

**Florida Public Service Commission Report
Pursuant to Rule 25-6.0343, F.A.C.
Calendar Year 2023**

The following information is submitted pursuant to the Florida Public Service Commission rule 25-6.0343, F.A.C. for the calendar year of 2023.

1. Reporting Utility

Glades Electric Cooperative, Inc.
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2. Number of services in place for calendar year 2023: 20,938

3. Standards of Construction –3 Year Review for 2021-2023

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).

Glades Electric Cooperative (GEC) utilizes a Construction Standards Committee that meets on an as-needed basis to evaluate construction and material standards currently in place and to make recommendations for any necessary changes. This committee consists of the Chief Operations Officer, Manager of Safety, Engineering representatives, Power Supply Management, Procurement representative and field crew representation. The goal is to review and evaluate construction options (materials, devices, practices...) that provide operational or safety improvements over the existing methods. When changes are made, documentation is updated and crews/employees are educated about the changes and the impacts of the new process.

a) National Electric Safety Code Compliance:

Construction standards, policies, guidelines, practices, and procedures at Glades Electric Cooperative, Inc. comply with the National Electrical Safety Code (ANSI C-2) [NESC] as set forth by RUS Regulations. Electrical facilities constructed are governed by the most recent edition of the NESC in effect at the time of the facility's initial construction. RUS regulation is as follows:

RUS Regulation 7 CFR Ch. XVII (1-1-06 Edition), Subpart E – Electric System Design § 1724.50 Compliance with National Electrical Safety Code (NESC).

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) A borrower shall ensure that its electric system, including all electric distribution, transmission, and generating facilities, is designed, constructed, operated, and maintained in accordance with all applicable provisions of the most current and accepted criteria of the National Electrical Safety Code (NESC) and all applicable and current electrical and safety requirements of any State or local governmental entity. Copies of the NESC may be obtained from the Institute of Electrical and Electronic Engineers, Inc., 445 Hoes Lane, Piscataway, NJ 08855. This requirement applies to the borrower's electric system regardless of the source of financing.

(b) Any electrical standard requirements established by RUS are in addition to, and not in substitution for or a modification of, the most current and accepted criteria of the NESC and any applicable electrical or safety requirements of any State or local governmental entity.

(c) Overhead distribution circuits shall be constructed with not less than the Grade C strength requirements as described in Section 26, Strength Requirements, of the NESC when subjected to the loads specified in NESC Section 25, Loadings for Grades B and C. Overhead transmission circuits shall be constructed with not less than the Grade B strength requirements as described in NESC Section 26.

b) Extreme Wind Loading Standards- (Storm Hardening)

Construction standards, policies, guidelines, practices, and procedures at Glades Electric Cooperative are guided by the extreme wind loading standards specified by Figure 250-2(d) of the most recent edition of the NESC for:

1. New Construction of main feeder lines and taps
2. Major planned work, including expansion, rebuilds, or relocation of existing facilities
3. Targeted critical infrastructure facilities and major thoroughfares.

Glades Electric Cooperative continues to utilize ductile iron poles as our standard go-to pole for new construction and targeted storm-hardening installations. The main purposes for selecting Ductile Iron poles over other types of poles is to provide reliability improvements, mitigate future hazards to the public and system and overall efficiency in the operations of the system. Since GEC began using them, we have not had a single DI pole damaged by any significant weather event, including recent Hurricanes Ian and Idalia. Many factors go into the decision-making process as to why GEC chose to use DI poles, here are a number of the more significant factors:

- Ductile iron poles are engineered for consistent strength, with a minimum yield strength much higher than wood products. The design strengths are also better than the typical wood pole.
- DI poles are smaller in total diameter along the entire length of the pole as compared to the typical wood equivalent. This lends itself to much lower wind moments on the pole itself due to the available surface area of the pole for wind to be applied to.
- DI poles have been independently tested and failure rates have been observed that exceed the acceptable wood requirements by as much as 70%.
- They are extremely durable, outlasting wood, with a service life of over 75 years as compared to 35 years (avg) for wood.
- They are resistant to corrosion which makes them a very effective solution for corrosive environments (airborne and water-based contaminants).
- They are fire resistant, which is a big hazard mitigation step for the GEC service territory with the sugar cane field burns that routinely take place. Wood poles can burn and lean over but not fail completely and leave overhead conductors dangerously low to the ground-potentially creating a very hazardous situation.
- They help resolve the problem of woodpeckers (holes in the wood poles) and other animals/insects' migration into the wood. Pole tops have been broken due to woodpecker damage and that has caused excessively low hanging, possibly energized, conductors along a roadway or area accessible to pedestrians.

c) Flooding and Storm Surges

Glades Electric Cooperative is a non-coastal utility but recognizes the potential for flooding should a catastrophic failure of the Herbert Hoover dike along the Lake Okeechobee southwestern shoreline occur. GEC has participated in a workshop series hosted by Florida Catastrophic Planning with such a scenario and has evaluated standards, policies, guidelines, practices and procedures that address the effects of flooding and storm surges on underground facilities and supporting overhead facilities.

GEC will be moving to a "spliceless" design for primary URD installations in 2024. This process will be keeping all URD terminations above ground, in a cabinet or transformer where they are less vulnerable to ground water and area flooding water intrusions.

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

Electrical construction standards, policies, guidelines, practices, and procedures at the Glades Electric Cooperative 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, back or side of property), all facilities are installed so that GEC's

facilities are accessible by its crews and vehicles to ensure proper maintenance/repair is performed as expeditiously and safely as possible. GEC 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.

