BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of an Investigation of	)	
The Empire District Electric Company's	)	Case No. EO-2008-0215
Storm Preparation and Restoration Efforts	)	

STAFF'S RESPONSE TO COMMISSIONER QUESTIONS

COMES NOW the Staff of the Missouri Public Service Commission (Staff) and for its Response To Commissioner Questions, respectfully states to the Missouri Public Service Commission (Commission) as follows:

1. On January 2, 2008, the Commission issued its Order Directing Staff To Investigate The Empire District Electric Company's Storm Preparation And Restoration Efforts And Setting An Intervention Deadline. This Order directed Staff to "investigate the effectiveness of Empire's storm preparation and power restoration efforts and report its [initial] findings and recommendations to the Commission" not later than April 3, 2008.

2. On January 14, 2008, Commissioner Robert M. Clayton III issued a Concurring Opinion, requesting Staff's investigation include fourteen (14) specific questions not listed in the majority Order.

3. On April 3, 2008, Staff filed an initial report of the investigation. as directed by the Commission's January 2, 2008 Order. The initial report contained a summary of progress made to date and indicated Staff's final report would be filed no later than June 17, 2008.

4. On June 17, 2008, Staff filed its Final Report Of Staff Investigation, which included in Attachment B, company responses to the fourteen (14) questions raised by Commissioner Clayton's Concurring Opinion.

5. Many of Staff's responses to the fourteen (14) questions were contained throughout the

Report filed on June 17, 2008. Dan Beck, Staff Utility Regulatory Engineer, prepared the report attached hereto, which contains a more direct and concise response to the questions, including references to the Report where applicable and additional information gathered since the Report was filed.

WHEREFORE, Staff respectfully submits its Response To Commissioner Questions.

Respectfully submitted,

/s/ Jennifer Hernandez

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Certificate of Service

I hereby certify that copies of the foregoing have been mailed, hand-delivered, or transmitted by facsimile or electronic mail to all counsel of record this 5th day of August 2008.

/s/ Jennifer Hernandez

Commissioner Questions

Empire District Electric Company

1. Analysis of the age, siting, durability and quality of the utility's infrastructure, including the placement of distribution lines in light of the ice storm outages of 2007.

Neither Staff nor Empire have conducted this type of analysis. The recent rulemaking (4 CSR 240-23.020 Electrical Corporation Infrastructure Standards, effective June 30, 2008) will provide information that would provide data and empirical information which will enhance analysis of this type for future events. The first compliance report required by this rule will be filed no later than July 1, 2009. However, it should be noted that under the requirements of this rule, the inspection of all electric utility infrastructure may not be completed for 12 years, due to the specific inspection interval requirements contained in the rule.

Empire noted that there was damage to older facilities and to newer facilities as well. Some of the newer facilities had even been replaced during or after the previous January 2007 ice storm.

2. A comprehensive compliance review of Commission Orders stemming from prior storms and outages applicable to the utility.

Staff is not aware of any specific Commission Orders from prior storm reviews that would be applicable to Empire. Empire response to the storm that occurred in January/February 2002 was not reviewed by Staff because of the path of those storms.

3. An analysis of all assistance requested or offered and whether the utility accepted or denied the offers of assistance by other entities.

Prior to and during this storm event, there were limited outside resources available. This storm and earlier storms had affected large portions of the central United States. Empire utilized the Midwest Mutual Assistance Group; however; locally available personnel were also being requested by and dispatched to assist Oklahoma utilities. In addition, as the second wave of storms severely impacted other utilities with service territories that are North of Empire's service territory, the ability to acquire crews from neighboring utilities became even more difficult. The tables below show the assistance provided by other utilities and outside contractors.

