Review of

Florida's Investor-Owned Electric Utilities

2010 Service Reliability reports

NOVEMBER 2011

State of Florida

Florida Public Service Commission
Division of Safety, Reliability & Consumer Assistance

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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
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, PEF, 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
PEF	Progress Energy Florida, Inc.
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, 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 of the 2010 reliability of the electric service provided by Florida's investor-owned electric utilities 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 investor-owned utility's (IOU) Electric Service Reliability is made primarily through a detailed review of established Service Reliability Metrics pursuant to Rule 25-6.0455, 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 unreliability. Comparison of the year-to-year levels of the metrics may reveal changes in performance, which 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. To ensure the reported data is reliable based on the patterns observed.

Since 2007, IOUs file 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 was needed to provide an indication of the distribution system performance during hurricanes and other allowable exclusions. 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, but does not reveal the impact of excluded events on reliability performance. Analyzing the "actual" and "adjusted" data provides insight concerning the impact of hurricanes and other severe weather had on the 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, 2011, include: **(1)** storm hardening activities; **(2)** actual 2010 service reliability data; **(3)** adjusted 2010 distribution service reliability data; and **(4)** actual and adjusted 2010 performance assessments in five areas: system-wide, operating region, feeder, cause of outage events, and 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: PSC-06-0351-PAA-EI, issues 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.

Conclusions

The March 2011 reports of Florida Power & Light Company (FPL), Progress Energy Florida, Inc., (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf) and Florida Public Utilities Company (FPUC) were sufficient to perform the 2011 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 2010 **(Table 2-1),** FPL's allowable exclusions for outage events accounted for approximately 5.3 percent of all customer minutes of interruption (CMI) with less than 0.69 percent of the allowable exclusions being attributed to tornados recorded by the National Weather Service (NWS). Planned outages accounted for the bulk of the CMI, representing 2.81 percent.

FPL's 2010 metrics on an adjusted basis include SAIDI (System Average Interruption Duration Index) which was reported as 77 minutes and is one minute less than the previous year's SAIDI of 78 minutes. Typically, SAIDI is viewed as the best overall reliability indicator because it encompasses two other standard performance metrics for reliability; SAIFI (System Average Interruption Frequency Index) and CAIDI (Customer Average Interruption Duration Index). The SAIFI index improved to 0.92 interruptions in 2010, from 1.11 interruptions in 2009. The CAIDI index increased by 14 minutes in 2010 to 84 minutes from 70 minutes in 2009. FPL attributed the increase in CAIDI to shorter duration feeder outages and a cold weather event in January 2010 that could not be excluded.

Equipment failure and vegetation outages continue to be the leading cause of the number of outage events per customer for the past five years. Analysis of **Figure 3-8** shows an increasing trend in the number of outage events attributed to equipment failure and vegetation. FPL has budgeted reliability programs targeted at reducing its equipment and vegetation outage events that include $15.8 million for reducing the number of direct buried lateral and feeder cables failures. $59.8 million to minimize tree and vine related interruptions, and an additional $10.1 million for switch replacement, pad-mounted transformers, submarine feeder cable, switch cabinets and vault inspections/repairs.

For all of the FPL complaints received by the Commission, only 0.7 percent was categorized as reliability related. This represents an improvement over the 2009 results as shown in **Figure 4-8.** Overall, FPL's percentage of total complaints that are reliability related for the last five years appear to be trending downward.

Service Reliability of Progress Energy Florida

PEF's 2010 unadjusted data indicated that allowable exclusions for outage events were approximately 18 percent of all customer minutes of interruptions (CMI). The bulk of the exclusion percentages were attributed to transmission (non-severe weather) at approximately 8 percent, emergency shutdown (non-severe weather) at approximately 4 percent and pre-arranged (non-severe weather) at approximately 5 percent. Severe weather that was excluded only accounted for 1.23 percent of the CMI.

On an adjusted basis, PEF's 2010 SAIDI was 93 minutes, increasing by 10 minutes from the 2009 SAIDI of 83 minutes. Progress Energy Florida attributes a system wide wind event that included wind gusts in excess of 57 mph as a weather event that was non-excludable. This single event contributed over 5.5 minutes to the 2010 SAIDI. The "deep freeze" in January also impacted the results; both of these events pushed PEF's SAIDI from 80 minutes to 93 minutes because the interruptions were non-excludable events.

In **Figure 3-16,** PEF's Top Five Outage Categories, the category "tree preventable" appears to be trending upward and has increased approximately 9 percent from 2009. The second top ten categories "unknown" decreased in 2010; however, for the five year period, all of the top five outage categories appear to be trending upward.

The percentage of reliability complaints to the total number of complaints filed with the Commission for PEF decreased to 3.1 percent. Overall, the total number of complaints decreased to 3,405 in 2010 from the five year high of 4,070 in 2009.

Service Reliability of Tampa Electric Company

TECO's 2010 unadjusted data indicated that the allowable exclusions for outage events accounted for approximately 4 percent of all the customer minutes of interruption and 15 percent of the customer interruptions.

The adjusted SAIDI increased by 7 minutes to 84 minutes and it represents an 8 percent increase when compared to the year 2009. The system average interruption frequency index (SAIFI) decreased to 0.89 interruptions and is an improvement when compared to the 2009 results of 1.00 interruptions. However, the customer average interruption duration index (CAIDI) increased to 95 minutes in 2010 and is up from the 77 minutes in 2009. TECO's customers had fewer interruptions; however, when an outage occurred, it lasted, on average, 18 minutes longer in 2010.

The percent of customers experiencing five or more service interruptions (CEMI5) in TECO's Dade City and Plant City regions appears to have decreased in 2010 as the region whose customers experienced the highest CEMI5 percentage was Winter Haven. Overall, the 2010 average CEMI5 percentage decreased to 1.3 percent from a five year high of 2.4 percent in 2009.

TECO's 2010 total number of complaints reported to the Commission decreased to 996 from the five year high of 1,073 in 2009. However, the percentage of service reliability related complaints for TECO's customers increased to 4.5 percent from the 3.2 percent reported in 2009.

Service Reliability of Gulf Power Company

In Gulf Power's 2010 unadjusted data, allowable exclusions accounted for 12.9 percent of customer minutes of interruption with 4.62 percent of the allowable exclusions being planned outages and 8.27 percent for transmission events. The number of customer interruptions that were excluded accounted for approximately 23.4 percent of the 979,221 customer interruptions. Gulf's 2010 System Average Interruption Duration Index (SAIDI) was reported as 146 minutes, which is an increase of six minutes over the 2009 results. The System Average Interruption Frequency Index (SAIFI) increased to 1.74 interruptions; the 2009 result was 1.36 interruptions and appears to be trending upward over the last five years. The customer average interruption duration index (CAIDI) improved to 84 minutes compared to the 103 minutes that were reported in 2009. Overall, the CAIDI results appear to be trending downward over the last five years. Momentary interruptions shown in **Figure 3-29** illustrates that Gulf's customers experienced fewer momentary interruption in 2010 by decreasing to 7.1 from 8.3 momentary interruptions in 2009. In 2010, the percent of customers experiencing more than five interruptions increased to 3.3 percent compared to 2.3 percent in 2009. CEMI5 appears to be trending slightly upward.

Gulf's top five causes of outages are animal, deterioration, lightning, trees, and unknown. Although animal causes were still the number one cause of outages the other four causes continued to decline in 2010.

The percentage of reliability related complaints reported to the Commission for Gulf remained at zero percent and for the last five years has remained relatively flat ranging from 0.047 reliability related complaints per 10,000 customers in 2006 to a high of 0.070 in 2008.

Service Reliability of Florida Public Utilities Company

FPUC's unadjusted data indicate that its allowable exclusions for 2010 accounted for approximately 40 percent of the total customer minutes of interruption. The "Substation" category accounted for approximately 32 percent of the customer minutes of interruption that were excluded.

The adjusted data for FPUC's System Average Interruption Duration Index (SAIDI) was 127 minutes and represents a significant decrease (improvement) from the 218 minutes reported for 2009. The system average interruption frequency index (SAIFI) also improved to 1.42 interruptions from 2.01 interruptions in 2009. The customer average interruption duration index (CAIDI) dropped to 90 minutes from the 2009 results of 109 minutes. FPUC reported improvements across the board on all three metrics.

FPUC's top five cause of outages included animal, vegetation, unknown, corrosion, and weather related events. Vegetation attributed outages continued to improve in 2010; however, animal caused outages increased and appear to be trending upward. The decrease in vegetation related outages indicates FPUC's vegetation management program is effective.

In FPUC's Feeder Report, there are so few feeders listed that the data in the report does not provide any statistical significance. There were two feeders on the Three Percent Feeder Report: one from each division. The 2010 report listed one feeder from 2008 that would qualify for the top three percent.

Reliability related complaints against FPUC are infrequent, in part, because FPUC has less than 28,000 customers. In 2010, the number of reliability related complaints reported to the Commission were five out of 53 total complaints. Normalizing to a 10,000-customer basis results in 1.790 reliability related complaints. The reliability related complaint results have varied from 0.347 in 2006 to a high of 4.256 in 2008. The volatility in FPUC's results can be attributed to its small customer base that averages 28,000 or fewer customers.

Introduction

The Florida Public Service Commission (Commission) has jurisdiction to monitor the quality and reliability of electric service provided by Florida's investor-owned electric utilities (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 indicate 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 years 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]

The reports filed on March 1, 2011, include: **(1)** actual 2010 service reliability data; **(2)** adjusted 2010 distribution service reliability data; **(3)** actual and adjusted 2010 performance assessments in five areas: system-wide, operating region, feeder, cause of outage events; and **(4)** complaints. The reports also summarized the storm hardening activities for the IOUs.

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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: 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.

Review Outline

This review primarily relies on the March 2011, Reliability Report filed by the IOUs for recent 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 2010 distribution service reliability and support for each of its adjustments to the actual service reliability data.
- **Section 3:** Each utility's 2010 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 2006 through 2010.
- **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. This order required 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 reports for 2010.

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 IOU's.[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] Each IOU, pursuant to Rule 25-6.0342(2), F.A.C., must file a plan and the plan is required to be updated every three years. The IOU's updated storm hardening plans were filed on May 1, 2010.[13]

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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, PSC-06-0947-PAA-EI, and PSC-07-0468-FOF-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 and PSC-07-0043A-FOF-EU.

[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 100262-EI through 100266-EI Review of the 2010 Electric Infrastructure Storm Hardening Plan filed pursuant to Rule 25-6.0342 F.A.C. for each of the IOUs.

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 and PSC-07-0078-PAA-EU require each IOU to inspect 100 percent of their installed wooden poles within an 8-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 PEF determined the extreme wind loading requirements, as specified in figure 250-2(d) of the NESC do not apply to poles less than 60 feet in height that are typically found within the electrical distribution system. PEF stated in its 2009 Storm Hardening Report that extreme wind loading has 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 2010.

Table 1-1. 2010 Wooden Pole Inspection Summary

Utility	Total Poles	Poles Planned 2010	Poles Inspected 2010	Poles Failed Inspection	% Failed Inspection	Years Complete in 8-Year Inspection Cycle
FPL	1,051,469	154,994	131,124	15,511	11.83%	4
FPUC	26,695	3,499	3,944	273	6.92%	3
GULF[15]	263,133	32,000	32,016	1,060	3.31%	4
PEF[16]	800,866	102,468	104,565	6,242	5.97%	4
TECO	419,109	42,631	53,185	7,333	13.79%	4

[14] See PEF Storm Hardening Plan 2007-2009, Appendix J, pages 4-5.
[15] Gulf Power does not inspect a set number of poles each year; however, Gulf is on target to achieve the 8-year cycle presented in their 2010-2012 Storm Hardening Plan.
[16] PEF totals include poles that were inspected ahead of schedule that were planned for 2011.

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

Table 1-2. Projected 2011 Wooden Pole Inspection Summary

Utility	Total Poles	Total Number of Wood Poles Inspected 2006-10	Number of Wood Pole Inspections Planned for 2011	Percent of Wood Poles Planned 2011	Percent of Wood Pole Inspections Completed in 8-Year Cycle	Years Remaining in 8-Year Cycle After 2011
FPL	1,051,469	614,559	125,725	11.96%	58%	3
FPUC	26,695	12,594	3,565	13.35%	47%	4
GULF	263,133	107,577	32,000	12.16%	41%	3
PEF	800,866	495,215	100,108	12.50%	62%	3
TECO	419,109	209,119	52,676	12.57%	50%	3

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[17] and mid-cycle trimming to address rapid growth problems.

[17] "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 per company 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		
FPL	***2008***	13,469	4,262	4,151	5,222	13,635	**101%**
FPUC	***2008***	170	59	63	65	187	**110%**
GULF	***2008***	843	274	274	281	829	**98%**
PEF	***2009***	3,600	467	787	*TBD*	1,254	**35%**
TECO	***2010***	1,797	617	TBD	*TBD*	617	**34%**

Table 1-4 is a summary of Lateral Vegetation management activities per company cycle.

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 Total Lateral Miles Trimmed
				1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year		
FPL	***6***	***2007***	22,444	2,215	2,078	2,768	2,741	*TBD**	*TBD*	9,802	***43.7%***
FPUC	***6***	***2008***	501	86	96	84	*TBD*	*TBD*	*TBD*	266	***53.1%***
GULF	***4***[18]	***2010***	3,981	1,060	*TBD*	*TBD*	*TBD*			1,060	***26.6%***
PEF	***5***	***2006***	14,200	2,703	2,203	2,544	3,178	4,139		14,767	***104.0%***
TECO	***3***	***2010***	4,591	1,634	*TBD*	*TBD*				1,634	***35.6%***

* 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**

[18] Gulf Power Company transitioned to a 4 year trim cycle for Laterals in 2010.

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 pole inspection program. The following are some 2010 highlights:

- FPL currently audits 20 percent of its joint use poles annually. The company strength tested 131,124 poles and found 6,316 to be overloaded. These poles were reinforced, replaced or the attachments relocated when they did not meet the NESC requirements. FPL replaced 8,971 wooden poles in 2010.

- During 2010, FPUC conducted 1,210 detailed pole loading calculations and the inspections identified 108 poles as having loading levels above 100 percent of the design load. An additional load assessment will be performed on these poles using the Pole Foreman and poles that fail the assessment will be scheduled for replacement. Pole Foreman is a software program used for classifying utility poles, calculating guy wire tensions, and performing joint use analysis.

- Gulf inspected 32,016 wooden poles in 2010 and identified 923 for replacement. As of the report date, 649 were replaced with the remaining 274 scheduled for replacement by the end of 2011. Gulf performs its joint use inventory audits, covering the overhead distribution system as required by FPSC every five years. The next audit is scheduled to begin in March 2011.

- PEF audited approximately 12.5 percent of its joint use poles in 2010 and found no apparent NESC violations involving third party attachments. Strength testing of 62,361 distribution poles was conducted of which 545 poles were found to be overloaded. No NESC violations were observed. PEF also identified 271 wood distribution poles for replacement.

- In 2010, TECO's Joint Use Department continued to streamline its processes. This process helped manage attachment requests. A comprehensive loading analysis was performed on 1,738 poles with 1,077 determined to be overloaded. Corrective action was initiated.

(3) Six-Year Transmission Inspections

The IOU's were required by the Commission to inspect on a six-year cycle, 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. PEF, 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-06-0198-EI dated April 4, 2006. All five IOU's reported that they are on target to meet the six-year inspection cycle for transmission structures and substations.

- In 2010, FPL completed inspections at 100 percent of its 488 distribution substations and 100 percent of its 98 transmission substations. Six hundred and forty inspections were completed at distribution substations as well as 239 inspections at transmission substations. The number of substation inspections exceeded FPL's annual target.

- FPUC reported inspecting 100 percent of its transmission circuits and transmission substations in 2010. These inspections included 40 substation inspections, 35 transmission poles and 2 transmission towers.

- Gulf Power Company's transmission inspection program is based on two alternating twelve-year cycles, which result in a structure being inspected at least every six years. As part of the Transmission Line Inspection Standards, Gulf performs at least four routine aerial patrols each year. Gulf completed five aerial inspections of its entire system. It also, completed 33 transmission substation inspections during 2010 along with 3,895 poles. All inspections are on schedule to meet the six-year timeline.

- PEF reported inspecting 76 of its 518 transmission circuits and all of its 481 transmission substations in 2010. Current plans are to inspect approximately 20 percent of the system, which equates to approximately 1,000 miles of Transmission Circuits consisting of approximately 7,500 wood structures. PEF will also conduct an aerial patrol of the entire transmission system twice during 2011.

- In 2010, TECO performed 3,865 above ground inspections on transmission structures comprising 25 circuits. This represents approximately 17 percent of TECO's transmission system. In 2011, TECO plans above ground inspections for approximately 17 percent of its transmission structures.

(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. 2010 highlights and projected 2011 activities for each IOU are explained below.

- FPL performed climbing inspections of more than 11,300 wood, concrete and steel transmission structures and completed all necessary follow-up work identified during the 2009 inspections. In 2011, FPL plans to complete the remaining first cycle inspections and complete all follow-up work identified during the 2010 inspections. FPL replaced 1,400 wood transmission structures in its system with spun concrete or steel poles. Additionally, FPL is replacing ceramic post insulators with polymer insulators on 70 concrete structures. Extreme Wind Loading (EWL) criteria is being applied in the design of 39 feeder projects serving critical infrastructure facilities (CIFs) including a hospital; 26

emergency 911 dispatch centers; and 12 Emergency Operation Centers (EOCs). EWL was utilized in designing 15 highway crossings. The company continues to promote overhead-to-underground conversions, completing five Governmental Adjustment Factor (GAF) tariff-qualified projects in 2010. FPL will incorporate EWL standards on 34 planned feeder projects and eight highway crossings this year.

- FPUC is also using the Extreme Wind Loading guidelines, as specified in figure 250-2(d) of the 2007 edition of the NESC. It has adopted the following: 130 mph wind speed for wind loading in the NE Division (Fernandina); and 120 mph wind speed for wind loading in the NW Division (Marianna).

- Gulf reported the hardening of 324 transmission structures in 2010 with a goal of hardening 858 transmission structures for 2011. The company has two priority hardening activities for transmission structures; installation of guys on H-frame structures and the replacement of wooden cross arms with steel cross arms. Gulf believes these activities will add additional strength capacity to the existing structures. At the date of the report, all replacements and installations are proceeding on schedule to meet the target completion dates.

- Progress Energy Florida installed either steel or concrete poles when replacing 780 wood poles during 2010. PEF designed all DOT; customer requested relocations; line upgrades; and additions to meet or exceed the current NESC code requirements and will construct these projects with either steel or concrete poles. As a result, approximately 1,134 poles were replaced with steel or concrete during 2010.

- TECO hardened 915 structures that included replacing 697 wooden poles with steel or concrete poles along with the replacement of 218 sets of insulators with polymer insulators. In 2011, Tampa Electric intends to harden 1,037 transmission structures with 937 structures targeted for replacement with steel or concrete poles as well as 100 sets of insulators.

(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 on effective implementation of the other two initiatives. The five IOUs have geographic information system (GIS) programs and programs to collect post-storm data on competing technologies, perform forensic analysis, and assess the reliability of overhead and underground 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 either 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. 2010 highlights and projected 2011 activities for each IOU are listed below.

- Since the fourth quarter of 2006, FPL has added inspection records for approximately 599,000 poles in its GIS, including approximately 137,000 poles during 2010. As of year-end 2010, all streetlight data has been loaded into the FPL Distribution GIS. FPL actively audits streetlight assets in the field. Through this project, streetlight asset data and audit data is processed into the GIS through the new automated loading "framework." However, a significant amount of data verification is required and continues as the field inspections are completed. As on-going inspection results are loaded into FPL's GIS, an interface to its Customer Information System ensures continued accuracy. This data includes 43,600 cable junction boxes/hand holes input into FPL's Asset Management System (AMS) during 2010.

  Forensic metrics have been established and will be entered into portable field computers at forensic locations. The information captured from portable field computers via FPL's mobile mapping and field automation software is uploaded into a Microsoft SQL server database. This mobile mapping and field automation software visually identifies the facilities to be patrolled and provides tools needed to perform forensic work such as an audit trail of route traveled and data collection forms. In 2011, the forensic team will participate in the annual storm dry run. Costs associated with the storm dry run are not tracked. Costs will be dependent on storm events and the subsequent deployment of the forensic teams.

- FPUC has a Customer Information System (CIS) using ArcGIS to identify the distribution and or transmission facilities overlaid on a GIS land base. The systems locate the facilities on the land base and allow the users to enter data updates for all existing or new physical assets within the system. The system has proven to be a reliable and valuable tool for the engineering of new construction or existing system maintenance projects. The system also interfaces with the Customer Information System to function as a Customer Outage Management System (OMS). Implementation of the OMS has resulted in significant improvement in data collection and retrieval capability for analyzing and reporting reliability indices.

  2010 was the second full year using an Outage Management System (OMS) in the NE Division. FPUC believes that two years did not provide enough data to produce credible trend results. The NW Division just completed the third year of collecting OMS data. FPUC will begin reporting trend information when the NE Division has completed the third year of data collection this year. The trend data will be reported to the FPSC on March 1, 2012. The CIS is being used as an integral part of the data collection for many of the programs mentioned in this update. The information now available in the GIS will be instrumental in conducting future pole inspections and joint use audits. In addition, the OMS will serve as a valuable tool for use in post storm forensic analysis.

- Gulf reports all overhead and underground distribution equipment has been captured in Gulf's DistGIS including conductors, regulators, capacitors and switches, protective devices such as reclosers, sectionalizer's fuses and transformers. The DistGIS continues to be updated with any additions and changes as the associated work orders for maintenance, system improvements, and new business are completed. This on-going process provides Gulf sufficient facility information to use with collected forensic data to assess performance of its overhead system in the event of a major storm.

- In 2010 PEF created a department named Distribution Data Integrity whose sole purpose is to ensure the accuracy and quality of its Geographical Information System (GIS) and Outage Management System (OMS) data. The department's additional responsibility is to monitor the performance of PEF's restoration activities. Since the department's inception, Distribution Data Integrity has created and enhanced key performance indicators that are used to continually measure and monitor the quality of PEF's GIS and OMS data.

  PEF's 2011 Storm Drill has been organized with a forensics team. They will collect sufficient data at the failure sites to determine the nature and cause of the failure. In collaboration with the University of Florida's Public Utility Research Center (PURC), PEF and the other Florida investor owned utilities developed a common format to collect and track data related to damage discovered during a forensics investigation. This ensures all the companies are collecting compatible data to allow analysis of performance and refinement of the inputs to the OH to UG Cost/Benefit model.

