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REVIEW OF

FLORIDA'S INVESTOR-OWNED ELECTRIC UTILITIES

2012 SERVICE RELIABILITY REPORTS

NOVEMBER 2013

STATE OF FLORIDA

FLORIDA PUBLIC SERVICE COMMISSION
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TERMS AND ACRONYMS

AMI	Advanced Metering Infrastructure
ANSI	American National Standards Institute
CAIDI	Customer Average Interruption Duration Index
CEMI5	Customers Experiencing More Than Five Interruptions
CI	Customer Interruption
CME	Customer Momentary Events
CMI	Customer Minutes of Interruption
DSM	Demand Side Management
DEF	Duke Energy Florida (formerly Progress Energy Florida, Inc.)
EOC	Florida's Emergency Operation Center
F.A.C.	Florida Administrative Code
FEMA	Federal Emergency Management Agency
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
GIS	Geographic Information System
Gulf	Gulf Power Company
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IOU	The Five Investor-Owned Electric Utilities: FPL, DEF, TECO, Gulf, and FPUC
L-Bar	Average of Customer Service Outage Events Lasting A Minute or Longer
MAIFIe	Momentary Average Interruption Event Frequency Index
N	Number of Outages
NWS	National Weather Service
OMS	Outage Management System
RDUP	Rural Development Utility Program
SCADA	Supervisory Control and Data Acquisition
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
TECO	Tampa Electric Company
VMP	Vegetation Management Program

RELIABILITY METRICS

Rule 25-6.0455, Florida Administrative Code (F.A.C.), requires Florida's IOUs to report data pertaining to distribution reliability in their Annual Distribution Reliability Reports. The following 10 indices are utilized in the reports or are derived from the filed data.

- *Average Duration of Outage Events* (L-Bar) is the sum of each outage event duration for all outage events during a given time period, divided by the number of outage events over the same time within a specific area of service.

- *Customer Average Interruption Duration Index* (CAIDI) is an indicator of average interruption duration, or the time to restore service to interrupted customers. CAIDI is calculated by dividing the total system customer minutes of interruption by the number of customer interruptions. (CAIDI = CMI ÷ CI, also CAIDI = SAIDI ÷ SAIFI).

- *Customers Experiencing More Than Five Interruptions* (CEMI5) is the number of retail customers that have experienced more than five service interruptions. (CEMI5 in this review is a customer count shown as a percentage of total customers.)

- *Customer Interruption* (CI) is the number of customer service interruptions, which lasted one minute or longer.

- *Customer Minutes of Interruption* (CMI) is the number of minutes that a customer's electric service was interrupted for one minute or longer.

- *Customer Momentary Events* (CME) is the number of customer momentary service interruptions, which lasted less than one minute measured at the primary circuit breaker in the substation.

- *Momentary Average Interruption Event Frequency Index* (MAIFIe) is an indicator of average frequency of momentary interruptions or the number of times there is a loss of service of less than one minute. MAIFIe is calculated by dividing the number of momentary interruption events recorded on primary circuits by the number of customers served. (MAIFIe = CME ÷ C)

- *Number of Outage Events* (N) measures the primary causes of outage events and identifies feeders with the most outage events.

- *System Average Interruption Duration Index* (SAIDI) is a composite indicator of outage frequency and duration and is calculated by dividing the customer minutes of interruptions by the number of customers served on a system. (SAIDI = CMI ÷ C, also SAIDI = SAIFI x CAIDI)

- *System Average Interruption Frequency Index* (SAIFI) is an indicator of average service interruption frequency experienced by customers on a system. It is calculated by dividing the number of customer interruptions by the number of customers served. (SAIFI = CI ÷ C, also SAIFI = SAIDI ÷ CAIDI)

EXECUTIVE SUMMARY

This is a review and analysis of the 2012 electric distribution reliability data filed by Florida's investor-owned electric utilities (IOU) and examines each utility's report concerning its distribution system. The review also tracks the progress and results of each utility's storm hardening plans. Observations and trends are used to predict possible declines in service reliability and are reported to determine if the Commission may require additional scrutiny, emphasis, or remedial actions.

ASSESSING SERVICE RELIABILITY

The assessment of an IOU's Electric Service Reliability is made primarily through a detailed review of established Service Reliability Metrics pursuant to Rule 25-6.0455, F.A.C. Reliability metrics or indices are intended to reflect changes over time in system average performance, regional performance, and sub-regional performance. As the indices increase, it is an indication of declining reliability. Comparisons of the year-to-year levels of the metrics reveal changes in performance, which may indicate the need for additional work in one or more areas. The review also examines each utility's level of storm hardening activity in order to gain insight into factors contributing to the observed trends in the performance metrics.[1,2] Inter-utility comparisons of reliability data and related complaints received by the Commission provide additional insight. Finally, audits may be performed where additional scrutiny is required and to ensure the reported data is reliable based on the patterns observed.

Since 2007, IOUs have filed distribution reliability reports using metrics to track performance in two categories. The first is "actual" or unadjusted reliability data that reflects the total or actual reliability experience from the customer's perspective. Unadjusted service reliability data provides an indication of the distribution system performance during hurricanes and other unusual events. Second, each IOU is required to provide "adjusted" performance data for the prior year. The "adjusted" data provides an indication of the distribution system performance on a normal day-to-day basis by removing the impact of excluded events on reliability performance. Analyzing the "actual" and "adjusted" data provides insight concerning the overall reliability performance of each utility. In addition, the scope of the IOUs' Annual Distribution Service Reliability Report was expanded to include status reports on the various storm-hardening initiatives required by the Commission.[3]

The reports filed on March 1, 2013, include: **(1)** storm hardening activities, **(2)** actual 2012 distribution service reliability data, **(3)** adjusted 2012 distribution service reliability data, and **(4)** actual and adjusted 2012 performance assessments in four areas: (1) system-wide, (2) operating region, (3) feeder, (4) cause of outage events, and **(5)** customer complaints.

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[1] Rule 25-6.0342, F.A.C., effective February 5, 2007, requires investor-owned electric utilities to file comprehensive storm hardening plans at least every three years.

[2] Rule 25-6.0343, F.A.C., effective December 12, 2006, requires municipal electric utilities and rural electric cooperative utilities to report annually, by March 1, the extent to which their construction standards, policies, practices, and procedures are designed to storm-harden their transmission and distribution facilities.

[3] Wooden Pole Inspection Orders: Order No. PSC-06-0144-PAA-EI, issued February 27, 2006, in Docket No. 060078-EI; and Order Nos. PSC-06-0778-PAA-EU, issued September 18, 2006, PSC-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 060531-EU.
Storm Hardening Initiative Orders: Order Nos. PSC-06-0351-PAA-EI, issued April 25, 2006, PSC-06-0781-PAA- EI, issued September 19, 2006, PSC-06-0947-PAA-EI, issued November 13, 2006, and PSC-07-0468-FOF-EI, issued May 30, 2007, all in Docket No. 060198-EI.

CONCLUSIONS

The March 2013 reports of Florida Power & Light Company (FPL), Duke Energy Florida, (DEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf) and Florida Public Utilities Company (FPUC) were sufficient to perform the 2012 review.

The following company specific summaries provide highlights of the observed patterns.

SERVICE RELIABILITY OF FLORIDA POWER & LIGHT COMPANY

In reviewing the unadjusted data for 2012, (**Table 2-1**), FPL's documented exclusions for outage events accounted for approximately 41 percent of all Customer Minutes of Interruption (CMI). The biggest impact was the named storms accounting for approximately 38 percent of the CMI. The named storms that affected FPL's service areas were Hurricane Sandy and Tropical Storms Beryl, Debby, and Isaac.

FPL's 2012 metrics on an adjusted basis include System Average Interruption Duration Index (SAIDI) which was reported as 63 minutes and represents a 17 minute decrease (21 percent) from last year's reported 80 minutes. SAIDI is viewed as the best overall reliability indicator because it encompasses two other standard performance metrics for reliability; System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI). Both the SAIFI and CAIDI improved in 2012. The SAIFI decreased from 0.97 interruptions in 2011 to 0.90 interruptions in 2012 and the CAIDI decreased from 82 minutes in 2011 to 71 minutes in 2012. FPL attributed the improved 2012 reliability results to its targeted reliability initiatives.

Equipment failure and vegetation outages continue to be the leading cause of the number of outage events per customer for the past five years. For 2012, the category of service and sub-category cable appear to be the largest cause of equipment failure outages. Analysis of **Figure 3-8** shows an increasing trend in the number of outage events attributed to vegetation, even though the number of outages decreased 9 percent from 2011 to 2012. The analysis shows a decreasing trend in the number of outage events caused by equipment failure, even though the number of outages increased 6 percent from 2011 to 2012.

FPL's reliability related complaints percentage received by the Commission in 2012 was 0.8 percent, which was higher than 0.7 percent in 2011. FPL's reliability related complaints are still trending downward as shown in **Figure 4-8**, even with a slight increase this year**.**

FPL completed its five approved Key Distribution Geographical Information System (GIS) improvement initiatives in 2012. The initiatives included post-hurricane forensic analyses, as well as the addition of poles, streetlights, joint-use survey and hardening level data into the GIS database. It appears that 100 percent of distribution overhead and underground asset data has been uploaded into the GIS, as well. Data collection to the GIS will continue through inspection cycles and other normal daily work activities.

SERVICE RELIABILITY OF DUKE ENERGY FLORIDA

Duke Energy Florida's 2012 unadjusted data indicated that allowable exclusions for outage events accounted for approximately 49 percent of all CMI. The largest contributor to the exclusion percentage was the category of Distribution (Severe Weather) at 33 percent. DEF's service areas were affected by one tornado, Hurricane Sandy, and Tropical Storms Beryl, Debby, and Isaac.

On an adjusted basis, DEF's 2012 SAIDI was 73 minutes, improving its adjusted SAIDI by 14 minutes from the 2011 results. The trend for the SAIDI over the five-year period of 2008 to 2012 is relativity flat even with the lower SAIDI for 2012. Both the SAIFI and CAIDI had decreases for 2012 compared to 2011. Over the five-year period, the SAIFI is trending downward as the CAIDI is trending upward.

In **Figure 3-16,** DEF's Top Five Outage Categories, the category animals remains in the top spot representing 17 percent of the ten outage categories. The next two highest categories were tree non-preventable, i.e. fallen trees (12 percent) and storms (11 percent). All of DEF's top five outage categories decreased in 2012 when compared to the 2011 data. For the five-year period of 2008 to 2012, outages caused by animals, tree non-preventable, and storms are trending upward as outages caused by tree preventable and defective equipment are trending downward.

The percentage of reliability complaints to the total number of complaints filed with the Commission for DEF decreased to 3.4 percent in 2012 from 4.0 percent in 2011. Over the five-year period from 2008-2012, DEF's reliability related complaints appear to be trending downward.

In 2008, DEF completed its transition to a new GIS system (G-Electric). In 2011, DEF implemented two systems, Facilities Management Data Repository and Compliance Tracking System. The new systems facilitate compliance tracking, maintenance, and planning and risk management of the major distribution assets. One-hundred percent of the overhead and underground systems are in the GIS. Ninety-nine percent of overhead and one-hundred percent of the underground transmission system are in GIS.

SERVICE RELIABILITY OF TAMPA ELECTRIC COMPANY

TECO's 2012 unadjusted data indicated that the allowable exclusions for outage events accounted for approximately 23 percent of all the CMI. The largest documented exclusion was the "Named Storm Outage" category, which included Tropical Storms Debby and Isaac. These extreme weather events accounted for approximately 20 percent of the total excludable CMI.

The adjusted SAIDI for 2012 increased to 78 minutes from 76 minutes in 2011 and represents a 3 percent decline in performance. The SAIFI also increased to 0.91 interruptions from 0.87 interruptions in the previous year. The CAIDI decreased 1 percent to 86 minutes from 87 minutes reported in 2011. TECO reported that the decline in reliability performance is attributed

to relays that are temporarily disabled during non-storm months which reduced the number of momentary events by 13 percent, when comparing 2011 customer momentary events (CME) to 2012 CME. However, this increased the frequency of outages due to faults being cleared by other protective devices.

Animals and vegetation continue to be the largest contributors to TECO's causes of outage events. **Figure 3-24** illustrates the top five outage causes showing vegetation related causes have continued to decrease over the last four years as animal related causes decreased from last year. Both animal and vegetation related outages appear to be trending downward over the five-year period of 2008 to 2012.

TECO's 2012 percentage of total complaints that are service reliability related improved to 2.4 percent from 2.5 percent as reported in 2011, and from 4.5 percent reported in 2010. TECO's percentage of complaints is trending downward over the period of 2008 to 2012.

In 2012, the Commission approved TECO's request to modify its trim cycle for both feeders and laterals to four years (Order No: PSC-12-0303-PAA-EI, issued June 12, 2012, in Docket No. 120038-EI). The company trimmed over one-fourth of its system in 2012.

In 2012, a project to enhance the GIS was initiated to expand the use of TECO's legacy grid numbering system for facilities in the field. TECO is planning and scheduling major upgrades to its GIS which are expected to be completed in 2014. The project will be executed in two phases. Phase I will consist of the actual upgrade to the computing hardware, software, and database to the most current versions available. Phase II will implement significant improvements that will enhance usability.

SERVICE RELIABILITY OF GULF POWER COMPANY

Gulf's 2012 unadjusted data indicates that allowable exclusions accounted for approximately 35 percent of the Customer Minutes of Interruption. "Transmission Events" accounted for 16 percent of the total CMI. Gulf's focus is on proactive facility upgrades and implementing projects that will reduce the impact of excludable transmission events. Gulf's service areas were affected by Tropical Storms Debby and Isaac.

The 2012 SAIDI for Gulf was reported as 113 minutes representing a 2 minute increase from the 111 minutes reported in 2011. The SAIFI decreased to 1.16 interruptions from 1.24 interruptions the previous year. The CAIDI increased to 98 minutes up from 89 minutes in 2011. Gulf reported the increase to SAIDI and CAIDI were due to a non-excludable severe thunderstorm in July 2012. Gulf has initiatives underway to mitigate service outages and improve the reliability of service.

Gulf's top five causes of outages remain unchanged and were listed as animals, deterioration, lightning, trees, and unknown. Animal caused outages were still the number one cause of outages. The number of outages increased for four of the top five causes of outages in 2012 when compared to 2011. The number of outages due to unknown causes decreased in 2012 as shown in **Figure 3.32**.

The percentage of complaints reported to the Commission against Gulf that were reliability related decreased to 0.0 percent from 0.4 percent in 2012. The highest percent of total complaints that were reliability related occurred in 2008 at 0.9 percent. Overall, Gulf has the lowest percentage of total complaints that are reliability related as shown in **Figure 4-8**.

Gulf completed its distribution facilities mapping transition to its new Distribution GIS (Dist GIS) in 2009 and the transmission system has been completely captured in the transmission GIS database. The Dist GIS continues to be updated with additions and changes as the associated work orders for maintenance and system improvements are completed. This on-going process provides Gulf sufficient information to evaluate the performance of its overhead and underground systems in the event of a major storm.

SERVICE RELIABILITY OF FLORIDA PUBLIC UTILITIES COMPANY

The unadjusted data for FPUC indicates its 2012 allowable exclusions accounted for approximately 62 percent of the total customer minutes of interruption. The "Named Storm Outages" category accounted for approximately 32 percent of the customer minutes of interruption that were excluded. FPUC's Northeast Division was affected by Tropical Storm Beryl and the Northwest Division was affected by tropical Storms Debby and Isaac.

The 2012 adjusted data for FPUC's SAIDI was 152 minutes, which is down from the 173 minutes reported in the previous year. The SAIFI also decreased from 1.93 interruptions in 2011 to 1.48 interruptions in 2012. The CAIDI declined in performance to 102 minutes from 89 minutes reported in 2011.

FPUC's top five causes of outages included animals, vegetation, unknown, corrosion, and weather related events. Vegetation caused outages is again the number one cause of outages for 2012 as shown in **Figure 3.37**. Vegetation, animal, unknown, and weather attributed outages increased in 2012; however, corrosion caused outages decreased.

Reliability related complaints against FPUC are minimal. In 2012, the utility had 10 total complaints filed with the Commission of which two were reliability related. The volatility in FPUC's results can be attributed to its small customer base that averages 28,000 or fewer customers. For the last five years, the percentage of reliability related complaints against FPUC have trended downward.

FPUC uses GIS mapping for all of its deployed equipment and uses it to identify distribution and transmission facilities. The system interfaces with the Company's Customer Information System (CIS) and is used within its overall Outage Management System (OMS). The implementation of the OMS has resulted in significant improvement in data collection and retrieval capability for analyzing and reporting reliability indices. The OMS will also serve as an available tool for use in post-storm forensic analysis. FPUC plans to improve the current OMS system by enabling customer outage calls to be automatically logged into the system.

INTRODUCTION

The Florida Public Service Commission (Commission) has jurisdiction to monitor the quality and reliability of electric service provided by Florida's IOUs for maintenance, operational, and emergency purposes.[4]

Monitoring service reliability is achieved through a review of service reliability metrics provided by the IOUs pursuant to Rule 25-6.0455, F.A.C.[5] Service reliability metrics are intended to reflect changes over time in system average performance, regional performance, and sub-regional performance. For a given system, increases in the value of a given reliability metric denote declining reliability in the service provided. Comparison of the year-to-year levels of the reliability metrics may reveal changes in performance, which indicates the need for additional investigation, or work in one or more areas. As indicated in previous reports, Florida's utilities have deployed Supervisory Control and Data Acquisition systems (SCADA) and Outage Management Systems (OMS) in order to improve the accuracy of the measured reliability indices. This deployment often results in an apparent degradation of reliability due to improvements over manual methods that customarily underestimate the frequency, the size, and the duration of the outages.

Throughout this review, emphasis is placed on observations that suggest declines in service reliability and areas where the company may require additional scrutiny or remedial action.

BACKGROUND

Rule 25-6.0455, F.A.C., requires the IOUs to file distribution reliability reports to track adjusted performance that excludes events such as planned outages for maintenance, generation disturbances, transmission disturbances, wildfires, and extreme acts of nature such as tornados and hurricanes. This "adjusted" data provides an indication of the distribution system performance on a normal day-to-day basis, but does not reveal the impact of excluded events on reliability performance.

With the active hurricane seasons of 2004 and 2005, the importance of collecting reliability data that would reflect the total or "actual" reliability experience from the customer perspective became apparent. Complete "unadjusted" service reliability data was needed to assess service performance during hurricanes. In June 2006, Rule 25-6.0455, F.A.C., was revised to require each IOU to provide both "actual" and "adjusted" performance data for the prior year. Additionally, the scope of the IOUs' Annual Distribution Service Reliability Report was expanded to include status reports on the various storm-hardening initiatives required by the Commission.[6]

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[4] Sections 366.04(2)c and 366.05, Florida Statutes.

[5] The Commission does not have rules or statutory authority requiring municipal electric utilities and rural electric cooperative utilities to file service reliability metrics.

[6] Wooden Pole Inspection Orders: Order No. PSC-06-0144-PAA-EI, issued February 27, 2006, in Docket No. 060078-EI; and Order Nos. PSC-06-0778-PAA-EU, issued September 18, 2006, PSC-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 060531-EU.
Storm Hardening Initiative Orders: Order Nos. PSC-06-0351-PAA-EI, issued April 25, 2006; PSC-06-0781-PAA- EI, issued September 19, 2006; PSC-06-0947-PAA-EI, issued November 13, 2006; and PSC-07-0468-FOF-EI, issued May 30, 2007, in Docket No. 060198-EI.

The reports filed on March 1, 2013, include: **(1)** actual 2012 distribution service reliability data; **(2)** adjusted 2012 distribution service reliability data; **(3)** actual and adjusted 2012 performance assessments in four areas: (1) system-wide, (2) operating region, (3) feeder, (4) cause of outage events; and **(4)** complaints. The reports also summarized the storm hardening activities for the IOUs.

Table C-1 below is a summary of the dates the named storms that affected each IOU, as further discussed in Section II.

Table C-1. NAMED STORMS IN 2012

Named Storms in 2012				
Dates each IOU was affected	**Hurricane Sandy**	**Tropical Storm Beryl**	**Tropical Storm Debby**	**Tropical Storm Isaac**
DEF	October 26–29	May 27–29	June 24–27	August 26–28
FPL	October 25–27	May 27–30	June 23–27	August 25–28
FPUC	N/A	May 27	June 24	August 27
Gulf	N/A	N/A	June 24	August 27
TECO	N/A	N/A	June 24–26	August 26–28

REVIEW OUTLINE

This review primarily relies on the March 2013 Reliability Report filed by the IOUs for the 2012 reliability performance data and storm hardening activities. A section addressing trends in reliability related complaints is also included. Staff's review consists of five sections.

- **Section 1:** Storm hardening activities, which include each IOU's Eight-Year Wooden Pole Inspection Program and the Ten Initiatives.
- **Section 2:** Each utility's actual 2012 distribution service reliability data and support for each of its adjustments to the actual service reliability data.
- **Section 3:** Each utility's 2012 distribution service reliability based on adjusted service reliability data and staff's observations of overall service reliability performance.
- **Section 4:** Inter-utility comparisons and the volume of reliability related customer complaints for 2008 through 2012.
- **Section 5:** Appendices containing detailed utility specific data.

SECTION I. STORM HARDENING ACTIVITIES

On April 25, 2006, the Commission issued Order No. PSC-06-0351-PAA-EI, in Docket No. 060198-EI. This order requires the IOUs to file plans for ten storm preparedness initiatives (Ten Initiatives).[7] Storm hardening activities and associated programs are on-going parts of the annual reliability reports required from each IOU since rule changes in 2006. The status of these initiatives is discussed in each IOU's report for 2012.

THE TEN INITIATIVES:

(1) A three-year vegetation management cycle for distribution circuits.

(2) An audit of joint-use attachment agreements.

(3) A six-year transmission structure inspection program.

(4) Hardening of existing transmission structures.

(5) A transmission and distribution geographic information system.

(6) Post-storm data collection and forensic analysis.

(7) Collection of detailed outage data differentiating between the reliability performance of overhead and underground systems.

(8) Increased utility coordination with local governments.

(9) Collaborative research on effects of hurricane winds and storm surge.

(10) A natural disaster preparedness and recovery program.

These Ten Initiatives are the starting point of an ongoing process to track storm preparedness activities among the IOUs.[8,9]

Separate from the Ten Initiatives, the Commission established rules addressing storm hardening of transmission and distribution facilities for all of Florida's electric utilities.[10,11,12]

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[7] Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation cost estimates.

[8] See page 2 of Order No. PSC-06-0947-PAA-EI, issued November 13, 2006, in Docket No. 060198-EI, In re: Requirement for investor-owned electric utilities to file ongoing storm preparedness plans and implementation cost estimates.

[9] The Commission addressed the adequacy of the IOUs' plans for implementing the Ten Initiatives by Order Nos. PSC-06-0781-PAA-EI, issued September 19, 2006, PSC-06-0947-PAA-EI, issued November 13, 2006, and PSC-07-0468-FOF-EI, issued May 30, 2007, all in Docket No. 060198-EI. In 2006, the municipal and rural electric cooperative utilities voluntarily provided summary statements regarding their implementation of the Ten Initiatives. Prospectively, reporting from these utilities is required pursuant to Rule 25-6.0343, F.A.C.

[10] Order No. PSC-06-0556-NOR-EU, issued June 28, 2006, in Docket No. 060172-EU, In re: Proposed rules governing placement of new electric distribution facilities underground, and conversion of existing overhead distribution facilities to underground facilities, to address effects of extreme weather events, and Docket No. 060173-EU, In re: Proposed amendments to rules regarding overhead electric facilities to allow more stringent construction standards than required by National Electric Safety Code.

[11] Order Nos. PSC-07-0043-FOF-EU, issued January 16, 2007, and PSC-07-0043A-FOF-EU, issued January 17, 2007, both in Docket Nos. 060173-EU and 060172-EU.

Each IOU, pursuant to Rule 25-6.0342(2), F.A.C., must file a plan which is required to be updated every three years. The IOU's second updated storm hardening plans were filed on May 3, 2013.[13] The following subsections provide a summary of each IOU's programs addressing an on-going eight-year wooden pole inspection program and the Ten Initiatives as directed by the Commission.

EIGHT-YEAR WOODEN POLE INSPECTION PROGRAM

Order Nos. PSC-06-0144-PAA-EI, issued February 27, 2006 in Docket No. 060078-EI and PSC-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 060531-EU require each IOU to inspect 100 percent of their installed wooden poles within an eight-year inspection cycle. The National Electric Safety Code (NESC) serves as a basis for the design of replacement poles for wood poles failing inspection. Additionally, Rule 25-6.0342(3)(b), F.A.C., requires that each utility's storm hardening plan address the extent to which the plan adopts extreme wind loading standards as specified in figure 250-2(d) of the 2007 edition of the NESC. Staff notes that DEF determined the extreme wind loading requirements, as specified in figure 250-2(d) of the NESC did not apply to poles less than 60 feet in height that are typically found within the electrical distribution system. DEF stated in its 2009 Storm Hardening Report that extreme wind loading requirements have not been adopted for all new distribution construction since poles less than 60 feet in height are more likely to be damaged by falling trees, flying limbs, and other wind borne debris.[14]

Table 1-1 shows a summary of the quantities of wooden poles inspected by all IOUs in 2012.

Table 1-1. 2012 WOODEN POLE INSPECTION SUMMARY

Utility	Total Poles	Poles Planned 2012	Poles Inspected 2012	Poles Failed Inspection	% Failed Inspection	Years Complete in 8-Year Inspection Cycle
DEF	813,992	103,500	105,220	8,049	7.65%	6
FPL	1,004,101	128,315	133,593	19,518	14.61%	7
FPUC	26,151	3,267	3,944	268	6.80%	5
GULF	208,171	*32,000	*1,709	48	2.81%	6
TECO	418,934	52,518	53,974	8,750	16.21%	6

*Note: Gulf stated that it was ahead of schedule on the wooden pole inspection programs, therefore, the amount of poles inspected was less that previously planned.

[12] Order No. PSC-06-0969-FOF-EU, issued November 21, 2006, in Docket No. 060512-EU, In re: Proposed adoption of new Rule 25-6.0343, F.A.C., Standards of Construction - Municipal Electric Utilities and Rural Electric Cooperatives.
[13] See Docket Numbers 130129-EI, 130131-EI, 130132-EI, 130138-EI, and 130139-EI, In re: Review of the 2013-2015 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342 F.A.C. for each of the IOUs.
[14] See DEF Storm Hardening Plan 2007-2009, Appendix J, pages 4-5.

Table 1-2 indicates the projected wooden pole inspection requirements for the IOUs.

Table 1-2. PROJECTED 2013 WOODEN POLE INSPECTION SUMMARY

Utility	Total Poles	Total Number of Wood Poles Inspected 2006-12	Number of Wood Pole Inspections Planned for 2013	Percent of Wood Poles Planned 2013	Percent of Wood Pole Inspections Completed in 8-Year Cycle	Years Remaining in 8-Year Cycle After 2012
DEF	813,992	718,165	103,500	12.72%	88%	2
FPL	1,004,101	865,397	128,637	12.81%	86%	1
FPUC	26,151	17,348	2,989	11.43%	66%	3
GULF	208,171	183,773	26,000	12.49%	88%	2
TECO	418,934	316,046	49,176	11.74%	75%	2

The annual variances shown in Tables 1-1 and 1-2 are allowable so long as each utility achieves 100 percent inspection within an eight-year period. Staff continues to monitor each utility's performance.

TEN INITIATIVES

(1) THREE-YEAR VEGETATION MANAGEMENT CYCLE FOR DISTRIBUTION CIRCUITS

Each IOU continues to maintain the commitment to completion of three-year trim cycles for overhead feeder circuits since feeder circuits are the main arteries from the substations to the local communities. The approved plans of all the IOUs also require a maximum of a six-year trim cycle for lateral circuits. In addition to the planned trimming cycles, each IOU performs "hot-spot" tree trimming[15] and mid-cycle trimming to address rapid growth problems.

[15] "Hot-spot" tree trimming occurs when an unscheduled tree trimming crew is dispatched or other prompt tree trimming action is taken at one specific location along the circuit. For example, a fast growing tree requires "hot-spot" tree trimming in addition to the cyclical tree trimming activities. TECO defines "hot-spot" trimming as any internal or external customer driven request for tree trimming. Therefore, all tree trim requests outside of full circuit trimming activities are categorized as "hot-spot" trims.

Table 1-3 is a summary of feeder vegetation management activities by each company's cycle.

Table 1-3. VEGETATION CLEARING FROM FEEDER CIRCUITS

IOU	1st Year of 3 Year Cycle	Total Feeder Miles	Miles Trimmed				Total Miles Trimmed	% of Miles Trimmed
			1st Year	2nd Year	3rd Year	4th Year		
DEF	*2012*	3,968	196	*TBD	*TBD	[redacted]	196	**5%**
FPL	*2010*	13,623	5,222	4,337	4,045	[redacted]	13,604	**100%**
FPUC	*2010*	170	58	68	52	[redacted]	177	**104%**
GULF	*2010*	719	281	259	240	[redacted]	780	**108%**
TECO	*2010*	1,710	617	605.6	435.3	*TBD	1,658	**97%**

Note: The initial three-year cycle for FPL was corrected this year.

Table 1-4 is a summary of the lateral vegetation management activities by company.

Table 1-4. VEGETATION CLEARING FROM LATERAL CIRCUITS

IOU	# of Years in Cycle	1st Year of Cycle	Total Lateral miles	Miles Trimmed						Total Lateral Miles Trimmed	% of Lateral Miles Trimmed
				1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year		
DEF	*5*	*2011*	14,200	1,132	3,214	*TBD	*TBD	*TBD	[redacted]	4,346	**30.6%**
FPL	*6*	*2007*	16,700	2,215	2,078	2,768	2,741	3,367	3,703	16,872	**101.0%**
FPUC	*6*	*2007*	501	54	86	96	188	205	123	751	**149.9%**
GULF	*4*	*2010*	5,170	1,060	1,530	857	*TBD	[redacted]		3,447	**66.7%**
TECO	*4*	*2010*	4,591	1,634	1,514	1,282	*TBD	[redacted]		4,430	**96.5%**

* TBD – To Be Determined

Tables 1-3 and 1-4 do not reflect "hot-spot" trimming and mid-cycle trimming activities. An additional factor to consider is that not all miles of overhead distribution circuits require vegetation clearing. Factors such as "hot-spot" trimming and open areas contribute to the apparent variances from the approved plans. Annual variances as seen in **Tables 1-3** and **1-4** are allowable as long as each utility achieves 100 percent completion within the cycle-period stated in its approved plan for feeder and lateral circuits.

(2) AUDIT OF JOINT-USE AGREEMENTS

For hardening purposes, the benefits of fewer attachments are reflected in the extreme wind loading rating of the overall design of pole loading considerations. Each IOU monitors the impact of attachments by other parties to ensure the attachments conform to the utility's strength and loading requirements without compromising storm performance. Each IOU's plan for performing pole strength assessments includes the stress impacts of all pole attachments as an integral part of its eight-year wood pole inspection program. In addition, these assessments are also conducted on concrete and steel poles. The following are some 2012 highlights:

- DEF audited approximately 120,375 of its 963,005 total distribution poles in 2012 of which 8,085 were found to have unauthorized attachments. The company also performed strength tests on 66,565 distribution poles with attachments recording 126 failures. The addition of guy wires corrected 75 poles and DEF replaced the remaining 51 failed poles. DEF has 48,295 transmission poles of which 8,786 have joint-use attachments. There were 576 transmission poles strength tested with 10 poles deemed overloaded and are scheduled for replacement.

- As in previous years, FPL audited 20 percent of its service territory in order to determine the number and ownership of jointly used poles and associated attachments. Pole strength and loading tests were also performed on all joint-use poles. Of the 62,379 distribution poles that were strength tested, 93 Grade C poles and 6,150 Grade B poles were found to be overloaded and 6,077 Grade C poles and 6,477 Grade B poles failed for other reasons. FPL does not track at the joint use level if the poles were corrected or replaced. There were 532 distribution poles with NESC violations and 207 poles with violations involving third-party facilities.

- During 2012, 1,317 pole loading calculations were performed for FPUC. The poles selected for inspection had third-party attachments and any poles registering load assessments greater than 100 percent were added to a follow-up inspection list. A list of replacement poles is provided to all third-parties so their attachments can be transferred.

- Gulf conducts joint-use inventory audits for its overhead distribution every five years with the latest being completed in December 2011. The next audit is scheduled for 2016. As of 2012 data, Gulf has 200,776 total distribution poles with 159,963 third party attachers. Gulf is attached to 57,566 foreign poles and leased 136,870 poles. During the last audit, 26,317 "unauthorized attachments" were identified.

- TECO is conducting comprehensive loading analysis on 2,558 poles and will correct any that are determined to be overloaded. TECO identified 39 distribution poles that were overloaded due to joint-use attachments. In addition, TECO identified 194 poles that had NESC violations; of these, 140 poles were due to joint-use attachments and 54 poles were due to TECO's attachments. All poles were corrected and TECO continues

to monitor the situation. TECO also performed an internal audit of the Joint-Use Department and the department was found to be operating in compliance.

(3) SIX-YEAR TRANSMISSION INSPECTIONS

The IOUs are required by the Commission to inspect all transmission structures and substations, and all hardware associated with these facilities. Approval of any alternative to a six-year cycle must be shown to be equivalent or better than a six-year cycle in terms of cost and reliability in preparing for future storms. The approved plans for FPL, TECO, FPUC, and Gulf require full inspection of all transmission facilities within a six-year cycle. DEF, which already had a program indexed to a five-year cycle, continues with its five-year program. Such variances are allowed so long as each utility achieves 100 percent completion within a six-year period, as outlined in Order No. PSC-06-0781-PAA-EI, issued September 19, 2006, in Docket No. 060198-EI. All five IOUs reported that they are on target to meet the six-year inspection cycle for transmission structures and substations.

- DEF inspected 195 of its 564 transmission circuits and all of its 487 transmission substations. The company plans to inspect 23 percent of its transmission circuits in 2013. The company performs a ground patrol of each transmission line every five years and averages three aerial patrols per year to identify potential problems.

- In 2012, FPL began a new six-year inspection cycle of its transmission structures. In 2012, FPL performed more than 11,000 climbing inspections on wood, concrete, and steel transmission structures. FPL inspected approximately 15 percent of its transmission circuits, 82 percent of its transmission substations, 17 percent of non-wood transmission tower structures, and 18 percent of wood transmission poles. In 2013, FPL plans to inspect 206 transmission circuits and conduct 694 substation inspections.

- FPUC inspected 19 transmission circuits, four transmission substations, four transmission tower structures, and 297 transmission poles in 2012. FPUC plans to inspect all transmission facilities and will include climbing patrols of 95 138kV and 202 69kV structures to ensure all structures will have a detailed inspection performed at a minimum of every six years.

- Gulf inspected all of the company's 33 transmission substations in 2012 and conducted 362 inspections of its metal poles and towers as well as 2,618 wood poles. Gulf replaced 272 of the wood poles, which failed inspection. Gulf plans to inspect 514 metal poles and towers, and 2,490 wood poles in 2013.

- In 2012, TECO completed the eight-year cycle of inspections, one year ahead of schedule. TECO performed ground line inspections on 4,762 transmission poles. All 230kV, 138kV, and 69kV circuits were subjected to ground patrols in 2012. TECO performed above ground inspections on 1,035 structures. All transmission substations were inspected in 2012. Since the 2011 aerial infrared patrol identified minimal issues, TECO omitted the patrol from its 2012 inspection program. However, the company intends to initiate the aerial infrared patrol in 2013. TECO is not transitioning to a bi-annual patrol and will continue to follow its three-year hardening plan for the transmission system which includes annual infrared patrols.

(4) HARDENING OF EXISTING TRANSMISSION STRUCTURES

Hardening transmission infrastructure for severe storms is an important motivation for utilities in order to continue providing transmission of electricity to high priority customers and key economic centers. IOUs are required by the Commission to show the extent of the utility's efforts in hardening of existing transmission structures. No specific activity was ordered other than developing a plan and reporting on storm hardening of existing transmission structures. In general, all of the IOU's plans continued pre-existing programs that focus on upgrading older wooden transmission poles. Highlights of 2012 and projected 2013 activities for each IOU are explained below.

- DEF planned 1,725 transmission structures for hardening. DEF exceeded this goal and hardened 1,819, which includes DOT/Customer Relocations, line rebuilds, and system planning additions. In 2013, DEF plans to harden 1,590 transmission structures. All transmission structures are designed to withstand the current NESC wind requirements and are built utilizing steel or concrete structures.

- In 2012, FPL continued executing its plan to replace all wood transmission structures in its system by replacing 996 wood transmission structures, including 89 single pole un-guyed wood structures, with spun concrete or steel poles. Additionally, FPL replaced ceramic post insulators with polymer insulators on 491 concrete structures. In 2013, FPL plans to replace 979 wood transmission structures and ceramic post insulators on 351 concrete structures.

- FPUC did not conduct any storm hardening of existing structures during 2012. All of the Northeast Division's 138 KV poles are constructed of concrete and steel and met NESC standards at the time of installation. The Northeast Division's 69 KV transmission system consists of 212 poles, of which 39 are concrete poles. The Northwest Division does not have transmission structures. In 2013, FPUC plans on replacing 31 wooden transmission poles with concrete transmission poles.

- Gulf has two priority goals for hardening its transmission structures. The priorities are the installation of storm guys on all wood H-frame structures and the replacement of wooden cross arms with steel cross arms. In 2012, the installation of guys on H-frames was completed and the replacement of wooden cross arms with steel cross arms is scheduled to meet a 2017 completion date. In 2012, 857 transmission structures were hardened and 200 structures are planned to be hardened in 2013.

- In 2012, TECO hardened 887 structures, which included 707 structure replacements utilizing steel or concrete poles and 180 sets of insulators were replaced with polymer insulators. For 2013, TECO's goal is to harden 973 transmission structures.

(5) TRANSMISSION AND DISTRIBUTION GEOGRAPHIC INFORMATION SYSTEM

(6) POST-STORM DATA COLLECTION AND FORENSIC ANALYSIS

(7) COLLECTION OF DETAILED OUTAGE DATA DIFFERENTIATING BETWEEN THE RELIABILITY PERFORMANCE OF OVERHEAD AND UNDERGROUND SYSTEMS

These three initiatives are addressed together because effective implementation of any one initiative is dependent upon effective implementation of the other two initiatives. The five IOUs have GIS and other programs to collect post-storm data on competing technologies, perform forensic analysis, and assess the reliability of overhead (OH) and underground (UG) systems on an ongoing basis. Differentiating between overhead and underground reliability performance and costs is still difficult because underground facilities are typically connected to overhead facilities and the interconnected systems of the IOUs address reliability on an overall basis. Many electric utility companies have implemented an Outage Management System (OMS) or are in the process of doing so. The collection of information for the OMS is being utilized in the form of a database for emergency preparedness. This will help utilities identify and restore outages sooner and more efficiently. The OMS fills a need for systems and methods to facilitate the dispatching of maintenance crews in outages, sometimes during severe weather situations, and for providing an estimated time to restore power to customers. Effective restoration will also yield improved customer service and increased electric utility reliability. The year 2012 highlights and projected 2013 activities for each IOU are listed below.

