Report
02/28/2018

Lee County Electric Cooperative, Inc.
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February 28, 2018

Lee County Electric Cooperative, Inc. (LCEC)
PO Box 3455
N Ft Myers, FL 33918-3455

Mr. Thomas Ballinger, Director
Engineering Division
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Mr. Ballinger,

Please find enclosed Lee County Electric Cooperative, Inc.'s (LCEC) Annual Report on Standards of Construction, Facility Inspections, and Vegetation Management for calendar year 2017. This filing is pursuant to Rule 25-6.0343 F.A.C.

Also enclosed is a matrix that summarizes many of LCEC's activities for the calendar year 2017.

If you have any questions, please do not hesitate to call me (239) 656-2399.

Sincerely,

s/ Denise Vidal

Denise Vidal
Director, Finance & Accounting/ CFO

cc: Allan Ruth
Shawn Walling

Annual Report on Lee County Electric Cooperative, Inc.'s (LCEC)
Standards of Construction, Facility Inspections, and Vegetation Management
for calendar year 2017

Standards of Construction:

a) LCEC's construction standards comply with the National Electrical Safety Code (ANSI C-2) [NESC]. Electrical facilities constructed through December 31, 2017 comply with the edition of the code in effect at the time of the facility's initial construction.

b) LCEC has construction standards, for required facilities, that meet the extreme wind loading standards specified by Figure 250-2(d) of the 2012 edition of the NESC.

c) Although not waterproof, LCEC's equipment and constructed facilities are designed to be water resistant. The majority of our underground facilities (excluding conduits and cables) are at or above existing/surrounding grade.

d) Although often at odds with the desires of customers and governmental entities, LCEC's current practice is to place the majority of new and replacement distribution facilities in the front of lots. This does provide in most cases the safest and most efficient access for installation and maintenance. If necessary, easements for placement of distribution facilities are requested from customers.

e) LCEC's standards for joint use provide clearances (distances) for conductors, equipment, and risers. The joint use agreements that are entered into with pole attachment parties detail the process for evaluating pole loading capacity. Additionally, the agreements define the responsibilities for pole reliability and upgrading. Currently, LCEC does not permit attachments to transmission poles.

Facility Inspections:

a) Transmission inspection 2-year cycle (138 kV): Inspect all poles and structures by either climbing or with the use of a bucket truck. Inspect poles, structures, guys, anchors, insulators, crossarms, conductors, shield wires, right-of-way, for any structural deficiency or any situation that may impact the structural integrity of the facility. Inspections are conducted by either climbing the pole/structure or with the use of a bucket truck.

Distribution inspection: 2-year cycle visual inspection: Single Phase, visually inspect all poles for splitting, cracking, visual decal, twisting, and bird damage. Patch minor woodpecker holes. 10-year cycle climbing the pole inspection: Inspect all three phase poles for splitting, cracking, visual decay, twisting, and bird damage. Patch minor woodpecker holes. When digging around ground line of poles for ground rod checks, check pole for ground rot. Sounding and assessing each pole for deteriorating by probing with a screwdriver. Examine

concrete poles for evidence of cracks and physical damage. Plumb poles if they are (1+) pole top out of plumb. In 2015 LCEC implemented a multi-year Targeted Pole Change Out initiative, a proactive step towards replacing poles nearing the end of their life expectancy.

In 2017 LCEC inspected 1,160 out of a total of 2,302 transmission poles and structures. This included 50% of the 138 kV facilities. This was 100% of scheduled.

In 2017, LCEC completed inspections on 62,520 distribution poles. This was 100% of inspections scheduled and 38.9% of total poles.

During the 2017 inspection of the transmission facilities, 39 poles (3.4% of inspected) failed inspection criteria. Of these, 13 failed due to rot, 0 to woodpecker damage, 26 concrete due to life expectancy.

During the 2017 inspection of the distribution facilities, 1,134 poles (1.6% of inspected) failed inspection criteria. Of these, 1,105 failed due to rot/split top, 16 failed due to out of plumb, and 13failed due to woodpecker damage.

In 2017, LCEC replaced 38 transmission poles due to rot.
The replacement poles are concrete and steel; the majority being concrete

In 2017, LCEC repaired through re-plumbing 16 poles; repaired through trussing 0 (1.4% of total that failed inspection); and repaired through patching 13 (1.1% of total that failed inspection). The replaced poles consisted of nine (9) Class-1; twelve (12) Class-2; fifty three (53) Class-3; one hundred twenty five (125) Class-4; one thousand three hundred fifty seven (1,357) Class-5; ninety five (95) Class-6.

