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February 23, 2024

Ms. Penelope Buys
Engineering Specialist
Division of Engineering
Florida Public Service Commission
2540 Shumard Oaks Blvd.
Tallahassee, FL 32399-0850

VIA: Electronic Filing

RE: SECO Energy Report to the Florida Public Service Commission Pursuant to Rule 25-6.0343, F.A.C. Calendar Year 2023

Dear Ms. Buys:

The attached report is being submitted by SECO Energy, pursuant to the Florida Public Service Commission Rule 25-6.0343, FAC for calendar year 2023.

The report details our storm hardening initiatives as they relate to construction standards, inspection cycles, and vegetation management for calendar year 2023.

SECO Energy places a high degree of emphasis on these programs and realizes the positive impact they have on the reliability of our electric system.

Sincerely,

A handwritten signature in blue ink that reads "John LaSelva".

John LaSelva
Chief Operating Officer
352-569-9530

A handwritten signature in blue ink that reads "Wayne Pennington".

Wayne Pennington
Associate Vice President of Operations
352-569-9550

SECOEnergy.com

Our purpose is to provide exceptional service to our customers, co-workers and communities.

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

1. Introduction

SECO Energy
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2. Number of meters served in calendar year 2023

240,963 active meters were served by SECO Energy (SECO) in calendar year 2023 as of December 31, 2023.

3. Standards of Construction

SECO promotes the installation of underground distribution facilities when providing service to residential and commercial customers. In addition, in areas with a history of vegetation related outages and reliability issues due to significant storm activities, SECO evaluates its existing overhead facilities and performs underground facilities conversion on a case-by-case basis. In 2023, SECO added 666 miles to its distribution system, of which 99.7% was underground construction. SECO has joined with all of Florida's electric utilities in retaining the Public Utility Research Center (PURC) to coordinate research efforts on electric infrastructure hardening and will continue to participate with other state utilities in evaluating the hardening of electric facilities.

a. National Electric Safety Code Compliance

SECO's design and construction standards, policies, and procedures comply with Rural Utilities Service (RUS) guidelines and the National Electrical Safety Code® (NESC®) (ANSI C2). Electrical facilities for which design or approval was started prior to February 1, 2023 are governed by the edition of the NESC that was in effect at the time. For electrical facilities for which design and approval were started on after February 1, 2023, the 2023 NESC (C2-2023) applies.

b. Extreme Wind Loading Standards

The design of SECO's transmission facilities is guided by extreme wind loading standards on a system-wide basis. Distribution facilities are designed to withstand 120 mph winds for Grade B construction and 110 mph winds for Grade C construction, in accordance with the NESC. The system is evaluated continuously for immediate storm hardening and system upgrade needs.

c. Flooding and Storm Surges

Although SECO serves a coastal county (Citrus), the closest facility to the coastline is 14 miles inland; therefore, storm surge is not a concern. SECO does experience sporadic localized flooding in some areas supporting underground and overhead facilities. These identified areas are evaluated on a case-by-case basis for possible solutions to mitigate the impact of future flooding.

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

Electrical construction standards and SECO policies dictate the placement of distribution facilities to allow for safe and efficient access during installation and maintenance. Wherever new facilities are placed (i.e., front, back or side of property), they are installed for accessibility by crews and vehicles to ensure proper maintenance/repair is performed as safely and expeditiously as possible. If it is determined that facilities need to be relocated, they will be placed in the safest and most accessible area available at the time of relocation.

e. Attachments by Others

SECO has established processes to accommodate and manage pole attachment requests from companies who express an interest in attaching to SECO facilities. Following a formal application review and a thorough field investigation, SECO enters into a binding contractual agreement with the requestor. Submission of a permit application from an attachment company is required to attach to a SECO pole. This permit application is reviewed by SECO personnel and then a qualified SECO contractor performs the necessary field work to accommodate the request to ensure that code requirements are met prior to attachment. SECO has established time frames to expedite the transfer of attachments and the removal of old poles so that they are completed in a timely manner; all pole replacements and code violations are logged and tracked in a database, which is monitored each month.