- TECO's Geographic Information System ("GIS) continues to serve as the foundational database for all transmission, substation and distribution facilities. Development and improvement of the GIS continues. In 2010, a quality control tool for GIS data was implemented. The tool is used to improve and maintain the integrity of the GIS data. Processes have been implemented to regularly validate the data and provide feedback to users for continual improvement of the data and user training. Also in 2010, Tampa Electric engaged the original GIS vendor to make changes to the software to implement updates, improvements and change requests.

  Tampa Electric's process for post storm forensic data collection and analysis has been in place for approximately four years. The company has continued its relationship with its outside contractor to perform the multiple components of the plan that include the establishment of a field asset database, forensic measurement protocol, integration of forensics activity with overall system restoration, forensics data sampling and reporting format. Should a storm impact Tampa Electric's service area, the overall process will facilitate post storm data collection and analysis that will be used to determine the root cause of damage occurring to the company's transmission and distribution system.

(8) Increased Utility Coordination with Local Governments

The Commission's goal with this program is to promote 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 who 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 2010 highlights for each utility:

- FPL employs dedicated Account Managers to governmental accounts, conducts meetings with county emergency operations managers to discuss critical infrastructure locations in each jurisdiction, and 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. The External Affairs organization also meets with local governments that express interest in converting overhead facilities to underground services. As part of FPL's Storm Secure Initiative, FPL filed its governmental adjustment factor (GAF) tariff in February 2006 and it was approved as a pilot by the FPSC. Through the end of December 2009, eight municipalities have signed the GAF tariff agreement and moved forward with their projects. In 2010, three municipalities signed the GAF tariff agreement and moved forward with their projects. Additionally, there were over twenty municipal requests for non-binding, order of magnitude estimates.

- FPUC actively participates with local governments in pre-planning for emergencies and in coordinating activities during emergencies. FPUC has continued involvement with local governments regarding reliability issues with emphasis on both undergrounding and vegetation management. All parties have continued to cooperate in order to address vegetation management issues in a cost effective manner when possible so that overall reliability impacts are minimized. FPUC and the City of Marianna have worked together and are completing a project of undergrounding in the downtown area of Marianna. Although this project has improved aesthetics as the major goal, this will provide a reliability case study area that can be used in future undergrounding analysis.

  The City of Fernandina Beach initiated an undergrounding committee that began work in 2005. During this time FPUC has participated in the work and provided up-to-date information regarding storm hardening practices, undergrounding requirements cost and applicable regulatory information. The committee issued a final report that indicates the City of Fernandina Beach will increase the focus and identify strategies on undergrounding a significant portion of the FPUC distribution facilities located within the city limits. FPUC will continue its involvement in the process as discussions continue. These types of sessions enable FPUC to better coordinate activities as well as highlight safety requirements when working around electrical equipment and power lines. FPUC continues to cooperate with local governments in actively discussing both undergrounding and tree trimming issues as they arise.

- Gulf Power Company has several employees with local government liaison responsibilities in Northwest Florida. District managers are located in Pensacola, Ft. Walton, and Panama City. Local managers, who report to the district managers, are located in Milton, Crestview, Niceville, and Chipley. These employees interact with city and county personnel on a daily/weekly basis regarding numerous issues, including emergency preparedness. Gulf's employees are also actively involved in specific governmental business committees that focus on emergency preparedness needs in Northwest Florida. The Emergency Operations Centers (EOCs) have numerous planning meetings. Gulf Power's personnel also participated in the following hurricane activities with Escambia, Santa Rosa and Okaloosa Counties during 2010:

- Hurricane Drill
- All EOC Activations
- Media Storm Training Session
- EOC Representative Training

Twelve employees are dedicated to the counties' EOCs throughout Northwest Florida. Each of those employees received federal certification under the National Incident Management System (NIMS) through FEMA. The EOC Representatives assist city, county agencies and officials during emergencies that warrant activation of the county EOCs. Gulf Power provides 24-hour coverage throughout the duration of the EOC activation. All actions are based on the Company's central Emergency Operations Plan.

- PEF's governmental coordination team consists of approximately 75 employees. More than 20 employees are assigned full-time, year-round to coordinate with local government on issues such as emergency planning, vegetation management, undergrounding and service related issues. The 2010 activities included attendance or participation in the National Hurricane Conference in Orlando, the Marion County Storm Expo, and the All Hazards Expo for Citrus County. The Florida State Storm Drill, the Seminole County EOC Table Top Exercise, the Orange County Hurricane Preparedness Expo, the Annual Hurricane Expo for Polk County, the Storm Forum/Municipal Summit, the Four Corners Hurricane Expo, a Storm Preparedness Presentation to the Central Florida Hotel and Lodging Association, and visits to thirty county EOCs in PEF's service territory round out the 2010 activities.

- In 2010, Tampa Electric focused its government communications efforts on re-acquainting governmental officials with the company's Emergency Response contacts and reviewing its Emergency Response Plan. Workshops with municipal Emergency Response officials were held at the company's Energy Control Center. This included all company personnel involved in communicating with governmental agencies related to the Emergency Response Plan. Tampa Electric continued communicating storm preparedness information to customers through the annual media pre-hurricane season press release. For 2011, more workshops and open dialog among stakeholders are planned.

(9) Collaborative Research on Effects of Hurricane Winds and Storm Surge

The University of Florida's Public Utility Research Center (PURC) is assisting Florida's electric utilities by coordinating a three-year research effort, which began in 2006, in the area of hardening the electric infrastructure to better withstand and recover from hurricanes. PURC hosts an annual conference. This conference commits continued collaborative research in electricity infrastructure hardening efforts. Hurricane wind, 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 the Commission's Order No. PSC-06-00351-PAA-EI in April 2006, 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 enter 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, advises the project sponsors and provides reports for project activities. The Project Sponsors continued the MOU through December 31, 2011.

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: The five IOU's all participate with the Public Utility Research Center (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 groups' 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 focused on understanding the economics and effects of hardening strategies, including undergrounding. As a result, Quanta Technologies has been 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 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 2010, 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 2010 highlights for each IOU.

- FPL continued its integration of the Incident Command System within its emergency response organization structure, as outlined within the National Incident Management System. FPL reports being well prepared for the 2011 storm season. In addition to the initiatives to strengthen its system and improve, storm preparedness discussed previously. FPL will also follow additional storm preparedness initiatives before the start of storm season. (1) extensive storm restoration training based on employees' storm roles; (2) annual company-wide hurricane dry-run exercise in May 2011; (3) plan for and review of mutual assistance agreements to ensure they are adequate and ready; and (4) continued focus on improving outage communications and estimated restoration times to customers. Additionally, FPL will clear vegetation from all feeder circuits serving major hospitals, 911 centers, special needs shelters, police and fire stations prior to the peak of 2011 hurricane season.

- FPUC'S Emergency Procedures for both divisions were updated during 2010. FPUC utilizes the plan to prepare for storms annually and ensures all employees are aware of their responsibilities. Communication efforts with local governments, county EOCs and the media are the key to ensuring a safe and efficient restoration effort. Key personnel, designated as media liaisons, will ensure that communications regarding the status of the restoration activities are available on a scheduled basis. The primary objective of the Disaster Preparedness and Recovery Plan is to provide guidelines under which Florida Public Utilities Company will operate in emergencies.

- Gulf Power Company's 2010 Disaster Preparedness and Recovery Plan had no major revisions from the Company's March 1, 2010, annual filing. On May 27, 2010 at Gulf's corporate office a mock hurricane, drill was conducted. The purpose of this drill was to enhance coordination and cooperation by involving all participants in rehearsing departmental readiness plans in response to a natural disaster. Management is currently reviewing Gulf's 2011 Storm Procedures Manual. Revisions, if any, will be returned and incorporated in the Manual by June 1, 2011. Storm assignments and training schedules are being finalized with plans for training to be completed prior to hurricane season.

- PEF has an established storm recovery plan that is reviewed and updated annually, based on lessons learned from the previous storm season and organizational needs. Consistent with NESC Rule 250C, PEF will use the extreme wind standard for all major planned transmission work, including expansions, rebuilds, and relocations of existing facilities.

- In 2010, Tampa Electric realized there were new personnel both in its organization as well as in the municipalities it serves. Therefore, the Emergency Response presentations were conducted for all personnel. TECO Energy companies continued to participate in internal and external preparedness exercises and will continue with this same level of preparedness for 2011. Tampa Electric continued its emergency management collaboration with government emergency management agencies at local, State and Federal levels to improve private/public sector emergency response coordination. This includes its partnerships within Hillsborough county preparedness organizations including the county's Post Disaster Redevelopment Plan, its Local Mitigation Strategy Group and the Tampa Bay Regional Planning Council-small business preparedness group.

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: data on excludable events and 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 2010 performance data and focuses on the exclusions allowed by the rule. The year 2007 was the first year for which actual reliability data has been provided.

Floridapower & light Company: Actual Data

Table 2-1 provides an overview of key FPL metrics: Customer Minutes of Interruption (CMI) and Customer Interruptions (CI) for 2010. Excludable outage events accounted for approximately 5 percent of the minutes of interruption experienced by FPL's customers. FPL reported five tornadoes and two named tropical storms in 2010. Tropical Storms Bonnie and Nicole accounted for 1 percent of the severe weather total and the five tornadoes accounted for the other 1 percent. FPL reported that Tropical Storm Bonnie occurred on July 23, 2010, and Tropical Storm Nicole occurred September 28 through 29, 2010. The tornadoes were recorded January 21, 2010, January 22, 2010, March 28, 2010, March 29, 2010, and August 11, 2010.

Table 2-1. FPL's 2010 Customer Minutes of Interruption and Customer Interruptions

2010	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	366,723,074		4,354,064	
Documented Exclusions				
Named Storm Outages	3,634,027	0.99%	41,717	0.96%
Fires	0	0.00%	0	0.00%
Planned Outages	10,290,052	2.81%	74,815	1.72%
Customer Request	2,977,856	0.81%	72,628	1.67%
Tornadoes	2,525,920	0.69%	26,063	0.60%
Other	0	0.00%	0	0.00%
Reported Adjusted Data	347,295,219	94.70%	4,138,841	95.06%

FPL provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2010.

Table 2-2 provides an overview of PEF's CMI and CI figures for 2010. Excludable outage events accounted for approximately 19 percent of the minutes of interruption experienced by PEF's customers. In 2010, PEF experienced one named storm and two tornadoes. Tropical Storm Bonnie, which occurred on July 23 through 25, 2010, and the two tornadoes, which occurred March 11, 2010, and April 8, 2010 accounted for 1.23 percent of the total minutes of interruption on its distribution system.

Table 2-2. PEF's 2010 Customer Minutes of Interruption And Customer Interruptions

2010	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	186,653,560		2,825,974	
Documented Exclusions				
Distribution (Severe Weather)	2,300,014	1.23%	34,535	1.22%
Transmission (Severe Weather)	1,638,049	0.88%	32,643	1.16%
Transmission (Non Severe Weather)	14,514,123	7.78%	306,389	10.84%
Emergency Shutdowns (Severe Weather)	42,314	0.02%	3,309	0.12%
Emergency Shutdowns (Non Severe Weather)	7,758,041	4.16%	381,351	13.49%
Prearranged (Severe Weather)	38,080	0.02%	535	0.02%
Prearranged (Non Severe Weather)	8,473,648	4.54%	71,419	2.53%
Reported Adjusted Data	151,889,291	81.37%	1,995,793	70.62%

PEF provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C. for calendar year 2010.

Tampa Electric Company: Actual Data

Table 2-3 provides an overview of TECO's CMI and CI figures for 2010. Excludable outage events accounted for approximately 4 percent of the minutes of interruption experienced by TECO's customers. TECO reported that it did not experience extreme weather events in 2010 that would cause outages.

Table 2-3. TECO's 2010 Customer Minutes of Interruption and Customer Interruptions

2010	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	59,121,855		703,504	
Documented Exclusions				
Other Distribution	2,337,929	3.95%	102,816	14.61%
Named Storm Outages	0	0.00%	0	0.00%
Tornado	0	0.00%	0	0.00%
Reported Adjusted Data	56,783,926	96.05%	600,688	85.39%

TECO provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for calendar year 2010.

GULF Power Company: Actual Data

Table 2-4 provides an overview of GULF's CMI and CI figures for 2010. Excludable outage events accounted for approximately 13 percent of the minutes of interruption experienced by Gulf's customers. Gulf reported there was an extreme January weather event that was not excludable because it was not a named storm or National Weather Service (NWS) recordable tornado. Otherwise, Gulf reported that it did not experience extreme weather events in 2010 that would meet the FPSC exclusion criteria.

Table 2-4. Gulf's 2010 Customer Minutes of Interruption and Customer Interruptions

2010	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	72,011,426		979,221	
Documented Exclusions				
Transmission Events	5,958,329	8.27%	187,142	19.11%
Planned Outages	3,328,107	4.62%	41,799	4.27%
Named Storm Outages	0	0.00%	0	0.00%
Tornado	0	0.00%	0	0.00%
Reported Adjusted Data	62,724,990	87.10%	750,280	76.62%

Gulf provided adequate support for its excludable event adjustments allowed by Rule 25 6.0455(4), F.A.C., for calendar year 2010.

Florida Public Utilities Company: Actual Data

Table 2-5 provides an overview of FPUC's CMI and CI figures for 2010. Excludable outage events accounted for approximately 40 percent of the minutes of interruption experienced by FPUC's customers. FPUC reported that neither the Northeast Division nor the Northwest Division was affected by a named storm or other significant weather events during 2010.

Table 2-5. FPUC's 2010 Customer Minutes of Interruption and Customer Interruptions

2010	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	5,910,008		88,550	
Documented Exclusions				
Planned Outages	140,902	2.38%	9,635	10.88%
Transmission Events	320,796	5.43%	15,276	17.25%
Substation	1,900,488	32.16%	24,013	27.12%
Severe Storm Outages	0	0.00%	0	0.00%
Named Storm Outages	0	0.00%	0	0.00%
Reported Adjusted Data	3,547,822	60.03%	39,626	44.75%

FPUC provided adequate support for its excludable event adjustments allowed by Rule 25-6.0455(4), F.A.C., for the calendar year 2010.

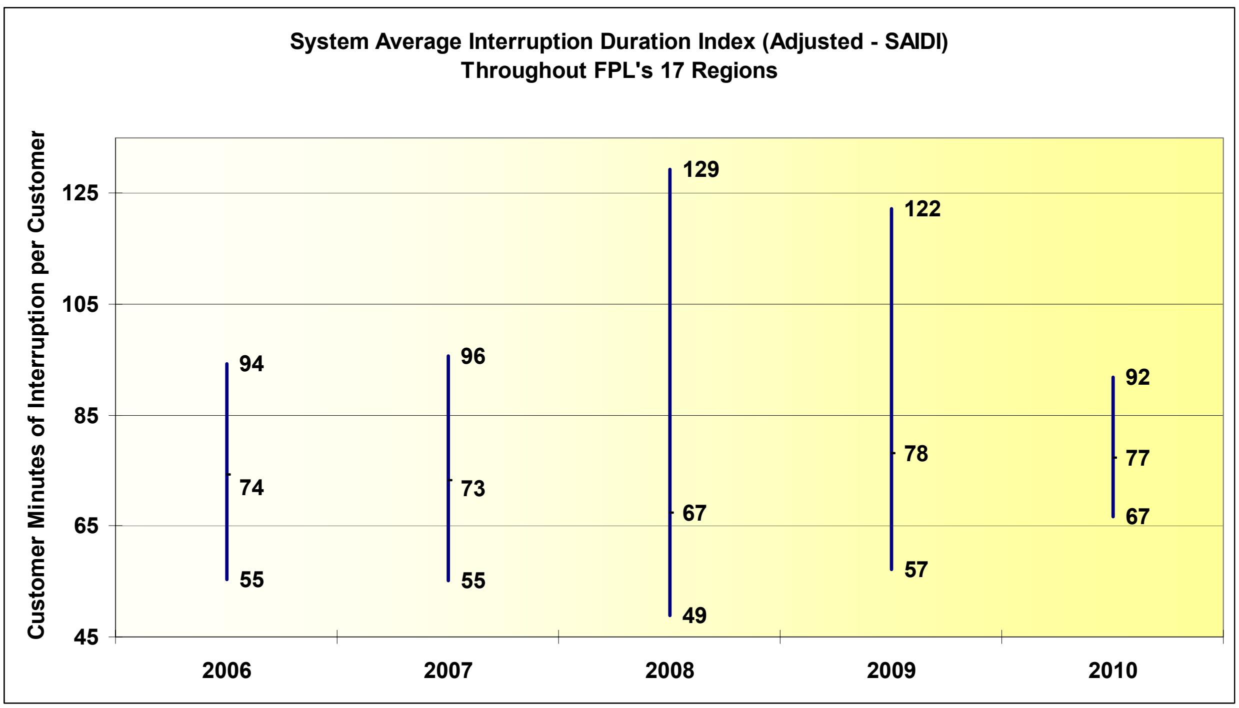
Section III. Adjusted Distribution Service Reliability Review of Individual Utilities

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 (System Average Interruption Duration Index) recorded across FPL's system that encompasses five management regions with seventeen service areas. The highest and lowest SAIDI values are the values reported for a particular service area. **Figure 3-1** shows an increase in the lowest SAIDI to 67 minutes for the West Palm service area in 2010, and there is a decrease in the highest SAIDI to 92 minutes for the Naples service area. FPL had an overall decrease of 1 minute (1 percent) to the average SAIDI results for 2010 compared to 2009. FPL attributes the SAIDI improvement primarily to the 2010 improvement in SAIFI (System Average Interruption Frequency Index) performance.

Figure 3-1. SAIDI across FPL's 17 Regions (Adjusted)

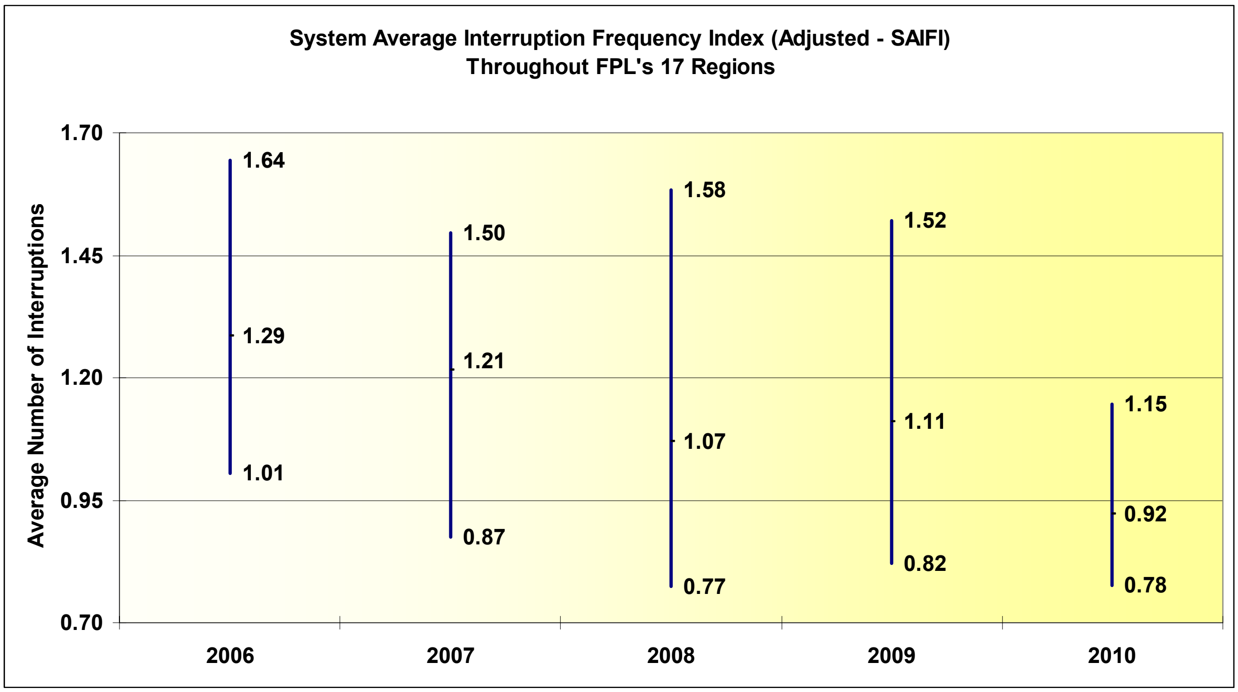


FPL's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIDI	West Dade	South. Dade	North. Florida	South. Dade	Naples
Lowest SAIDI	Brevard	Gulf Stream	Pompano	Pompano	West Palm

Figure 3-2 is a chart of the highest, average, and lowest adjusted SAIFI (Frequency or Number of Interruptions Per Customer) across FPL's system. FPL had a decrease in the average results of 0.92 outages in 2010, compared to 1.11 outages in 2009. FPL reported a decrease to the highest SAIFI for West Dade of 1.15 interruptions compared to South Dade's 1.52 interruptions in 2009. The region reporting the lowest adjusted SAIFI for 2010 was Central Dade at 0.78 interruptions compared to Pompano's 0.82 interruptions in 2009. The highest, average and lowest SAIFI appear to be trending downward suggesting improvements.

