

City of Bartow
Storm Hardening Report to the Florida Public Service Commission Pursuant
to Rule 25-6.0343, F.A.C.
Calendar Year 2017

1) Introduction

- a) Name of city/utility

City of Bartow

- b) Address, street, city, zip

450 North Wilson Avenue, Bartow, FL 33830

- c) Contact information: Name, title, phone, fax, email

Roger Murphy
Engineer Technician of Electric Utilities
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Email: rmurphy.electric@cityofbartow.net

2) Number of meters served in calendar year 2017

12,002

3) Standards of Construction

a) National Electric Safety Code Compliance

Construction standards, policies, guidelines, practices, and procedures at the City of Bartow currently comply with the National Electric Safety Code (ANSI C-2) [NESC]. The City of Bartow's distribution standards were updated and made effective June 1, 2008. For electrical facilities constructed on or after September 1, 2016, the 2017 NESC applies. Electrical facilities constructed prior to September 1, 2016, were built to comply with prior editions of the NESC.

b) Extreme Wind Loading Standards

Construction standards, policies, guidelines, practices, and procedures at the City of Bartow are currently guided by the extreme wind loading standards as specified in the 2017 edition of the NESC for new construction. The City of Bartow lies within the 100-110 mph region. Wind loading standards for this region were included in the City's 2008 standards update.

c) Flooding and Storm Surges

We are not located in a coastal area. Flooding and Storm surges do not apply to the City of Bartow.

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

Electrical construction standards, policies, guidelines, practices, and procedures at the City of Bartow provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance. Wherever new facilities are placed (i.e. front, back or side of property), all facilities are installed so that City of Bartow's facilities are accessible by its crews and vehicles to ensure proper maintenance/repair is performed as expeditiously and safely as possible. We decide on a case-by-case basis whether existing facilities need to be relocated. If it is determined that facilities need to be relocated, they will be placed in the safest, most accessible area available.

e. Attachments by Others

Currently, we have attachment agreements with the local telephone and cable providers. These agreements require that any new attachments or changes to existing attachments will be designed and executed per the NESC code in force at the time the attachment is made. We follow up the attachments with quarterly inspections required by the PSC and make corrections as necessary.

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 pole selection process.

In 2008 the City of Bartow developed a policy to inspect our facilities based on an eight year cycle. We chose to elicit the help of a contractor to perform pole inspections on a percentage of our utility system. The contractor we have chosen has many years of experience in pole inspections. Each year, said contractor will receive a grouping of facilities based on age determined via the City's facility database. All facilities initially receive a visual inspection with notes made of any problems discovered. Tests are also done to identify shell rot and insect infestation. The facilities are then excavated to a depth of 18 inches while measurements are made to determine the strength remaining. All facilities passing the visual inspection and having 40 percent or greater strength remaining are treated with a life extending process and reported so. Any facilities not meeting these criteria are noted in the report for further action.

In 2016 the City began round two of our eight year pole inspection cycle and elected to perform pole inspections every other year for the years to follow, therefore, in 2017 the City did not complete any pole inspections.

b) Describe the number and percentage of transmission and distribution inspections planned and completed for 2017.

As mentioned in part a, the City did not plan or complete any pole inspections for the 2017 calendar year. Instead, the City chose to use said contractor to do pole bracing on qualifying poles inspected in 2016 to extend the life of the poles while reducing the cost to the City. Pole inspections will proceed in 2018 following with pole bracing in 2019.

c) Describe the number and percentage of transmission poles and structures and distribution poles failing inspection in 2017 and the reason for the failure.

No inspections were completed in 2017.

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 2017, including a description of the remediation taken.

Please see the attached spreadsheet listing pole type, class, and remediation method.

5. 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.

We are currently on a 4 year tree trimming cycle. We trim out our distribution at a 6-10 foot clearance depending on the situation and type of vegetation. We have a licensed arborist on staff and currently use such practices as basal bark treatment, foliage treatment, cut-stump treatment, & herbicide application along with our regular trimming. We remove problem trees when deemed necessary by our crews or when the history of the tree reveals problems. Our reliability analysis indicates that our vegetation management practices are effective.

b) Describe the quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities in 2017.

