

Kissimmee Utility Authority (KUA)
Report to the Florida Public Service Commission Pursuant to
Rule 25-6.0343, F.A.C.
Calendar Year 2021

1. Introduction

This report is filed in response to the above referenced rule for:

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2. Number of meters served in calendar year 2021

During calendar year 2021, KUA served an average of 85,950 meters

3. 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.**

KUA has a comprehensive inspection program for transmission and distribution lines, poles and structures. KUA outsources the pole inspection program to an experienced pole inspection company. Inspections utilize a sound and bore method for all wood poles. The base of the pole is exposed to 18 inches (where feasible) below ground line to inspect for indications of decay. All decay will be removed where possible, from 18 inches below ground line to 3 inches above ground line. If any voids of internal decay pockets are found, a preservative is applied. Internal pole treatment utilizing MITC-Fume fumigant is also applied where necessary. During the pole inspection, visual inspections are also performed to identify problem areas such as cracks, splitting, woodpecker damage, obvious decay, missing ground wire molding, ground wire repair and missing guy guards. Rejected poles are classified as “priority” and “non-priority” rejects. Priority rejects are replaced immediately. Non-priority rejects are scheduled to be replaced as soon as possible. All inspection/treatment and follow up remediation is documented and tracked in a facility inspection database and through the GIS system.

KUA’s inspection guidelines, practices and procedures are summarized as follows:

Transmission System:

KUA's current guidelines, practices and procedures include inspection of all wood transmission poles every 3 years. The pole inspection process includes sound and bore and ground-line excavation and treatment.

During the pole inspection process, facilities are also visually inspected for any signs of broken grounds, broken or damaged guy wire, missing guy wire covers and other problems that can be seen via a visual inspection. Infrared scans are also conducted 3 times a year on all substation transmission facilities that are part of the Bulk Electric System (BES) as defined by NERC. Infrared scans are conducted 2 times a year on substation transmission facilities that are not part of the BES. Vegetation inspections of all transmission lines are conducted on an annual basis. During this process, visual inspections of transmission circuits are conducted for potential problem areas.

Distribution System:

KUA currently targets for the inspection of all wood distribution poles on an eight-year cycle. KUA currently outsources pole inspections to an experienced contractor. Pole inspections include sound and bore and ground-line excavation and treatment. During pole inspections, facilities are also inspected for problems such as missing grounds, broken guy wires, missing guy guards and other problems that can be spotted via visual inspection.

Infrared scanning of all main distribution feeders is conducted on an annual basis. Scans of major feeder equipment (main riser poles, main bridging switches, select pad mount switching equipment) are conducted 2 times a year. Infrared technology assists in locating potential problem areas such as bad connectors, bad insulators and other potential faulty or failing equipment. The scanning process also provides for visual contact with all distribution feeders on an annual basis. KUA also currently targets a more thorough visual inspection of all distribution facilities on a five-year cycle. Outage data for all distribution feeders is also evaluated on a regular basis. Detailed component by component inspections are conducted on feeders experiencing higher than normal outage incidents.

b) Describe the number and percentage of transmission and distribution inspections planned and completed for 2021.

Transmission

KUA conducts inspection of transmission poles every 3 years. In 2020, all wood transmission poles were inspected. Visual inspection of all transmission circuits are conducted semi-annually during transmission vegetation management inspections. All of KUA's transmission circuits were inspected through this process during 2021. These inspections look for problem areas such as clearance issues, broken or tracking insulators, broke grounds, woodpecker holes, etc.

Distribution

KUA targets inspection of distribution poles on an eight-year cycle. KUA is currently on target to meet its targeted eight-year cycle. A total of 1663 distribution poles were actually inspected during calendar year 2021. During the pole inspection process, the pole is also inspected for obvious maintenance issues such as damaged grounds, missing guy guards, slack guys, vegetation issues, attachment issues, etc.

The distribution system visual inspection is also performed on an eight-year cycle. KUA's distribution system currently consists of approximately 1095.87 miles of distribution circuits.