Figure 3-2. SAIFI across FPL's 17 Regions (Adjusted)

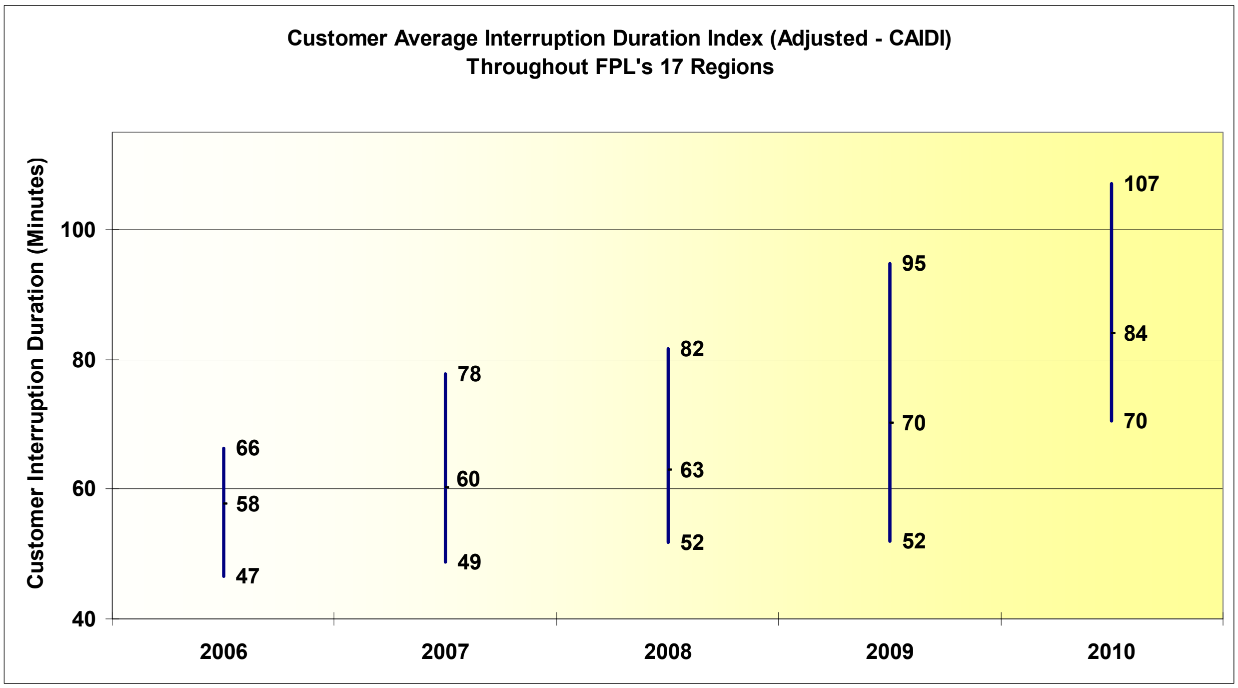


FPL's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	West Dade	Wingate	North Florida	South Dade	West Dade
Lowest SAIFI	Manasota	Manasota	Toledo Blade	Pompano	Central Dade

Figure 3-3 is a chart of FPL's highest, average, and lowest customer interruption duration indexes expressed in minutes. FPL's adjusted average CAIDI (Customer Average Interruption Duration Index) has risen approximately 20 percent from 70 minutes in 2009, to 84 minutes in 2010. The average duration of CAIDI, or the average number of minutes a customer is without power when a service interruption occurs, is trending upwards. For 2010, the Brevard service area reported the lowest duration of CAIDI, which was 70 minutes; however, the lowest CAIDI for 2010, is 35 percent higher than the Boca Raton service area, reported as 52 minutes in 2009.

Figure 3-3. CAIDI across FPL's 17 Regions (Adjusted)



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

	2006	2007	2008	2009	2010
Highest CAIDI	South Dade	Manasota	North Florida	North Dade	Naples
Lowest CAIDI	Gulf Stream	Gulf Stream	Boca Raton	Boca Raton	Brevard

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 two percent increase in L-Bar (the time required to restore service) from 214 minutes in 2009, to 219 minutes in 2010, which represents the highest average duration of outages since 2006. 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 the minutes of interruption divided by the total number of outages.

Figure 3-4. FPL's Average Duration of Outages (Adjusted)

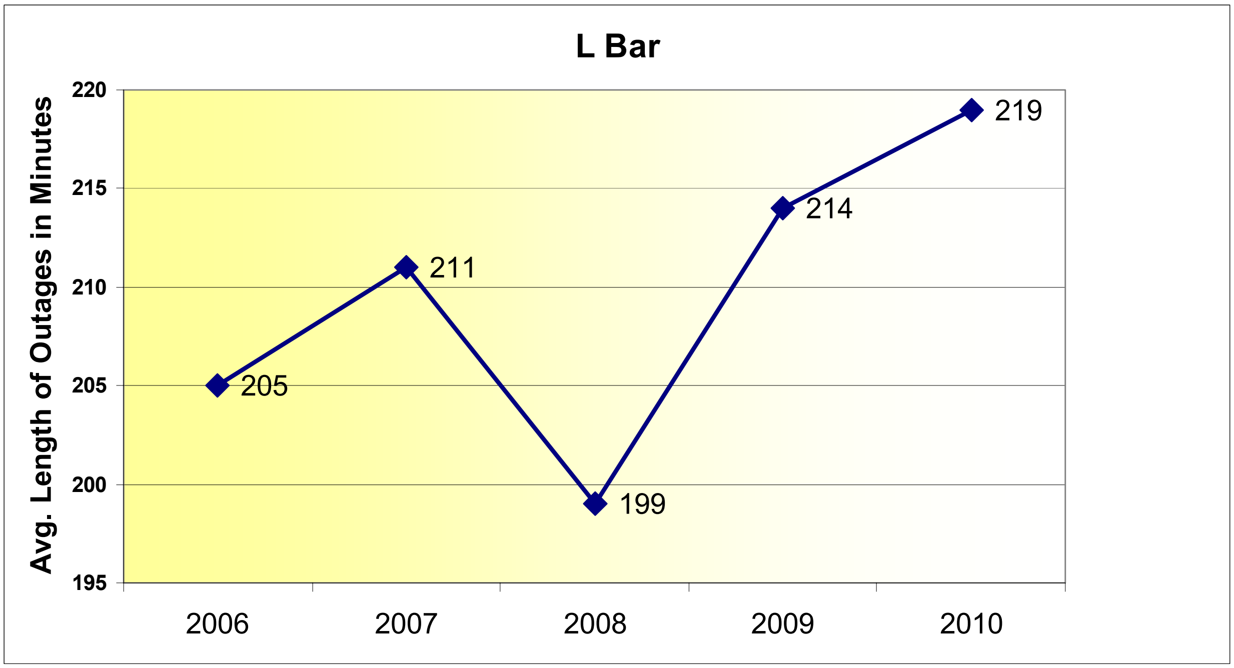
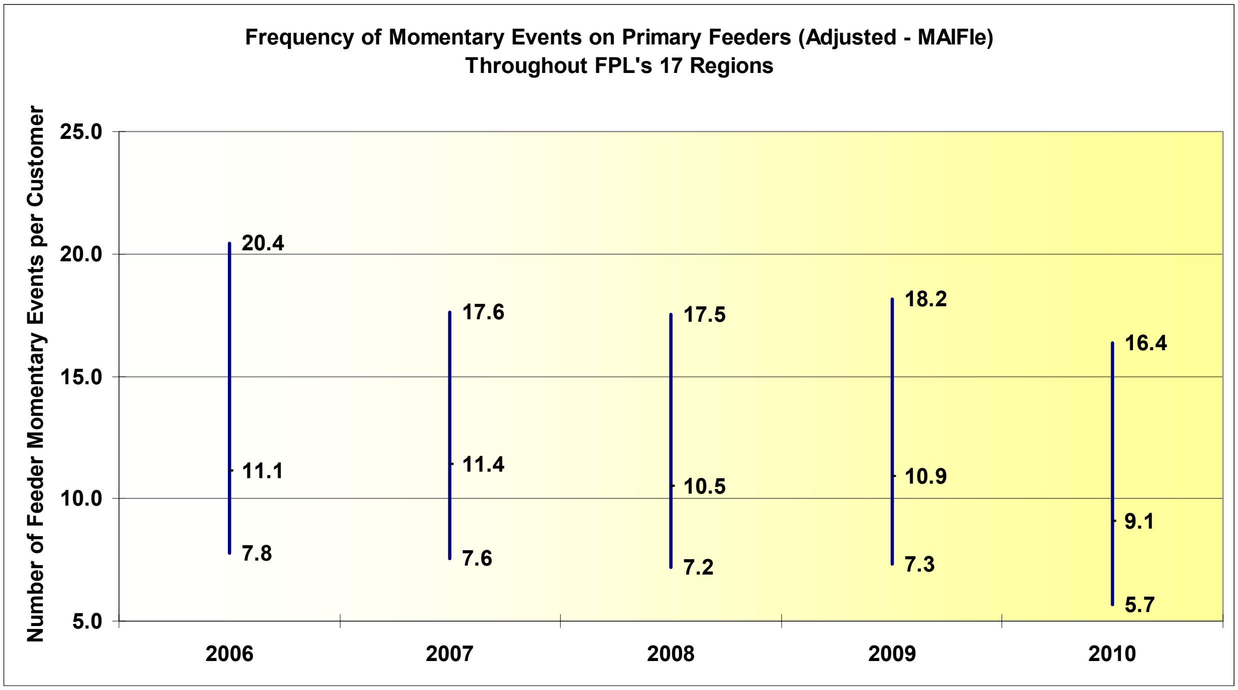


Figure 3-5 is the highest, average, and lowest adjusted MAIFIe (Frequency of Momentary Events on Primary Circuits per Customer) recorded across FPL's system. These momentary events often affect a small group of customers. FPL's Toledo Blade and Treasure Coast service areas have experienced, and continue to have, the least reliable MAIFIe results over the 17 regions of FPL since 2006. The Pompano service area had the fewest momentary events and the results have been trending downwards over the last five years.

Figure 3-5. MAIFIe across FPL's 17 Regions (Adjusted)

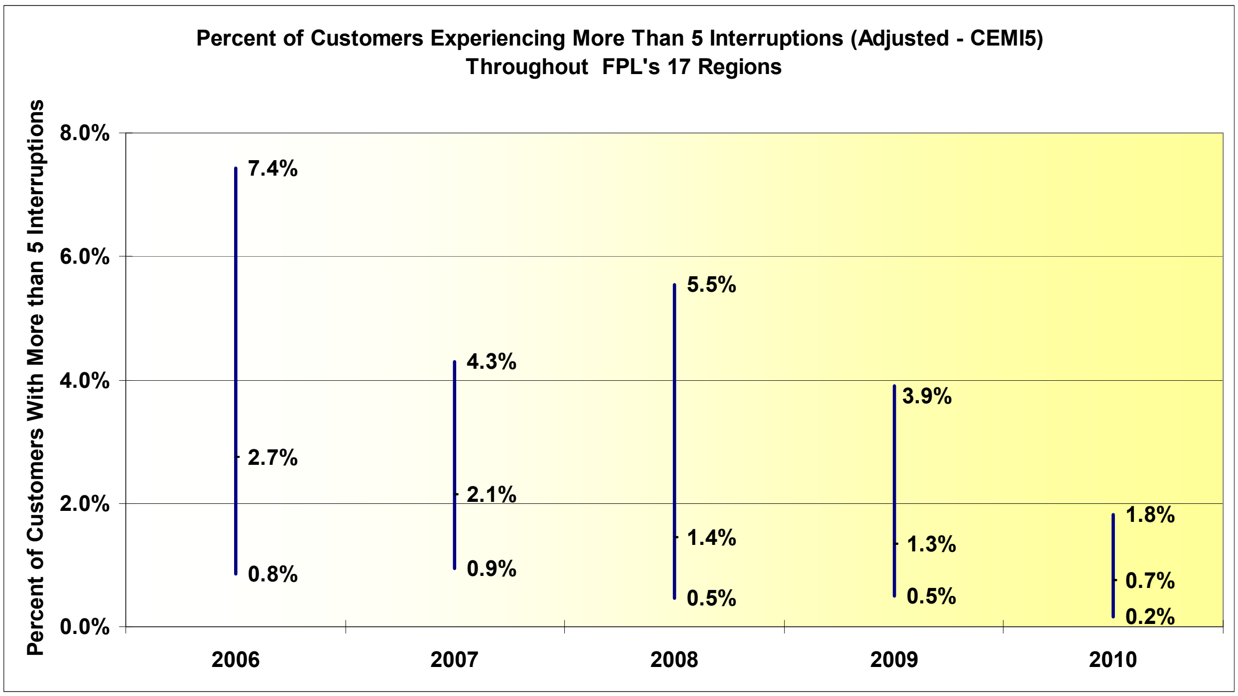


FPL's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest MAIFIe	Toledo Blade	Treasure Coast	Treasure Coast	Toledo Blade	Toledo Blade
Lowest MAIFIe	Pompano	Pompano	Pompano	Pompano	Pompano

Figure 3-6 shows the highest, average, and lowest adjusted CEMI5 (Percent of Customers Experiencing More Than Five Interruptions). FPL reported a "best-ever performance" for CEMI5 for FPL's combined 17 service areas. 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 the areas; however, Brevard and Pompano are reported as having the lowest percentages in the last five years.

Figure 3-6. CEMI5 across FPL's 17 Regions (Adjusted)



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

	2006	2007	2008	2009	2010
Highest CEMI5	West Dade	Naples	North Florida	South Dade	North Florida
Lowest CEMI5	Brevard	Brevard	Gulf Stream	Pompano	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 three percent of 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 and five-year percentages of multiple occurrences are trending upward since 2006. The three-year percentage improved from 9 percent in 2009 to 7 percent in 2010.

Figure 3-7. FPL's Three Percent Feeder Report (Adjusted)

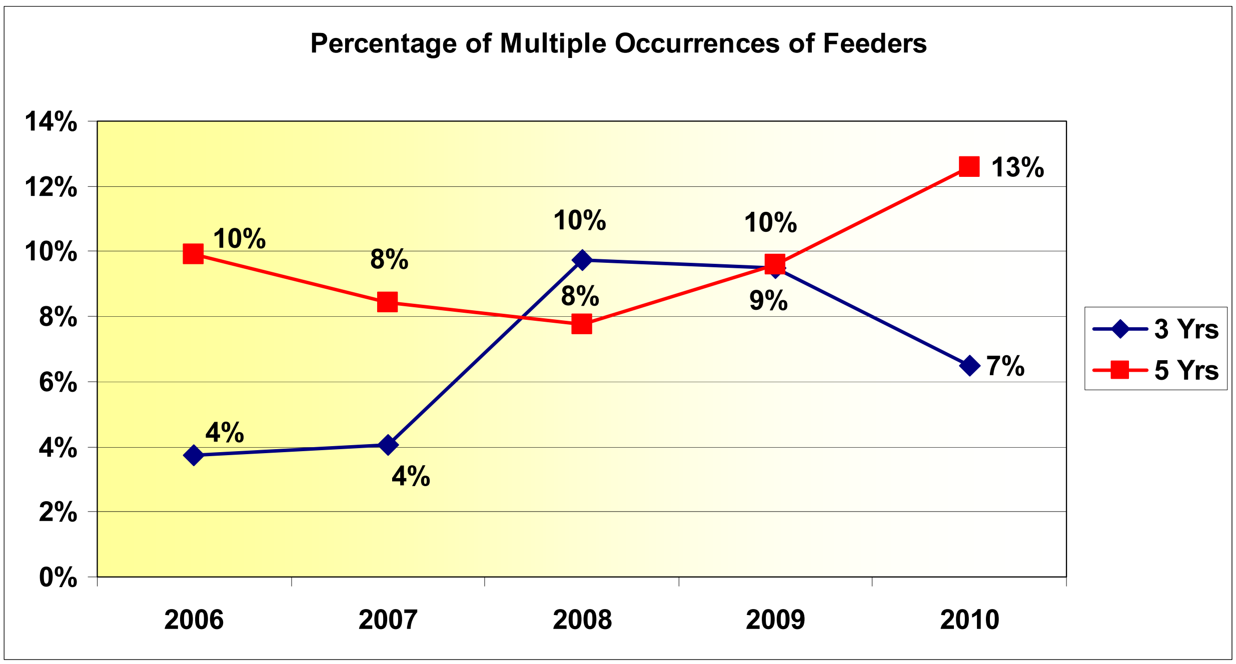
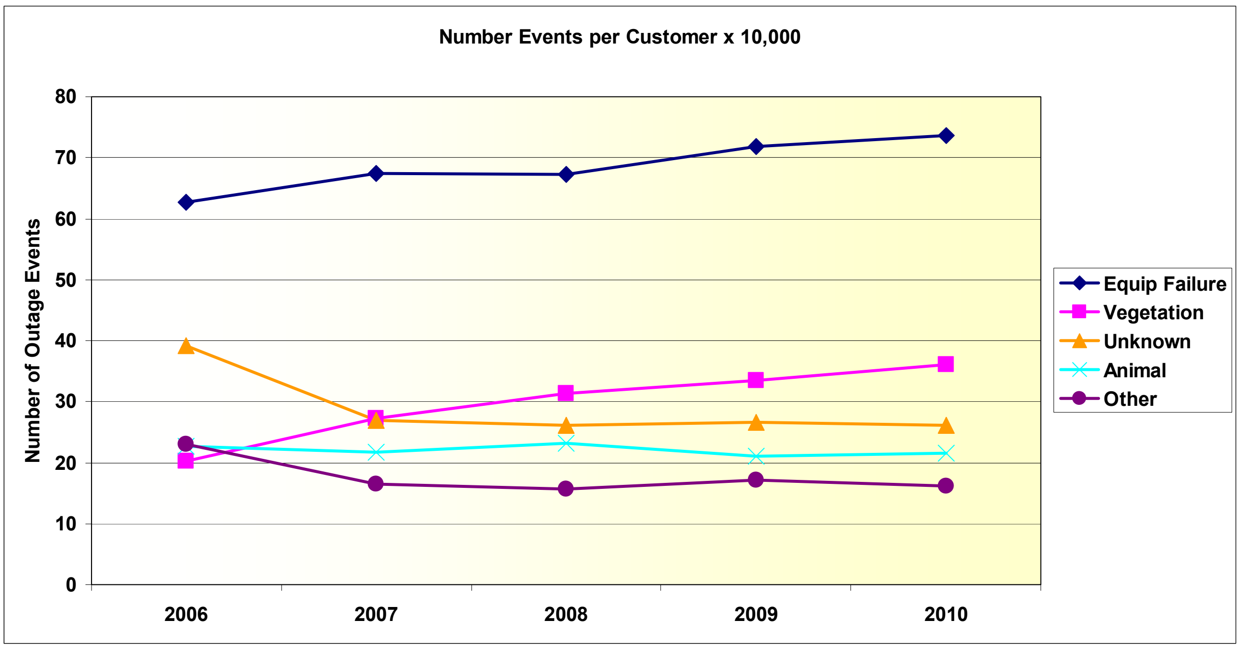


Figure 3-8 depicts the top five causes of outage events on FPL's distribution system normalized to a 10,000-customer base. The graph is based on FPL's adjusted data of the top ten causes of outage events. For the five-year period, the five top causes of outage events included equipment failures (35 percent), vegetation (17 percent), unknown (12 percent), animals (10 percent), and other causes (8 percent) on a cumulative basis. The data shows an increasing trend in outage events caused by equipment failure, which continues to dominate the highest percentage of outage causes throughout the FPL regions. In addition, outage events due to vegetation are also trending upward. The outage events due to unknown and other causes are trending downward, as the outage; events due to animals remain relatively flat over the five-year period.

Figure 3-8. FPL's Top Five Outage Causes (Adjusted)



Observations: FPL's Adjusted Data

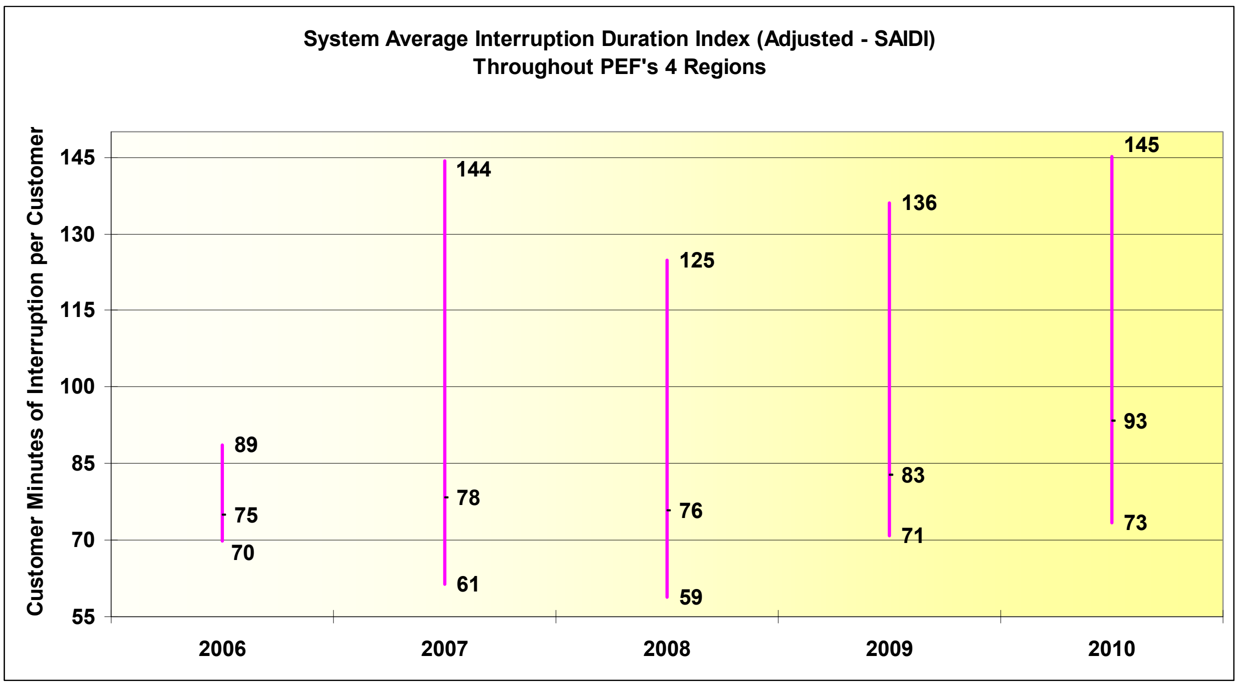
The Naples region appears to have the least reliable overall service results compared to other FPL regions across the 17 service areas, whereas, Brevard, Central Dade, and West Palm achieved the best service reliability among the same service areas. The 2010 report shows the system indices for SAIDI, SAIFI, MAIFIE, CEMI5 and the Three-year Percentages of Multiple Feeder Outage Events are all slightly lower than the 2009 results as the system indices for CAIDI and L-Bar results are slightly higher than the 2009 results. FPL reports that its index for SAIDI is 32 percent better than the 2009 national average and that even though the index for CAIDI went up, the CAIDI performance ranked "second in the nation when compared to the most recent available industry data." FPL explained that preventing certain types of typical "shorter duration feeder outages has the negative impact of increasing CAIDI." FPL also reported that an extreme cold weather event in January 2010, contributed to the increasing CAIDI index.

Progress Energy Florida, Inc: Adjusted Data

Figure 3-9 charts the adjusted SAIDI recorded across PEF's system and depicts an increase in the highest, average, and lowest values for 2010. PEF notes that in 2010, two tornadoes and one named storm affected its service territory. Only 2.5 SAIDI minutes were excluded due to the weather events. The adjusted SAIDI for 2010 was reported as 93.3 minutes. PEF notes that it continues to focus on "reliability projects including, but not limited to, small wire upgrades, storm hardening, and pole replacements."

Figure 3-9 illustrates that the North Coastal region continue to report the poorest SAIDI over the last five years, fluctuating between 89 minutes and 145 minutes. While the South Coastal and South Central regions have the best or lowest SAIDI for the same period. PEF's service territory is comprised of four regions: North Coastal, South Coastal, North Central, and South Central.

