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Witness: William P. Herdegen, III
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2007-____

DIRECT TESTIMONY

OF

WILLIAM P. HERDEGEN, III

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
January 2007

DIRECT TESTIMONY

OF

WILLIAM P. HERDEGEN, III

Case No. ER-2007-____

Q: Please state your name and business address.

A: My name is William P. Herdegen, III. My business address is 1201 Walnut, Kansas City, Missouri 64106.

Q: By whom and in what capacity are you employed?

A: I am employed by Kansas City Power & Light Company ("KCPL") as Vice President, Customer Operations.

Q: What are your responsibilities?

A: My responsibilities include the engineering, design, construction, maintenance, and operation of KCPL's distribution system, as well as the call center and revenue management.

Q: Please describe your education, experience and employment history.

A: I graduated from the University of Illinois, Champaign-Urbana in 1976 with a Bachelor of Science degree in Electrical Engineering, and in 1981, I received my M.B.A. from The University of Chicago. I was first employed at KCPL in 2001. I have nearly 30 years of experience in the electric utility industry. Prior to joining KCPL, I served as chief operating officer for Laramore, Douglass and Popham, a consulting firm providing engineering services to the electric utility industry. Additionally, I was vice president of Utility Practice at System Development Integration, an IT consulting firm focused on development and implementation of technology systems. I began my utility career at

Commonwealth Edison and over a course of more than 20 years held various positions, including field engineer, district manager, business unit supply manager, operations manager and vice president - Engineering, Construction & Maintenance.

Q: Have you previously testified in a proceeding at the Missouri Public Service Commission or before any other utility regulatory agency?

A: I have previously testified before both the Missouri Public Service Commission ("MPSC") and the Kansas Corporation Commission ("KCC").

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to discuss the progress made, as well as the goals and objectives of KCPL's Asset Management Plan (or the "Plan"), including distribution investments and distribution automation projects. Additionally, I will address the recommended adjustment to distribution maintenance expense. I will also discuss the proactive storm response processes implemented along with the strong operational performance of KCPL's distribution business.

Q: What are the goals and objectives of the Asset Management Plan?

A: Asset Management at KCPL is the structured and disciplined process to develop the program of work for system expansion, system improvements, and maintenance (both corrective and preventive). Our objective is to provide a scope of work to achieve three key strategic goals at the most optimal cost: (i) Mitigate risks of major outage events to our customers; (ii) Minimize the System Average Interruption Duration Index ("SAIDI") as it relates to the duration and frequency of outages to our customers; and (iii) Minimize the number of customers with multiple interruptions.

By implementing this plan, we expect to manage asset replacement schedules and our aging infrastructure. We will also optimize system maintenance programs, improve system design for better long term performance, and optimize strategic capital and O&M investments while maintaining Tier 1 reliability performance

Q: What progress has been made thus far with respect to the Plan?

A: The Plan includes a number of distribution projects and programs. These Distribution Asset Management Programs include the following:

- High Outage Count Customer Program
- Distribution System Inventory Program
- Condition Assessment Program
- Proactive URD Cable Replacement Program
- URD Cable Injection Program

Through the end of 2006, significant progress has been made on the five projects making up the Distribution Asset Management Program which are all designed to improve system reliability.

Q: Please describe the High Outage Count Customer Program.

A: The High Outage Count Customer Program focuses on proactively rebuilding and replacing poor performing assets in areas where customers are experiencing multiple outages. Corrective action includes tree trimming, pole, equipment and hardware replacement, and line re-conductoring. Additional areas requiring improvements are identified from worst performing circuit and lateral lists.

- KCPL identified the 16 worst performing circuits and laterals under the High Outage Count Customer Program and completed the engineering

planning and design for improvements. Five (5) improvement projects have been completed.

Q: Please describe the Distribution System Inventory Program.

A: This program involves conducting a full system field inventory to collect distribution system information at the component level. Based on the inventory data, the Asset Management and Engineering group will conduct targeted asset management and reliability studies focused on reducing outage minutes caused by problem or failure prone equipment, wildlife, lightning, overhead wire issues, and line design and construction-related issues. Benefits resulting from the studies and resulting system improvements include improved reliability and customer satisfaction due to reduced outages.

