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From: S. Denise Hill [dhill@publicpower.com]
Sent: Wednesday, May 31, 2006 2:25 PM
To: Filings@psc.state.fl.us
Subject: JEA Storm Preparedness Report

Attachments: JEA Storm Preparedness Report.doc



JEA Storm
Preparedness Report.

Dear Sir/Madam,

Attached is the Implementation Plan for Ongoing Storm Preparedness for the JEA (Jacksonville Electric Authority).

Thank you,

Denise

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Storm Preparedness

JEA

June 1, 2006

A. Introduction

Utility: JEA

Electric Customers Served: approximately 409,000

Primary Contact: Ted Hobson, VP, Fuels, Purchased Power and Compliance

JEA has not experienced a "direct hit" by a hurricane since Dora in 1964. However, in 2004, JEA was significantly affected by hurricanes Jeanne, Frances and Charlie, with combined losses in excess of \$10M. Additionally, JEA electric and water crews have assisted other utilities, IOU's and municipals, in their hurricane recovery efforts in 2004 and 2005.

B. Three Year Vegetation Management Cycle

JEA has a strong vegetation management program based on a three year clearance cycle. This program is implemented using a well structured contract with one of the leading contractors in the country. JEA employs professional Foresters or Arborists to manage this program and work with customers and community leaders. The annual expense for this program is about \$4M. In addition to trimming vegetation to meet our clearance specifications, there is a strong focus on removing or relocating trees away from power lines. Our professional staff works with customers and offers advice, relocation and replacement of trees away from problem locations.

C. Transmission and Distribution Graphical Information System

In April of this year, JEA commissioned our new GIS system which provides for the integration of water, sewer and electric system facilities. Presently, we have complete representation of our water, sewer and electric distribution system and facilities. The data entry of transmission facilities and routes is ongoing and planned for completion in late 2007.

D. Wooden vs Concrete /Steel Transmission Structures

JEA owns and operates a transmission system comprised of over 700 miles of overhead and underground lines operating at 69kv, 138kv and 240 kv. JEA has fifty (50) 69kV transmission lines of which twenty four (24) are overhead, fourteen (14) are underground and twelve (12) are combination overhead and underground. One (1) of the thirty four (34) 138kV transmission lines is combination underground and overhead, the remainder are overhead. At 230kV level, there is only one underground transmission line and twenty nine (29) overhead transmission lines for a total of thirty (30). Additionally, JEA is joint owner of two (2) 500kv lines interconnecting the transmission systems of Florida and Georgia. The approximately 5,049 overhead transmission structures include 755 spun concrete, 1206 cast concrete, 263 lattice steel, 1393 steel and 1432 wood poles. Most of the wood existing poles are on 69kv lines. JEA has not used wood pole

DOCUMENT NUMBER-DATE

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construction on any new lines since early seventies. Of particular note here, is that all of JEA's approximately 100 substations are connected to at least two transmission lines ("loop fed") such that a single transmission line outage will not cause a customer outage.

E. Post Storm Data Gathering

JEA has a well-developed plan for assessing and documenting system conditions and damage from storms. Storm damage on the JEA Transmission System and substations is assessed with aerial inspection using the helicopter service. Any damage is reported to the System Dispatch Operations Center for corrective follow-up. JEA is evaluating use of live video streaming of the aerial inspection for a clear assessment follow-up.

Working from our two service centers, teams of engineers (one driver and one assessment engineer per team) assess all electric system damage for their assigned substations beginning at each substation and riding the feeder and all connected laterals. Paper assessment forms are completed for all damage. The assessment forms are hand carried several times per day to the respective service center where the data is manually entered into a database. During the initial phase of restoration, crews are assigned work using reports run against this database. Reports from this database are also used in making total damage assessments including number of customers out, time for restoration, materials required, geographic areas affected etc. Additionally, JEA coordinates with the Jacksonville Sheriff's Office the restoration of traffic lights at major intersections. JEA assigns electric troubleshooters to ride with water/sewer troubleshooters restore power/service to lift stations to prevent SSO's in the community. After emergency services are restored (Hospitals, shelters etc.), JEA surveys the schools and starts power restoration so the community can return to normal as soon as possible. In the newest addition to the plan, JEA is identifying major intersections with gas stations/grocery stores close to electric substation in different parts of the service territory. JEA will notify the owners of these facilities that these areas will be restored early so they can supply needed services/fuel to the surrounding areas during the remainder of the restoration. This process was refined, based on our experience with hurricanes in 2004. We have made a training video for our assessment personnel, which they review once each year and again just prior to an actual storm deployment. After restoration is complete, a "lessons learned" process is implemented where everyone involved in the restoration provides input of what things worked well, what things need improving and what needs adding to our plans. The damage assessment database is used for analyzing failures and suggesting improvements to equipment or processes.

F Audit of Joint Use Pole Attachment Agreements

JEA's last audit of joint use facilities was completed in 2002. JEA is negotiating, and expects execution of, new joint use contracts for all users by the end of this year. The previous agreements assumed all poles were of standard design, using only the pre-drilled locations for joint user attachments. As configured in this manner, all poles complied with NESC requirements. JEA has no history of problems of pole failures due to joint use attachments, however, as additional insurance, the new contracts specifically limit the loading by each joint user to 7% of maximum allowable, and they must supply pole

loading calculations for every pole (unless they have previously submitted a calculation for the identical configuration).

G Six Year Transmission Inspection Program

JEA has historically operated on a two-year inspection cycle with minor repairs being completed during the inspection process. The major repairs were evaluated by system planning for priority, and these capital projects were then budgeted for the correct year. JEA is shifting to a 4-year inspection cycle of the transmission system starting in FY07. The focus will be to make the major repairs timelier after the inspection process but performs the inspections less often due to results found during the two-year inspection process. During the 2004 storms, very little transmission damage occurred. The small areas affected were due to storm debris or tree damage. None of the transmission outages effected delivery power to our customers. On a continuing basis, JEA inspects the transmission corridors and has integrated the right-of-way mowing activities to inspect for tree clearance (or dead tree) issues that are resolved immediately.

H Collection of Overhead vs Underground Outage Data

JEA has very few “underground only” distribution feeders and we have historically not analyzed the storm performance of our system with respect to underground versus overhead construction (although the raw data is available and some analysis might be performed retroactively). Anecdotally we know that we have had very little underground distribution damage during the recent storms, mainly because we have had no associated flooding. Beginning with the 2006 storm season, JEA will provide separate outage analysis for underground facilities.

I Coordinate with Local Governments

During major storms or emergency events, JEA coordinates closely through the Jacksonville Emergency Operations Center (EOC) with all appropriate governmental agencies, including police and fire, to achieve rapid and safe recovery. This coordination is significantly enhanced by Jacksonville’s consolidated government structure. JEA’s liaison to the EOC coordinates a team that actively participates and maintains a continuous presence in the Jacksonville EOC and surrounding County EOC’s during activations and exercises. JEA develops and maintains emergency plans under Jacksonville’s CEMP that address electrical, water and wastewater system problems affecting the safety, health and welfare of their customers. JEA’s EOC personnel and selected management, including executive level management, are NIMS certified.

J Collaborative Research through PURC

JEA is involved with PURC through our membership in Florida Municipal Electric Association and its interaction with PURC.