Tree Trimmers Mobilized

Vendor	City	State	Crew Locations	
Wright Tree Service	Des Moines	IA	Missouri, Texas, Indiana	246
Asplundh	Willow Grove	PA	Missouri, Arkansas, Kentucky, Tennessee	185
Townsend	Corydon	IN	Missouri, Kentucky, Tennessee, Louisiana	87
West Tree	Little Rock	AR	Arkansas	46
Poor Boy	Fairplay	MO	Iowa	37
Wolf Tree Experts	Knoxville	TN	Arkansas	8
Shade Tree Service	St. Louis	MO	Missouri	3

Vendor	Linemen Mobilized City	State	Crew Locations	
Sumter Utilities	Sumter	SC	South Carolina	161
Dillard Smith	Chattanooga	TN	Tennessee	105
BBC	Joplin	MO	Kansas	48
PAR	Kansas City	MO	Missouri, Kansas	45
Bowlin Energy Group	Owenton	KY	Kentucky	42
Bison	Tulsa	OK	Oklahoma	19
Texas Electric	Sherman	TX	Texas	18
Tiede's Line Construction	Haysville	KS	Kansas	11
Diversified	Hartselle	AL	Alabama	13
Kelley Electric	Kennett	MO	Missouri	8
P.R.O. Line Construction	Topeka	KS	Kansas	16
B&B Electrical & Utilities Contractors	Brandon	MS	Arkansas	21

4. An analysis of the Call Center operations during the storm and any observations about customer service issues.

Empire's Call Center serves as the primary method for customers to contact the Company to conduct a wide range of business. Empire provides customers with a toll-free phone number to contact its two Call Centers. Joplin area customers may also use the local number to contact Empire. If a Call Center agent is available, the call goes directly to the agent. If no agents are available, the call goes to the Interactive Voice Response (IVR) unit where customers can choose from various options, including self-reporting an outage.

The Staff reviewed a wide range of procedures and practices that pertained to customer service during Empire's outages. Detailed information regarding customer service operations, including recommendations for improvement, is provided on pages 18-41 of Staff's report filed in Case No. EO-2008-0215.

Empire reports monthly Call Center statistics and performance metrics to the Commission on a quarterly basis. In its analysis of the Call Center operations for the December 2007 ice storm, the Staff reviewed daily Call Center metrics for the duration of the restoration period and contrasted the number of calls handled to the number handled during the 15-day restoration period from the January 2007 ice storm. The Staff also examined Call Center staffing levels during the December 2007 outage, including the assistance of staff from other departments within the Company. (Staff Report, pages 20-22).

The Staff analyzed performance metrics, including the Abandoned Call Rate (ACR) and the Average Speed of Answer (ASA). Staff determined that although the ASA during the January and December 2007 ice storms was high, the ASA in the months after Empire began taking gas calls after acquiring the Aquila gas properties on August 28, 2006, and during the winter months of 2007 was higher. (Staff Report, pages 24-26).

The Staff also reviewed technical issues the Company encountered, which likely affected customer service. (Staff Report, pages 22-23).

Web site information has become an increasingly valuable source of assistance and communication with the customer. Empire continues to add pertinent customer information to its Web site.

The Commission's Electronic Filing and Information System (EFIS) received 105 public comments noting multiple concerns from Empire customers. The majority of public comments

fell into the categories of tree trimming, Call Center issues, and customer communications. (Staff Report, pages 31-35).

Media communications were initiated early in the storm and continued throughout the restoration. Fourteen news releases regarding the ice storm were issued from December 9-19, 2007. Opportunities for improvement exist, particularly in regard to customers being able to access the Company to report outages and receive information regarding restoration efforts.

5. An analysis of the utility's current tree trimming schedule and input on whether there is a need to amend the current program or consider alternative programs suggested through other Commission cases.

Empire's vegetation management program cycles will require significant modifications to comply with the recently adopted 4 CSR 240-23.030 Electrical Corporation Vegetation Management Standards and Reporting Requirements, which became effective June 30, 2008.

The new rule will provide information that would provide data and empirical information, which will enhance analysis for future events. The first compliance report required by this rule will be filed no later than April 1, 2009. However, it should be noted that under the requirements of this rule, the completion of the first vegetation management cycle will not be completed until four years following the effective date of the rule for urban areas and six years following the effective date of the rule for rural areas, due to the specific vegetation management interval requirements.

4 CSR 240-23.010 Electric Utility System Reliability Monitoring and Reporting Submission Requirements becomes effective July 30, 2008. This rule will require reporting of worst performing circuits and actions taken (or planned) to improve the performance of these circuits. Additionally, reporting will include reliability improvement programs that are being implemented by the utility.