A pilot inventory of 5% of the overhead electrical system was performed and completed by INTEC Services (using EDM collection software) by year-end 2005. Plans in 2006 called for completing targeted reliability studies using the pilot inventory data, developing a program of work based on the findings, and fine-tuning the process in preparation for launch of the full system inventory beginning in 2007.

- Under the Distribution System Inventory Program, data for the 27 pilot circuits has been loaded into the AM/FM System and targeted reliability studies are on-going. Lessons learned from the pilot were incorporated into KCPL's specifications for the system-wide inventory. The technical and pricing evaluations for the Distribution System Inventory/Condition Assessment contractor are complete and contract negotiations are near completion.

Q: Please describe the Condition Assessment Program.

A: INTEC Services performed a condition assessment in tandem with the pilot system inventory in order to identify corrective actions that will maintain and improve system reliability. Corrective actions resulting from the pilot are reviewed, prioritized and scheduled.

- To date, corrective actions on 331 items have been scheduled and completed as part of the Condition Assessment Pilot. Typical repairs included primary wire strand damage repairs; replacement of spans of primary wire that had excessive splices; reattaching "floating" conductors to insulators and supports; replacing broken or damaged insulators; replacing broken, damaged or deteriorated cross-arms and braces; re-sagging slack conductors; replacing blown or damaged lightning arrestors; and replacing deteriorated open-wire secondary conductors. An additional 82 jobs are available to be worked.

Q: Please describe the Proactive URD Cable Replacement Program.

A: KCPL initiated the Proactive URD Cable Replacement Program to maintain and improve URD cable system reliability and increase customer satisfaction. The program takes into consideration the type, age, design, number of failures experienced, and failure impacts on customers. This provides a means to perform intelligently targeted proactive cable replacement before failure.

- KCPL completed 31 replacement jobs involving approximately 8,356 feet of cable as part of this program. Three replacement jobs are currently in field design.

Q: Please describe the URD Cable Injection Program.

A: KCPL initiated the URD Cable Injection Program to maintain/improve URD cable system reliability, increase customer satisfaction, and extend the useful life of existing URD cable. The injection process involves a pressure injection of an insulating solution through the stranded conductors to restore the insulation to near new condition. The program takes into consideration the type, age, design, number of failures experienced, and failure impacts on customers. Costs for cable injection are expected to be roughly one-third of the cost of cable replacement.

- The URD Cable Injection Program experienced a minor setback when it was discovered during inspection and testing that some targeted cable sections were #2 solid and could not be injected. The team researched historical standards and purchasing records to eliminate #2 solid vintage cables from the program and identified a new target sample of cables to be injected. Injections on 29 cable segments were completed.

Q: Are there other programs related to distribution automation that KCPL has been conducting?

A: KCPL initiated five of the six total projects that are being funded under the Distribution Automation Strategic Intent Initiative. The one remaining project, Rural Power Quality, was studied during 2006 with larger scale deployment scheduled to begin in 2007. As part of the Integrated Circuit of the Future Project identified below, the pilot program for Dynamic Voltage Control (DVC) has been implemented and further studied. Due to the success of the pilot program for Dynamic Voltage Control, the full DVC program was accelerated to begin implementation in the fourth quarter 2006. The objective of the

Distribution Automation projects is to improve customer service, reliability, and workers' safety by taking advantage of technological innovation. KCPL has been successful in utilizing automation in Transmission & Distribution applications and has received recognition and awards for its innovative automation technology implementation.

The five projects being implemented are as follows:

- Network Automation
- 50 C.O. relay automation
- 34-kV switching device automation and fault indication
- "Integrated Circuit of the Future"
- Dynamic Voltage Control

Q: Please describe the Network Automation Program.

A: The Network Automation Project involves monitoring of KCPL's underground (UG) network. Prior to the Network Automation Project, KCPL had no means to monitor the activity of this network. During annual inspections conducted by the UG department, network protectors were found that had excessive operations, and some were in a state of disrepair and had to be replaced. The new system allows KCPL to track the causes associated with such issues so that action can be taken to address the symptoms and mitigate a malfunction on the UG network. Due to automation of the network, engineers, dispatchers, and the underground workers are alerted to abnormal situations that could potentially cascade if left unchecked. Automation of the UG network has resulted in a better understanding of the causes associated with excessive operations. As a result of being able to proactively manage the network, premature failures have already been

averted and it is anticipated that the lives of transformers and network protectors will be extended, all resulting in deferral of replacement of such expensive equipment. The ability to retrieve important data from the UG network and to convert this data into useful information will greatly improve the ability to troubleshoot issues related to the network system.