- In 2011, two systems were implemented to DEF's GIS. These systems were Facilities Management Data Repository and Compliance Tracking System. Every year, the new systems facilitate the compliance tracking, maintenance, planning and risk management of the major distribution assets. DEF collects and determines the percentage of storm related failures of its overhead and underground facilities. The locations of all transmission and distribution poles have been entered into a GIS to ensure accuracy of information gathered. DEF uses the data to determine the number and positioning of its forensic teams. The forensics teams participated in DEF's 2013 Storm Drill.

- FPL completed its five approved Key Distribution GIS improvement initiatives in 2012. The initiatives include post-hurricane forensic analyses, the addition of poles, streetlights, joint-use survey and hardening level data to the GIS. It appears that 100 percent of distribution OH and UG asset data were uploaded in the GIS. FPL states it would be difficult to differentiate between the performance of its overhead and underground feeders because they are mostly hybrids consisting of both overhead and underground cables. FPL feels that it can use the performance statistics of its laterals, which are typically comprised of only a single type, overhead or underground construction, as a proxy to determine the performance of its feeders. The company believes this alternative method will demonstrate the performance differences between the overhead and underground facilities during storms. The company started using GIS to map its facilities in the mid 1980s and has made continuous upgrades since that time.

- FPUC uses GIS mapping for all of its deployed equipment and uses it to identify distribution and transmission facilities. The system is interfaced with the company's Customer Information System (CIS) and used within its overall OMS. The

implementation of the OMS has resulted in significant improvement in data collection and retrieval capability for analyzing and reporting reliability indices. In addition, the OMS will serve as a valuable tool for use in post-storm forensic analysis. The company continues to implement a Forensic Data Collection process that is triggered and followed 72 hours prior to a storm. There were no OH to UG conversions in the Northwest Division during 2012. In the Northeast Division, at the request of local government, FPUC analyzed undergrounding of some of the overhead facilities which are associated with the storm hardening projects planned for construction during 2012. The local government did not provide FPUC with a formal request for cost estimates.

- Gulf transitioned to a new GIS in 2009 for its distribution facilities and it is continuously updated to represent equipment replacements and additions. In addition, the transmission system has been completely captured in the transmission GIS database. This effort has now given the company the capability to perform forensic data assessments of the performance of its overhead plant during major storms. Although 2012 was an uneventful year for Gulf, refresher training courses were conducted for post-storm data collection and forensic analysis. In 2012, Gulf expanded its record keeping and analysis of data associated with OH and UG outages.

- TECO's GIS continues to serve as the foundational database for all its transmission, substation, and distribution facilities. Development and improvement of the GIS continues on an ongoing basis. In 2012, a project to enhance the GIS was initiated to expand the use of TECO's legacy grid numbering system for facilities in the field. TECO is scheduling major upgrades to its GIS system for 2013 and 2014. This two-phase project will consist of upgrading the computing hardware, software, and database to the most current versions available and improving configuration changes and usability enhancements. In 2012, no dollars were spent on forensic analysis due to an inactive hurricane season. In addition, TECO continues to have an established process in place for collecting outage performance data of OH and UG systems should a major weather event occur.

(8) INCREASED UTILITY COORDINATION WITH LOCAL GOVERNMENTS

The Commission's goal with this program is to promote an ongoing dialogue between IOUs and local governments on matters such as vegetation management and underground construction, in addition to the general need to increase pre- and post-storm coordination. The increased coordination and communication is intended to promote IOU collection and analysis of more detailed information on the operational characteristics of underground and overhead systems. This additional data is also necessary to inform customers and communities that are considering converting existing overhead facilities to underground facilities (undergrounding), as well as to assess the most cost-effective storm hardening options.

Each IOU's external affairs representatives or designated liaisons are responsible for engaging in dialog with local governments on issues pertaining to undergrounding, vegetation management, public rights-of-way use, critical infrastructure projects, other storm-related topics, and day-to-day matters. Additionally, each IOU assigns staff to each county emergency operations center (EOC) to participate in joint training exercises and actual storm restoration efforts. The IOUs now have outreach and educational programs addressing underground

construction, tree placement, tree selection, and tree trimming practices. Below are some 2012 highlights for each utility:

- In 2012, DEF visited several EOCs in different counties to review storm procedures. DEF's storm planning and response program is operational all year to respond to weather events at anytime. There are approximately 60 resources with more than 37 employees assigned full-time to coordinate with local governments on issues such as emergency planning, vegetation management, undergrounding and service related issues. Annually, DEF conducts a system-wide internal storm drill. DEF will also participate in Florida's state wide annual storm drill.

- In 2012, FPL continued efforts to improve its coordination with local governments. FPL maintains an External Response Team that consists of trained representatives who assist External Affairs in meeting the needs of local governments in times of emergency. This team of more than 70 employees, staff county EOCs and interface with local officials throughout the FPL service territory. FPL met with personnel from 25 county EOC locations to obtain input on critical infrastructure locations within their jurisdiction. Additionally, FPL's Community Outreach Teams and Customer Service Field Organization conducted 66 community presentations in 2012, providing information on storm readiness and other topics of community interest.

- FPUC has continued its involvement with local governments regarding reliability issues with emphasis on vegetation management. The City of Marianna has worked with FPUC to complete the undergrounding of equipment in the downtown area. The company's current practice is to have FPUC personnel located at the county EOCs on a 24-hour basis during emergency situations to ensure good communication.

- Gulf met with local government officials to discuss the scope of major projects and worked very closely with the EOCs within its service territory. Gulf participated in EOC activations with Bay County. In 2012, the company participated in hurricane drills with Escambia, Santa Rosa, and Okaloosa counties. Gulf also participated in a Geomagnetic Storm exercise with the Florida's Division of Emergency Management. In addition, the company's district managers act as liaisons with city and county personnel weekly.

- TECO focused its government communications efforts on re-connecting governmental officials with the company's Emergency Response contacts and reviewing its Emergency Response Plan. TECO continues to work closely with different stakeholders to improve the Emergency Response Team Plan. In addition, TECO participated in several Hillsborough County led initiatives, focusing on temporary housing, rebuilding infrastructure, and reviving the area's economy in the aftermath of a disaster.

(9) COLLABORATIVE RESEARCH ON EFFECTS OF HURRICANE WINDS AND STORM SURGE

The University of Florida's Public Utility Research Center (PURC) assisted Florida's electric utilities by coordinating a three year research effort, which began in 2006 through 2009, in the area of hardening the electric infrastructure to better withstand and recover from hurricanes. Hurricane winds, undergrounding, and vegetation management research are key areas explored in these efforts by all of the research sponsors involved with PURC.

Current projects in this effort include: (1) research on undergrounding existing electric distribution facilities by surveying the current literature. Case analyses of Florida underground projects, and developing a model for projecting the benefits and costs of converting overhead facilities to underground, (2) data gathering and analysis of hurricane winds in Florida and the possible expansion of a hurricane simulator that can be used to test hardening approaches, and (3) an investigation of effective approaches for vegetation management.

The effort is the result of Commission Order No. PSC-06-0351-PAA-EI, issued April 25, 2006, in Docket No. 060198-EI, directing each investor-owned electric utility to establish a plan that increases collaborative research to further the development of storm resilient electric utility infrastructure and technologies that reduce storm restoration costs and outages to customers. The order directed them to solicit participation from municipal electric utilities and rural electric cooperatives in addition to available educational and research organizations.

The IOUs joined with the municipal electric utilities and rural electric cooperatives in the state (collectively referred to as the Project Sponsors) to form a steering committee of representatives from each utility and entered into a Memorandum of Understanding (MOU) with PURC. In serving as the research coordinator for the project outlined by the MOU, PURC manages the workflow and communications, develops work plans, serves as a subject matter expert and conducts research, facilitates the hiring of experts, coordinates with research vendors, advise the project sponsors, and provides reports for project activities.

HURRICANE WIND EFFECTS: The collaborative group is trying to determine the appropriate level of hardening required for the electric utility infrastructure against wind damage from hurricanes. The project's focus was divided into two categories: (1) accurate characterization of severe dynamic wind loading, and (2) understanding the likely failure modes for different wind conditions. An agreement with WeatherFlow, Inc., to study the effects of dynamic wind conditions upon hurricane landfall includes 50 permanent wind-monitoring stations around the coast of Florida. In addition, PURC has developed a uniform forensics data gathering system for use by the utilities and a database that will allow for data sharing that will match the forensics data with the wind monitoring and other weather data.

VEGETATION MANAGEMENT: The goal of the project 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.

UNDERGROUNDING OF ELECTRIC UTILITY INFRASTRUCTURE: All five IOUs participate with PURC, along with the other cooperative and municipal electric utilities, in order to perform beneficial research regarding hurricane winds and storm surge within the state. The group's research shows that while underground systems on average have fewer outages than overhead systems, they can sometimes take longer to repair. Analyses of hurricane damage in Florida found that underground systems might be particularly susceptible to storm surge. The research on undergrounding has been the focus for understanding the economics and effects of hardening strategies, including undergrounding. As a result, Quanta Technologies was contracted to conduct a three-phase project to understand the economics and effect of hardening policies in order to make informed decisions regarding hardening of underground facilities.

Phase I of the project was a meta-analysis of existing research, reports, methodologies, and case studies. Phase II examined specific undergrounding project case studies in Florida and included an evaluation of relevant case studies from other hurricane prone states and other

parts of the world. Phase III developed a methodology to identify and evaluate the costs and benefits of undergrounding specific facilities in Florida. The primary focus is the impact of undergrounding on hurricane performance. This study also considered benefits and drawbacks of undergrounding during non-hurricane conditions. For 2012, the collaborative focused on refining the computer model developed by Quanta Technologies in response to Phase III of the overall project. The reports for Phase I, Phase II and Phase III are available at **http://warrington.ufl.edu/purc/research/energy.asp**.

(10) A NATURAL DISASTER PREPAREDNESS AND RECOVERY PROGRAM

Each IOU is required to maintain a copy of its current formal disaster preparedness and recovery plan with the Commission. A formal disaster plan provides an effective means to document lessons learned, improve disaster recovery training, pre-storm staging activities and post-storm recovery, collect facility performance data, and improve forensic analysis. In addition, participation in the Commission's annual pre-storm preparedness briefing is required which focuses on the extent to which all Florida electric utilities are prepared for potential hurricane events. The following are some 2012 highlights for each IOU.

- DEF's storm recovery plan is reviewed and updated annually based upon lessons learned from previous storm seasons on managing organization needs. DEF's objective is to establish a consistent approach and level of responsibility for each emergency response. In addition, DEF uses the EWL standards in accordance with the NESC Rule 250C in all planning for transmission upgrades, rebuilds and expansions of existing facilities.

- FPL's Storm Emergency Plan identifies emergency conditions and the responsibilities and duties of the FPL emergency response organization for severe weather and fires. The plan covers the emergency organization, responsibilities and FPL's overall severe storm emergency processes. These processes describe the planning activities, restoration work, public communications, and coordination with government, training, practice exercises, and lessons-learned evaluation systems. The plan is reviewed annually and revised as necessary.

- FPUC primary objective of the Disaster Preparedness and Recovery Plan is to provide for the safety of employees, contractors, and the general public. The procedures detail when to request additional manpower as well as the necessary activities required for rapid and orderly restoral of service.

- Gulf had no major revisions to its Disaster Preparedness and Recovery Plan and continues to focus on annual refresher training for employees. Gulf's 2013 Storm Procedures Manual is currently being revised and at the time of this writing, will be finalized by June 1, 2013. A hurricane drill was conducted on May 1, 2012, at the company's corporate office. This drill provided awareness and preparedness for both work and at home. Gulf completed an additional hurricane drill on May 1, 2013.

- TECO's Emergency Management plans support all hazards, including extreme weather events. In 2012, TECO continued to participate in internal and external preparedness exercises and collaboration with government emergency management agencies at local, state and federal levels and will continue with this same level of preparedness for 2013. In addition, TECO continues its participation in county and national preparedness

groups including: Hillsborough County Post Disaster Redevelopment Plan, Hillsborough County Local Mitigation Strategy Group, Tampa Bay Regional Planning Council-Small Business Preparedness, Edison Electric Institute and the National Fire Protection 1600 Committee on Emergency Management, Business Continuity, and Disaster Recovery.

SECTION II ACTUAL DISTRIBUTION SERVICE RELIABILITY

Electric utility customers are affected by all outage events and momentary events regardless of where problems originate. For example, generation events and transmission events, while electrically remote from the distribution system serving a customer, affect the distribution service experience. This total service reliability experience is intended to be captured by the actual reliability data.

The actual reliability data includes two subsets of outage data: (1) data on excludable events, and (2) data pertaining to normal day-to-day activities. Rule 25-6.0455(4), F.A.C., explicitly lists outage events that may be excluded:

(1) Planned service interruptions.

(2) A storm named by the National Hurricane Center.

(3) A tornado recorded by the National Weather Service.

(4) Ice on lines.

(5) A planned load management event.

(6) Any electric generation or transmission event not governed by subsections 25-6.018(2) and (3), F.A.C.

(7) An extreme weather or fire event causing activation of the county emergency operation center.

This section provides an overview of each IOU's actual 2012 performance data and focuses on the exclusions allowed by the rule. The year 2007 was the first year for which actual reliability data was provided.

FLORIDA POWER & LIGHT COMPANY: ACTUAL DATA

Table 2-1 provides an overview of key FPL metrics: Customer Minutes of Interruption (CMI) and Customer Interruptions (CI) for 2012. Excludable outage events accounted for approximately 41 percent of the minutes of interruption experienced by FPL's customers. Severe weather outages accounted for approximately 38 percent of the excludable outage events. FPL reported five tornados, one hurricane, and three tropical storms in 2012. Hurricane Sandy accounted for 6 percent of the severe weather total, the five tornados accounted for less than 1 percent of the total, and the three tropical storms accounted for 32 percent of the severe weather total. Hurricane Sandy occurred October 25 through 27, 2012 and the tornados were recorded January 27, 2012, April 6, 2012, May 24, 2012, July 17, 2012, and December 10, 2012. Tropical Storm Beryl occurred May 27 through 30, 2012, Tropical Storm Debby occurred June 23 through 27, 2012, and Tropical Storm Isaac occurred August 25 through 28, 2012.

Table 2-1. FPL'S 2012 CUSTOMER MINUTES OF INTERRUPTION AND CUSTOMER INTERRUPTIONS

2012	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	488,942,638		5,220,563	
Documented Exclusions				
Named Storm Outages	183,122,310	37.45%	899,618	17.23%
Fires	0	0.00%	0	0.00%
Planned Outages	11,790,695	2.41%	130,318	2.50%
Customer Request	3,141,557	0.64%	88,573	1.70%
Tornadoes	1,162,818	0.24%	10,980	0.21%
Other	0	0.00%	0	0.00%
Reported Adjusted Data	289,725,258	59.26%	4,091,074	78.36%

FPL provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2012.

DUKE ENERGY FLORIDA: ACTUAL DATA

Table 2-2 provides an overview of DEF's CMI and CI figures for 2012. Excludable outage events accounted for approximately 49 percent of the minutes of interruption experienced by DEF's customers. In 2012, DEF experienced one hurricane, three tropical storms, and one tornado. Tropical Storm Beryl occurred on May 27 through 29, 2012, Tropical Storm Debby occurred June 24 through 27, 2012, and Tropical Storm Isaac occurred August 26 through 28, 2012. Hurricane Sandy occurred October 26 through 29, 2012 and the one tornado occurred December 10, 2012. These severe weather events accounted for 33 percent of the total minutes of interruption on its distribution system.

Table 2-2. DEF'S 2012 CUSTOMER MINUTES OF INTERRUPTION AND CUSTOMER INTERRUPTIONS

2012	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	235,918,218		2,581,026	
Documented Exclusions				
Distribution (Severe Weather)	77,208,030	32.73%	347,221	13.45%
Transmission (Severe Weather)	387,017	0.16%	8,427	0.33%
Transmission (Non Severe Weather)	10,368,827	4.40%	216,336	8.38%
Emergency Shutdowns (Severe Weather)	8,436,148	3.58%	22,256	0.86%
Emergency Shutdowns (Non Severe Weather)	9,098,363	3.86%	338,309	13.11%
Prearranged (Severe Weather)	432,744	0.18%	1,950	0.08%
Prearranged (Non Severe Weather)	8,761,320	3.71%	68,992	2.67%
Reported Adjusted Data	121,225,769	51.38%	1,577,535	61.12%

DEF provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2012.

TAMPA ELECTRIC COMPANY: ACTUAL DATA

Table 2-3 provides an overview of TECO's CMI and CI figures for 2012. Excludable outage events accounted for approximately 23 percent of the minutes of interruption experienced by TECO's customers. TECO reported two tropical storms that affected TECO's service areas. Tropical Storm Debby occurred June 24 through 26, 2012, and Tropical Storm Isaac occurred August 26 through 28, 2012. These extreme weather events accounted for approximately 20 percent of the minutes of interruption.

Table 2-3. TECO'S 2012 CUSTOMER MINUTES OF INTERRUPTION AND CUSTOMER INTERRUPTIONS

2012	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	70,226,090		809,584	
Documented Exclusions				
Other Distribution	2,279,541	3.25%	111,700	13.80%
Named Storm Outages	14,176,134	20.19%	69,361	8.57%
Tornado	0	0.00%	0	0.00%
Reported Adjusted Data	53,770,415	76.57%	628,523	77.64%

TECO provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2012.

GULF POWER COMPANY: ACTUAL DATA

Table 2-4 provides an overview of Gulf's CMI and CI figures for 2012. Excludable outage events accounted for approximately 35 percent of the minutes of interruption experienced by Gulf's customers. Gulf reported two tornados and two tropical storms in 2012. Tropical Storm Debby occurred June 24, 2012 and Tropical Storm Isaac occurred August 27, 2012. The two tropical storms accounted for 8 percent of the excludable minutes of interruption. The two tornados, which occurred May 12 through 13, 2012, and December 20, 2012, accounted for less than 1 percent of the excludable minutes of interruption.

The biggest impact on CMI was the transmission events which accounted for 16 percent of the excludable minutes of interruptions. The transmission events happened in several areas with multiple causes, i.e. animals, failed equipment, lightning, and deterioration. Gulf reported that there were no obvious trends for the transmission events but it recognized that 2012 was an unusual year for outages caused by animals. Gulf will continue to focus on proactive facility upgrades which include installing animal protection where outages occur, on new installations, and when performing maintenance work. Additionally, Gulf has implemented projects which add remote switching capabilities for load sectionalizing and automatic reclosing schemes in upgraded substations.

Table 2-4. GULF'S 2012 CUSTOMER MINUTES OF INTERRUPTION AND CUSTOMER INTERRUPTIONS

2012	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	75,281,937		811,054	
Documented Exclusions				
Transmission Events	12,044,030	16.00%	176,740	21.79%
Planned Outages	4,926,501	6.54%	58,951	7.27%
Named Storm Outages	6,288,287	8.35%	44,799	5.52%
Tornadoes	343,109	0.46%	3,152	0.39%
Flooding	2,486,475	3.30%	23,621	2.91%
Reported Adjusted Data	49,193,535	65.35%	503,791	62.12%

Gulf provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2012.

FLORIDA PUBLIC UTILITIES COMPANY: ACTUAL DATA

Table 2-5 provides an overview of FPUC's CMI and CI figures for 2012. Excludable outage events accounted for approximately 62 percent of the minutes of interruption experienced by FPUC's customers. FPUC reported that Tropical Storm Beryl, which occurred on May 27, 2012, affected the Northeast Division. Tropical Storm Debby, which occurred June 24, 2012, and Tropical Storm Isaac, which occurred August 27, 2012, affected the Northwest Division. The tropical storms accounted for 32 percent of the excludable minutes of interruption.

Table 2-5. FPUC'S 2012 CUSTOMER MINUTES OF INTERRUPTION AND CUSTOMER INTERRUPTIONS

2012	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	11,299,134		82,799	
Documented Exclusions				
Planned Outages	3,786	0.03%	114	0.14%
Transmission Events	2,055,475	18.19%	12,764	15.42%
Substation	1,393,134	12.33%	5,400	6.52%
Severe Storm Outages	0	0.00%	0	0.00%
Tornado	0	0.00%	0	0.00%
Named Storm Outages	3,587,579	31.75%	22,940	27.71%
Reported Adjusted Data	4,259,160	37.69%	41,581	50.22%

FPUC provided adequate support for its excludable event adjustment allowed by Rule 25-6.0455(4), F.A.C., for the calendar year 2012.

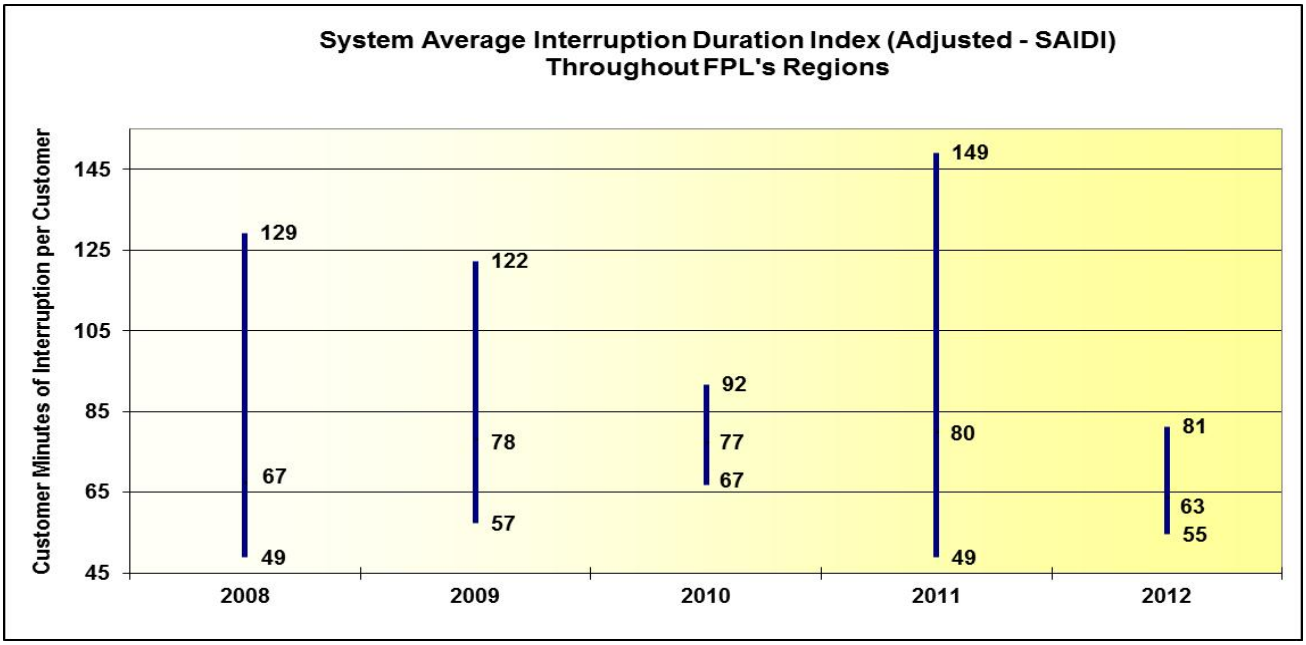
SECTION III. ADJUSTED DISTRIBUTION SERVICE RELIABILITY REVIEW OF INDIVIDUAL UTILITIES

The adjusted distribution reliability metrics or indices provide insight into potential trends in a utility's daily practices and maintenance of its distribution facilities. This section of the review is based on each utility's reported adjusted data.

FLORIDA POWER & LIGHT COMPANY: ADJUSTED DATA

Figure 3-1 shows the highest, average, and lowest adjusted SAIDI recorded across FPL's system that encompasses four management regions with 16 service areas. The highest and lowest SAIDI values are the values reported for a particular service area. FPL had an overall decrease of 17 minutes (21 percent) to the average SAIDI results for 2012 compared to 2011. The average SAIDI appears to be slightly trending downward over the five-year period of 2008 through 2012. The 2012 average SAIDI results are the lowest (best) for the five-year period. "FPL primarily attributes this excellent performance to its targeted reliability initiatives."[16]

Figure 3-1. SAIDI ACROSS FPL'S SIXTEEN REGIONS (ADJUSTED)



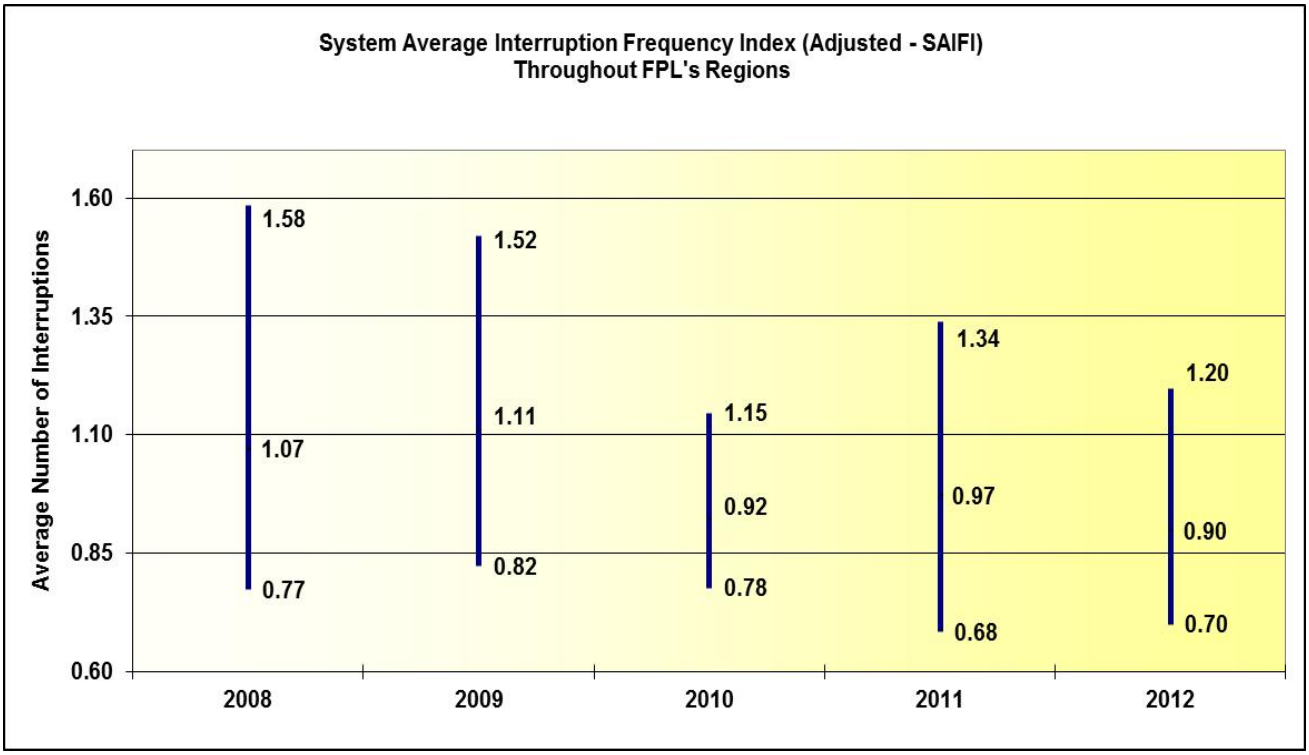
FPL's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIDI	North Florida	South Dade	Naples	Central Florida	South Dade
Lowest SAIDI	Pompano	Pompano	West Palm	Central Dade	West Palm

[16] Summary – Reliability, page 82, FPL Reliability Report filed March 1, 2013.

Figure 3-2 is a chart of the highest, average, and lowest adjusted SAIFI across FPL's system. FPL had a decrease in the system average results to 0.90 outages in 2012, compared to 0.97 outages in 2011, which is a 7 percent decrease. FPL reported a decrease to the highest SAIFI for West Dade of 1.20 interruptions in 2012 compared to North Florida's 1.34 interruptions in 2011. The region reporting the lowest adjusted SAIFI for 2012 was North Dade at 0.70 interruptions compared to Central Dade's 0.68 interruptions in 2011. The highest, average and lowest SAIFI appear to be trending downward suggesting improvements. The 2012 average SAIFI results are the lowest (best) for the five-year period of 2008 through 2012.

Figure 3-2. SAIFI ACROSS FPL'S SIXTEEN REGIONS (ADJUSTED)

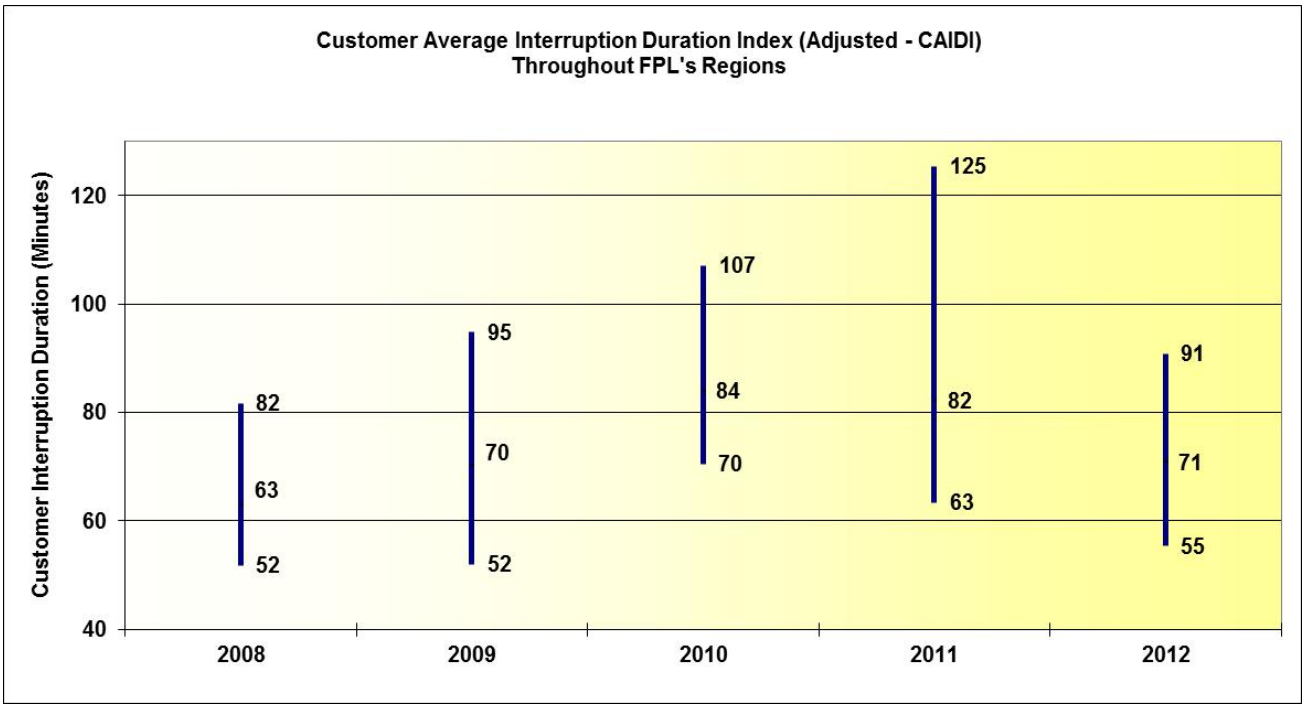


FPL's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIFI	North Florida	South Dade	West Dade	North Florida	West Dade
Lowest SAIFI	Toledo Blade	Pompano	Central Dade	Central Dade	North Dade

Figure 3-3 is a chart of FPL's highest, average, and lowest CAIDI expressed in minutes. FPL's adjusted average CAIDI has dropped approximately 13 percent from 82 minutes in 2011, to 71 minutes in 2012. The average duration of CAIDI, or the average number of minutes a customer is without power when a service interruption occurs, is trending upward even though there was a decrease in CAIDI minutes. For 2012, the Boca Raton service area once again reported the lowest duration of CAIDI, which was 55 minutes. The lowest CAIDI for 2012 is 12 percent lower than 63 minutes in 2011. The highest duration of CAIDI was 91 minutes for the North Dade service area for 2012, which is 27 percent lower than the highest CAIDI minutes in 2011.

Figure 3-3. CAIDI ACROSS FPL'S SIXTEEN REGIONS (ADJUSTED)



FPL's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CAIDI	North Florida	North Dade	Naples	Central Florida	North Dade
Lowest CAIDI	Boca Raton	Boca Raton	Brevard	Boca Raton	Boca Raton

Figure 3-4 depicts the average length of time that FPL spends recovering from outage events, excluding hurricanes and other extreme outage events and is the index known as L-Bar (Average Service Restoration Time). FPL had a 9 percent decrease in L-Bar from 196 minutes in 2011, to 178 minutes in 2012. The 2012 L-Bar result is the lowest average duration of outages since 2008, indicating FPL is spending shorter times restoring service. The L-Bar measures the average length of time of a single service interruption. The IEEE standard for calculation of L-Bar is the summation of each outage event duration divided by the total number of outage events.

Figure 3-4. FPL'S AVERAGE DURATION OF OUTAGES (ADJUSTED)

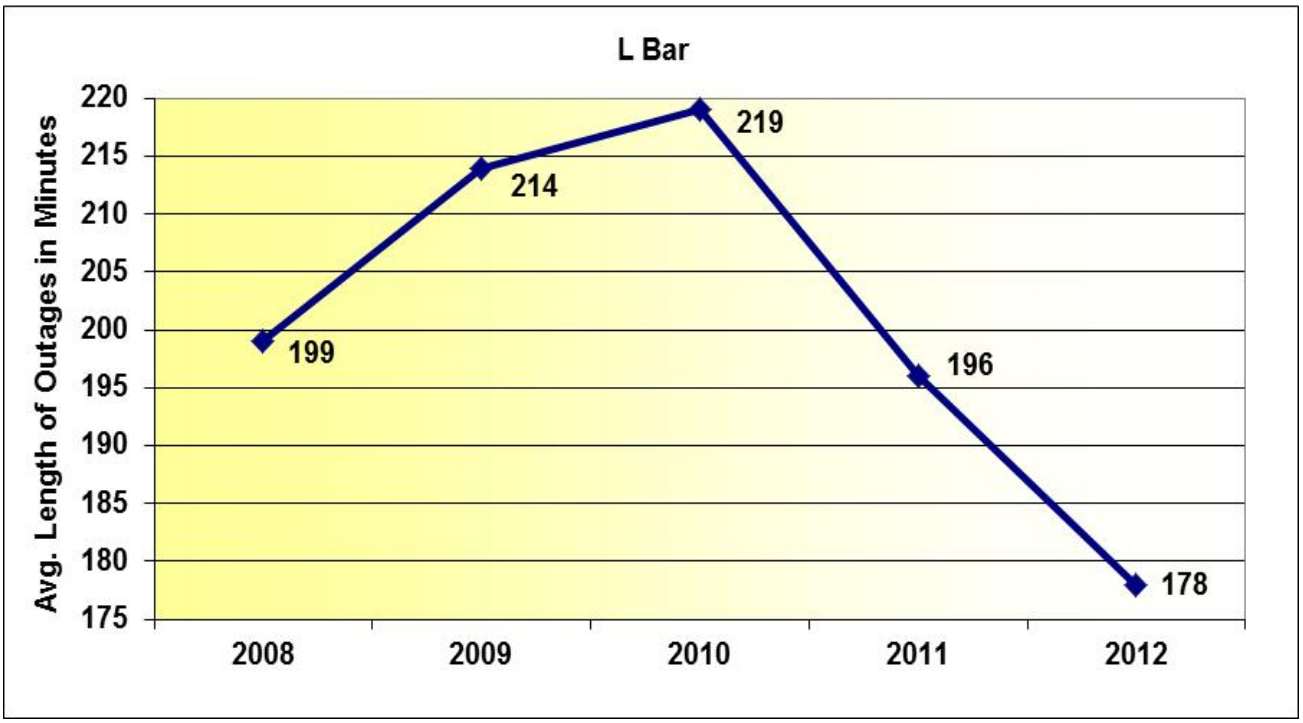
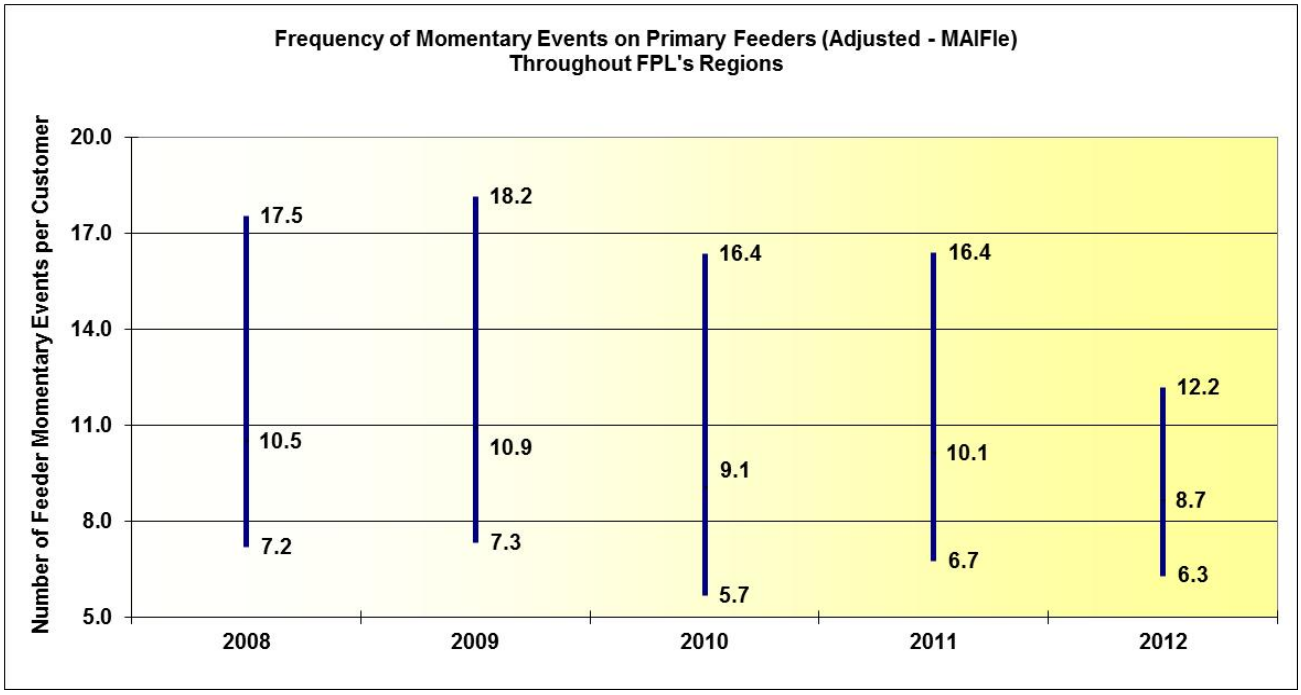


Figure 3-5 is the highest, average, and lowest adjusted MAIFIe recorded across FPL's system. These momentary events often affect a small group of customers. FPL's Toledo Blade, Treasure Coast, and North Florida service areas have experienced the least reliable MAIFIe results of the 16 service areas of FPL since 2008. The Pompano, Central Dade, and Naples service areas had the fewest momentary events since 2008. There is a 14 percent decrease of the average MAIFIe results from 2011 to 2012 and the results have been trending downward (improving) over the last five years.

