PO Box 301 | Sumterville, Florida 33585-0301 | 352.793.3801

February 28, 2022

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 2021

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 2021.

The report details our storm hardening initiatives as they relate to construction standards, inspection cycles, and vegetation management for calendar year 2021.

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

Sincerely,

Micheal White
Vice President of Engineering
(352)-569-9550

John LaSelva
Vice President of Operations
(352)-569-9530

SECO Energy Report to the Florida Public Service Commission Pursuant to Rule 25-6.0343, F.A.C. Calendar Year 2021

1. Introduction

SECO Energy
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2. Number of meters served in calendar year 2021

222,054 active meters were served by SECO Energy (SECO) in calendar year 2021 as of December 31, 2021.

3. Standards of Construction

Distribution Facilities

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 2021, SECO added 145 miles to its distribution system, of which 97.9% 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.

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 constructed prior to February 1, 2017 are governed by the edition of the NESC that was in effect at the time of the facility's initial construction. However, for electrical facilities constructed on or after February 1, 2017, the 2017 NESC (C2-2017) applies.

Extreme Wind Loading Standards

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

Flooding and Storm Surges

Not part of Calendar Year 2021 report. To be included in Calendar Year 2023 report, per Rule 25-6.0343 F.A.C. amended 12-10-2020.

Safe and Efficient Access of New and Replacement Distribution Facilities

Not part of Calendar Year 2021 report. To be included in Calendar Year 2023 report, per Rule 25-6.0343 F.A.C. amended 12-10-2020.

Attachments by Others

Not part of Calendar Year 2021 report. To be included in Calendar Year 2023 report, per Rule 25-6.0343 F.A.C. amended 12-10-2020.

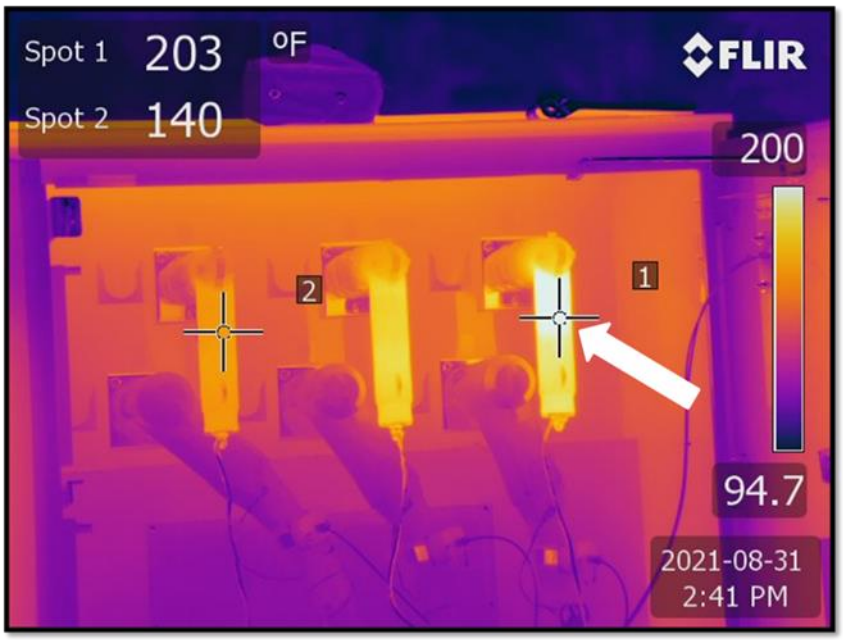
4. Facility Inspections

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 inspects its transmission facilities, substation facilities, and distribution facilities on regular cycles to maintain a safe and reliable electrical system. The transmission facilities are of utmost importance because they serve the majority of members per line. In 2010, SECO implemented a policy to complete ground-line inspections of all transmission facilities on a five-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 allows for longer span lengths and requires fewer poles.

SECO performs annual visual and infrared inspections for SECO and Seminole Electric Cooperative (SECI) owned transmission lines. SECO conducts visual and thermographic inspections at every substation monthly. This method helps to quickly diagnose and resolve issues, thereby preventing potential substation outages to thousands of members.

As illustrated by the following infrared photo of a lightning arrester mounted in an underground switchgear cabinet, 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.



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 27 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 28 years. This is in accordance with PSC Docket 140082-EI 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 16,981 distribution poles for the 2021 inspection cycle. This represented 12.4% of the distribution poles on the SECO electrical system. There were 1,189 distribution poles identified during the inspection process that required remediation or replacement. This represented a failure rate of approximately 7%. In

addition, the inspection process identified maintenance needed at 2,310 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 2021 cycle year.