- KCPL automated 60 network protectors. An additional 21 network protectors are planned for automation.

Q: Please describe the 50 C.O. Automation Project.

A: The 50 C.O. Automation Project involves enabling or disabling overcurrent relays (50 C.O.) installed at substations by remote control. 50 C.O. relays are overcurrent protection relays designed to trip open before lateral fuses blow, thereby preventing sustained outages. The automation of these devices allows dispatchers to turn these relays on or off remotely from their desktops. The ability to turn the relays off on fair weather days will result in a reduction in momentaries by 40-50 percent, which will greatly improve reliability and customer service. In addition, this system will save fuses during storms to reduce outages, and the monitoring capability will allow dispatchers to check the status of the relay.

- KCPL completed installation on 19 buses, and began engineering for two (2) of the 33 buses planned for 2007 installation.

Q: Please describe the 34-kV Switching Device Automation and Fault Indication Project.

A: The 34-kV Switching Device Automation and Fault Indication Project involves installation of automated switching devices and fault indicators. The rural circuits in the

East and South Districts on KCPL's 34-kV system are quite lengthy, and therefore, when there is an outage, locating the cause of the outage can be time-consuming, resulting in longer duration outages. Also, because the 34-kV feeders serve various 12-kV substations and municipalities, the number of customers affected is significant. The installation of automated faulted circuit indicators will greatly improve dispatchers' ability to troubleshoot the causes associated with an outage. In addition, the automated switching devices will allow faster power restoration to customers because linemen will not be required to drive to a switch and manually operate it. The combination of these technologies will result in shorter outages and improved reliability and customer service.

- KCPL developed standard design for installation of 34-kV reclosers, evaluated bids and awarded a purchase order, initiated design projects for installation of the first eight (8) reclosers, received 15 reclosers and controls, and completed field installation of six (6) reclosers in the South District in 2006. Two (2) more reclosers are targeted for completion in January 2007. These first eight (8) installations will have full automation and communication capability implemented by the end of the first quarter 2007.

Q: Please describe the Integrated Circuit of the Future Project.

A: The "Integrated Circuit of the Future" Project involves the integration of various pieces of distribution system automation technologies, engineering applications, and software in order to support KCPL's vision of implementing a smarter distribution grid. KCPL expects the future delivery system to have the ability to support two-way power flows along with associated real-time information flows. In essence, the distribution network

will evolve to more closely resemble the transmission grid. This vision incorporates the integration of control level data and applications from various devices on the circuit, enabling the concept of a "self-healing grid" which will reduce power outages and mitigate momentary interruptions. The real-time integrated input of data from monitoring devices will help manage system load and losses, while also helping to maintain voltage quality to our customers. The implementation of a smarter distribution grid will require an incremental approach to fully develop and deploy, and will require extensive collaboration among many industry parties.

Q: What is involved in the initial phase of this project?

A: The initial phase of this project includes the installation of radio-controlled switching devices with sophisticated automation and configuration schemes. These devices are capable of remote commands to reconfigure the system as needed to help minimize power outages and momentary interruptions. Radio-controlled faulted circuit indicators are also being piloted to assist in pinpointing system fault locations supporting prompt diagnostics for service restoration. KCPL will also be installing new substation relays that can be remotely configured to help minimize momentary power interruptions during varying system conditions. KCPL is also installing automated capacitors along with remote voltage and current sensors, all of which are expected to help KCPL manage and improve customer power quality while limiting our system losses.

Q: Would you also describe KCPL's Dynamic Voltage Control Program?

A: The Dynamic Voltage Control (DVC) program was piloted under the umbrella of the Integrated Circuit of the Future project by utilizing the identified automation devices/ technologies along with real-time system data. The DVC pilot was implemented for

proof of concept of KCPL's ability to optimize system load and power quality via automation technologies. The pilot proved the concept and DVC implementation has been accelerated. I discuss DVC further in my testimony.

