be sent to a customer's meter to verify the meter has power. If the meter has power to it, there will be a return

signal. If the meter has lost power, a return signal will not be generated. Information on meters with no power was given back to the DSO to investigate and resolve.

Outage Management System Interfaces



This section provided by KCP&L

Distribution System Operations (DSO)

At 6 A.M. Tuesday morning the SERP Evaluation &Information (E&I) teams arrived at the metro service centers and the Initial Evaluators were sent out and delivered needed information to help with the restoration. The SERP E&I team in the Emergency Operating Center (EOC) and Real Time Systems (the IT support group for the Outage Management System, Outage Reporting System and Energy Management System) teamed up together to look ahead and document the trouble in the OMS. At the same time, the Wire Down team was activated. The Superintendent of the DSO has the authority to activate the Wire Down team whenever needed—usually based on the quantity of down wires. The Wire Down team is led by KCP&L's Reliability Engineer and is used whenever public safety is threatened from downed power lines due to an ice storm, wind, etc. that affects a large number of customers. The team is comprised of qualified personnel (former linemen and meter readers) that can assess a down wire (energized, de-energized, etc.) situation and take the necessary actions which may include staying on-site until a crew arrives to remove the downed wire. This group makes the situation safe for the public. During the December 2007 storm, the team inspected 213 wire-down reports.

December 2007 Wire-Down Team Numbers for Missouri

Action	Number
OK on Arrival – no problem found	89
Wires confirmed down, no hazard	32
Wires confirmed down, public safety hazard	13
Trees on wire	22
Cable TV/phone wire	14
Crew already on site	16
Streetlight related	10
Part of larger outage	4
Wire down, made safe	4
Other	4
Broken pole	2
Light out – no other problem	2
Low wire	1

This section provided by KCP&L

The SERP E&I teams were released from service at the end of the day on Wednesday, December 12. The EOC E&I team that was directing the center E&I teams determined that all circuits had been patrolled and damage assessment was complete. The EOC E&I team made the decision to release the center E&I teams. In summary, during the three days of patrolling 956 patrols were completed identifying five broken poles, 27 primary wires down, and 32 tree issues. They also identified 357 "O.K. on arrivals" during the patrols allowed valuable dispatching and crew time to be utilized on actual outage situations.

In the Dispatching department, seasoned dispatchers were teamed with the dispatch trainees. Three trainees worked near the experienced dispatchers. One of the trainees was dedicated to running nothing but service related outages. The two other trainees were also assigned to answering phone calls by civil authorities and entering tickets from the calls or faxed lists of wire downs; associating fuzzy calls (i.e., addresses new enough that they are not in the Geographic Information System (GIS) yet); and scrubbing data by eliminating duplicate calls and closing tickets determined to be on by Cellnet pings and callbacks. Later they assisted in closing tickets from the dispatchers (line clearance tickets) and creating the event details on some of the more simple calls.

All school outages (11 total in Missouri) were moved up in priority on Tuesday, per KCP&L's Service Restoration Sequence Priorities (see pages 25 and 26) and all but two were restored by Tuesday evening. The remaining two schools were restored on Wednesday morning.

Conference calls with the EOC and Service Centers were generally held at 9 AM, 3 PM and 8 PM daily but Tuesday's first call was at 6:45 AM. The general plan established in pre-storm planning was implemented. The plan called for everyone to work 16 hours and be off 8 hours. In order to maximize the restoration efforts, most crews worked daylight hours. The exception to this was the Trouble Department. The Trouble Department operated 24 hours a day at three metro service centers: Dodson, Front and Manchester and Johnson County but covered all five metro service centers. These linemen normally work alone and handle customer outages.

This section provided by KCP&L

Manpower rosters were sent to the DSO each evening. All outage assignments were made by the dispatchers in the DSO overnight and faxed to the centers so they were ready for the crews that showed up the next morning. Each evening, the Trouble Department worked on the higher priority outages, as assigned by the DSO.

This is an example of the restoration activities from the DSO. This was the December 12 (Wednesday) morning Game Plan and update from the overnight restoration:

- All initial assignment have been faxed to the centers by the largest number of customers that had been without power the longest
- Will work the list of Laterals, Transformers, and Singles sorted by oldest to newest
- Once the first assignments are cleared, crews were re-allocated to various centers (the object was to get them out in the field ASAP then move them so we can get as many lights on as possible)
    - In general, Southland and Johnson County crews working Johnson County calls
    - In general, F&M and Northland crews working calls in Northland
    - In general, Dodson crews working Dodson, then F&M, then Northland or Johnson County
- The DSO will have a 7 AM safety huddle to discuss how yesterday went, lessons learned, increased communication, any OMS issues (if any), etc.
- Two schools are out; Supervisors and dispatcher will focus on them first thing
- Supervisor will work on any wires down reports

After the storm was over and all customers were restored, the team now had the storm cleanup to do before things were back to normal. They started with 1,038 non-outage tickets. By Friday morning, that number was down to just over 800 non-outage calls. These non-outage tickets are normal after a storm – they are the cleanup items that the crews couldn't get to during the event and the customer had power. Examples of a non-outage ticket include limbs reported on lines, blinking lights, etc. The customers are contacted to ensure the situation still exists before sending crews. Management decided

to offer the overtime to anyone who wanted to work over the weekend. A few took Saturday off to rest but almost all continued to work through the weekend. All non-outage calls were complete by Sunday night.

Line Clearance Crews

At the onset of the storm, the Superintendent of Line Clearance for Environmental Consultants, Inc (ECI) (third party hired by KCP&L to oversee the Line Clearance program) set up a work station in the DSO. The KCP&L Dispatcher that handled the contract crews also handled the tree crews. If any of the Dispatchers received a call needing a tree crew, these were funneled to one Dispatcher and ECI to respond. As tree issues were reported in the system, ECI was given reports of the problem – location, Incident Report (IR) numbers, etc. The Line Clearance Superintendent then sent the IRs to ECI's Supervisor of Line Clearance. The Line Clearance Supervisor took the IRs and dispatched tree crews. When the work was completed, the Line Clearance Supervisor called the Line Clearance Superintendent with the IR number and the job was closed out in the OMS. In addition, the SERP E&I personnel that were in the field scouting ahead of the crews, had a phone number to call and report the problem. These calls went straight to ECI and tree crews could be dispatched ahead of the field crews, eliminating their wait time.

After the storm, approximately 30 tree crews were released by KCP&L to travel to other utilities needing help. The remaining tree crews were given all the tree related non-outage calls to work. They continued working 16 hour days on Friday, Saturday and Sunday.

SERVICE RESTORATION SEQUENCE PRIORITIES

Service restoration priorities depend, to some extent, on the magnitude and duration of the storm causing the service interruptions. The general sequence of service restoration is as follows (SERP Manual, page B5 -6):

This section provided by KCP&L

- **First Priority**

  The de-energizing, cutting down or securing of live distribution lines that pose an immediate threat to **public safety**

- **Second Priority**

  Restoration of service to sensitive **public service facilities** such as hospitals, city halls, county court houses, fire alarm system headquarters, water pumping stations, sewer lift stations, fire stations, police stations, air traffic control centers and other sensitive loads

- **Third Priority**

  Service restoration to the maximum number of customers in the minimum amount of time with available work forces. This involves re-energizing **circuit backbones**, which are the main source of power for their area

- **Fourth Priority**

  Service will be restored to **whole neighborhoods** after the initial effort to reenergize the circuit backbone. As stated in the third priority, source facilities must be restored first. After the source facilities are restored, the services are restored in conjunction with all the laterals connected to the circuit backbone. When all the primaries in an area are totally restored, no customer should be left without service in that area. However, service that cannot be restored because of damage to the customer's service equipment should be reported to the Group Supervisor of that area. The Group Supervisor has the authority to request that the **necessary service repair** be done by an inside electrical contractor. During a SERP activation and work decentralization, the Group Supervisor role is filled by the service center Superintendent. The Group Supervisor directs the restoration work in the service center territory they are assigned.