As utility compliance reports are filed in accordance with these new rules, Staff will be able to evaluate if the current programs are effective or if rule amendments/alternative programs should be recommended.

6. An evaluation of the communication, cooperation and assistance between the affected utilities, citizens and city, county and state officials.

Communications with individual customers is addressed in the response to Question 4 (above).

Responses to Questions 3 and 9 (in this document) provide information relative to interaction with other utilities.

The response to this question will focus on the communication, cooperation, and assistance between Empire and local (city and county) and state officials. The State Emergency Management Agency (SEMA) activated their Emergency Operations Center on December 9. SEMA returned to normal operational status on December 18. Empire did not directly participate in periodic SEMA teleconferences; however, the Company provided Staff with a single point-of-contact that provided the twice daily updates needed by SEMA and provided responses to specific requests. In several instances, Staff was able to provide Empire's response to a specific request from a state or local government agency during the same SEMA teleconference in which the request was made. In other cases Staff received timely responses to

requests that were generated by the SEMA process, either in the SEMA teleconferences or during the normal functioning of the SEMA Emergency Operations Center (EOC).

In Empire's December 2007 Ice Storm Process Review, which is Attachment E to Staff's report, Empire had several primary findings that should improve communication with local and state officials. First "Corporate Communication needs updates for the community and Agency contacts at: 7:30 AM and 2:30 PM." Second, "Governmental Affairs personnel should be responsible for communicating with state and national government elected officials and their staffs. Must work closely with Community, Agency Contact and Corporate Communications."

7. If any of the utility's service area lost electrical service for a prolonged amount of time, provide an analysis of what caused the prolonged outage.

The following table shows the number of customers that were out by day as the outage progressed:

Day	Customers Out	Missouri	Kansas	Oklahoma
Dec 9th	48,000	36,600	9,000	2,400
Dec 10th Peak	65,000	48,500	12,000	4,500
Dec 10th	58,000	43,000	11,000	4,000
Dec 11th	42,000	30,500	8,000	3,500
Dec 12th	33,000	24,000	6,000	3,000
Dec 13th	26,000	19,000	5,000	2,000
Dec 14th	15,000	9,400	4,300	1,300
Dec 15th	9,300	4,900	3,500	900
Dec 16th	4,500	2,000	2,000	500
Dec 17th	2,100	850	950	300
Dec 18th	600	250	250	100

It is Staff's opinion that a significant number of Empire's customers experienced a prolonged outage in Missouri, Kansas and Oklahoma. In Missouri, the largest number of affected customers were in and around Joplin, which is also the area of Empire's service territory that has the densest population. Although the severity of the storm was the primary cause for the extended outage, a second major cause was the design of the distribution system, which is heavily back lot routed in the Joplin area. Back lot routing typically results in distribution line being located near more trees than front lot routing and the tree typically are larger in neighborhoods with older housing stock. In addition, back lot routing of distribution lines greatly slows the restoration process since equipment like line trucks cannot easily access the lines due to obstructions like fences and wet soil conditions. With front lot routing, the lines can typically be accessed from the street or road. All of the utilities in Missouri have areas with significant back lot routing.

8. An assessment of the coordination of efforts to ensure that critical operations facilities such as hospitals, residential care facilities, police and fire department buildings had temporary electric needs satisfied until service from the grid could be restored.

Most critical care facilities such as hospitals are required by state and federal regulation to have standby emergency generation for certain circuits and functions. For example, the

Department of Health and Senior Services, Division of Regulation and Licensure, has regulations for hospitals in 19 CSR 30-20 that require standby emergency generation for certain circuits and functions with sufficient fuel on site to ensure continuous operation for twenty-four (24) hours. However, many residential care facilities do not have similar requirements and do not have standby emergency generation.

Empire's Power Outage Recovery Plan places a priority on establishing at least one adequate transmission line source into each substation feeding critical loads. Critical loads include hospitals, civil authority communication centers, water plants, sewer plants, television and radio stations, etc. (but residential care facilities are not specifically on Empire's list of critical loads).