Q: What is the status of the Integrated Circuit of the Future Program?

A: Currently the "Integrated Circuit of the Future" is considered a pilot level effort to provide continued proof of concept as all the above-mentioned technologies are integrated into selected distribution circuits. During this pilot, our goal is to validate the expected benefits of implementing these technologies, and then execute a full-scale system deployment plan.

- KCPL finalized the contract and scope for statistical analysis of the DVC study, completed circuit testing and installation of monitoring hardware, began testing of underground faulted circuit indicators, completed analysis of data from the summer tests for the DVC study and began analysis of data from the winter tests.

Q: Is KCPL accelerating the implementation of the Dynamic Voltage Control system?

A: Yes. As a result of successful testing of the Dynamic Voltage Control (DVC) system on the Integrated Circuit of the Future, KCPL is accelerating implementation of the DVC system to all 203 metro Kansas City substation buses. This is an increase of 65 buses from the 138 buses originally planned for the DVC program.

The project includes the installation of substation voltage regulating controls with intelligent electronic devices (IEDs) that will support state-of-the-art communications protocols. In addition, intelligent substation Remote Terminal Units (RTUs) with remote

communication capability will be installed to allow integration and connection of these regulation control IEDs. The project will also install remote voltage monitoring devices at strategic points throughout the system to identify circuits or areas that need additional capacitors to support the voltage during an event when the DVC system is called upon to optimize system voltage and reduce system loading.

- KCPL began implementation of the DVC system with installation and automation of 60 buses in the field, integrated DVC controls into the EMS, and completed engineering for 36 buses for Spring 2007 installations.

Q: Has KCPL requested an adjustment to test year distribution maintenance expense?

A: Yes. Two adjustments are requested and are included in Adj-26b of Schedule JPW-2, attached to the direct testimony of KCPL witness John P. Weisensee.

Q: Please explain the requested adjustments.

A: The first adjustment is to remove ice storm amortization costs of $4.5 million. The costs become fully amortized in early 2007.

Q. Please explain the second adjustment.

A. The second adjustment requests an increase to test year distribution maintenance expense in the amount of $4.1 million. This amount represents incremental costs of projects not included in the test year but planned for 2007 and representative of a normal level of maintenance expense.

KCPL's distribution maintenance programs over the past few years have been influenced by the impact of the 2002 ice storm. We focused reliability efforts on customers

experiencing the most outages, while overall system reliability performance (SAIDI) continued to benchmark in the top quartile of electric utilities in numerous benchmark studies. Programs were established to identify customers, laterals, and circuits with outages above the system norm, evaluate the facilities serving those customers, and develop corrective action plans to improve reliability in those areas. Another part of the plan was to take a step back from our traditional reliability programs and conduct a system inventory and condition assessment to improve our understanding of the health of the existing infrastructure. Following the assessment, the plan is to utilize the additional intelligence to establish a portfolio of reliability programs and studies that will have the greatest impact on system reliability.

Q: Is KCPL ready to begin deploying the reliability programs?

A: Yes. KCPL is now at the point of deploying reliability improvements based on the pilot inventory and condition assessment discussed earlier. We have identified $4.1 million in additional reliability programs.

Q: Please describe these programs.

A: KCPL expects to generate approximately $850,000 of required corrective maintenance repairs in 2007 from the condition assessment performed in conjunction with the system inventory. Other proactive maintenance expenditures are:

- $900,000 for wood pole inspection and treatment, a significant portion of which are targeted for poor performing laterals or pocket areas.
- $800,000 for infrared thermal-scan inspections and associated repairs. This is for scanning the backbone/mainline portion of overhead

distribution circuits and targeted scanning of padmounted and underground equipment and terminations.

- $350,000 for manhole inspections and associated repairs.
- $400,000 combined for predictive maintenance of automation equipment, installing and administering new mobile power quality metering, mid-circuit fault indicator installation, performance of a grounding/lightning performance study, and a system hardening study for distribution circuits having critical load customers and/or infrastructure.

Although automation equipment reduces overall maintenance costs, this equipment requires predictive monitoring to ensure proper, reliable operation of the automation schemes. The most significant example is monitoring battery condition in the automation equipment for replacement prior to battery failure.