Call Center Operations & Communications

Call Center Operations

The Company's Call Center, referred to as the Customer Care Center (CCC), is the essential component of the Company's relationship with its customers, as KCP&L, like many other companies, has closed their local business offices and customers are required to interact with office personnel primarily through the Call Center. The Call Center receives and transmits a large volume of requests by telephone and must provide sufficient staff and inbound capacity to ensure that the quality of service is maintained, and customers receive assistance in a reasonable amount of time. An efficient and effective call center is an important strategic asset that improves a company's image and improves customer relationships. Through the Call Center, companies gather information from their customers and with that information learn how to better serve their customers.

The Company's CCC is located at its 801 Charlotte, Kansas City, Missouri, office building and its published business hours are 7 a.m. to 7 p.m. CST Monday through Friday, except holidays; however, representatives are on-site and available 24/5. The CCC telephone lines are automated around-the-clock so customers can report service problems anytime.

The Company stated that the average tenure of its CCC representatives is five to eight years. The option of at-home representatives has not been used in the past, but the Company stated that it intends to evaluate sometime in the future the implementation of at-home representatives and other opportunities to better serve its customers.

Outage Reporting

The customers are able to report outages by contacting the Company's CCC through a toll-free phone number (1-888-LIGHTKC [544-4852]) or using the Company's Web site to complete an online form. When contacting the CCC by phone, there are three methods for customers to report outages: 1) Twenty First Century (TFCC), which is a vendor of the Company that handles calls during periods of high volume, 2) press 0 and speak to a live person or 3) self-serve option.

Customer Care Center Storm Operations

In preparation for the storm, the Company's CCC held a joint meeting Monday, December 10, in the CCC with Dispatch and Field Operations. The CCC's advance preparation for the Company's Storm Evaluation and Restoration Plan (SERP) included 1) Setup and testing of the back-up CCC, 2) Overtime and emergency staffing plan, 3) Information Technology (IT), telecom and automated services (internal and external) and 4) Safety message and storm information to CCC employees.

The Company's 49 full-time and 6 part-time CCC representatives are union employees and their roles do not change during the implementation of the Company's SERP. Although the Company's union contract allows 16-hour shifts for the CCC representatives, the Company asked that the representatives work a maximum 12-hour shift throughout the storm. The Company asked for volunteers to work overtime on December 10. The Company's CCC has a "Reflection Room" that is used as a decompression room when representatives feel overly stressed. The CCC's normal business hours resumed on the morning of December 13.

The Company's SERP was activated for December 11 and 12, 2007. Beginning at 4 a.m. December 11 through December 12 overnight, the number of overnight representatives was increased to handle outage calls. The Dispatch Department typically provides an estimated restoration time for the CCC representatives to provide to customers reporting an outage; but, due to the characteristics of this storm the Company discontinued this practice throughout the storm.

Call Volume

The Company's average volume of calls is 3,000 per day, which are from the Company's Missouri and Kansas customers. The Company does not currently segregate its calls, but plans to evaluate the possibility of doing so.

The number of Power Problem/Outage Reporting calls received throughout the storm is shown in the following table.

Date	Customer Care Center Representatives	TFCC	IVR Self-Serve	Non-Customer Care Center Representatives Assisting
December 11	6,894	33,815	2,571	673
December 12	1,920	5,796	350	545
December 13	572	1,994	155	0
Total	9,386	41,605	3,076	1,218

Source: KCP&L Presentation made to Commission Staff February 8, 2008

The Company's calculation of the number of calls offered is based on those callers that have chosen the option to speak to a live person and do not include calls taken by TFCC. The average number of monthly calls offered to KCP&L during 2005 (July through December), 2006 and 2007 were 82,872, 76,017 and 80,942, respectively.

The Company's monthly total calls are calls received by the Company's CCC and the Company's vendor, TFCC. The total calls received for July 2005 through December 2007 are shown on the table below.

Month	2005	2006	2007
January		111,932	114,691
February		99,151	109,116
March		117,451	121,943
April		114,099	112,882
May		136,190	119,414
June		138,980	128,514
July	156,799	156,191	131,598
August	173,196	168,099	139,039
September	145,017	132,173	168,703
October	143,160	144,934	189,644
November	123,313	129,721	146,425
December	105,468	103,745	186,979
Yearly Average	141,159	129,389	139,079

Source: Company's reporting in Case No. EO-2005-0329

A significant increase of calls began at 10 p.m. December 10 and the Company implemented the use of TFCC, which has the capability to handle 190,000 90-second telephone calls per hour without a busy signal, and put into operation a back-up system to its CCC that consisted of twenty computers and twenty phones to assist with the high volume of calls. The Company utilized fourteen employees from departments other than

the CCC that were familiar with the CCC procedures to operate the back-up system during the storm. The Company informed the Staff that neither it nor its telephone service provider block any calls.

The calls received by TFCC are logged and forwarded real time to the Company's Outage Management System (OMS). TFCC handled 2,486 calls between 10 p.m. and 12 a.m. on December 10, which was 75% of the day's volume of calls. Graphs representing all CCC calls received on December 10 and 11 are attached as Appendix E and F. The peak number of outage calls of 1,464 occurred during the 9:00 a.m. to 9:30 a.m. interval Tuesday, December 11, and the call volume slowly declined after that time. At 7:00 a.m. Wednesday, December 12, the CCC returned to normal business operations.

On December 11 and 12, the CCC morning shift began at 4 a.m. and CCC representatives worked mandatory 12-hour shifts. At 10 a.m. December 11, the CCC representatives were handling all calls as normal; but, at 11 a.m., December 11, a decision was made to focus on outage calls only. A recorded message was enabled that informed the customers that due to the current high volume of calls regarding the outages, calls other than outages were not being handled by the CCC representatives. In addition, the callers were informed that disconnections due to nonpayment were not being performed at this time. This message remained in action until 7 p.m. December 11. During this time, all automated options for callers contacting the CCC remained in effect.

Provision of Information

The CCC representatives were provided outage and storm information updates throughout the storm by email and by management personnel walking throughout the CCC. Short team huddles were periodically held throughout the storm. The Company stated that the information provided by its Cellnet software to the CCC representatives proved to be valuable to the customers. In addition, the CCC representatives were able to obtain storm and outage information by accessing all customer information screens and the Company's OMS, the Company's internal dashboard. The Company's dashboard is a screen that provides at-a-glance visualization and monitoring of the Company's key performance indicators. The screen's green, yellow and red lights indicate performance is satisfactory, requires monitoring or needs action. From the OMS, the CCC

representatives were able to obtain vital information regarding the status of the storm, i.e., how many customers remained without service and how many customers had been restored. This information was timely as it was updated every fifteen minutes. Throughout the storm, the CCC was attempting to provide as much accurate information as possible to the customers through its CCC representatives. The Company stated that it realized throughout the storm the importance of equipping its CCC representatives with an ample amount of accurate information. In future storms, the Company will attempt to increase the amount of information provided to its CCC representatives, if possible.

