



Control Number: 32182



Item Number: 216

Addendum StartPage: 0

PROJECT NO. 32182

INVESTIGATION OF METHODS TO
IMPROVE ELECTRIC AND TELECOM
INFRASTRUCTURE THAT WILL
MINIMIZE LONG TERM OUTAGES
AND RESTORATION COSTS
ASSOCIATED WITH GULF COAST
HURRICANES

RECEIVED
PUBLIC UTILITY COMMISSION
2008 DEC 1 AM 10:44
PUBLIC UTILITY COMMISSION
FILING CLERK
OF TEXAS

EL PASO ELECTRIC COMPANY'S
RESPONSE TO COMMISSION STAFF'S REQUEST

El Paso Electric Company ("EPE") files this report in response to the request by Staff of the Public Utility Commission of Texas to file by December 1, 2008, a written update to the reports originally made in October 2006 related to utility programs concerning vegetation management and ground-based inspections for overhead facilities. The following is an explanation of EPE's: (1) vegetation management program for overhead facilities; and (2) on-going cyclical, ground-based inspections program for overhead facilities.

I. EPE'S VEGETATION MANAGEMENT PROGRAM

A. Service Territory

EPE's service territory encompasses both a desert and a river valley area, thus creating a fairly diverse population of trees. The Rio Grande River valley has significant agricultural activity associated with large pecan orchards. Other tree-related issues in the valley areas are in residential subdivisions where trees grow along irrigation canals and planted trees grow fairly aggressively. Development in the desert areas presents some tree-related issues due to customers' landscaping efforts which, while significant, are not of the magnitude of that in the valley.

B: Guidelines

EPE applies ANSI Standard Z 133.1 as a guide to pruning activities necessary for defining adequate clearances between energized facilities and trees. EPE's application of this standard is intended to account for the three main concerns related to tree trimming: (1) public safety; (2) reliability; and (3) prevention of equipment damage. EPE's top priority is ensuring public safety. Trees contacting energized power lines create a potentially hazardous situation to the public, as human contact with trees making contact with power lines can provide an alternate path to ground for fault current through the individual.

The tree-trimming practices on EPE's distribution system utilize the following pruning criteria:

- Side: Distance from tree to wire after pruning is a minimum of five (5) feet;
- Overhead: Distance from tree to wire after pruning is a minimum of fifteen (15) feet;
- Underneath: Distance from tree to wire after pruning is a minimum of ten (10) feet.

EPE's reliability statistics are indicative of the effectiveness of its vegetation management program. Using 2007 as an example, 8 percent of all outages on EPE's system were related to tree contact. Only three of these outages resulted in a feeder breaker operation. The remaining tree-related outages involved either lateral fuse operations or secondary and service interruptions.

C. Field Work - Distribution

EPE utilizes a contracted professional tree-trimming service as the primary resource for performing field work related to tree trimming. On occasion, EPE utilizes its own field

personnel to perform moderate trimming when it is deemed necessary to immediately perform such work to restore power. The tree-trimming contractor's daily work is managed in EPE's Texas service territory by the Supervisor of the Trouble and Emergencies Section of EPE's Distribution Operations Department.

In general, EPE attempts to perform tree trimming on a two-year cycle. EPE makes significant efforts to obtain customer agreement before the trimming of trees. Four areas of input are used to manage EPE's vegetation management program. These four areas are: (1) field patrols; (2) historical data; (3) meter readers' observations; and (4) customer reports. EPE's patrol program consists of a patrol schedule under which EPE employees patrol the main portion of each feeder on a three-year cycle. The information obtained from these patrols related to tree clearances is included in the daily work management for the contract tree-trimming crews.

The EPE Supervisor responsible for managing the tree-trimming efforts maintains historical information on areas with specific tree-trimming concerns. Certain areas must be trimmed in the non-growing season to minimize the impact to crop production. Pecan orchards are an example of this type of consideration. Scheduled trimming in pecan orchards is generally limited during the growing season, and customer agreement is much easier to obtain during the non-growing season. Attention to areas with special consideration may impact the tree-trimming cycle. There are areas where the magnitude of tree trimming necessary to maintain a two-year cycle creates aesthetic concerns from customers. When possible, EPE takes customer concerns into account and may perform only minor trimming, postponing more extensive trimming until the non-growing season. The historical data used to manage the work flow in these areas accounts for tree growth and customer concerns.

All EPE field personnel have been instructed to report any potential problems, including trees. EPE field personnel can report problems by simply notifying the Distribution Dispatcher, who in turn creates a trouble call that will be addressed by the Supervisor in charge of vegetation management. The Integrated Outage Management System ("IOMS") is a database used to log outage information and the need for follow-up work. When field crews can perform minor tree trimming to restore service, this system is utilized to create a trouble call for more extensive follow-up trimming by the contract crews the following day.

