



Control Number: 32182



Item Number: 221

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2008 DEC -1 PM 12:38

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December 1, 2008

David Featherston
Director of Infrastructure and Reliability Division
Public Utility Commission of Texas
1701 N. Congress Ave.
Austin, Texas 78701

RE: Project No. 32182 – *PUC Investigation of Methods to Improve Electric and Telecom Infrastructure that will Minimize Long Term Outages and Restoration Costs Associated with Gulf Coast Hurricanes* – Compliance Filing

Dear Mr. Featherston:

On October 15, 2008, you requested that the electric and telecommunication utilities update information submitted in October 2006 on the utility's programs for vegetation management and the ground-based inspections for overhead facilities. CenterPoint Energy Houston Electric, LLC submits the attached information in response to the request.

If you need any further information, please contact me at 512-397-3032. Thank you for your attention to this matter.

Yours truly,

DeAnn T. Walker
Assistant General Counsel

VEGETATION MANAGEMENT PROGRAM

Transmission:

CenterPoint Energy Houston Electric, LLC ("CenterPoint Energy") has an established Transmission Vegetation Management Program ("TVMP") based on a 5-year ground inspection and tree trimming and removal cycle for all 69 kV, 138 kV, and 345 kV internal and tie circuits. CenterPoint Energy's objective is to remove vegetation that will at some time prior to the next trimming and removal cycle interfere with the safe operation of the transmission lines, with the intent of producing a low-growing predictable environment within the transmission line corridors.

Approximately 700 transmission circuit miles (1/5th of the system) are inspected and maintained each year on a pre-scheduled basis with dedicated resources. In addition, an annual aerial inspection of the transmission system is performed by a forester to identify and remove any dead, dying, or compromised trees adjacent to the transmission corridor that are in danger of falling into the transmission lines during high winds.

The TVMP is coordinated with the transmission line inspection and rehabilitation program, which is also based on a 5-year inspection cycle. Tree trimming or removal is performed one quarter in advance of line inspection, allowing for additional verification of proper line clearance during line inspections and utilization of common access paths for forestry crews, line inspectors, and maintenance crews. During tree trimming and removal operations, an access path is mowed along the right-of-way ("ROW"). Herbicide application is also incorporated into the TVMP to control woody growth and promote low-growing species. Tree clearing crews also apply herbicides to tree stumps, to the bases of transmission structures, and along the access path during the tree trimming and removal cycle for additional vegetation control.

ROWs are maintained to the initial edge to edge clearance established when the transmission line was constructed or trimmed to pre-defined clearances based on the voltage class for the transmission line. This includes removal of trees within the ROW and side trimming of branches that overhang into the ROW. Tree trimming or removal is performed in accordance with CenterPoint Energy's Specification for Transmission Vegetation Management Program which complies with the National Electrical Safety Code ("NESC") as well as the North American Electric Reliability Corporation ("NERC") reliability standard FAC-003-01. Quality assurance for contractor work execution is performed and documented.

Additionally, fee simple ROWs are mowed on a cyclical basis within incorporated areas in accordance with local ordinances regarding weeds and tall grass. CenterPoint Energy mows these ROWs six times a year during the growth season. Herbicides are applied to the bases of the transmission structures to control vegetation under the structures. In certain high-growth areas, herbicides are applied to the entire ROW as part of a Bermuda release program promoting the growth of low-growing grasses for longer term weed control.

The inspections for the TVMP are performed and documented in prescriptions by qualified contractors under the direction of two transmission foresters that are matrixed to the Reliability

Analysis & Technical Support (RA&TS) Division of the Transmission Operations Department from the Line Clearance Operations Section of the Distribution Project Management Department. The TVMP maintenance is performed by the same qualified contractors. The ordinance mowing program is coordinated by the transmission foresters, and the work is performed by qualified contractors.

Vegetation management activities are tracked in the Transmission Vegetation Management Annual Work Plan spreadsheet and updated on a monthly basis. The spreadsheet includes the line segment information, prescription date, work start and completion dates, cost information, quality assurance information, and responsible contractor and forester. The danger tree removals identified on the annual aerial inspection are tracked in the Transmission Annual Aerial Inspection Work Plan spreadsheet. The spreadsheet includes the flight dates, the line segment information, the work start and completion dates, and the responsible contractor and forester.