Feedback to Customers Routing Outages

Twenty First Century's system places a return telephone call to customers reporting outages through the Company's IVR system and to TFCC. The customers received the following prerecorded message: "As an automated service from Kansas City Power & Light, this call confirms we have received the outage report submitted for this address. Crews are currently working to restore service. Thank you for your patience and cooperation as we work to restore your electrical service." The calls received by the Company's IVR system are forwarded to TFCC in 30-minute intervals and the customers reporting their outage to TFCC receive a confirmation phone call within 30 minutes. Twenty First Century places the confirmation calls to the telephone number on the Company's record. If there is no answer, the system leaves the message on the customer's recorder, if provided. If there is no answer and no recorder provided, the TFCC system makes up to three attempts to contact the customer. These confirmation calls are made whenever an outage call is received, not just during major outages. As a courtesy, these calls are not placed during the hours of 10:00 p.m. to 6:30 a.m. This procedure addresses a recommendation made by the Staff in its June 14, 2002 Staff Report on Restoration Efforts Following Major Ice Storm in Late January of 2002, which stated "Pursue ways to provide positive feedback to customers that are routed to the Interactive Voice Response system for assurance that the reported outage has been received."

This was the Company's first use of this TFCC feature during a storm and it believes the calls were well received by the customers. Following the storm, the

Company received comments from some customers that they appreciated receiving the TFCC courtesy call; the customer was confident that their outage had been received by the Company and was being handled. Although the Company is not able to provide data, it believes the TFCC courtesy calls provided reassurance to the customers that their outage call was seriously taken and this created fewer repetitive outage calls from the same customer.

Opportunities to enhance customer satisfaction exist with the utilization of secondary telephone numbers during the Company's restoration period. Confirmation calls made to the customer's phone number on the Company's record will not be worthwhile if the residential land-line is reliant upon electricity for operation and the customer is not there to receive the call. By obtaining and using alternative telephone numbers of customers (cell phone number, relative's telephone number, etc.) during the restoration period, greater customer accessibility would be provided.

Multiple Calls

When the Company received repeat outage calls from customers, its system recognized the telephone number being called and confirmed with the caller if they were the customer. If it was, the call continued through the Company's self-serve system. If it was not, the Company's system validated the caller by obtaining the caller's account number or telephone number and then the call continued through the Company's system.

Restoration Validation

Outbound calling was performed by live CCC representatives to confirm the customer's service had been restored. Calls to validate restorations were initiated at 7 a.m. December 11. The Company's Automatic Meter Read (AMR) system pinged the customers' meters to inform the Company whether or not the service was restored. When the Company pings a meter, the customer's account number is entered and the Company's system connects with the customer's meter to obtain a snapshot in order to determine the activity of the meter. Customers were told that according to Company records, their service was restored. If it was not currently restored, they were asked to

please call the Company. These calls were compared to a list and targeted individually for restoration.

The Company stated that this detail was well received by its customers. The Company stated during the February 8, 2008 meeting with the Staff that this feature experienced a glitch with Cellnet during this storm. The glitch occurred when a customer was contacted by the Company to confirm that their service was restored; but, in actuality, the customer's service had not been restored. Customers who did not yet have service restored when contacted by the representatives were informed to either call TFCC or the Company's CCC. The information from pinging the meter allowed the Company to inform the customer that the Company had done everything possible to restore their service and restoration would now be the responsibility of the customer. The CCC representatives have been trained to inform these customers of what they might possibly check at their location to determine the problem at their service location.

The CCC has had a post mortem following the storm and has determined that it will expand its outbound calling during the next storm. It will attempt to implement some more efficient and effective processes prior to the next storm. The Company will also look at its allocation of employees prior to the next storm.

Customer Care Center Staffing

The Company's CCC staffing levels during the storm are displayed in the following table:

Day of the Week	Customer Care Center Representatives	Non-Customer Care Center Representatives	Credit and Collections Personnel	Total Call Takers
Tuesday, December 11	40	7	7	54
Wednesday, December 12	38	7	7	52
Thursday, December 13	36	0	0	36

Source: KCP&L Presentation made to Commission Staff February 8, 2008

For comparison purposes, the Company's monthly average of CCC representatives is shown below.

Year	Full Time	Part Time
2005	49	8.5
2006	53	10.5
2007	50.5	9.0

Source: KCP&L Presentation made to Commission Staff February 8, 2008 and Company's reporting in Case No. EO-2005-0329

The two tables above are CCC representatives only; they do not include supervisory personnel. Due to the Company's union contract, its CCC management personnel's job description does not include handling customer calls. The Company stated that the disparity in the number of personnel in the two charts is due to sick leave, annual leave and family and medical leave. The CCC no longer has any part-time representatives; all part-time personnel have become full-time personnel since the December ice storm. Many of the CCC's representatives transfer to other departments within the Company which requires the CCC to frequently hire and train new representatives. The CCC manager has assured Staff that the Company has plans to address its current understaffing situation.

Customer Care Center Performance Indicators

The Staff examined KCP&L's Customer Care Center performance indicators, including the service level, the average speed of answer (ASA) and the abandoned call rate (ACR) during the outage. There are many call center indicators used by utility management to monitor call center performance and, of those, ASA and ACR are considered to be two foundational call center performance metrics.

The Service Level indicates the percentage of calls answered by the CCC representative within thirty seconds. On December 11, 62% of all calls received were answered within 30 seconds. The ACR is the percentage of calls that are disconnected before the call is answered. On December 11, 13% of all calls received were abandoned before the call was answered. The ASA is the number of seconds required for the call to be answered by a CCC representative. On December 11, the average speed of answer was 2 minutes and 5 seconds.

The Company's CCC performance measurements during the storm are displayed in the following table.

Day of the Week	Service Level	Abandoned Call Rate	Average Speed of Answer (Seconds)
Tuesday, December 11	62:30	13%	125
Wednesday, December 12	86:30	4%	31
Thursday, December 13	86.6:30	1.7%	10

Source: KCP&L Presentation made to Commission Staff February 8, 2008

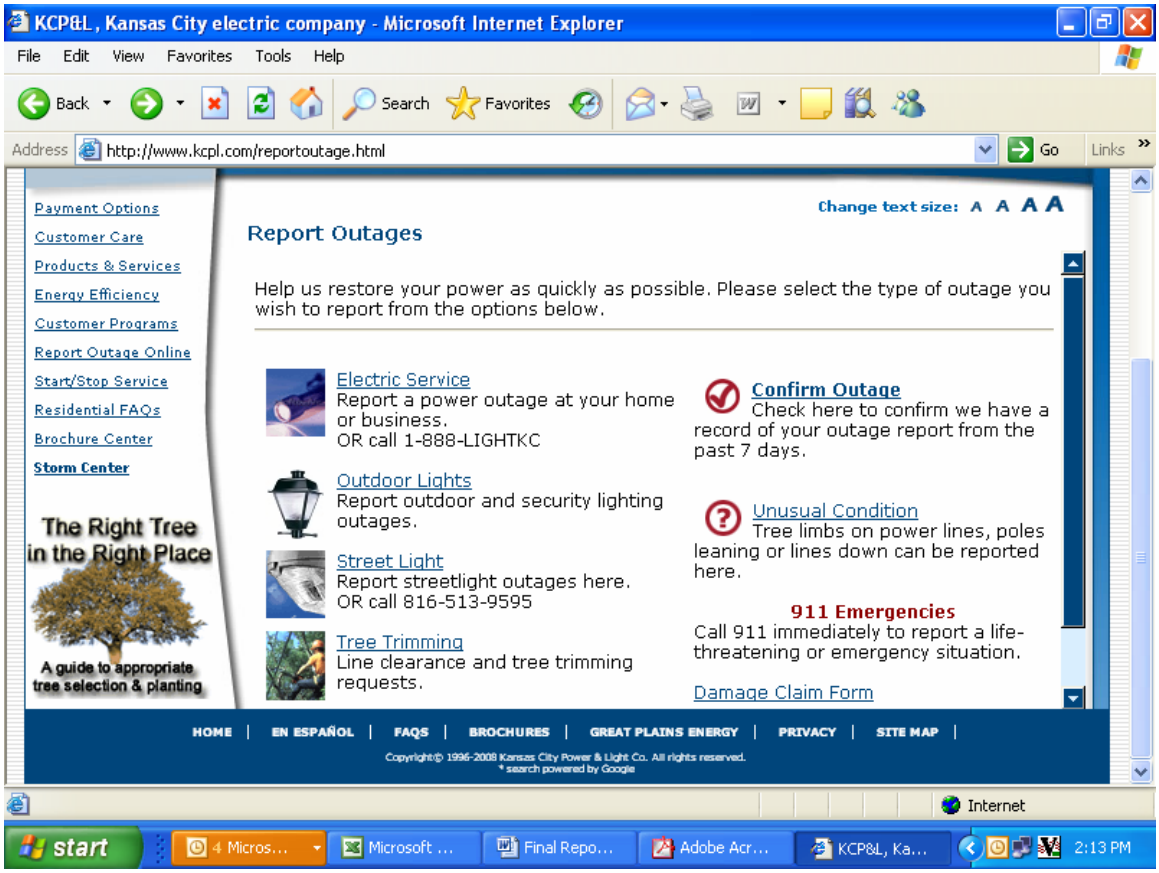
For comparison, the Company's CCC performance measurements for 2005 (July through December), 2006 and 2007 are shown in the following table.