EPE has a considerable number of meter readers in the field on a daily basis who can observe tree-related problems. Meter readers travel into areas (*e.g.*, backyards, alleys, between buildings) that might not otherwise be easily observed by other EPE employees. Meter readers, along with all EPE field employees, have the responsibility to report potential problems, including tree growth, to the Distribution Dispatcher for inclusion in the IOMS system.

Reports from EPE customers are also significant. A considerable number of trouble calls are generated by customers observing contact by trees on their property. These calls are typically addressed by EPE field personnel the same day as they are received.

D. Field Work - Transmission

Vegetation management on EPE's transmission system is addressed jointly by the Supervisor of Trouble and Emergencies and the Manager of the Transmission Department. Most of EPE's transmission system traverses desert areas where vegetation is not a concern.

However, two transmission lines are located in areas where the potential for tree-related problems exist. One line is located completely in a desert area with the exception of one river crossing where the trees and brush do have the potential to encroach on clearances to the

transmission line. This area is addressed annually by the Supervisor of Trouble and Emergencies. Each year, EPE utilizes the contract tree-trimming crews to clear-cut the entire right-of-way at this crossing, completely eliminating the potential for tree related outages to occur.

The other transmission line with potential tree contact is the Springerville-Luna line, which traverses 78 miles of forested property managed by the USDA Forest Service. Vegetation maintenance on this line requires a permit issued by the National Forest Service. The permit obtained by EPE allows for a 10-year trimming cycle. EPE trims this entire line every 10 years to a level where projected 10-year growth will not encroach on the proper clearances. Recent droughts and related forest fires have resulted in the USDA Forest Service encouraging EPE to perform vegetation management more aggressively than in the past due to the natural fire breaks that clearing of rights-of-way helps create.

Vegetation management on the remaining portions of the EPE transmission system where trees pose a potential problem is accounted for by EPE's distribution system vegetation management program. This is primarily due to the fact that these transmission lines have distribution circuits built on the same structures.

II. GROUND-BASED INSPECTIONS

A. Patrol Program - Distribution

EPE utilizes a patrol program whereby each feeder is patrolled by qualified field personnel. The patrol program consists of a visual inspection by field personnel of the main trunk of each feeder on a cycle of three years. The data produced from these patrols is placed into a database and prioritized based on the risk of causing an outage. The maintenance

Supervisors then utilize the database to coordinate their daily workload based on the priority level.

Additional patrols are completed on distribution circuits on which faults have occurred and a successful re-close of the circuit was accomplished. EPE's general operating practice on SCADA-controlled substations is to automatically re-close one time on distribution circuits. If the automatic re-close is unsuccessful, the dispatcher will remotely attempt another re-close. Many times, the circuit will re-close successfully, restoring power to customers on that feeder. A patrol is initiated within the next few days to determine if the problem creating the fault has disappeared. Automatic re-closing ranging from three to four re-closes is utilized on non-SCADA substations (generally 4 kV substations).

B. Patrol Program - Transmission

Transmission facilities are divided into three categories for patrol programs: 345 kV, 115 kV, and 69 kV transmission lines. Every structure on EPE's 345 kV transmission lines is inspected twice a year by personnel within EPE's Transmission and Distribution Department. The 115 and 69 kV transmission lines are patrolled annually. A handful of 69 kV and 115 kV radial transmission lines exist within EPE's system. The individual structures on these lines are also inspected annually by personnel within EPE's Transmission and Distribution Department.

C. Pole Inspection Program


A trial pole inspection program was initiated by EPE in 2006. The first phase of this inspection program was utilized to test wood poles at critical locations such as interstate crossings. The testing utilized a non-destructive pole testing device to provide data calculating

the current safety factor of these structures. The 2007-2008 pilot program returned results indicating only an approximate 1% failure rate for these structures. EPE's Transmission and Distribution Department is currently requesting management approval for the additional budget to continue the pilot program and expand the forms of program testing.

EPE facility designs incorporate the additional loading associated with cable attachments from other entities such as cable and telecommunications companies. EPE's permission must be granted before other entities can attach to EPE poles. A joint-use fee is charged for these attachments.

EPE has implemented a Geographic Information System ("GIS") project under which one of the many benefits is to map poles with attachments. This provides EPE the opportunity to verify that safety standards have not been violated on attachments to EPE's poles and that attachments have not been constructed without EPE's knowledge and approval. When EPE does find unauthorized pole attachments, the violating entity is notified of the violation. EPE then performs an analysis of the structure and, if necessary, orders the violating party to remove its facilities from the structure or pay the necessary cost to upgrade the structure.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Evan D. Evans", written over a horizontal line.

Evan D. Evans
Assistant Vice President -
Regulatory Services and Rates
El Paso Electric Company
100 N Stanton
El Paso, Texas 79901
(915) 543-5995 (Telephone)
(915) 543-4605 (Fax)