The TVMP is administered by the Transmission Operations Department. The Manager of the RA&TS Division of Transmission Operations is responsible for establishing and monitoring the annual work plan of this program.

Distribution:

CenterPoint Energy's proactive strategy focuses tree trimming efforts on circuits in a manner that maximizes the benefits toward achieving system-wide System Average Interruption Duration Index ("SAIDI") targets. All circuits are ranked based on customer-minutes of outage due to vegetation and wind causes, as well as the number of years since the circuit was last trimmed. For 35 kV, the criterion is three or more years since the last trim. For 12 kV, the criterion is four or more years since the last trim for normal easements, and three years since the last trim for narrow easements or sensitive locations. Separate budgets are provided for 12 kV and 35 kV to ensure both systems receive appropriate attention. All laterals, along with the feeder-main, are trimmed on any circuit identified for trimming. Tree trimming dollars are also provided to the Service Centers to address spot tree trim problems on a reactive basis.

The timing of the proactive process has been enhanced so that in July of each year, the probable 10% circuits will be reviewed along with the other year-to-date reliability information to identify circuits for trimming during the fourth quarter. Fourth quarter trim priority will be given to 10% circuits to which outage minutes caused by vegetation and/or wind have been attributed, with the highest priority given to 300% circuits and repeat circuits. The benefit will be improved timing for trimming 10% circuits to maximize reliability improvements. As with all 10% circuit improvements, it is beneficial to facilitate the proactive tree trimming as close to the beginning of the year as possible. Also, this results in improved visibility for 10% circuit inspections following the trimming.

Distribution Line Clearance work is administered and coordinated by a staff of one supervisor and seven degreed foresters. Currently, four professional Line Clearance contractors perform utility tree trimming services for CenterPoint Energy.

Approximately 75% of the circuit work is on a fixed price basis with the remainder on a time and equipment basis. Fixed price work is primarily allocated to circuits with extensive feeder and lateral networks that are in outlying areas of the system, or that are otherwise conducive to fixed price bids. Time and material work is allocated strategically for smaller circuits, which includes those circuits in-town close to contractor parking locations, problems that require quicker action than a bid process will allow, and other situations not conducive to fixed price bids.

Line Clearance prepares detailed work maps of circuits identified for fixed price work. Once completed, these maps are released to the contractors for field review. The contractors submit bids to complete all tree trimming on the circuit per specifications also provided by Line Clearance. Line Clearance reviews the bids and awards the work to the best valued provider based on both pricing and performance, as determined from performance audits of the contractors' completed work. When the work is completed, the forester reviews the job to ensure that it was completed satisfactorily and the invoices to ensure accuracy. The foresters and contractors interface with the customers as needed to resolve issues and facilitate completion of the work

Reactive tree trim maintenance work is either in response to specific requests from customers or the Service Centers. Customer requests are received by CenterPoint Energy personnel and forwarded to assigned contractors for inspection to ensure validity. If valid, the trees are trimmed or removed to clearance specifications. Contractors receive work orders directly from the Service Centers and conduct work per standard line clearance specifications or specific instructions on the work request. Almost all reactive work is performed on a unit-priced basis. The Service Centers can also utilize a contractor for vine patrol on particular circuits. They provide maps of the circuits to the assigned contractor who will cut and treat all vines, look for dead trees and locate any obvious problems with the overhead facilities. This reactive work is done on a time and material basis.

GROUND-BASED INSPECTION PROGRAM

Transmission:

CenterPoint Energy performs ground-based inspections of the transmission circuits and associated ROWs on a five-year cycle, which is 20 percent of the system circuit miles each year. Circuit schedules are optimized for inspection and construction efficiencies by grouping circuits on common towers and common corridors within the same inspection cycle. During the ground-based inspections, all transmission line components are evaluated (e.g. structures, foundations, conductors, insulators, static wires, grounds, etc.). Galvanized steel structures are also inspected for rust and metal loss on cycle with the circuit inspections. The structures are periodically painted with zinc-rich coatings in highly corrosive areas to avoid loss of steel due to corrosion. Planned inspections and ground line treating of wood poles with specialized chemicals are performed as a preventive measure to extend wood pole life and is scheduled on a coordinated 10-year cycle with the circuit inspections.