Vegetation Management:

(a) LCEC has developed the following Vegetation Management Program for the control of vegetation on its distribution facilities. This Program covers the maintenance of vegetation for the 3,953 miles of single, double and three-phase distribution lines. Goals and strategies of the program are:

1) Maintain reliability of the distribution lines by controlling vegetation to meet the requirements of NESC and ANSI.

2) Strategies for control include cultural, mechanical, manual, and chemical treatments.

3) LCEC's practices planned circuit trimming on a six year cycle for single phase and a three year cycle for double and three phase distribution.

4) Approved procedures include directional trim techniques per ANSI A300 standard. Maintain side clearance of 8-10 feet or employ the use of directional trim technique of taking the cut to the next lateral beyond the standard clearance point. Standard ground/horizontal clearance is one foot below the lower most cable attachment or 12 feet from the primary,

whichever is greater. Palm trees are tipped back so fronds will not make contact with the primary when they drop. Overhang less than 15 feet above the primary is removed. All vines are cut and sprayed.

LCEC's TREES (To Respect Electricity and the Environment Safely) communication program focuses on planting and landscaping. Key messages are incorporated into the customer newsletter at least twice a year. Door hangers with brochures containing detailed information about planting the right tree in the right place are distributed throughout neighborhoods prior to circuit trimming. Through LCEC's Public Relations Department, presentations are used to promote smart landscaping to city government, builders and local agencies.

LCEC maintains a quarterly ground inspection of ROW Restriction Vegetation with trim/maintenance done as required.

(b) 2017's Planned Vegetation Management for transmission and distribution was completed as follows:

2017 Vegetation Management Schedule			
	YE Actual	YE Goal	% YE
Three-phase trimming*	395	395	100.0%
Single-phase trimming*	351	351	100.0%
Transmission mowing and Trimming*	36.77	36.77	100.0%
138 kV inspection	Jan thru Dec	Annual	100.0%
ROW Restriction Inspection/Maintenance	Q2, Q4	Bi-Annually	100.0%

* Miles

Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2017														
	The extent to which Standards of Construction address:							Transmission & Distribution Facility Inspections:				Vegetation Management:	
		Guided by Extreme Wind Loading per Figure 250-2(d)											
Utility	Comply with the 2007 NESC on or after 2/1/2007	New Const.	Major Planned Work, Expansion, Rebuild, or Relocation	Targeted Critical Infrastructure and major thoroughfares	Effects of flooding & storm surges on UG & OH distribution facilities	Placement of distribution facilities to facilitates safe and efficient access	Written safety, pole reliability, pole loading capacity, and engineering stds for Attachments	Description of policies, guidelines, practices, procedures, cycles	No. & Pct. of poles & structures planned & completed	No. & Pct. of poles & structures failing inspection w/ reasons	No. & Pct. of poles & structures, by class, replaced or remediated w/ description	Description of policies, guidelines, practices, procedures, tree removals, w/ sufficiency explanation.	Quantify, level, & scope planned and completed for transmission and distribution.
Lee County Electric Cooperative Inc.	Yes.	guided by 2012 Figure 250-2(d).			Yes.	Yes.	Yes.	T: 2-Yr full D: 10-Yr	T: Planned 1,160 pole inspections (50% of all 138 kV poles) completed 100%. D: Planned 62,520 (38.9% of Total Population) Completed 62,520 (100% of Planned)	T: 3.4% (39) failed inspection 13 decay; 0 woodpecker, 26 to life expectancy. D: 1,134 Failed (1.6% of total inspected); 1,105 rot/split top; 16 out of plumb; 13 woodpecker damage	T: 38 replaced in 2017. D: Replumb 16; Patch 13; Trussed 0; Replaced 9 Class 1; 12 Class 2; 53 Class 3; 125 class 4; 1,357 Class 5; and 95 Class 6.	T; 138KV Annual D: Circuit Trim 3-Yr Cycle for 2&3 Phase circuits; 6-Yr Cycle for 1 Phase circuits	T; inspection 100% of plan T: Mowing 100% D: 100.0% of plan