

Utilities Commission, City of New Smyrna Beach
Storm Hardening Report to the Florida Public Service
Commission Pursuant to Rule 25-6.0343, F.A.C.
Calendar Year 2019

1) Introduction

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The Utilities Commission, City of New Smyrna Beach (UCNSB) served an average of 29,400 customers during 2019 calendar year.

2) Standards of Construction

a) National Electric Safety Code Compliance

The UCNSB engineering and construction standards, policies, guidelines, practices, and procedures comply with the with the current versions of the National Electrical Safety Code (NESC) ANSI C-2 standards applicable at the time of facility design and installation. The Utilities Commission City of New Smyrna Beach practice is to adopt the latest revision of the NESC standards.

b) Extreme Wind Loading Standards

The UCNSB construction standards, policies, guidelines, practices, and procedures are guided by the extreme wind loading standards specified by latest edition of the NESC standard for new construction, and expansion, rebuild, and relocation of existing facilities, effective as of December 10, 2006.

The UCNSB is also participating in the Public Utility Research Center's (PURC) granular wind research study through the Florida Municipal Electric Association.

c) Flooding and Storm Surges

The UCNSB construction standards, policies, guidelines, practices, and procedures are constantly being monitored to ensure the UC is applying industry hardening standards for flooding and storm surges.

The UCNSB standard for pad-mounted transformers is a stainless steel dead front pad-mounted style transformer. In addition, our new standard for switchgear is a sealed steel dead front pad-mounted switchgear.

The UCNSB is also participating in the Public Utility Research Center's (PURC) study on the conversion of overhead electric facilities to underground and the effectiveness of underground facilities in preventing storm damages and outages through the Florida Municipal Electric Association. New construction projects within the New Smyrna Beach city limits install conductor in conduit to reduce storm exposure and impacts.

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

The UCNSB design and construction standards, policies, guidelines, practices, and procedures provide for placement of new and replacement distribution facilities to facilitate safe and efficient access for installation and maintenance activities.

Whenever possible, easements are secured from private property owners for the installation of new and/or relocated facilities. If easements are not secured, facilities are installed in the public right of ways. The UCNSB standard installation of new underground facilities is cable in conduit with stainless steel transformers and switchgear. Areas with existing underground facilities that require upgrades are installed using current underground design standards which includes installing cables in conduit to mitigate the effects of soil erosion and reduce mechanical damage to conductors.

e) Attachments by Others

The UCNSB has existing pole attachment agreements with joint users. We have enforced the latest NESC guidelines for all new attachment's requests. Distribution pole stress calculations are reviewed and if attachments are found to trigger an overload situation, the existing facilities, facilities are upgraded or the project reengineered.

The UCNSB has revised our attachment agreements to include written safety, pole reliability, pole loading capacity, and engineering standards and procedures for attachments by others to the utility's electric distribution poles. Joint use attachments are not permitted on transmission poles.

4. Facility Inspections

Policies, guidelines, practices, and procedures are utilized for inspecting transmission and distribution lines, poles, and structures.

The UCNSB contracts with Osmose Utility Services to inspect all transmission and distribution poles and structures as part of an eight-year inspection program.

In addition, transmission and distribution facilities are inspected as part of our regular inspection and maintenance programs. Deficiencies are recorded and corrective maintenance plans are scheduled for repair or replacement of defective items.

- a) Number and percentage of transmission and distribution inspections planned and completed for 2019

The Utilities Commission, City of New Smyrna Beach has approximately 420 transmission poles.

- In 2019 – 0% of transmission poles were inspected.
 - Osmose Utility Services completed inspection of 100% of the UCNSB transmission poles in 2012.
 - Osmose Utility Services completed inspection of 18% of the UCNSB transmission poles in 2017.
- The UCNSB is in the process of a significant upgrade and facilities additions at Smyrna Substation. As part of the substation upgrade approximately 38 of our 76 Field Street wood transmission poles will be replaced with spun concrete poles in 2021 and 2022 including the addition of 3-way transmission tie switch for reliability purposes.

The UCNSB has approximately 12,000 distribution poles. In 2019, the annual Osmose Utility Services inspection included 1,500 distribution poles, approximately 12.5 % of our distribution system.