Figure 3-9. SAIDI across PEF's Four Regions (Adjusted)

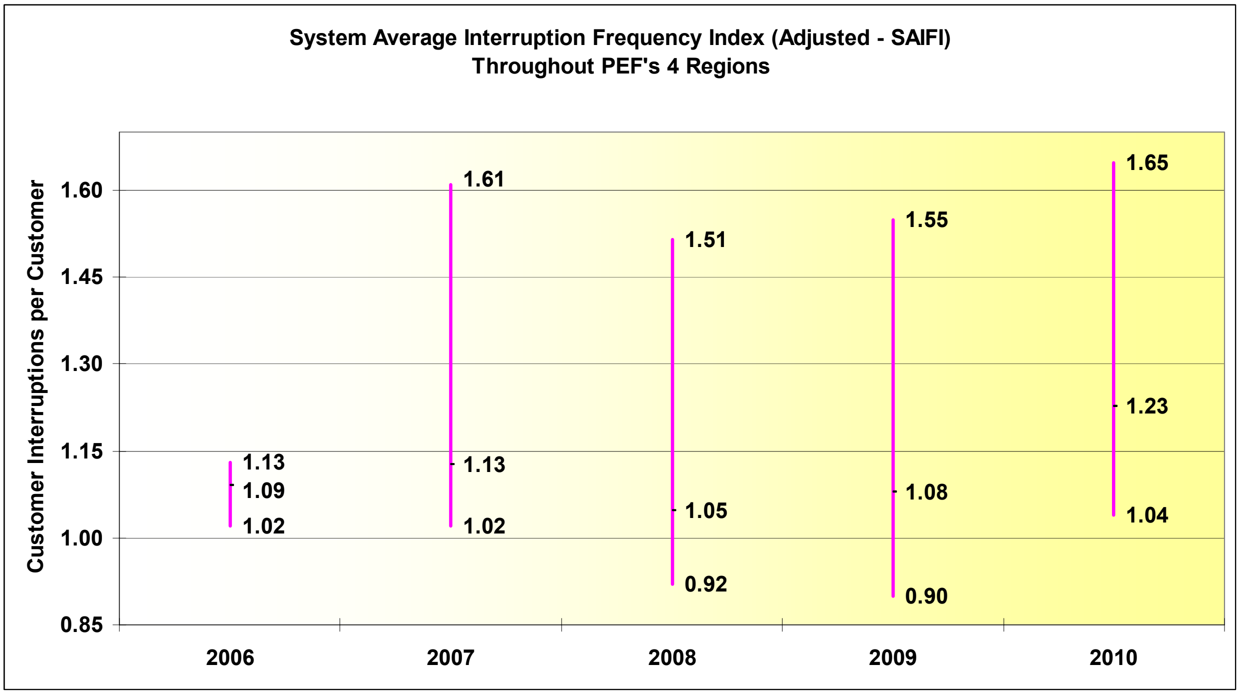


PEF's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIDI	North Central	North. Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIDI	North Coastal	South Central	South Coastal	South Central	South Central

Figure 3-10 shows the adjusted SAIFI (System Average Interruption Frequency Index or the number of times a customer experiences a power interruption) across PEF's system. The maximum SAIFI index is trending upward as the minimum SAIFI index is 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 PEF's Four Regions (Adjusted)

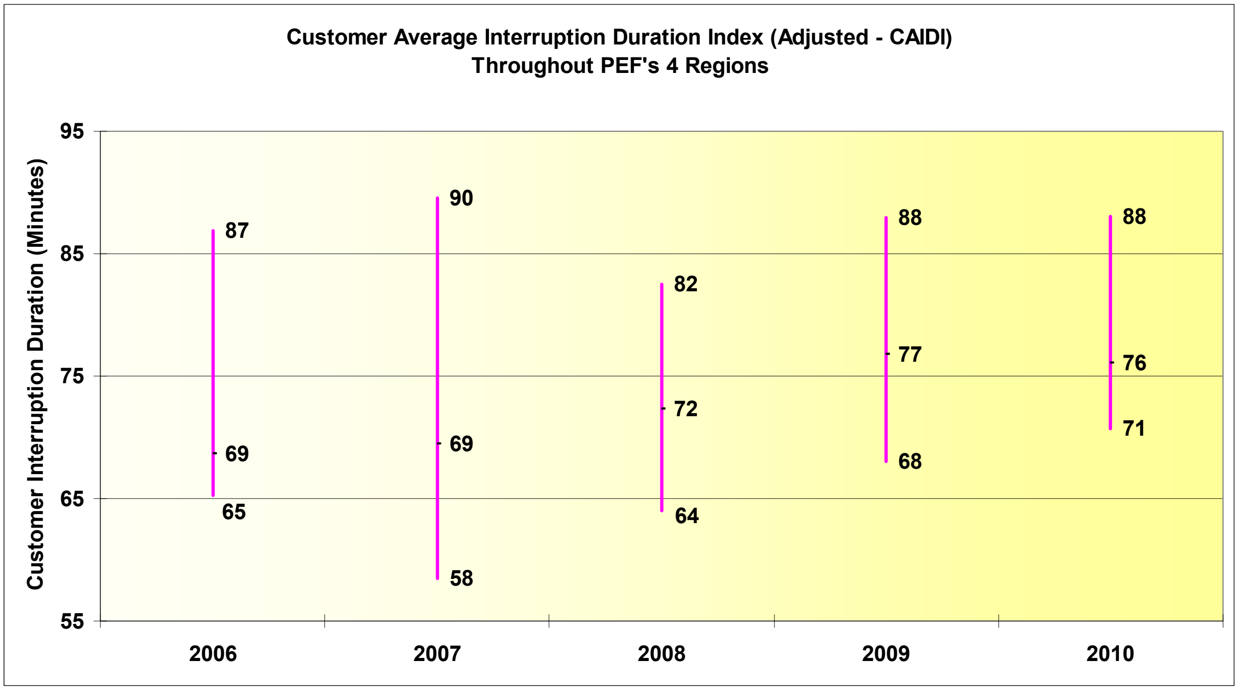


PEF's Regions with the Highest and Lowest Adjusted SAIFII Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	North Central	North Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIFI	North Coastal	South Central	South Coastal	South Central	South Central

Figure 3-11 illustrates the Customer Average Interruption Duration Index or CAIDI for PEF's four regions. PEF's adjusted CAIDI is trending upward from 69 minutes in 2006 to 76 minutes in 2010. The North Coastal region has continued to have the highest CAIDI level for the past five years, as compared to the other PEF regions, while the South Coastal and South Central regions have maintained the lowest CAIDI level during the same period.

Figure 3-11. CAIDI across PEF's Four Regions (Adjusted)



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

	2006	2007	2008	2009	2010
Highest CAIDI	North Central	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CAIDI	North Coastal	South Central	South Coastal	South Central	South Central

Figure 3-12 is the average length of time PEF 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 2 percent increase of outage durations since 2006, and a 4 percent decrease from 2009 to 2010. Even with the drop in the L-Bar index from 2009 to 2010, PEF's overall L-Bar index is trending upward, indicating that PEF is still spending a longer time restoring service from outage events.

Figure 3-12. PEF's Average Duration of Outages (Adjusted)

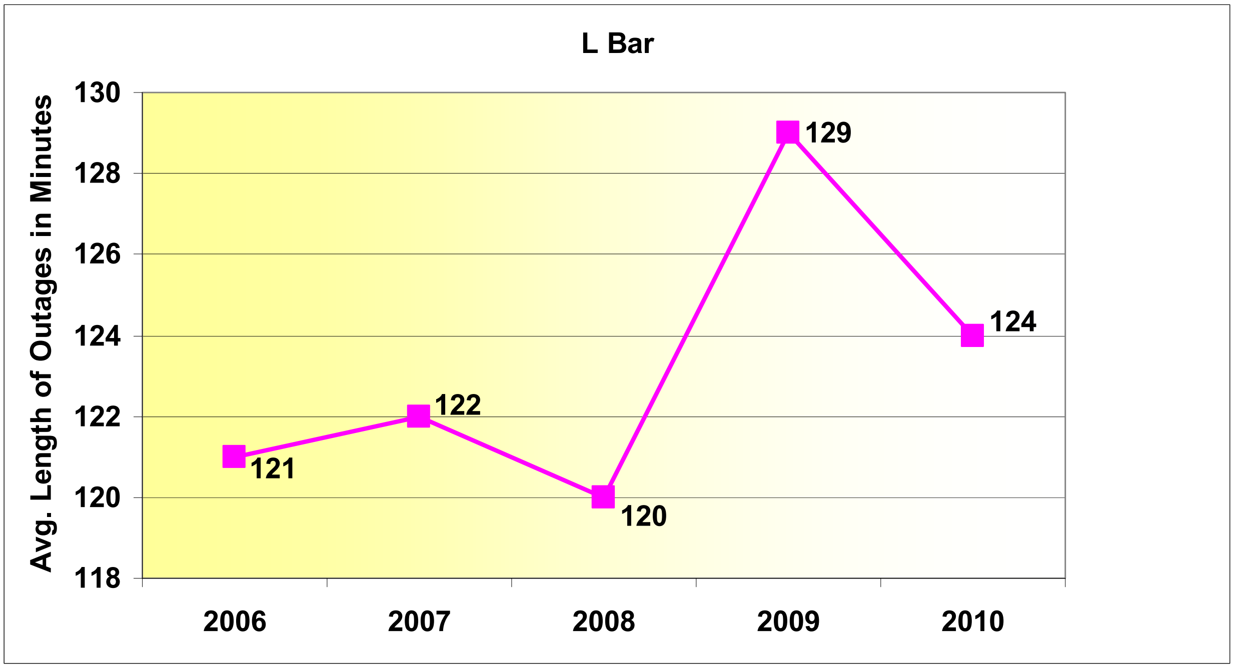
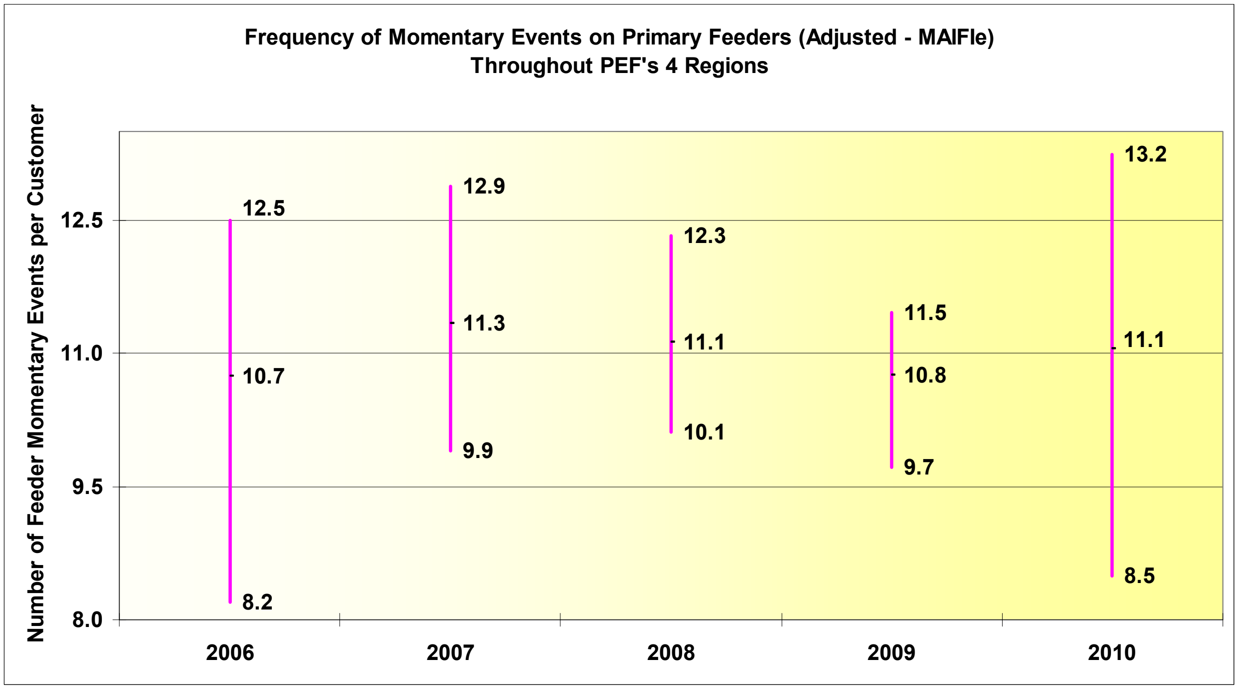


Figure 3-13 illustrates the frequency of momentary events on primary circuits for PEF's customers recorded across its system. A review of the supporting data suggests that the MAIFIe results between 2006 and 2010 appear to be relatively flat. The best (lowest) results are distributed among three of the regions; however, the South Coastal region appears to have the worst (highest) results for the last five years.

Figure 3-13. MAIFIe across PEF's Four Regions (Adjusted)

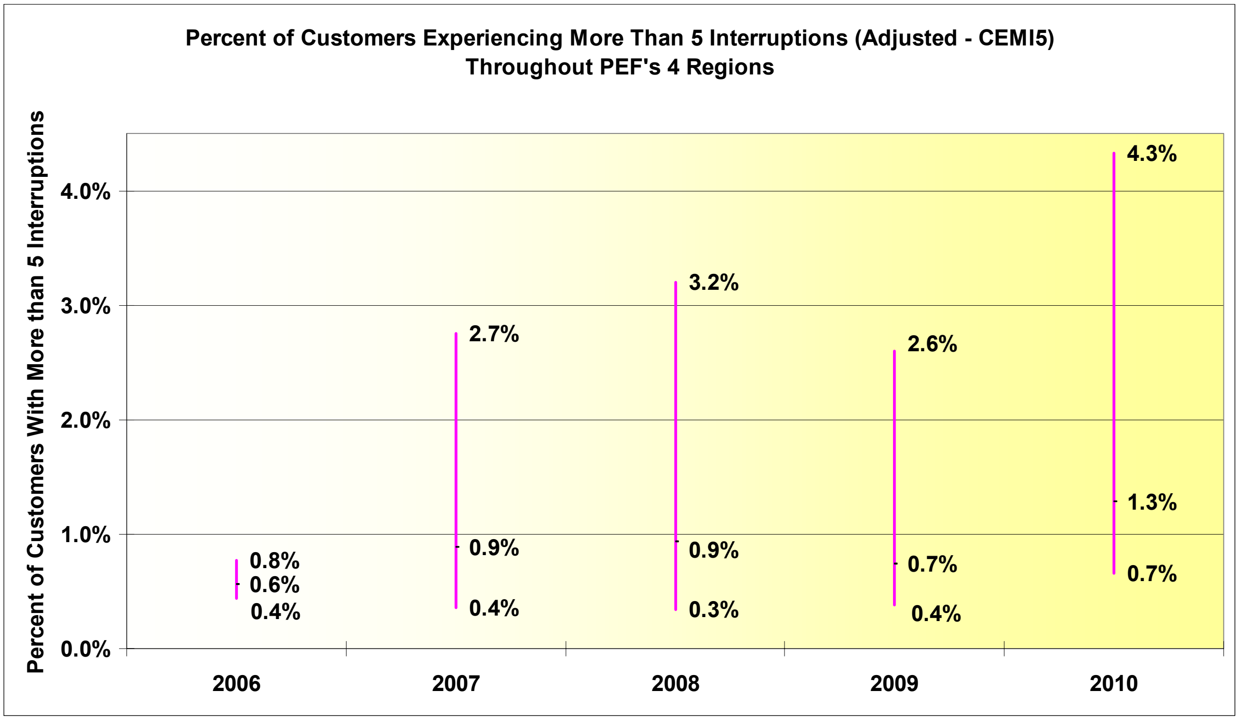


PEF's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest MAIFIe	South Coastal	South Coastal	South Coastal	South Coastal	South Coastal
Lowest MAIFIe	North Coastal	North Central	North Central	South Central	South Central

Figure 3-14 charts the percent of PEF's customers experiencing more than five interruptions over the last five years. PEF reported an 86 percent increase in the average CEMI5 performance from 2009 to 2010. The South Central region continues to have the lowest reported percentage for all of PEF's regions and the North Coastal region continues to have the highest reported percentage.

Figure 3-14. CEMI5 across PEF's Four Regions (Adjusted)



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

	2006	2007	2008	2009	2010
Highest CEMI5	North Central	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CEMI5	South Central	South Central	South Coastal	South Coastal	South Central

Figure 3-15 shows the fraction of multiple occurrences of feeders using a three-year and five-year basis. During the period of 2006 to 2010, the five-year fraction of multiple occurrences appears to be trending downward, while the three-year results are trending slightly upward. The Three Percent Feeder Report lists the top three 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.

Figure 3-15. PEF's Three Percent Feeder Report (Adjusted)

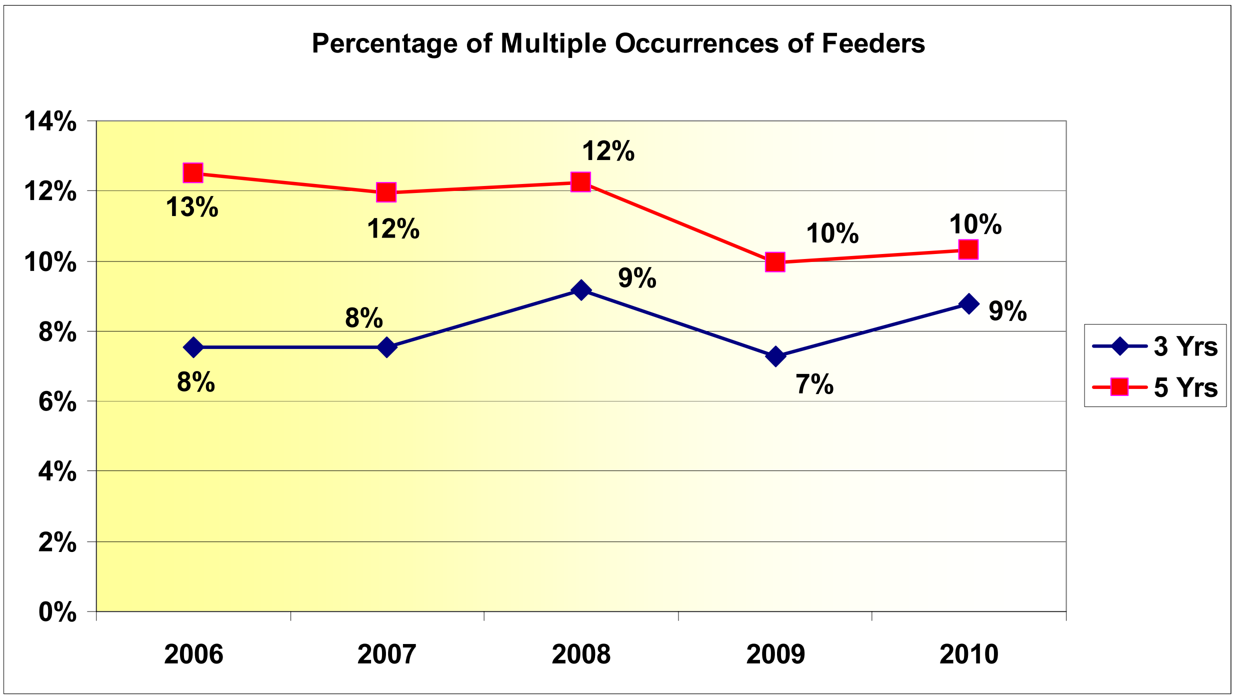
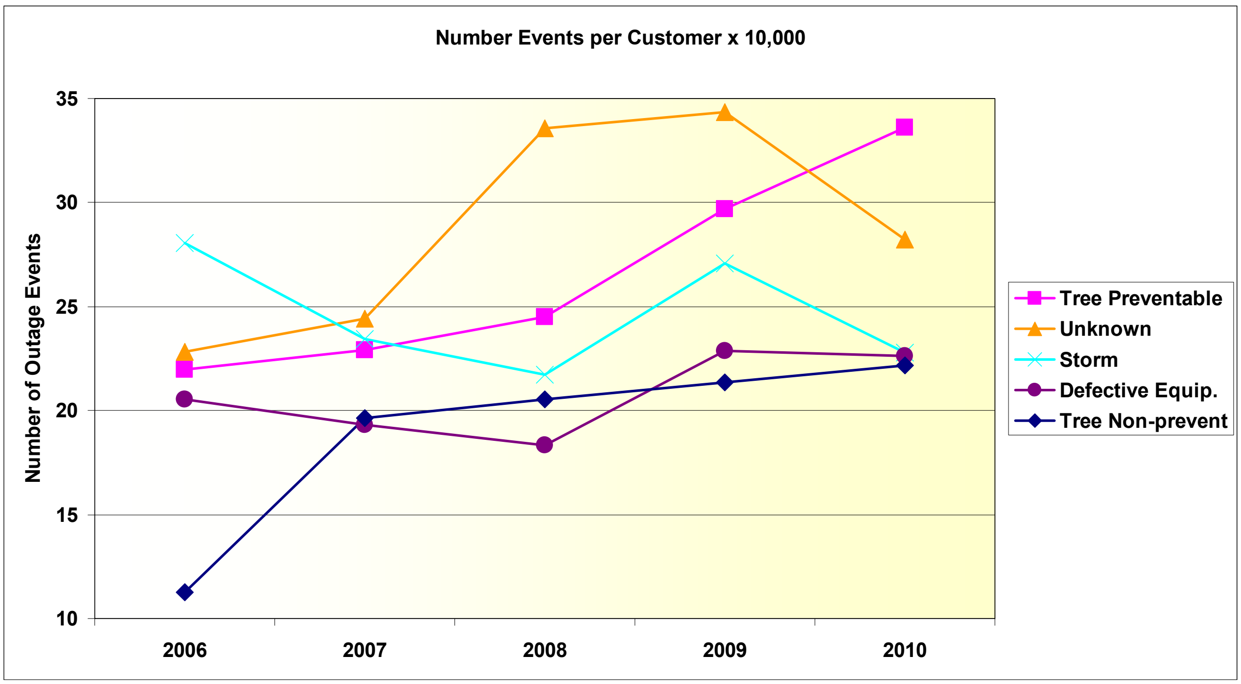


Figure 3-16 shows the top five causes of outage events on PEF's distribution system normalized to a 10,000-customer base. The figure is based on PEF's adjusted data of the top ten causes of outage events and represents approximately 51 percent of the top ten causes of outage events that occurred during 2010. For the five-year period, the top five causes of outage events were tree preventable (13 percent), unknown (11 percent), storm (9 percent), defective equipment (9 percent) and tree non-preventable (9 percent) on a cumulative basis. The PSC/ECR form 103 allows the IOUs to list its top ten categories and it identifies the category "all other." The "all other" category is not part of the top ten enumerated categories. PEF uses the "all other" category when no reasonable evidence is available as to what caused the outage. Staff notes PEF's "all other" has increased 299 percent from 2008 to 2010 and in 2010 represents 30.5 percent of the total number of events per 10,000 customers.

