

**City of Lakeland/Lakeland Electric
Report to the Florida Public Service Commission Pursuant to
Rule 25-6.0343, F.A.C.
Calendar Year 2017**

1) Introduction

- a) Name of city/utility
City of Lakeland/Lakeland Electric
- b) Address, street, city, zip
501 East Lemon Street
Lakeland, FL 33801
- c) Contact information: Name, title, phone, fax, email

Joey Curry
Assistant General Manager – Energy Delivery
Phone: (863) 834-6551
Fax: (863) 834-6373
joey.curry@lakelandgov.net

2) Number of meters served in calendar year 2017

123000

3) Standards of Construction

a) National Electric Safety Code Compliance

Construction standards, policies, guidelines, practices, and procedures at the Lakeland Electric (LE) comply with the National Electrical Safety Code (ANSI C-2) [NESC]. For electrical facilities constructed on or after February 1, 2012, the 2012 NESC applies. Electrical facilities constructed prior to February 1, 2012 are governed by the edition of the NESC in effect at the time of the facility's initial construction.

b) Extreme Wind Loading Standards

Construction standards, policies, guidelines, practices, and procedures at Lakeland Electric have considered the extreme wind loading standards specified by Figure 250-2(d) 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. Per NESC Rule 250C, LE designs and builds to meet or exceed the extreme wind loading strength requirements for all poles that exceed a height of 60 feet above ground or water level. All structures below this height are designed and built to meet or exceed the requirements of Grade B construction.

c) Flooding and Storm Surges

The LE service territory is not a coastal area and, therefore, not subject to storm surges or other wide-spread significant flooding.

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

Electrical construction standards, policies, guidelines, practices, and procedures at Lakeland Electric provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance. In all locations possible and with rare exception facilities are immediately adjacent to public roadways. Lakeland Electric discontinued rear-lot-line construction over 30 years ago. We consider relocating poles and lines from rear lots to roadside when we plan significant reconstruction of those line sections.

e) Attachments by Others

Lakeland Electric’s engineering and construction standards account for the influence of potential telecommunications attachments for pole strength and height in maintaining compliance to the applicable NESC standards. Additionally, the current City of Lakeland Ordinance # 4899 governing pole attachments with external entities has maintained requirements that those making the licensed attachments comply with NESC requirements in their design, construction, operation, and maintenance activities. The pole strength calculations completed during the pole inspections include modeling all attachments in the assessment.

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.

Lakeland Electric initiated a contract for its second eight-year-cycle in 2017 to inspect all wood poles using visual and the sound and bore techniques with ground line excavation and strength calculations that include all pole attachments. Additionally, LE personnel inspect for T&D facility damage throughout the service territory during the course of normal travel, operations work, and in response to outages. LE also uses concrete and tubular steel poles which receive a visual inspection only.

b) Describe the number and percentage of transmission and distribution inspections planned and completed for 2017.

<u>Documented pole inspection results</u>	<u>Distribution</u>	<u>Transmission</u>	<u>Total</u>
Poles planned for inspection	7080	81	7161
Percentage planned	12.5 %	12.5%	12.5%
Poles inspected	7197	71	7268
Percentage inspected	12.7%	11.0%	12.7%

The number and percentage of poles planned for inspection are the total in each category divided by the eight-year cycle. Because the inspections are done by geographical region, the actual number of poles inspected will vary by the percentage of distribution and transmission poles in the region by year with the end result of all poles being inspected on each eight-year cycle.

c) Describe the number and percentage of transmission poles and structures and distribution poles failing inspection in 2017 and the reason for the failure.

Four transmission poles or 5.6% of those inspected failed to meet minimum strength requirements due to decay. There were 486 distribution poles or 6.8% of those inspected failed to meet minimum strength requirements due to decay.

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 after inspection in 2017, including a description of the remediation taken.

All poles recommended for strengthening from the inspections during the calendar year of 2017 were assessed for appropriate action. Zero distribution poles were reinforced with struts in 2017, and 607 distribution poles were replaced, repaired, or removed by the end of 2017. Lakeland Electric will defer 1849 distribution poles until 2018. 29 transmission poles were repaired or replaced in 2017 and 44 transmission poles were deferred to 2018.

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.

Lakeland Electric's vegetation management programs entails circuit based maintenance provided by contractual services. Species specific distance trimming and directional pruning techniques are incorporated to maximize tree/conductor separation and to establish a three-year trim cycle on the transmission and distribution circuits. Vegetation interference that exceeds the anticipated maintenance cycle on feeder circuits is trimmed in between cycles to enhance reliability.

Lakeland Electric's tree removal program includes tree less than twelve inches in diameter that will require future maintenance. Tree replacement certificates are used as an incentive to promote proper tree selection and energy conservation. Tree planting information booklets include setback recommendations that correspond with the City of

Lakeland and Polk County Land Development Codes.

Lakeland Electric finds these practices sufficient because the anticipated tree growth will generally not exceed the established three-year tree trim cycle and there are budgetary allowances for priority situations.

b) Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities in 2017.

230 kV transmission lines: Lakeland Electric inspected 27 miles of BES to verify clearance meets or exceeds the FAC-003 compliance requirements. 17.6 miles were planned and completed.

69 kV transmission lines: 21.15 miles of were planned and 14.36 were completed.

12 kV distribution lines: 400 miles were planned and 253 miles were completed
Distribution maintenance includes secondary voltage lines not included in the stated mileage.

All maintenance trimming was inspected to verify that it meets the required clearance specifications.

The Public Utility Research Center has held two vegetation management workshops in 2007 and 2009. Through FMEA, Lakeland Electric 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 as they occur.

6. Storm Hardening Research

Lakeland Electric 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:

Executive Director, FMEA
850-224-3314, ext.1