4. Facility Inspections

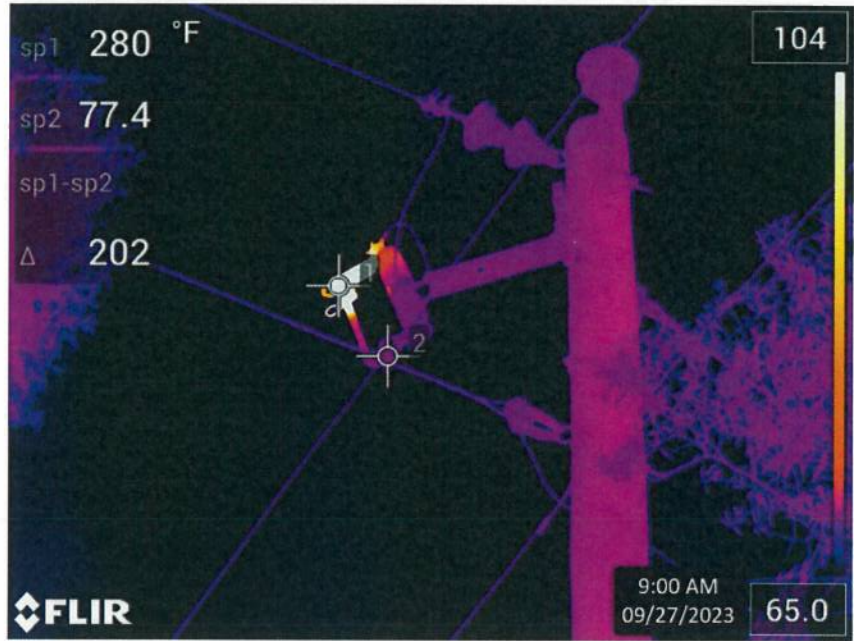
- a. *Describe the utility's policies, guidelines, practices, and procedures for inspecting transmission and distribution lines, poles, and structures including, but not limited to, pole inspection cycles and the pole selection process.*

SECO has implemented an inspection program using drones for visual inspection and documentation of existing poles, conductor, and hardware. SECO inspects its transmission facilities, substation facilities, and distribution facilities on regular cycles to maintain a safe and reliable electrical system.

SECO conducts visual and thermographic inspections at every substation monthly to ensure safety and operational efficiency. The inspection includes assessment of fencing, grounding, equipment counters, and the direct current (DC) battery system. The oil and winding temperatures of power transformers are noted along with tap positions for load tap changers and/or regulators. General site review includes documenting equipment leaks, noting warning signs are in place, verifying control insulators and switches are in good working condition, and the control house is operational. This method helps to quickly diagnose and resolve issues, thereby preventing potential substation outages to thousands of members.

In 2010, SECO implemented a policy to complete ground-line inspections of all transmission facilities on a 5-year cycle. In 2015, SECO completed the final year of the 5-year ground-line inspection cycle and implemented a policy to replace all wood transmission poles with spun-concrete. The use of spun-concrete transmission poles supports system hardening of SECO's transmission facilities by providing structures designed for stronger wind loads and are more resistant to environmental forces.

In addition, SECO performs annual visual and infrared inspections for SECO and Seminole Electric Cooperative (SECI) owned transmission lines. As illustrated by the following infrared photo of a 200-amp fused cut out, this proactive approach allows SECO to detect even the slightest of hotspots and identify devices before they fail to minimize service interruptions to its members. Spot 1 in the following infrared photo distinguishes a heat-related concern, whereas Spot 2 shows the expected temperature of a similar piece of equipment for comparison.



In 2007, SECO began performing ground-line and visual inspections of all distribution poles on an 8-year cycle. The ground-line inspection includes sounding and boring tests, as well as the excavation of all poles for treatment per RUS Bulletin 1730B-121. SECO inspects all Chromated Copper Arsenate (CCA) poles more than 20 years of age, as well as all non-CCA poles on an eight-year cycle. SECO selectively bores and excavates CCA-preserved poles under the age of 20 years. This is in accordance with PSC Docket 140082-El and is similar to the CCA inspection process followed by Duke Energy Florida, Inc. (DEF) and Florida Power & Light, Inc. (FPL).