Year	Service Level	Abandoned Call Rate	Average Speed of Answer
2005 (July through December	77.8:30	2.96%	42.5
2006	78:30	3.45%	31
2007	70.3:30	4.85%	45

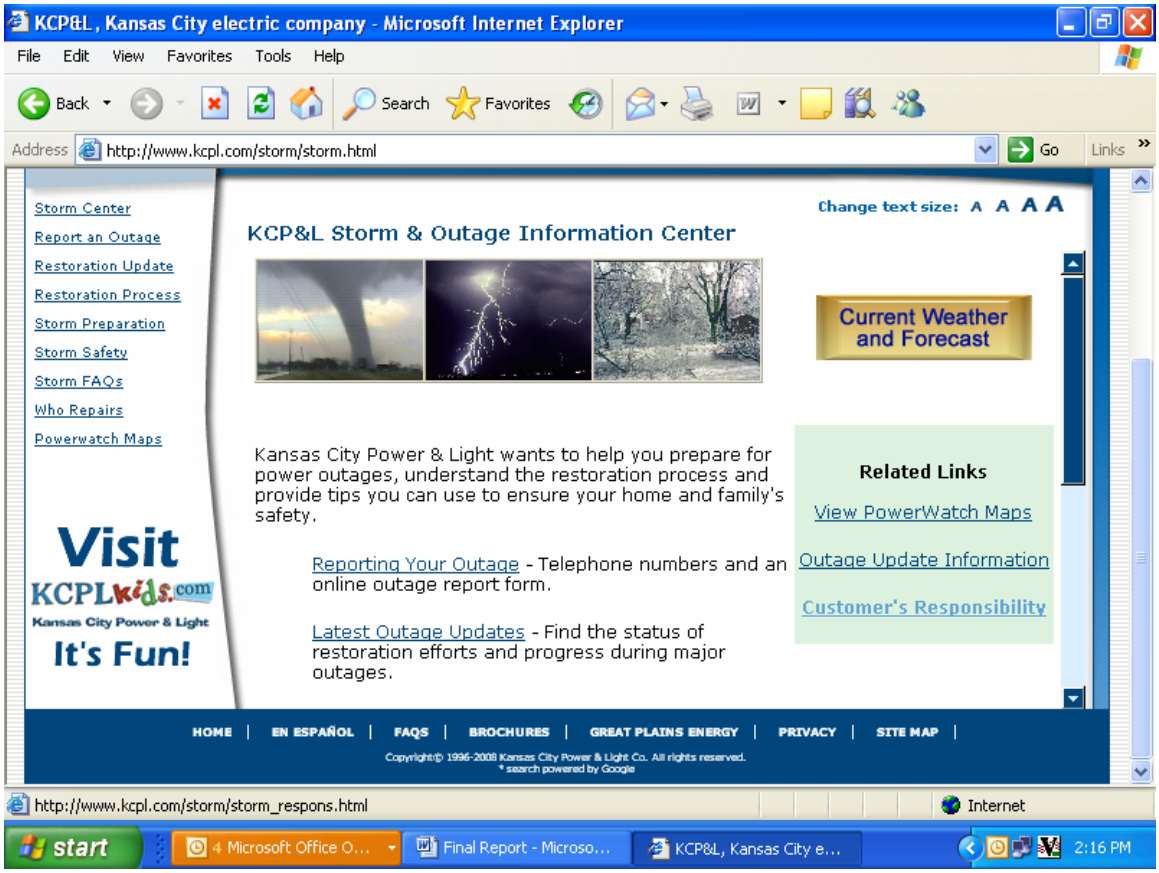
Source: Company's reporting in Case No. EO-2005-0329

Web site

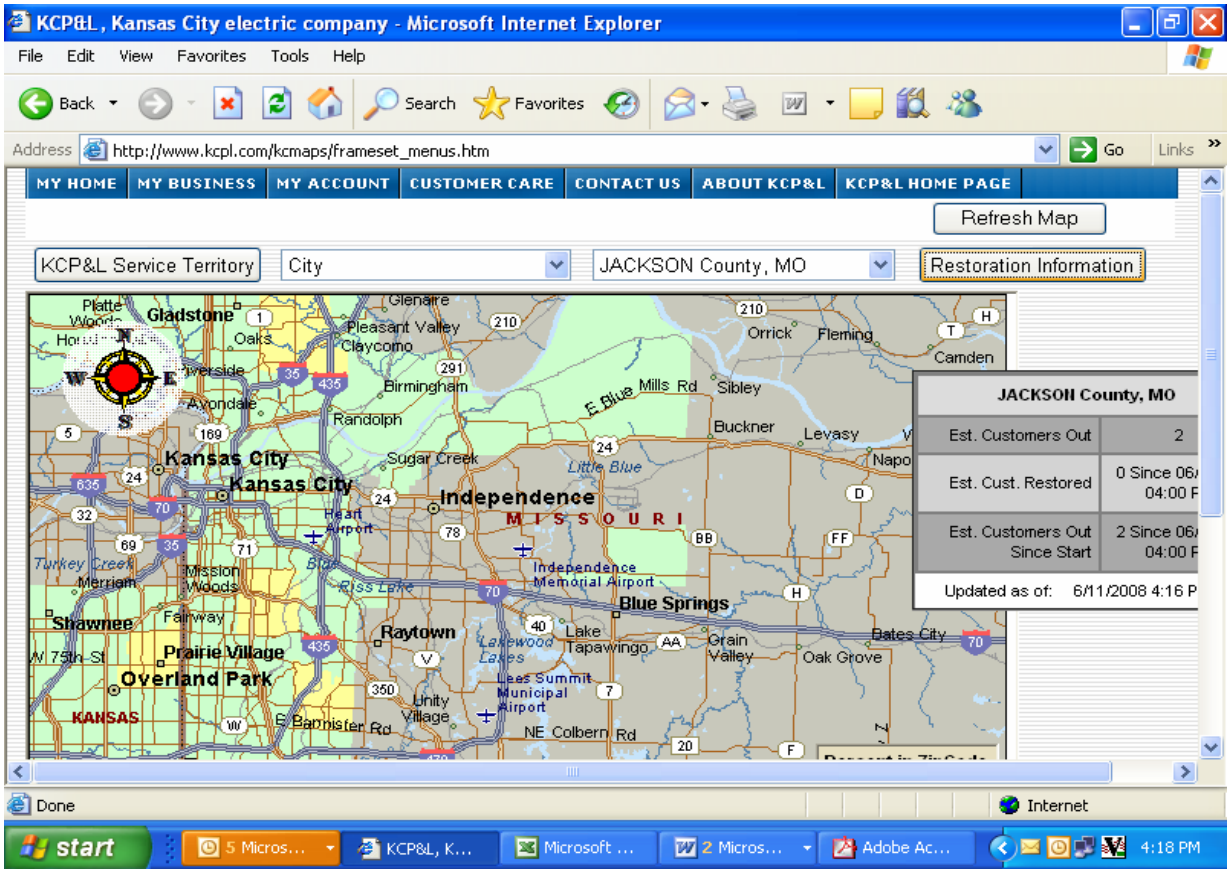
Customers were able to report their outage and confirm a record of their report on the Company's Web site Report Outages Screen, which is shown below.