Figure 3-5. MAIFIe ACROSS FPL'S SIXTEEN REGIONS (ADJUSTED)

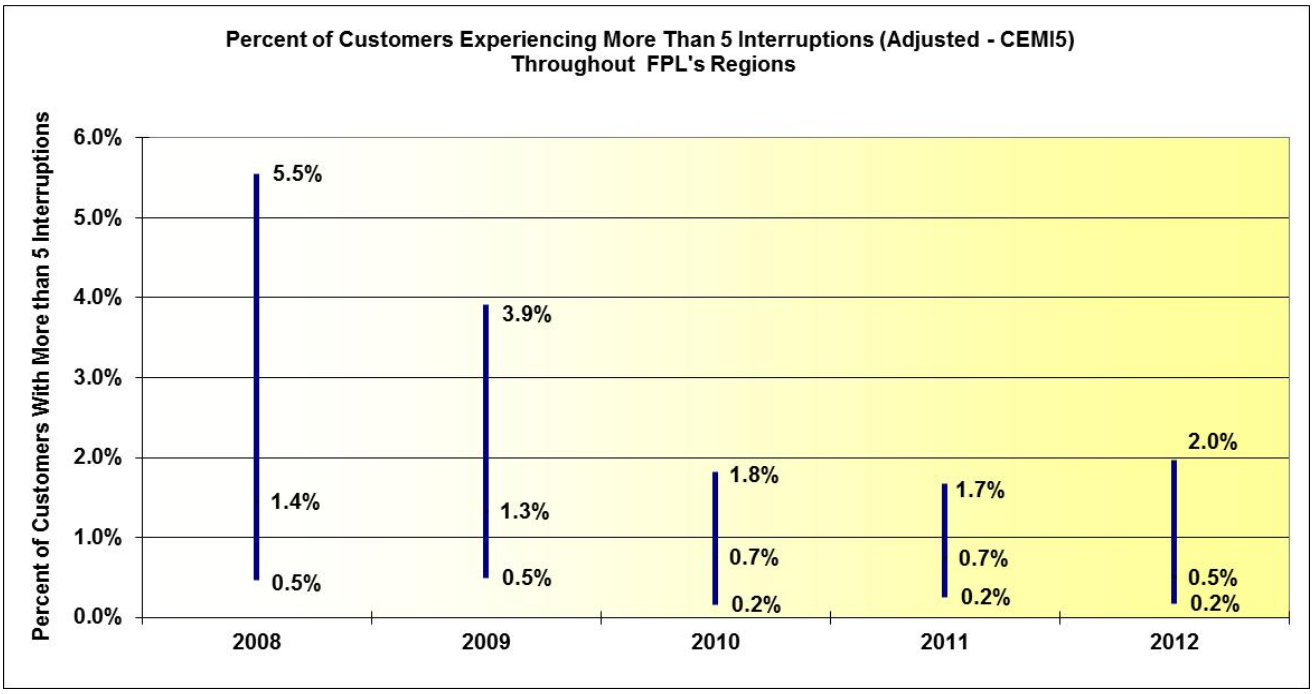


FPL's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest MAIFIe	Treasure Coast	Toledo Blade	Toledo Blade	North Florida	Treasure Coast
Lowest MAIFIe	Pompano	Pompano	Pompano	Central Dade	Naples

Figure 3-6 shows the highest, average, and lowest adjusted CEMI5. FPL's customers with more than five interruptions per year appear to be decreasing and represent an overall improvement that appears to be trending downward. The service areas experiencing the highest CEMI5 appear to fluctuate among North Florida, South Dade, and West Dade. Gulf Stream, Pompano, and Central Dade are reported as having the lowest percentages in the last five years. The average CEMI5 results decreased from 0.7 percent in 2011 to 0.5 percent in 2012.

Figure 3-6. CEMI5 ACROSS FPL'S SIXTEEN REGIONS (ADJUSTED)



FPL's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CEMI5	North Florida	South Dade	North Florida	North Florida	West Dade
Lowest CEMI5	Gulf Stream	Pompano	Pompano	Central Dade	Pompano

Figure 3-7 is a graphical representation of the percentage of multiple occurrences of FPL's feeders and is derived from The Three Percent Feeder Report, which is a listing of the top 3 percent of problem feeders reported by the utility. The percentage of multiple occurrences is calculated from the absolute number of multiple occurrences divided by the ending total number of feeders reported on a three-year and five-year feeder analysis. The three year percentage increased from 6 percent in 2011 to 7 percent in 2012. The five year percentage improved from 12 percent in 2011 to 11 percent in 2012. The five year percentage appears to be trending upward, even though it did improve from 2011 to 2012, as the three year percentage is trending downward.

Staff noted there was one feeder that was on the Three Percent Feeder Report for three years back-to-back and another feeder was on the report for two years consecutively. The feeder that was on the report three years back-to-back is located in St. Lucie and served approximately 331 customers. The feeder that was on the report for two years is located in Miami-Dade area and services approximately 1,857 customers. For both feeders, FPL reported that the majority of the outage causes were due to equipment failure. During 2010 through 2012, regarding the St. Lucie feeder, FPL replaced multiple cross-arms, insulators, lightning arrestors, and disconnect switches. In 2013, FPL plans poles inspections, equipment inspections, ground testing, and an upgrade to a section of conductor with small wire. Regarding the Miami-Dade feeder, FPL replaced the majority of small overhead wire with large wire and transferred it from wood to concrete poles. In 2012, a thermovision inspection was performed resulting in the fuse drop switches being repaired. In 2013, FPL is installing switches at the beginning and end of this feeder, which will allow the overhead line to be sectionalized. This action will improve the isolation of problems on the feeder.

Figure 3-7. FPL'S THREE PERCENT FEEDER REPORT (ADJUSTED)

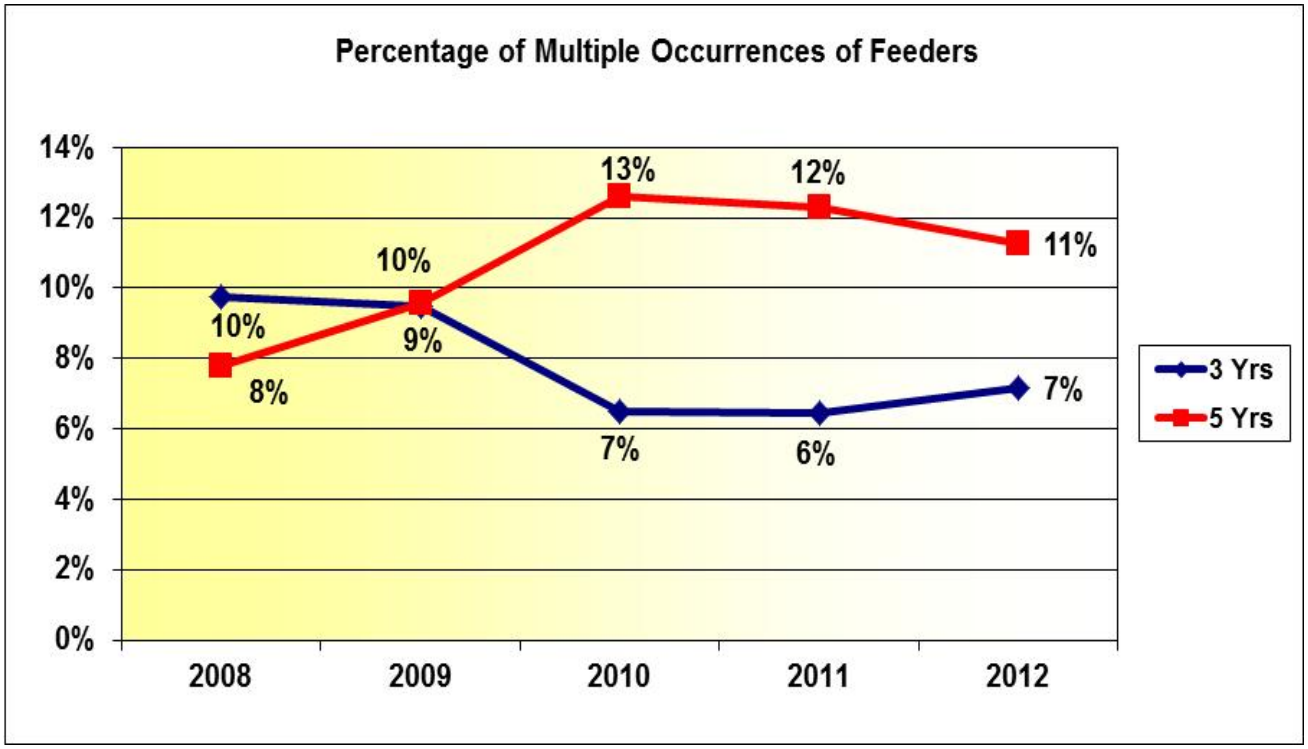
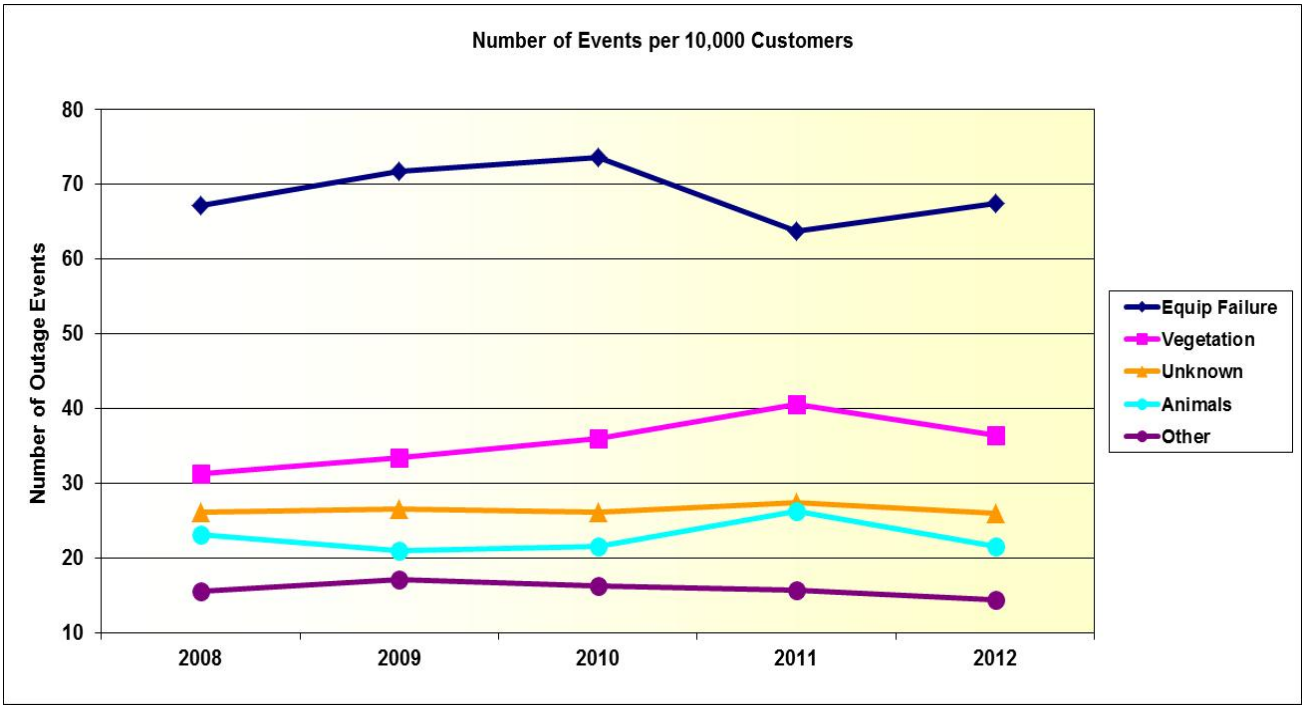


Figure 3-8 depicts the top five causes of outage events on FPL's distribution system normalized to a 10,000-customer base. The graph is based on FPL's adjusted data of the top ten causes of outage events. For the five-year period, the five top causes of outage events included equipment failures (33 percent), vegetation (18 percent), unknown (13 percent), animals (11 percent), and other causes (7 percent) on a cumulative basis. The data shows an increasing trend in outage events caused by vegetation, even though the number of outages decreased from 2011 to 2012. The outage events due to equipment failure are trending downward, which continues to dominate the highest percentage of outage causes throughout the FPL regions, even though the number of outages increased from 2011 to 2012. The outage events due to unknown, animals, and other causes are remaining relatively flat over the five-year period.

Figure 3-8. FPL'S TOP FIVE OUTAGE CAUSES (ADJUSTED)



OBSERVATIONS: FPL'S ADJUSTED DATA

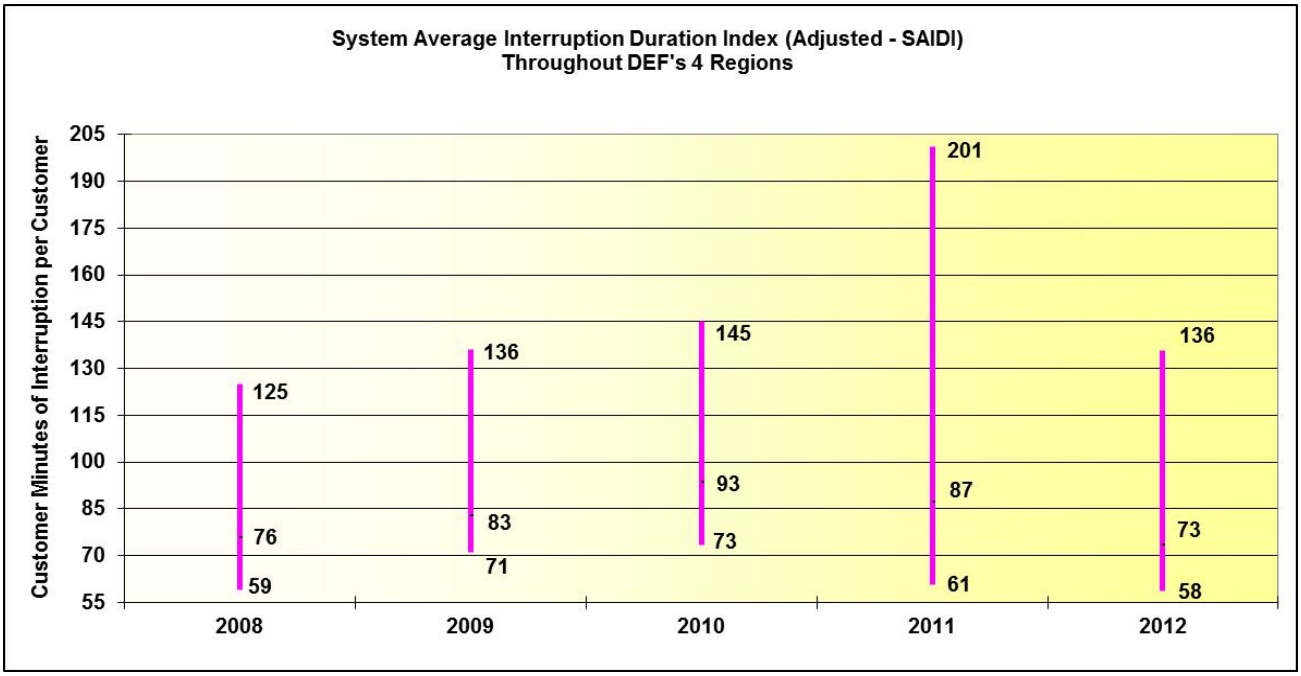
The least reliable overall results seem to fluctuate between FPL's different service areas, as do the best service reliability results. The 2012 report shows the system indices for most of the distribution reliability metrics are lower or better than the 2011 results. The system index for the Three-year Percentages of Multiple Feeder Outage Events is the only one that is higher than the 2011 results. FPL reports that the 2012 improved reliability results were do to its targeted reliability initiatives. FPL's distribution management team review several daily reports, providing detailed information, to capture lessons learned and identify areas for improvement. With the aid of advanced statistical applications, FPL attempts to identify reliability trends and root causes, and measure program benefits.

DUKE ENERGY FLORIDA: ADJUSTED DATA

Figure 3-9 charts the adjusted SAIDI recorded across DEF's system and depicts a decrease in the highest, average and lowest values for 2012. DEF reported that in 2012, one tornado, three tropical storms, and one hurricane affected its service territory. DEF notes that the improved performance is a result of "reliability projects including, but not limited to, small wire upgrades, storm hardening, and pole replacements."[17]

DEF's service territory is comprised of four regions: North Coastal, South Coastal, North Central, and South Central. **Figure 3-9** illustrates that the North Coastal region continues to report the poorest SAIDI over the last five years, fluctuating between 125 minutes and 201 minutes. While the South Coastal and South Central regions have the best or lowest SAIDI for the same period. The North Coastal region is rural and has more square miles when compared to the other regions. It is also served by predominantly long circuits with approximately over 7,700 miles of overhead and underground main circuits. DEF reported that these factors result in higher exposure to outage causes and higher reliability indices.

Figure 3-9. SAIDI ACROSS DEF'S FOUR REGIONS (ADJUSTED)



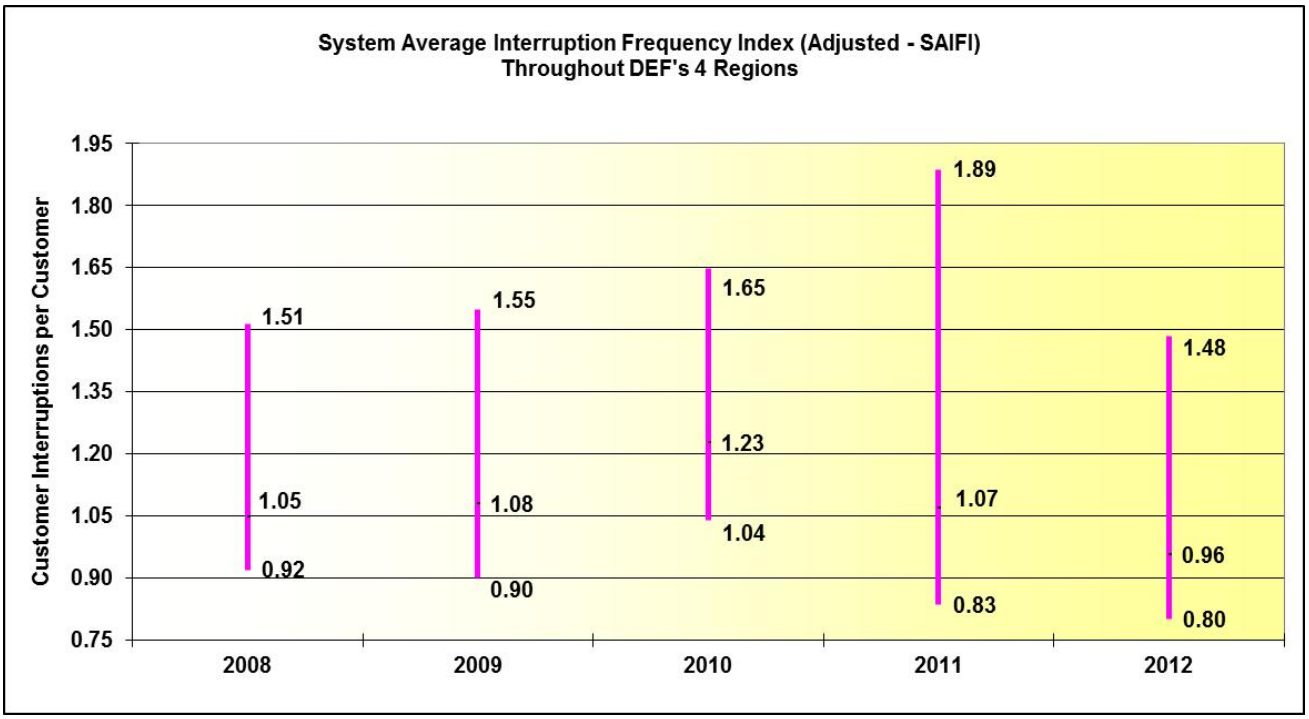
DEF's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIDI	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIDI	South Coastal	South Central	South Central	South Central	South Coastal

[17] Overall Reliability Performance – 2012, page 3, DEF 2012 Reliability Report filed March 1, 2013.

Figure 3-10 shows the adjusted SAIFI across DEF's system. The maximum SAIFI index is trending upward even though there was a 22 percent decrease in 2012. The minimum and average SAIFI indexes are trending downward. The South Central region continues to have the lowest number of interruptions, while the North Coastal region continues to have the highest number of interruptions.

Figure 3-10. SAIFI ACROSS DEF'S FOUR REGIONS (ADJUSTED)

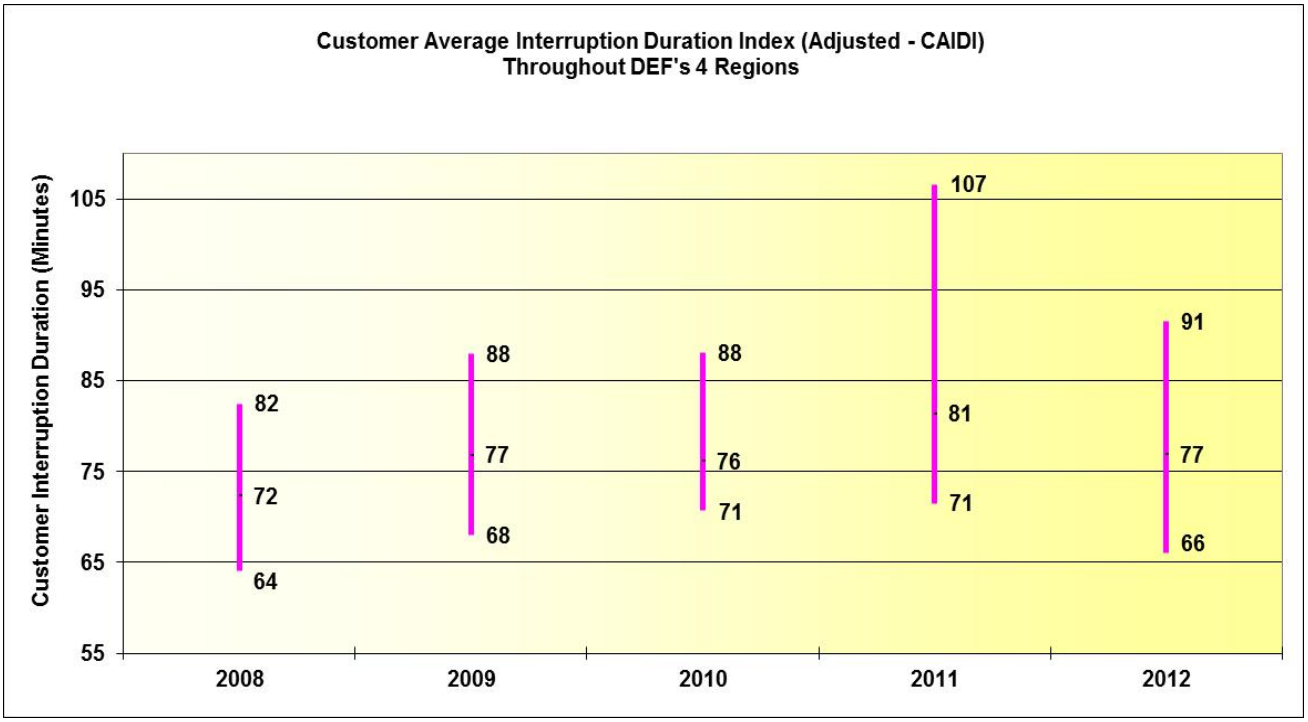


DEF's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIFI	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIFI	South Coastal	South Central	South Central	South Central	South Central

Figure 3-11 illustrates the CAIDI for DEF's four regions. DEF's adjusted CAIDI is trending upward from 72 minutes in 2008 to 77 minutes in 2012 even though there was a 5 percent decrease from 2011 to 2012. The North Coastal region has continued to have the highest CAIDI level for the past five years, but is showing improvement with a 15 percent decrease from 2011 to 2012. The South Coastal and South Central regions have maintained the lowest CAIDI level during the same period.

Figure 3-11. CAIDI ACROSS DEF'S FOUR REGIONS (ADJUSTED)



DEF's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CAIDI	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CAIDI	South Coastal	South Coastal	South Central	South Coastal	South Coastal

Figure 3-12 is the average length of time DEF spends restoring customers affected by outage events, excluding hurricanes and certain other outage events. This is displayed by the index L-Bar in the graph below. The data demonstrates an overall 7 percent increase of outage durations since 2008, and a 6 percent decrease from 2011 to 2012. DEF's overall L-Bar index is trending upward, indicating that DEF is still spending a longer time restoring service from outage events even though there was a decrease in the L-Bar value from last year.

Figure 3-12. DEF'S AVERAGE DURATION OF OUTAGES (ADJUSTED)

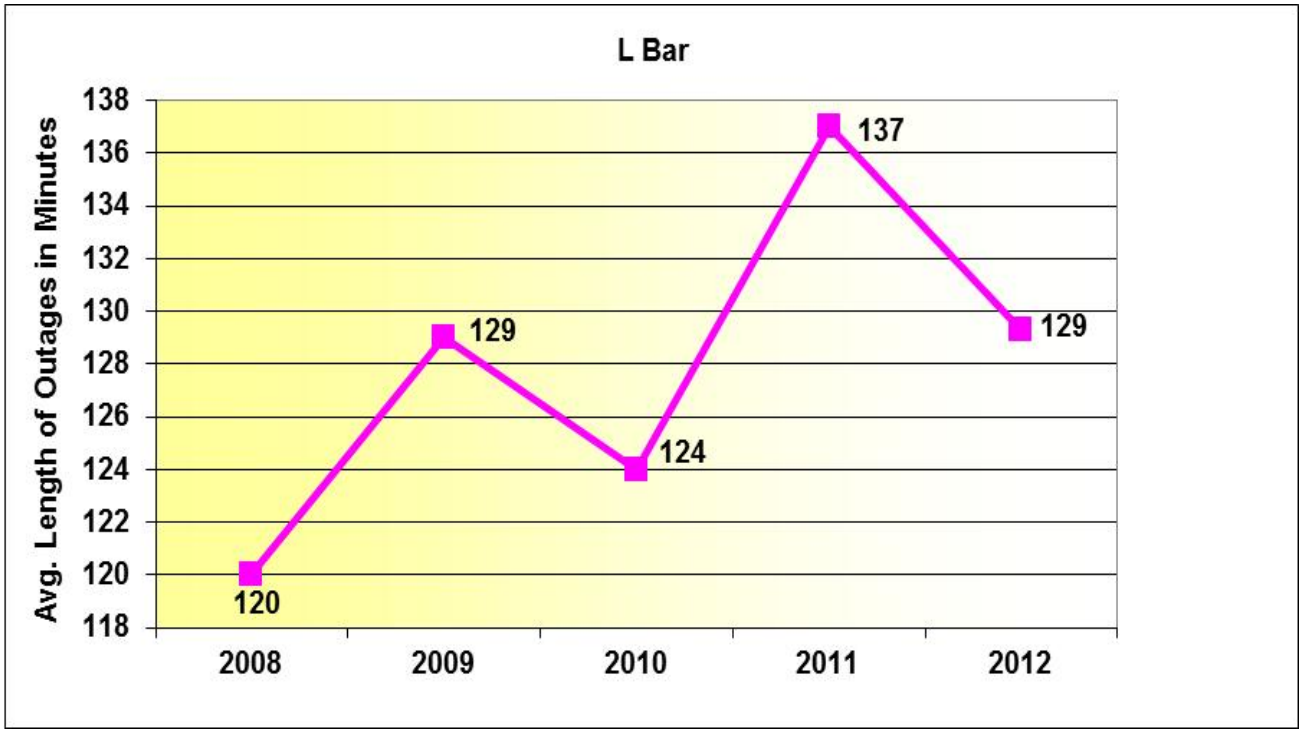
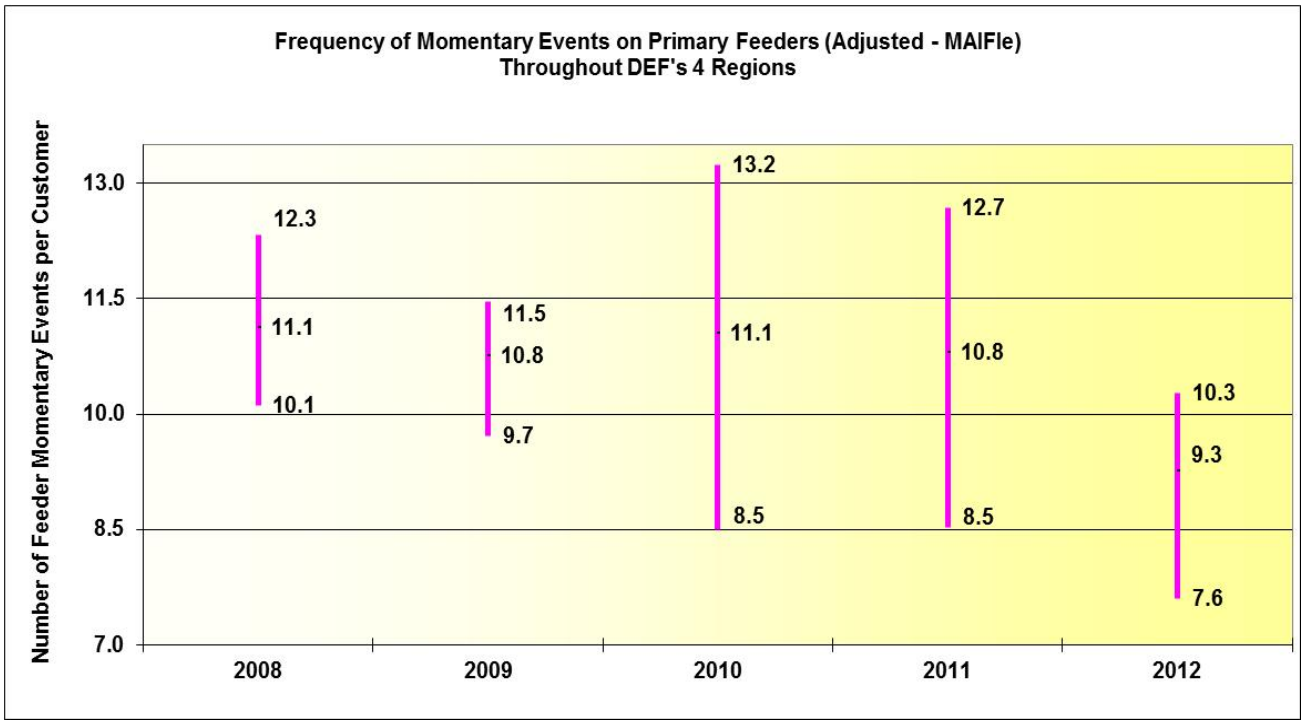


Figure 3-13 illustrates the frequency of momentary events on primary circuits for DEF's customers recorded across its system. A review of the supporting data suggests that the MAIFIe results between 2008 and 2012 appear to be trending downward showing improvement. The best (lowest) results are distributed among the North Central and South Central regions. The South Coastal region appears to have the worst (highest) results for the last five years, even though there was a 19 percent decrease from 2011 to 2012.

Figure 3-13. MAIFIe ACROSS DEF'S FOUR REGIONS (ADJUSTED)

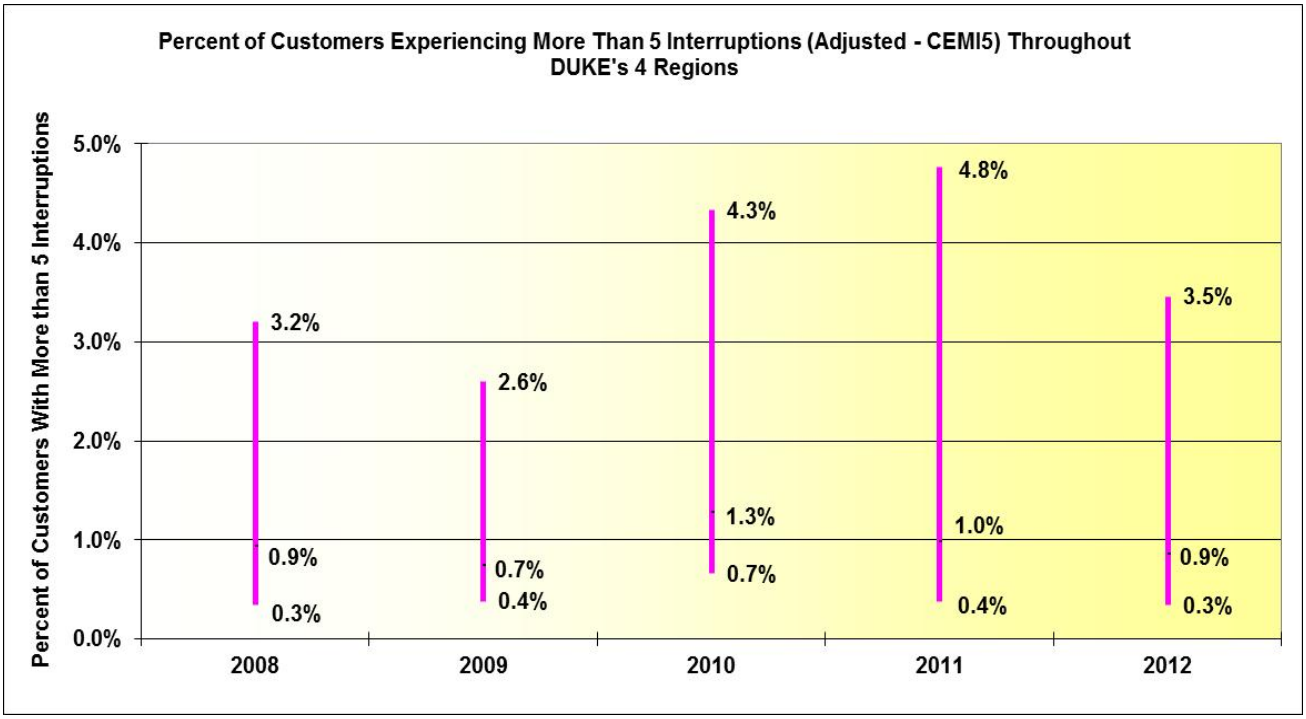


DEF's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest MAIFIe	South Coastal	South Coastal	South Coastal	South Coastal	South Coastal
Lowest MAIFIe	North Central	South Central	South Central	South Central	South Central

Figure 3-14 charts the percentage of DEF's customers experiencing more than five interruptions over the last five years. DEF reported a decrease (improvement) in the average CEMI5 performance from 1.0 percent in 2011 to 0.9 percent in 2012. Even though there was a decrease in the percentage from 2011 to 2012, the average CEMI5 trend line is remaining relatively flat over the past five years. The South Central and South Costal regions continue to have the lowest reported percentage for all of DEF's regions and the North Coastal region continues to have the highest reported percentage.

Figure 3-14. CEMI5 ACROSS DEF'S FOUR REGIONS (ADJUSTED)



DEF's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CEMI5	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CEMI5	South Coastal	South Coastal	South Central	South Coastal	South Coastal

Figure 3-15 shows the fraction of multiple occurrences of feeders using a three-year and five-year basis. During the period of 2008 to 2012, the five-year fraction of multiple occurrences is trending slightly upward as the three-year fraction of multiple occurrences is trending slightly downward. The Three Percent Feeder Report lists the top 3 percent of feeders with the most feeder outage events. The fraction of multiple occurrences is calculated from the number of recurrences divided by the number of feeders reported.

Staff noted that one of DEF's feeders was on the 3 percent Feeder Report for five years back-to-back and two feeders were on the report for two years consecutively. According to DEF, tree outages and the configuration of the circuit contributed to the vast majority of the outage causes for the feeder that was listed on the report for five years in succession. DEF plans to install three sets of switches that will allow some of this feeder's load to be transferred to an adjacent feeder during lengthy outages. DEF plans this upgrade in 2013. One of the feeders listed on the report two years consecutively is one of the longest feeders in the North Central region. DEF has replaced certain equipment on the feeder and will continue to trim trees around the feeder. For the other feeder listed on the report two years back-to-back, DEF replaced certain equipment and will upgrade the cable to a more robust cable which is more durable and will eliminate multiple splices.

Figure 3-15. DEF'S THREE PERCENT FEEDER REPORT (ADJUSTED)

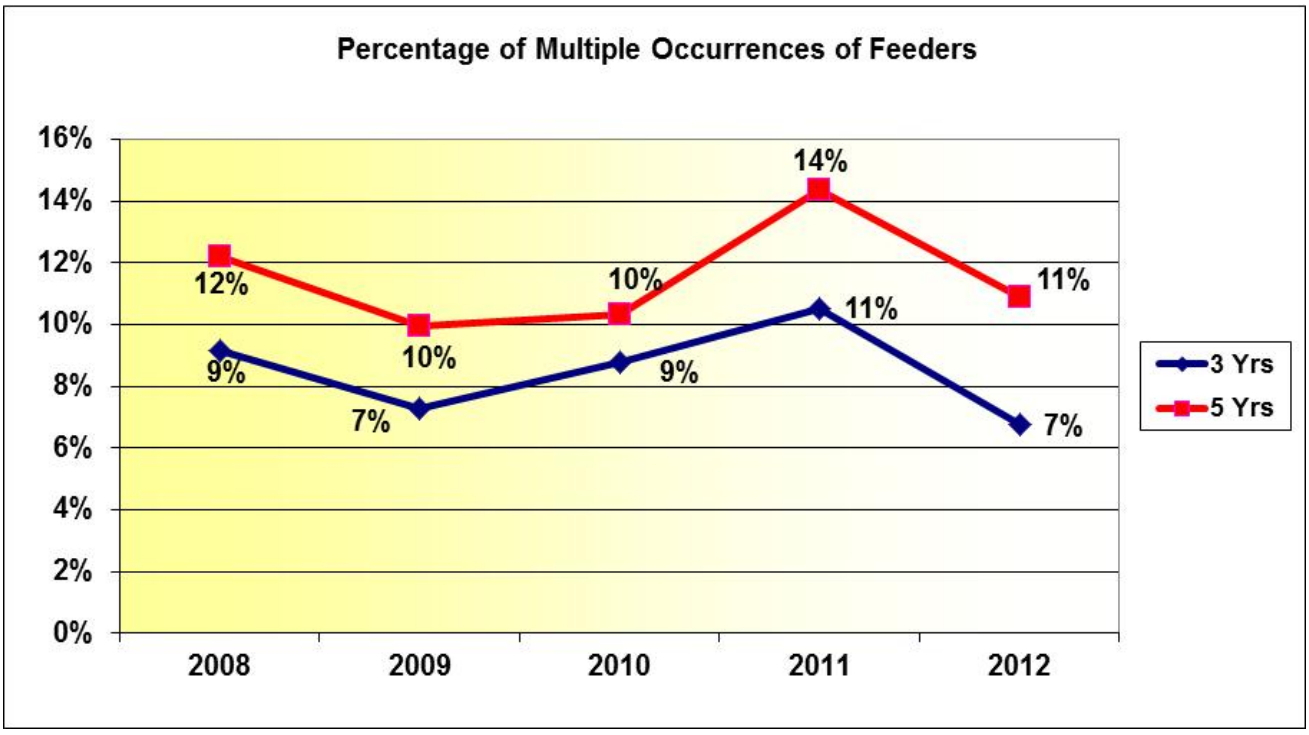
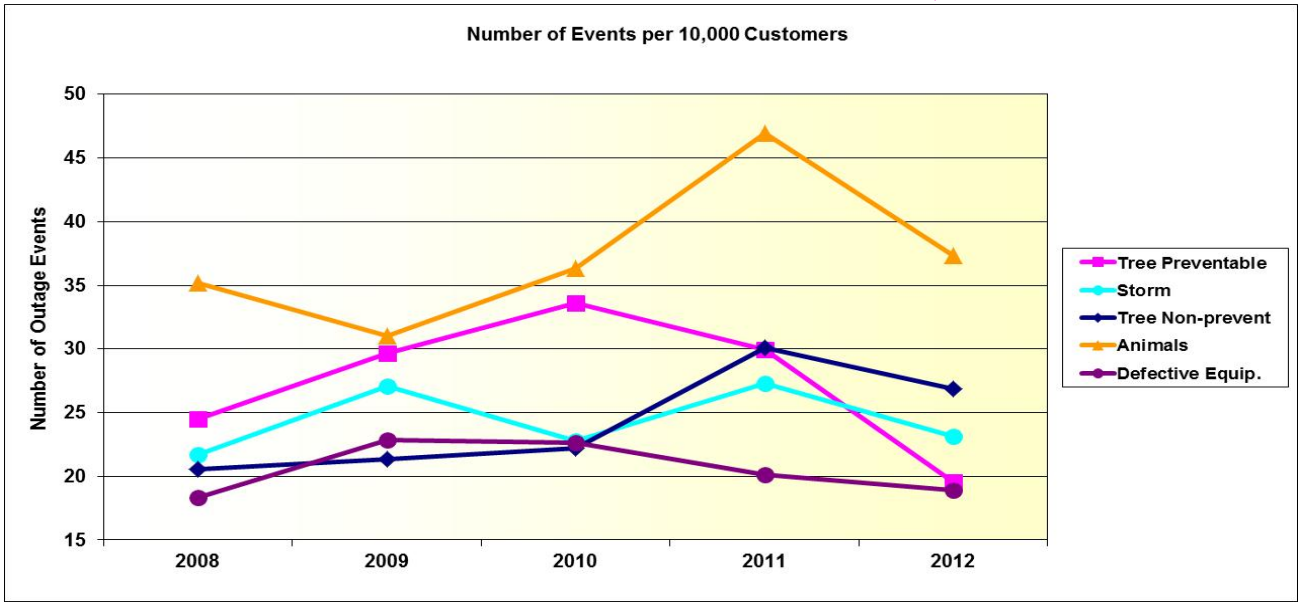


Figure 3-16 shows the top five causes of outage events on DEF's distribution system normalized to a 10,000-customer base. The figure is based on DEF's adjusted data and represents approximately 58 percent of the top ten causes of outage events that occurred during 2012. For the five-year period, the top five causes of outage events were animals (17 percent), tree non-preventable (12 percent), storm (11 percent), tree preventable (9 percent), and defective equipment (9 percent) on a cumulative basis. The outage events caused by animals, tree non-preventable, and storms are trending upward even though there were 21 percent, 11 percent, and 15 percent decreases, respectively, in the number of outages from 2011 to 2012. The outages caused by tree-preventable and defective equipment are both trending downward and there was a 35 percent and a 6 percent decrease, respectively, in the number of outages from 2011 to 2011.