KCPL has ordered mobile power quality meters that employ the same technology and communications as monitoring on the Circuit of the Future. These meters will begin being deployed to monitor for quality issues. Data must be retrieved, monitored and analyzed in order to pinpoint system problems and develop appropriate solutions.

Faulted circuit indicators will be deployed near the midpoint of selected circuits at a sectionalizing device to assist with outage restoration. Operations personnel can check the midpoint indicator, identify the portion of the circuit with the fault, and then quickly restore the unfaulted half of the circuit. Once the unfaulted portion is restored, the other half will be patrolled to identify the fault and restore the remainder.

Engineering will perform a study of circuits with poor lightning performance and assess the grounding and lightning protection. The plan is to utilize lightning stroke data from the FALLS Lightning Detection system to pinpoint possible lightning strokes that caused outages or damage. The study will produce recommendations for improvements on the specific circuits and may initiate improvements in lightning protection standards and application criteria.

We have identified an additional $800,000 of necessary vegetation management work. Our focus on reliability-based vegetation management practices has allowed us to maintain excellent overall system reliability performance (top quartile) while slightly reducing the number of tree related outages over the past five years. We are currently within 10% of our established tree trimming schedules.

Q: Has KCPL implemented any proactive storm response processes since the 2002 storm?

A: Yes. Since the January 2002 ice storm, numerous improvements have been made to our systems and processes to improve our response and communication abilities. After KCPL was back to normal operations after the ice storm, several projects to improve response were initiated. There were projects involving facilities, training, systems, material and communication with local leaders.

Q: What improvements have been made to KCPL's systems and processes to improve KCPL's response to storms?

A: Prior to the storm, KCPL had not designated a storm command center. In December 2005, an Emergency Operating Center (EOC) was opened at 801 Charlotte. An under-utilized part of the building was designed to centralize storm restoration efforts. This area features a large meeting room capable of video conferencing, weather and news updates (cable television), and ties into our Energy Management System, Outage Management System, and Customer Information System. Space is available for our Corporate Communications personnel to get up-to-the-minute information and make it available to interested parties.

Along with the EOC, a mobile command center was designed and built for onsite local and remote command and control capability in the field. The vehicle is equipped with HVAC and electrical power (generator and system sources). Some of the equipment carried in the command center includes handheld and base radios, cell phones, five phone lines with conference call capabilities, two programmable radios for Police, Fire, etc., WAN access and five laptop computer stations.

Immediately after the storm in 2002, we invited representatives from the utilities and contractors that assisted in the restoration to provide feedback on what we could do to improve our restoration efforts. This information was used to revise our Storm Evaluation & Restoration Plan (SERP). The majority of the feedback was on communication – feeding back information to the Company in a timely manner. An

example of the improvements involves line fuses and when they get closed in. A new Crew E&I OMS Update form was created. The field forces use this for reporting line fuse progress. This one change assists with restoration time estimates because of more accurate, timely information being submitted.

Along with any SERP changes, training goes hand in hand. Any plan changes that are made need to be communicated, as well as training new personnel involved in the restoration effort. Several tabletop drills have been conducted for the Evaluation and Information (E&I) teams, Staging Managers and leadership positions in SERP. Cubic, a defense contractor that specializes in terrorism response scenarios, was hired in 2005 to review our plan and assist us in developing training. In 2006, two tabletop exercises were conducted and the feedback is being reviewed for inclusion in SERP. More exercises, leading up to a full-scale drill, are being planned for 2007.

Q: Has KCPL conducted any disaster drills to prepare for storms in the future?

A: Yes. In early 2006, The Uriah Group, a nationally recognized disaster drill consultant, was hired by KCPL. The goal was to develop a Joint Disaster Drill that tested the communication and response capabilities between KCPL and the City of Kansas City, Missouri. The drill involved activation of both parties' EOCs and was a simulated real-time, reality-based exercise. The information we received in the After-Action report will be reviewed and follow-up with the City will be done. One outcome of the joint drill is a commitment by both parties to continue meeting and discussing joint issues. A similar drill is being discussed with Overland Park, Kansas.

Q: Has KCPL conducted other training related to crisis management?