Figure 3-16. PEF's Top Five Outage Causes (Adjusted)



Observations: PEF's Adjusted Data

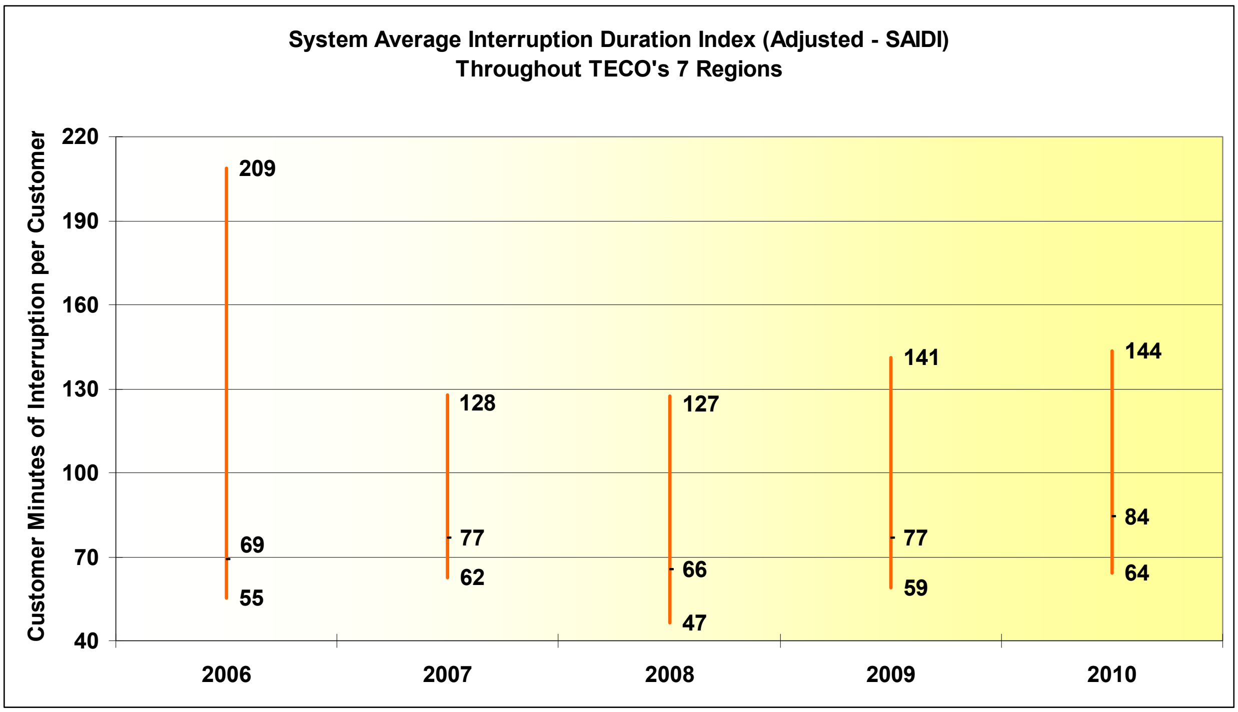
In general, the increase in trends for the SAIDI, SAIFI, and CAIDI indexes appear to relate directly to the results of the North Coastal Region which have continually demonstrated the lowest service reliability of the four regions within PEF for the past five years. The South Coastal and South Central regions have the most reliable SAIDI, SAIFI, and CAIDI results of the four regions within PEF for the last five years. Progress Energy Florida attributes a system wide wind event with wind gusts in excess of 57 mph as a weather event that contributed over 5.5 minutes to its SAIDI for 2010. In addition, the twelve day deep freeze in January had a significant effect on customer minutes of interuption that could not be excluded from the adjusted data. Staff notes that the non-excludable weather events (the deep freeze and the excessive wind gusts) caused the SAIDI metric to increase from 80.4 to 93.3 minutes in 2010.

Tampa Electric Company: Adjusted Data

Figure 3-17 shows the adjusted SAIDI values recorded by TECO's system. Six of the seven TECO regions had an increase in SAIDI performance during 2010, with Plant City and Dade City having the highest SAIDI performance results for the five-year period of 2006 to 2010.

Figure 3-17 shows a slight increase in the average and lowest SAIDI recorded for all of TECO's regions. The highest SAIDI index for the seven regions appears to be trending downwards. 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 Tampa Electric divisions. The SAIDI indexes for all the regions except the Central, Eastern, and Winter Haven regions were above the 2010 average SAIDI index of 84 minutes. The Central and Winter Haven regions recorded the lowest SAIDI indexes for the five-year period.

Figure 3-17. SAIDI across TECO's Seven Regions (Adjusted)

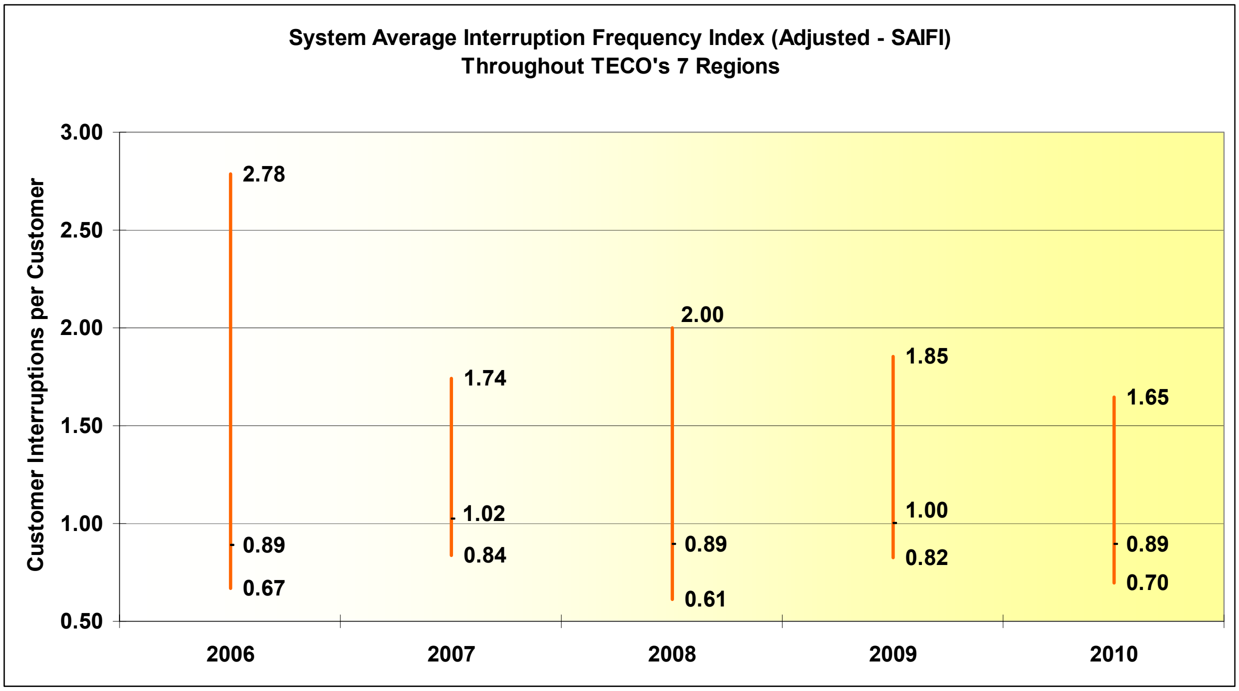


TECO's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIDI	Dade City	Plant City	Dade City	Plant City	Plant City
Lowest SAIDI	Central	Central	Central	Winter Haven	Central

Figures 3-18 illustrates TECO's adjusted frequency of interruptions per customer reported by the system. TECO's data represents an 11 percent decrease in the SAIFI average from 1.00 interruptions in 2009 to 0.89 interruptions in 2010. TECO's Dade City region has the highest frequency of service interruptions when compared to TECO's other regions. Staff has not identified any specific patterns among the SAIFI results throughout the seven TECO regions, as the maximum SAIFI index is trending downward and the minimum index is trending slightly upward. The average SAIFI index is remaining relatively flat.

Figure 3-18. SAIFI across TECO's Seven Regions (Adjusted)

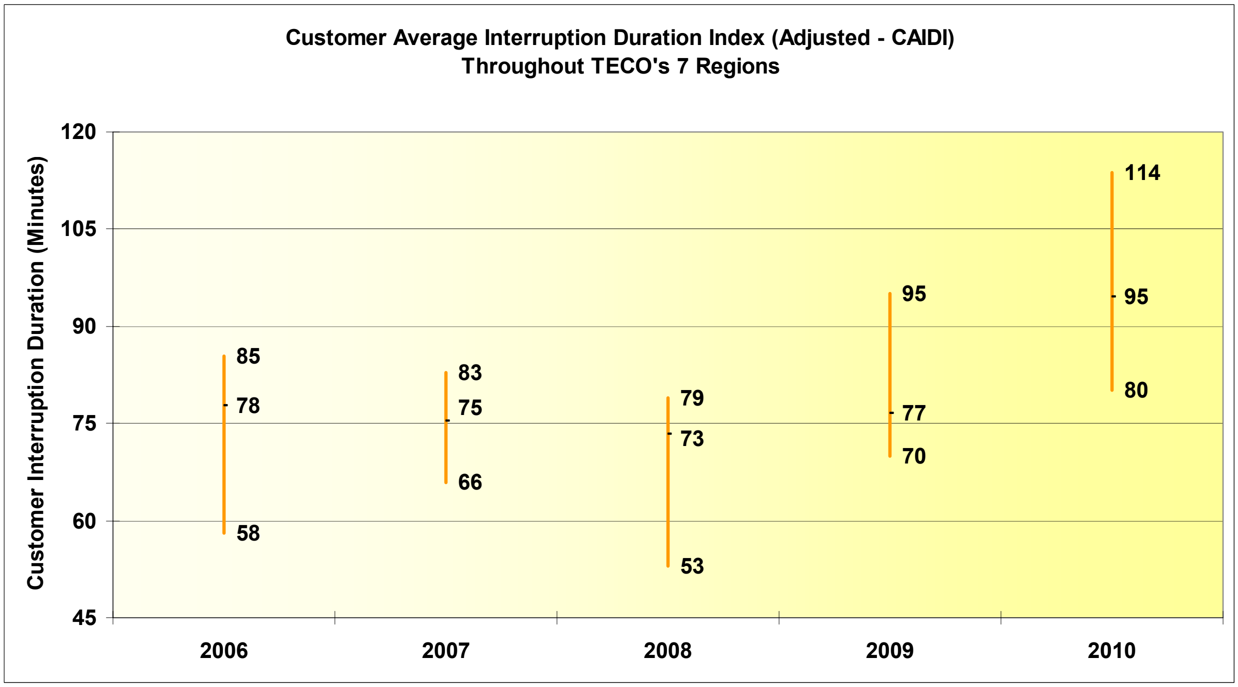


TECO's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	Dade City	Dade City	Dade City	Dade City	Dade City
Lowest SAIFI	Central	Central	Central	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; however, Plant City and South Hillsborough both make appearances. Winter Haven has had the lowest (best) results for four out of the last five years. The average CAIDI seems to be trending upwards at this time suggesting TECO's customers are experiencing outages that are lasting longer.

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

	2006	2007	2008	2009	2010
Highest CAIDI	Western	Plant City	Plant City	South Hillsborough	South Hillsborough
Lowest CAIDI	Winter Haven	South Hillsborough	Winter Haven	Winter Haven	Winter Haven

Figure 3-20 denotes a 9 percent increase in outage durations for the period from 2009 to 2010. TECO has made a 20 percent increase in the L-Bar index since 2008 and the L-Bar index appears to be trending upward suggesting an overall decline and 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)

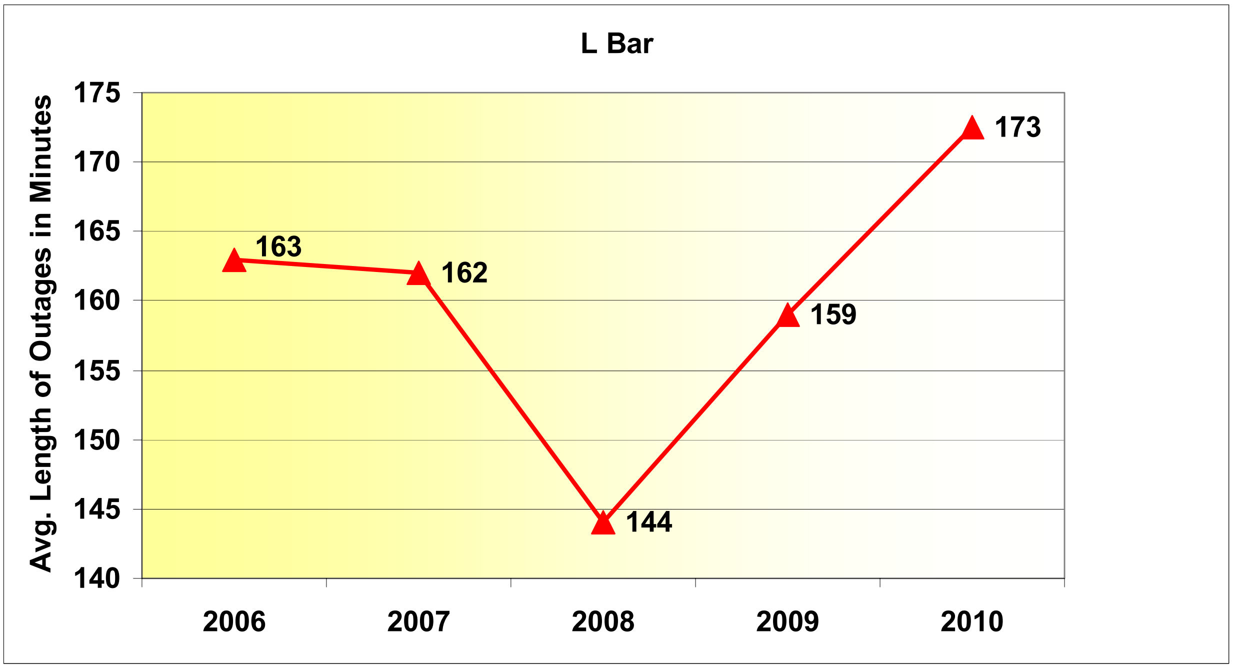
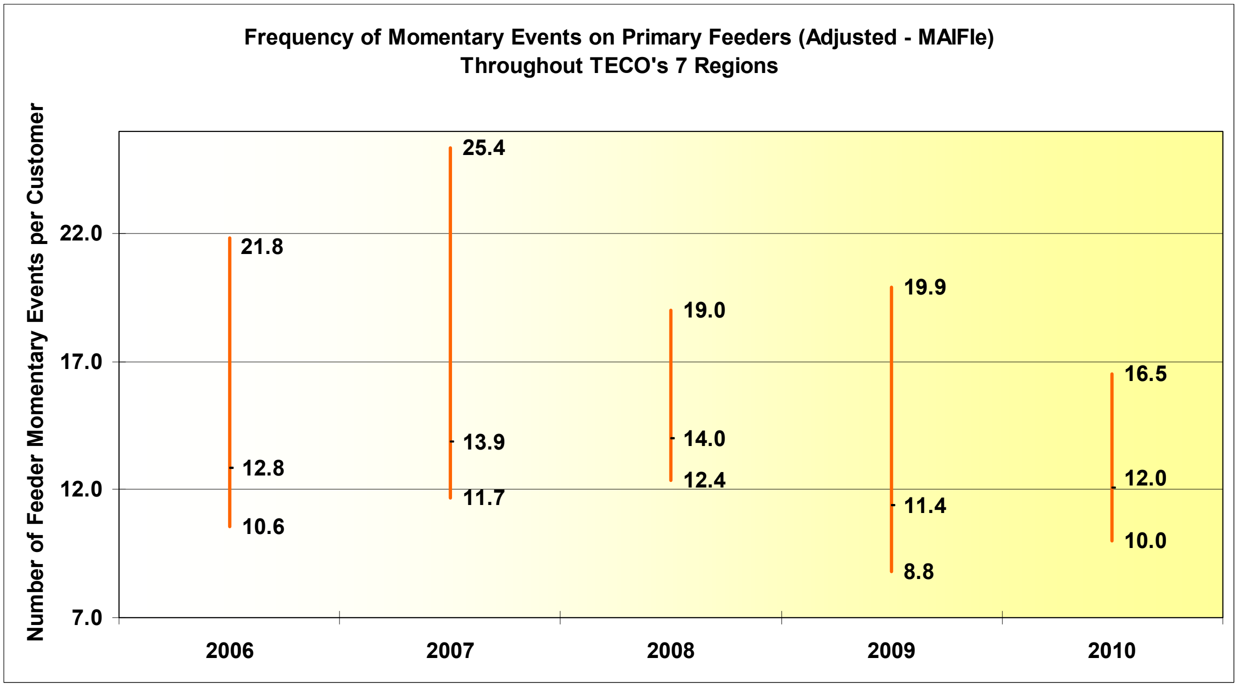


Figure 3-21 illustrates TECO's number of momentary events on primary circuits per customer recorded across its system. In 2010, TECO reported that the "MAIFIe performance declined over 2009 in all divisions except Plant City." **Figure 3-21** shows a downward trend for the average MAIFIe index, which suggests improvement over the five-year period of 2006 to 2010.

Figure 3-21. MAIFIe across TECO's Seven Regions (Adjusted)

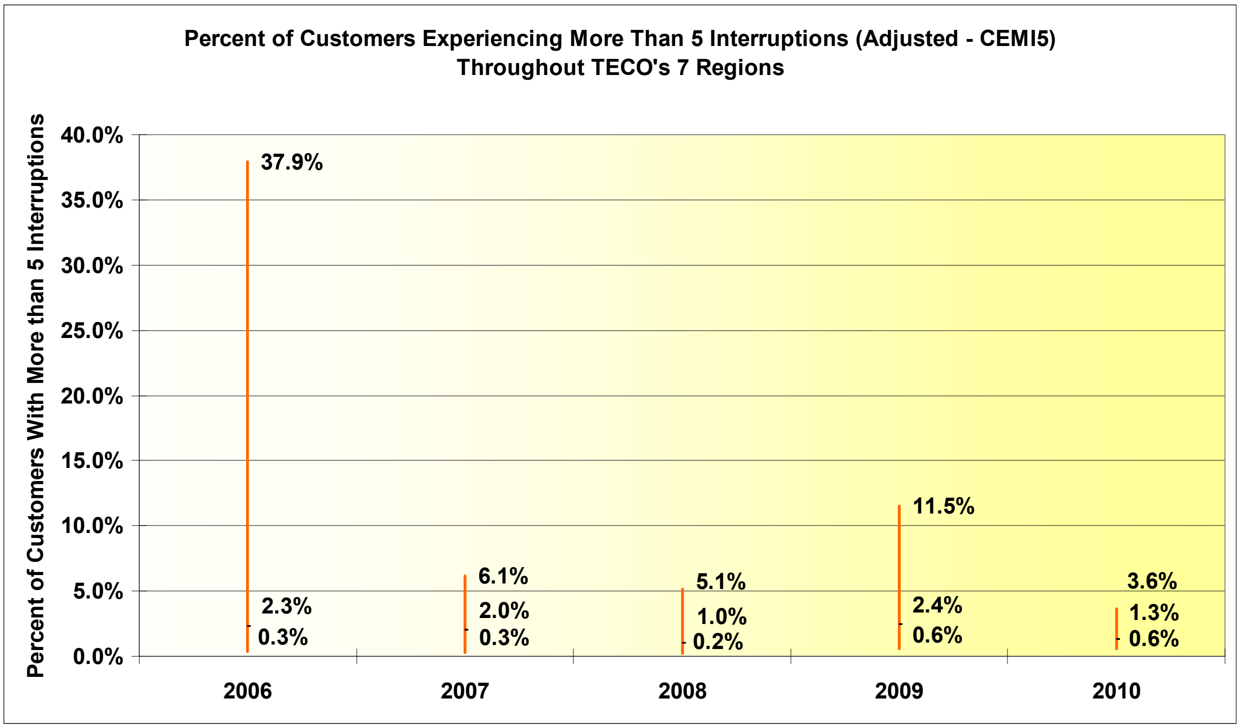


TECO's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest MAIFIe	Dade City	Dade City	Plant City	Plant City	Dade City
Lowest MAIFIe	Central	Central	Central	Central	Central

Figure 3-22 shows the percent of customers experiencing more than five interruptions. Five regions in TECO's territory experienced a decrease in the CEMI5 results for 2010. The Eastern and Winter Haven regions experienced an increase in the CEMI5 index with Winter Haven reporting the highest CEMI5 percentage for 2010. Even though TECO's results for this index have varied for the past five years, the average CEMI5 index appears to be trending downward suggesting improvement.

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

	2006	2007	2008	2009	2010
Highest CEMI5	Dade City	Dade City	Dade City	Dade City	Winter Haven
Lowest CEMI5	Central	Winter Haven	Eastern	Eastern	Central

Figure 3-23 represents TECO's top three percent of 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 increased from 2009 to 2010, as well as the three-year average. The three-year average of outages per feeder appears to be trending upward as the five-year average appears to be trending downward.