Figure 3-16. DEF'S TOP FIVE OUTAGE CAUSES (ADJUSTED)



OBSERVATIONS: DEF'S ADJUSTED DATA

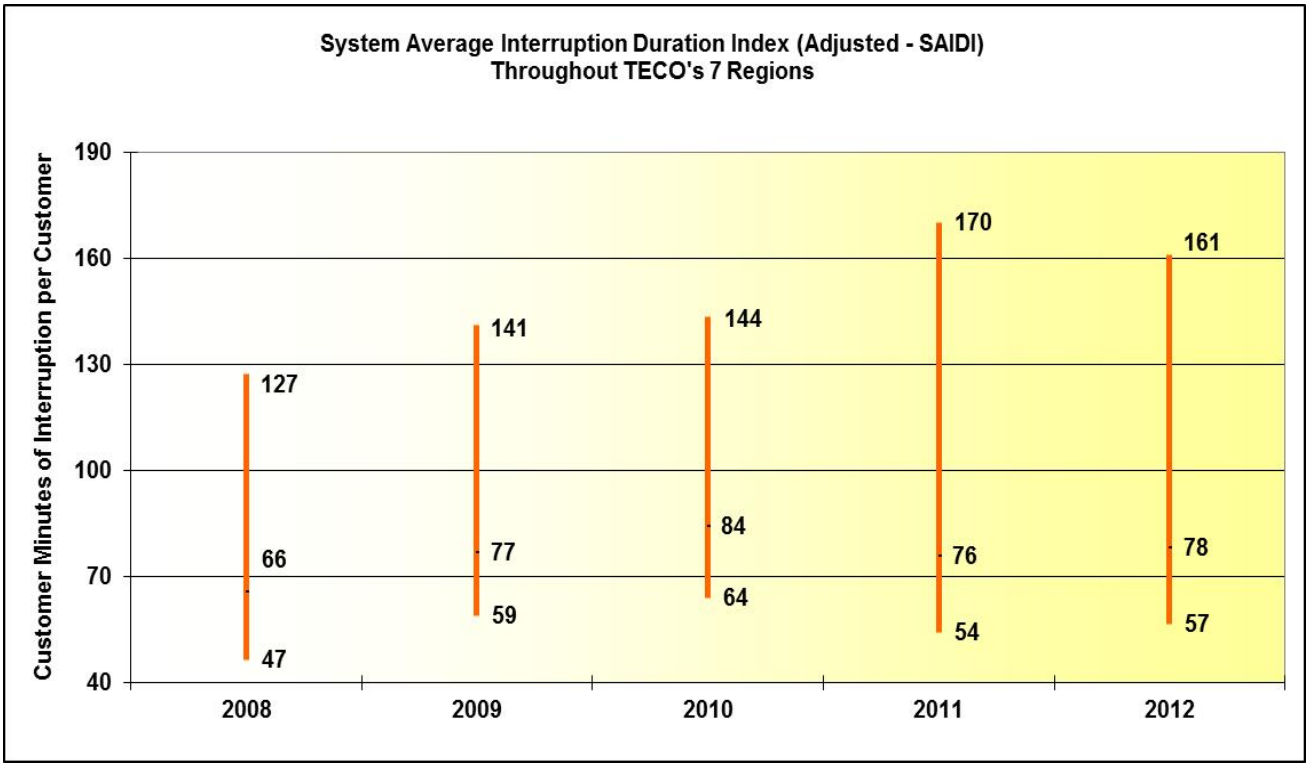
The trend for the SAIDI and CEMI5 indices are relatevilety flat as the trend for the SAIFI and MAIFIe are trending downward for the past five years. The CAIDI, L-Bar and the Five-year Percent of Multiple Feeder Outage Events are all trending upward for the five year period. Most of the reliability indices did have decreases from 2011 to 2012. The Three-year Percent of Multiple Feeder Outage Events was the only index that had an increase from 2011 to 2012. The results of the North Coastal Region has continually demonstrated the highest (poorest) service reliability indices of the four regions within DEF for the past five years. The South Coastal and South Central regions continue to have the best SAIDI, SAIFI, and CAIDI results of the four regions within DEF for the last five years.

The North Coastal region is rural and has more square miles compared to DEF's other service territories. DEF has performed several reliability improvement projects in the North Coastal region during 2011 and 2012, which include installing new equipment, reconfiguring and rebuilding circuits, and converting overhead circuits to underground circuits. DEF has additional reliability projects planned for the North Coastal region in 2013.

TAMPA ELECTRIC COMPANY: ADJUSTED DATA

Figure 3-17 shows the adjusted SAIDI values recorded by TECO's system. Three of the seven TECO regions had an increase in SAIDI performance during 2012, with Plant City and Dade City having the highest SAIDI performance results for the five-year period of 2008 to 2012. The lowest SAIDI index for the seven regions appears to be trending upward. The average SAIDI index increased 3 percent from 2011 to 2012 and appears to be trending upward. The Central, Eastern, and Winter Haven regions recorded the lowest SAIDI indices for the five-year period. Dade City, Plant City, and South Hillsborough regions have the fewest customers and represent the most rural, lowest customer density per line mile in comparison to the other four TECO divisions.

Figure 3-17. SAIDI ACROSS TECO'S SEVEN REGIONS (ADJUSTED)

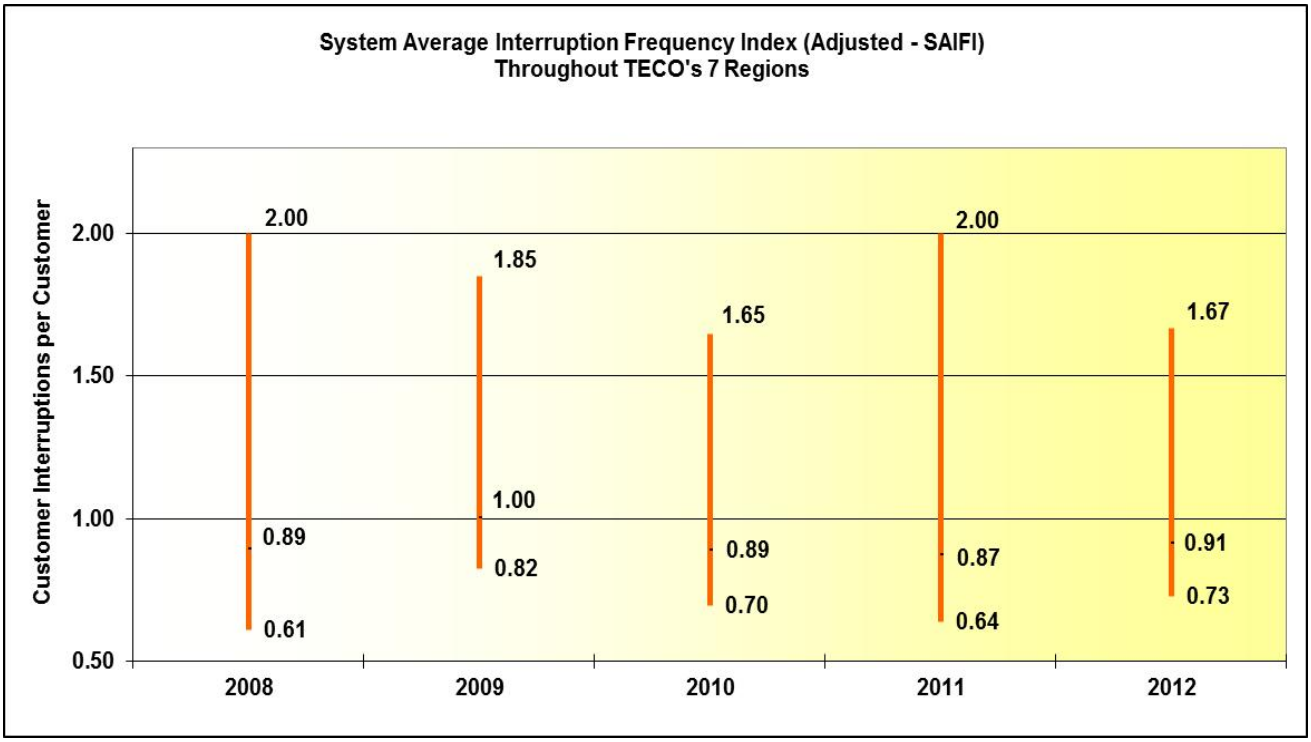


TECO's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIDI	Dade City	Plant City	Plant City	Dade City	Dade City
Lowest SAIDI	Central	Winter Haven	Central	Central	Eastern

Figures 3-18 illustrates TECO's adjusted frequency of interruptions per customer reported by the system. TECO's data represents a 4 percent increase in the SAIFI average from 0.87 interruptions in 2011 to 0.91 interruptions in 2012. TECO's Dade City region continues to have the highest frequency of service interruptions when compared to TECO's other regions. The maximum SAIFI index is trending downward and the minimum and average indices appears to be relatively flat.

Figure 3-18. SAIFI ACROSS TECO'S SEVEN REGIONS (ADJUSTED)

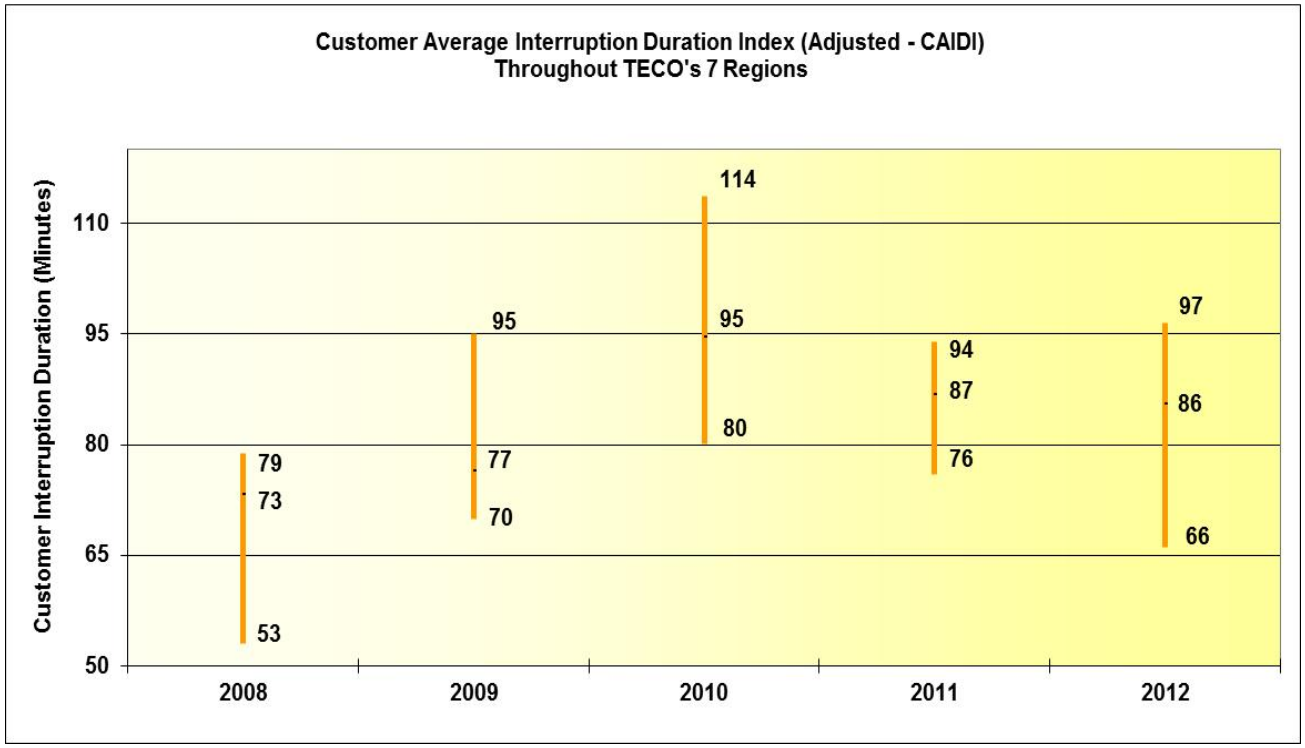


TECO's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIFI	Dade City	Dade City	Dade City	Dade City	Dade City
Lowest SAIFI	Central	Central	Eastern	Central	Eastern

Figure 3-19 charts the length of time that a typical TECO customer experiences an outage, which is known as CAIDI. The highest CAIDI minutes do not appear to be confined to any particular service area. Winter Haven has had the lowest (best) results for four out of the last five years. The average CAIDI continues to be trending upward at this time suggesting TECO's customers are experiencing outages that are lasting longer, even though there was a 1 percent decrease from 2011 to 2012.

Figure 3-19. CAIDI ACROSS TECO'S SEVEN REGIONS (ADJUSTED)



TECO's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CAIDI	Plant City	South Hillsborough	South Hillsborough	Western	Dade City
Lowest CAIDI	Winter Haven	Winter Haven	Winter Haven	Eastern	Winter Haven

Figure 3-20 denotes a 5 percent increase in outage durations for the period from 2011 to 2012. The L-Bar index appears to be trending upward suggesting an overall decline and longer restoral times. The L-Bar index for 2012 is the highest average duration of outages since 2008, once again indicating longer restoral times. The average length of time TECO spends restoring service to its customers affected by outage events, excluding hurricanes and other allowable excluded outage events is shown in the index L-Bar.

Figure 3-20. TECO'S AVERAGE DURATION OF OUTAGES (ADJUSTED)

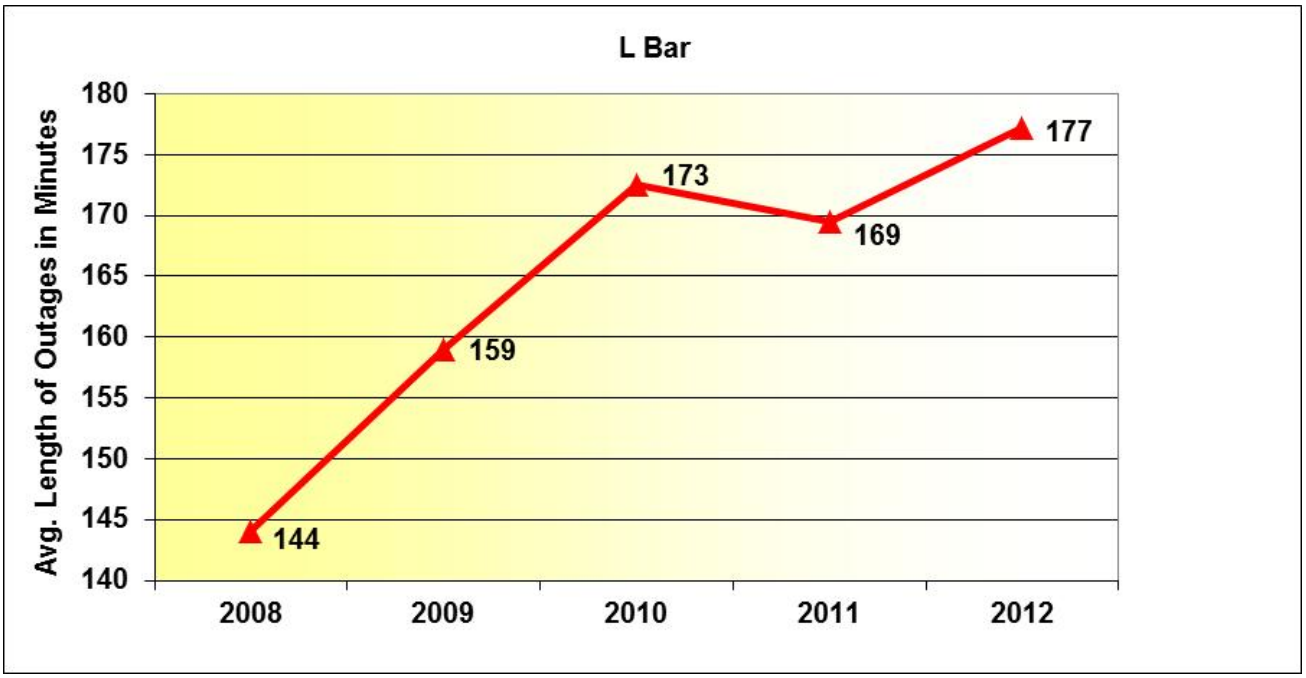
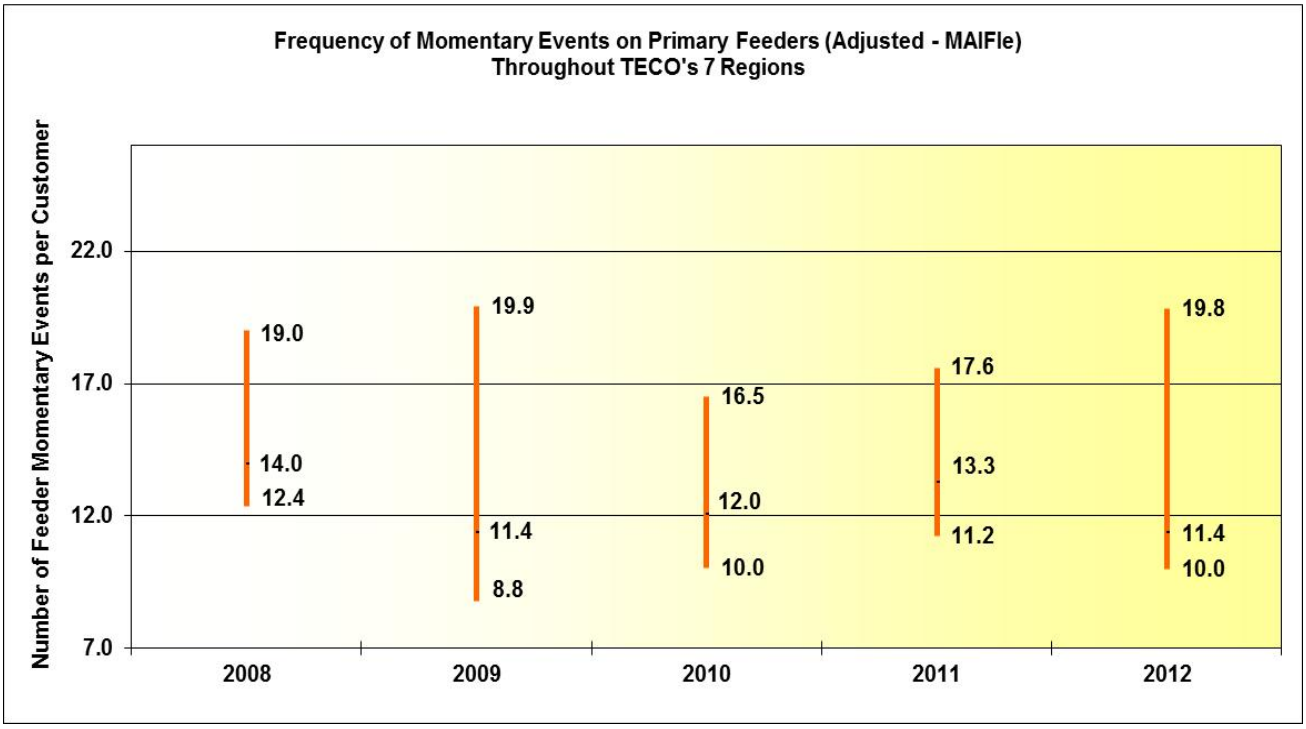


Figure 3-21 illustrates TECO's number of momentary events on primary circuits per customer recorded across its system. In 2012, the MAIFIe performance improved over the 2011 results in all divisions except Dade City and Plant City. The average MAIFIe decreased 14 percent from 2011 to 2012. **Figure 3-21** shows a downward trend for the average MAIFIe, which suggests improvement over the five-year period of 2008 to 2012.

Figure 3-21. MAIFIe ACROSS TECO'S SEVEN REGIONS (ADJUSTED)

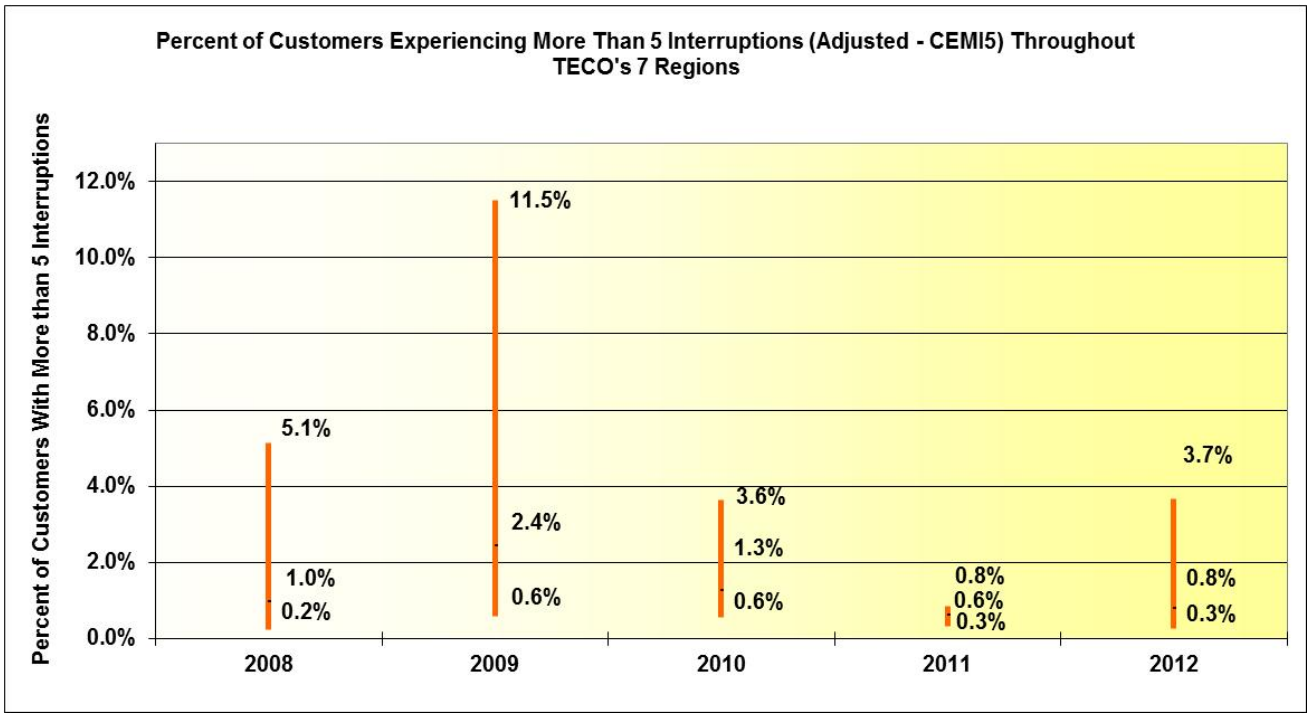


TECO's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest MAIFIe	Plant City	Plant City	Dade City	Plant City	Plant City
Lowest MAIFIe	Central	Central	Central	Central	Winter Haven

Figure 3-22 shows the percent of customers experiencing more than five interruptions. Four regions in TECO's territory experienced a decrease in the CEMI5 results for 2012. The Dade City, Plant City, and South Hillsborough regions experienced an increase in the CEMI5 index. Dade City reported the highest CEMI5 percentage for 2012. With TECO's results for this index varying for the past five years, the average CEMI5 index appears to be trending downward suggesting improvement, even though there was a 25 percent increase from 2011 to 2012.

Figure 3-22. CEMI5 ACROSS TECO'S SEVEN REGIONS (ADJUSTED)



TECO's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CEMI5	Dade City	Dade City	Winter Haven	Plant City	Dade City
Lowest CEMI5	Eastern	Eastern	Central	South Hillsborough	Western

Figure 3-23 represents an analysis of TECO's top 3 percent of problem feeders that have reoccurred (appeared on the Three Percent Feeder Report) on a five-year and three-year basis. The graph is developed using the number of recurrences divided by the number of feeders reported. The five-year average of outages per feeder decreased from 2011 to 2012, as well as the three-year average. Both the three-year and five-year averages of outages per feeder appear to be trending upward.

Figure 3-23. TECO'S THREE PERCENT FEEDER REPORT (ADJUSTED)

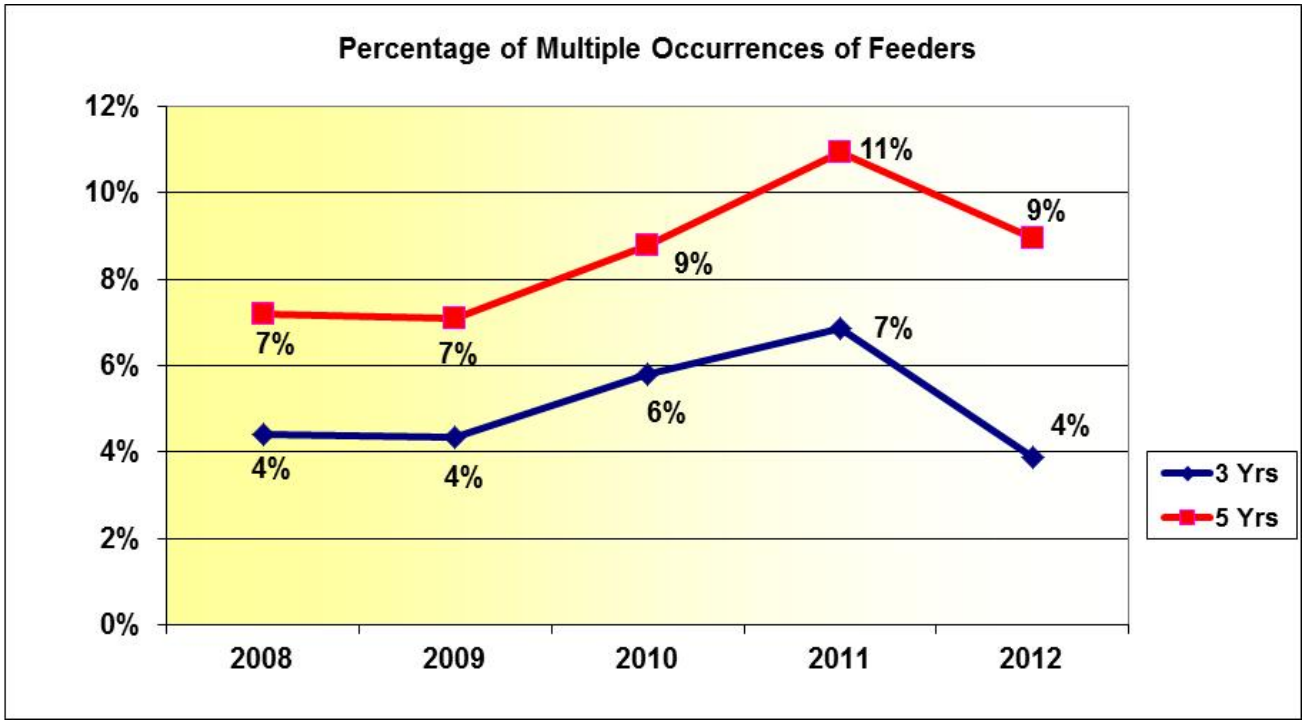
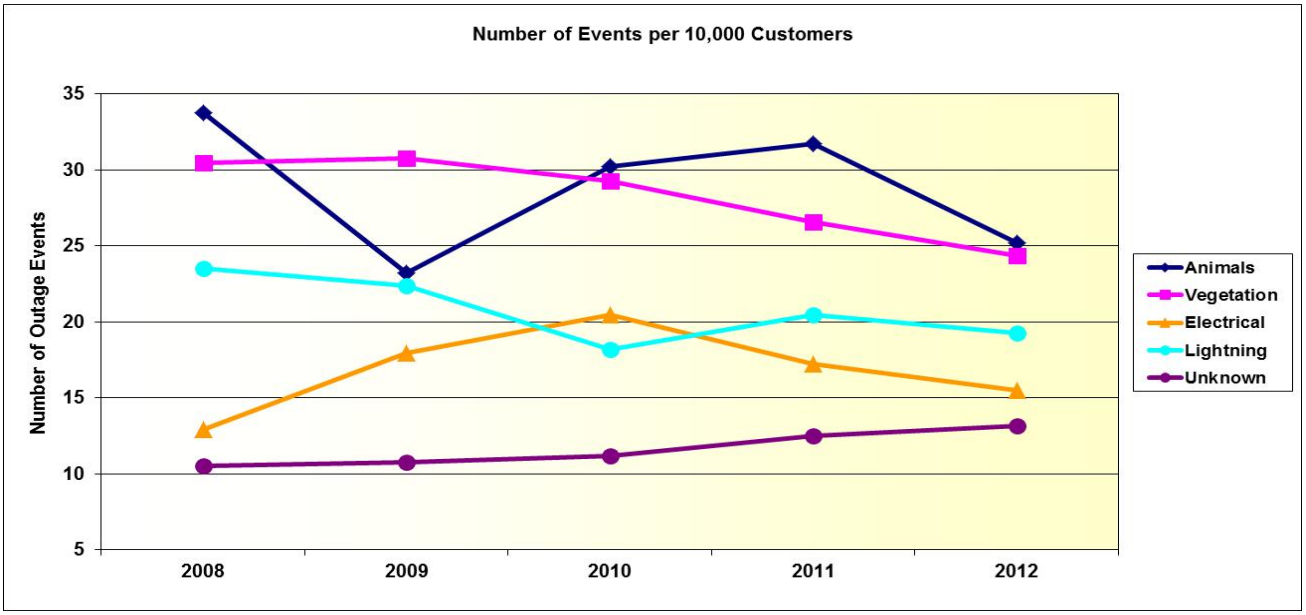


Figure 3-24 shows the top five causes of outage events on TECO's distribution system normalized to a 10,000-customer base. The figure is based on TECO's adjusted data of the top ten causes of outage events and represents 75 percent of the total outage events that occurred during 2012. For the five-year period, the five top causes of outage events included animals (19 percent), vegetation (19 percent), lightning (15 percent), electrical (12 percent), and unknown causes (10 percent) on a cumulative basis. Vegetation and animal causes continue to be the top two problem areas for TECO; however, the causes due to both animals and vegetation continue to decrease. The number of outages due to electrical issues, and unknown causes are trending upward while the number of outages due to animals, vegetation, and lightning are trending downward.

Figure 3-24. TECO'S TOP FIVE OUTAGE CAUSES (ADJUSTED)



OBSERVATIONS: TECO'S ADJUSTED DATA

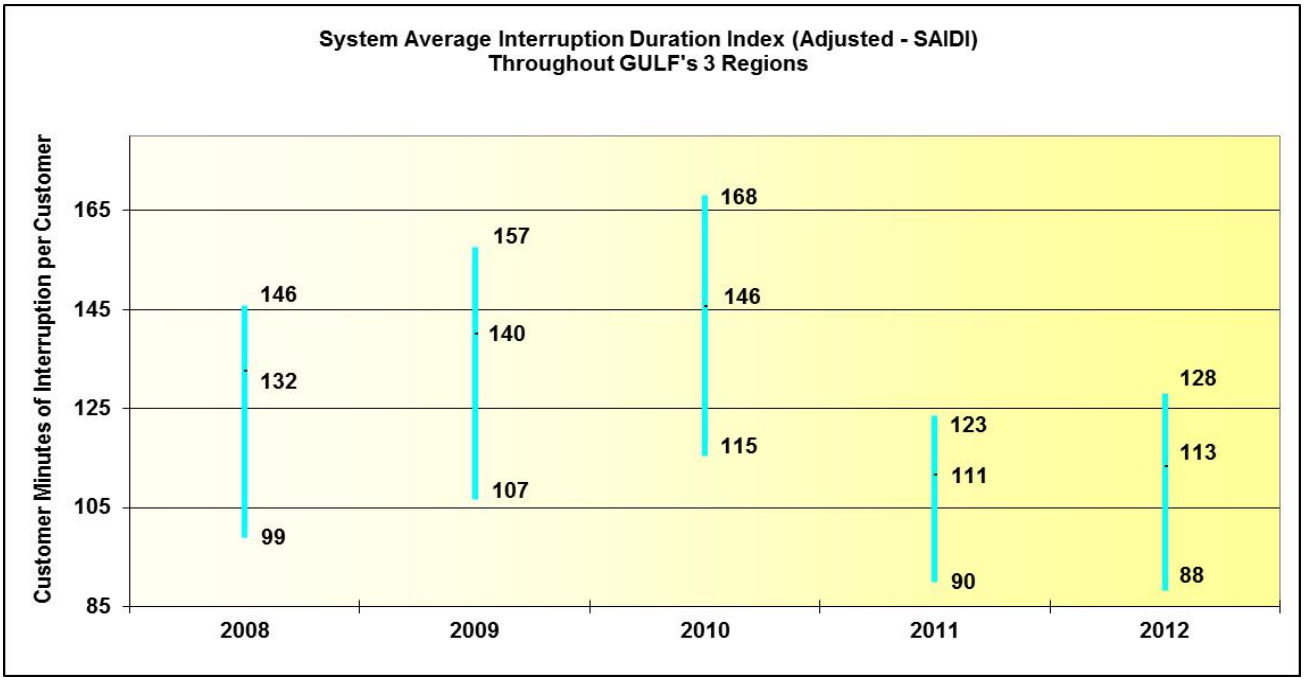
The indices for CAIDI, MAIFIe, Three-year Percent of Multiple Feeder Outage Events and Five-year Percent of Multiple Feeder Outage Events showed an improvement in performance compared to 2011 while the indices for SAIDI, SAIFI, CEMI5, and L-Bar showed a decline in performance. TECO reported that the decline in performance is attributed to relays that are temporarily disabled during non-storm months to reduce the number of momentary events; however, this increased the frequency of outages due to faults being cleared by other protective devices. It also appears that the Dade City region has been the region with the highest Reliability Indices for most of the five-year period of 2008 through 2012. TECO reported to staff that in the year 2013, the company plans to trim one-quarter of Dade City's distribution miles. Dade City's circuits will also be patrolled by mid-2013. This patrol will include visual inspections as well as an evaluation to ensure proper fuse coordination and phase balancing on the system. Necessary work to correct any deficiencies or encroaching vegetation found during the patrols is expected to be completed by October 2013. Although the completed maintenance work will be designed to have a positive impact on system performance, measured reliability improvements may not begin to be realized until the following year.

GULF POWER COMPANY: ADJUSTED DATA

Gulf's service area includes much of the Florida panhandle and covers approximately 7,550 square miles in eight Florida counties – Bay, Escambia, Holmes, Jackson, Okaloosa, Santa Rosa, Walton, and Washington. This geographic area is divided into three districts known as the Western, Central, and Eastern. The district distribution metrics and overall distribution system metrics are presented in the following figures.

Figure 3-25 illustrates Gulf's SAIDI minutes, or the interruption duration minutes on a system basis. The chart depicts an increase in the average SAIDI value by two minutes in Gulf's combined regions over the 2011 results. Gulf's 2012 average performance was 2 percent worse than the 2011 SAIDI results. The Western district which was impacted by a non-excludable severe thunderstorm has the highest SAIDI value for the past five years as the Central and Eastern districts have the best or lowest SAIDI values. The maximum, minimum, and average SAIDI indices are continuing to trend downward, showing improvements.

