

Report to the Florida Public Service Commission Pursuant to Rule 25-6.0343, F.A.C.

Calendar Year 2012

1) Introduction

a) Central Florida Electric Cooperative, Inc.

b) PO Box 9
11491 NW 50th Ave.
Chiefland, Florida 32644

c) Contact information:
Ben Dawson
Chief Operating Officer
(352) 493-2511 Ext. 6903

d) Central Florida Electric Cooperative, Inc., is an electric distribution cooperative in north central Florida, serving approximately 36,145 services as of year-end, 2012. The Cooperative maintains 4,194 miles of overhead distribution line, 271 miles of underground distribution line, and 30 miles of transmission line. Central Florida Electric Cooperative, Inc. serves consumers in Alachua, Dixie, Gilchrist, Layfette, Levy and Marion Counties. The Cooperative operates 16 distribution substations, purchasing power at 69 kV from Seminole Electric Cooperative, Inc., a statewide cooperative power supplier.

The Cooperative's service territory, located in the "Big Bend" area of Florida, is flanked by the Gulf of Mexico on the west; Tri-County and Clay ECI's to the north and northeast; and Sumter and Withlacoochee ECI's to the south and southeast. The majority of the area is rural, where small farms, multiple dairies, and timberlands are the predominant land usage. There are several relatively small urban areas within the service area, along with some "pockets" of residential development.

The service area is bisected by U.S. Highway 19 & 98, which runs from the northwest to the southeast, and by U.S. Highway 27A, which runs west to east.

2) Number of meters served in calendar year 2012:

36,145 connected meters.

3) Standards of Construction:

a) National Electric Safety Code Compliance:

Construction standards, policies, guidelines, practices, and procedures at Central Florida Electric Cooperative, Inc. comply with the National Electrical Safety Code (ANSI C-2) [NESC]. For electrical facilities constructed on or after February 1, 2007, the 2007 NESC applies. The edition of the NESC in effect at the time of the facility's initial construction governs electrical facilities constructed prior to February 1, 2007.

b) Extreme Wind Loading Standards:

The wind standard for the Central Florida Electric Cooperative, Inc. facilities is between 100 mph inland and 130 mph at the coast. At this time, Central Florida Electric Cooperative, Inc. facilities are not designed to be guided by the extreme loading standards on a system wide basis. Central Florida Electric Cooperative, Inc. is participating in the Public Utility Research Center's (PURC) granular wind research study through the Florida Electric Cooperative Association. We continue to self-audit and evaluate our system to determine any immediate needs for system upgrades and hardening in isolated areas, but this time we do not have sufficient data to substantiate the effort and cost of making major upgrades to our system. We do look at projects on case by case bases for evaluation for upgrades and hardening. Attached is a report updating the activities of PURC and its Steering Committee.

c) Flooding and Storm Surges:

Central Florida Electric Cooperative, Inc. is in a constant evaluation of our standards, policies, guidelines, practices and procedures that address the effects of flooding and storm surges on underground facilities and supporting overhead facilities. Central Florida Electric Cooperative, Inc. is participating in the Public Utility Research Center's (PURC) study on the conversion of overhead electric facilities to underground and the effectiveness of undergrounding facilities in preventing storm damage and outages through the Florida Electric Cooperative Association. Attached is a report updating the activities of PURC and its Steering Committee.

d) Safe and Efficient Access of New and Replacement Distribution Facilities:

Electrical construction standards, policies, guidelines, practices, and procedures at Central Florida Electric Cooperative, Inc. provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance. Wherever new facilities are placed (i.e. front or side of property), all facilities are installed so that Central Florida Electric Cooperative, Inc.'s facilities are accessible by its crews and vehicles to ensure proper maintenance/repair is performed as expeditiously and safely as possible. Central Florida Electric Cooperative, Inc. does not install facilities in the rear of property. Central Florida Electric Cooperative, Inc. decides on a case-by-case basis whether existing facilities need to be relocated. If it is determined that facilities need to be relocated, they will be placed in the safest, most accessible area available.

e) Attachments by Others:

Electrical construction standards, policies, guidelines, practices, and procedures at the Central Florida Electric Cooperative, Inc. include written safety, pole reliability, pole loading capacity, and engineering standards and procedures for attachments by others to the utility's electric transmission and distribution poles. By pole attachment agreement, we ensure attachments to our poles comply with the above before we approve pole attachment permits.

4. Facility Inspections

- a) It is the policy of Central Florida Electric Cooperative, Inc. to inspect all of its transmission facilities with its crews on a yearly basis. These inspections are coordinated to be performed as crews become available when higher priority work is complete. All distribution poles are inspected or repaired at the ground line by contractors or in-house crews within a planned 9-year program. Poles are replaced by Central Florida Electric Cooperative, Inc. crews if found deteriorated beyond repair. Above ground line inspection is performed by Central Florida Electric Cooperative, Inc. crews on a daily basis.
- b) Central Florida Electric Cooperative, Inc. planned and inspected thirty miles of transmission in 2012. Central Florida Electric Cooperative, Inc. crews performed a ground line inspection and treatment of 11,222 distribution poles in 2012. This was approximately 13.2% of all distribution poles in the system. Approximately 12,000 poles are planned to be inspected in 2013.
- c) Out of the 11,222 distribution poles inspected, 56 were found to be deteriorated and are scheduled for replacement.