- b) Number and percentage of transmission poles and structures and distribution poles failing inspection and the reason for the failure.

- Osmose Utility Services Inspections of all UCNSB transmission poles were completed in 2012 & 2017
- The next inspection cycle is scheduled to begin in March 2020.

- c) 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.

Transmission: None in 2019

Distribution: For 2019, please see Attachment B

5. Vegetation Management

- a) 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.

The UCNSB has an on-going vegetation management program. The UCNSB contracts with Davy Tree to complete our vegetation management plans. Davy has five full time crews continuously trimming trees and reducing vegetative growth throughout the UCNSB system.

The crew's trim feeder mains per the UC schedule and "hot spot" trimming, as required. The UCNSB is currently in the process of reviewing our vegetation management plan to incorporate current industry standard practices and will be re-bidding our services contract with an update vegetation management plan in June 2019.

The UCNSB tree trimming records indicate that during 2019 approximately 50% of our distribution system was trimmed. In addition, 100% of the annual mowing of transmission line rights-of-way was completed.

- b) Quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities.

See response to 5a above.

6. Storm Hardening Research

The Utilities Commission, City of New Smyrna Beach is a member of the Florida Municipal Electric Association (FMEA), which is participating with Florida's electric utilities in storm hardening research through the Public Utility Research Center at the University of Florida. Under separate cover, FMEA is providing the FPSC with a report of research activities. For further information, contact Amy Zubaly, Executive Director, FMEA, at 850-224-3314, or azubaly@publicpower.com.

Attachment B

Distribution Poles

Distribution Poles inspected: 1500

Rejected Distribution Poles: 106 Percent of Total: 7.1%

Rejected Due to Decay:

30' CI 6:	
30' CI4:	26
3S' CIS:	16
3S' CI4:	
40' CIS:	
40' CI4:	31
4S' CI4:	5
4S' CI 3:	
SO' CI3:	
SO' CI2:	4
SS' CI2:	5
60' CI2:	
60' CI 1:	
6S' CI 1:	
TOTAL:	87

Rejected Due to Split Tops:

30' CI 6:	
30' CI4:	9
3S' CIS:	3
3S' CI4:	
40' CIS:	
40' CI4:	4
4S' CI4:	2
4S' CI 3:	
SO' CI3:	
SO' CI2:	
SS' CI 2:	
60' CI2:	
60' CI 1:	
6S' CI 1:	
TOTAL:	18

Rejected Due to Woodpecker Damage:

30' CI 6:	
30' CIS:	
3S' CIS:	
3S' CI4:	
40' CIS:	
40' CI4:	1
4S' CI4:	
4S' CI3:	
SO' CI3:	
SO' CI2:	
SS' CI2:	
60' CI2:	
60' CI 1:	
6S' CI 1:	
TOTAL:	1

Replaced/Repaired Poles:

30' CI4:	24
30' CI3:	24
3S' CI4:	11
3S' CI3:	7
40' CI4:	46
40' CI3:	21
4S' CI3:	4
4S' CI 2:	3
SO' CI3:	
SO' CI2:	1
SS' CI2:	2
60' CI2:	
60' CI 1:	
6S' CI 1:	
TOTAL:	143

Poles Restored W/ C Truss:

30' CI 6:	
30' CIS:	
3S' CIS:	
3S' CI4:	
40' CIS:	
40' CI4:	
4S' CI4:	
4S' CI3:	
SO' CI3:	
SO' CI2:	
SS' CI 2:	
60' CI 2:	
60' CI 1:	
6S' CI 1:	
TOTAL:	0

Repaired Woodpecker Damage:

30' CI6:	
30' CIS:	
3S' CIS:	
3S' CI4:	
40' CIS:	
40' CI4:	
4S' CI4:	
4S' CI3:	
SO' CI3:	
SO' CI2:	
SS' CI2:	
60' CI2:	3
60' CI 1:	
6S' CI 1:	
TOTAL:	3

2 x 7SH Transmission Poles with 2 x Composite H Poles =
Total 2 Customer growth has impacted pole replacement
schedule.