Figure 3-25. SAIDI ACROSS GULF'S THREE REGIONS (ADJUSTED)

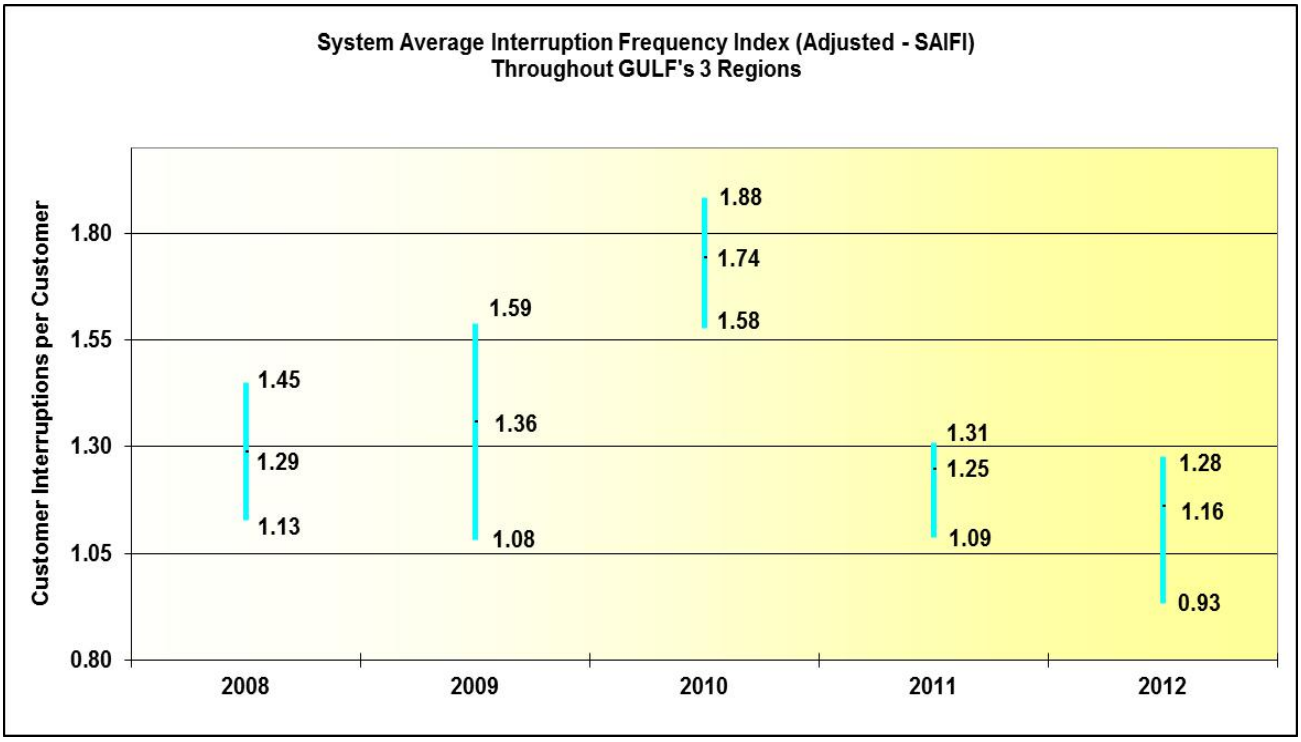


GULF's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIDI	Western	Western	Western	Western	Western
Lowest SAIDI	Central	Central	Central	Central	Eastern

Figure 3-26 illustrates that Gulf's SAIFI had a 7 percent decrease in 2012 when compared to 2011. Gulf's Western region had the highest SAIFI values in four of the last five years. The lowest values appear to fluctuate between the Central region and the Eastern region. The maximum, minimum, and average SAIFI values appear to be trending downward.

Figure 3-26. SAIFI ACROSS GULF'S THREE REGIONS (ADJUSTED)

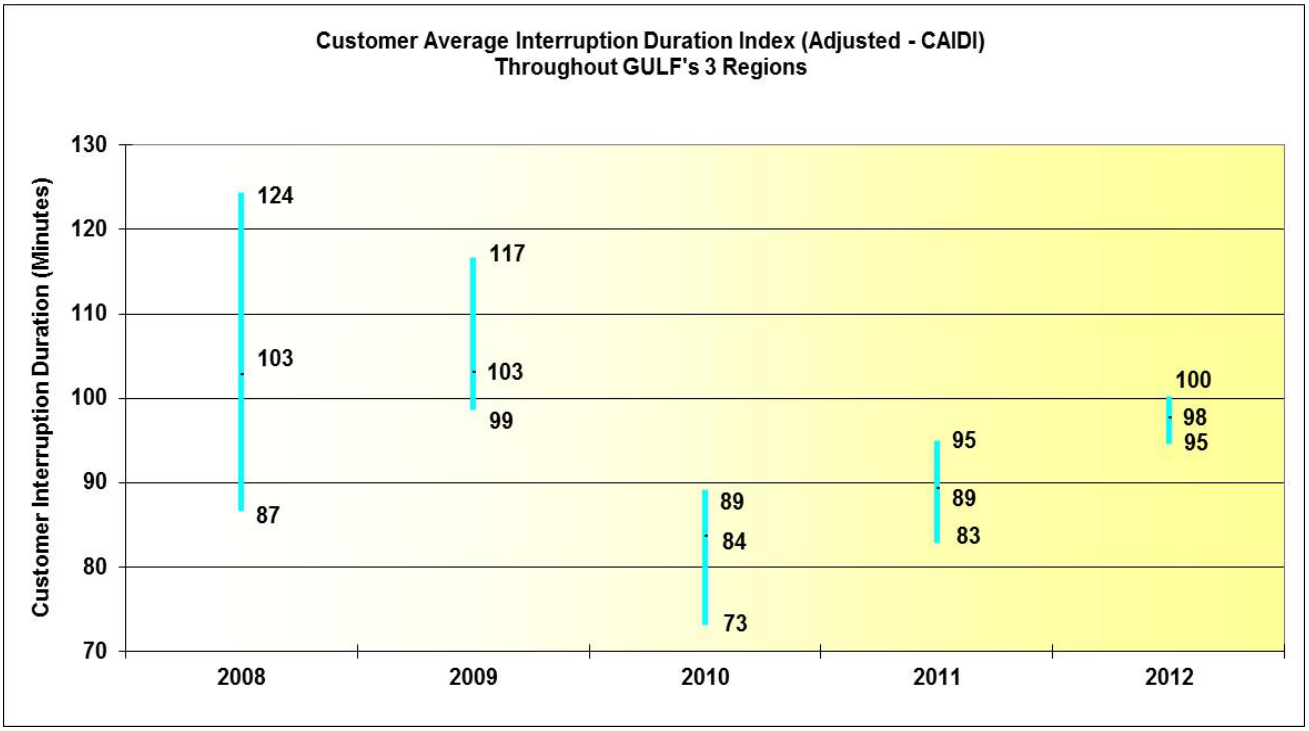


GULF's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIFI	Western	Western	Western	Eastern	Western
Lowest SAIFI	Eastern	Central	Central	Central	Eastern

Figure 3-27 is Gulf's adjusted CAIDI. For 2012, the average CAIDI is 98 minutes and represents a 9 percent increase from the 2011 value of 89 minutes. In 2012, the Western region had the highest CAIDI value, as the Central region had the lowest CAIDI. Staff notes that the average CAIDI value is trending downward, as the maximum CAIDI value is trending upward and the minimum CAIDI value is relatively flat.

Figure 3-27. CAIDI ACROSS GULF'S THREE REGIONS (ADJUSTED)



GULF's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CAIDI	Eastern	Eastern	Western	Western	Western
Lowest CAIDI	Central	Central	Central	Central	Central

Figure 3-28 illustrates Gulf's L-Bar or the average length of time Gulf spends recovering from outage events, excluding hurricanes and other allowable excluded outage events. Gulf's L-Bar showed a 9 percent increase from 2011 to 2012. Even though there was an increase in the L-Bar value for 2012, the data for the five-year period suggests that the L-Bar index is trending downward and Gulf is spending shorter times restoring service.

Figure 3-28. GULF'S AVERAGE DURATION OF OUTAGES (ADJUSTED)

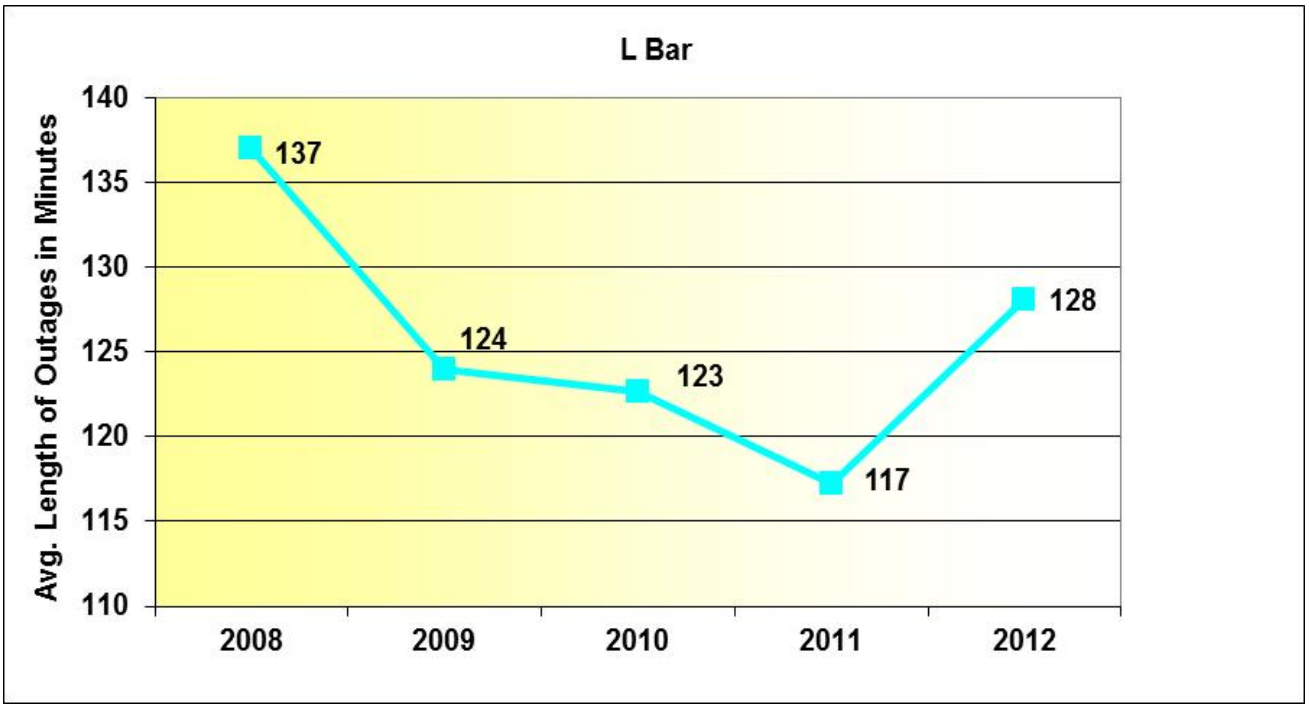
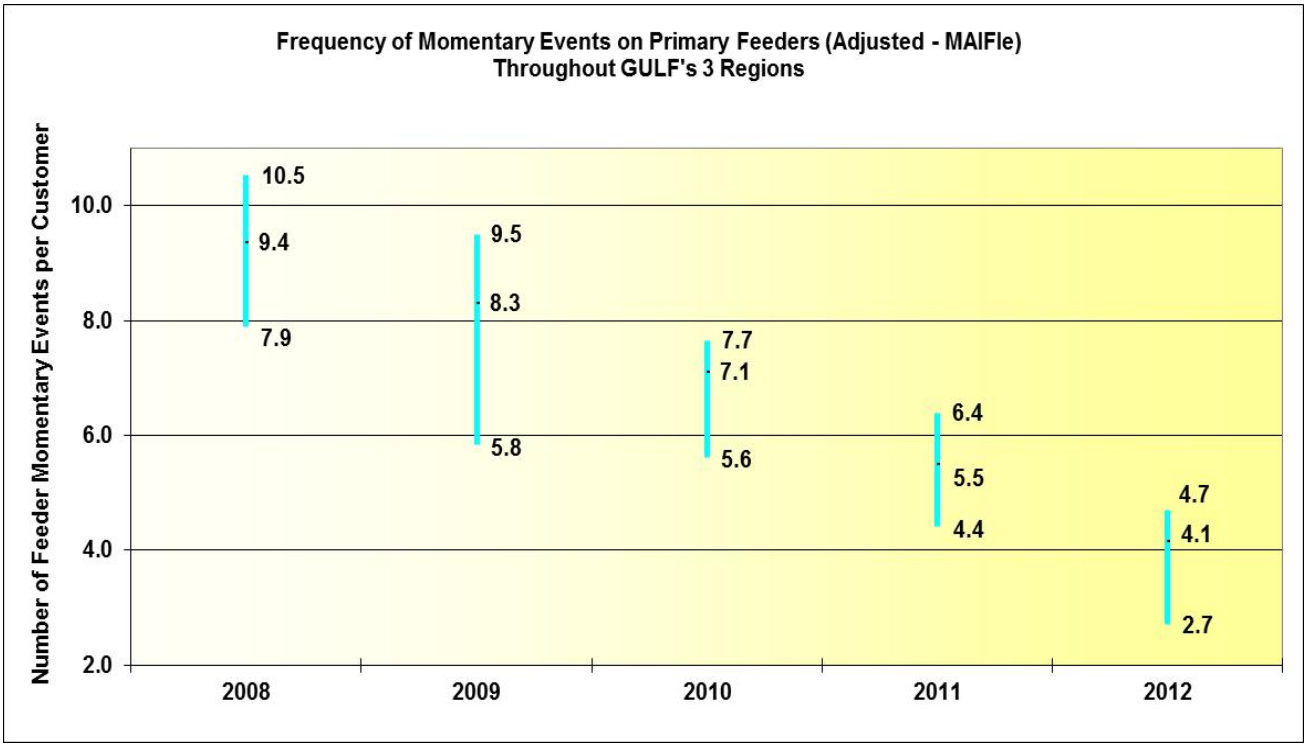


Figure 3-29 is the adjusted MAIFIe recorded across Gulf's system. The adjusted MAIFIe results by region show that the Eastern region once again had the lowest frequency of momentary events on primary feeders. The Western region has the highest MAIFIe index in 2012, with a 25 percent improvement when compared to 2011. The data suggests that the level of service reliability for the highest, average, and lowest MAIFIe are all continuing to trend downward, suggesting improvement.

Figure 3-29. MAIFIe ACROSS GULF'S THREE REGIONS (ADJUSTED)

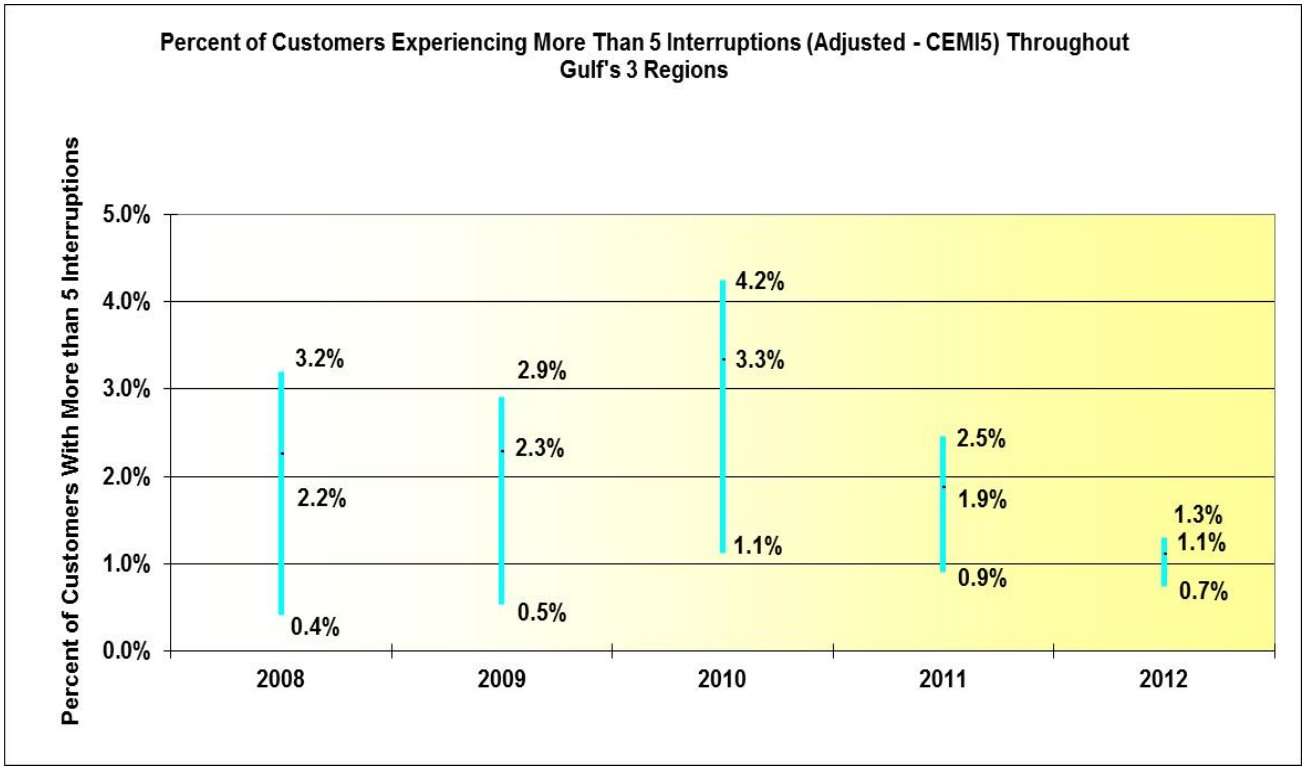


GULF's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest MAIFIe	Western	Western	Western	Central	Western
Lowest MAIFIe	Eastern	Eastern	Eastern	Eastern	Eastern

Figure 3-30 shows the highest, average, and lowest adjusted CEMI5 across Gulf's Western, Central, and Eastern regions. Gulf's 2012 results illustrate a decrease when compared to 2011. The lowest and highest CEMI5 values are trending downward over the five-year period of 2008 through 2012. The average CEMI5 appears to be trending downward suggesting that the percentage of Gulf's customers experiencing more than five interruptions is decreasing and improving.

Figure 3-30. CEMI5 ACROSS GULF'S THREE REGIONS (ADJUSTED)



GULF's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CEMI5	Western	Western	Eastern	Eastern	Western
Lowest CEMI5	Central	Central	Central	Central	Eastern

Figure 3-31 shows the multiple occurrences of feeders using the utility's Three Percent Feeder Report and is analyzed on a three-year and five-year basis. The five-year, multiple occurrences analysis showed an increase from the prior trend, which implies declining performance, as the three-year multiple occurrences analysis showed a decrease from the prior trend. The Three Percent Feeder Report is a listing of the top 3 percent of feeders that have the most feeder outage events. The supporting data illustrates that the five-year multiple occurrences have increased from 11 percent to 16 percent from 2011 to 2012 as the three-year multiple occurrences decreased from 15 percent to 7 percent. The five-year period of 2008 to 2012 indicates overall that the five-year index is trending upward. The three-year multiple occurrences index appears to be trending upward as well, even though there was a decrease in 2012.

Figure 3-31. GULF'S THREE PERCENT FEEDER REPORT (ADJUSTED)

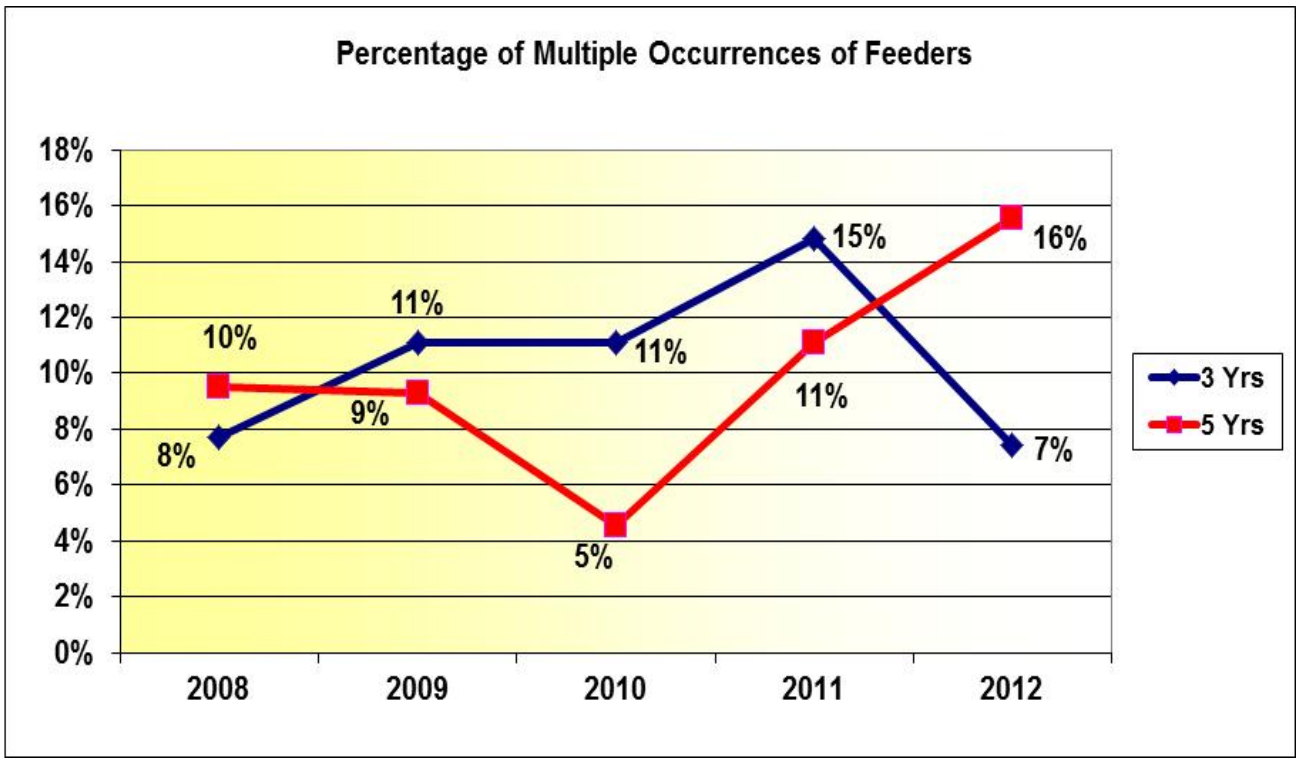
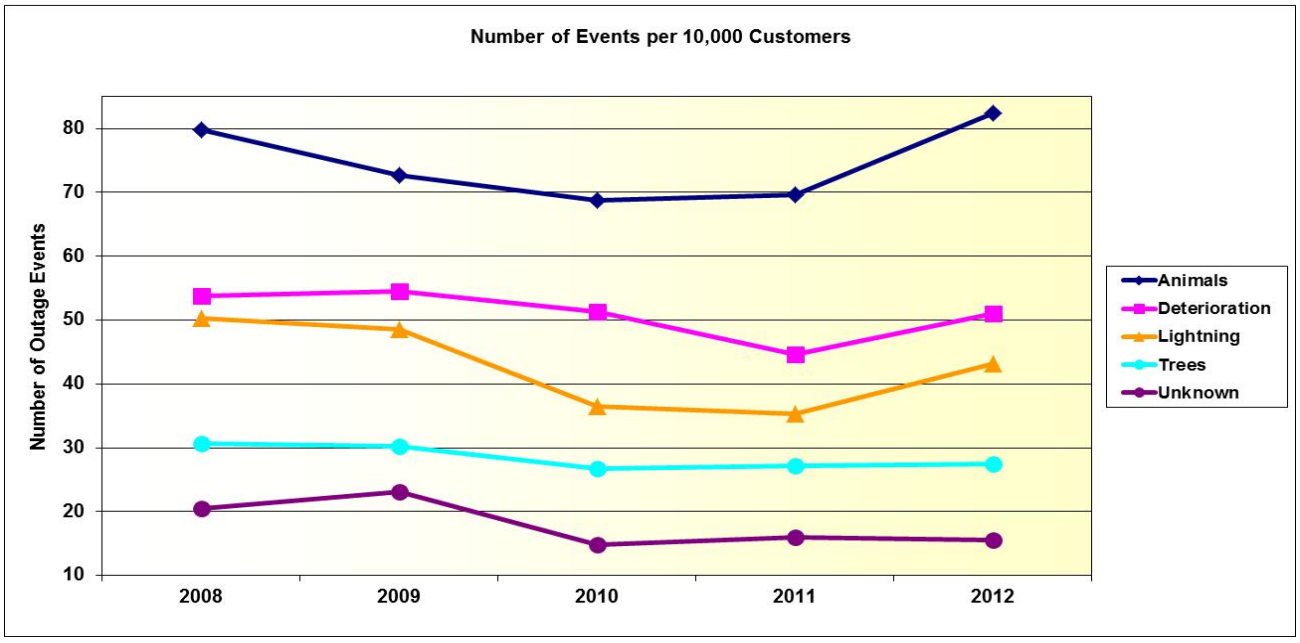


Figure 3-32 is a graph of the top five causes of outage events on Gulf's distribution system normalized to a 10,000-customer base. The figure is based on Gulf's adjusted data of the top ten causes of outage events and represents 87 percent of the total adjusted outage events that occurred during 2012. The top five causes of outage events were animals (33 percent), deterioration (20 percent), lightning (17 percent), trees (11 percent), and unknown causes (6 percent). The percentage of outages caused due to animals remains the highest cause of outages. As the number of outage events due to animals is remaining relatively flat, the number of outage events due to deterioration, lightning, unknown, and trees are trending downward.

Figure 3-32. GULF'S TOP FIVE OUTAGE CAUSES (ADJUSTED)



OBSERVATIONS: GULF'S ADJUSTED DATA

As Gulf's SAIDI and CAIDI results declined (increased) from 2011 to 2012, the SAIFI index improved, indicating reduced outages in frequency. There were also improvements seen in MAIFIe, CEMI5, and Three-year Percentage of Multiple Feeder Outages Events service reliabilty indices in 2012. The L-Bar and the Five-year Percentage of Multiple Feeder Outages Events results increased in 2012.

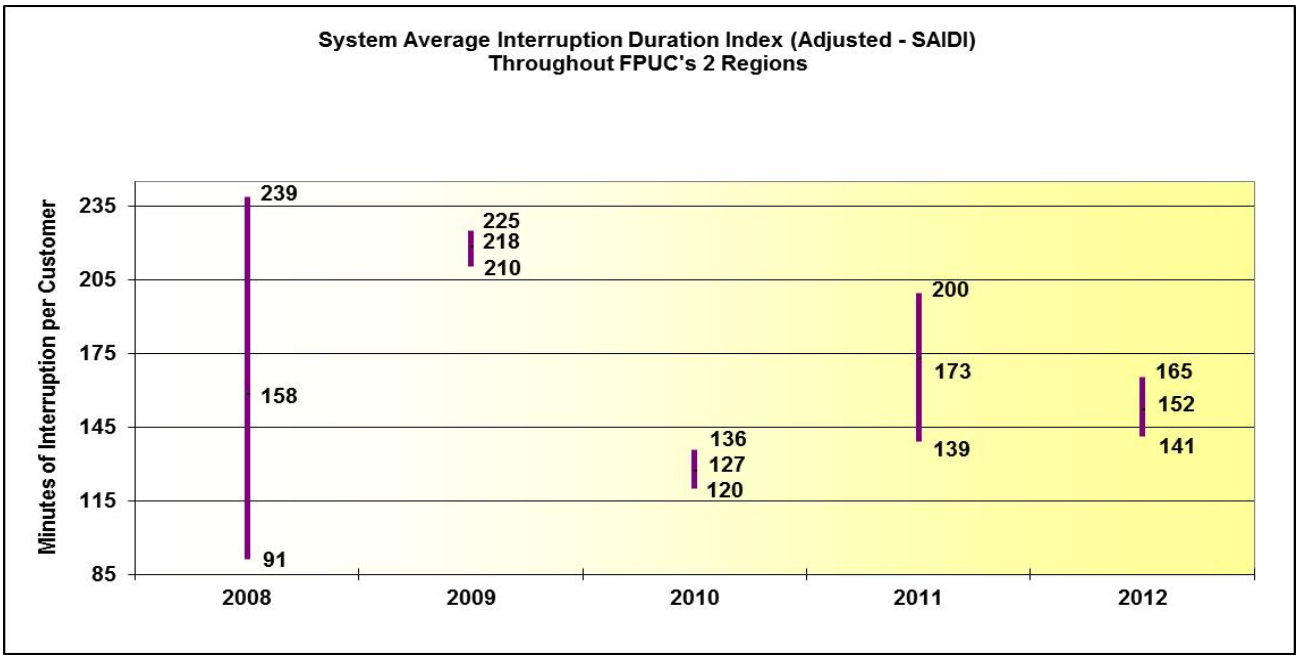
Gulf reported that the increase in SAIDI, CAIDI and L-Bar is primarily due to a non-excludable severe thrunderstorm in July 2012. The July storm effected the Western region, which is the region with the highest Reliability Indices for most of the five-year period of 2008 through 2012. Gulf reported that it has many initiatives underway to mitigate outages. For example, when poles are replaced, new animal and lightning protection equipment are installed. Infrared and visual inspections help Gulf identify and correct problems before they result in outages. Gulf installs animal protection where outages occur, on new installations, and when performing maintenance work. Additionally, Gulf is continuing to expand its distribution automation, update over current protection devices, and ensure that the devices are properly coordinated together.

FLORIDA PUBLIC UTILITIES COMPANY: ADJUSTED DATA

FPUC has two electric divisions, the Northwest (NW) Division, also referred to as Marianna and the Northeast (NE) Division, also referred to as Fernandina Beach. Each division's result is reported separately because the two divisions are 250 miles apart and not directly interconnected. Although the divisions may supply resources to support one another during emergencies, each division has diverse situations to contend with, making it difficult to compare the division's results and form a conclusion as to response and restoration time.

Figure 3-33 shows the highest, average, and lowest adjusted SAIDI values recorded by FPUC's system. The data shows the average SAIDI index is trending downward for the five-year period of 2008 to 2012. FPUC's 2012 Reliability Report notes that the reliability indicators continue to be heavily influenced by the weather and the small size of the territories.

Figure 3-33. SAIDI ACROSS FPUC'S TWO REGIONS (ADJUSTED)

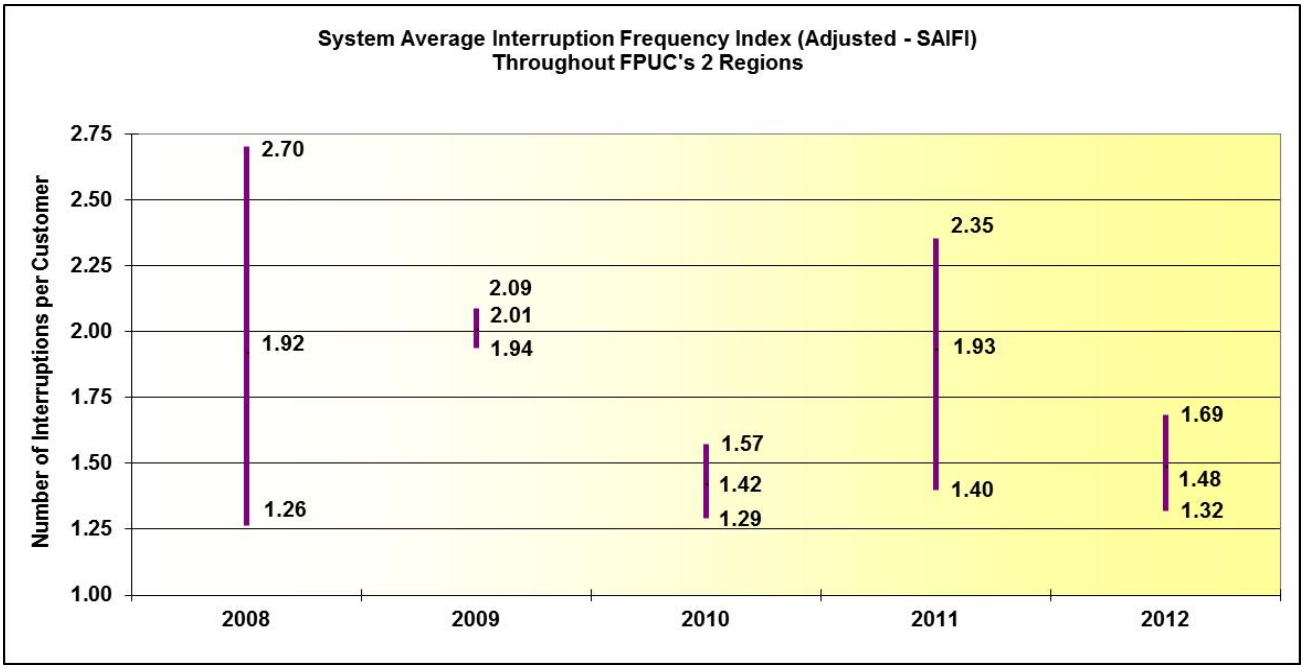


FPUC's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIDI	Marianna (NW)	Fernandina(NE)	Marianna (NW)	Fernandina(NE)	Marianna (NW)
Lowest SAIDI	Fernandina(NE)	Marianna (NW)	Fernandina(NE)	Marianna (NW)	Fernandina(NE)

Figure 3-34 shows the adjusted SAIFI across FPUC's two divisions. The data depicts a 23 percent decrease in the 2012 average SAIFI reliability index from 2011. The data for the maximum, minimum, and average SAIFI indices are all trending downward showing improvement in the index over the five-year period of 2008 to 2012.

Figure 3-34. SAIFI ACROSS FPUC'S TWO REGIONS (ADJUSTED)

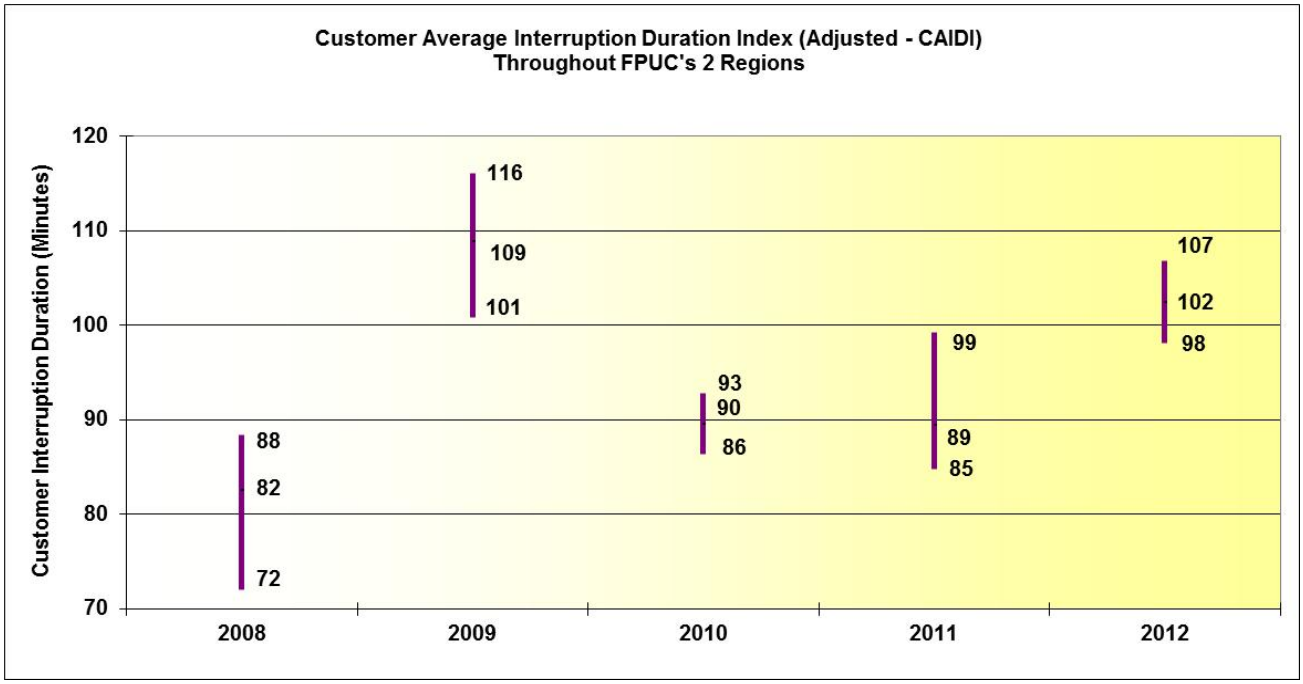


FPUC's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest SAIFI	Marianna (NW)	Marianna (NW)	Marianna (NW)	Fernandina(NE)	Marianna (NW)
Lowest SAIFI	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)	Marianna (NW)	Fernandina(NE)

Figure 3-35 shows the highest, average, and lowest adjusted CAIDI values across FPUC's system. FPUC's data shows a 13 percent increase in the 2012 reliability indices relative to 2011 values. For the past five years, the maximum CAIDI index, the minimum CAIDI index, and the average CAIDI index are continuing to trend upward.

Figure 3-35. CAIDI ACROSS FPUC'S TWO REGIONS (ADJUSTED)



FPUC's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2008	2009	2010	2011	2012
Highest CAIDI	Marianna (NW)	Fernandina(NE)	Fernandina(NE)	Marianna (NW)	Fernandina(NE)
Lowest CAIDI	Fernandina(NE)	Marianna (NW)	Marianna (NW)	Fernandina(NE)	Marianna (NW)

Figure 3-36 is the average length of time FPUC spends recovering from outage events (adjusted L-Bar). There was no change in the L-Bar value from 2011 to 2012. The data for the five-year period of 2008 to 2012 suggests that the L-Bar index is trending downward indicating FPUC is improving on the time to restore service.