Figure 3-23. TECO's Three Percent Feeder Report (Adjusted)

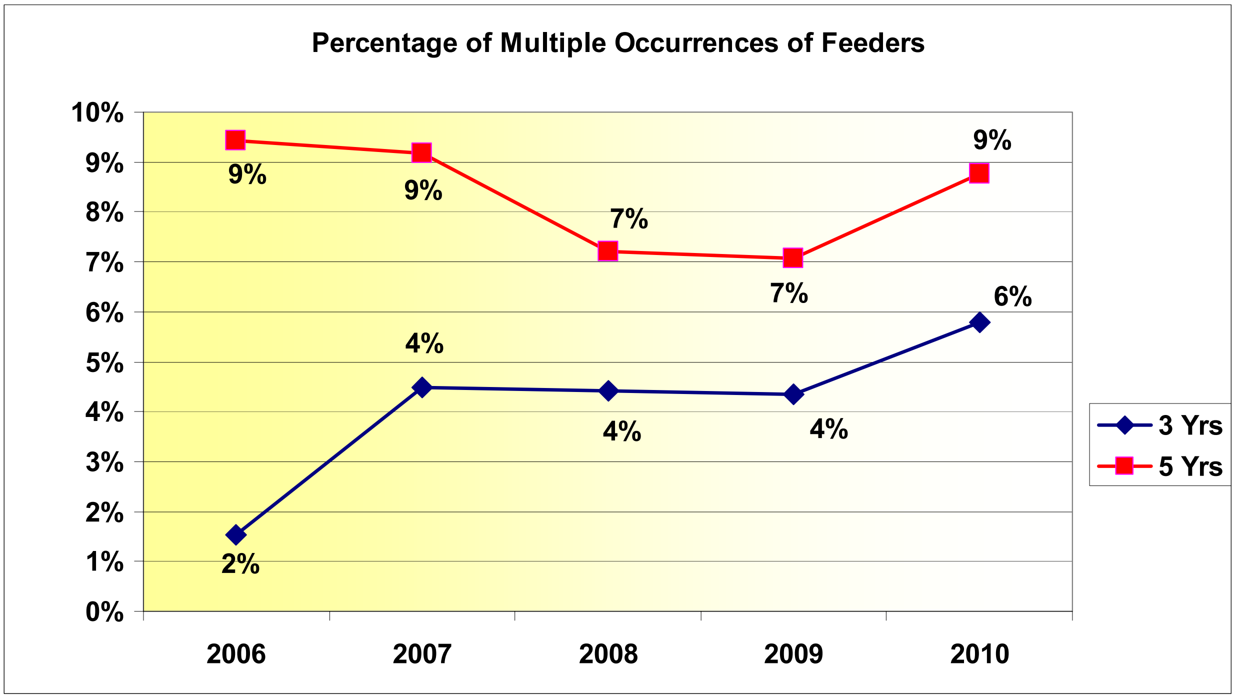
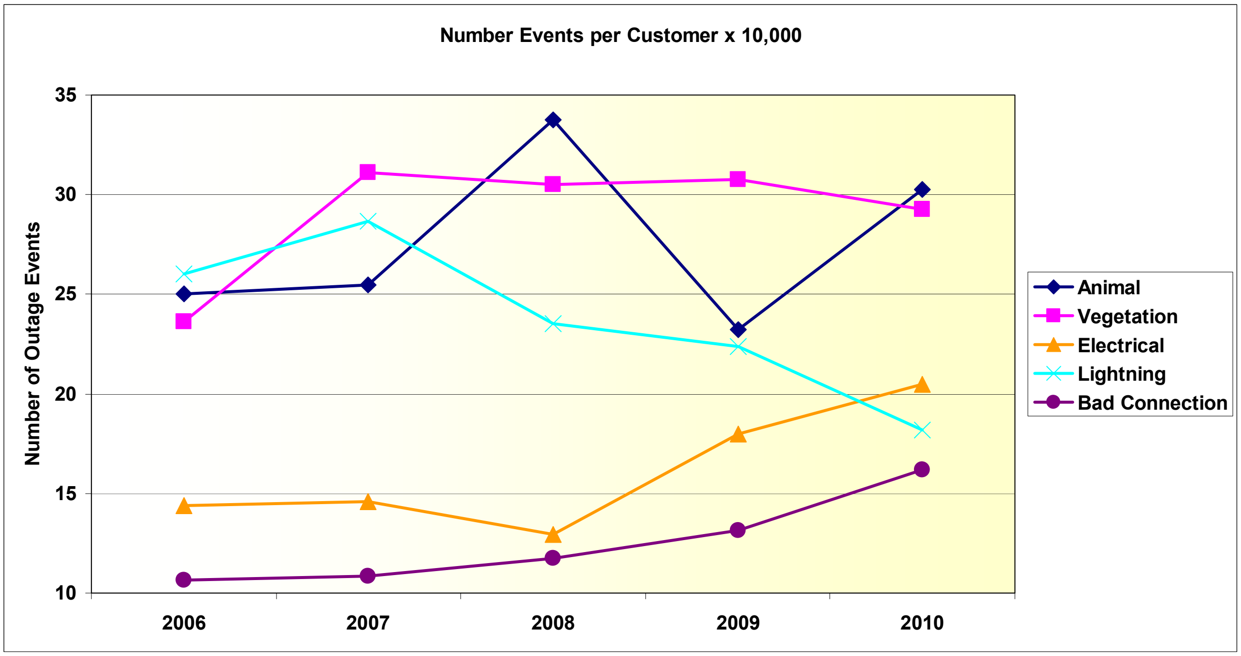


Figure 3-24 shows the top five causes of outage events on TECO's distribution system normalized to a 10,000-customer base. The figure is based on TECO's adjusted data of the top ten causes of outage events and represents 76 percent of the total outage events that occurred during 2010. Vegetation and animal causes continue to be the top two problem areas for TECO; however, the cause due to vegetation was reduced by 4 percent from 2009 to 2010. TECO reports that "overall outages were up in 2010 in comparison to 2009" and "the total number of outages in comparison to the last five-year average is also up." The numbers of outages due to animals, vegetation, electrical issues, and bad connections are trending upward while the number of outages due to lightning is trending downward.

Figure 3-24. TECO's Top Five Outage Causes (Adjusted)



Observations: TECO's Adjusted Data

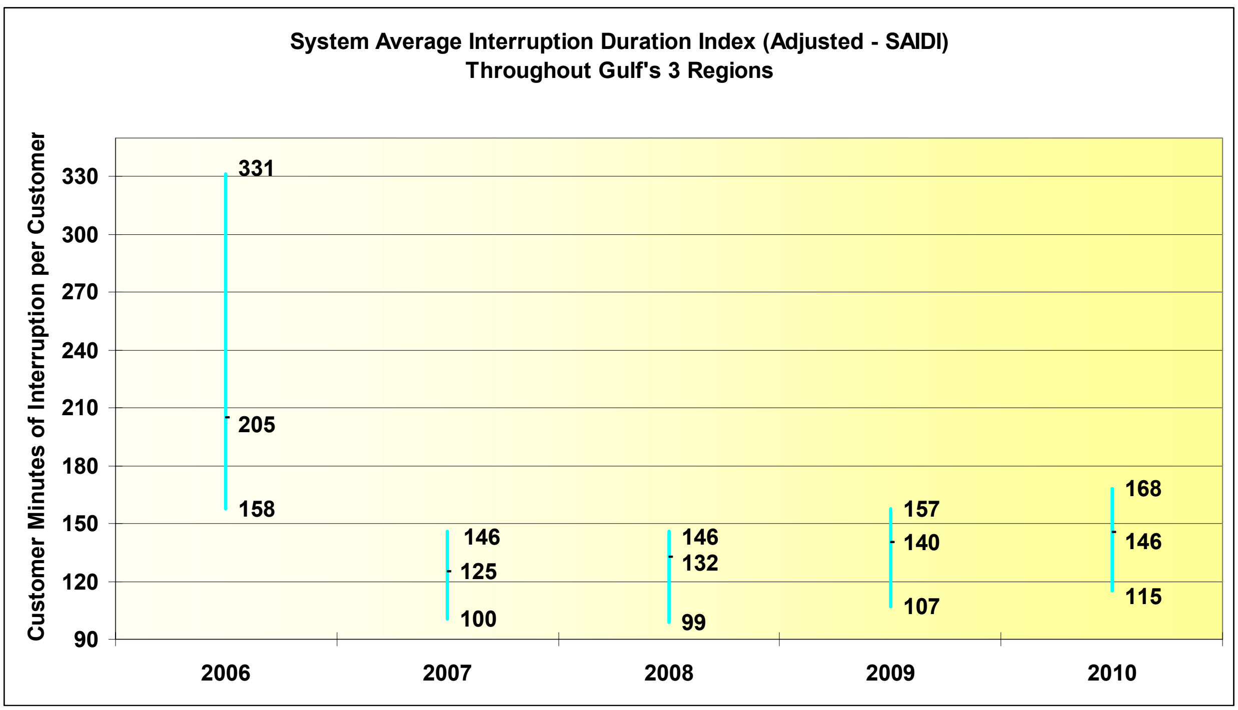
The indexes for SAIDI and CAIDI increased compared to 2009 while the index for SAIFI showed an improvement in performance. TECO reported that in 2010, its "customers experienced an increase in the average interruption duration compared to previous years" and that "the company attributes some increase to longer interruption duration along with an increased number of outages as reported." TECO continues to focus on divisional reliability through the operational management structure. TECO's management continues to review system performance and related metrics, feeder outage activity, and distribution circuit performance on a daily basis.

Gulf Power Company: Adjusted Data

Gulf Power Company'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 6 minutes in Gulf's combined regions over the 2009 results. Gulf's 2010 average performance was 4 percent worse than the 2009 SAIDI results. Gulf reported there was an extreme January weather event that was not excludable because it was not a named storm or NWS recordable tornado. The total SAIDI impact for this significant event was 7.43 minutes, which would have resulted in a Gulf adjusted SAIDI of 138 minutes instead of the reported 146 minutes. Even though the average SAIDI value increased this year, it appears that the maximum, minimum, and average SAIDI indexes are trending downward, showing improvements.

Figure 3-25. SAIDI across Gulf's Three Regions (Adjusted)

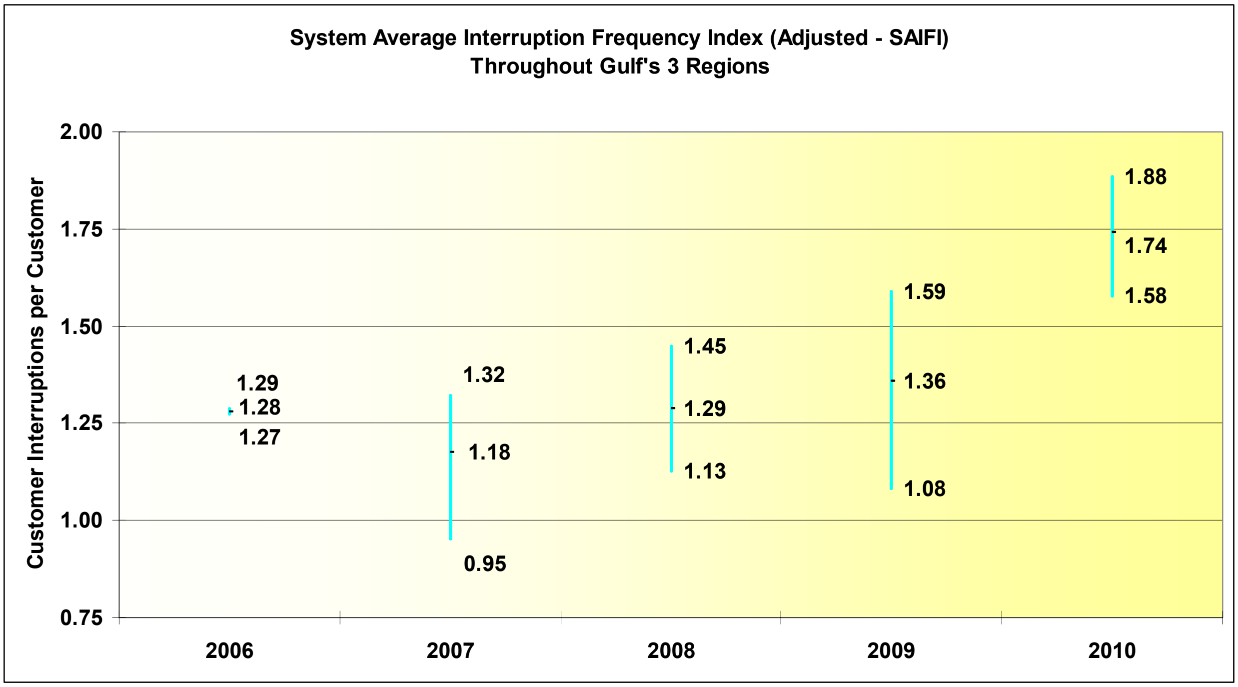


Gulf's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIDI	Eastern	Western	Western	Western	Western
Lowest SAIDI	Western	Eastern	Central	Eastern	Central

Figure 3-26 illustrates the System Average Interruption Frequency Index and Gulf's index had a 28 percent increase in 2010 when compared to 2009. Gulf's Western region had the highest SAIFI values in four of the last five years. The lowest values appear to be confined to the Central and the Eastern regions. Overall, the 2010 maximum, minimum, and average SAIFI values appear to be trending upward as the SAIDI values are trending downward.

Figure 3-26. SAIFI across Gulf's Three Regions (Adjusted)

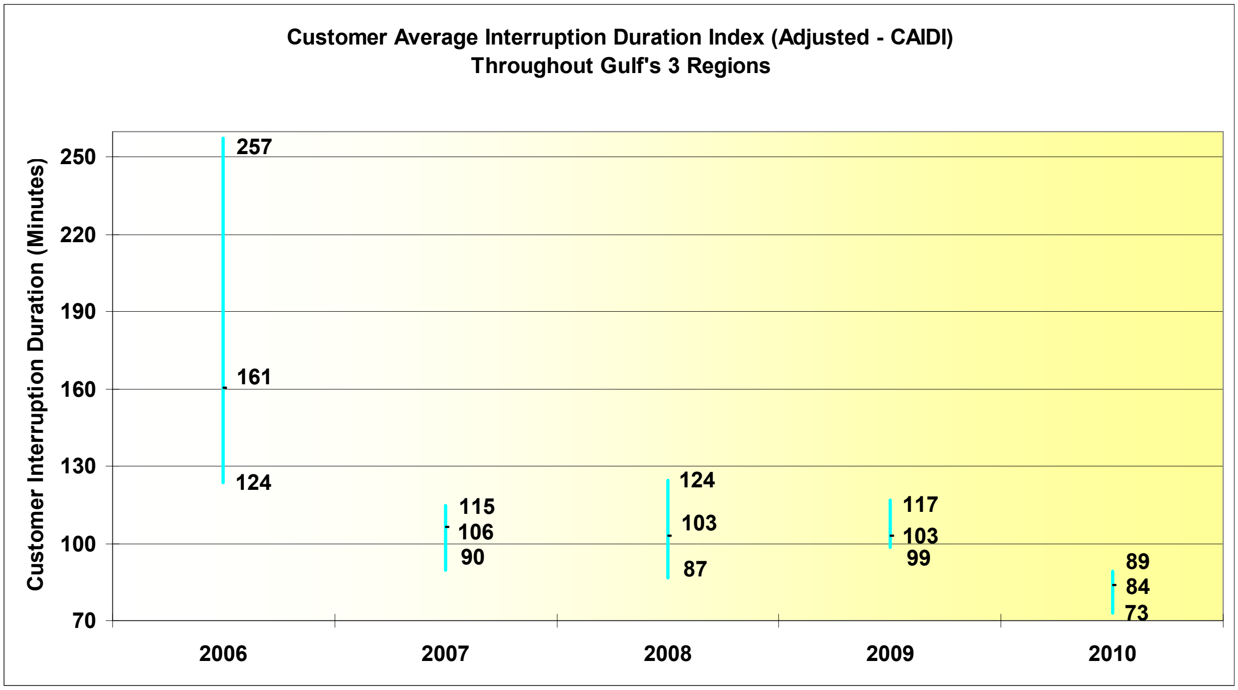


Gulf's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	Eastern	Western	Western	Western	Western
Lowest SAIFI	Western	Central	Eastern	Eastern	Central

Figure 3-27 is Gulf's adjusted CAIDI (Customer Average Interruption Duration Index). The average CAIDI in 2010 was 84 minutes and represents an 18 percent decrease from the 2009 value of 103 minutes. In 2010 the Western region had the highest CAIDI value, as the Central region had the lowest CAIDI. Staff notes that just like the SAIDI values in **Figure 3-25** the maximum, minimum, and average CAIDI values are also trending downward suggesting improvement.

Figure 3-27. CAIDI across Gulf's Three Regions (Adjusted)



Gulf's Regions with the Highest and Lowest Adjusted CAIDI Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	Eastern	Western	Western	Western	Western
Lowest SAIFI	Western	Central	Eastern	Eastern	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 1% improvement from 2009 to 2010. Even though for the past two years, Gulf's L-Bar values did improve, the data for the five-year period suggests that the L-Bar indexes are trending upward.

Figure 3-28. Gulf's Average Duration of Outages (Adjusted)

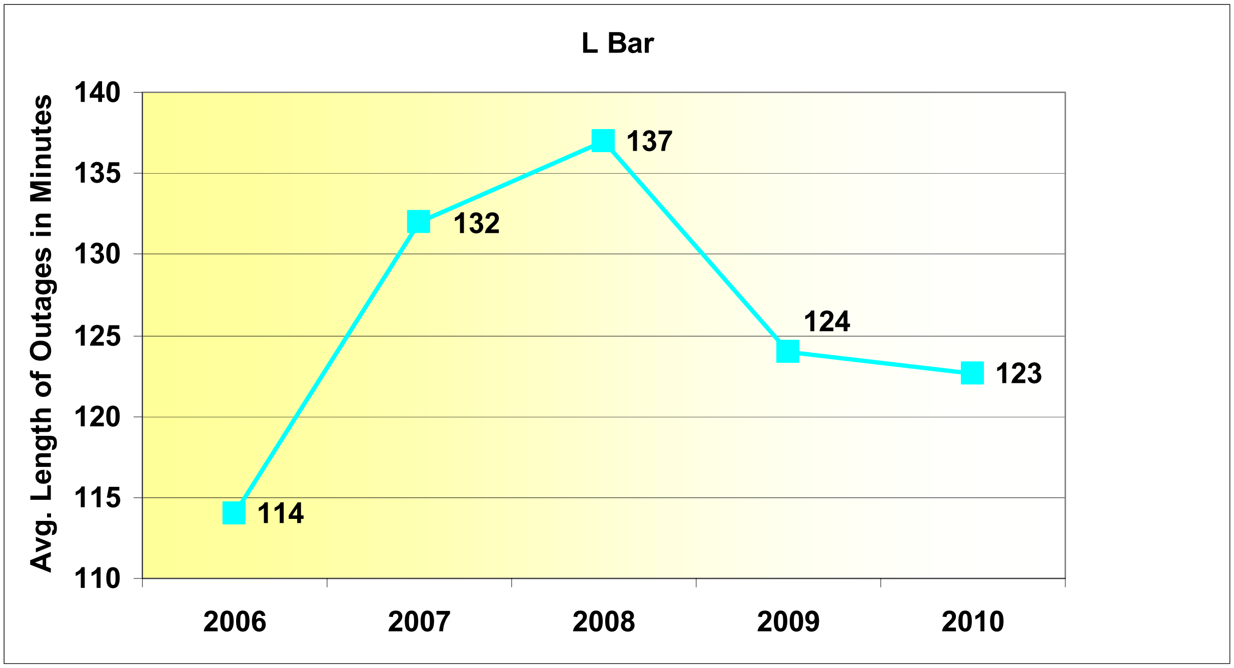
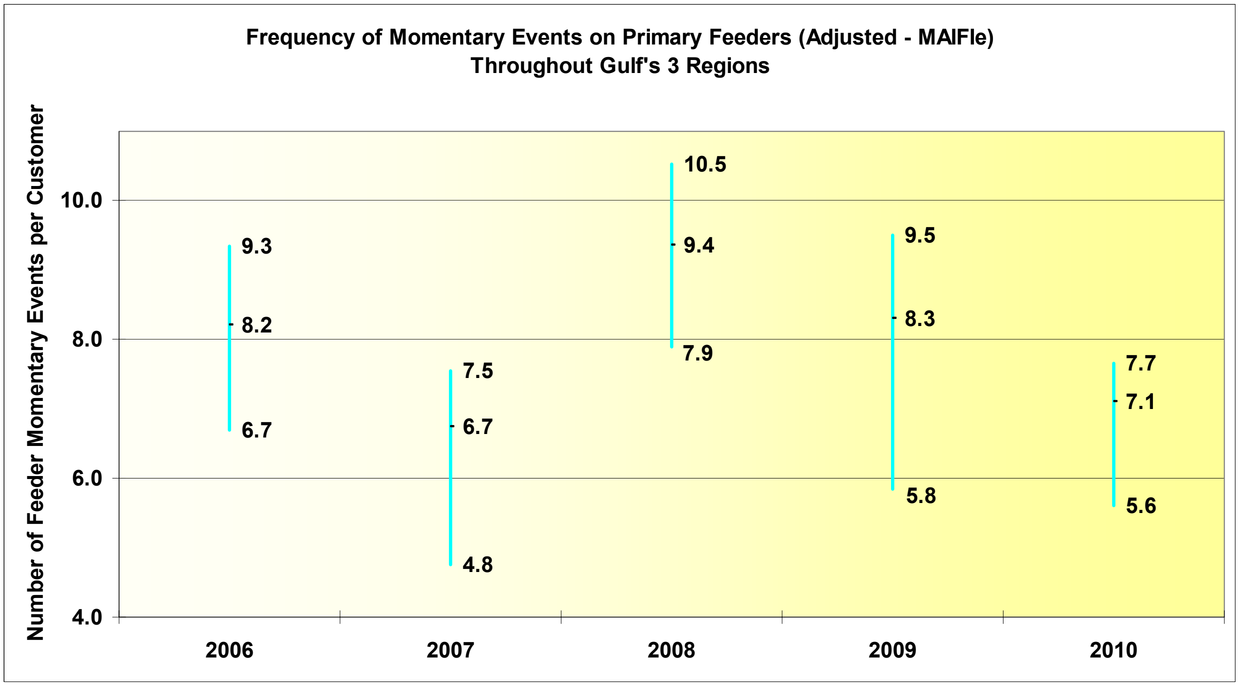


Figure 3-29 is the adjusted MAIFIe recorded across Gulf's system. The adjusted MAIFIe results by region show that the Eastern region had the lowest frequency of momentary events on primary feeders. The Western region has the highest MAIFIe index, with a 19 percent improvement from 2009 to 2010. The data suggests that the level of service reliability for the highest, average, and lowest MAIFIe are all trending downward, which shows improvement.