In accordance with the inspection criteria described above, Osmose Utilities Services, Inc. (Osmose) inspected 15,836 distribution poles for the 2023 inspection cycle. This represented 11.6% of total distribution poles on the SECO electrical system. There were 79 poles identified during the inspection process that required remediation or replacement. This represented a failure rate of approximately 0.5%. In addition, the inspection process identified maintenance needed at 975 locations, including items such as the replacement of cross-arms and pole bonds.

b. Describe the number and percentage of transmission and distribution inspections planned and completed for the 2023 cycle year.

System	# of Planned Inspections	% of Planned Inspections vs Total Poles	# of Completed Inspections	% Completed vs. Planned
Transmission	15	1.3%	15	100%
Distribution	15,760	11.5%	15,836	100.5%

- c. Describe the number and percentage of transmission poles and structures and distribution poles failing inspection for the 2023 cycle year and the reason for the failure.

System	# Failed	% of Total Poles Inspected	Reason for Failure
Transmission	0	0%	--
Distribution	63	0.4%	Ground Rot
Distribution	16	0.1%	Top Deterioration

- 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 2023, including a description of the remediation taken.

Transmission

As of 2023, all transmission line structures have been replaced with spun-concrete poles except for the Big Creek transmission line which comprises of 67 wood poles. Due to budget constraints and SECO load growth, the need for this transmission line may be eliminated. A decision will be made in 2025.

Distribution

In 2020, significant SECO construction resources were displaced to assist with storm restoration activities after Hurricane Isaias (August 2020), Hurricane Laura and Marco (August & September 2020), and Hurricane Sally (September 2020). The displacement of resources created sufficient construction delays such that as of December 31, 2020 remediation had not been completed for 253 poles. SECO completed 78.7% of the distribution pole replacements and remediation as of December 31, 2020 and 98.8% as of December 31, 2021. The remaining 14 distribution poles were replaced in 2023 in conjunction with planned voltage conversion and conductor upgrade projects. SECO completed 100% of the 2020 distribution pole replacements and remediation as of December 31, 2023 as shown in categorical data table below.

Distribution Poles - 2020			
Pole Type and Class	# Failed	# Replaced	% Remediation Complete (As of 12/31/2022)
25-6	1	1	100%
30-3	1	1	100%
30-5	2	2	100%
30-6	255	255	100%
35-5	21	21	100%
35-6	425	425	100%
40-3	1	1	100%

Distribution Poles – 2020 (cont.)			
Pole Type and Class	# Failed	# Replaced	% Remediation Complete (As of 12/31/2022)
40-4	4	4	100%
40-5	456	456	100%
40-6	2	2	100%
45-3	2	2	100%
45-4	10	10	100%
45-5	10	10	100%
55-4	2	2	100%
Total	1,192	1,192	100%

In 2021, SECO replaced 98.8% of identified failed distribution poles and 99.4% as of December 31, 2022 as shown in categorical table below. The mitigation of the remaining seven (7) distribution poles have been delayed due to site related field conditions which will be evaluated and addressed in 2024.

Distribution Poles - 2021			
Pole Type and Class	# Failed	# Replaced	% Remediation Complete (As of 12/31/2023)
25-6	1	1	100%
25-7	1	1	100%
30-4	1	1	100%
30-5	2	2	100%
30-6	248	247	99.6%
35-4	2	2	100%
35-5	36	36	100%
35-6	396	393	99.2%
40-1	2	2	100%
40-3	4	3	75.0%
40-4	4	4	100%
40-5	310	310	100%
45-1	4	4	100%
45-3	105	105	100%
45-4	12	12	100%
45-5	14	14	100%
50-2	23	23	100%
50-3	5	5	100%
50-4	10	10	100%
55-1	3	3	100%
55-3	2	2	100%
55-4	3	2	66.7%
65-3	1	0	0.0%
Total	1,189	1,182	99.4%

In 2022, SECO replaced 98.8% of identified failed distribution poles and 99.7% as of December 31, 2023 as shown in categorical table below. The remaining two (2) distribution poles are expected to be addressed in 2024 on conductor replacement projects.