This screen also informs the customer to call 911 to report life-threatening or emergency situations. The Company's Web site has a storm center report; this information is updated every two to three hours. The storm center screen is shown on the following page.



Within the Company's Storm Center and the home page, the Company has its PowerWatch Map. Users could check outage status 24/7 and were able to select a specific city or county for outage details and obtain real-time outage and restoration information as the maps were updated every 15 minutes. An example of the outage information customer's can access on the PowerWatch screen is shown on the following page.



The Company indicated that the December 2007 ice storm was the first major storm since the PowerWatch Map tool had been added. In its February 15, 2008 report, the Company stated that KCP&L was pleased with the response from both customers and reporters. Many television reports referenced the PowerWatch map during newscasts, and one meteorologist demonstrated how to use the tools. The PowerWatch map was beneficial to Company personnel and reporters who were on a deadline and needed immediate information because they no longer had to call KCP&L for outage information and Company personnel were not required to handle the calls.

The Company's toll-free phone number is also shown on its Web site. This Web site provides information about the responsibilities of the customer regarding their meter, connection to the residence, etc. Emails from the Company's Vice President of Customer Operations were also placed on the Company's Web site. The Company believes this additional information reduced the number of customer calls to its CCC.

The Company's Web site activity increased dramatically during the storm restoration and is shown in the table below. A Web site visit indicates a single person viewed a specific page or site.

Web site Activity			
	December 11-13	**Average 3-day December period**	**Difference**
Web site visits	95,030	31,000	64,030
Storm Center visits	14,000	>10	13,990+
Power Watch Map visits	28,996	160	28,836

Source: Company's response to Staff Request

When the Staff contacted some city and county officials, an improvement requested by one of the Company's constituents was to provide access for the city and county officials to information on its Web site so these individuals would have restoration information that would benefit them in their decision making.

Consumer Services Specific Issues/Observations

The Company stated that it provided restoration updates via email to Staff and also provided information to Staff for customer discussions. The Consumer Services Department should be included in this information exchange given they are the first line of contact for most consumers making an inquiry.

During the December outage and again in the May 2008 outage Staff found it hard to get in touch with anyone at KCP&L that could give them up-to-date Missouri outage numbers for SEMA. In its work with SEMA during large outages, Staff needs to be able to contact personnel at utilities that can get answers to questions and provide the information that they need when they call. Staff was asked by KCP&L not to call the phone number that KCP&L had previously given Staff. KCP&L gave Staff several alternative phone numbers and its preference for who the Staff should contact. Staff usually had to call several different phone numbers before it could get someone to even answer the phone during the outages. KCP&L should review the phone numbers that it supplies Staff and provide 24/7 contact information that Staff can use when there is a large outage. The contact person needs to be able to provide up-to-date Missouri specific

outage numbers and be a liaison between SEMA, Staff and KCP&L when issues arise at SEMA.

Customer Relations

During SERP mode, the Customer Relations Department serves as a point of contact for vulnerable customers and/or the organizations that serve them, targets the customer groups within the Customer Relations Department and provides a communication channel to the Commission and external "helping organization" by providing information. During the February 8 meeting, the Company stated that during this storm its big focus internally was on customer relations.

The Customer Relations Department's target groups include: 1) Medical needs customers, 2) Gatekeeper customers, 3) Assistance agencies / Seniors Centers, 4) Nursing homes and Hospice organizations, 5) Elderly customer referrals, 6) Red Cross and 7) Commissions.

Medical Needs Customer Registration and Notifications

The Company's Customer Relations Department, which has three advisors and a supervisor, is responsible for handling the calls of its medical needs customers. These employees' SERP duties are an extension of their normal duties. On Monday, December 10, the Customer Relations Department met with the management teams in the CCC, Dispatch and Field Operations. The Customer Relations Department set up and tested the back-up CCC and initiated the preparation of overtime and emergency staffing, the preparation of IT, telecom and automated services and the safety message and storm information to the CCC employees.

The Company has 40 medical needs customers in Missouri and stated that it had placed a high priority on these customers during the storm. When the customer initially informs the Company that they are a medical needs customer, the customer is mailed an application for registering and a letter explaining the program. The application requires their doctor's signature. The Company's Internal Medical Department reviews the application, verifies the information and contacts the doctor signing the application, if necessary. The Internal Medical Department determines whether or not the customer is

accepted as a medical needs customer. The customer is mailed a letter informing them of the Internal Medical Department's decision and an explanation letter of the program is included with this letter, which means the customer receives two copies of the letter explaining the medical needs customer program.

If the customer is accepted into the program, their account is coded as a medical needs customer and is a priority restoration during storms. These accounts are renewed on their anniversary date. The Internal Medical Department mails the necessary paperwork for renewal and processes the renewal paperwork.

The medical needs customers are provided a phone number that moves their call next in line when contacting the Company's CCC. The Company stated that throughout the storm, its Customer Relations Department advisors maintained contact with these customers to determine whether or not they had service and that they were coping satisfactorily. If the customer was without service, a trouble ticket was entered for the Dispatch Department and a call was made to Dispatch to bring attention to the ticket. The Customer Relations Department maintained contact with the Dispatch Department throughout the storm. If possible, Dispatch provides an estimated time of restoration and the customer is called and given the information. When these customers contacted the Company during the storm, the Customer Relations Department advisors provided assurance that the Company was prepared to handle the storm by providing the caller with information to address their issue(s). The Company attempts to obtain more than one contact for its medical needs customers, hospitals and nursing homes.

In the Ice Storm Report issued June 12, 2002, of the January 2002 storm, the Staff recommended that Company "Structure a curriculum that periodically informs and updates the medical needs customers and communicates the expectations of the program". The Company informed Staff that these customers receive this information in their re-enrollment letter. The information informs the customer of the correct number to call during outages, that this program does not prevent the customer from being disconnected for nonpayment and the restoration priority of their service during an outage. This information is also available on the Company's Web site.

Other Customer Relation Groups

The Company also has about 140 Gatekeeper customers; approximately 95% of these are Missouri customers. These are customers that are elderly, disabled or confused, and are placed on the Gatekeeper List due to an experience or conversation with a Company employee. The Customer Relations Department advisors determine whether or not the customer should be a Gatekeeper customer and they remain on the Gatekeeper List until they are no longer a customer of the Company. The Company's Customer Relations employees contacted these customers on December 10 to advise them of the pending storm and to provide the CCC's telephone number. The employees also discussed with these customers alternate plans if they experienced a power outage. The Company stated during the February 8 meeting with the Staff that, for future storms, it would like to develop transportation means for its Gatekeeper customers.

The CCC representatives also refer elderly customers that demonstrate a need to be monitored to the Customer Relations Department. The Customer Relations Department advisors confirm that an outage ticket has been made and that it has not been bumped. The Company stated that almost all of its elderly customer referrals are located in Missouri. Some of the elderly customer referrals have been moved to the Gatekeeper List. The Elderly Customer Referrals is a program the Company makes available year round. However, during a storm situation, the employees attempt to be more aware of customers that can typically handle their situation, but might need assistance under these circumstances. Information on outage calls received in the CCC from elderly customers is transferred to the Customer Relations Department. These customers are contacted by the Customer Relations Department advisors and if the customer is without service, the advisor makes certain an outage ticket has been prepared and not bumped. Following the ice storm, the Customer Relations Department advisors determined those customers who should remain as Elderly Customer Referrals.