A: Yes. The Senior Strategy Team has also requested training on crisis management. KCPL has retained Cubic to co-develop an Executive Crisis Model and conduct a training session in early 2007. Along with SERP, pandemic planning and business continuity are being included into this effort.

Q: Are there other ongoing efforts that are intended to help KCPL to improve its response to future storms?

A: Yes. KCPL is also partnering with the Metropolitan Community College system to develop an Emergency Preparedness certification program. This could range from an 8-hour certificate to a 2-year Associate's degree. KCPL hosted the initial meeting and included several customers and energy providers. Our Energy Consultants have contacted numerous customers from our commercial/industrial base concerning their interest in such a program and the response has been overwhelmingly positive. We will serve on the advisory committee as the program is being developed.

Q: Is KCPL also working with regional utilities to coordinate the response to storms in the area?

A: Yes. Due to the magnitude of the 2002 ice storm, we quickly realized a need for a larger, coordinated effort among regional utilities. KCPL was the founding member of the Midwest Mutual Assistance Group. When a situation arises, this group communicates via email and conference calls, serving as a resource to any member utility in need.

Q: Have there been other improvements in addition to the facilities and training?

A: Yes. Along with the facility and training that has been done, numerous systems/enhancements and process changes have been added. The desired outcome is to

assist our efforts in faster, more accurate communication with our field forces, customers, community leaders and commissions.

Q: Please elaborate on these improvements.

A: KCPL maintains a database of customers with sensitive load situations, including homes with medical equipment, nursing homes, and certain public facilities (water or sewage treatment plants). Customer Relations promptly contacts these customers to provide outage information and updates on restoration efforts. These customers also receive higher restoration priority.

PowerWatch, an on-line, real time Outage Reporting System, was launched. This system provides customers and the public with information, via maps, on outage locations and restoration activities as it happens. PowerWatch is available on the corporate website 24 hours a day, 7 days a week.

Customers who call into the Customer Care Center to speak to a representative get more accurate information about the restoration effort than previously available. Customer Care Center representatives have access to the Outage Management System, giving them better visibility into restoration efforts, including crew dispatching. On clear days, the system automatically estimates restoration times. During storms, dispatchers enter estimated restoration times once crews are assigned.

Customers have the option to contact the Customer Care Center and use the automated phone system (IVR) to report their outage. Within this process, the caller is given multiple options to narrow the reason or cause of the outage. Regardless of the type of

outage recorded, the system provides an estimated system restoration time in hours and minutes. This is done as a courtesy, helping set a realistic and accurate expectation for the caller. After the estimated restoration time is given, the caller hears two additional offers asking: a) If you would like to be called back if your estimated restoration time changes – press "1" and, b) We would like to call you back to confirm your service is restored. To request a callback – press "1". If for any reason the IVR is unable to identify the caller or if there are multiple matches to the phone number entered, the call is transferred to a live Customer Care Center representative.

Customers may also choose to report an outage by calling 888-LIGHT KC. This call is handled by 21st Century providing a fully automated outage reporting system, handling periods of extremely high call volume. Though this service is fully automated, if for any reason the system is unable to identify the caller or if there are multiple matches to the phone number entered, the call is transferred to a KCPL Customer Care Center representative.

Lastly, both outage reporting systems utilize the OK-on-Arrival system. This system receives reported outages from the systems described above and sends a signal attempting to contact the service meter at the customer address. Two scenarios follow – a) there is no response, indicating the outage report is legitimate, or b) the meter replies, indicating there is indeed power to the meter and the outage may not be legitimate. Legitimate outages are processed through KCPL dispatchers and crews are sent. In the event the meter replies (indicating power is on at the meter), the phone system places an automated

call to the customer announcing (paraphrasing) "Power is currently on at your meter, please check your circuit breaker or other electrical issues inside the house. If your problem continues, please call KCPL."

Q: What is the Power Outage Application?

A: The Power Outage Application (POA) runs on Cellnet's system controller side, waiting to read outage meter events. This application acts on real-time events and notifies the utility as soon as possible. The Outage Management System reads Cellnet's outage meter events every five minutes. Once processed by the system, these events are either grouped under an existing event or a new one is created. Dispatchers handle these calls as valid outages.