Along with the ground-based inspections of the facilities owned by CenterPoint Energy, an aerial inspection is performed on other utilities' interconnected transmission lines and associated ROWs in cases where CenterPoint Energy owns one segment of a line and another utility owns the remainder. Notice is provided to the adjacent utility. Any adverse conditions found on the other utility's facilities are reported to that utility for action, and a response on action taken by that utility is requested.

ROW inspection and maintenance is coupled with the transmission line inspection and rehabilitation program. Prior to inspection of a transmission corridor, available aerial photography and ROW property lines are displayed in a Geographical Information System ("GIS") and visually screened for potential encroachments and unauthorized uses. During inspection, any unauthorized use of the ROW is verified and reported to a CenterPoint Energy ROW agent for any necessary mitigation. Maintenance access problems are also recorded and repairs are scheduled along with any line maintenance identified.

CenterPoint Energy also has a process for the joint use of transmission ROWs to ensure that other uses of the corridors (e.g. distribution lines, communication lines, pipelines, etc.) do not interfere with the safe operation of the transmission lines. The process incorporates steps to review joint-use proposals for impacts to existing and future transmission lines and to verify that joint-use facilities meet or exceed the NESC requirements for clearance to transmission lines. All work within the ROW must comply with the Specification for Construction on CenterPoint Energy Property.

The inspections for the transmission line inspection and rehabilitation program are performed by four line mechanics formed into two two-man teams that are matrixed to the RA&TS Division from the Field Operations Section within Transmission Operations. Each inspection team makes on-the-spot decisions to repair or replace deteriorated line components in accordance with Company selective replacement guidelines and transmission line standards. Inspection findings are entered into a GIS database for producing automated work orders and encroachment reports and for recording maintenance history. The inspection teams utilize high precision, stabilized

optics, digital cameras, and all-terrain vehicles along with specialized equipment for measuring the integrity of grounding systems, galvanized steel coatings, and wood poles.

Any line components inspected that are deemed likely to fail within a critically short period of time are repaired or replaced on an immediate corrective basis to avoid an unplanned circuit outage. Preventive maintenance work is targeted to start three months after inspection to allow for materials acquisition and the scheduling of circuit outages or work tags. Quality assurance for work order execution is performed and documented.

The transmission tower painting and wood pole ground line treatment programs are performed by qualified contractors. The ROW access maintenance is performed by Field Operations line crews or qualified contractors. The inspections for joint-use facilities placed within the ROW are performed by two technicians from the RA&TS Division. Maintenance on any non-CenterPoint Energy-owned, joint-use facility is performed by that facility owner after providing required notification to CenterPoint Energy that work will be performed within CenterPoint Energy's ROW.

Line maintenance work includes ROW access maintenance and is tracked in a GIS database administered by the RA&TS Division. The ROW joint-use activities are tracked in a Microsoft Access database administered by the RA&TS Division.

As with the TVMP, the transmission line inspection and rehabilitation program is administered by the Transmission Operations Department. The Manager of the RA&TS Division of Transmission Operations is responsible for establishing and monitoring the annual work plan of this program.

Distribution:

CenterPoint Energy utilizes four programs that incorporate ground-based inspection programs of overhead facilities. These programs are the Infra-Red Program, the Root Cause Analysis Program for the 10% Circuits, the Hot Fuse Program and the Pole Maintenance Program. Also, personnel in the field perform inspections as they go about their daily business.

- *The Infra-Red Program*

Infra-red technology allows the Company to see the heat generated by deteriorating components on the distribution system. These "Hot Spots" will eventually result in equipment failure and a loss of service. Infra-red technology provides a unique tool to find potential equipment outages before they occur, so that proactive repairs can be made prior to an outage. This reduces the number of equipment failures and improves reliability by decreasing System Average Interruption Frequency Index ("SAIFI").