Figure 3-36. FPUC'S AVERAGE DURATION OF OUTAGES (ADJUSTED)

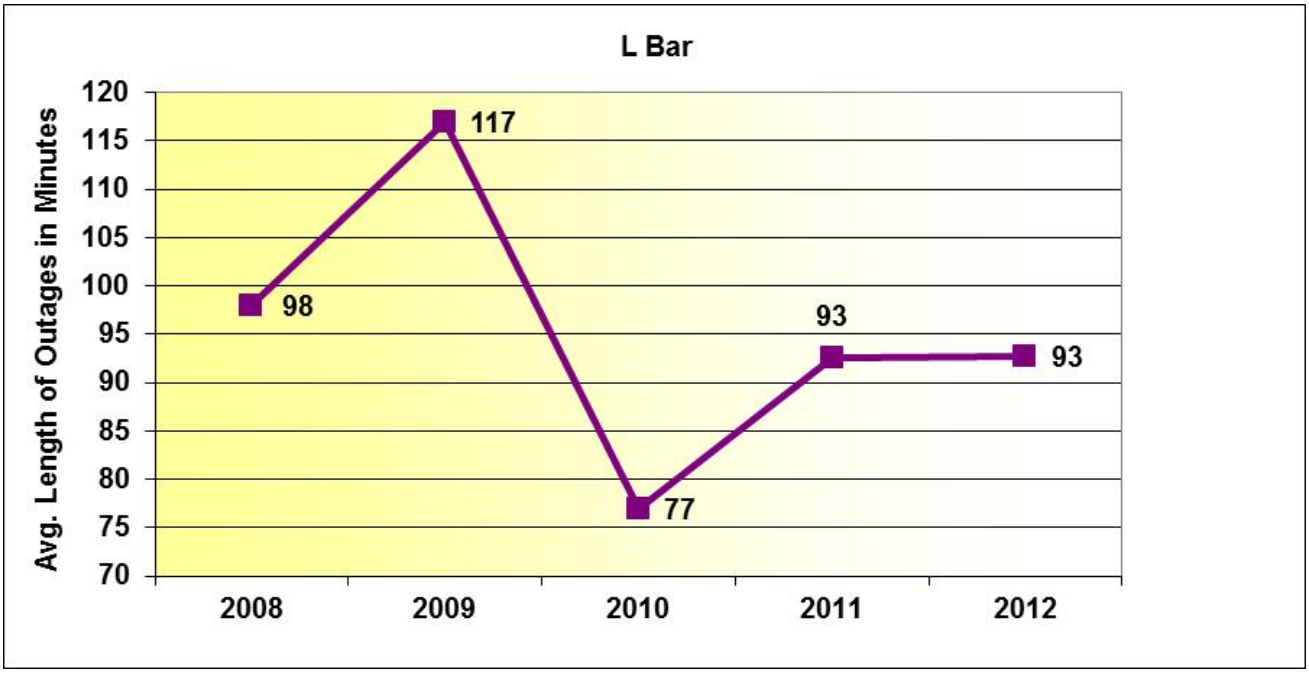
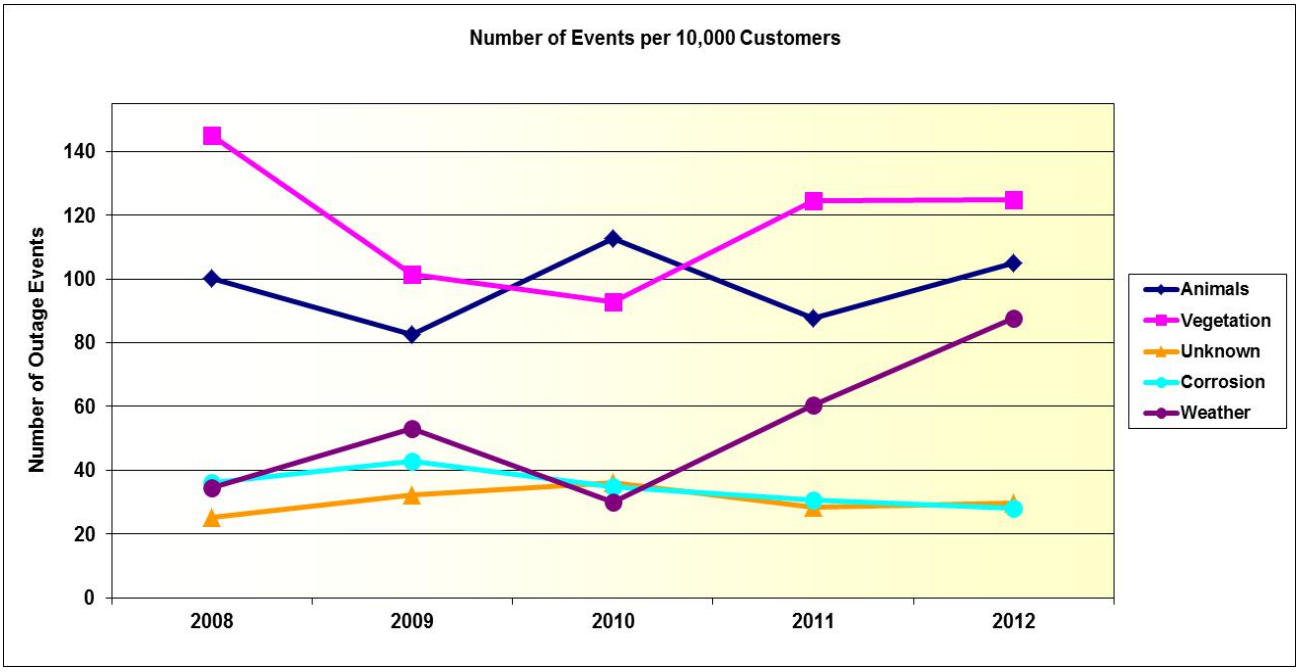


Figure 3-37 shows the top five causes of outage events on FPUC's distribution system normalized to a 10,000-customer base. The figure is based on FPUC's adjusted data of the top ten causes of outages. For 2012, the top five causes of outage events were vegetation (29 percent), animals (24 percent), weather (20 percent), unknown (7 percent), and corrosion (7 percent). These five factors represent 87 percent of the total adjusted outage causes in 2012. The causes by animals and weather are trending upwards and both causes did increase 17 percent and 32 percent from 2011 to 2012, respectively. The causes by vegetation and corrosion are trending downward. Vegetation had a 1 percent increase from 2011 to 2012, as corrosion had a 7 percent decrease. The unknown caused outages remain relatively flat over the five-year period of 2008 to 2012, even though there was a 5 percent increase from 2011 to 2012.

Figure 3-37. FPUC'S TOP FIVE OUTAGE CAUSES (ADJUSTED)



FPUC filed a Three Percent Feeder Report listing the top 3 percent of feeders with the outage events for 2012. FPUC has so few feeders that the data in the report has not been statistically significant. There were two feeders on the Three Percent Feeder Report, one in each division. The 2012 report listed one feeder from the 2011 report. The outage in 2012 was due to a severe thunderstorm and the outage in 2011 was due to a failed voltage regulator. FPUC reported that given that the feeder had an outage once each year, the company has not taken further action. However, FPUC will continue to monitor its performance.

OBSERVATIONS: FPUC'S ADJUSTED DATA

The SAIDI and SAIFI average indices have decreased compared to 2011, as the CAIDI average index increased. For the five-year period of 2008 to 2012, the average indices for SAIDI, SAIFI, and L-Bar are all trending downward as the average index for CAIDI is trending upward. FPUC reported that it continues to invest in infrastructure upgrades and it believes the upgrades have begun to show reliability improvement.

FPUC does not have to report MAIFIe or CEMI5 because Rule 25-6.0455, F.A.C., waives the requirement. The cost for the information systems necessary to measure MAIFIe and CEMI5 has a higher impact on small utilities compared to large utilities on a per customer basis.

SECTION IV. INTER-UTILITY RELIABILITY COMPARISONS

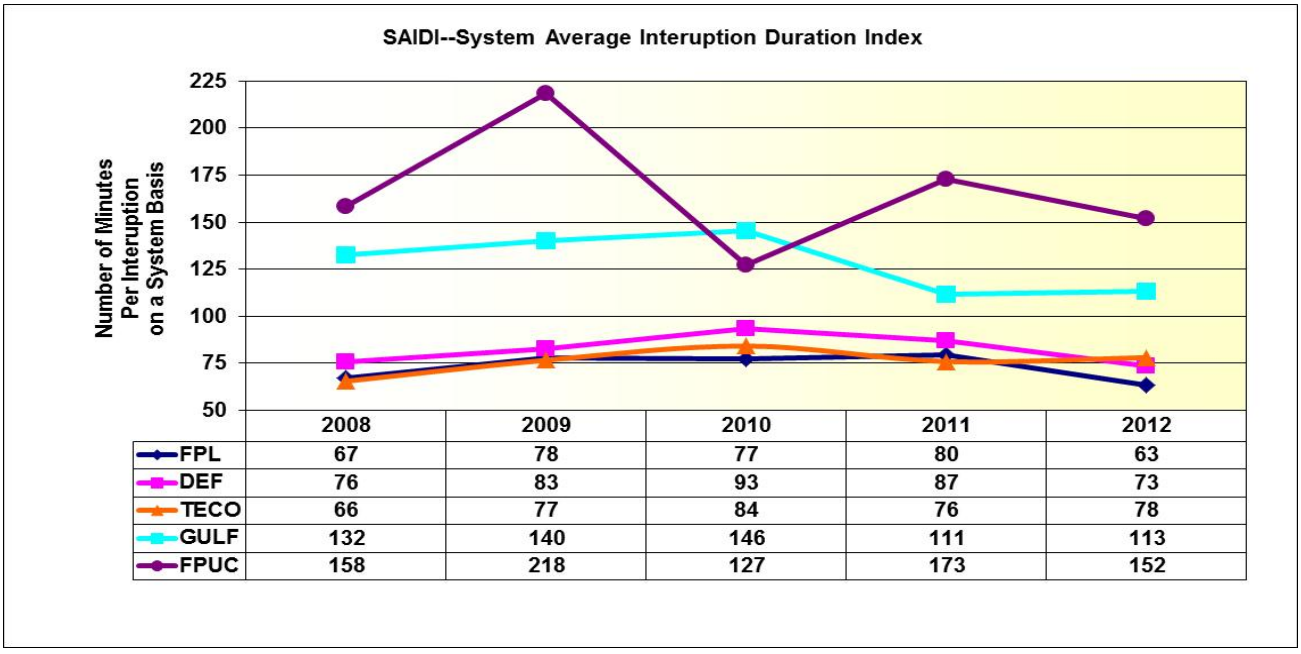
Section IV contains comparisons of the utilities' adjusted data for the various reliability indices that were reported. It also contains a comparison of the service reliability related complaints received by the Commission.

INTER-UTILITY RELIABILITY TREND COMPARISONS: ADJUSTED DATA

The inter-utility trend comparison focuses on a graphical presentation that combines all of the IOUs' distribution reliability indices for the years 2008 through 2012. **Figures 4-1** through **4-3** apply to all five utilities while **Figures 4-4 and 4-5** do not apply to FPUC because it is not required to report MAIFIe and CEMI5 due to the size of its customer base. The adjusted data is used in generating the indices in this report. It is based on the exclusion of certain events allowed by Rule 25-6.0455(4), F.A.C. Generalizations can be drawn from the side-by-side comparisons; however, any generalizations should be used with caution due to the differing sizes of the distribution systems, the degree of automation, and the number of customers. The indices are unique to each IOU.

Figure 4-1 represents the SAIDI and illustrates the average minutes of service interruption on a distribution system. This is the duration of an interruption per retail customer served within a specified area of service over a given period. It is determined by dividing the total Customer Minutes of Interruption (CMI) by total Number of Customers Served (C) for the respective area of service**.**

Figure 4-1. SYSTEM AVERAGE INTERRUPTION DURATION (ADJUSTED SAIDI)



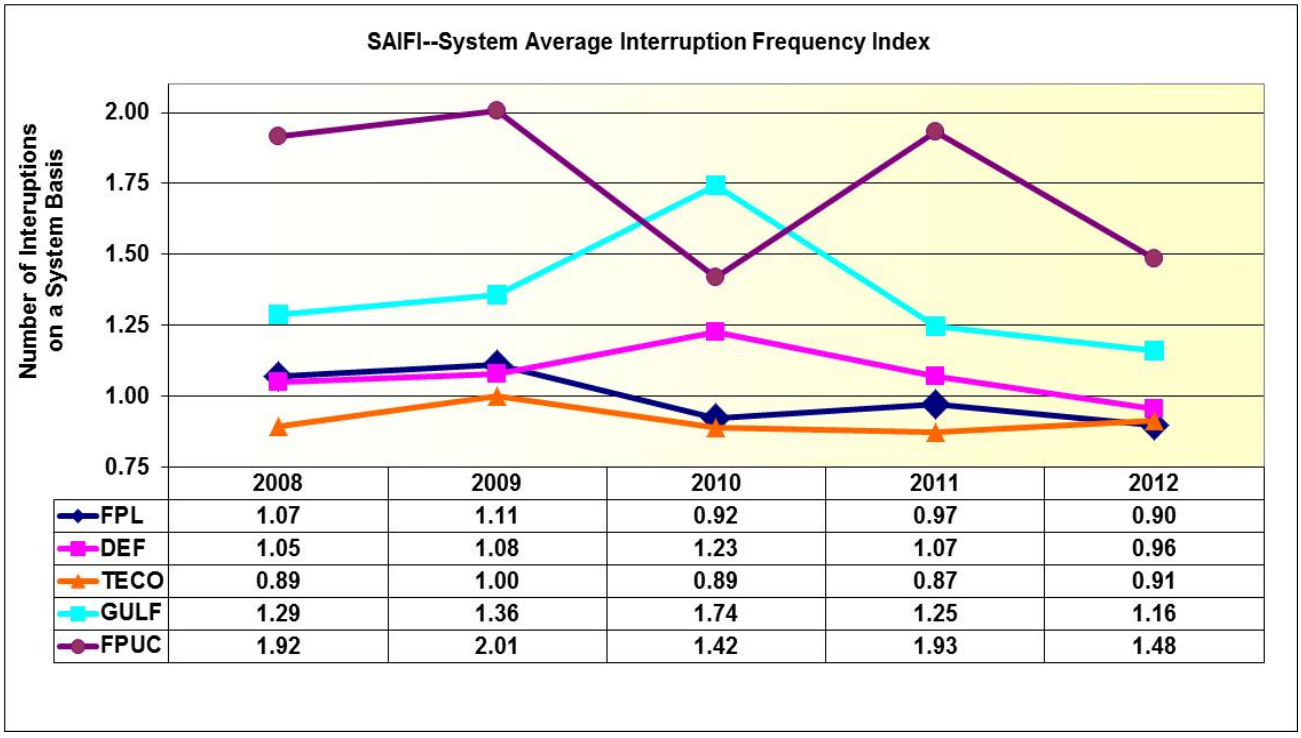
	2008	2009	2010	2011	2012
FPL	67	78	77	80	63
DEF	76	83	93	87	73
TECO	66	77	84	76	78
GULF	132	140	146	111	113
FPUC	158	218	127	173	152

Figure 4-1 indicates that TECO's SAIDI trend has gradually risen since 2008. DEF's trend has been primarily flat while FPL, FPUC, and Gulf appear to be trending downward. Comparing 2011 SAIDI indices to 2012 SAIDI indices, FPL, FPUC, and DEF's indices have fallen 21 percent, 12 percent, and 16 percent respectively. Gulf and TECO's SAIDI indices have risen 2 percent and 3 percent, respectively, from 2011 to 2012.

Figure 4-2 is a five-year graph of the adjusted SAIFI for each IOU. The 2012 data shows FPL, FPUC, DEF, and Gulf's SAIFI indices decreased (improved) from the 2011 results as TECO's SAIFI indices increased. Even though TECO's SAIFI increased from 2011 to 2012, over the five-year period of 2008 to 2012, TECO's SAIFI is remaining relatively flat. FPL, DEF, Gulf, and FPUC's SAIFI indices are all trending downward for the period of 2008 to 2012.

SAIFI is the average number of service interruptions per retail customer within a specified area of service over a given period. It is determined by dividing the Sum of Service (aka Customer) Interruptions (CI) by the total Number of Customers Served (C) for the respective area of service.

Figure 4-2. NUMBER OF SERVICE INTERRUPTIONS (ADJUSTED SAIFI)

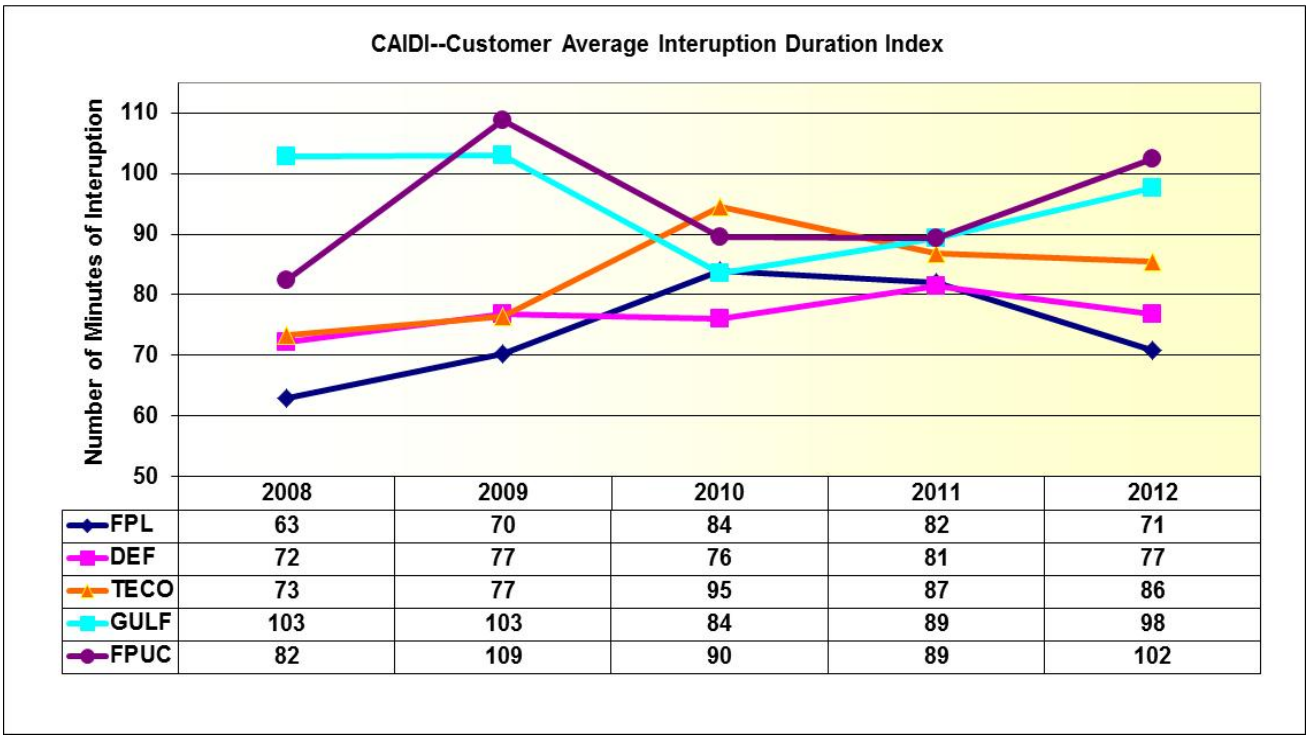


	2008	2009	2010	2011	2012
FPL	1.07	1.11	0.92	0.97	0.90
DEF	1.05	1.08	1.23	1.07	0.96
TECO	0.89	1.00	0.89	0.87	0.91
GULF	1.29	1.36	1.74	1.25	1.16
FPUC	1.92	2.01	1.42	1.93	1.48

Figure 4-3 is a five-year graph of the adjusted CAIDI for each IOU. FPL, DEF, and TECO had a decrease in the CAIDI from 2011 to 2012 while FPUC and Gulf had an increase in the CAIDI. Even though FPL, DEF, and TECO had a decrease in the CAIDI, these companies along with FPUC have CAIDI indices that are trending upward for the five-year period of 2008 to 2012. Gulf is trending downward even though it had an increase in the CAIDI for 2012.

CAIDI is the average interruption duration or the time to restore service to interrupted customers. CAIDI is calculated by dividing the total system customer minutes of interruption (CMI) by the number of customer interruptions (CI) which is also SAIDI divided by SAIFI.

Figure 4-3. AVERAGE SERVICE RESTORATION TIME (ADJUSTED CAIDI)

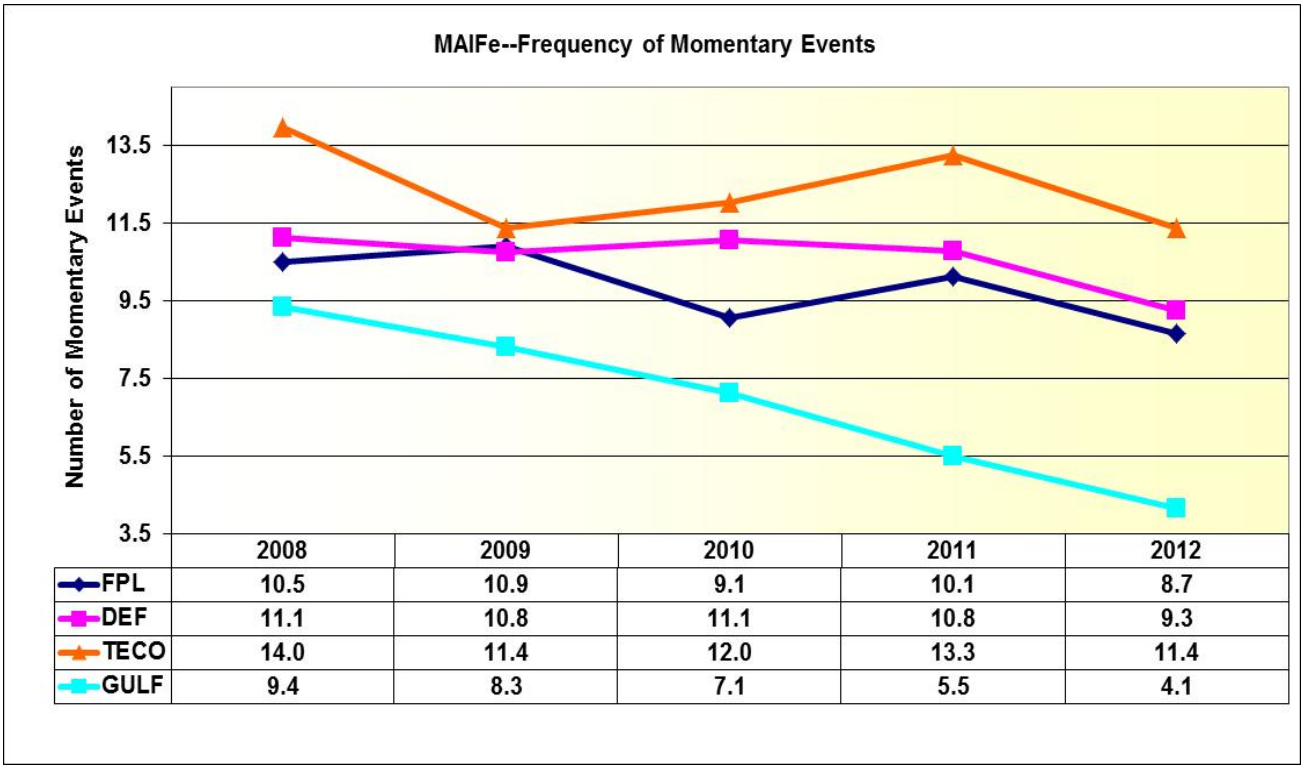


	2008	2009	2010	2011	2012
FPL	63	70	84	82	71
DEF	72	77	76	81	77
TECO	73	77	95	87	86
GULF	103	103	84	89	98
FPUC	82	109	90	89	102

Figure 4-4 shows a five-year graph of the adjusted MAIFIe for FPL, DEF, TECO, and Gulf. All four companies' MAIFIe indices are trending downward for the five-year period of 2008 to 2012. Comparing the MAIFIe for 2011 and 2012, all four companies decreased with FPL at 14 percent, Gulf at 25 percent, DEF at 14 percent, and TECO at 14 percent. FPUC is exempt from reporting MAIFIe and CEMI5 because it has fewer than 50,000 customers.

MAIFIe is the average frequency of momentary interruptions or the number of times there is a loss of service of less than one minute. MAIFIe is calculated by dividing the number of momentary interruptions events recorded on primary circuits (CME) by the number of customers served (C).

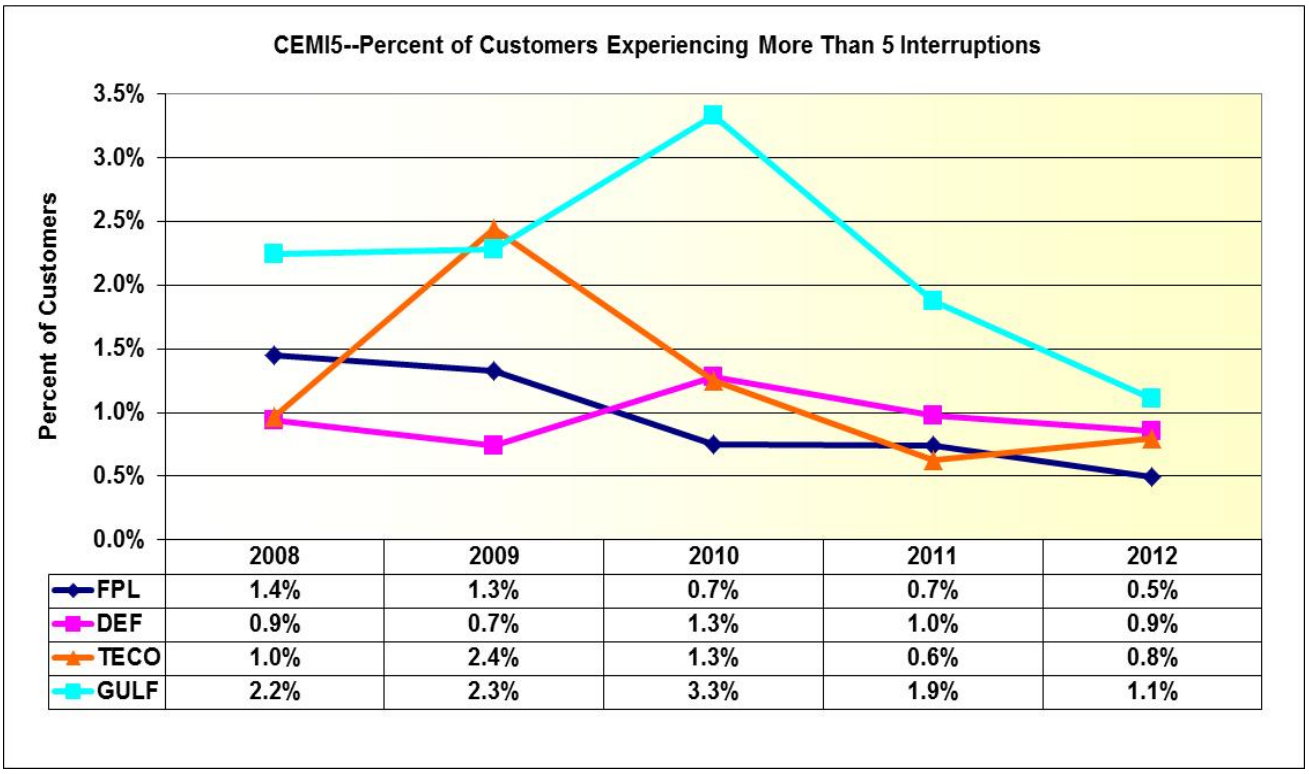
Figure 4-4. AVERAGE NUMBER OF FEEDER MOMENTARY EVENTS (ADJUSTED MAIFIe)



	2008	2009	2010	2011	2012
FPL	10.5	10.9	9.1	10.1	8.7
DEF	11.1	10.8	11.1	10.8	9.3
TECO	14.0	11.4	12.0	13.3	11.4
GULF	9.4	8.3	7.1	5.5	4.1

Figure 4-5 is a five-year graph of the adjusted CEMI5 for FPL, Gulf, DEF, and TECO. CEMI5 is a percentage. It represents the number of customers that experienced more than five service interruptions in the year divided by the total number of customers. The adjusted CEMI5 decreased to 1.1 percent for Gulf in 2012 compared to 1.9 percent in 2011. FPL's CEMI5 also decreased in 2012, from 0.7 percent in 2011 to 0.5 percent in 2012. DEF's trend remains relatively flat even though the 2012 CEMI5 decreased compared to 2011. TECO's CEMI5 had an increase in the percent of customers experiencing more than five interruptions in 2012 from its 2011 results.

Figure 4-5. PERCENT OF CUSTOMERS WITH MORE THAN FIVE INTERRUPTIONS (ADJUSTED CEMI5)



	2008	2009	2010	2011	2012
FPL	1.4%	1.3%	0.7%	0.7%	0.5%
DEF	0.9%	0.7%	1.3%	1.0%	0.9%
TECO	1.0%	2.4%	1.3%	0.6%	0.8%
GULF	2.2%	2.3%	3.3%	1.9%	1.1%

Figure 4-6 shows the number of outages per 10,000 customers on an adjusted basis for the five IOUs over the last five years. The graph explains each utility's adjusted data concerning the number of outage events and the total number of customers on an annual basis. The number of FPL outages decreased from 98,780 in 2011 to 92,554 in 2012 and the number of outages per 10,000 customers remains flat for the five-year period. TECO's results are decreasing for the five-year period. DEF's number of outages decreased for 2012 and is trending downward for the five-year period. Gulf's number of outages increased for 2012, but continues to trend downward for the five-year period. FPUC's results decreased in 2009 and 2010, and then increased for 2011 and 2012. Due to the small customer base, the line graph for FPUC could be subject to greater volatility.

Figure 4-6. NUMBER OF OUTAGES PER 10,000 CUSTOMERS (ADJUSTED)

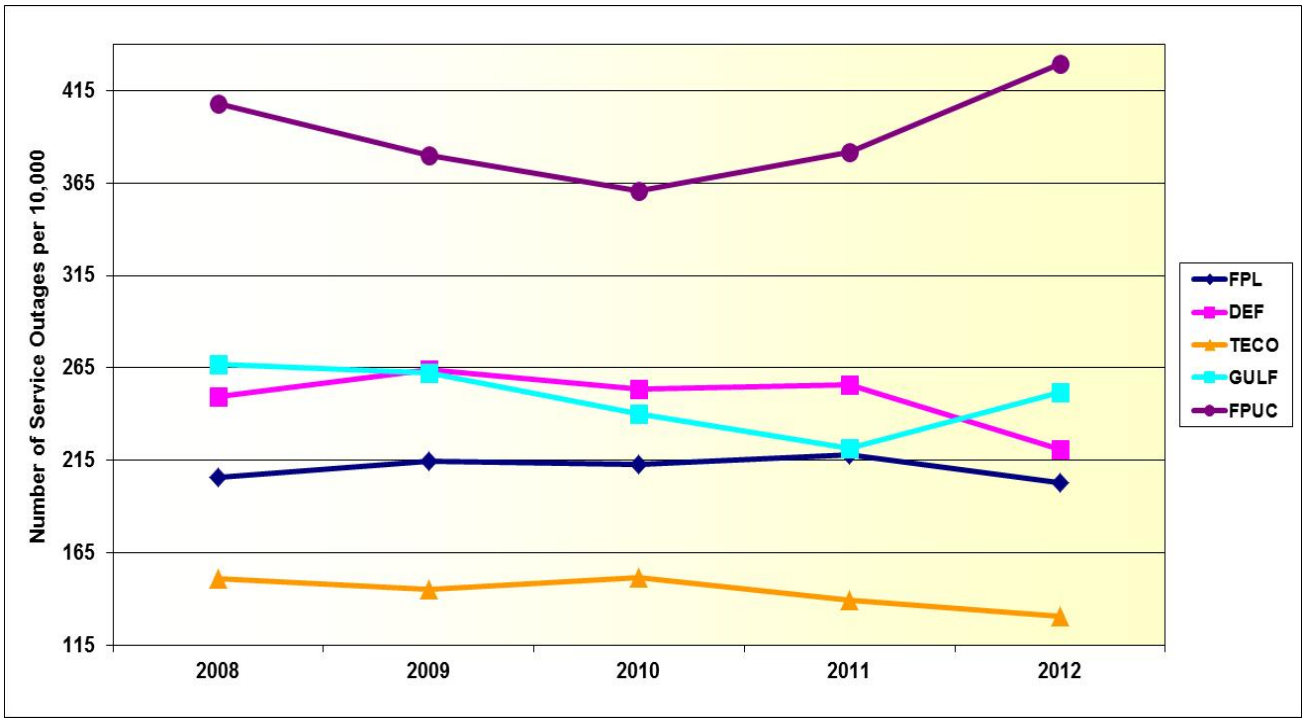
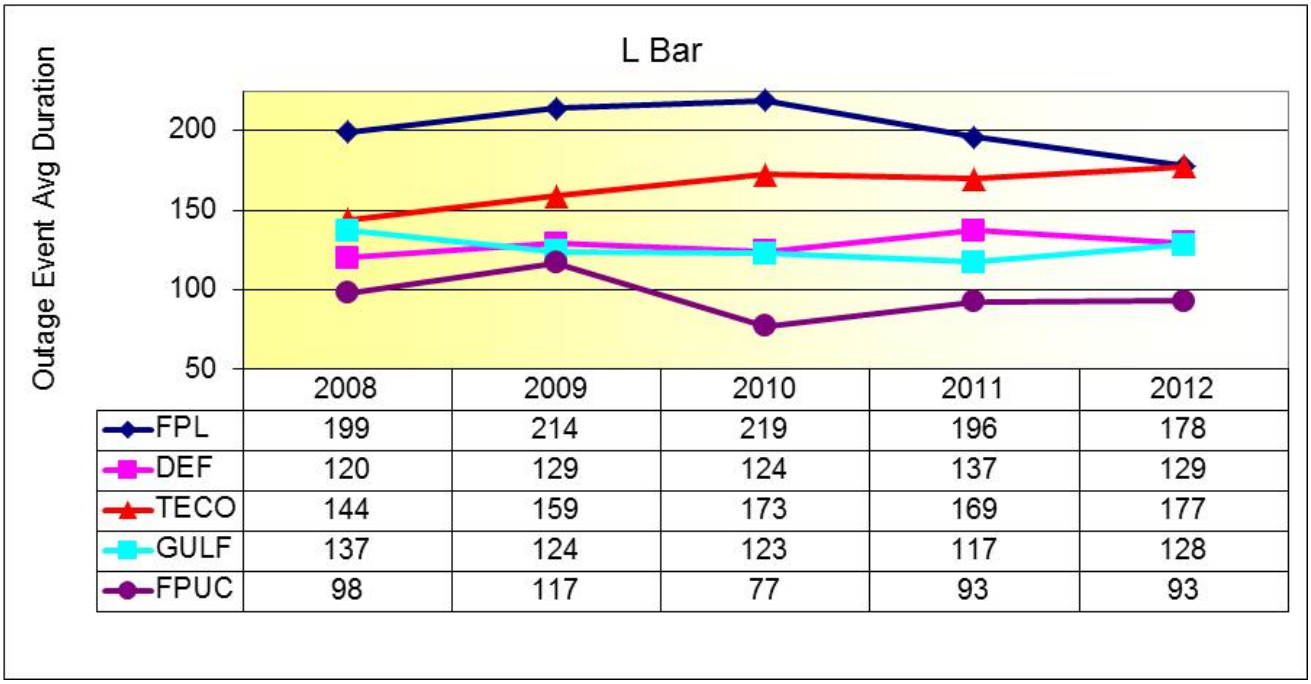


Figure 4-7 represents the average duration of outage events (Adjusted L-Bar) for each IOU. FPL's average outage duration remains higher than the other IOUs and appears to be decreasing even with the category "Equipment Failure" increasing and representing approximately 33 percent of FPL's outages. Correspondingly, DEF's outages appear to be decreasing with 35 percent of the outages attributed to animals (17 percent) and all other (18 percent). Gulf and TECO's L-Bar values increased in 2012 with the outages attributed to animals (33 percent for Gulf and 19 percent for TECO) for both companies. FPUC's L Bar stayed the same in 2012 with vegetation representing 29 percent of the outages as was the case in 2011.

Figure 4-7. AVERAGE DURATION OF OUTAGE EVENTS (ADJUSTED L-BAR)



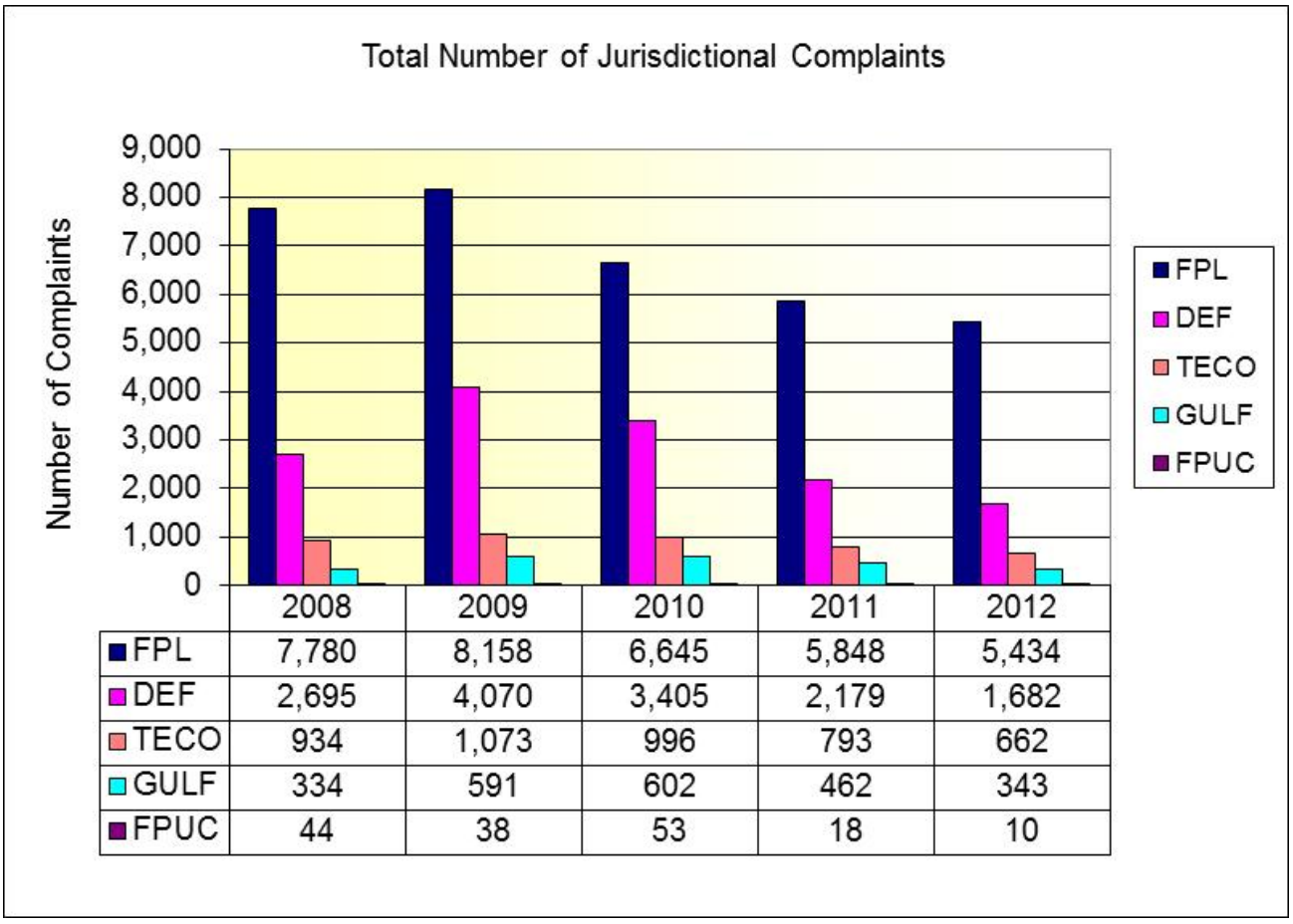
	2008	2009	2010	2011	2012
FPL	199	214	219	196	178
DEF	120	129	124	137	129
TECO	144	159	173	169	177
GULF	137	124	123	117	128
FPUC	98	117	77	93	93

INTER-UTILITY COMPARISONS OF RELIABILITY RELATED COMPLAINTS

Figures 4-8, 4-9, and 4-10 represent consumer complaint data that was extracted from the Commission's Consumer Activity Tracking System (CATS). Each consumer complaint received by the Commission is assigned an alphanumeric category after the complaint is resolved. Reliability related complaints have 15 specific category types and typically pertain to trees, safety, repairs, frequent outages, and momentary service interruptions. The "quality of service" category was established in July 2003, resulting in a shift of some complaints that previously would have been coded in another complaint category.[18]

Figure 4-8 shows the total number of jurisdictional complaints for each IOU. In comparing the number of complaints by the different companies, the total number of customers should be considered. FPL is showing more complaints, but FPL also has more customers than the other companies.

