

Talquin Electric Cooperative
Report to the Florida Public Service Commission
Pursuant to Rule 25-6.0343, F.A.C.
Calendar Year 2012

1) Introduction

- 1) Name of cooperative – Talquin Electric Cooperative, Inc.
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2) Number of active meters served in calendar year 2012: 52,258

3) Standards of Construction

a) National Electric Safety Code Compliance & Rural Utilities Services Standards

Construction standards, policies, guidelines, practices, and procedures at the Talquin Electric Cooperative comply with the National Electrical Safety Code (ANSI C-2) [NESC]. For electrical facilities constructed on or after August 1, 2011, the 2012 NESC applies. Electrical facilities constructed prior to August 1, 2011, are governed by the edition of the NESC in effect at the time of the facility's initial construction.

b) Extreme Wind Loading Standards

Construction standards, policies, guidelines, practices, and procedures at the Talquin Electric Cooperative are guided by the extreme wind loading standards specified by Figure 250-2(d) of the 2012 edition of the NESC for:

- 1) New construction.

2) Major planned work, including expansion, rebuild, or relocation of existing facilities, assigned on or after December 10, 2006.

c) Targeted critical infrastructure facilities and major thoroughfares.

d) Flooding and Storm Surges

Only a very, very small percentage of Talquin Electric Cooperative's service area includes areas subject to storm surge. Talquin evaluated our standards, policies, guidelines, practices and procedures that address the effects of flooding and storm surges on underground facilities and supporting overhead facilities. Some measures have already been made including the installation of grounding sleeves to further secure underground switching cabinets. Talquin has used anchoring systems to further strengthen our pad-mount transformers. There have been no storm surges to test the new anchoring system since 2007. These stronger anchoring systems should reduce the damage and power outages caused by storm surges along the coast.

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

Electrical construction standards, policies, guidelines, practices, and procedures at the Talquin Electric Cooperative 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 Talquin Electric Cooperative's facilities are accessible by its crews and vehicles to ensure proper maintenance/repair is performed as expeditiously and safely as possible. Talquin obtains easements for all newly constructed lines that give Talquin the right for ingress and egress in order to maintain our power lines. Talquin Electric Cooperative decides 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, based on Talquin's ability to secure easements from the property owners.

f) Attachments by Others

Talquin Electric is in the process of updating our pole attachment agreements between Talquin Electric and third-party attachers to include language which specifies that the attacher, not the cooperative, has the burden of assessing pole strength and NESC compliance and be certified by an engineer before they attach to the pole. After the attachment has been made, the third-party's engineer will certify that the work has been inspected and built according to the NESC standards. Talquin Electric and the third-party attacher will jointly inspect these attachments on a regular basis within a five (5) year cycle.

4) Facility Inspections

- a) Talquin Electric Cooperative inspects the transmission lines annually checking the pole, hardware and conductors. An outside pole-treating contractor inspects distribution & transmission poles each year. Since 2007 and beyond, poles have been and will continue to be inspected on an eight-year rotation.
- b) Talquin Electric Cooperative inspected 14,077 poles in 2012, which included 86 transmission poles.
- c) There were four hundred forty two (442) distribution poles rejected for a total of 3.2% of the distribution poles inspected. In 2012 Talquin Electric Cooperative had no transmission poles rejected out of 86 poles that were inspected. Of the 13,991 distribution poles inspected, 442 were rejected of which 3 were priority poles. The priority poles were replaced with new poles and the rejected poles are being inspected and repaired if possible or replaced if not.
- d) When replacing 30 class 7 poles, Talquin is installing stronger 35 class 6 poles for service and guy poles as the minimum standard. Since approximately 1990 Talquin has been replacing 35 class 6 poles with 40 class 4 poles as the minimum for distribution poles.
- e) In approximately 1990, Talquin increased its minimum wire size from #4 ACSR to a stronger #2 ACSR conductor to help withstand falling debris during storms.
- f) Talquin has an independent engineering consulting firm to perform inspections on its new and existing line construction on a quarterly basis.
- g) Talquin performs monthly inspections on its substation facilities to insure that any needed maintenance is performed. Talquin performs infrared inspections at its substations and lines to insure that any weak connections are detected and repaired before outages occur.
- h) In the past, Talquin has hired a helicopter contractor to ride its transmission lines to detect any problems that could not be detected from the ground. This contractor is available on an as need basis for future inspections and storm restoration.

5) Vegetation Management

- a) Talquin Electric Cooperative maintains its right of ways by mechanical cutting, herbicide applications and mowing. Talquin utilizes a variety of contractors and some in-house crews to maintain its rights of way. The Cooperative uses the RUS bulletin for right of way maintenance and local governmental rules to perform this clearance. Talquin Electric Cooperative has a right of way budget exceeding \$2,800,000.00 for 2013 with the goal of

accomplishing its trimming cycle's goals to minimize outages to our members and harden our system from storm damage.

- b) Talquin Electric Cooperative performed right of way maintenance on 625 miles of line in 2012, which represents a total of 17% of Talquin's overhead lines. The routine maintenance was in addition to responding to approximately 1,725 member request for tree maintenance.
- c) A major goal of Talquin Electric goal is to improve vegetation management practices so that vegetation related outages are reduced, vegetation clearing for post-storm restoration is reduced, and vegetation management is more cost-effective. This is also the goal of the University of Florida's Public Utility Research Center (PURC). PURC manages the work flow and communications, develops work plans, serves as a subject matter expert, conducts research, facilitates the hiring of experts, coordinates with research vendors, advises the Project Sponsors, and provides reports for Project activities. The collaborative research has focused on undergrounding, vegetation management, hurricane wind speeds at granular levels, and improved materials for distribution facilities. The PURC research group held a vegetation management conference in the past which Talquin employees attended. Talquin Electric Cooperative employees gained useful information from this conference as experiences and lessons learned were shared by all participants. The Talquin employees learned new vegetation management techniques for implementation. Recently Talquin has studied the PURC Report on Collaborative Research for Hurricane Hardening which summarizes the research efforts of the utilities for wind and hurricane data evaluations. Talquin is constantly taking the necessary measures to strengthen our system in preparation for the high winds that are associated with hurricanes and tropical storms.

Talquin made a significant investment in mapping and automated metering infrastructure (AMI) to improve power reliability. Talquin completely GPS/mapped the electrical system and installed an AMI remote metering system to improve storm response, reliability, monitor power quality, and power restoration efforts. Talquin's mapping and AMI systems are tied to an outage management system to enable quicker outage restoration times. Newly constructed tie lines are designed to handle switching to help eliminate outages for planned work, as well as reduce the outage times during storm restoration efforts. Other improvements planned for in 2013 consist of major capital expenditures to the microwave and communication system.

Talquin maintains a comprehensive Emergency Response Plan and conducts annual storm restoration exercises prior to hurricane season to insure proper response and refresher training for its employees. Employees have pre-assigned duties for storm assessment and restoration activities. Talquin Electric maintains a storm stock of materials and supplies to insure availability during storms.