Distribution Poles - 2022			
Pole Type and Class	# Failed	# Replaced	% Remediation Complete (As of 12/31/2023)
30-5	2	2	100%
30-6	171	171	100%
35-4	1	1	100%
35-5	43	43	100%
35-6	209	209	100%
40-3	1	1	100%
40-4	2	2	100%
40-5	242	240	99.2%
45-3	8	8	100%
45-4	11	11	100%
45-5	12	12	100%
50-1	1	1	100%
50-2	2	2	100%
50-3	10	10	100%
50-4	5	5	100%
60-3	2	2	100%
Total	722	720	99.7%

SECO completed 100% of identified 2023 distribution pole replacements and remediation as of December 31, 2023 as shown in categorical data table below.

Distribution Poles - 2023			
Pole Type and Class	# Failed	# Replaced	% Remediation Complete (As of 12/31/2023)
27-5	1	1	100%
30-6	31	31	100%
35-5	4	4	100%
35-6	27	27	100%
35-7	1	1	100%
40-5	13	13	100%
45-3	1	1	100%
50-3	1	1	100%
Total	79	79	100%

Vegetation Management

Program Summary

SECO's Vegetation Management program has a two-pronged approach to trimming and removing trees: cycle maintenance and non-cycle maintenance. SECO's long-term cycle maintenance strategy is to be on a three (3) year trimming and tree removal cycle while providing a minimum 10-foot clearance with a desired clearance of 15-feet from distribution conductor. For transmission conductor, the specification is 30-foot clearance.

SECO's non-cycle maintenance tree trimming and removal is reactive in nature. Electrical system expansion, electrical system improvements, problematic danger trees, and member requests generate tree trimming / removal work.

SECO strives to maintain a balance of preserving the urban forest while providing safe and reliable electric service to members. This is accomplished through cycle and non-cycle maintenance trimming and removals. SECO requires all vegetation management contractors to follow ISA Best Management Practices and ANSI A300 Pruning Standards, utilizing directional trimming and proper pruning cuts to encourage regrowth away from the conductors. Adherence to these standards allows trees to remain healthy after pruning, while reducing crown failures that can cause storm-related reliability issues. This attention to protecting the environment is evidenced by SECO being designated as a "Tree Line USA" utility by the Arbor Day Foundation for the seventeenth year in a row.

Policies, Guidelines, Practices, and Procedures

Cycle Maintenance

SECO is currently on a six (6) year trimming and tree removal cycle, clearing approximately 700 miles of overhead lines per year. This includes the pruning or removal of all incompatible (tall growing) species of trees within the utility right-of-way. For all primary distribution pole structures, the minimum clearance specification is 10-feet, while the desired clearance specification is 15-feet. For transmission pole structures, the minimum clearance specification is 30-feet.

SECO uses ISA certified utility arborists to perform all work planning, auditing, and customer notification. SECO issues the work plans to a line-clearing contractor whose work procedures and training certification meet all federal OSHA, ANSI Z133 standards (2015 or later), and State of Florida Safety requirements. SECO's cycle maintenance trimming contractors are primarily compensated on a "per-unit" basis to perform all overhead line clearance work on the SECO system. A unit is defined as a single trimming or removal operation (i.e., a side trim on a tree or a removal; each count as one unit). Unit-based compensation allows SECO to accurately track the type of units and costs associated with the work being performed.

SECO prioritizes its order of cuts annually based on four weighted factors: SECO’s pole inspection cycle, the date last trimmed, the number of members served by each circuit, and the total tree-related outages on each circuit. SECO coordinates its vegetation management program with its pole inspection cycle to improve the overall reliability of circuits and minimize the impact to customers (since tree-trimming, pole inspection, and pole replacement all occur within the same 12-month period).

In 2023, SECO trimmed 651 total circuit miles and removed 27,970 trees from circuit easements, representing 45% of the total 61,653 trees that were addressed for line-clearance issues. The following table is a summary of the vegetation management work completed in 2023:

Description	Measurement
Distribution & Transmission line miles “Cycle Trimmed”	651 miles
Distribution & Transmission line miles “Non-Cycle Trimmed” for system improvement projects	6 miles
Total miles trimmed in 2023 (Distribution & Transmission)	657 miles
Total trees removed in “Cycle Trimming” process	27,970 trees

SECO’s trimming and tree removal specification is a 10-foot minimum clearance for all vegetation and all dying, decaying, or hazard trees with potential to impact the line.