The Customer Relations Department also handles outage calls from nursing home facilities. When a nursing home contacts the Customer Relations Department, the advisor confirms that Dispatch is aware of the outage to ensure the outage report is not missed.

The Company has approximately 250 energy solutions customers, that are small industrial customers and the Company's top revenue customers. Prior to the storm, laminated cards were provided to all energy solutions customers with information of how to handle outages during the storm. The customers have the Company department's 24/7 phone number and access to the Company's PowerWatch Web site, which is updated every fifteen minutes, and email messages from the Vice President of Customer Operations were massaged and placed on the Web site for these customers. During the storm, the Company made proactive calls to those customers still without service. The Company also kept these customers updated by automatic phone calls. The Company indicated that it received a fewer number of calls during this storm from these customers.

During 2007, the Company implemented a program for its industrial customers. When an industrial customer initially contacts the Company, the employee asks the customer what information they need during a storm and the best method for contacting them during the storm. This information is then documented on the customer's account.

The Customer Relations Department advisors placed outbound calls to 25 Assistance Agencies and Senior Centers to advise of restoration efforts and to provide information. The assistance agencies included United Services, Bishop Sullivan, Metropolitan Lutheran Ministry, Seton Center, Guadalupe Center and the senior centers included Don Bosco Center.

The Customer Relations Department advisors contacted approximately 75 nursing homes to verify power status and provide restoration information and approximately 15 hospices to inform them of the dedicated telephone line and check the status of their patients. When contacting these customers, the Company checks with the customers as to whether or not a generator is available.

The Customer Relations Department contacted the Red Cross to provide information on outages and restoration. In reaction to this information, the Red Cross opened three additional warming shelters in Gladstone (north of the river), south mid-town and at Olathe. All departments within Customer Services were provided the locations and hours of the Red Cross shelters.

Other Customer Contact Groups

KCP&L's largest commercial customers, whom have registered to receive automated email, phone call and/or text messages, received notification that KCP&L was aware of their outage. The Energy Consultants at 801 Charlotte answered these customer's calls and followed up with power restoration information. All large commercial customers who called back to confirm their power was restored received a return call from someone on the team.

The DSO provided the Energy Consultants information from the OMS on Tier 1 customers that were reporting an outage. The Energy Consultants would ping the Tier 1 customer's meter. If no response was returned, the customer would receive a call from one of the Energy Consultants, confirming their outage. Then the Energy Consultant would work with one of the DSO Supervisors.

Corporate Communications

Media Efforts

The Company believes that most of its customers received their information during the storm from the media. The information to the media regarding the Company's restoration efforts was provided real time by the Operations and Dispatch Departments to the Public Relations Department. Information was provided to four local television stations and two local radio stations. The Company stated that it did proactive media outreach to both television and radio stations in order to assure its customers that it was prepared for the storm by informing them what had been done in preparation for the storm. A major emphasis was placed on providing safety suggestions to the customers. The Company monitored the information the media was providing to the public and if the information was erroneous, the Company contacted the media.

In response to several media requests for interviews in anticipation of the storm, the Vice President of Customer Operations met reporters from Channel 9 (ABC) and Channel 41 (NBC) on December 7 at KCP&L's headquarters. He informed the media of steps the Company was taking in preparation for the storm and of steps customers should take to prepare for the storm. The interviews aired on the evening newscasts. On

December 10, the Corporate Communications Team approved one communications specialist as the Company spokesperson. The spokesperson stayed in a nearby hotel in order to be in close proximity to the command center during the storm. A timeline of the Company's media coverage is shown below:

- December 7, 5:30 p.m.—Provided live interview opportunities to Channels 9 and 41. Interviews focused on storm preparation efforts and safety messaging for customers.

- December 10, 3:00 p.m.—Provided information to all television, radio and print reports regarding PowerWatch maps and storm preparation.

- December 11, 5:30 a.m.—Provided live interviews (via phone) to all four television stations and local talk radio. Interviews focused on current outage information, areas of concentration and number of crews working. Also discussed safety messages and how to report an outage. Provided information about PowerWatch maps.

- December 11, throughout the day—KCP& L spokespeople provided live and taped interview opportunities, when requested. The two spokespeople talked to up to 20 reporters an hour during the first full day of the storm. One spokesperson provided live television interview opportunities at the Service Center in the early afternoon.

- December 11, 10:00 p.m.—Provided updated information to all media outlets via phone and email.

- December 12, 5:30 a.m.—Provided live phone interviews to all four local television stations and radio. Outage numbers began to climb and KCP&L explained the restoration process and highlighted safety messaging again.

- December 12, throughout the day—KCP&L spokespeople provided live and taped interview opportunities, when requested. Many local newspaper reporters called for information regarding their specific geographic area as it related to outage numbers and restoration efforts.

Following the storm, the Company stated that it was difficult to convince the media that the storm was complete and the Company had returned to normal mode because the Company was continuing to experience a small number of outages.

E-mail Communication to Employees

To strengthen the Company's communication with its customers and city, county and state officials, the Company believed its employees needed to receive regular updates during the storm restoration process so that they could act as ambassadors for the Company. The employees directly assisting with the restoration efforts were updated more regularly, but KCP&L updated the entire Company several times a day. The Vice President of Customer Operations drafted detailed updates twice daily (following the restoration meetings) during the storm that were emailed to employees around 7:45 a.m. and 3:30 p.m. These updates included information concerning safety, outage updates, customer email feedback related to the storm and crews, challenges facing the crews and success stories. The emails were well received as employees were able to communicate the information when speaking with stakeholders. The Company indicated it believes that internal communications are important; they increase the probability that stakeholders are being provided similar information. These emails were archived on the Company's intranet site.

Communications with State and Local Officials and Government

On December 10, the Company's Corporate Communications and Governmental Affairs implemented a proactive communications plan with state and local officials and government employees by phone or email. The purpose of the communication was 1) to inform officials that a storm was possible that would likely cause outages, 2) to inquire how they preferred to receive status updates and 3) to ensure all the necessary contact information was current for the Governmental Affairs employee handling their particular jurisdiction. As the storm arrived and outages began, the Company stated that Governmental Affairs and Community Affairs and Economic Development employees emailed updates every three to four hours to those on the original contact list desiring to be updated. The Company further stated that the response to these emails was very positive as it received multiple thank yous for the information.

Outreach to Other Groups

The Corporate Communications and Governmental Affairs Department contacted the business managers in cities, counties and municipalities that were experiencing outages. These individuals were emailed information similar to that sent to the state and local officials and government employees. They too were provided updated information throughout the restoration.

The Corporate Communications and Governmental Affairs Department indicated that it also contacted various chambers and councils. In addition, this Department emailed key people of non-government groups throughout the storm. The Company stated that the goal of this department throughout the storm was to communicate with individuals that distribute information to large groups of people.

Results of Staff Contact with KCP&L Stakeholders

Staff contacted entities that KCP&L worked with in the December storm to determine the responsiveness of KCPL and to find areas that may need some improvement.

The Company stated that during the storm, it was linked into other agencies, the City Emergency Operations Center (EOC), government officials and civic officials, through telephone calls and emails about every two to three hours. The Company stated that it updates its contact information with these agencies twice yearly, but the Staff was informed by one agency that it did not have telephone numbers to contact the Company.