Figure 3-29. MAIFIe across Gulf's Three Regions (Adjusted)

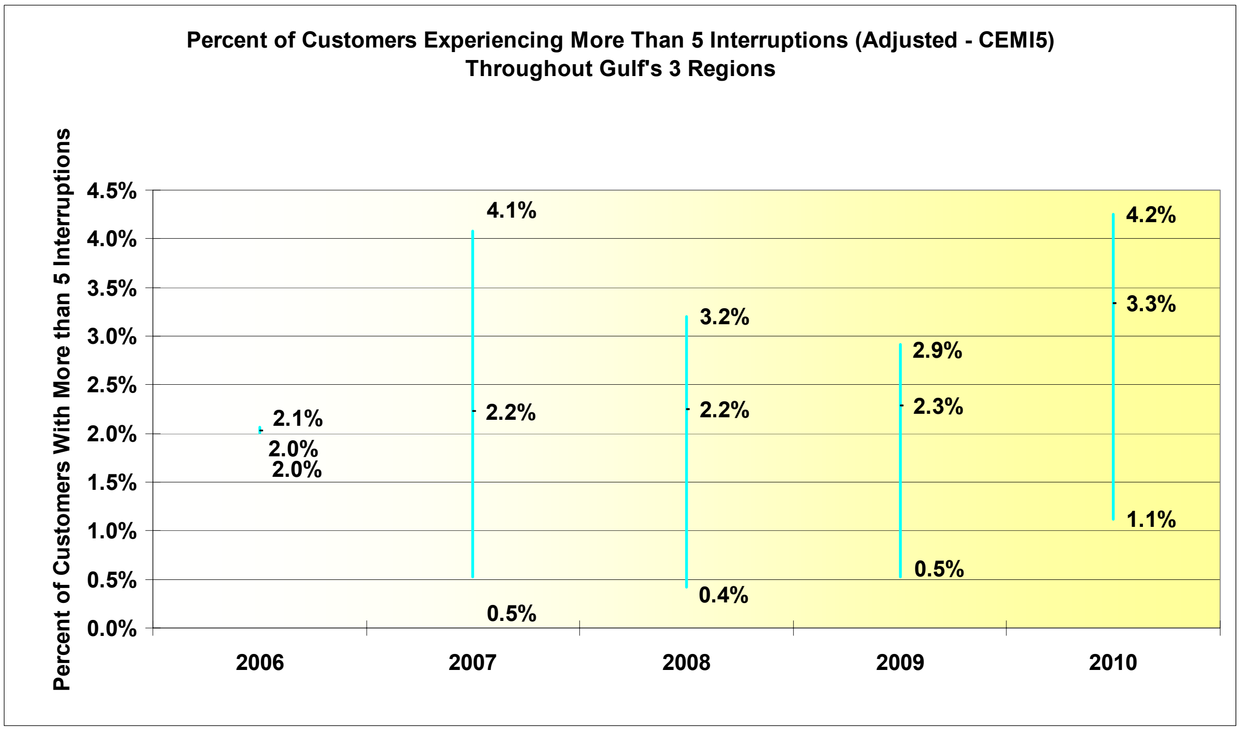


Gulf's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest MAIFIe	Western	Central	Western	Western	Western
Lowest MAIFIe	Eastern	Eastern	Eastern	Central	Eastern

Figure 3-30 shows the highest, average, and lowest adjusted CEMI5 (Customers Experiencing More Than Five Interruptions) across Gulf's Western, Central and Eastern regions. Gulf's 2010 results illustrate an increase when compared to 2009. The highest CEMI5 values have been trending upward as the lowest CEMI5 values have been trending downward over the five-year period of 2006 through 2010. The average CEMI5 appears to be trending upward suggesting that the percentage of Gulf's customers experiencing more than five interruptions is still increasing.

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

	2006	2007	2008	2009	2010
Highest CEMI5	Eastern	Eastern	Western	Western	Eastern
Lowest CEMI5	Western	Central	Central	Central	Central

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 a decrease from the prior trend, which implies improving performance. The Three Percent Feeder Report is a listing of the top three percent of feeders that have the most feeder outage events. The supporting data illustrates that the five-year multiple occurrences have dropped from 9 percent to 5 percent from 2009 to 2010 as the three-year multiple occurrences remained steady at 11 percent. Even though the five-year multiple occurrences showed an improving performance for the two-year period from 2009 to 2010, the five-year period of 2006 to 2010 indicates overall that the five-year index is trending upward. The three-year multiple occurrences index appears to be trending upward as well.

Figure 3-31. Gulf's Three Percent Feeder Report (Adjusted)

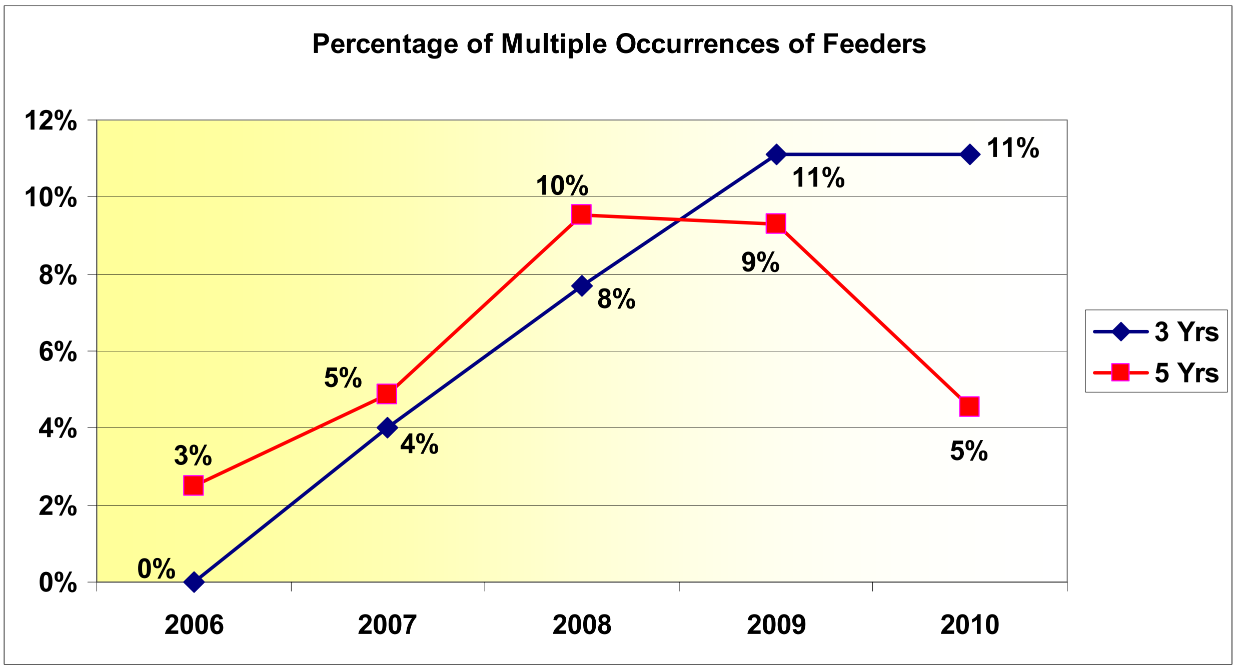
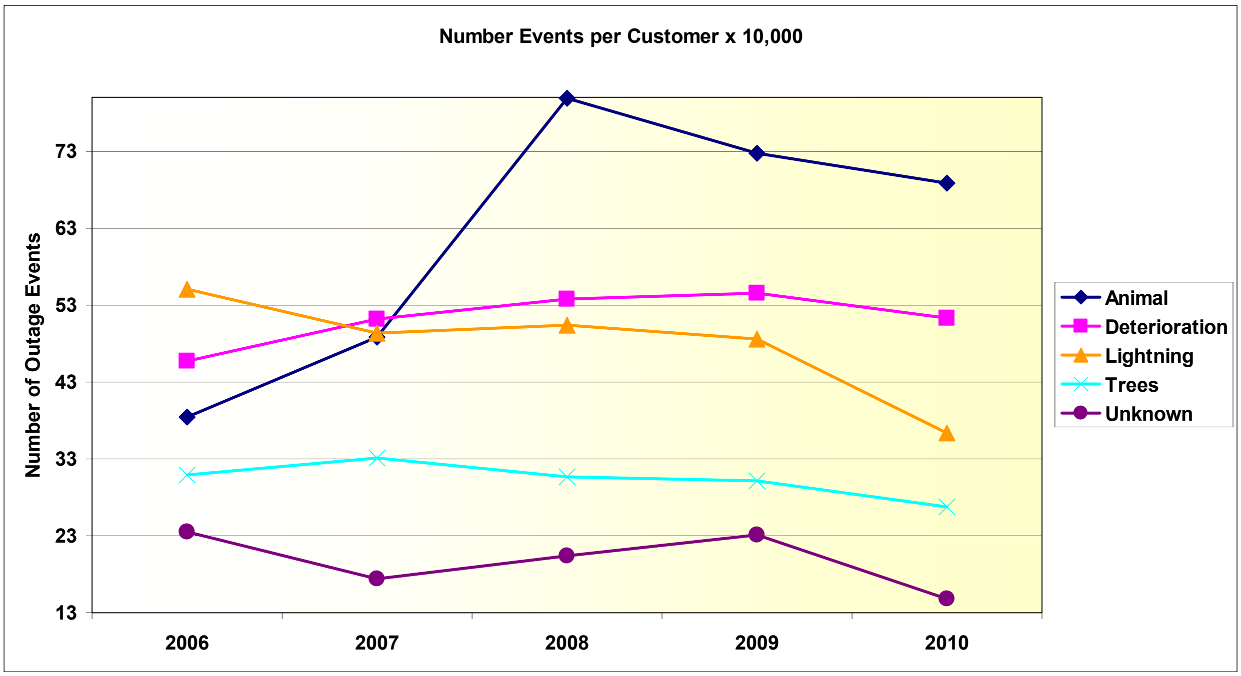


Figure 3-32 is a graph of the top five causes of outage events on Gulf's distribution system normalized to a 10,000-customer base. The figure is based on Gulf's adjusted data of the top ten causes of outage events and represents 82.6 percent of the total adjusted outage events that occurred during 2010. The top five causes of outage events were animals (29 percent), deterioration (21 percent), lightning (15 percent), trees (11 percent), and unknown causes (6 percent). Even though the percentage of outages causes due to animals has decreased by 5 percent from 2009 to 2010, it remains the highest cause of outages. As the number of outage events due to animals and deterioration are trending upwards, the number of outage events due to lightning, unknown, and trees are trending downward.

Figure 3-32. Gulf's Top Five Outage Causes (Adjusted)



Observations: Gulf's Adjusted Data

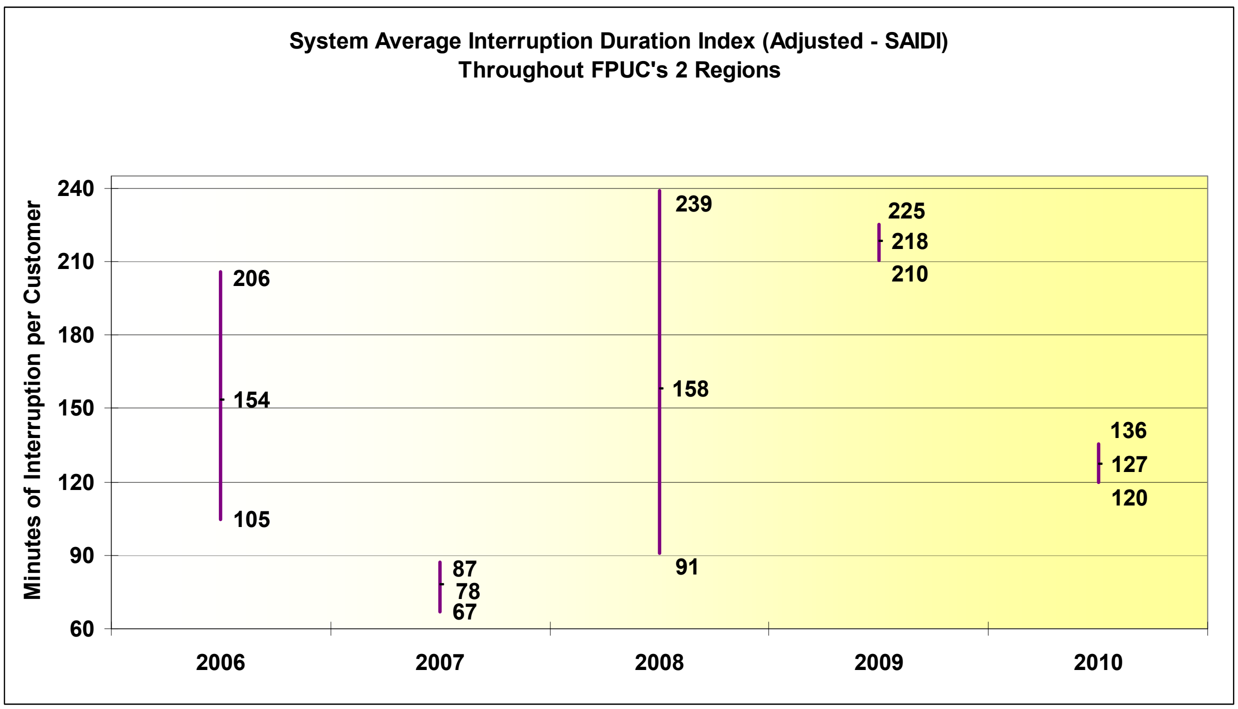
As Gulf's SAIDI and SAIFI results declined (increased) from 2009 to 2010, the CAIDI index improved, indicating that when a customer did experience an outage, the outage was of a shorter duration. There were also improvements seen in MAIFIe and L-Bar service reliabilty indices in 2010. Gulf reports that an extreme weather event that was not excluded, impacted the SAIDI index. If the weather event was excluded, the SAIDI index would have decreased to 138.21 minutes representing a 1 percent improvement from 2009 to 2010. Gulf reported that in 2010 it continues, "To seek improvements in the company's distribution reliability." In 2007, Gulf developed and implemented a program to "document and track distribution feeder lock-outs, recognize root causes of feeder lock-outs, and identify systems and operational modifications that could be implemented to prevent future feeder lock-outs." In 2009, Gulf implemented a process to provide "a pro-active way for any employee to notify Gulf's Forestry Services department of a vegetation problem."

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. 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 upward for the five-year period of 2006 to 2010. FPUC's 2010 Reliability Report notes that 2010 was the second full year for the NE Division and the third year for the NW Division using an Outage Management System (OMS). FPUC stated, "two years did not provide enough data to produce credible trend results." After the third full year for both divisions using the OMS, "FPUC will begin reporting trend information."

Figure 3-33. SAIDI across FPUC's Two Regions (Adjusted)

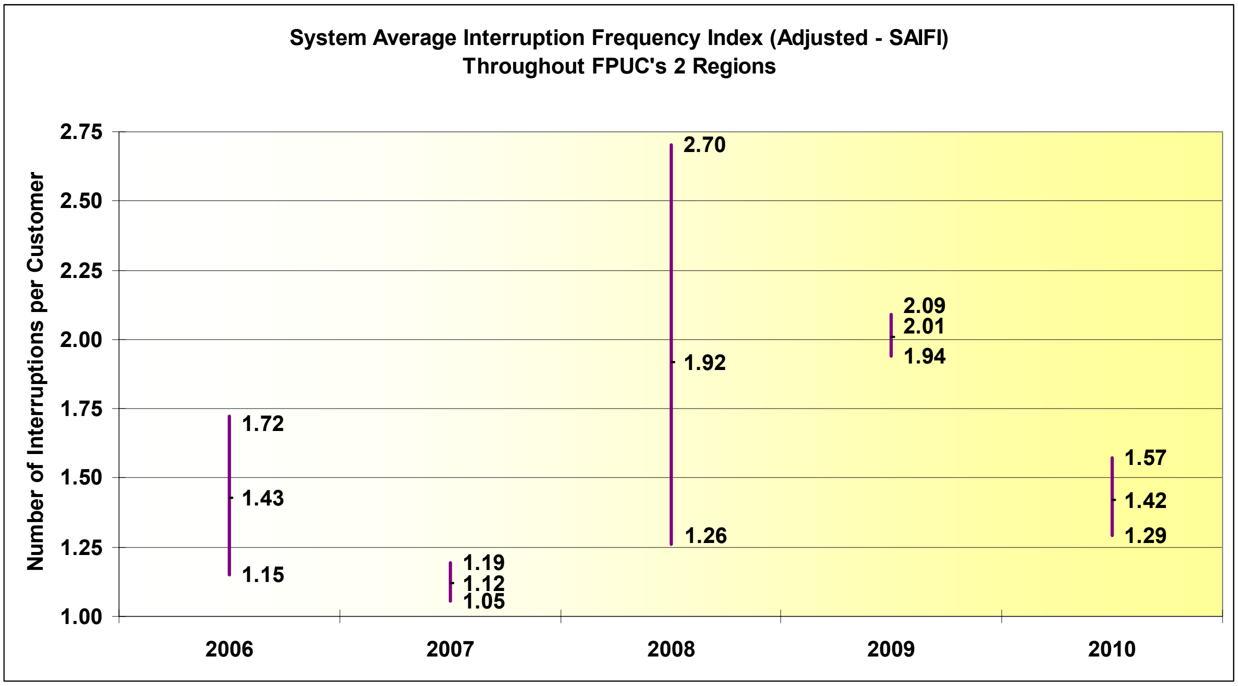


FPUC's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
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 (System Average Interruption Frequency Index or the average number of interruptions per customer) across FPUC's two divisions. The data depicts a 29 percent decrease in the 2010 average SAIFI reliability index from 2009. Staff notes that the maximum, minimum, and average SAIFI indexes are all trending upward even though there was a decrease (improvement) in the indexes in 2010 from 2009.

Figure 3-34. SAIFI across FPUC's Two Regions (Adjusted)

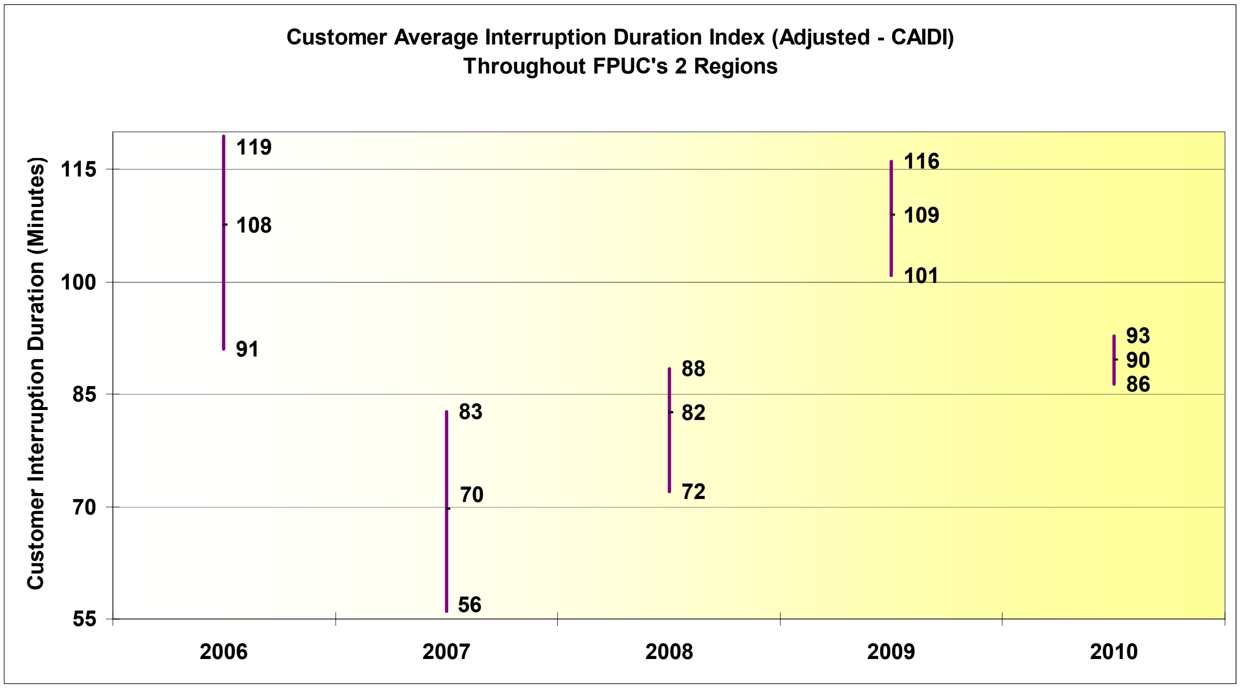


FPUC's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2006	2007	2008	2009	2010
Highest SAIFI	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)
Lowest SAIFI	Fernandina (NE)	Fernandina (NE)	Fernandina (NE)	Fernandina (NE)	Fernandina (NE)

Figure 3-35 shows the highest, average, and lowest adjusted CAIDI values across FPUC's system. FPUC's data shows a 17 percent decrease in the 2010 reliability indices relative to 2009 values. As stated earlier, 2010 is the second full year for the NE Division and the third year for the NW Division using FPUC's OMS system. FPUC stated that two years does not provide enough data to produce credible trend results. For the past five years, the maximum CAIDI index is trending downward, the minimum CAIDI index is trending upward, and the average CAIDI index is trending slightly 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

	2006	2007	2008	2009	2010
Highest CAIDI	Marianna (NW)	Fernandina (NE)	Marianna (NW)	Fernandina (NE)	Fernandina (NE)
Lowest CAIDI	Fernandina (NE)	Marianna (NW)	Fernandina (NE)	Marianna (NW)	Marianna (NW)

Figure 3-36 is the average length of time FPUC spends recovering from outage events (adjusted L-Bar). The data is trending upward even though there is a 34 percent decrease in the L-Bar value from 2009 to 2010. FPUC is taking steps to improve the overall reliability for both Divisions. It is having an independent coordination study performed on all transmission, substation, and distribution facilities to "verify existing designs and provide recommendations to achieve further enhancements." FPUC is accelerating "the current substation capital improvement program for the NE Division." The company has also "expedited the installation of additional underground and overhead fault detecting equipment throughout its distribution system."