5. Vegetation Management

- a) Central Florida Electric Cooperative, Inc. is currently on a 5-year right-of-way vegetation clearance plan. Trees are trimmed or removed within 15 feet of all main lines, taps, and guys. Dead trees, which could fall on the line from outside of our easements, are downed with owner's permission. Vines are removed from poles, guys and lines. In 2012, 638 miles of the approximately 3,187 miles of primary overhead line on the system was cleared.

Report on Collaborative Research for Hurricane Hardening

Provided by

The Public Utility Research Center
University of Florida

To the

Utility Sponsor Steering Committee

February 2013

I. Introduction

The Florida Public Service Commission (FPSC) issued Order No. PSC-06-00351-PAA-EI on April 25, 2006 (Order 06-0351) directing each investor-owned electric utility (IOU) to establish a plan that increases collaborative research to further the development of storm resilient electric utility infrastructure and technologies that reduce storm restoration costs and outages to customers. This order directed IOUs to solicit participation from municipal electric utilities and rural electric cooperatives in addition to available educational and research organizations. As a means of accomplishing this task, the IOUs joined with the municipal electric utilities and rural electric cooperatives in the state (collectively referred to as the Project Sponsors) to form a Steering Committee of representatives from each utility and entered into a Memorandum of Understanding (MOU) with the University of Florida's Public Utility Research Center (PURC).

PURC manages the work flow and communications, develops work plans, serves as a subject matter expert, conducts research, facilitates the hiring of experts, coordinates with research vendors, advises the Project Sponsors, and provides reports for Project activities. The collaborative research has focused on undergrounding, vegetation management, hurricane-wind speeds at granular levels, and improved materials for distribution facilities.

This report provides an update on the activities of the Steering Committee since the previous report dated February 2012.

II. Undergrounding

The collaborative research on undergrounding has been focused on understanding the existing research on the economics and effects of hardening strategies, including undergrounding, so that

informed decisions can be made about undergrounding policies and specific undergrounding projects.

The collaborative has refined the computer model developed by Quanta Technologies and there has been a collective effort to learn more about the function and functionality of the computer code. PURC and the Project Sponsors have worked to fill information gaps for model inputs and significant efforts have been invested in the area of forensics data collection. Since the state has not been affected by any hurricanes since the database software was completed, there is currently no data. Therefore, future efforts to refine the undergrounding model will occur when such data becomes available.

In addition, PURC has worked with doctoral and master's candidates in the University of Florida Department of Civil and Coastal Engineering to assess some of the inter-relationships between wind speed and other environmental factors on utility equipment damage. PURC has also been contacted by engineering researchers at other universities with an interest in the model, though no additional relationships have been established. The researchers that contact PURC all cite the model as the only non-proprietary model of its kind.

The research discussed in last year's report on the relationship between wind speed and rainfall is still under review by the engineering press. Further results of this and related research can likely be used to further refine the model.

III. Wind Data Collection

The Project Sponsors entered into a wind monitoring agreement with WeatherFlow, Inc. Currently, WeatherFlow's Florida wind monitoring network includes 50 permanent wind monitoring stations around the coast of Florida. The wind, temperature, and barometric pressure data being collected at these stations has been made available to the Project Sponsors.

There have been no major impacts from hurricanes since the wind monitoring network was established. Once such an event does occur and wind data is captured, it is expected that forensic investigations of utilities' infrastructure failure will be conducted and overlaid with wind observations to correlate failure modes to wind speed and turbulence characteristics. Project Sponsors and PURC will analyze such data at that time.

IV. Public Outreach

In last year's report we discussed the impact of Hurricane Irene on greater interest in storm preparedness. PURC researchers discussed the collaborative effort in Florida with the engineering departments of the state regulators in Pennsylvania and Maryland. In addition, PURC researchers testified on the collaborative effort in a special session before the office of the Governor of Connecticut. While all of the regulators and policymakers showed great interest in the genesis of the collaborative effort, and the results of that effort, they have not, at this point, shown further interest in participating in the research effort. However, the impact of Hurricane Sandy has sparked interest in the research in the states of New York and New Jersey, and

representatives of regulatory and consumer organizations in both states have contacted PURC regarding the research and Florida's collaborative effort.

In August, PURC Director of Energy Studies Ted Kury participated in a teleseminar for state utility regulators sponsored by the National Regulatory Research Institute. During the seminar, he joined other participants in discussing the costs and benefits of relocating power lines underground. He also discussed the state's response to the 2004-05 hurricane seasons and shared lessons from the collaborative experience. In March of 2013, the *Wall Street Journal* will be publishing a special section on pressing energy issues where Kury will be contributing an essay on the costs and benefits of undergrounding.

V. Conclusion

In response to the FPSC's Order 06-0351, IOUs, municipal electric utilities, and rural electric cooperatives joined together and retained PURC to coordinate research on electric infrastructure hardening. The steering committee has taken steps to extend the research collaboration MOU so that the industry will be in a position to focus its research efforts on undergrounding research, granular wind research and vegetation management when significant storm activity affects the state.