All circuits are inspected on a five-year cycle so that additional focus can be put on the 10% circuits with the highest SAIDI or SAIFI (approximately 140 circuits). Infra-red scans are made of the terminal poles at the substation and major equipment on the circuit, including pole-top switches, reclosers, regulators, and capacitors. The surrounding facilities are also examined to identify other possible deterioration. The identified hot spots are reported and repairs are made. If

the problem is severe enough and there is a danger of imminent failure, then procedures are taken to isolate the device and initiate immediate repairs.

- *The Root Cause Analysis Program for the 10% Circuits*

The Root Cause Analysis Program involves an analysis of the projected 10% highest SAIDI and SAIFI circuits. An evaluation process has been developed that encompasses a detailed analysis of a circuit's outages for the past 24 months. CenterPoint Energy uses outage cause, outage location, and customer-minutes of outage to develop an action plan that can include a number of possible recommendations to address the root causes of the outages. The recommendations might include a protective coordination study, an infra-red inspection, enhanced lightning protection, reconfiguration to avoid vehicle collisions, reconfiguration of line fuses, tree trimming, or installation of automated switches. The Company makes a field inspection to verify that the recommendations are appropriate and to determine if there are other items that may need to be repaired to avoid future outages. The action plan is usually implemented during the first quarter of a year to gain the most benefit. Circuit performance is watched throughout the year to determine if the analysis was correct and whether additional measures are necessary.

An additional process has been developed to supplement the response to 10% circuit outages. In an effort to respond to 10% circuits as they occur, CenterPoint Energy has developed a method to proactively predict a circuit's ability to become a 10% circuit. Then the Company initiates the Root Cause Analysis process in a proactive manner. This allows CenterPoint Energy to react immediately to circuit outages and not wait until it is beyond correction for the year.

- *The Hot Fuse Program*

The Hot Fuse Program is a program for notifying Service Centers of line and transformer fuses that have experienced recurring outages, so there can be an investigation and corrective action. There are two hot fuse criteria: (1) recurring hot fuse – a fuse that has had a minimum of three outages within a 90-day period, and (2) ultra hot fuse – a fuse that has had a minimum of three outages within a 30-day period. Hot fuses are less likely than an ultra hot fuse to have a high impact to the Company's indices if left unaddressed after the 90-day timeframe. These fuse outages are more closely associated with wind-related events that are caused by vegetation or slack span contacts. The ultra hot fuse is more likely to have a high impact to the Company's indices if left unaddressed after the 30 day timeframe. These fuse outages are more closely associated with ongoing issues such as overloaded devices.

A third criterion of 4+ outages in 12 months is used to supplement the analysis of fuse outages. This criterion is applied to fuses that have large customer counts (high impact) that affect the circuit's overall reliability. These fuses are also reviewed during the Root Cause Analysis process to verify a successful solution to the outages.

CenterPoint Energy field inspects the hot fuses meeting one of these criteria and researches outage records to determine the cause of the outages causing the hot fuse. The Company then issues work orders to correct the problem. Typical remedies include tree trimming, the installation of wildlife

protection devices, slack span adjustment, the installation of additional fuses to limit the impact of a fault, or the installation of smart fuses that only operate on permanent faults.

- *The Pole Maintenance Program*

CenterPoint Energy has a proactive Pole Maintenance Program, whereby a portion of the distribution system poles are inspected and treated annually by contract ground-line inspector crews. All poles are visually inspected on a fifteen year cycle. Poles that are seven years or older are partially excavated and inspected for decay below the ground line. They are also sounded and bored to locate internal voids. If the pole has sufficient strength to remain in service, it is treated with a ground line paste and an injection of fungicide and insecticide. If the pole is not of sufficient strength, it is either treated and braced, or if necessary, replaced.

As a result of the pole maintenance program, CenterPoint Energy replaces or braces approximately 2,400 rotten wooden poles per year. In addition, the Service Centers typically replace several hundred poles each year.

- *"As You Go" Inspections*

As many as 700 personnel are in the field on a daily basis. This includes linemen, crew leaders, service consultants, and engineers. As they go about their daily business, they observe the condition of overhead facilities and report any unusual problems.