Year	System	# of Structures – Planned Inspections	% of Total Structures	# of Structures – Actual Inspected	% Complete vs. Planned
2021	Transmission	0	0%	0	- -
2021	Distribution Overhead	17,079	12.5%	16,981	99.4%

c. Describe the number and percentage of transmission poles and structures and distribution poles failing inspection for the 2021 cycle year and the reason for the failure.

Year	System	# Failed	% Failed	Cause
2021	Transmission	0	0%	Ground Rot
2021	Transmission	0	0%	Top Deterioration
2021	Distribution	132	0.8%	Ground Rot
2021	Distribution	1,057	6.2%	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 2021, including a description of the remediation taken.

Transmission

As of 2021, all transmission line structures have been replaced with spun-concrete poles except for the Big Creek transmission line which comprises of 67 wood poles. The Big Creek transmission line is scheduled for upgrade to spun-concrete poles and relocation in 2023 or 2024.

Distribution

In 2019, significant SECO construction resources were displaced to assist with storm restoration activities after Hurricane Barry and the Texas tornadoes of October 2019. The displacement of resources created sufficient construction delays such that as of December 31, 2019 remediation had not been completed for 225 poles. SECO completed 98.8% of the distribution pole replacements and remediation as of December 31, 2020. The remaining 21 distribution poles were replaced in 2021 in conjunction with a road widening project due to the need to accommodate the new roadway width and identify the areas of no conflict within the of construction zone. SECO completed 100% of the

distribution pole replacements and remediation as of December 31, 2021 as shown in categorical data table below.

Distribution Poles - 2019			
Pole Type and Class	**# Failed**	**# Replaced**	**% Remediation Complete (As of 12/31/2021)**
25-7	1	1	100%
30-5	1	1	100%
30-6	392	392	100%
35-4	1	1	100%
35-5	51	51	100%
35-6	657	657	100%
40-1	1	1	100%
40-4	10	10	100%
40-5	533	533	100%
40-6	1	1	100%
45-3	20	20	100%
45-4	25	25	100%
45-5	11	11	100%
50-2	1	1	100%
50-4	1	1	100%
55-1	1	1	100%
Total	**1,707**	**1,707**	100%

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. SECO completed 98.8% of the distribution pole replacements and remediation as of December 31, 2021. The remaining 14 distribution poles will be replaced in 2022 in conjunction with planned voltage conversion and conductor upgrade projects.

Distribution Poles - 2020			
Pole Type and Class	**# Failed**	**# Replaced**	**% Remediation Complete (As of 12/31/2021)**
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	416	97.9%
40-3	1	1	100%

Distribution Poles – 2020 (cont.)			
Pole Type and Class	**# Failed**	**# Replaced**	**% Remediation Complete (As of 12/31/2021)**
40-4	4	4	100%
40-5	456	451	98.9%
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**	**1,178**	**98.8%**

The following numbers shown in the categorical data below represent the remediation taken by SECO during 2021. SECO completed 98.8% of the distribution pole replacements and remediation as of December 31, 2021. The remaining 8 distribution poles will be addressed in 2022 in conjunction with planned conductor upgrade projects.

Distribution Poles - 2021			
Pole Type and Class	**# Failed**	**# Replaced**	**% Remediation Complete (As of 12/31/2021)**
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	4	80.0%
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**	**1,181**	**98.8%**

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 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-feet 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 fifteenth year in a row.

Policies, Guidelines, Practices, and Procedures

Cycle Maintenance

SECO's objective is to be on a three (3) year trimming and tree removal cycle. This means that SECO aims to clear approximately 1,500 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 cut 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 2021, SECO trimmed 531 total circuit miles and removed 50,549 trees from circuit easements, representing 61% of the total 82,754 trees that were addressed for line-clearance issues. The following table is a summary of the vegetation management work completed in 2021:

Description	Measurement
Distribution & Transmission line miles "Cycle Trimmed"	531 miles
Distribution & Transmission line miles "Non-Cycle Trimmed" for system improvement projects	13 miles
Total miles trimmed in 2021 (Distribution & Transmission)	544 miles
Total trees removed in "Cycle Trimming" process	50,549 trees

Over the past five (5) years, SECO has been unable to maintain a three (3) year trimming and tree removal cycle. This has primarily been due to a lack of contractor resources, financial constraints, and hurricane support / disaster recovery efforts. The following table contains a breakdown of SECO's target versus actual miles for the past five (5) years:

Year	Target Miles	Actual Miles
2017	1,500	966
2018	1,500	492
2019	550	470
2020	767	412
2021	740	531

Impact of COVID and Associated Financial Constraints

A shortage of available contract labor negatively impacted SECO's ability to meet unit and mileage completion targets in 2021. Although SECO targeted the completion of 740 miles for tree trimming and removals in 2021, SECO's primary vegetation management contractor was unable to align their production and staffing to meet unit targets, as the COVID pandemic continued to impact the United States and SECO's service area.

