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From: S. Denise Hill [dhill@publicpower.com]
Sent: Wednesday, May 31, 2006 2:26 PM
To: Filings@psc.state.fl.us
Subject: Lakeland Storm Hardening Response

Attachments: Lakeland Storm Hardening Response.doc



Lakeland Storm
Hardening Respo...

Dear Sir/Madam,

Attached is the Implementation Plan for Ongoing Storm Preparedness for the Lakeland Electric.

Thank you,

Denise

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Outline of Implementation Plan for Ongoing Storm Preparedness

(Report due to PSC June 1, 2006)

A. Introduction

Lakeland Electric is a municipal utility serving 120,000 customers within a 260 square mile service territory covering the greater City of Lakeland area within Polk County in west central Florida.

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In 2004 Lakeland Electric (LE) experienced direct damage from hurricanes Charlie, Francis, and Jeanne whose centers all passed through or within 15 miles of our service territory.

Charlie caused outages to 30,000 customers with full restoration completed in four and one-half days by internal crews. Francis caused outages to 40,000 customers with restoration work supplemented by some external resources and completed in six days. Jeanne caused outages to 90,000 customers and with the assistance from 500 mutual aid and contract personnel restoration repairs required eleven days.

Almost all system damage in all three storms was isolated to the distribution system with the vast majority caused by falling trees and branches.

B. Three-Year Vegetation Management Cycle

LE utilizes contract crews to perform year-round vegetation management operations with a present complete system cycle of three years for transmission circuits and five years for the distribution system (primary, secondary, and services). A movement toward a three year cycle for the distribution system also is planned over the next several years as budgeting allows. Additional hotspot tree trimming and removal is performed as required.

LE is a Tree Line USA awarded utility and utilizes techniques that include clearance, directional pruning, growth retardants, herbicides, and selective but aggressive tree removal and replacement.

C. Transmission and Distribution Geographic Information System

LE's complete transmission and distribution system including every pole location is mapped within our land-based GIS. A separate asset database

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contains the additional pole data such as type, size, age, condition, and attachments. LE is evaluating the integration of this data as we proceed with moving to a new GIS platform.

D. Wooden Transmission vs. Concrete Transmission Structures

LE has previously standardized on the use of spun concrete or steel poles for all new and rebuilt transmission lines. Fewer than one-half of our transmission poles are wood. Poles and line sections are evaluated and prioritized for budgeted replacement by planning studies and physical condition from inspection.

E. Post-Storm Data Gathering, Data Retention and Forensic Analysis

Lessons learned analysis for damage assessment and process/procedure improvement was conducted from outage data and staff input after each of the three 2004 hurricanes and will be conducted for any future storm. LE has applied lessons learned and is continuing to address these findings at this time.

F. Audit of Joint-Use Pole Attachment Agreements

A system pole audit was completed in 2005 which surveyed all LE and other licensed attachments for every pole in our system. Additional pole information such as GPS location, type, and other birthmark data was also recorded. Included were poles owned by others to which LE facilities were attached. This data continues to be updated with the ongoing attachment activities.

Original T&D line designs have included an allowance for the expected attachments in determine pole strength requirements. Additional stress calculations are not done unless unusual conditions warrant the need to do so.

G. Six-year transmission Inspection Program

LE visually inspects all transmission circuits annually and performs the required maintenance identified. Additional inspections and repairs are conducted as a result of transmission line outage investigations throughout the year.

H. Collection of Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems

LE's Outage Management System stores data for each outage event that includes the outage cause with separate causes defined for overhead and underground related issues. This will allow the differentiation of overhead related outage data from underground related outage data. LE presently computes the system totals with no differentiation but could provide separate overhead and underground reliability indices as needed.

I. Coordination with Local Governments

LE has provided input to City of Lakeland departments concerning acceptable tree species for their planting standards under power lines in road rights of way and park areas. Additionally, LE contributes to the funding of a City contracted tree crew for the contribution they make in assisting in vegetation management in the road rights-of-way where T&D lines are located.

LE actively participates in the City EOC with an assigned representative and through the City representative at the County EOC. Communication for the purposes of any required coordination and action is maintained with other City departments and emergency services throughout the restoration period. LE has worked with other City departments to identify City facility emergency generator installations and needs. Public announcements regarding level of storm damage and restoration progress and plans are done with cooperation with and through the City's Public Communications Department.

J. Collaborative Research Through the Public Utility Research Center (PURC) at the University of Florida

LE participates in the storm hardening collaborative research activities of PURC through our membership in the Florida Municipal Electric Association.