

City of Leesburg
Storm Hardening Report to the Florida Public Service Commission Pursuant
to Rule 25-6.0343, F.A.C.
Calendar Year 2015

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:

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2) Number of meters served in calendar year 2015

Leesburg's electric utility serves approximately 23,000 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 15,027 poles to which distribution facilities are attached; of which approximately 8,970 are wood poles and approximately 3,692 are concrete poles. The remaining 2,365 are a combination of steel, fiberglass, and aluminum. Distribution pole inspections commenced during 2007. With the inspection of 16,483 poles during the period from 2007 through 2010 as shown in "c" below, Leesburg has now completed the inspection of all poles supporting electric facilities for this 8 year cycle. Pole inspections are planned to resume in 2016.

- b) **Describe the number and percentage of transmission and distribution inspections planned and completed for 2015.**

No pole inspections were planned or completed for 2015. The current 8 year pole inspection cycle was completed in 2010. The next pole inspection cycle will commence in 2016.

- c) **Describe the number and percentage of transmission poles and structures and distribution poles failing inspection in 2015 and the reason for the failure.**

No pole inspections were planned or completed for 2015. Past results are included in the chart below.

Service Provided	2007 Poles	2009 Poles	2010 Poles	Total Poles	% Total Inspected
Poles treated with COP-R-Plastic II - Passed	2,365			2,365	14.3%
Poles treated with MP400-EXT - Passed		1,243	2191	3,434	20.8%

Poles treated with MITC-FUME	1,293	670	1319	3,282	19.9%
Poles treated with Hollow Heart CF	45	87	2	134	0.8%
No treatment	2,517	1,224	3,527	7,268	44.1%
TOTAL	6,220	3,224	7,039	16,483	100.0%
Priority Rejects requiring immediate attention	3	6	0	9	0.1%
Poles that failed minimum strength and are replaced	163	84	205	452	2.7%
Other conditions—Split top, Woodpecker Holes, etc.	1,346	63	1,195	2,603	15.8%

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 2015, including a description of the remediation taken.

Pole Type	Distribution Pole Class	Remediation	Number Poles	% of 2010 Inspected Poles
Wood	Various	Replaced	66	0.85% (95 of 7,039)

During 2015, Approximately 66 poles were replaced. Approximately 70 poles are scheduled to be replaced in 2016, prior to commencement of the new inspection cycle.

In addition to the inspected pole replacements, Leesburg replaced 40 wood poles with hardened concrete poles as part of continuing upgrades in 2015.

Leesburg has also converted several areas from Overhead to underground primary and secondary wires. This removed over 182 poles from our system. We added an additional 68 poles. That leaves a net of 114 poles that have been removed from our system.

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 90 vegetation outages causing 153,433 customer minutes interrupted “CMI” during calendar year 2015, with an average of 1704 CMI per vegetation outage. The total CMI has been greatly improved from 2014, when we had two major outages that affected many customers.

b) Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities in 2015.

Vegetation management activities were completed as scheduled during calendar year 2015.

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 Barry Moline, Executive Director, FMEA, 850-224-3314, ext.1, or bmoline@publicpower.com.