We feel that a 4 year trimming cycle is effective for reliability purposes. We are currently contracting additional line clearance personnel to keep us on a 4 year cycle. This along with other vegetation management practices mentioned in 5a are and will be effective in offering great reliability to our customers for now and for years to come. Also, the Public Utility Research Center held two vegetation management workshops in 2007 & 2009. Through FMEA, the City of Bartow has a copy of their reports and will use the

information to continually improve vegetation management practices. We will participate in future best-practice workshops if there is interest.

6. Storm Hardening Research

The City of Bartow is a member of the Florida Municipal Electric Association (FMEA), which is participating with all of 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, Interim Executive Director, FMEA, 850-224-3314, ext. 7, or azubaly@publicpower.com.

City of Bartow Pole Replacement Report

Poles Replaced - Calendar Year 2017

Facility ID	Pole Length/Class	Pole Type	Remediation
7473	30-5	Southern Pine	Replaced
7647	30-5	Southern Pine	Replaced
7583	30-5	Southern Pine	Replaced
6783	30-5	Southern Pine	Replaced
1505	35-5	Southern Pine	Replaced
9076	40-5	Southern Pine	Replaced
2087	40-5	Southern Pine	Replaced
2088	40-5	Southern Pine	Replaced
7582	40-5	Southern Pine	Replaced
3832	40-5	Southern Pine	Replaced
2119	40-5	Southern Pine	Replaced
7718	40-5	Southern Pine	Replaced
6784	40-5	Southern Pine	Replaced
5428	45-4	Southern Pine	Replaced
238	45-4	Southern Pine	Replaced
9376	45-4	Southern Pine	Replaced

Poles Braced - Calendar Year 2017

4443	30-5	Southern Pine	Braced
4095	30-5	Southern Pine	Braced
5011	30-5	Southern Pine	Braced
5153	30-5	Southern Pine	Braced
5025	30-5	Southern Pine	Braced
5579	30-5	Southern Pine	Braced
5055	30-5	Southern Pine	Braced
5500	30-5	Southern Pine	Braced
5195	30-5	Southern Pine	Braced
9830	30-5	Southern Pine	Braced
7463	30-5	Southern Pine	Braced
7713	30-5	Southern Pine	Braced
7798	30-5	Southern Pine	Braced
7791	30-5	Southern Pine	Braced
7377	30-5	Southern Pine	Braced
6534	30-5	Southern Pine	Braced
7152	30-5	Southern Pine	Braced
7135	30-5	Southern Pine	Braced

7011	30-5	Southern Pine	Braced
6717	30-5	Southern Pine	Braced
6685	30-5	Southern Pine	Braced
7426	30-5	Southern Pine	Braced
9839	30-5	Southern Pine	Braced
9840	30-5	Southern Pine	Braced
6785	30-5	Southern Pine	Braced
7370	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
13052	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
13183	30-5	Southern Pine	Braced
13108	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
NN	30-5	Southern Pine	Braced
5094	35-5	Southern Pine	Braced
7306	35-5	Southern Pine	Braced
3962	35-5	Southern Pine	Braced
3995	35-5	Southern Pine	Braced
1299	35-5	Southern Pine	Braced
7695	35-5	Southern Pine	Braced
7659	35-5	Southern Pine	Braced
7150	35-5	Southern Pine	Braced
6688	35-5	Southern Pine	Braced
7154	35-5	Southern Pine	Braced
9824	35-5	Southern Pine	Braced
9405	35-5	Southern Pine	Braced
NN	35-5	Southern Pine	Braced
1141	40-5	Southern Pine	Braced
4357	40-5	Southern Pine	Braced
4094	40-5	Southern Pine	Braced
1343	40-5	Southern Pine	Braced
1579	40-5	Southern Pine	Braced
389	40-5	Southern Pine	Braced
7739	40-5	Southern Pine	Braced
7894	40-5	Southern Pine	Braced
1490	40-5	Southern Pine	Braced

7696	40-5	Southern Pine	Braced
1446	40-5	Southern Pine	Braced
7061	40-5	Southern Pine	Braced
469	40-5	Southern Pine	Braced
7524	40-5	Southern Pine	Braced
1569	40-5	Southern Pine	Braced
1573	40-5	Southern Pine	Braced
1135	40-5	Southern Pine	Braced
7882	40-5	Southern Pine	Braced
1668	40-5	Southern Pine	Braced
1531	40-5	Southern Pine	Braced
520	40-5	Southern Pine	Braced
4519	45-4	Southern Pine	Braced
1486	45-4	Southern Pine	Braced
1126	45-4	Southern Pine	Braced