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From: S. Denise Hill [dhill@publicpower.com]
Sent: Wednesday, May 31, 2006 2:18 PM
To: Filings@psc.state.fl.us
Subject: Bartow Storm Preparedness Report

Attachments: Bartow Storm Preparedness Report.doc



Bartow Storm
Preparedness Repo..

Dear Sir/Madam,

Attached is the Implementation Plan for Ongoing Storm Preparedness for the City of Bartow.

Denise

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Storm Preparedness Implementation Plan
City of Bartow Electric Department

A. Introduction

The City of Bartow is located between Tampa and Orlando in Polk County, just south of Lakeland on US 98 and State Road 60. The electric utility serves approximately 10,500 customers in a 165 square mile area. The City operates a 12,470 volt distribution system and also has transmission ties with Progress Energy.

Florida has seen a record number of hurricanes in recent years; in 2004 Bartow was hit by 3 hurricanes: Charley, Jeanne, & Frances. The eyes of these three storms passed within 15 miles of Bartow. Charley, a Category 4 hurricane and being the most destructive of the three, put customers out of power for as long as 14 days in Bartow. It took 9 days to restore power after Hurricane Frances and 4 days to restore after Hurricane Jeanne. During the 2005 season, Bartow was not directly affected by any hurricanes.

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B. Three-Year Vegetation Management Cycle

Trees are the number one cause for outages in Bartow. One way the City has decided to counteract this problem is to actively engage into a four-year vegetation management cycle. This will contribute to minimizing outages due to vegetation problems.

The plan is to trim by grids and maintain a 6 to 8-foot clearance within town and 8 to 10-foot clearance in rural areas. Crews also will ensure that any hanging limbs and deteriorated trees are removed within the City's right-of-way. The supervisor overseeing the maintenance is herbicide licensed and a certified arborist.

C. Transmission and Distribution Geographic Information System

The City adopted a new GIS system in June 2004, which is a standard database using ArcInfo software. The entire system is inventoried and mapped using GPS technology. The database stores all the information necessary to sustain a precisely operational electric system. The database is updated every six months, in which all new, removed, or updated facilities are recorded. AutoCAD drawings for new installations can also be incorporated into the GIS maps if necessary. The GIS system has recently been updated and is operating properly. It is not automated but can be queried for reporting purposes.

D. Wooden Transmission vs. Concrete Transmission Structures

Progress Energy owns and maintains the transmission system.

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

Outage information is documented daily using our DTR management system. Crews list the location and cause of the outage and the course of action taken to correct the problem. Specific information is also documented such as number of customers affected, span of the interruption, and time of day.

This same procedure is used during and after a hurricane, and photographs are taken as additional documentation. The information collected has identified a trend in outages due to natural causes (ie. fallen trees/limbs and lightning). We are not aware of any poles that failed due to high winds or stress alone. However, we continue to make certain that any maintenance or future designs are calculated to withstand extreme weather conditions.

F. Audit of Joint-Use Pole Attachment Agreements

The City's overhead electric distribution system has approximately 10,000 poles. Our Distribution Geographic Information System is periodically updated to reflect the addition or removal of joint utilities attached to our distribution poles.

The poles may or may not contain attachments from other utilities such as cable, fiber or telephone. Current distribution standards were based on strength and clearance requirements of the 1996 edition of the NESC as a minimum. Attachment of local distribution facilities of joint-use utilities are covered by the standard designs. Additional calculations are only necessary to accommodate the attachment of unusually large cables by foreign utility.

G. Six-year transmission Inspection Program

Progress Energy owns and maintains the transmission system.

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

Outage information is documented daily using our DTR management system. Whether it is overhead or underground, crews will list the cause of the outage and the course of action taken to correct the problem. Crews log all aspects of the problem into their mobile laptops, and afterward the data is uploaded into the main database for documentation and analysis

Since the main cause of outages are due to natural causes (ie. fallen trees/limbs and lightning), the underground system has been less susceptible to undergo an outage.

I. Coordination with Local Governments

As a department of the City of Bartow, the electric utility department maintains coordination and actively works with local governments and the FMEA to identify and address issues of common concern.

We are all components of the City of Bartow; therefore, it is vital for Bartow Electric to have close coordination between Police and Fire departments. City facilities with backup generators include the Police and Fire departments, Church Street Substation, the water plant, wastewater plant, and our electric department complex.

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

The City of Bartow participates in PURC activities related to storm hardening research through membership in the Florida Municipal Electric Association and its involvement with PURC.