Q: Are there other improvements that the Commission should be made aware of?

A: Yes. Another Cellnet application, Restoration Verification Application (RVA), allows KCPL to ping batches of meters to test for service. The Outage Management System is then updated automatically to close existing trouble tickets and flag accounts in CIS to signal that service is restored.

Q: Please describe the Outage Management System.

A: The Outage Management System, which allows KCPL to track outages, manage crews more effectively and speed restoration, was upgraded. The system can predict the outage device and location, which gives the restoration crew a head start on diagnosing the problem. It automates the workflow and schedules the crews in the most efficient manner. Dynamic management of the crew status and assignments is also possible. The system provides paperless recording of trouble calls, assignments and resolution of outages, non-outages and customer meets. CIS records are then updated so Customer

Care Center representatives and customers can see the status of the work. KCPL spent $600,000 on new UNIX servers, disk arrays, and the latest version of Centricity to increase the capacity and stability of the system. The software was upgraded in 2006 and both hardware and software will be upgraded in 2007.

Q: Are there additional systems that are important in this area?

A: An additional internal automation to rapidly assemble and communicate with KCPL crews was implemented in 2006. The ARCOS system is used to call field personnel for overtime assignments, storm restoration, etc. When activated, the system can call up to three devices (home phone, pager, and cell phone) for individual employees or "blasted" to all field personnel in the system within 80 seconds.

There are two additional efforts that also need to be mentioned. These procedural items were in place for the 2002 ice storm but have been enhanced since that time. The first item is the Wire Down Team. Public safety and increasing crew utilization efficiency were the drivers for this effort. When a wire down call comes in, someone is dispatched to the scene to assess the situation. If it is an unsafe condition, a qualified person (a safety representative that is qualified to cut in the clear) takes appropriate measures to correct the situation or guard the public until a crew arrives. If the situation is not a public safety hazard, the team reports it as such and moves to the next call. This team was expanded after the 2002 ice storm.

The second effort involves material used in the restoration process. Material lists identifying primary ("A" Kits) and secondary ("B" Kits) were reviewed by Material

Services and selected linemen. They were looking at the particular items identified for the kits and quantities available. Numerous changes were made and an additional list ("C" Kit) was identified for the outlying districts. In addition, several "Conex" boxes were purchased/donated and filled with material, specifically identified "for emergencies only." One box is filled with hand coils of wire and cable in predetermined lengths. Each service center in the Metro has a Conex box filled with material representing 5 "A" Kits and 5 "B" Kits. Any of the Conex boxes can be opened on-site for use or loaded on a flat bed trailer and moved to a staging area or work location.

Q: Please discuss the communication of storm restoration efforts with local leaders.

A: Communication of our storm restoration efforts are continually being refined. During a storm, local leaders receive customized information to keep them informed of restoration efforts. Company representatives contact designated individuals in each city in advance of the storm to discuss anticipated conditions. As the storm progresses, personal status updates continue, at a frequency selected by the city leader. If the outage is localized in a particular area, or if a city requests, a liaison may be assigned to coordinate restoration activities with key emergency operations personnel. During a major outage in Kansas City, Missouri, two KCPL employees work at the City's EOC with remote access to the Outage Management System and other critical KCPL systems. We are continually working with the City to identify ways of better response during an outage.

Q: Have there been improvements in KCPL's vegetation management program?

A: Yes. KCPL's vegetation management program has undergone many improvements since the 2002 ice storm. The program is based on three major cornerstones: a focus on reliability, not just trimming trees; implementation of industry best practices; and

maintaining vendor competition. We have contracted a third-party vegetation management consultant for pre-planning the line clearance work, on-site daily program supervision, administration, and record-keeping, and tree-trimming contractor oversight. Our overall line clearance strategy is centered on reliability-based trimming, where work is planned based on risk and reliability performance of specific lines as opposed to the same cycle for all lines. This focused approach on vegetation management has led to a 10% reduction in tree-caused customer minutes out (2003-2006 period versus the prior four year period of 1999-2002). We have implemented a number of industry best practices, including prescriptive work selection in advance of tree crews, proactive and preventive scheduling rather than reactive maintenance, appropriate maintenance cycle based on tree re-growth rates and clearance guidelines, brush control techniques and herbicide application, and sourcing strategies. The sourcing strategies have led to vendor competition and productivity improvements through best practices such as development of comprehensive specifications, using multiple contractors with competitively bid contracts, contractor evaluation and rating process, and performance-based contracts.