Activity	Qty. Planned	Percentage Planned	Qty. Completed	Percentage Completed
Pole Inspections	1,800	12.7%	1663	11.79%

- c) **Describe the number and percentage of transmission poles and structures and distribution poles failing inspection in 2021 and the reason for the failure.**

Transmission:

KUA conducts inspection of transmission poles every 3 years. Transmission pole inspections were performed in 2021. Visual inspections did not identify any new failures.

Distribution:

Of the 1663 distribution poles that were inspected, 3 were classified as rejects. Reason for failures are given below. The rejected poles were not classified as a priority reject requiring immediate action.

Reason for Failure	Number of Failures	Percentage of Inspected
Mechanical Damage	0	0.0%
Decayed Top	1	0.06%
Exposed Pocket	0	0.0%
Shell Rot	1	0.06%
Enclosed Pocket	0	0.0%
Woodpecker Holes	1	0.06%
TOTAL	3	0.18%

- 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.**

General

KUA pole inspections are typically conducted during the first quarter of the calendar year. Any required remediation, except for priority rejects, is typically completed during the calendar year or as dictated by system constraints.

Transmission:

Transmission poles were found to not require remediation during the 2021 inspection cycle.

Distribution:

The 2021 inspection resulted in 3 poles failing inspection. The poles have been scheduled for replacement. A summary of the size, class, species and treatment for the replaced pole is shown below:

Distribution Pole Remediation

Length	Class	Species	Treatment	Qty.	Remediation
35	5	South. Pine	CCA Type C	1	Pole #5911 - Scheduled for Replacement
55	3	South. Pine	CCA Type C	1	Pole #17971 - Scheduled for Replacement
35	3	South. Pine	CCA Type C	1	Pole #17971 - Scheduled for Replacement
Totals				3	

4. 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.**

All KUA construction is planned in order to ensure adequate right-of-way widths are obtained. KUA only constructs new distribution circuits on front lots and the majority of new distribution lines are constructed with dedicated utility easements. This helps to minimize the planting of vegetation near electric infrastructure. Thirdly, local ordinances dictate that all new distribution construction be constructed underground. While KUA believes our vegetation management program is sufficient, we also recognize that vegetation management is an ongoing process and improvements can be made with the ability to gather and analyze data. We continue to implement improvements in the electronic and graphical tracking of vegetation management in order to facilitate the oversight of the program.

Transmission

KUA has a written Transmission Vegetation Management Plan (TVMP) that details our policies, procedures and practices for transmission line vegetation management. KUA’s TVMP has been found to be in full compliance with the applicable North American Electric Reliability Corporation (NERC) reliability standards.

KUA’s TVMPP calls for an annual inspection of all transmission lines for potential vegetation problems. However, in practice an inspection is performed on a semi-annual basis. Any problem areas identified during this inspection are scheduled for remediation based on the severity of the problem. A vegetation work plan is prepared as a result of the inspection. The work plan identifies the location, type and scheduled date for any required remediation. Inspection and remediation is planned each year in order to complete any required work prior to the next hurricane season.

Distribution

KUA guidelines currently target a vegetation inspection/trim cycle on the overhead distribution system on a three-year cycle. This anticipates an average annual growth of 2.5 feet. Vegetation near distribution facilities are trimmed to maintain a minimum of 10 feet clearance for energized conductors. In addition, we utilize our outage analysis system to categorize outages, including those attributable to vegetation. Analysis of this data is also performed to target potential problem areas. We have recently converted the contract with our vegetation management contractor to a line-mile basis. This requires the contractor to inspect trim (if necessary) 33% of our distribution circuits annually.

- b) Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities in 2021.**

Transmission

During calendar year 2021, vegetation inspections were performed on all transmission circuits. All required remediation identified during the inspection was also completed during 2021.

Distribution

During calendar year 2021, our goal of a three-year cycle for inspection/trimming of the distribution system was accomplished. We target 33.3% (102 miles) of circuits per year. During 2021 we inspected/trimmed 33.2% (101.6 miles) of distribution circuits.