Gated properties (farms, ranches, sugarcane fields, residential areas...) are the biggest area of interest for facilities access. When gated access is encountered, GEC supplies a dedicated GEC owned lock and coordinates with the property owner/manager for installation. GEC internally controls the distribution of the keys to these company locks.

e) Attachments by Others

The pole attachment agreements between Glades Electric Cooperative and third-party attachees include language which specifies that the attachee, not the cooperative, has the burden of assessing pole strength and safety before they attach to the pole. It is the intent of this policy to ensure all third-party attachment agreements are uniform and consistent regarding responsibility assignments.

GEC coordinates all attachments requests through a single consultant group (presently, McLean Engineering) to ensure consistency. All major requests go through Make-Ready Engineering review and cost estimates are generated for necessary corrective actions. We instruct our consultants to evaluate power supply and communications facilities re-arrangements as a solution, prior to upgrading the structure-when these activities can be implemented, it can save the joint-use requester significant costs related to the make-ready cost estimate.

4. Facility Inspections

Glades Electric Cooperative policies, guidelines, practices and procedures for inspections and maintenance - Glades Electric Cooperative effectively inspects and maintains its transmission and distribution lines, poles, and structures guided by a number of regulations, procedures, and guidelines. These practices have proven to be invaluable based on previous storm impacts. Inspection and maintenance work is completed by utilizing GEC's System Improvement Plan, wood pole inspection cycle as established in RUS bulletin 1730B-121, and GEC's annual Strategic Work Plan.

Wood Pole Inspection Cycle – Glades Electric Cooperative utilizes an eight (8) year pole inspection cycle (sound/bore with excavation, or IML drilling with excavation as necessary) for all wood poles on the GEC system. This procedure is in compliance with RUS bulletin 1730B-121 which recommends an eight (8) year cycle but also allows a three (3) year deviation as set forth in Section 3.4 of the bulletin.

GEC's Annual Strategic Work Plan – Glades Electric Cooperative utilizes an annual strategic work plan that is formulated from input from GEC's management staff, and employees to set Goals and specific action steps. The work plan utilizes the Harvard Business School's "Balanced Scorecard" system to assure our Board of Trustees of our performance in all areas of the Strategic Work Plan. Pole inspection cycles, maintenance schedules, and system upgrades are discussed during the strategic work plan creation.

Transmission and distribution inspections planned and completed in 2023 – Glades Electric Cooperative planned and completed 99.0% of its 2023 inspection goals. This work consisted of the following:

- a) **Distribution Inspections** – GEC Power Supply Managers and line crews visually inspected approx. 2100 miles of GEC primary distribution lines for NESC code violations and hazardous conditions. GEC line crews conducted inspections on 53 miles of underground distribution representing 100% of GEC’s URD.
- b) **Transmission Inspections** – GEC inspected 100% of its 83 miles of transmission lines through visual inspections.
- c) **Number and percentage of transmission poles and structures and distribution poles failing inspection and the reason for the failure.**

Distribution Pole Rejects – GEC had approximately 4600 poles inspected/tested in 2023, 895 of which were reject poles and scheduled to be replaced. The rejects were mostly due to ground level or below, decay or rot. Pole tops that are significantly damaged/split are also included for replacement. Most poles are replaced with ductile iron poles if practical.

Transmission Pole Rejects- None were designated for replacement due to inspection results.

- d) **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, including a description of the remediation taken.**
 - a) **Distribution Poles** – **80%** of the reject poles identified in the 2023 pole inspection were replaced during 2023. The remainder will be replaced Q1 of 2024. All reject poles were replaced with equivalent wood or ductile iron poles.
 - b) **Transmission Poles** – GEC visually inspected 100% of its 83 miles of transmission lines. There were no transmission poles replaced after the inspections in 2023.

5. Vegetation Management

Distribution Right of Way - Glades Electric Cooperative began a system wide circuit by circuit right of way trimming program in 1999. This initial trimming by circuit took four years to complete as GEC had never trimmed right of way in this manner. The trim cycle started over in 2003 and GEC was able to reduce and maintain the system wide circuit by circuit trimming to a three year cycle. Trimming guidelines are established in RUS Bulletin 1728F-803 (D-803)

RIGHT-OF-WAY CLEARING SPECIFICATIONS

The right-of-way shall be prepared by removing trees, clearing underbrush, and trimming trees so that the right-of-way is cleared close to the ground and to the width specified. However, low growing shrubs, which will not interfere with the operation or maintenance of the line, may be left undisturbed if so directed by the owner. Slash may be chipped and blown on the right-of-way if so

specified. The landowner's written permission shall be received prior to cutting trees outside of the right-of-way. Trees fronting each side of the right-of-way shall be trimmed symmetrically unless otherwise specified. Dead trees beyond the right-of-way which would strike the line in falling shall be removed. Leaning trees beyond the right-of-way which would strike the line in falling and which would require topping if not removed, shall either be removed or topped, except that shade, fruit, or ornamental trees shall be trimmed and not removed, unless otherwise authorized.

Quantity, Level, and Scope of vegetation management planned and completed in 2023:

Glades Electric Cooperative trimmed 90% of the distribution tree trimming goals in 2023. GEC's transmission rights of ways were inspected during 2023. Transmission rights of ways are inspected annually and problem vegetation is removed or trimmed as necessary. Most of GEC's transmission lines are located on cultivated land and vegetation growth is manageable. Vegetation that is outside of the ROW is always a concern that has to be watched.

A new ROW floor management program was initiated in late 2021. Approx. 50 miles were completed in 2021. Since this program started, GEC has dedicated nearly \$1M per year to "reclaiming" the ROW floor in a ground-to-sky format. Over 600 miles of ROW maintenance activities will be completed in 2024.

GEC believes that its right of way program is a valuable asset to its members and feels that the current program is effective.