The Public Service Commission participated in the emergency management efforts of the State Emergency Management Agency (SEMA) during Empire's storm restoration of the December 2007 Ice Storms. This included having a Commission Staff member onsite at SEMA's Emergency Operations Center (EOC) for an average of 10 hours on a typical day. The PSC also participated in twice daily conference calls that included many state agencies, county EOCs, municipal EOCs or officials, federal agencies, and non-government/volunteer organizations. One of the topics that is frequently dealt with at SEMA's EOC and during the conference calls is the need for emergency generation or fuel for emergency generation. Requests for emergency generation needs are typically raised during the conference calls or are directly requested from the county or municipal agency where the need occurs.

During the first 48 to 72 hours of a major storm event, such as the December 2007 Ice Storm, significant resources of the state emergency management function are devoted to the need for and the transportation of electrical generators. Typically, the need for fuel for generators occurs after the first 24 hours. State agencies that are involved in the electrical generator work include SEMA, Office of Administration, Department of Natural Resources and the PSC. In addition, the PSC coordinates requests for restoration of critical facilities throughout the storm restoration process.

9. An assessment of the interdependence among all PSC certificated utilities as well as with utilities not certificated by the PSC in the affected area.

The Staff for purposes of addressing this issue will use the term "utilities" to refer to electric utilities. However, Staff would note that other utilities: telecommunication companies, water and sewer companies, gas companies, cable companies, and even cell phone companies require coordination efforts by the electric utility during a storm restoration effort. All four of certificated electric companies' (Investor-owned utilities or IOUs) restoration plans include contract crews and mutual assistance crews from other electric utilities during major outages. Staff is not aware of any electric utility, in Missouri or in the Continental United States that does not include contract crews and mutual assistance crews in its staffing during a major outage.

Contract crews are independent contractors that work for electric utilities. Typically, at any given time, contract crews will be working on an electric utility's system. For lineman crews, the contractors normally work on large projects such as replacing a 5-mile section of distribution line while the day-to-day tasks are carried out by the utility's in-house crews. For tree-trimming crews, almost all of the work, day-to-day or larger projects, is carried out by contract crews. Contract crews that are working on the system at the time of the outage offer two advantages over other assistance options. First, the crews are on-site. Since a crew is not just manpower, but also it is the trucks and equipment, avoiding the initial travel time required

for out-of-state crews to respond can significantly reduce the duration of the outage. During some recent storm restoration efforts, some crews have traveled as much as 48 hours to reach the utility's system and while a utility truck is an excellent work platform, it is not the most comfortable vehicle to travel in. Second, contract crews that are working on the system are already familiar with the utility's procedures, parts of the service territory, and some of the utility's personnel. All of these factors make an on-site contractor a valuable asset during storm restoration.

For crews that come from other utilities, either contractors or utility crews, coordination with other utilities must take place. The primary way that this coordination takes place is through mutual assistance organizations like the Midwest Mutual Assistance Group (MMAG). In addition to twice daily conference calls during major outages, the MMAG also provides the utilities with valuable contact information to discuss the availability of crews with other utilities. The mutual assistance function is discussed further on pages 12-13 of Staff's Empire Report.

Contract crews that are working on other utilities are another resource during a major storm outage. Since most contract crews work for various utilities, the contract crews typically have an easier time adapting to a utility's specific procedures. This can have benefits in both the speed of the restoration process and the safety of the process. However, since a storm often strikes multiple utilities in the same geographical area, contract crews that are working on neighboring utilities are often supporting that utility's restoration efforts and are not available.

The speed with which off-site contractor and utility crews can arrive in a utility's service area after a major storm is primarily influenced by the amount of damage to surrounding utilities and therefore the travel distance. However, other factors such as road conditions and forecasts for near-term weather can also influence the speed of the response and a neighboring utility's decision to release crews.

Although the electric cooperatives and municipal electric utilities do not participate in the MMAG, both have similar mutual assistance groups that are primarily organized by state. In addition, since IOUs, electric cooperatives and municipal electric utilities are neighboring utilities, there are informal lines of communication between these entities during the storm restoration process that often provides for additional assistance. For example, during the December 2007 storm restoration, after it became clear that the Springfield area had very little impact from the storms, City Utilities of Springfield provided several crews to aid Empire's restoration process.

10. An analysis that includes a comparison of utility performance with other utilities that had significant outages during the same time period.