The Kansas City Red Cross (KCRC) informed the Staff that no communication occurred immediately prior to the storm. The KCRC obtained the Company's Customer Relations Department phone number from a Kansas City, Missouri Emergency Management employee. The KCRC contacted the Customer Relations Department and stated that the information provided by the Company was very important to their decision-making. This information included the location of the outages and possible restoration times. Based upon the information the KCRC received from the Company, the KCRC opened three shelters: north of the river (Gladstone), south mid-town and Olathe. The KCRC stated that it used radio and television to inform customers of the shelters, but no one made use of the shelters and the KCRC determined it was not

necessary to open the shelters on the second night. The KCRC believed that due to the pockets of outages, customers were able to find shelter with friends, family or others. The KCRC was complimentary of the Company employees for assisting in its shelters during the storm.

One city's Emergency Preparedness Manager (EPM) expressed appreciation to the Staff with the Company's efforts to maintain a relationship with his organization. He is provided an employee's telephone number to contact during storms. When necessary, a back-up employee's telephone number is provided. The EPM indicated that Company employees attend the Metropolitan Emergency Managers Committee (MEMC) meetings, which includes hospitals, industries, etc., which is in conjunction with the Regional Homeland Security Coordination Committee that Company employees also attend. The city's Regional Coordination Guide is working on a Joint Utility System, of which the Company is assisting in the development. Through the Joint Utility System, the Company has indicated that it plans to place an employee at each Emergency Operations Center in the future when necessary, which should expedite constituents' and customers' questions. The Staff was informed that Company employees also attend the Mid-America Regional Council, which has started several initiatives with the assistance of the Company. These initiatives include the creation of a utility clearinghouse. The Kansas City Emergency Operations Center would serve as an additional communication tool for the Company when storms occur by forwarding information provided by the Company to groups associated with the Kansas City EOC. The Staff was also informed by the EPM and the Company that it plans to provide access to its information system so that the Emergency Preparedness Manager can monitor the Company's restoration progress. The Emergency Preparedness Manager felt the Company had improved in its coordination efforts with its constituents since the January 2002 ice storm.

The Staff was informed by one city official served by KCP&L that he believes their outage at their water pumping station is a low restoration priority with the Company because the Company is aware the city has a back-up generator. During the Staff's February 8 meeting with the Company, personnel stated that pumping stations are included as a sensitive public service facility, which is the Company's second priority in storm restoration. The official has met with Company personnel to discuss the situation

and has not gained any satisfaction. The Company has provided the city official with phone numbers to contact during outages, but the city official stated that the city receives no priority treatment when the Company is notified. The official stated that it is costly for the city to run the generator during outages and that there is the potential for a crisis situation should the city need to fight any large fires during an outage. The city official indicated that its longest outage was for three days during the 2002 ice storm.

The Company stated that it met with community people during the past year and is anticipating an expansion of its communication processes, which would include better access to KCP&L storm information and possibly more conference calls.

A recommendation made by the Staff in its June 14, 2002 Staff Report on Restoration Efforts Following Major Ice Storm in Late January of 2002, stated "Contact city officials and agencies impacted by extended electric outages twice a year to update telephone and personnel changes."

The Company stated that it met with community constituents during the past year. The Staff interviewed city officials, county officials and agency heads that were both complimentary and non-complimentary. The KCRC indicated that it is not included in these meetings. Therefore, the Staff believes that improvement can be made to address this recommendation. It would be advantageous to the Company and its constituents to have up-to-date personnel information in order to share information between the Company and its constituents during future major outages. It would also be advantageous to everyone to communicate throughout the year with necessary information, not just during major outages. These officials and agencies would be responsible for areas that could possibly be impacted by extended electric outages.

The Company did not participate in the daily SEMA meetings throughout the storm and was informed by Staff that it would benefit by participating in these meetings, possibly by telephone. Staff informed the Company of the information discussed at the SEMA meetings and suggested that the Company would benefit by participating in the meetings and acquiring the important information that is shared at these meetings. In addition, the Company would benefit by developing relationships with other utility, state and federal personnel attending these meetings.

The Company stated that it would like to build partnerships with the Red Cross and other agencies and develop a data base of this information. Additionally, the Company would like to develop more creative ways to provide information to its customers.

This section provided by KCP&L

Actions to Prevent/Mitigate Future Events

This section highlights changes to KCP&L's systems, processes, and plans stemming from the December 2007, ice storm and sets forth changes made prior to this ice event. Also outlined are changes in systems, processes, and plans, stemming from the January 2002 ice storm and the impact each of those changes had on KCP&L's response to the December 2007 storm.

DECEMBER 2007 CHANGES

Direct Wire Procedures

As previously described, KCP&L's policy is to cut meters straight through only if the customer's meter can or weatherhead is damaged beyond immediate repair by the crew but the service entry cable is in a safe and operable condition. The December 2007 ice storm resulted in 20 Missouri wire directs.

One of the challenges in this process is recording the wire direct service address in the field and reporting it to the Correspondence Desk in the Customer Care Center. KCP&L recognizes a more streamlined approach needs to be implemented to capture the service information and is working to improve that process. Revenue Protection, the department responsible for metering, in conjunction with the Emergency Response team, is working to simplify this process.

Public Official Communication

Many stakeholders expressed, "Thanks" and were appreciative for the up-to-date information. In the event the outage period extended over a greater time period, KCP&L was ready to begin a conference call update system for elected officials. This was the first time a formal process was in place to update these stakeholders and it proved to be very effective.

Governmental Affairs also received numerous compliments for their communication efforts. The feedback they received confirmed the information provided

was timely and the appropriate amount. The communication plan is now incorporated as KCP&L's standard operating procedure for future major events.

Storm Evaluation and Restoration Plan (SERP)

The Initial Evaluators are employees trained to assess system damage. They were called and asked to report between 6:00 AM and 6:30 AM to their designated service centers for duty on Tuesday, December 11th. The Initial Evaluators were not initially used based on the nature of the damage seen by crews already in the field and what the Outage Management System ("OMS") was showing. Instead, the Initial Evaluators were used to visually inspect laterals.

Having the laterals checked before the crews arrived prevented crews from possibly arriving at a location and finding the lights on. Normally Scouts, who have more experience with and knowledge of the distribution system, would and should perform this duty. They are trained and have the background for this kind of work. A majority of the Initial Evaluators are also trained as Scouts. Regardless, patrolling the laterals early in the storm was shown to reduce crew down time and shorten the service restoration time. This additional duty will be added to the Scout activity role in the SERP system. It will also be incorporated in future Scout training.

PowerWatch Map

Changes were made to the map during the outage to clarify the data presented on the map.

An additional change being investigated stems from the February 8, 2007, meeting with the MPSC. The Commission is required to report total outage numbers for Missouri to the State Emergency Management Agency (SEMA). The map currently shows area numbers but not state-wide totals. Although the data is available for this change, the issue is finding the best way to present the data.

This section provided by KCP&L

PRIOR TO DECEMBER 2007

Emergency Preparedness

Over the last couple of years, there has been a renewed emphasis on emergency preparedness. KCP&L cannot be content with only considering system damage from a storm. Storm response procedures can be applied to other major events. KCP&L looks beyond the major weather event and anticipates other events that can impact operations. For example, "What happens if a company facility is uninhabitable or 40% of the employees cannot get to work because of widespread illness or a natural disaster or something impacts one of the communities the company serves?" KCP&L recognizes it has many stakeholders and emergency preparedness training cannot be limited to KCP&L employees but seeks to incorporate all emergency response agencies and personnel that service the Company's territory.

Education

Over the last two years there were different types of training exercises focused on the company's SERP.