Q: Please discuss the 2006 operational performance of KCPL's distribution business.

A: KCPL's overall system reliability performance continued to be strong in 2006, and is expected to remain in the top quartile of utilities in our benchmarking peer groups. In 2005, the T&D System Average Interruption Duration Index (SAIDI) was 55.2 minutes, compared to a top quartile figure of 89.8 minutes. The source of this data is the EUCG benchmarking study of which KCPL ranked third out of thirty. EUCG is a global association of energy and electric utility professionals who discuss current and emerging

industry issues, share best practices and exchange data for benchmarking purposes. In 2006, we finished with a SAIDI of 63.8 minutes, a slight increase that was mainly due to a higher than average number of Class II storms (ten in 2006 compared to historical average of four). The above SAIDI data excludes major events and is based on the IEEE 1366 standard, a method of distribution reliability reporting. A Class II storm for KCPL is defined as 5,000 to 15,000 customers were out of power, and these storms are typically not classified as major events per the IEEE 1366 standard.

Q: What factors contribute to KCPL's recent reliability performance?

A: Our reliability performance can be attributed to a number of factors. As mentioned earlier in my testimony, we have focused our programs on improving reliability performance for the customers who have experienced the most outages. These customers are identified through our outage management system data. We analyze the cause and trends of the outages, inspect the infrastructure serving them, then issue improvement plans to mitigate the problems. Progress has been measured by tracking the number of customers who have experienced three or more outages in a calendar year. In 2006, this number was slightly less than 23,000 customers, compared to an average of about 50,000 for the previous two years. In addition, we have initiated several capital reliability improvement programs, discussed earlier in my testimony, covering our Asset Management CEP programs. KCPL has maintained engineering and design standards (including Grade B construction), and material specifications, that also play a role in our reliability performance by establishing an infrastructure that is built to withstand National Electric Safety Code (NESC) heavy loading conditions and provide contingencies to quickly restore service when outages do occur. We have implemented a number of best

practices in our vegetation management program that have enabled us to maintain reliability while controlling costs. Finally, our storm response processes, also discussed earlier, contribute to our strong reliability performance by reducing the duration of outages.

Q: Do you have any comments regarding KCPL's performance in the safety area?

A: Yes. While discussing KCPL's strong operational performance, it is important to mention our performance in the area of safety. The OSHA Recordable Incidence Rate for the Customer Operations division was 2.38 in 2006, and 2.05 for the entire Delivery division, both historically low numbers. In addition, KCPL has been a top quartile performer in our benchmarking studies with industry peers in overall safety performance, which includes evaluation in four categories: OSHA Recordable Incident Rate, Lost Time Incident Rate, Lost Time Severity Rate, and Total Vehicle Incident Rate.

Q: What are KCPL's goals for safety-related improvements in the future?

A: Safety has always been a priority to KCPL, and will continue as we strive for our stated goal of attaining a World Class Safety culture by 2008, based on annual evaluations by DuPont Safety Resources. We have created a number of cross functional teams with management and bargaining unit employees to develop and modify safety policies, procedures, and training, and establish open communications to learn from our near misses and accidents as we drive toward a goal of a zero accident workplace.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariff to Continue the Implementation of Its Regulatory Plan	)))	Case No. ER-2007-____

AFFIDAVIT OF WILLIAM P. HERDEGEN, III

STATE OF MISSOURI)
) **ss**
COUNTY OF JACKSON)

William P. Herdegen, III, being first duly sworn on his oath, states:

1. My name is William P. Herdegen, III. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Vice President, Customer Operations.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of twenty-six (26) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

William P. Herdegen III
WILLIAM P. HERDEGEN, III

Subscribed and sworn before me this 31st day of January 2007.

Nicole A. Wehry
Notary Public

My commission expires: Feb. 4 2007

NICOLE A. WEHRY
Notary Public - Notary Seal
STATE OF MISSOURI
Jackson County
My Commission Expires: Feb. 4, 2007