All four Missouri investor owned electric utilities, many municipal electric utilities, and many rural electric cooperatives were affected by the December 2007 ice storms. Over 300,000 electrical customers were interrupted statewide. The State Emergency Operations Center was activated from December 9 to December 18.

The following table provides data (some numbers rounded) for the four utilities.

Utility	Total Missouri Customers	December 2007 Storm Customer Interruptions	Percent of Total Customers Interrupted	Start of Interruptions	End of Interruptions (Note 1)
AmerenUE	1,180,000	97,000	8.2%	12/09/07	12/13/07
Aquila	308,000	84,000	27.3%	12/09/07	12/18/07
Empire	144,000	65,000	45.1%	12/09/07	12/19/07
KCP&L	271,000	54,558	20.1%	12/10/07	12/13/07
Total	1,903,000	300,558	15.8%	12/09/07	12/19/07

Note 1: Some customer interruptions may have lasted longer due to customer restoration responsibility.

11. If damage was caused by vegetation, a detailed overview of the type and extent of damage caused by various scenarios including whether the vegetation was located in the easement or right of way, whether the vegetation fell from outside the right of way, whether the vegetation was diseased or particularly weak, whether the vegetation fell vertically from above the electrical conductors and whether the vegetation had been appropriately addressed prior to the storm in accordance with the utility's vegetation management plan. Further, what percentage of the damage would have been prevented by the utility strictly adhering to its vegetation plan? What percentage of the damage would have been prevented by the utility if strictly adhering to the vegetation management plan proposal attached to this Opinion?

Detailed information is not available to support an analysis of this type. 4 CSR 240-23.030 Electrical Corporation Vegetation Management Standards and Reporting Requirements became effective June 30, 2008.

This rule will provide information that would provide data and empirical information which will enhance analysis of this type for future events. The first compliance report required by this rule will be filed no later than April 1, 2009. However, it should be noted that under the requirements of this rule, the completion of the first vegetation management cycle will not be completed until four years following the effective date of the rule for urban areas and six years following the effective date of the rule for rural areas, due to the specific vegetation management interval requirements.

Additionally, Staff intends to facilitate a workshop to discuss the storm reports filed for all four electric utilities. An expected topic of that workshop will be enhanced acquisition of forensic data during storm recovery efforts. This forensic data, in conjunction with the data obtained via the Electrical Corporation Infrastructure Standards and Electrical Corporation Vegetation Management Standards and Reporting Requirements rules, will enable the electric utilities and Staff to perform a more rigorous analysis of the damage incurred due to storms of varying magnitudes.

12. If the damage was caused by infrastructure failure aside from vegetation contact, identify more detailed reasons how and why the infrastructure failed, i.e., age, design, etc., and what can be done to strengthen the infrastructure.

Detailed information is not available to support an analysis of this type. 4 CSR 240-23.020 Electrical Corporation Infrastructure Standards became effective June 30, 2008.

This rule will provide information that would provide data and empirical information which will enhance analysis of this type for future events. The first compliance report required by this rule will be filed no later than July 1, 2009. However, it should be noted that under the requirements of this rule, the inspection of all electric utility infrastructure may not be completed for 12 years, due to the specific inspection interval requirements.

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13. An analysis of the economic impact on customers who experienced a disruption of power during the ice storms.

Staff did not perform a specific analysis of the economic impact on Empire's customers. However, Empire estimates that $18 million in costs were incurred by the utility during the restoration process. The state of Missouri estimated the January 2007 storms resulted in approximately $353 million in damage throughout the state of Missouri. This estimate includes government, utility and private costs. An article describing the State's estimate can be found at the following web link: http://www.joplinglobe.com/local/local_story_356220956.html. The article indicates impact from the December 2007 storms were not as high for Empire's service area since the storms affected a smaller area over a shorter period of time.

14. Any and all recommendations to improve utility response to weather related and day to day electric outages in the future.

Staff included twenty five (25) specific recommendations for Empire in the Staff Report filed in Case No. EO-2008-0215. These recommendations are listed on pages 45 through 47 of that report. A more detailed discussion of the various topics associated with these recommendations is found throughout Staff's Report.