Non-Cycle Maintenance

As stated above, SECO trims and removes trees that are not being addressed by the scheduled maintenance cycle. This is reactive work that supports and augments the cycle maintenance program. Non-cycle tree trimming, and tree removal work is used to provide the necessary clearance for system improvement projects, electrical system expansion projects and where new lines are to be constructed. The intent is to storm-harden the line by removing overhang and vegetation that would present a hazard during inclement weather.

Another important component of the non-cycle maintenance program is “danger tree” removal. A danger or problem tree is defined as a tree inside or outside the normal trim zone that may cause an outage if left untrimmed or is not removed until the next scheduled cycle. SECO continued its danger / hazard tree removal program in 2023. From January 1, 2023 through June 30, 2023, qualified line personnel patrolled every three (3) phase circuit on SECO’s distribution system to identify all diseased, dying, or dead trees that could potentially fall into an energized conductor. SECO removed those trees on a priority basis based on imminent failure capability. All danger trees were removed prior to December 31, 2023. Line personnel also submitted requests for “spot” trimming at locations where they felt that trees would likely cause an outage. This tree trimming work was performed within 90-days of identification.

The third and final component of non-cycle maintenance trimming is response to member-owner tree trimming / removal requests. When a member-owner notifies SECO that there is a potential vegetation encroachment condition, SECO sends an arborist to check on the location and determine if tree trimming and/or tree removal is needed. If it is, the work is scheduled and targeted for completion within 90-days of identification.

Reclamation of Easements

SECO has two types of easements – descriptive and prescriptive. When SECO plans the tree work on a property with a descriptive easement, SECO enforces all conditions contained in the easement, trimming and removing trees within 10-feet for distribution and 30-feet for transmission. SECO uses its bylaws and state regulations to maintain a 10-foot clearance for its prescriptive easements. Furthermore, SECO works with city, county, and state authorities to provide a 10-foot clearance for its utility lines that exist within the road right-of-way.

Tree Replacement

SECO's tree replacement program provides "utility-friendly" trees to customers who allow for the removal of vegetation growing near its conductors. In 2023, SECO purchased 302 trees for members in exchange for these strategic removals.

Environmental Focus

By encouraging healthy growing areas for trees, shrubs, and ground cover, SECO seeks to maintain a favorable balance between urban forest conservation needs and the safety / reliability demands of its electrical system. SECO provides proper tree selection and planting guidelines to member owners and the public through its website, newsletters, and public events. Each year SECO applies to be recognized as a "Tree Line USA" utility by the Arbor Day Foundation. In 2023, SECO received this designation for the seventeenth consecutive year. This recognition is a by-product of SECO's continued commitment to being environmentally responsible.

In keeping with SECO's commitment to environmental sensitivity, SECO only used a broadcast application of herbicide on select, controlled areas of its system in 2023. Herbicide was applied to brush stems after mowing and to tree stumps within 30 minutes of their removal. All applied stump spray contained dye material for ease in identification of treated stumps. The application of herbicide was performed in accordance with local, state, and federal laws, statutes, and regulations. Additionally, SECO maintains an active list of members who do not wish for herbicide to be used on their property due to livestock and/or personal considerations. SECO willingly complies with all these requests.

Program Sufficiency

SECO's long-term objective is to be on a three (3) year trimming and tree removal cycle, aiming to clear just over 1,400 miles of overhead lines per year. SECO is currently on a six (6) year trimming and tree removal cycle, clearing approximately 700 miles of overhead lines per year. In 2024, SECO will be exploring opportunities to incorporate the use of satellite imagery software and artificial intelligence models to optimize its vegetation management program and sharpen its efforts to return to a three (3) year trimming and tree removal cycle. With certified utility arborists planning and auditing the work, adherence to cycle and non-cycle maintenance strategies, continued danger tree patrols, and an environmentally sensitive focus, SECO's Vegetation Management program has been adapted over time to reduce tree-caused outages while providing safe and reliable electric service to its member-owners.