Based on a cost analysis performed prior to the bidding process in late 2020, SECO realized the need to consider additional contractors compensated at an hourly rate to augment its unit-based cycle maintenance program. In late 2020, SECO awarded contracts to two (2) additional contractors to improve prospects leading into 2021. This did help to increase the

total units addressed for line-clearance issues on SECO's system in 2021 by 24% and the cycle-trimmed distribution miles by 29% from the previous year. However, due to the continued increase in tree removals per mile, SECO was unable to meet its three (3) year trimming and tree removal cycle objective of clearing 1,500 miles of overhead lines per year.

In late 2018, clarifications were made to SECO's desired clearance specification that increased the number of units per mile as well as associated tree removals. The average units per mile in 2019 and 2020 increased by 130% over the average trimmed in the 10 years prior (2008-2017). The average number of removals per mile in 2019 and 2020 skyrocketed by 514% over the preceding 10-year average (2008-2017). While tree removals are a one-time cost that dramatically improve electrical system reliability, this substantial increase in 2019 that continued into 2020 slowed down the progression of cycle maintenance and financially constrained SECO's ability to achieve its desired mileage target. In 2021, SECO had planned to modify its maintenance cycle approach by pursuing trimming in place of large removals where at all possible without negatively impacting reliability. Unfortunately, this did not effectively occur, as removals continued to encompass 61% of all trees addressed on SECO's system in 2021 (a 2% reduction in removal rate from 2020).

In December 2021, SECO's Vegetation Management team devised a plan to effectively alter clearance specifications and thereby reduce the tree removal rate while increasing the total cycle maintenance mileage for 2022. A primary feature of this new plan is to mow at least one-third of the 1,500 miles ahead of cycle maintenance planning to "clear the floor" of all brush and trees that grow 4-10 inches in diameter at breast height ("dbh") within 10-feet from each side of pole or outside conductor. SECO will still be seeking a 10-foot minimum clearance for all brush, all vegetation 4-10-inches dbh, all "fast-growing" species, and all dying, decaying, or hazard trees with potential to impact the line. Everything else will be trimmed to a minimum 8-feet clearance or 4-years growth. Additionally, the specification to clear 60-feet from the ground was adjusted to 15-feet above the pole. This should reduce the number of large removals that are typically outside the trim zone, but overhang is within 60-feet.

Rather than aim for a "system-wide" three (3) year trimming and tree removal cycle, SECO is now targeting a four (4) year cycle until the tree removal rate drops. SECO's total cycle maintenance mileage goal for 2022 will be 1,500 miles.

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 2021. From January 1, 2021 through June 30, 2021, 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, 2021. 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 2021, SECO purchased 940 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 2021, SECO received this designation for the fifteenth 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 did not use a broadcast application of herbicide on its system in 2021. Herbicide was only applied to brush stems and 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 Vegetation Management program is evaluated on three (3) factors: trimming and removal specifications, capability of the plan to meet those specifications, and execution of the plan to trim and remove trees according to specifications. Based on ISA Best Management Practices and ANSI A300 Pruning Standards, SECO's trimming clearance and removal specifications have long been considered world-class but needed to be reined in to achieve its three (3) year trimming and tree removal cycle objective of clearing 1,500 miles of overhead lines per year. SECO's plan to follow those specifications is first-rate. With certified utility arborists planning and auditing the work, a dual-core emphasis on cycle and non-cycle maintenance strategies, and an environmentally sensitive focus, SECO's plan is fully capable of adhering to its specifications.

In 2021, SECO faced many obstacles affecting its ability to carry out the plan, the most significant of which was a shortage of contract personnel due to the COVID pandemic and storm restoration assistance. In 2021, SECO will endeavor to achieve a four (4) year trimming and tree removal cycle until the tree removal rate drops. Cycle trimming, danger tree patrols, and non-cycle work processes all serve to reduce SECO's tree-caused outages while providing safe and reliable electric service to its member-owners.