KCP&L Employee Training

- May 2006 – A tabletop exercise was held for 110 people in the Distribution Operations' workgroup. The training was conducted by Cubic, a defense contractor whose emphasis is on emergency training. The Evaluation and Information ("E&I") teams, Group Supervisors, Team Captains and EOC team were involved in the tabletop exercise that included a Q&A session based on SERP.
- December 2006 – Reception, Staging and Integration ("RS&I") group trained 20 Staging Managers. This role is to act as the liaison with foreign crews working for KCP&L during an emergency.
- March 2007 – EOC training was conducted. The day-long training consisted of the different groups that are located in the EOC and

adjoining areas presenting their understanding of roles and responsibilities. Their current understanding was compared to the SERP. Any discrepancies were discussed and then clarified.

- April 2007 – Training was conducted with each E&I team, I.T. support, E&I Mapping, Group Supervisors, Team Captains, and E&I EOC team. This classroom setting was to review specific duties of these activity codes. Tabletop discussions ended the sessions. The training was 3 hours long for everyone except the E&I EOC team whose training was extended to 5 hours.
- May 2007 – a full-scale functional exercise was conducted down to the field worker level. This two-day exercise tested everything from the Initial Evaluation, I.T. system, EOC through closing out a restoration event. Cubic facilitated the exercise and kept it on track. A "hot-wash" review was held at the end of the exercise and recordable issues were identified and addressed.
- December 2007 – Online training and testing was developed for 6 activity roles with additional training coming in 2008: Scout, Guide, Captain, Co-Captain, E&I Manager and Initial Evaluator are complete.
- Various dates – When KCP&L crews are requested to assist other utilities, supervision and field workers use SERP work processes in the foreign service territory. This continuity in SERP work processes reinforces the plan with the Company's field forces.

The renewed emphasis on training has helped reduce confusion when a SERP event is declared. Most employees now have a clear picture of their duties and responsibilities when called out to support the restoration effort. Training is important, but it has to be relevant and with an emphasis on safety and putting forth a quality effort. Additional drills and training (classroom and e-learning) will be scheduled for 2008 and on a continuing and regular basis. The drills and training had a moderate impact on the December 2007 ice storm.

Community Drill

- November 2006 – A Reality Based Exercise ("RBX") was conducted with KCP&L's EOC and the City of Kansas City's EOC. The main objective of the drill was to test communication between the two entities. The Uriah Group from Falls Church, Virginia, worked with a smaller steering committee from KCP&L and the City of Kansas City ("City"). The drill was a real-time exercise – 5 minutes of the drill equaled 5 minutes of real time. At the conclusion of the day-long training, a "hot-wash" review was held at the City's EOC. One of the principle issues identified from the exercise was the pinpointing of barriers to effective communication and working to overcome those barriers to keep communication channels open. Since the drill, KCP&L and the City have had numerous discussions regarding channels of communication and will continue to have such discussions.

Another purpose of this drill was to test communication between KCP&L and the City's EOC during an emergency. During the after exercise review, a number of issues were detected. All issues were reviewed and "fixes" put into place. Emergency Response meets with the Director of the City's Emergency Management group on a regular basis. This drill had some impact on the December 2007 ice storm. Communication with the City of Kansas City Emergency Management group occurred much earlier and more frequently than in previous restoration efforts.

Educational Opportunities

- November 2006 – discussions were held with representatives from the Metropolitan Community Colleges (MCC), KCP&L and area emergency service providers. The meeting was to discuss the interest in offering an emergency preparedness curriculum at the MCC for members of the public and its students. The school came

> back to KCP&L mid-year of 2007 and wanted to step back and look at the proposed training program more closely. In the interim, Mark Widner, the Director of Emergency Management for the City of Independence met with MCC representatives and came to an agreement for the MCC to teach CERT training for Independence. Mr. Widner was concerned about who was going to do this training when federal funding ended. Independence's staff directly credits KCP&L's push to establish emergency preparedness training at the MCC as laying the groundwork and with helping Independence resolve its problem.

Getting a certification program developed and offered has been more challenging than originally thought. The MCC has a number of programs under development and have backed off of this one for the time being. Future discussions between KCP&L and the MCC on training programs need to be arranged. Even with the delays, KCP&L is strongly committed to accomplishing this initiative but, unfortunately, does not see its completion in 2008. This effort had no impact on the December 2007 ice storm.

Crisis Management Plan

Knowing what to communicate during an emergency is just part of the emergency response equation. The other component of this equation is who communicates with whom. Working with Cubic, a Crisis Management Plan was developed to address who in KCP&L communicates with stakeholders outside the company. Based on this plan, a communication matrix was developed showing primary and secondary responsibilities. Training for KCP&L's Senior Strategy Team was conducted in December 2007.

The Crisis Management Plan includes SERP, Business Continuity, Pandemic, employee violence and other business interruption scenarios. On-going drills and communication with affected stakeholders is key to keeping the plan current. A follow-up drill for the next lower-level in the organization is planned for late 2008. This drill had minimal impact on the December 2007 ice storm although the Senior Strategy Team

followed the storm restoration more closely than previous events because of the team's recent training.

Business Continuity Plan

Business Continuity plans for each department in Customer Operations were finalized in January 2007 and have been updated quarterly, consistent with KCP&L's corporate guidelines. Corporate has provided the software ("LDRPS") and basic layout of the plan. The underlying premise of the plan is the building each department occupies becomes unusable due to some major event. The structure of the plan lays out a calling tree to inform management personnel, includes contact information for bargaining unit personnel, identifies equipment needs and alternate work locations.

Working with Audit Services, a plan to test procedures and documentation of the Business Continuity plans has been developed. Testing is scheduled for the second quarter of 2008. This plan had no impact on the December 2007 ice storm.

Pandemic Plan

Pandemic plans are currently being developed for each department in Customer Operations. Approximately 50% of the departments have completed plans. The balance will complete plans by the end of the 1st quarter 2008. Each department must review its workforce and its respective duties to identify, by employee, who can work from home or who is required to report to work. I.T. is investigating the impact on the number of remote portals it will have to provide and support. When the Business Continuity plans are communicated and tested, the Pandemic plans will be included. This plan had no impact on the December 2007 ice storm.

Sensitive Load/Critical Customers

Customers that KCP&L has identified as "sensitive" or "critical", *i.e.* hospitals, police, fire, etc. are tracked in the CIS+ system. KCP&L's restoration priorities (SERP Manual, page B5–6) show this class of customer as a second priority when restoration is needed:

- **Second Priority**
  Restoration of service to sensitive **public service facilities** such as hospitals, city halls, county court houses, fire alarm system headquarters, water pumping stations, sewer lift stations, fire stations, police stations, air traffic control centers and other sensitive loads

When new customers are identified as a sensitive load, they are flagged in the CIS+ system. Existing customers in CIS+ have been reviewed and flagged. Twice a year a report is produced automatically from CIS+ and reviewed. A separate file is kept on each sensitive load customer that includes customer information and a location map. Some of the customers – pumping stations, for example, are difficult to locate. Annually, a letter is sent to the sensitive load customers verifying their contact information – name, address, phone, etc. The Sensitive Load customers have a major impact during any restoration effort. During the December 2007 event, the Energy Consultants contacted sensitive load customers if they appeared on outage reports periodically generated during the ice storm.

Mutual Assistance

KCP&L is one of the founding members of the Midwest Mutual Assistance Group ("MMAG"). The MMAG provides a forum to share and discuss best practices during extraordinary service disruption events. It also acts as a conduit to make/receive assistance requests to/from neighboring utilities. The MMAG currently has over 30 member utilities. The Midwest group is associated with several other Regional Mutual Assistance Groups ("RMAG"). The RMAG meets annually to share and discuss restoration practices.

During a restoration event, conference calls are arranged by the requesting utility. Each call is structured and follows an established protocol (roll call, weather conditions, future conditions, "on hold" or can supply help, what help can each utility spare, arrange next call, and so forth.). Mutual assistance processes have been used 6-8 times during the last two years.