

City of Leesburg
Storm Hardening Report to the Florida Public Service Commission Pursuant
to Rule 25-6.0343, F.A.C.
Calendar Year 2016

1) Introduction

- a) Name of city/utility: **City of Leesburg / Leesburg Electric Department**

- b) Address, street, city, zip: **2010 Griffin Road, Leesburg, FL 34748**

- c) Contact information: Name, title, phone, fax, email:

Patrick M. Foster PE, Interim Electric Director
Voice: 352.728.9786 Ext 2012
Fax: 352.326.6622
E-mail: Patrick.Foster@leesburgflorida.gov

2) Number of meters served in calendar year 2016

Leesburg's electric utility serves approximately 23,700 customer meters.

3) Standards of Construction

a) National Electric Safety Code Compliance

Leesburg construction standards, policies, guidelines, practices, and procedures 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. Electrical facilities constructed prior to February 1, 2007, are governed by the edition of the NESC in effect at the time of the facility's initial construction.

b) Extreme Wind Loading Standards

Leesburg construction standards, policies, guidelines, practices, and procedures are guided by the extreme wind loading standards specified by Figure 250-2(d) of the 2012 edition of the NESC for 1) new construction; 2) major planned work, including expansion, rebuild, or relocation of existing facilities, assigned on or after December 10, 2006; and 3) targeted critical infrastructure facilities and major thoroughfares. These standards require structures to withstand winds up to 100 mph within the Leesburg electric service territory.

Leesburg is also participating in the Public Utility Research Center's (PURC) granular wind research study through the Florida Municipal Electric Association.

c) Flooding and Storm Surges

Leesburg is approximately 60 miles inland from the Atlantic and Gulf coasts and is not subject to major flooding or storm surge. Leesburg construction standards, policies, guidelines, practices, and procedures do not address the effects of flooding and storm surges on underground distribution facilities or supporting overhead facilities.

Leesburg is also participating in the Public Utility Research Center's (PURC) study on the conversion of overhead electric facilities to underground and the effectiveness of underground facilities in preventing storm damage and outages through the Florida Municipal Electric Association.

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

Leesburg construction standards, policies, guidelines, practices, and procedures provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance. New overhead and underground facilities for residential and commercial installations are placed in locations that are accessible by crews and vehicles to ensure proper maintenance and repair can be performed expeditiously and safely. Some aged rear lot line overhead facilities exist in scattered neighborhoods, but these facilities are generally relocated to the front lot line to the greatest extent possible when converted to underground. All feeder main lines have already been relocated to front lot lines.

e) Attachments by Others

Leesburg electrical construction standards, policies, guidelines, practices, and procedures include written safety, pole wind loading capacity, and engineering standards for attachment by others to Leesburg distribution poles. Leesburg requires permits for all foreign utility attachments to Leesburg owned overhead facilities. This permit requires the entity requesting to attach to a Leesburg pole to provide the design calculations to insure the addition of their attachment does not violate the requirements of the NESC in effect at the time of the request.

If poles are determined to be overloaded, they are replaced.

Foreign utility attachments are inspected on an 8 year cycle.

4. Facility Inspections

- a) **Describe the utility's policies, guidelines, practices, and procedures for inspecting transmission and distribution lines, poles, and structures including, but not limited to, pole inspection cycles and pole selection process.**

Leesburg does not own or operate transmission facilities. Leesburg contracts general pole inspection and sound and bore inspection with excavation on wood poles using the NESC standards for decay and reject status.

All poles (wood, steel, fiberglass, aluminum and concrete) to which Leesburg electric facilities are attached, are inspected by the contractor and all wood poles are treated at ground level as necessary to preserve the strength of the poles. Field notes and reports of other wood pole defects (top split, woodpecker holes, etc.) are prepared by the contractor and delivered to the City weekly during the inspection period. Appropriate action is taken by Leesburg to repair or replace the wood poles. Leesburg inspects poles on an 8 year inspection cycle. Leesburg electric facilities are attached to approximately 14,942 poles to which distribution facilities are attached; of which approximately 8,854 are wood poles and approximately 3,731 are concrete poles. The remaining 2,357 are a combination of steel, fiberglass, and aluminum. Leesburg has began a new inspection cycle in 2016. There were 2,827 poles inspected. Of those, 182 were reject poles and are scheduled to be replaced.

- b) **Describe the number and percentage of transmission and distribution inspections planned and completed for 2016.**

2,827 pole inspections were planned or completed for 2016. The current pole inspection cycle was started in 2016 and will be completed in 2021.

- c) **Describe the number and percentage of transmission poles and structures and distribution poles failing inspection in 2016 and the reason for the failure.**

182 pole inspections failed the 2016 inspection, or 6.4%. The reason for failure was ground line rot, internal deterioration, or animal infestation (squirrels, owls, etc.). The jobs to replace these poles are in design and details will be provided in next year's report.

- d) **Describe the number and percentage of transmission poles and structures and distribution poles, by pole type and class of structure, replaced or for which remediation was taken in 2016, including a description of the remediation taken.**

During 2016, Approximately 143 poles were replaced in addition to the inspection. Approximately 150 poles are scheduled to be replaced in 2017, prior to commencement of the new inspection cycle. 1,067 poles were treated externally, 1,678 poles were treated internally, 206 guy wires were installed, and 22 ground wires were repaired.

Leesburg continues to convert areas from Overhead to underground. Leesburg has also upgraded several feeders, including pole replacements. These upgrades were designed to the Latest NESC guidelines. Leesburg has a plan to upgrade other main feeder lines in the coming years.

5. Vegetation Management

- a) **Describe the utility’s policies, guidelines, practices, and procedures for vegetation management, including programs addressing appropriate planting, landscaping, and problem tree removal practices for vegetation management outside of road right-of-ways or easements, and an explanation as to why the utility believes its vegetation management practices are sufficient.**

The City of Leesburg maintains a 4-year tree trimming cycle for feeder and lateral circuits. Problem trees are trimmed or removed as identified along with vegetation underbrush management. There were 77 vegetation outages causing 211,353 customer minutes interrupted “CMI” during calendar year 2016, with an average of 2,745 CMI per vegetation outage. This includes outages experienced during Hurricane Matthew and other storm events which were significant.

- b) **Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities in 2016.**

Vegetation management activities were completed as scheduled during calendar year 2016.

The Public Utility Research Center has held two vegetation management workshops in 2007 and 2009. Through FMEA, Leesburg has a copy of their reports and will use the information to continually improve vegetation management practices. We will participate in future best-practice workshops if there is interest.

6. Storm Hardening Research

The City of Leesburg is a member of the Florida Municipal Electric Association (FMEA), which is participating with all of Florida’s electric utilities in storm hardening research through the Public Utility Research Center at the University of Florida. Under separate cover, FMEA is providing the FPSC with a report of research activities. For further information, contact Amy Zubaly, Interim Executive Director, FMEA, 850-224-3314, ext.1, or azubaly@publicpower.com.