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February 10, 2016

**Tom Ballinger, Director
Division of Engineering
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850**

Dear Mr. Ballinger,

Enclosed is the City of Vero Beach System Hardening Report pursuant to rule 25-6.0343, F.A.C. for 2015. I have also attached a spreadsheet listing the poles that were replaced. If you have any questions, please contact me.

Sincerely,

Ted Fletcher
Director, Electric Utility Operations
Email: tfletcher@covb.org

**City of Vero Beach
System Hardening Report to the Florida Public Service
Commission Pursuant to Rule 25-6.0343, F.A.C.
Calendar Year 2015**

1) Introduction

- a) City of Vero Beach
- b) 3455 Airport Dr. West
P.O. Box 1389
Vero Beach, FL 32961-1389
- c) Contact information: Name, title, phone, fax, email
Ted Fletcher
Director, Electric Utility Operations
Phone: 772-978-5466
Fax: 772-770-2230
Email: tfletcher@covb.org

2) Number of customers served in calendar year 2015

Accounts:

Residential – 28,802
Commercial – 5,737
Industrial – 1

Total	34,540
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There are also 502 Outdoor unmetered lighting accounts.

3) Standards of Construction

a) National Electric Safety Code Compliance

Construction standards, policies, guidelines, practices, and procedures at the City of Vero Beach comply with the applicable version of the National Electrical Safety Code at the time of construction.

b) Extreme Wind Loading Standards

The City of Vero Beach designs all facilities in accordance with the extreme loading criteria as defined in the NESC.

c) Flooding and Storm Surges

Electrical construction standards, policies, guidelines, practices, and procedures at the City of Vero Beach address the effects of flooding and storm surges on underground distribution facilities and supporting overhead facilities. All facilities are installed a minimum of 8 inches above the roadway and grading is required to prevent erosion.

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

Electrical construction standards, policies, guidelines, practices, and procedures at the City of Vero Beach provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance. All new facilities are installed on the roadway for easy access. Right-of-ways are maintained to existing overhead back lot lines as much as possible. Overhead back lot lines are replaced by underground lines in high-risk areas. Remote control equipment is also available for hard to reach areas.

e) Attachments by Others

Electrical construction standards, policies, guidelines, practices, and procedures at the City of Vero Beach include written safety, pole reliability, and pole loading capacity, and engineering standards and procedures for attachments by others to the utility's electric transmission and distribution poles. They use, number, size, elevation of attachment and wind loading are all taken into consideration when determining the strength of the pole.

4. Facility Inspections

- a) Policies, guidelines, practice, and procedures for inspecting transmission and distribution lines, poles, and structures.
- The City of Vero Beach has 41.5 miles of transmission lines that are mostly on road or canal right-of-way. The transmission lines are driven and visually inspected once every 2 to 3 months.

A complete inventory of the electric system was taken in 2009. The results of the inventory showed that the overhead distribution system is made up of approximately 10,600 electric utility poles. The count showed that approximately 2,900 of the poles are owned by AT&T/Bellsouth with the City of Vero Beach owning the rest. The poles are inspected once every 5 years. Plans are to inspect 2,000 to 2,500 poles per year. Last year all of the AT&T/Bellsouth poles were inspected by an outside firm contracted by AT&T/Bellsouth. The City of Vero Beach contracts a four-person line crew to inspect and repair or replace anything that doesn't meet current NESC standards including poles and hardware. The crew is given a GIS map printout with instructions to inspect everything in the map area. The condition of the poles and equipment is marked on the map including the estimated life expectancy of the poles not failing inspection. The poles are inspected using the sound and bore method with some excavation. Normally the poles are sounded and bored at ground line unless the pole is over 20 years old or looks weathered, then some excavation around the pole is performed for further inspection. All poles and equipment failing inspection are replaced within two weeks. AT&T/Bellsouth is notified when one of their poles fails inspection and they usually replace them within 90 days.

- b) Number and percentage of transmission and distribution inspections planned and completed for 2015.
- The transmission system was inspected once in 2015 with no poles failing inspection. We currently have approximately 700 square concrete, 65 steel, 125-spun concrete, 65 wooden, and 5 round hybrid concrete/steel poles. Any additions or replacements will be either spun concrete or round hybrid poles.

The City of Vero Beach initiated an inspection program of the electric system in September 2006. Prior to this date complete records were not kept. In 2015 approximately 12.5% (1320 poles) of the distribution system had been inspected and repairs made. The entire system will be inspected and repairs made within 8 years.

- c) Describe the number and percentage of transmission poles and structures and distribution poles failing inspection and the reason for the failure.
- There were no transmission pole or structure failures in 2015. Three square concrete poles were found to have a vertical hairline crack at the base in a 2008. An outside contractor inspected the poles and determined that the cracks were not due to wind or load stress but possibly from lightning. All three poles were repaired in 2009.
 - 1320 distribution poles were inspected with 15 failures or 0.5%. There were no poles replaced by AT&T/Bellsouth due to ground rot. Sixteen poles were replaced by the City of Vero Beach, of which 17 were from ground rot, and none were hit by a vehicle.
- 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, including a description of the remediation taken.
- There were no transmission poles or structure failures in 2015.
 - The distribution system needed 54 wood poles replaced that failed inspection using both The City of Vero Beach labor and contracted labor. Most of the poles were class 4

5. Vegetation Management

- a) The City of Vero Beach has always attempted to maintain a three-year vegetation management cycle. In December 2004 the City adopted the Tree Line USA approach to trimming trees. Now when tree limbs get within 3 feet of the neutral or 5 feet of the primary it is cut back to the trunk or main limb. This usually leaves about a 10 feet clearance after initial trimming. The City has also started topping trees that are in the right-of-way at the customer's request in an effort to help them remove the trees. With this trimming policy the City has been able to maintain proper clearance with two 3-man crews. In 2015 the dispatch center received approximately 8 calls per week from customers requesting tree trimming.
- b) Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities.

- The City of Vero Beach has approximately 40 square miles of service territory. This territory is broken down into a grid system of 60 blocks of equal size. The tree crews are given one block to trim at a time and this block is mark off as it is completed. The goal is to complete all 60 blocks every three years. We also have our transmission lines mowed every six months.