Figure 4-8. TOTAL NUMBER OF JURISDICTIONAL COMPLAINTS

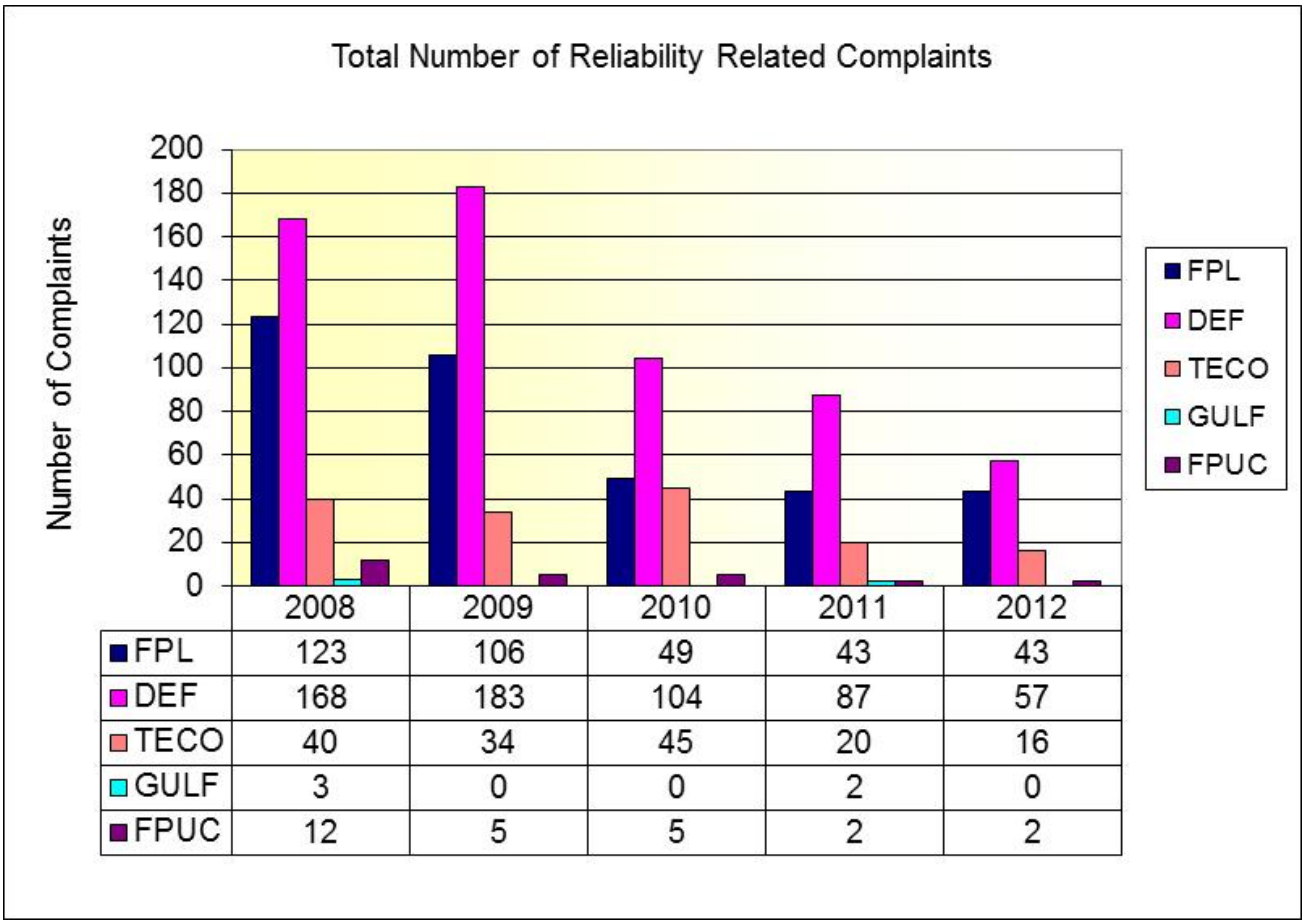


	2008	2009	2010	2011	2012
FPL	7,780	8,158	6,645	5,848	5,434
DEF	2,695	4,070	3,405	2,179	1,682
TECO	934	1,073	996	793	662
GULF	334	591	602	462	343
FPUC	44	38	53	18	10

[18] The "Quality of Service" category is applied to the customer service experience of the utility customer and not quality of service that typically has a measureable standard such as a voltage level or frequency. Quality of Service, beginning in 2010, is no longer tabulated as a reliability type complaint.

Figure 4-9 charts the total number of reliability related complaints for the IOUs. DEF is showing the largest amount of reliability complaints for all five years over the period of 2008 through 2012 with Gulf showing the least amount for four years over the same period. All the companies are trending downward in the number of reliability complaints per year.

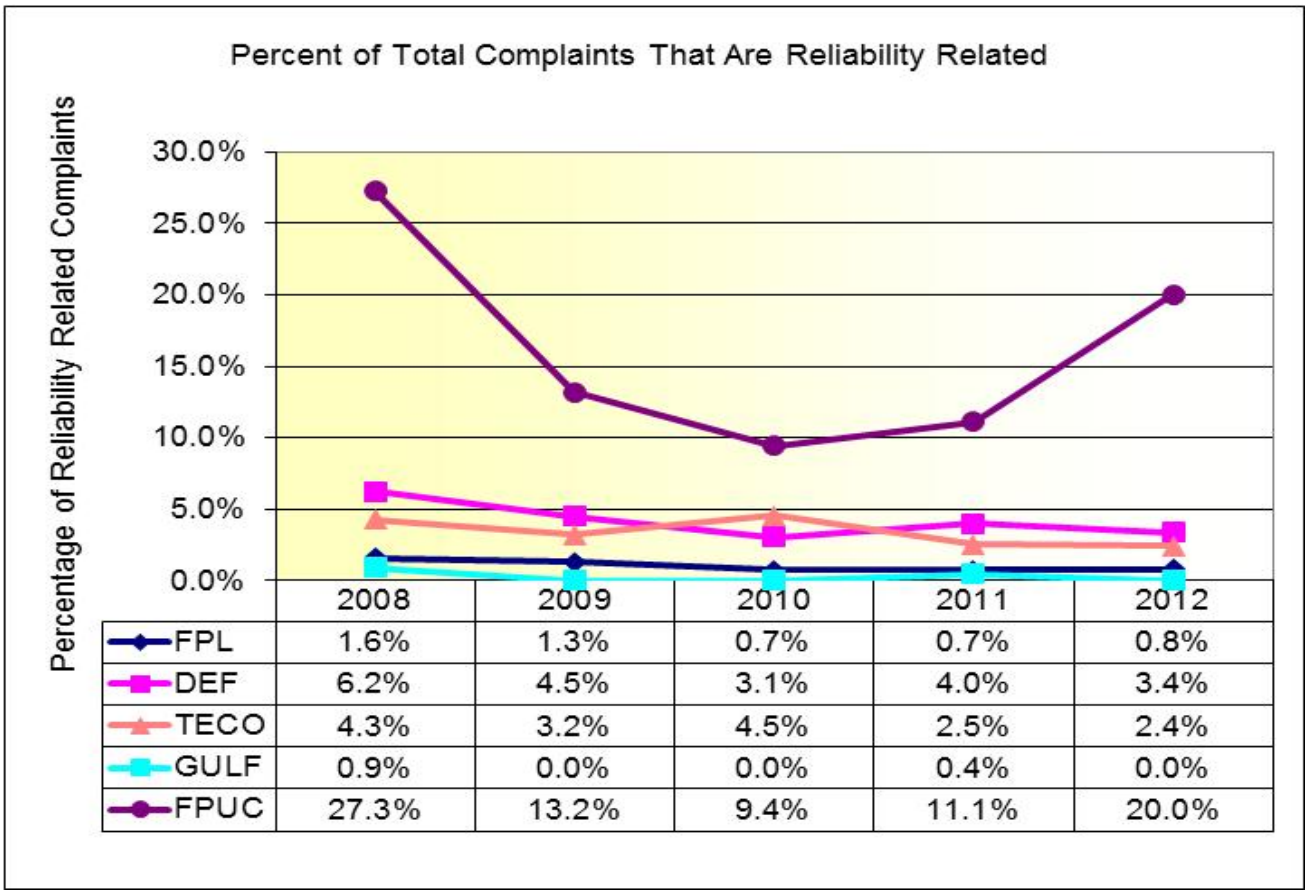
Figure 4-9. TOTAL NUMBER OF RELIABILITY RELATED COMPLAINTS



	2008	2009	2010	2011	2012
FPL	123	106	49	43	43
DEF	168	183	104	87	57
TECO	40	34	45	20	16
GULF	3	0	0	2	0
FPUC	12	5	5	2	2

Figure 4-10 shows the percentage of reliability related customer complaints in relation to the total number of complaints for each IOU. All the companies still appear to be trending downward. The percentages of FPUC compared to the other companies appears high, however FPUC has fewer customers and fewer complaints in total.

Figure 4-10. PERCENT OF COMPLAINTS THAT ARE RELIABILITY RELATED



	2008	2009	2010	2011	2012
FPL	1.6%	1.3%	0.7%	0.7%	0.8%
DEF	6.2%	4.5%	3.1%	4.0%	3.4%
TECO	4.3%	3.2%	4.5%	2.5%	2.4%
GULF	0.9%	0.0%	0.0%	0.4%	0.0%
FPUC	27.3%	13.2%	9.4%	11.1%	20.0%

SECTION V - APPENDICES

Appendix A - Adjusted Service Reliability Data

FLORIDA POWER & LIGHT COMPANY

Table A-1. FPL'S NUMBER OF CUSTOMERS (YEAR END)

	2008	2009	2010	2011	2012
Boca Raton	349,157	349,273	351,056	352,382	355,293
Brevard	282,691	283,298	285,276	286,035	287,898
Central Dade	254,825	257,751	263,305	267,582	270,676
Central Florida	264,699	264,524	266,261	267,930	269,890
Ft. Myers	183,172	184,230	186,626	-	-
Gulf Stream	315,782	315,117	317,296	319,478	322,805
Manasota	358,368	357,938	360,971	363,324	366,379
North Dade	223,159	221,592	223,875	225,457	226,633
North Florida	139,271	139,400	140,248	141,303	143,038
Naples	235,816	236,430	239,150	360,786	364,414
Pompano	294,881	294,184	298,007	300,115	301,639
South Dade	295,591	280,926	283,708	286,068	289,808
Toledo Blade	167,401	167,850	169,698	241,111	243,832
Treasure Coast	268,713	269,792	271,429	272,383	274,197
West Dade	221,682	237,215	240,579	242,334	244,838
West Palm	339,105	337,471	339,417	340,898	344,432
Wingate	252,931	251,991	254,976	256,934	258,480
FPL System	**4,447,244**	**4,448,982**	**4,491,878**	**4,524,120**	**4,564,252**

Notes: Ft. Myers was split into Naples and Toledo Blade starting in the 2011 report.

Table A-2. FPL'S ADJUSTED REGIONAL INDICES SAIDI, SAIFI, AND CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Boca Raton	54	67	73	58	63	1.04	1.29	0.93	0.92	1.14	52	52	79	63	55
Brevard	76	75	71	115	61	1.07	1.18	1.01	1.15	0.87	71	64	71	100	70
Central Dade	50	75	69	49	62	0.94	1.16	0.78	0.68	0.72	54	65	89	72	86
Central Florida	80	71	69	149	61	1.24	1.05	0.91	1.19	0.82	64	68	76	126	75
Ft. Myers	79	73	79	-	-	1.24	1.11	1.09	-	-	63	66	73	-	-
Gulf Stream	54	76	77	55	60	1.03	1.03	0.82	0.81	0.86	52	75	94	68	70
Manasota	73	83	78	67	55	1.01	0.94	0.91	0.84	0.77	72	88	86	80	72
North Dade	62	84	84	67	64	0.83	0.89	0.82	0.78	0.70	75	95	103	86	91
North Florida	129	103	82	131	81	1.58	1.30	1.02	1.34	1.03	82	79	80	98	79
Naples	64	73	92	86	57	0.93	0.98	0.86	0.90	0.86	69	74	107	96	66
Pompano	49	57	71	61	62	0.91	0.82	0.79	0.92	0.84	54	70	90	66	73
South Dade	89	122	88	92	81	1.35	1.52	1.04	1.14	0.96	66	80	84	81	85
Toledo Blade	60	79	78	98	62	0.77	1.02	0.96	1.28	0.91	78	78	81	76	68
Treasure Coast	67	70	79	78	61	1.05	1.10	1.01	0.98	0.95	64	63	79	80	64
West Dade	66	86	88	70	79	1.17	1.19	1.15	0.96	1.20	57	72	77	73	66
West Palm	55	62	67	63	55	0.88	0.98	0.78	0.87	0.82	63	67	85	73	66
Wingate	71	88	81	78	70	1.35	1.42	0.97	1.10	0.99	53	62	83	71	71
FPL System	**67**	**78**	**77**	**80**	**63**	**1.07**	**1.11**	**0.92**	**0.97**	**0.90**	**63**	**70**	**84**	**82**	**71**

Table A-3. PL'S ADJUSTED REGIONAL INDICES MAIFIe AND CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5%)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Boca Raton	8.9	10.6	7.1	8.3	8.4	0.71%	1.64%	0.37%	0.44%	0.99%
Brevard	14.1	13.6	11.1	15.1	10.6	0.82%	1.09%	0.92%	0.69%	0.23%
Central Dade	8.5	9.5	7.1	6.7	6.4	1.16%	1.32%	0.42%	0.25%	0.28%
Central Florida	13.3	12.3	10.7	14.0	9.8	2.64%	1.16%	0.96%	0.91%	0.99%
Ft. Myers	9.4	8.5	8.1	-	-	2.26%	0.82%	0.77%	-	-
Gulf Stream	8.5	9.3	7.7	7.8	7.8	0.46%	1.68%	1.04%	0.37%	0.40%
Manasota	9.2	8.5	8.1	8.8	7.7	1.06%	0.65%	0.74%	0.53%	0.22%
North Dade	7.8	8.8	7.2	7.0	6.8	1.19%	1.08%	0.71%	0.94%	0.35%
North Florida	15.9	15.3	13.0	16.4	11.6	5.54%	2.84%	1.81%	1.67%	0.49%
Naples	7.5	7.7	7.2	7.3	6.3	1.21%	1.04%	0.51%	0.49%	0.22%
Pompano	7.2	7.3	5.7	6.9	6.9	0.92%	0.49%	0.16%	0.49%	0.17%
South Dade	8.9	11.0	8.2	8.9	7.8	2.30%	3.91%	0.67%	1.64%	0.27%
Toledo Blade	16.5	18.2	16.3	15.4	10.9	0.67%	1.15%	0.58%	1.33%	0.52%
Treasure Coast	17.5	15.2	13.4	15.1	12.2	2.17%	1.09%	1.46%	1.25%	0.64%
West Dade	9.0	9.7	9.1	8.7	7.8	1.45%	1.26%	1.07%	0.49%	1.97%
West Palm	10.0	10.7	9.0	10.2	9.0	0.67%	0.82%	0.57%	0.51%	0.19%
Wingate	11.0	13.9	10.2	10.9	11.4	2.02%	1.14%	0.52%	0.67%	0.23%
FPL System	**10.5**	**10.9**	**9.1**	**10.1**	**8.7**	**1.45%**	**1.33%**	**0.75%**	**0.74%**	**0.49%**

FLORIDA POWER & LIGHT COMPANY

Table A-5. FPL'S PRIMARY CAUSES OF OUTAGE EVENTS

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2008	2009	2010	2011	2012	Cumulative percentages	2008	2009	2010	2011	2012
Equipment Failure	29,904	31,933	33,047	28,825	30,801	33.3%	238	261	273	231	218
Unknown	11,639	11,806	11,737	12,404	11,803	12.8%	164	172	144	137	130
Vegetation	13,916	14,866	16,201	18,379	16,636	18.0%	205	219	215	229	196
Animals	10,297	9,343	9,688	11,916	9,870	10.7%	113	116	109	105	98
Remaining Causes	3,841	3,745	5,849	6,072	5,011	5.4%	207	214	323	259	211
Other Weather	6,903	8,185	5,142	7,033	5,708	6.2%	148	152	148	177	137
Other	6,940	7,654	7,297	7,104	6,598	7.1%	191	191	182	178	140
Lightning	4,431	4,292	2,492	1,855	1,528	1.7%	277	297	285	270	265
Equipment Connect	2,442	2,488	3,052	4,176	3,511	3.8%	208	253	253	174	157
Vehicle	1,334	1,088	1,149	1,016	1,008	1.1%	236	257	250	236	249
FPL System	**91,647**	**95,400**	**95,654**	**98,780**	**92,474**	**100%**	**199**	**214**	**219**	**196**	**178**

Notes:

(1) "Other" category is a sum of outage events that require a detailed explanation.

(2) "Remaining Causes" category is the sum of many diverse causes of outage events, which individually are not among the top ten causes of outage events, and excludes those identified as "other."

DUKE ENERGY FLORIDA

Table A-7. DEF'S NUMBER OF CUSTOMERS (YEAR END)

	2008	2009	2010	2011	2012
North Central	373,050	370,929	372,724	374,978	378,198
North Coastal	192,498	191,826	192,482	192,477	193,049
South Central	412,576	411,992	417,540	422,041	428,891
South Coastal	652,167	650,613	644,765	647,103	650,951
DEF System	**1,630,291**	**1,625,360**	**1,627,511**	**1,636,599**	**1,651,089**

DUKE ENERGY FLORIDA

Table A-9. DEF'S ADJUSTED REGIONAL INDICES SAIDI, SAIFI, AND CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
North Central	82	81	101	86	79	1.13	0.97	1.25	1.06	0.98	72	83	81	82	81
North Coastal	125	136	145	201	136	1.51	1.55	1.65	1.89	1.48	82	88	88	107	92
South Central	74	71	74	61	63	0.96	0.90	1.04	0.83	0.80	77	79	71	73	79
South Coastal	59	76	86	70	58	0.92	1.11	1.21	0.98	0.89	64	68	71	72	66
DEF System	**76**	**83**	**93**	**87**	**73**	**1.05**	**1.08**	**1.23**	**1.07**	**0.96**	**72**	**77**	**76**	**81**	**77**

Table A-11. DEF'S ADJUSTED REGIONAL INDICES MAIFIe AND CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
North Central	10.1	11.1	11.4	11.0	9.6	1.38%	0.53%	1.21%	0.69%	0.82%
North Coastal	10.5	9.8	8.6	9.1	8.8	3.20%	2.60%	4.33%	4.77%	3.46%
South Central	10.5	9.7	8.5	8.5	7.6	0.42%	0.64%	0.66%	0.43%	0.49%
South Coastal	12.3	11.5	13.2	12.7	10.3	0.34%	0.38%	0.81%	0.38%	0.34%
DEF System	**11.1**	**10.8**	**11.1**	**10.8**	**9.3**	**0.94%**	**0.74%**	**1.28%**	**0.98%**	**0.85%**

DUKE ENERGY FLORIDA

TABLE A-13. DEF'S PRIMARY CAUSES OF OUTAGE EVENTS

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2008	2009	2010	2011	2012	Cumulative percentages	2008	2009	2010	2011	2012
Animals	5,732	4,589	-	7,686	6,168	16.9%	66	68	-	70	70
Storm	3,538	4,405	3,711	4,470	3,826	10.5%	101	122	107	131	103
Tree-Preventable	3,992	4,827	5,469	4,896	3,229	8.8%	115	126	128	148	120
Unknown	5,472	5,582	4,595	3,429	2,909	8.0%	77	79	79	81	80
All Other	3,168	8,248	12,634	6,614	6,577	18.0%	113	139	101	144	143
Defective Equipment	2,991	3,718	3,681	3,296	3,122	8.5%	181	183	173	174	177
Vehicle-Const. Equipment	4,761	353	326	316	303	0.8%	171	210	208	227	239
Connector Failure	2,982	3,244	3,078	2,905	2,892	7.9%	103	113	113	120	114
Tree Non-preventable	3,347	3,474	3,612	4,930	4,438	12.2%	131	149	140	176	150
UG Primary	2,506	2,521	2,175	2,288	2,076	5.7%	209	228	227	249	252
Lightning	2,217	1,525	1,073	1,093	980	2.7%	128	158	187	216	192
Overload	-	-	968	-	-	-	-	-	154	-	-
DEF System	**40,706**	**42,486**	**41,322**	**41,923**	**36,520**	**100%**	**120**	**129**	**124**	**137**	**129**

Note: "All other" category is the sum of diverse causes of outage events which individually are not among the top ten causes of outage events.

TAMPA ELECTRIC COMPANY

Table A-15. TECO'S NUMBER OF CUSTOMERS (YEAR END)

	2008	2009	2010	2011	2012
Central	179,224	179,160	179,810	181,797	185,005
Dade City	13,806	13,686	13,692	13,700	13,822
Eastern	107,495	108,206	109,383	109,876	111,069
Plant City	53,925	54,103	54,470	54,725	55,472
South Hillsborough	59,540	60,356	61,530	62,761	64,530
Western	186,062	186,960	187,932	189,200	191,083
Winter Haven	67,243	66,979	67,560	67,222	67,735
TECO System	**667,295**	**669,450**	**674,377**	**679,281**	**688,716**

Table A-17. TECO'S ADJUSTED REGIONAL INDICES SAIDI, SAIFI, AND CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Central	47	62	64	54	76	0.61	0.82	0.73	0.64	0.86	76	75	88	85	88
Dade City	127	138	135	170	161	2.00	1.85	1.65	2.00	1.67	64	75	82	85	97
Eastern	69	64	67	61	57	0.94	0.90	0.70	0.80	0.73	74	70	96	76	78
Plant City	108	141	144	99	110	1.37	1.85	1.48	1.13	1.34	79	76	97	88	82
South Hillsborough	65	85	101	67	90	0.90	0.89	0.89	0.75	1.06	73	95	114	89	85
Western	70	79	89	91	77	0.89	1.01	0.90	0.97	0.81	78	78	99	94	96
Winter Haven	52	59	79	86	67	0.97	0.84	0.99	1.04	1.01	53	70	80	83	66
TECO System	**66**	**77**	**84**	**76**	**78**	**0.89**	**1.00**	**0.89**	**0.87**	**0.91**	**73**	**77**	**95**	**87**	**86**

Table A-19. TECO'S ADJUSTED REGIONAL INDICES MAIFIe AND CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Central	12.4	8.8	10.0	11.2	10.2	0.29%	1.22%	0.56%	0.60%	0.44%
Dade City	16.9	13.4	16.5	15.6	15.8	5.12%	11.50%	0.60%	0.67%	3.66%
Eastern	15.3	12.0	13.0	14.4	10.8	0.23%	0.59%	1.64%	0.69%	0.37%
Plant City	19.0	19.9	14.8	17.6	19.8	3.84%	11.27%	2.02%	0.85%	0.90%
South Hillsborough	15.3	13.3	14.2	13.6	11.2	1.20%	2.47%	1.05%	0.30%	3.49%
Western	12.6	10.4	11.8	12.6	10.6	0.82%	1.74%	0.73%	0.58%	0.26%
Winter Haven	14.2	11.2	11.6	14.5	10.0	1.00%	1.69%	3.62%	0.80%	0.71%
TECO System	**14.0**	**11.4**	**12.0**	**13.3**	**11.4**	**0.97%**	**2.45%**	**1.25%**	**0.62%**	**0.79%**

Table A-21. TECO'S PRIMARY CAUSES OF OUTAGE EVENTS

	Adjusted Number of Outage Events						Adjusted L-Bar Length Of Outages				
	2008	2009	2010	2011	2012	Cumulative percentages	2008	2009	2010	2011	2012
Lightning	1,570	1,498	1,226	1,392	1,327	14.8%	189	82	233	206	225
Animals	2,252	1,555	2,040	2,157	1,736	19.3%	79	198	84	90	87
Vegetation	2,035	2,059	1,975	1,806	1,677	18.7%	147	163	187	207	218
Unknown	703	721	753	849	905	10.1%	113	209	128	128	225
Other Weather	645	636	727	222	260	2.9%	143	149	186	183	191
Electrical	864	1,204	1,380	1,172	1,068	11.9%	165	181	193	197	184
Bad Connection	785	880	1,090	848	779	8.7%	181	128	227	226	135
Vehicle	220	234	245	285	315	3.5%	181	145	219	218	221
Defective Equipment	511	396	245	196	181	2.0%	202	203	147	161	182
All Other	249	235	206	223	215	2.4%	151	155	146	138	155
Down Wire	264	301	336	325	525	5.8%	158	-	218	174	165
TECO System	**10,098**	**9,719**	**10,223**	**9,475**	**8,988**	**100%**	**144**	**159**	**173**	**169**	**177**

Notes:

(1) "All other" category is the sum of many diverse causes of outage events which individually are not among the top ten causes of outage events.

(2) Blanks are shown for years where the numbers of outages were too small to be among the top ten causes of outage events.

GULF POWER COMPANY

Table A-23. GULF'S NUMBER OF CUSTOMERS (YEAR END)

	2008	2009	2010	2011	2012
Central	109,168	109,250	110,040	111,168	111,854
Eastern	110,191	110,532	110,791	111,180	111,481
Western	208,570	208,372	209,827	210,188	211,236
Gulf System	**427,929**	**428,154**	**430,658**	**432,536**	**434,571**

Table A-25. GULF'S ADJUSTED REGIONAL INDICES SAIDI, SAIFI, AND CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Central	99	107	115	90	110	1.14	1.08	1.58	1.09	1.16	87	99	73	83	95
Eastern	140	140	133	110	88	1.13	1.20	1.64	1.31	0.93	124	117	82	84	95
Western	146	157	168	123	128	1.45	1.59	1.88	1.30	1.28	101	99	89	95	100
Gulf System	**132**	**140**	**146**	**111**	**113**	**1.29**	**1.36**	**1.74**	**1.25**	**1.16**	**103**	**103**	**84**	**89**	**98**

GULF POWER COMPANY

Table A-27. GULF'S ADJUSTED REGIONAL INDICES MAIFIe AND CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Central	8.6	8.5	7.6	6.4	4.5	0.42%	0.53%	1.12%	0.91%	1.11%
Eastern	7.9	5.9	5.6	4.4	2.7	2.26%	2.83%	4.25%	2.45%	0.74%
Western	10.5	9.5	7.7	5.6	4.7	3.20%	2.91%	4.01%	2.08%	1.30%
Gulf System	**9.4**	**8.3**	**7.1**	**5.5**	**4.1**	**2.25%**	**2.28%**	**3.33%**	**1.87%**	**1.11%**

GULF POWER COMPANY

Table A-29. GULF'S PRIMARY CAUSES OF OUTAGE EVENTS

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2008	2009	2010	2011	2012	Cumulative Percentages	2008	2009	2010	2011	2012
Animals	3,417	3,112	2,963	3,013	3,585	32.7%	94	81	79	72	72
Lightning	2,154	2,080	1,569	1,527	1,875	17.1%	165	155	167	148	187
Deterioration	2,300	2,333	2,211	1,928	2,219	20.3%	172	150	152	154	162
Unknown	874	988	639	691	676	6.2%	99	90	96	96	94
Trees	1,314	1,293	1,151	1,174	1,195	10.9%	158	155	137	138	149
Vehicle	288	275	264	249	275	2.5%	167	173	179	180	187
All Other	354	388	383	285	290	2.6%	152	135	132	119	115
Wind/Rain	169	-	-	-	182	1.7%	170	-	-	-	212
Overload	198	245	414	162	-	-	109	104	113	97	-
Vines/Dig-in	162	150	189	187	159	1.5%	134	108	90	110	95
Other	-	166	288	222	254	2.3%	-	85	85	103	113
Contamination Corrosion	203	212	266	151	240	2.2%	134	116	118	118	110
Gulf System	**11,433**	**11,242**	**10,337**	**9,589**	**10,950**	**100%**	**137**	**124**	**123**	**117**	**128**

Notes:

(1) "All other" category is the sum of many diverse causes of outage events which individually are not among the top ten causes of outage events.

(2) Blanks are shown for years where the number of outages was too small to be among the top ten causes of outage events.

FLORIDA PUBLIC UTILITIES COMPANY

Table A-31. FPUC'S NUMBER OF CUSTOMERS (YEAR END)

	2008	2009	2010	2011	2012
Fernandina(NE)	15,376	15,254	15,276	15,416	15,461
Marianna (NW)	12,822	12,730	12,654	12,260	12,560
FPUC System	**28,198**	**27,984**	**27,930**	**27,676**	**28,021**

Table A-33. FPUC'S ADJUSTED REGIONAL INDICES SAIDI, SAIFI, AND CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
NE	91	225	120	200	141	1.26	1.29	1.29	2.35	1.32	72	116	93	85	107
NW	239	210	136	139	165	2.70	2.09	1.57	1.40	1.69	88	101	86	99	98
FPUC System	**158**	**218**	**127**	**173**	**152**	**1.92**	**2.01**	**1.42**	**1.93**	**1.48**	**83**	**109**	**90**	**89**	**102**

FLORIDA PUBLIC UTILITIES COMPANY

Table A-35. FPUC'S PRIMARY CAUSES OF OUTAGE EVENTS

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2008	2009	2010	2011	2012	Cumulative Percentages	2008	2009	2010	2011	2012
Vegetation	409	284	259	345	350	29.1%	93	89	77	83	83
Animals	283	231	315	243	294	24.4%	62	63	59	55	67
Lightning	71	95	47	39	44	3.7%	82	115	88	80	82
Unknown	71	90	101	79	83	6.9%	67	119	65	64	67
Corrosion	102	120	97	85	79	6.6%	127	101	92	103	96
All Other	46	43	50	55	63	5.2%	113	98	104	93	107
Other Weather	97	149	84	167	246	20.4%	207	275	89	177	134
Trans. Failure	22	24	20	18	25	2.1%	114	150	137	100	139
Vehicle	31	27	35	26	19	1.6%	105	63	135	97	150
Cut-Out Failure	10	-	-	-	-	-	68	-	-	-	-
Fuse Failure	8	-	-	-	-	-	39	-	-	-	-
FPUC System	**1,150**	**1,063**	**1,008**	**1,057**	**1,203**	**100%**	**98**	**117**	**77**	**93**	**93**

Notes:

(1) "All other" category is the sum of many diverse causes of outage events which individually are not one of the top ten causes of outage events.

(2) Blanks are shown for years where the quantity of outages was less than one of the top ten causes of outage event.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Alachua, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The City's inspection cycle is on an 8-year cycle (12.5% per year) The City of Alachua owns only distribution poles, no transmission poles.	The City planned 12.5% of distribution system to be inspected and completed 368 poles (16%). The City of Alachua has 2,285 distribution poles.	65 (17.6%) poles were rejected. 1 pole was deemed non-restorable due to shell rot; 64 poles were deemed restorable with C-Truss replacement to be scheduled.	All failed poles were 45-50 foot, class 3 and were replaced or C-trussed. All other poles were treated and wrapped.	The City continues to use the information from the PURC conference held in 2007 and 2009, to improve vegetation management.	The City trims approximately 62 miles of overhead distribution on a 3-year cycle. Approximately 20% of the facilities are trimmed each year.
Bartow, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The facilities are inspected on an 8-year cycle. Inspections are visual, and tests are made to identify shell rot, insect infestation, and excavated to determine strength.	1,500 (0.13%) poles were planned, and the City completed 1,339 pole inspections in 2012.	236 (18%) distribution poles failed inspection due to pole top rot or rotten ground decay.	99 poles were replaced ranging in size from 30 to 50 foot; class 3, 4, and 5.	The City is on a 5-year trim cycle with trim out at 6-10 foot clearance depending on the situation and type of vegetation, along with foliage and herbicidal treatments.	The City feels that its 4-year cycle and other vegetation management practices are effective in offering great reliability to its customers.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Beaches Energy Services	Yes	Yes, The Beaches use stronger concrete poles rather than wood poles and eliminates of static lines with shorter distribution structures to reduce moment loads on the structures.	All exposed, "live-front" connected transformers have been replaced with sealed, "dead front" elbows. Almost all exposed, "live-front" air-insulated switchgear has been replaced with sealed padmounted switchgear using SF6 gas or insulating oil. The company has eliminated using fiberglass foundations for padmounted equipment and now uses thick, heavy concert foundations.	Yes, "Back lot line" construction has been eliminated, all electric kWh meters are located outside and near the front corner of buildings, all replacement or new URD underground cables are being installed in conduits and have a plastic, jacketed sheath, and all padmounted equipment located near buildings have minimum access clearance.	Yes	The transmission structure is inspected annual, which includes insulators, downguys, grounding, and pole integrity. The distribution poles are inspected on an 8-year cycle using sound and bore method for every wood pole. Poles 10 years old and older were treated at ground level for rot and decay.	355 (100%) transmission structure inspections were planned and completed. There were no routine distribution wood or concrete pole inspections planned for 2012 because the next inspection is scheduled for 2015.	No transmission structures failed the inspection. There were no inspections for the distribution structures.	No transmission structures failed the inspection. There were no inspections for the distribution structures.	The transmission line Rights-of-way are mowed and maintained annually. Tree trimming crews work year round to maintain a 2 to 3 year VMP cycle for transmission and distribution lines.	All vegetation management activities for 2012 have been fully completed and the vegetation management activities for 2013 are on schedule.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Blountstown, City of	Yes	No; the City of Blountstown adopted a larger minimum pole standard in 2007 in an effort to harden facilities	The City does not have any underground facilities. The City is looking at measures to flood proof substation.	Yes	No. Guidelines do not include written safety, pole reliability, pole loading, capacity and engineering standards and procedures for attachments by others to the transmission and distribution poles.	City owns 1,704 utility poles. The City of Blountstown is currently finalizing a practical inspection system to be implemented as part of major construction project.	100% of all poles are visually inspected annually.	22 poles required replacement because of ground rot, extreme cracking and warping and splices in the line.	22 poles that were replaced class 5 poles and were replaced with class 3 poles.	The City has a 4-year tree trimming cycle with 10-foot clearance of lines and facilities. The City has policies to remove dead, dying, or problematic trees before damage occurs.	The City will trim 25% of the system with a 10-foot clearance in 2013.
Bushnell, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	No written policy. All existing attachments inspected as part of the City's pole program initiated in 2007.	The City has no transmission facilities. All distribution poles are on a 7-year cycle. The inspection includes visual, sound/bore, pole condition, and wind loading.	100% of entire system was inspected starting in 2007 and ended in 2011. The next pole inspection interval commences in 2014.	No poles were inspected in 2012.	No poles were inspected in 2012.	Tree removal, power line trim, and right of way clearing are on a 3-year cycle. Annual trimming are performed before hurricane season. Distribution lines not located on right of ways are trimmed on an "as needed" basis.	PURC held a vegetation management conference March 2007. Through FMEA, the City has a copy of the report and will use the information to continually improve vegetation management practices.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Chattahoochee, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The distribution facilities are on a 3-year cycle inspection using visual, excavation around base, sounding, and probing with steel rod.	1,957 distribution poles were inspected in January 2012.	In 2012, 58 (3%) poles failed the inspection due to ground line and pole top decay.	Replacement of all 58 poles began in February 2012 and will continue through 2012. The poles ranged in size from 30'-6 to -50 '-3.	The City trims the distribution system on an annual basis. This cuts down on animals outages by limiting their pathways to poles and conductors.	The 2007 and 2009 PURC workshops reports are used to improve vegetation management.
Clewiston, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	The City does not have standard guidelines for pole attachments as all attachments are reviewed by engineers, and place all new construction underground.	The facilities are on an 8-year inspection cycle using sound and bore with strength test inspection. The City performs infrared inspections on the facilities on a 3-4 year cycle.	No poles were inspected in 2012 because the City completed the entire system inspection in 4 years. Inspections will begin again in 2014.	No poles were rejected in 2012, because no poles were inspected.	The City has replaced 26 - 40 foot wooden poles from the last inspection.	The City has a City ordinance that prohibits planting in easements. The City trims the feeders annually and the laterals as needed or as requested by customers.	All transmission and feeders checked and trimmed in 2012 as every year, and The City completed 46 customer requests for tree trimming.
Fort Meade, City of	Yes	Yes	The current procedures address flooding & storm surges. Participant in PURC study on conversion of OH to UG.	Yes	Yes	The City's facilities are on an 8-year cycle using visual and sound and probe technique.	The City has distribution lines only. The City replaced 38 poles in 2012.	The City approximately has 2,730 dist. poles. The poles failed inspection due to age deterioration & animal infestation.	The City replaced 38 (1.4%) poles with15- size 40 foot, class 4, 8- 30 foot, class 5, 8-35 foot, class 5, and7- 45 foot, class 5 poles.	The facilities are on a 3-year inspection cycle, and have a low outage rate due to problem vegetation.	The City has completed approximately 33% of trimming. The city reported 95 outages in 2012, with 19% (18) due to vegetation.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Fort Pierce Utilities Authority	Yes	The facilities are not designed for extreme loading standards on a system wide basis, but are guided by the extreme wind loading standard for new construction, major work, and rebuilds after Feb. 1, 2007.	Yes, and is abiding by the FEMA 100 Year Flood zone for new construction of underground facilities	Yes	Yes	All 250 transmission wood poles were inspected annually by using visual, the excavation, and sound and bore method. 106 concrete and 90 steel transmission poles are inspected on a 3-year. Beginning in 2012, all transmission will be inspected on a 3-year cycle. The distribution poles will be inspected on a 5 year cycle beginning in fiscal year 2013.	84 wooden, 35 concrete and 30 steel transmission poles inspection were completed in 2012. This included hardware, bolt and bonding inspection, excavation, and sound bore tests. There were no planned distribution poles inspections for 2012.	No transmission poles failed inspection in 2012. There were no distribution pole inspections in 2012.	There were no transmission or distribution pole failures in 2012.	The company maintains year round contract for tree removal, power lining trimming, and right-of-way clearing. All transmission lines are trimmed on a 3-yr. cycle. The transmission lines are monitored and patrolled annually for vegetation management.	The company will continue to provide resources for the same quantity, level, and scope for vegetation management as in the past. The company has copies of PURC's reports from 2007 and 2009 VMP workshops and will use the information to improve its VMP.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Gainesville Regional Utilities	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes; GRU has instituted a Continuous Improvement Program, which identifies the worst performing devices, circuits and most compromised primary voltage underground cable.	Yes	The facilities are on an 8-year cycle for all lines and includes visual, sound and bore, and includes below ground line inspection to 18 in. around the base of each pole.	No transmission poles were scheduled for inspection in 2012. GRU planned 2,999 distribution pole inspections and completed 3,204 (107%) inspections.	No transmission poles were planned or identified for replacement. 11 (0.03%) distribution poles failed due to shell rot, heart rot, rotten butt, carpenter ants, and decay.	There were no transmission poles inspected. 11 (0.03%) distribution poles were replaced in 2012, ranging in size from 30' to 50' Class 2 to Class 6.	The VMP includes 560 miles of overhead distribution lines on a 3-year cycle. The VMP includes an herbicide program and standards from NESC, ANSI A300, and Shigo-Pruning.	The VMP is an on going and year round program. 100% of the transmission facilities were inspected. 196 distribution circuit miles were trimmed in 2012 with an additional 12 circuit miles associated with renewal and replacement work.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Green Cove Springs, City of	Yes	Yes	Yes, all facilities are installed a minimum 8 inches above the roadway.	Yes	Yes	The distribution facilities are on an 8-year cycle, which includes sound and bore techniques. The City does not have transmission lines as defined by 69kV and above.	The City visually inspects any distribution pole it interfaces with under normal maintenance workflow patterns. The City plans to upgrade 2 major sections of 4KV in the next 4 years. In 2012, the City began an internal inspection program and inspected over 595 (19%) poles.	In 2012, 45 wood distribution poles were replaced on visual inspection.	6- 30 foot Class 3 were replaced. 10 - 30 foot class 5 poles were replaced. 5 -35 foot class 3 poles were replaced. 4 -35 foot class 5 were replaced. 19 -40ft class 3 poles were replaced. 1 -45 foot class 3 pole was replaced. All due to rot.	The City contracts annually to trim 100% of the system three phase primary circuits including all sub-transmission and distribution feeder facilities. Problem trees are trimmed and removed as identified.	100% of system was trimmed in 2012, with scheduled trim cycle of the system for 2013 to begin in the fall. PURC held 2 vegetation management workshops in 2007 and 2009 and the City has a copy of the report and will use the information.
Havana, Town of	Yes	No. Participating in PURC granular wind research study through the Florida Municipal Electric Assoc.	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	Total system is 1,173 poles; inspected several times annually using sound and probe method.	100% planned and completed in 2012.	6 (0.5%) poles failed inspection.	2- 40' Class 4, 1- 50' Class 3, and 3- 45' Class 4 poles (total of 6) poles were replaced. 4- lines at 150' each (total of 600') of single phase overhead transmission were replaced due to old age.	Written policy requires one-third of entire system trimmed annually.	33% of the system was trimmed in 2012.

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Homestead Energy Services	Yes	Yes	Yes; participating in PURC's study on the conversion of overhead to underground facilities through FMEA.	Yes	Yes	All transmission poles concrete. The distribution facilities are on an 8-year cycle using sound and bore and loading evaluations and the annual thermographic inspection was completed December, 2012.	During 2012, 2,002 (25%) distribution poles were inspected. The entire transmission system was inspected in 2005. The transmission was not inspected in 2012.	76 (3.8%) distribution poles failed the inspection due interior decay, exterior decay and decayed tops.	HES replaced 56 distribution Class 3 45' poles with Class 2 poles, 46 Class 3, 40' poles with Class 2 poles, cut tops and lowered facilities on 3 Class 3 45' poles and 3 40' poles, removed 1 Class 3 45' poles & 2 Class 3 40' poles, transferred facilities onto 3 storm hardened Class 2 45' poles owned by AT&T.	Trimming services are contracted out and entire system is trimmed on a 2-year cycle. There are no issues for transmission facilities.	HES enacted code changes which require property owners to keep vegetation trimmed to maintain 6-feet of clearance from city utilities.

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Jacksonville Electric Authority (JEA)	Yes	Yes	Yes, currently has written Storm Policy and associated procedures addressed for Category 3 storms or greater.	Yes	Yes	Transmission circuits are on a 4-year cycle, except critical N-1 240kV on a 2-year cycle. Distribution poles are on an 8-yr inspection cycle, using sound and bore with excavation.	All transmission circuits that were scheduled to be inspected in 2012 were completed. In 2012, JEA completed the assigned circuits (approximately 40 circuits) in accordance with its schedule.	Based on 2011 inspection: 8 transmission wooden poles failed inspection. Based on 2012 inspection: 2024 distribution poles failed inspection.	8 transmission wood poles were replaced with new wood poles. In 2012, 2024 distribution poles were replaced. The poles listed as danger poles (around 1%) are replaced in a 15-day cycle.	The transmission facilities are in accordance with NERC FAC-003-1. The distribution facilities are on a 3-year trim cycle; 2.5 year completed 2012.	JEA fully completed all 2012 VM activities and is fully compliant with NERC standard for vegetation management in 2012. VMP activities are on schedule for 2012.
Keys Energy Services, City of Key West	Yes	Yes	Yes	Yes	Yes	The Keys does not have any wooden trans poles. The concrete and metal transmission poles are inspected every 2 years by helicopter and infrared survey. 100% of the distribution poles were inspected in 2007 by Osmose, Inc.	An inspection of all transmission facilities was done in 2012. There are no issues or concerns. From the 2007 inspection, 7,453 wooden distribution poles were inspected with 2,232 rejected.	The rejected poles in the 2007 inspection are on a 5 year contract to be replaced. In 2012, 218 rejected poles were replaced.	KEYS have a contract to replace approximately 2,200 poles over 5 years; with 2,474 poles replaced 2007 thru 2012. All rejected/failed poles have been replaced. KEYS will start a field check of all poles in 2014.	The Keys' 230 miles 3 phase distribution lines and 66 miles of transmission lines are on a 2-year trim cycle. KEYS tree crews remove all invasive trees in the right-of-way and easements. The trees are cut to ground level and sprayed with an herbicide to prevent re-growth.	The Keys has 3 recloser outages, 2 feeder outages, & 5 lateral outages due to trees. Keys will strive to continue to improve its VMP to further reduce outages.

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Kissimmee Utility Authority	Yes	Yes; replaced 10 distribution poles and 7 wooden transmission poles with spun concrete to meet or exceed extreme wind loading requirements.	Non-coastal utility; therefore storm surge is not an issue. Low areas susceptible to flooding have been identified and are monitored.	Yes	Yes	All transmission and distribution inspections are outsourced to experienced pole inspector who utilizes sound and bore method for all wood poles. Transmission poles are inspected on a biennial cycle and distribution poles are inspected on an eight year cycle.	No transmission poles were inspected in 2012, since 100% were inspected in 2011. 1,872 distribution poles were inspected in 2012 which has completed the cycle.	No transmission poles were inspection in 2012. 18 (0.96%) distribution poles failed inspection due to split top, decayed top, woodpecker holes, shell rot, and exposed pocket.	7 transmission poles from the 2011 inspection were replaced and 32 poles from 2011 were repaired in 2012. The transmission poles ranged from 70 to 90 feet and classes H1 to H3. 9 distribution poles from the 2011 inspection were replaced and 22 poles were repaired in 2012. The distribution poles ranged from 30 to 45 feet and class 3 to 4.	KUA has a written Transmission Vegetation Management Plan (TVMT) were it conducts visual inspection of all transmission lines semi-annually. The guidelines for KUA's distribution facilities are on a 3-year trim cycle.	100% required remediation during the transmission facilities inspection was completed in 2012. Approximately 107 miles of distribution facilities were inspected and remediated in 2012.

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Lake Worth Utilities Department	Yes	The facilities are not designed to be guided by the extreme loading standards on a system wide basis. However, CLW is guided by the extreme wind-loading standard for new construction, major planned work, etc. after 12/10/2006.	Underground distribution construction practices require installation of dead front pad mounted equipment in areas susceptible to flooding.	Yes	Yes	Visual inspections are performed on all CLW transmission facilities on an annual basis. The transmission poles are concrete and steel. CLW performs an inspection of the distribution facilities on an 8-yr. cycle. Pole tests include hammer sounding and pole prod penetration 6 inches below ground.	CLW inspected 785 poles in 2012, and rotation will complete in 2014.	91 poles failed inspection in 2012. Poles are replaced when pole prod penetration exceeds two inches or there is evidence of pole top shell rot.	CLW replaced 51 poles in 2012, with 40 poles pending replacement.	CLW has an on-going VMP on a system wide, two-year cycle. Minimum clearance of 10 feet in any direction from CLW conductors is obtained.	Contractor attempts to get property owners permission to remove trees which are dead or defective and are a hazard; fast growing soft-wooded or weed trees, small trees which do not have value but will require trimming in the future, tress that are unsightly as a result of trimming and have no chance for future development, and trees that are non native and invasive.

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Lakeland Electric	Yes	Yes, for all pole heights 60 feet and above; and meet or exceed Grade B Construction below this height.	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The facilities are on an 8-year inspection cycle using visual, sound and bore, with ground line excavation and in addition; visual inspection during normal course of daily activities.	There were 147 (12.5%) transmission poles planned for inspection and 11 (1%) were completed. There were 7,500 (12.5%) distribution poles planned for inspection and 3,679 (6.1%) completed.	7 (63.6%) transmission poles failed inspection due to decay. 440 (11.9%) distribution poles failed inspection due to decay.	All poles recommended in 2011 assessed for appropriate action. 101 distribution poles reinforced and 673 replaced, repaired, or removed in 2012. 13 transmission poles were replaced in 2012.	The facilities are on a 3-year inspection cycle for transmission and distribution circuits. VMP also provides in between cycle trim to enhance reliability.	40 miles of 69kV transmission lines were planned and 28.5 miles were completed. 350 miles of distribution line maintenance were planned and 406 miles were completed.
Leesburg, City of	Yes	Yes, and Participation in PURC granular wind research study through the Florida Municipal Electric Assoc.	Leesburg is approximately 60 miles inland from the Atlantic and Gulf coasts and is not subject to major flooding or storm surge.	Yes	Yes	No transmission facilities. D: 8-year cycle. Visual, sound/bore, excavation method, and ground level strength test	Leesburg plans an 8 year inspection cycle. Leesburg electric facilities are attached to approximately 15,743 poles of which approximately 9,443 are wood poles and approximately 3,273 are concrete poles.	With the inspection of 16,483 poles during the period from 2007 through 2010, Leesburg has now completed the inspection of all poles for this 8 year cycle. Pole inspections are planned to resume in 2015.	88 poles were replaced. 53 wood poles were replaced with concrete poles.	4-year trim cycle for feeder and lateral circuits. Problem trees are trimmed or removed as identified.	VMP activities were completed as scheduled during 2012. An additional Tree Crew was added as planned during April 2008 and has been continuously maintained.

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Moore Haven, City of	Yes	At this time, the facilities are not designed to be guided by the extreme loading standards on a system wide basis. The City is participating in PURC granular wind research study through FEMA.	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The City inspects all the distribution facilities annually by visual and sound inspections.	The City continuously inspects the distribution facilities in 2012. The City is one square mile and easily inspected during routine activities. The City does not own any transmission facilities. The City is upgrading its 3 phase poles.	The City is working on the rear-of secondary, making them more accessible. The City has approximately 410 poles in the distribution system and streetlights.	The City replaced 12 40 foot poles and 4 35 foot poles.	The City is continuous tree trimming in easements and right of way. 100% of distribution system is trimmed each year.	The City expended approximately 20% of Electric Dept. Resources to vegetation management. All vegetation management is performed in house.
Mount Dora, City of	In 2010, the City retained a firm to make a review & help determine compliance with NESC. The City used the study in 2011 to evaluate where new construction standards should be implemented.	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	A new construction standard was developed to use guy wires for all levels on poles. The standards for poles that the City developed in 2012 reflect the impact of pole attachments on pole loading capacity.	The City does not own any transmission lines. Distribution lines and structures are visually inspected for cracks and a sounding technique used to determine rot.	The City completed 100% of planned distribution inspections in 2011.	The City had 95 distribution poles in 2012 that failed inspection. 20 wood poles were replaced with concrete poles.	The city had 1,877 wooden poles in 2012 and with the replacement of 20 wooden poles, as of 12/31/12, the count for wooden poles is 1,857. The wooden replaced range from 30 foot to 45 foot.	An outside contractor working two crews 40 hours per week completes tree trimming on a 12-month cycle.	The City trimmed trees on a 12-month cycle, and removed limbs from trees in right of way and easements that could create clearance problems.

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New Smyrna Beach, City of	Yes	Yes	Yes. The City only installs stainless steel dead front pad mounted transformers in its system.	Yes	Yes	The transmission and distribution facilities are on an 8-year inspection cycle. Additionally, distribution facilities are inspected as part of the City's normal maintenance when patrolling distribution facilities.	30 transmission poles were inspected during 2012. These remaining poles completed 100% of the transmission poles inspection. 1,502 (12.5%) distribution poles were inspected in 2012.	0 (0%) transmission pole failed inspection. 530 (35.3%) failed inspection due to decay, split top, and woodpecker damage.	The City replaced/repaired 315 distribution poles (95 were from 2011 inspection), and restored with C truss 136 (85 were from 2011 inspection) distribution poles. The poles are sizes 30-65 ft. and Class 1-5.	The City maintains two crews on continuous basis to do main feeder and "hot spot" trimming.	The City trimmed approximately 20% of distribution system in 2012, and performed clear cutting on 20% of the transmission lines.
Newberry, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	Distribution poles are inspected on a 3-year inspection cycle at ground line for deterioration, entire upper part of the pole for cracks, and soundness of upper part of pole.	Due to limited personnel, the City was unable to perform Pole Inspections in 2012. The City will be inspecting poles in 2013.	While the City did not inspect all of their poles in 2012, they continue to replace poles when they are found to be defective.	43 Distribution poles were replaced in 2012: 10 Class 4 45' poles, 30 Class 5 35' poles, and 3 Class 4 30' poles.	The City trims all distribution lines on a 3-year trim cycle, with attention given to problem trees during the same cycle. Problem trees not in the right of way are addressed with the property owner.	1/3 of distribution facilities are trimmed each year to obtain a three year cycle.

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Ocala Utility Services, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The City inspects its system on an 8-year inspection cycle, which include above ground inspection, sounding, boring, excavation, chipping, internal treatment, and evaluation of each pole to determine strength.	11,057 (36.06%) distribution poles inspected in 2012; 100% of transmission poles were completed in 2007; will not be inspected again until 2015.	802 (7.2%) distribution poles failed inspection due to shell rot or decayed top.	700 (87.2%) of the rejected distribution poles were replaced and 102 (12.7%) distribution poles braced. The poles were 30 to 50 foot, class 1, 3 & 5.	The City is on a 3-year trim cycle, with additional pruning over areas allowed minimal trimming. Contractor performs annual VMP over 1/3 of the system. In 2013, an IVM style pruning program will be implemented, which will use mechanical pruning for line clearance, overhang and removals and moving more toward the use of herbicide for managing brush.	In 2012, over 5 miles of the 13-mile 230kV transmission easement was cleared as well as over 250 miles of primary / 69kV transmission lines.
Orlando Utilities Commission, City Orlando	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	OUC facilities are on an 8-year inspection cycle, which includes visual inspection, sounding & boring, excavation, removal of exterior decay, ground line and internal treatments.	OUC planned 6,400 (12%) inspection for distribution and transmission facilities and completed 6,400 (100%) inspections.	396 poles (6.2%) failed inspection. Failure causes include: decay top, shell/heart rot, split top, woodpecker holes, and other. (Detailed Osmosis Report included).	8 poles were replaced, 10 poles were restored, and the remaining 386 poles have work orders being generated for replacement in 2012 and 2013. (See the detailed Osmosis report for size and classes.)	213 miles of transmission facilities are on a 3-year trim cycle. 1,261 miles of distribution facilities are on a 4-year trim cycle. OUC follows safety methods in ANSI A300 & Z133.1.	For 2012, 332 distribution miles were planned and 100% were completed. For 2012 127 transmission miles were planned and 100% were completed.

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Quincy, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	City of Quincy conducted visual inspections of all distribution and transmission poles in 2012.	Visual inspections were carried out on all 2,842 distribution poles. Detailed inspections were carried out on all 31 transmission poles. All transmission poles are made of concrete and found to be in good condition.	22 poles (0.8%) failed inspection. The poles showed signs of rotting around the base of the pole, excessive splitting of the pole top and excessive bends. The poles were replaced with wood poles. No transmission poles failed inspection.	22 distribution poles were replaced. The poles ranged from 25 feet to 55 feet, class 3, 6, and 7.	The City trims its electric system right of way on a regular basis using in-house crews. The City strives to trim 25% of the system per year.	Approximately 24 miles (31%) of vegetation trimming was planned and completed on the distribution system in 2012. 100% of the City's transmission lines were inspected in 2012.
Reedy Creek Improvement District	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	The District does not have any foreign attachments on the facilities.	The District performs visual inspection performed monthly, and inspects the distribution facilities every 5-year. Reedy Creek in not a transmission owner or operator.	All distribution poles were inspected and treated in 2008.	All distribution poles passed inspection. 3 wood transmission poles were identified to have excessive internal decay and classified as non-priority rejects.	Based on the 2008 inspection results, all remaining wood transmission poles were replaced in 2009. No distribution pole replacement or remediation was required based on the 2008 inspection results.	15 miles of transmission right-of-way is ridden monthly for visual inspection. The District contracts tree trimming each spring to clear any issues on right-of-ways.	Periodic inspections in 2012 identified several areas of encroachment in early stages and those areas were addressed to restore to acceptable conditions.

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	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Starke, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	The City is in the process of studying this issue.	The City is in process of having all their poles GIS mapped. To date, they have approximately 1/3 of their poles mapped and inspected. The poles are replaced as needed on a visual basis.	One third of their poles (1176) poles were inspected.	In 2012, 6 poles (0.17%) were found to be bad from rotting and splitting.	The City has no transmission poles. 2 distribution pole (0.06%), Class 2, 30 feet and 4 (0.11%) Class 2, 35 feet, was replaced in 2012.	The City has an annual tree trim and vegetation contract with Gainesville Regional Utilities. In addition, the City will trim trees yearly as needed. 33% of distribution facilities are completed annually.	The City trims distribution lines throughout the year as needed and when applicable removes dead or decayed trees. The City will trim 33% of distribution system in 2012.
Tallahassee, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	Every 8 years a new pole inspection cycle is initiated to inspect all poles over a 3-year period. The inspection includes visual inspection, sound & bore, internal & fumigant treatment, assessment & evaluation for strength standards.	645 (18.8%) wood poles were inspected during 2012. Next treatment and inspection cycle for distribution poles is scheduled to begin 2013.	No transmission poles were rejected. 72 poles distribution poles were rejected and replaced due to wood decay, woodpecker damage, wind loading concerns, and other damage.	No transmission poles were replaced. 154 distribution poles (ranging in size from 40'3 to 65'2) were replaced due to construction and 91 distribution poles (ranging in size from 40'3 to 60'2) were added to serve new customer load.	The transmission facilities are on a 3-yr. trim cycle with target of 20 feet horizontal clearance on lines. The distribution facilities are on an 18 month trim cycle on overhead lines to 4-6 feet clearances.	The transmission rights of way & easements were mowed in 2012. Approximately 1,037 miles of overhead distribution lines were managed in 2011 and 2012. The City is currently working on the 11th trim cycle.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Vero Beach, City of	Yes	Yes	Facilities installed a minimum of 8 inches above roadway and grading required preventing erosion. The City is also participating in the PURC study on conversion of overhead facilities to underground facilities.	Yes	Yes	The transmission lines are driven and inspected visually every 2-3 months. There is a total of 41.5 total miles of transmission lines. The distribution poles and lines are inspected on 5-year cycle by sound and bore method with some excavation.	The transmission system was inspected 4 times in 2012 with no poles failing. The city has 700 concrete, 65 steel, 125-spun concrete, 65 wooden and 5 hybrid concrete / steel poles. In 2012, approximately 25% (2,640 poles) of the distribution system was inspected.	There were no transmission poles failures in 2012. 2,650 distribution poles were inspected with 15 (0.5%) failures due to ground rot and hit by a vehicle.	There were no transmission poles failures in 2012. 14 distribution poles were replaced by the City and AT&T replaced 2 poles. The sizes ranged from 30 foot to 40 foot, Class 3, 4, 5.	The City's VMP is on a 3-year cycle that includes trimming tree limbs within 3 feet of neutral or 5 feet of the primary and topping trees in the right of way.	The City has approximately 40 square miles of service territory. The territory is broken down into 60 blocks of equal size and the City's goal is to complete all 60 blocks every 3 years. The transmission facilities are mowed twice a year.
Wauchula, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	The City of Wauchula does a sound and bore inspection.	The facilities are on a 3-year cycle and completed 1/3 of system in 2012.	Less than 1% (out of 1800 poles) has failed due to poles rotting at the ground line.	2 poles were replaced in 2012 due to damage caused by traffic accidents.	The policy on vegetation management is on a 3-year cycle that includes trimming trees and herbicides for vines.	The City completes 1/3 of the system every year. The City also uses PURC's 2077 and 2009 vegetation management reports to help improve its practices.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Williston, City of	Yes	Yes	Not applicable, the City of Williston is an inland community located 45 miles from a coastal area.	Yes	As a result of employee turnover within the management ranks the City has not established any data on pole reliability, pole loading capacity, or engineering standards and procedures for attachments by others to our distribution poles. The City anticipates outsource this function in the 2013 – 2014 budget years.	All distribution poles are visual and sound inspection on a 3-year cycle. The city uses both the bore method and the visual and sound method to inspect poles	33% of 1,100 poles were inspected in 2012. This is the first year of the three year cycle.	Two(0.05%) poles found defective due to wood decay at or below ground level	Two poles failing inspection were 40 foot, class 5, which both have been replaced	The distribution lines are on a 3-year trim cycle with attention to problem trees during the same cycle. Any problem tree not in right of way is addressed to the property owner to correct	One third of distribution facilities are trimmed every year to obtain a 3-yr. cycle

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Winter Park Electric Utility, City of	The city has an initiative to put its entire distribution system underground. The city requires new residential service to be installed underground and to date, 51% of the system is underground.	The facilities are not designed to meet extreme loading standards on a system wide basis. The city participates in PURC's granular wind research study through FMEA.	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	The city does not own transmission poles or lines. The distribution facilities are on an 8-yr.cycle, which the city is evaluating the cycle for length. The inspection includes visual, assessment prior to climbing and sounding with a hammer.	The city does not own transmission poles. Distribution poles were inspected in 2011. The city did not contract pole inspections in 2012.	From the 2011 inspection, 5% poles failed due to base rot, 4.8% failed due to top rot or split rot.	Based on the 2007 full system inspections, all repairs and replacements have been made. The next full system inspection will begin 2015. The City routinely inspects the poles involved with daily jobs and work orders. Poles requiring remediation or replacement were class 1 to 3 wood poles with damage from decay or insects.	Vegetation Management is performed by an outside contractor on a 3-year trim cycle, which is augmented as needed between cycles.	The trimming crews trimmed approximately 126,825 feet of distribution lines in 2012. The city is using the PURC 2007 and 2009 reports to improve VMP practices.

Appendix C – Summary of Rule Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Central Florida Electric Cooperative, Inc.	Yes	Central Florida's facilities are not designed to be guided by the extreme loading standards on a system wide basis.	Central Florida continues to participation in evaluation of PURC study to determine effectiveness of relocating to underground.	Yes	Yes	100% of the transmission facilities are inspected annually using above and ground level inspections. The distribution facilities are on a 9-year cycle for inspections using above and ground level inspections.	Central Florida planned and inspected 30 miles of the transmission facilities in 2012. 11,222 (13.2%) distribution poles were inspected in 2012.	Of the 11,222 distribution poles inspected in 2012, 56 were rejected due to deterioration.	56 rejected distribution poles are scheduled for replacement.	Trees are trimmed or removed within 15 feet of main lines, taps, and guys on a 5-year plan.	In 2012, 638 miles of 3,187 miles of primary overhead line on the system were cleared.
Choctawhatchee Electric Cooperative, Inc.	Yes	Yes	Yes	Yes	Yes; also inspect and physically count every attachment on a 3-year cycle	Inspect new construction of power lines on a monthly basis. Eight-year cycle to cover all poles	During 2012, 7,571 poles or 12.62% of 59,624 poles were inspected.	261 poles or 3.4% of the poles failed inspection ranging from spit top to wood rot	256 of 261 failed poles were replaced.	Current right of way program is to cut, mow, or otherwise manage 20% of it's right of way on an annual basis	Standard cutting is 10 ft .on either side of primary from ground to sky. 535 miles were cut on primary lines. Worked to removed problem tress under the primary lines, which reduces hot-spotting requirements between cycles. The company also established herbicidal spraying pgm.

Appendix C – Summary of Rule Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Clay Electric Cooperative, Inc.	Yes	Clay's facilities are not designed to be guided by the extreme wind loading standards specified by Figure 250-2(d) except as required by rule 250-C. Clay is participating in the PURC's granular wind research study through the FECA.	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	Clay's transmission facilities are on a 10-yr. cycle, which includes sound/bore techniques, excavation, climbing inspection, and ground and helicopter visual patrol. Clay's distribution system is on an 8-year cycle using excavation, sound and bore at the ground line and visual inspection.	Clay completed the transmission ground patrol inspection in 2010 and the next inspection will be done in 2014. A complete climbing inspection and 2 helicopter inspections was performed in 2012. A total of 5,520 transmission structures were inspected consisting of 7,830 poles. Clay has an estimated 206,000 distribution wooden poles. In 2012, 22,638 (10.99%) poles were planned and 29,260 (14.20%) were inspected.	The inspection found 39 (0.498%) of the total transmission poles inspected required some form of maintenance. 73 (0.2495%) distribution poles were rejected due to ground rot, top decay, holes high, split, split top, and int rot.	6 (0.23%) transmission poles of the 2,610 total system poles were replaced of height-class as follows: (1) 55-1; (4) 60-1 and (1) 75-1. All rejected distribution poles will be replaced by the end of 2nd quarter 2013. 92 poles are scheduled to be replaced ranging from 25 feet to 40 feet, Class 4 to 6.	Clay's VMP for the transmission facilities is on a 3-year cycle and includes mowing, herbicide spraying and systematic recutting. Clay's VMP for the distribution facilities is on a 3 year cycle for city, a 4-year cycle for urban and 5 year cycle for rural and includes mowing spraying and recutting.	In 2012, Clay mowed 79.91 miles of transmission right-of-way, sprayed 79.40 miles of transmission right-of-way, and recut 49.88 miles of transmission right-of-way. In 2012, Clay mowed 3,365.59 miles of its distribution circuits, sprayed 3,161.79 miles of distribution circuits, and recut 2,254.3 miles of distribution circuits.

Appendix C – Summary of Rule Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Escambia River Electric Cooperative	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue.	Yes	Yes	Escambia River inspects its distribution facilities on an 8-year cycle using visual, sound and bore techniques in accordance with RUS standards.	4,211 (12.5%) distribution poles were planned and 0 (0%) inspections were completed 2012. Escambia River does not own any transmission poles.	The lack of inspections done in 2012 was due to improving the way inspections and ROW maintenance are done and recorded.	To start the new computerized inspection management system a complete GPS inventory of the field assets were needed. The GPS inventory has been completed and EREC is committed to and currently working on inspecting the 2012 and 2013 poles now.	Escambia River's distribution facilities are on a 5-year trim cycle. Distribution lines and right-of-way is cleared 20 feet; 10 feet on each side.	In 2012, approximately 299.8 miles (20%) of the power lines were trimmed with 300 miles (20%) planned.
Florida Keys Electric Cooperative Association, Inc.	Yes	The facilities were not designed to the extreme loading standards on a system wide basis. However, the company has adopted the extreme wind loading standard.	Yes	Yes	Yes	The company inspects 100% of the transmission structures annually by helicopter. The distribution poles are on a 4-year cycle. The four year cycle was completed in 2010 and is scheduled to resume 2015.	100% of the transmission: poles were inspected in 2012 by helicopter and visually. The inspection of all distribution poles were completed in 2010.	No transmission structures failed inspection in 2012. No distribution poles were inspected in 2012.	No transmission poles were replaced in 2012. All pole replacements identified in the 2007 – 2010 inspection were replaced prior to 2012.	100% of the transmission system is inspected and trimmed annually. The distribution system is on a 3-year trimming cycle. The trade-a-tree program was implemented in 2007 for problem trees within the right of way.	Annual transmission line right-of-way clearing form mile marker 106 to County Road 905 to the Dade/Monroe County line was completed in 2012. The remainder of the transmission system was spot trimmed. Approximately 200 circuit miles of distribution lines were trimmed in 2012.

Appendix C – Summary of Rule Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Glades Electric Cooperative, Inc.	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue; GEC participated in a workshop hosted by Florida Catastrophic Planning that addressed flooding and storm surges.	Yes	Yes	The facilities are on a 10-year sound and bore inspection cycle with excavation inspection cycle for all wood poles in addition to System Restoration Plan inspections.	100% of total 83 miles of transmission lines were planned and completed by aerial/visual and groundline and climbing inspections. 2,225 distribution poles were planned and inspected in 2012.	5 transmission poles rejected. 273 distribution poles failed due to decay, rot and top splits.	100% transmission and distribution poles rejected in 2012 were replaced. The distribution poles ranged from 35 foot to 40 foot, Class 5 to 6. GEC upgraded wood cross arms and suspension insulators on approximately 25 transmission structures.	All trimming is on a 3-year cycle. The right of way is trimmed for 10 foot clearance on both sides, and herbicide treatment is used where needed.	Approximately 860 miles of distribution facilities was planned and completed right of way trimming during 2012. The transmission rights of ways are inspected annually and trimmed if necessary. Vegetation growth is not an issue for the transmission lines.
Gulf Coast Electric Cooperative, Inc.	Not bound by the extreme loading standards due to system is 99.9% under the 60ft extreme wind load requirements.	The method of construction used by GCEC does, however, meet the "design to withstand, without conductors, extreme wind loading in Rule 250C applied in any direction on the structure".	Yes, and GCEC continues to evaluate the PURC study to determine effectiveness of relocating to underground	Yes	Yes	No transmission lines. Performs general distribution pole inspections on an 8-yr. cycle	Inspected1, 151 (2.3%) distribution poles, in house in 2012 with 104 rejects.	104 (9.0%) poles were rejected due to rotten tops, holes at the tops, broken pole, pole split in the tops. The poles in this selection for inspection are 40 to 50 years old.	Not reported. Report contained no information regarding remedial action planned or taken on rejected poles	1,632 miles overhead and underground, and at present on a definitive 4-yr. program. Cut 20 & 30 ft. width, ground to sky	Planned annual clearing, and has a 3-yr. contract to cut 440 miles in 2011 and 2012. GCEC works closely with property owners for danger tree removal.

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Lee County Electric Cooperative, Inc.	Yes	Yes	Yes	Yes	Yes	Transmission facilities are inspected annually for 230 kV systems and ever 2 years for 138 kV systems. The inspections are done by climbing or the use of a bucket truck. The distribution facilities are on a 2 year visual inspection cycle and on a 10-year cycle for splitting, cracking, decay, twisting, and bird damage.	In 2012, 2,713 transmission poles were inspected. This includes 100% of the 230 kV facilities and 54% of the 138 kV facilities and was 100% of the poles that were scheduled. 139,236 distribution poles were inspected. This was 100% of the inspections scheduled and 97% of the total poles.	186 (0.06%) transmission poles failed inspection due to rot, woodpecker damage, bad arm, and grounds.202 (0.145%) distribution poles failed inspection due to rot / split top, out of plumb, and woodpecker damage.	118 transmission poles were replaced due to rot by concrete and steel poles. 23 (11.4%) distribution poles were repaired through re-plumbing, 9 (4.45%) were repaired through patching. 170 poles were replaced in 2012. The sizes verified by Class 2 to Class 6.	VMP strategies include cultural, mechanical, manual, & chemical treatments and the plan is on a 3-6 yr. cycle for 3,947 miles of distribution facilities.	Transmission and distribution VMP was completed 100% (975 miles) as planned for 2012.
Okefenoke Rural Electric Membership Cooperative	Yes	The facilities are not designed to be guided by the extreme loading standards on a system wide basis. OREMC is participating in PURC's granular wind research study.	OREMC is continuing the evaluation of the PURC study to determine effectiveness of relocating to underground.	Yes	Yes	OREMC owns no transmission facilities. The inspections for the distribution systems include visual, sound/bore with excavations, and chemical treatment.	In 2012, 380 distribution poles were inspected. The target inspections will be in excess of 5,000 poles for 2013.	57 poles were either repaired or replaced in 2012.	43 poles required minor repairs such as repairing guy wires, grounds, and etc. 14 poles were replaced. 118 maintenance tickets left over from year 2011 were addressed during the year 2012.	Vegetation control practices consist of complete clearing to the ground line, trimming, and herbicides. The VMP is on a 5-year trim cycle.	OREMC planned 500 miles of right-of-ways for trimming and completed 700 miles in 2012. This equates to 28% of the 2,535 miles of facilities.

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Peace River Electric Cooperative, Inc.	Yes	The facilities are not designed to be guided by the extreme loading standards on a system wide basis. Peace River is currently participating in PURC granular wind research study.	Peace River is continuing the evaluation of PURC study to determine effectiveness of relocating to underground to prevent storm damage and outages.	Yes	Yes	Peace River currently uses RDUP bulletin 1730B-121 for planned inspection and maintenance. The facilities are located in Decay Zone 5 and are inspected on an 8-year cycle.	294 transmission poles are inspected every 2 years. 1,152 of 55,962 distribution poles were inspected.	218 transmission poles were visual inspected in 2012 and there were no rejected poles. 227 (19.71%) distribution poles were rejected which were replaced in 2012.	Peace River has 89 concrete, 2 steel, and 218 wood transmission poles inspected on 2-year program. Peace River has 55,962 wooden distribution poles, 25 to 60 feet and Class 1 to 7.	Peace River renewed its vegetation maintenance plan in December 2012, to cut the system in a 3-year period from the substation to the consumer's meter.	In 2012, the company completed right-of-way maintenance on 31.67% of its 2,796 miles of overhead distribution. This completed year 3 of their vm plan at 100%.
Sumter Electric Cooperative, Inc.	Yes	Transmission and distribution facilities are designed to withstand winds of 110 MPH in accordance with 2012 NESC extreme wind load	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	The transmission facilities are on a 5-yr cycle using ground line visual inspections. The distribution facilities are on an 8-yr. cycle using sound, bore, & excavation tests.	292 (21.5%) transmission poles were planned and 292 (100%) were inspected in 2012. 21,169 (15.4%) distribution poles were planned and 21,169 (100%) were inspected in 2012.	78 (26.7%) transmission poles failed inspection. 2,144 (10.1%) distribution poles failed inspection. The causes are due to ground rot and top deterioration.	37 transmission poles were replaced and 14 transmission poles were retired. 2,099 distribution poles were replaced and 45 poles were retired. The transmission and distribution poles ranged from 25 to 85 foot and Class 1 to class 7.	Transmission is on a 3-year trim cycle for feeder and laterals. In 2012, trimmed 1,624 circuit miles & removed 19,695 trees.	Plan to meet current tree trim cycles, tree removals, and herbicide treatment. An estimated 1,624 miles of underbrush treatment is being scheduled for 2013.
Suwannee Valley Electric Cooperative, Inc.	Yes	SVEC facilities are not designed to be guided by the extreme loading standards on a system wide basis. SVEC participates in PURC wind study.	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	SVEC inspects all structures on an 8-year cycle using sound/bore and visual inspection procedures.	SVEC inspected 5 (100%) transmission structures in 2012. 4,311 (5%) distribution structures were inspected in 2012.	144 (3.4%) inspections of D poles failed due to ground line decay, excessive splitting, & woodpecker damage. 0 inspections of T poles failed.	597 (14.1%) distribution poles were remediated by ground line treatment and 77 (1.8%) distribution poles were replaced. 0 transmission structures were remediated.	SVEC's facilities are on a 5-year inspection cycle includes cutting, spraying and visual on as-needed basis.	In 2012, 900 (21.3%) miles were cut & 657 miles right-of-way sprayed. 947 (20%) miles are planned for cutting & 900 miles are planned for spraying in 2013.

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Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Talquin Electric Cooperative, Inc.	Yes	Yes	Talquin has a very small percentage subject to storm surge. Stronger anchoring systems are in place to better secure pad-mount transformers and installation of grounding sleeves to secure underground cabinets.	Yes	Yes, inspecting on a 5-year cycle	Annual inspections in house of transmission lines are performed by checking the pole, hardware, and conductors. An outside pole-treating contractor inspects distribution and transmission poles annual. The poles are inspected on 8-yr. rotation since 2007	14,077 poles were inspected in 2012, which included 864 transmission poles.	442 (3.2%) of 13,991 distribution poles were rejected with 3 being priority poles. No transmission poles were rejected out of the 86 poles inspected.	The priority poles rejected were replaced in 2012 and the rejected poles are being inspected and repaired if possible or replaced if not.	Talquin maintains its right of ways by mechanical cutting, mowing, and herbicidal applications	625 (17%) miles of right of way treated in 2012. In addition, Talquin received 1,725 member requests for tree maintenance. Talquin has a right-of-way budget exceeding $2,800,000.00 for 2013 trimming goals
Tri-County Electric Cooperative, Inc.	Yes	Yes	The current standard practice is to restrict electrification of flood prone areas. Due to natural landscape within area, storm surge issues are low.	Yes	Yes	The transmission facilities are inspected annually by visual inspections. The distribution facilities are on an 8-year cycle using both ground line and visual inspections.	During 2012, the transmission poles were visually inspected. The Coop completed the 8-year cycle inspection for the distribution poles. Of the 55,504 poles in their system, 17,457 were inspected.	241 (3.1%) distribution poles were rejected due to animals / insect damage and missing guy guards and broken ground wires.	The 241 rejected distribution poles found during the 2012 inspection which required replacement are in the process of being changed out.	The Coop attempts to acquire 30 foot right of way easement for new construction and increase 20 foot to 30 foot on existing to inspect annually.	Approximately 519 distribution miles were trimmed in 2012. 422 miles received herbicide treatment in 2012.

Appendix C – Summary of Rule Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2012

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2012

Utility	The extent to which Standards of construction address:					Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Guided by Extreme Wind Loading per Figure 250-2(d)		Effects of flooding & storm surges on UG and OH distribution facilities	Placement of distribution facilities to facilitate safe and efficient access	Written safety, pole reliability, pole loading capacity and engineering standards for attachments	Description of policies, guidelines, practices, procedures, cycles, and pole selection	Number and percent of poles and structures planned and completed	Number and percent of poles and structures failing inspections with reasons	Number and percent of poles and structures by class replaced or remediated with description	Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation	Quantity, level, and scope of planned and completed for transmission and distribution
	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
West Florida Electric Cooperative Association, Inc.	Yes	Yes	Non-coastal utility; therefore, storm surge is not an issue. Some areas in territory are subject to flooding. In these areas, line design is modified to compensate for known flooding conditions.	Yes	Yes. General inspections are completed on an 8-year cycle	West Florida continues to use RUS Bulletin 1730B-121 as its guideline for pole maintenance and inspection	During 2012, inspected 8% of entire system	Out of the 8% inspected, 12% required maintenance or replacement.	During the 2012 year, 1011 poles were replaced. 9 miles of single phase line was converted to 3 phase to correct loading issues. The company re-insulated and upgraded approximately 50 miles of distribution lines from 12.5 KV to 25 KV. The company relocated 5 miles of line to accommodate the upgrade and widening of local roads.	Ground to sky side trimming along with mechanical mowing and tree removal.	During 2012, the company mowed and side trimmed 622 miles of its distribution system. Also during 2012, the company chemically sprayed approximately 608 miles of right of way. Approximately 710 miles will be sprayed and approximately 700 miles will be trimmed and mowed during 2013.

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Withlacoochee River Electric Cooperative, Inc.	Yes	The facilities are not designed to be guided by the extreme wind loading standards on a system wide basis. However, most new construction, major planned work and targeted critical infrastructure meets the design criterions that comply with the standards.	Yes	Yes; in 2012, WREC relocated 30,000 feet of overhead primary lines from rear lots to street side; this will continue until older areas are all upgraded.	Yes	WREC inspects the transmission and distribution facilities annually (approximately 2,771 miles for 2012) by line patrol, physical and visual inspections.	62 miles or 100% of transmission facilities were inspected by walking, riding or aerial patrol. 2,771 miles of distribution facilities were inspected annually by line patrol, voltage conversion, right-of-way, and Strategic Targeted Action and Repair (S.T.A.R.).	OSMOSE (a contractor for pole inspection and treatment) found 6.2% poles with pole rot and 1.0% poles were rejected in 2003 through 2004. WREC discontinued this type of inspection / treatment plan and now data is unavailable on the exact failure rates.	4,205 wooden, composite, concert, steel, and fiberglass poles ranging in size from 12 to 120 feet were added; 2,452 poles were retired.	WREC has an aggressive VMP that includes problem tree removal, horizontal/vertical clearances and under-brush to ground.	All transmission lines are inspected annually. 1,334 miles of right of way issues were addressed in 2012.