Figure 3-36. FPUC's Average Duration of Outages (Adjusted)

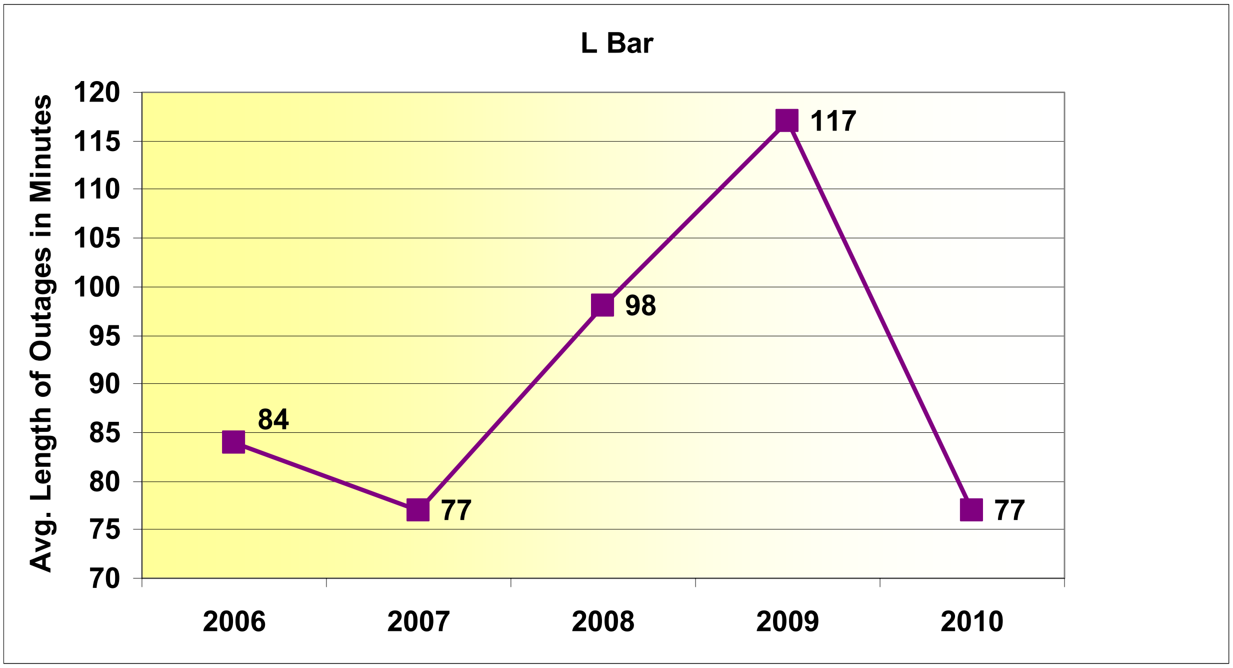
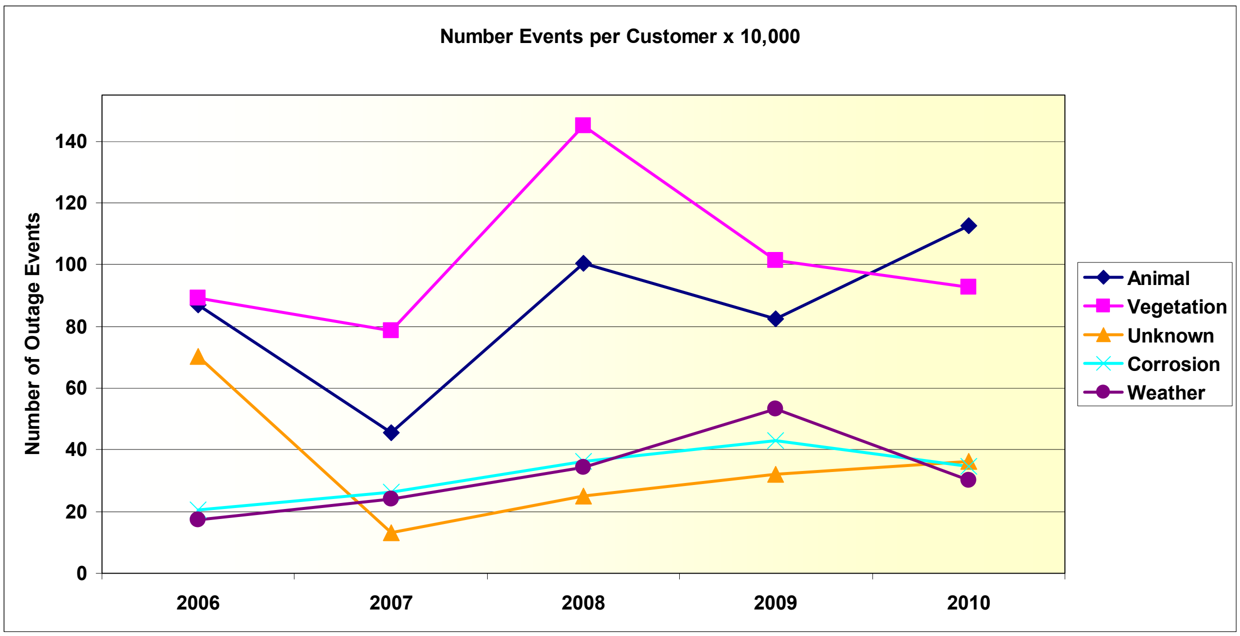


Figure 3-37 shows the top five causes of outage events on FPUC's distribution system normalized to a 10,000-customer base. The figure is based on FPUC's adjusted data of the top ten causes of outage. For the five-year period, the top five causes of outage events were animal (31 percent), vegetation (26 percent), unknown (10 percent), corrosion (10 percent), and weather (8 percent). These five factors represent 84.9 percent of the total adjusted outage causes in 2010. Four of the five-outage causes are trending upward. The four causes are animal, vegetation, corrosion, and weather. Vegetation, corrosion, and weather outages did decrease from 2009 to 2010, even though they are trending upward. Animal and unknown outages increased 36 percent and 12 percent, respectively, from 2009 to 2010. Even though the unknown caused outages increased from 2009 to 2010, it is still trending downward.

Figure 3-37. FPUC's Top Five Outage Causes (Adjusted)



FPUC filed a Three Percent Feeder Report listing the top three percent of feeders with the outage events for 2010. 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 2010 report listed one feeder from the 2008 report that would qualify for the top three percent with the most outage events.

Observations: FPUC's Adjusted Data

The overall service reliability provided by FPUC appears to have improved relative to 2009. Even though the SAIDI, SAIFI, CAIDI, and L-Bar average indexes have decreased compared to 2009, all the average indexes are trending upward. The impact to the service reliability indices since the implementation of FPUC's OMS system has not been determined. As FPUC reports, "two years did not provide enough data to produce credible trend results," staff agrees with FPUC and believes additional results are required.

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

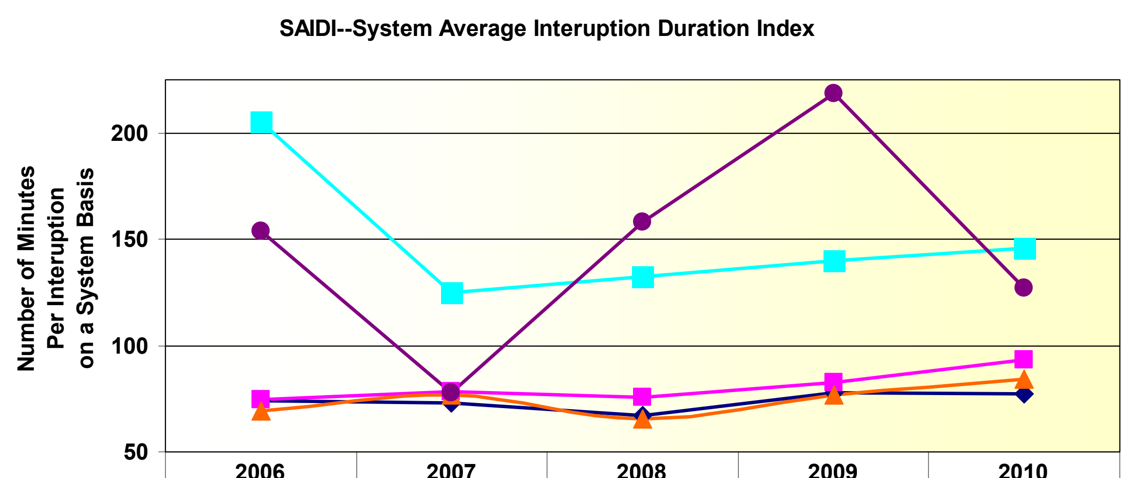
Section IV contains comparisons of the utilities' adjusted data for the various reliability indices that were reported. It also contains a comparison of the service reliability related complaints received by the Commission.

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 2006 through 2010. **Figures 4-1** through **4-3** apply to all five utilities while **Figures 4-4 and 4-5** does 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 the 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 System Average Interruption Duration Index (SAIDI) and it is the average minutes of service interruption. This is the duration 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)



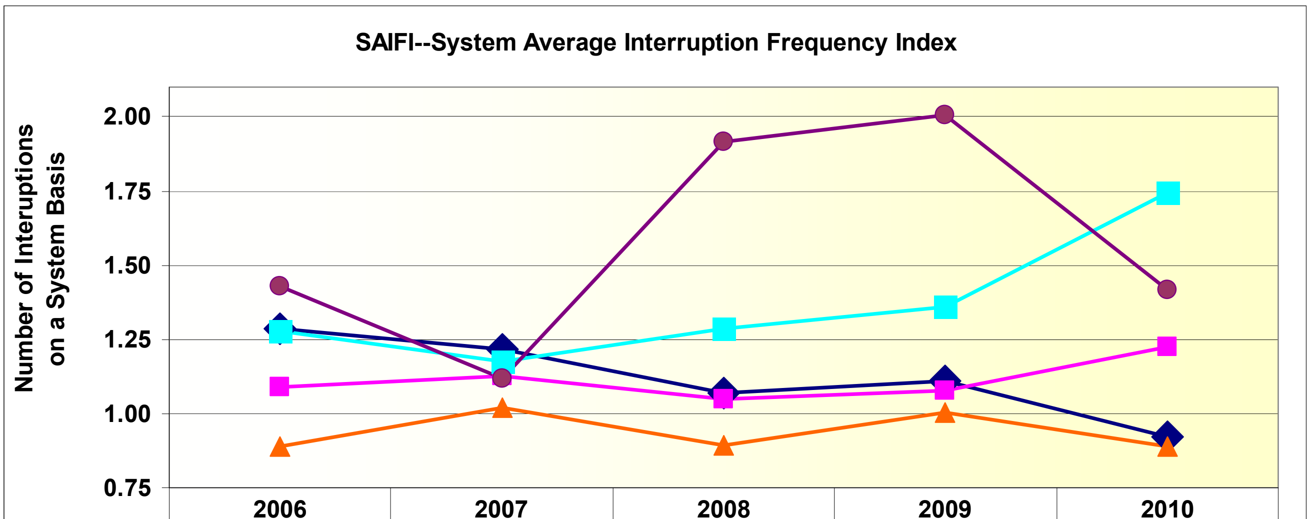
	2006	2007	2008	2009	2010
FPL	74	73	67	78	77
PEF	75	78	76	83	93
TECO	69	77	66	77	84
Gulf	205	125	132	140	146
FPUC	154	78	158	218	127

Figure 4-1 indicates that PEF, TECO, and GULF's SAIDI trends have gradually risen since 2007. FPL's trend has been primarily flat while FPUC appears to have cyclical rises and falls. 2010 was the second full year that FPUC has used its new Outage Management System (OMS) in both its NE and NW Divisions. FPUC believes the OMS is a significant improvement in data collection and retrieval capability for analyzing and reporting reliability indices. PEF and TECO's indices are much smaller; however, all three companies are trending upward.

Figure 4-2 is a five-year graph of the adjusted SAIFI (System Average Interruption Frequency Index) for each IOU. The 2010 data shows FPL and FPUC's SAIFI indices decreased (improved) from the 2009 results. TECO's indices fell as well, but appear cyclical per the yearly data. Gulf's and PEF's SAIFI metrics trended upward.

System Average Interruption Frequency Index (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.

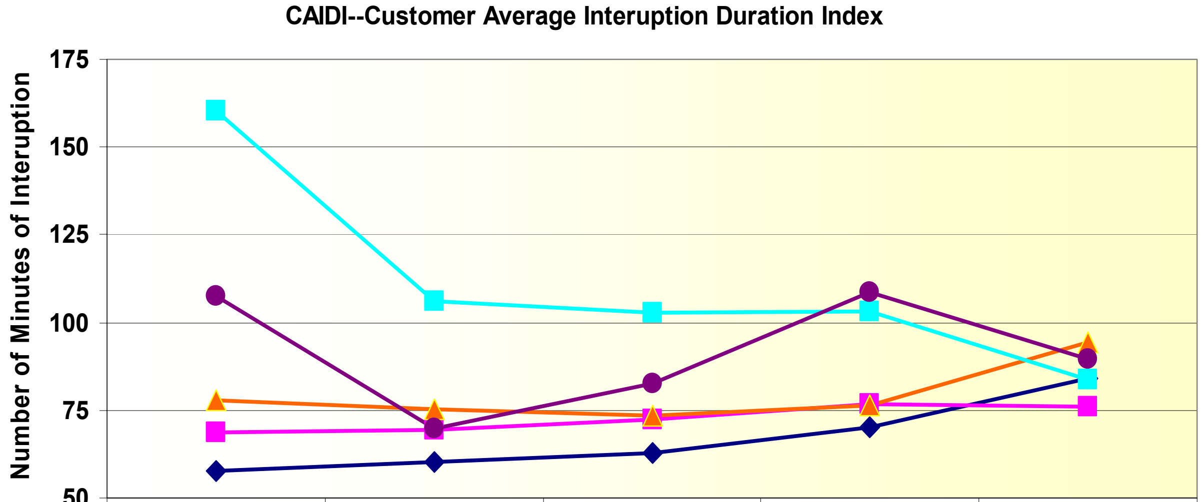
Figure 4-2. Number of Service Interruptions (Adjusted SAIFI)



	2006	2007	2008	2009	2010
FPL	1.29	1.21	1.07	1.11	0.92
PEF	1.09	1.13	1.05	1.08	1.23
TECO	0.89	1.02	0.89	1.00	0.89
Gulf	1.28	1.18	1.29	1.36	1.74
FPUC	1.43	1.12	1.92	2.01	1.42

Figure 4-3 is a five-year graph of the adjusted CAIDI (Customer Average Interruption Duration Index) for each IOU. Despite the increase from 2009, FPL states its 2010 overall CAIDI performance ranks second in the nation when compared to the most recent available industry data. FPUC's CAIDI decreased in 2010, which reversed course from the previous two years. GULF continues to trend downward while PEF's performance is consistent from year to year. After being flat for several years, TECO saw an increase in its CAIDI by 23 percent.

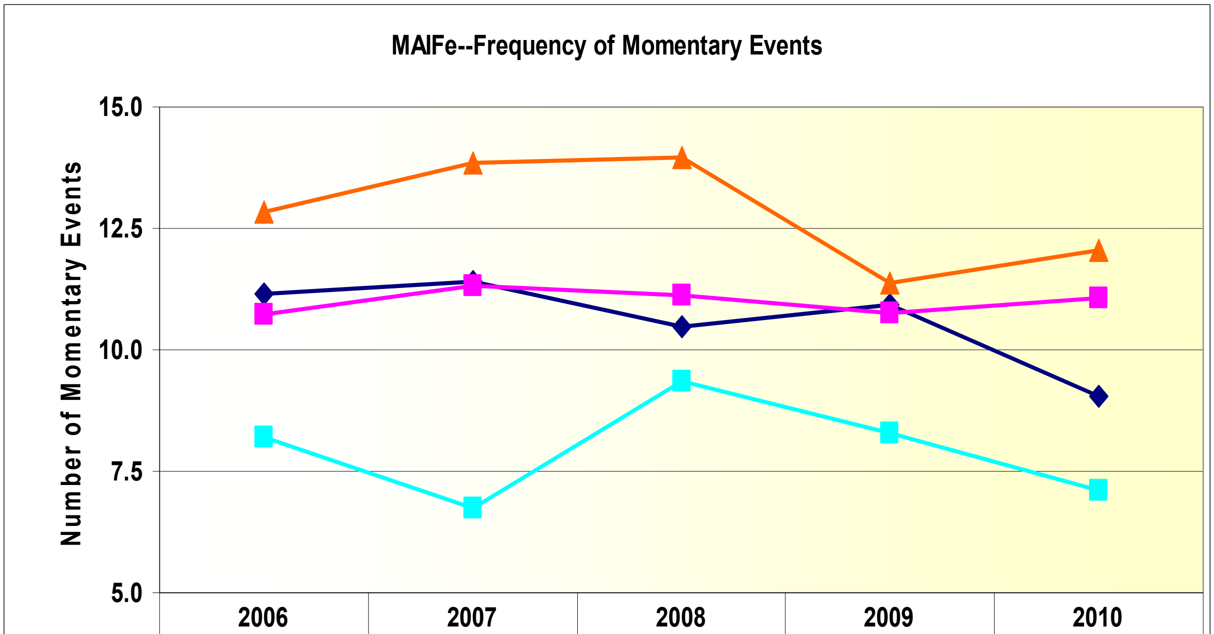
Figure 4-3. Average Service Restoration Time (Adjusted CAIDI)



	2006	2007	2008	2009	2010
FPL	58	60	63	70	84
PEF	69	69	72	77	76
TECO	78	75	73	77	95
Gulf	161	106	103	103	84
FPUC	108	70	82	109	90

Figure 4-4 shows a five-year graph of the adjusted MAIFIe (Momentary Average Interruption Frequency Index) for FPL, PEF, TECO and GULF. All four companies' MAIFE indices are consistent with the previous four years. FPUC is exempt from reporting MAIFIe and CEMI5 (Customers Experiencing More Interruptions than 5) because it has fewer than 50,000 customers.

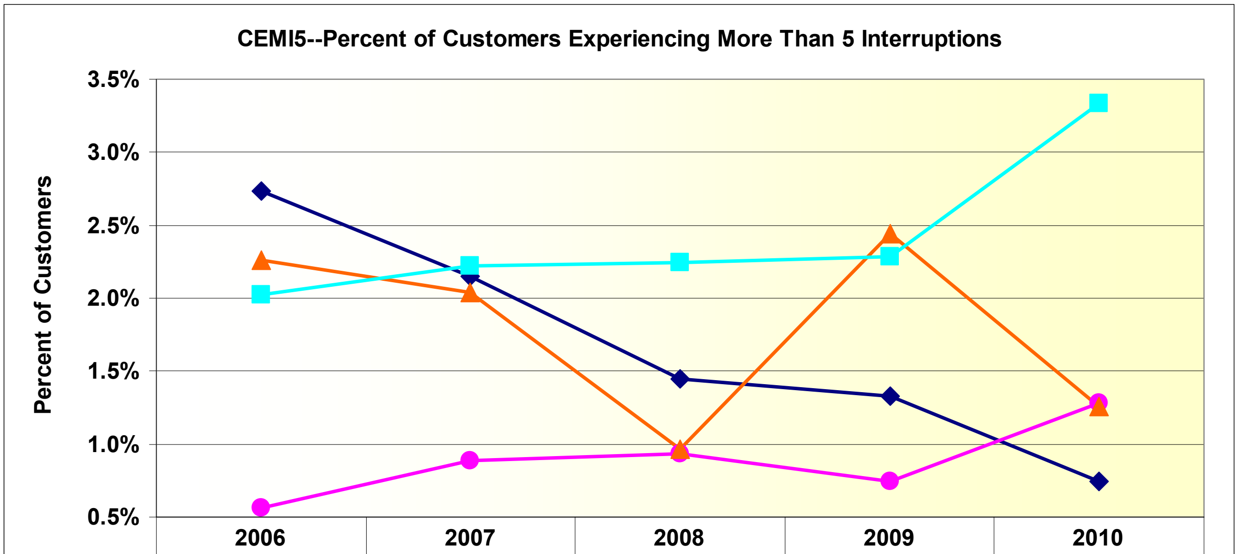
Figure 4-4. Average Number of Feeder Momentary Events (Adjusted MAIFIe)



	2006	2007	2008	2009	2010
FPL	11.1	11.4	10.5	10.9	9.1
PEF	10.7	11.3	11.1	10.8	11.1
TECO	12.8	13.9	14.0	11.4	12.0
Gulf	8.2	6.7	9.4	8.3	7.1

Figure 4-5 is a five-year graph of the adjusted CEMI5 (Customers Experiencing More Than Five Interruptions) for FPL, GULF, PEF 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 increased to 3.3 percent for Gulf in 2010 compared to 2.3 percent in 2009. FPL decreased to its lowest level in 5 years. PEF's trend continues upward and 2010 appears to have had the largest impact of the last five years. TECO's CEMI5 had a significant decrease in the percent of customers experiencing more than five interruptions in 2010 from its 2009 results.

Figure 4-5. Percent of Customers with More Than Five Interruptions (Adjusted CEMI5)



	2006	2007	2008	2009	2010
FPL	2.7%	2.1%	1.4%	1.3%	0.7%
PEF	0.6%	0.9%	0.9%	0.7%	1.3%
TECO	2.3%	2.0%	1.0%	2.4%	1.3%
Gulf	2.0%	2.2%	2.2%	2.3%	3.3%

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 increased marginally to 95,654 from 95,400 in 2009 and the number of outages per 10,000 customers remained flat for the five-year period. Similar results are seen for TECO. After seeing the number of outages rising earlier in the period for both PEF and Gulf, their outages appear to have stabilized and seem to be on the decline. FPUC's results increased sharply in 2008 and declined in 2009 and 2010. 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)

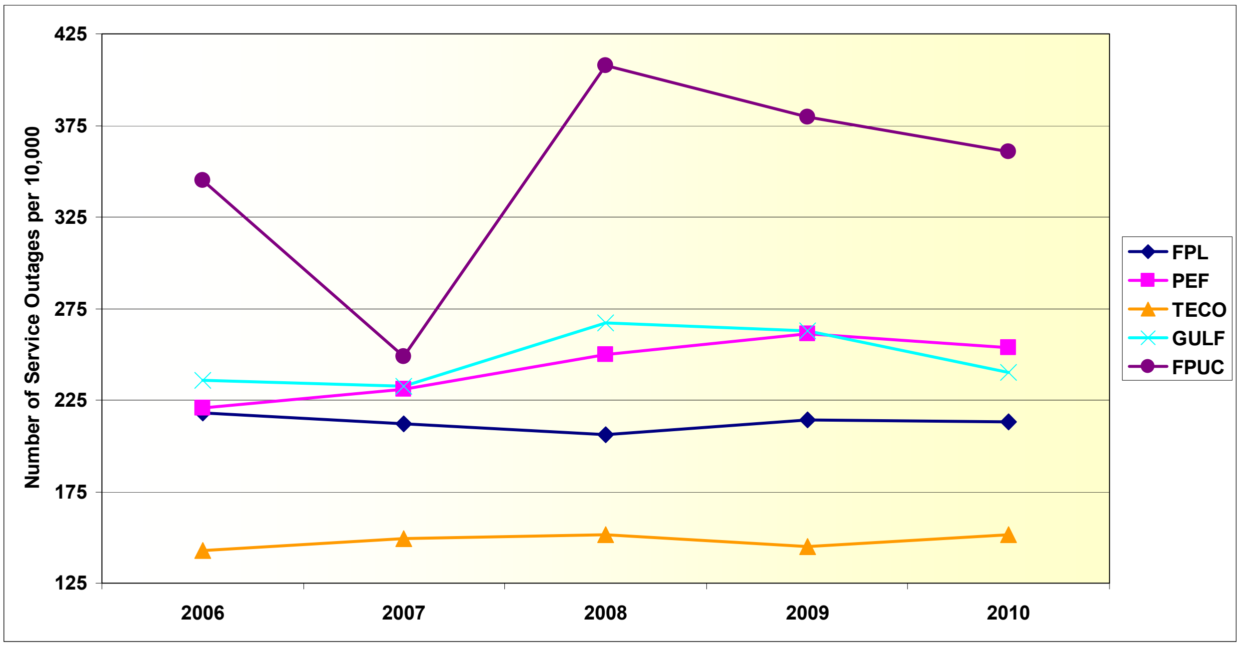
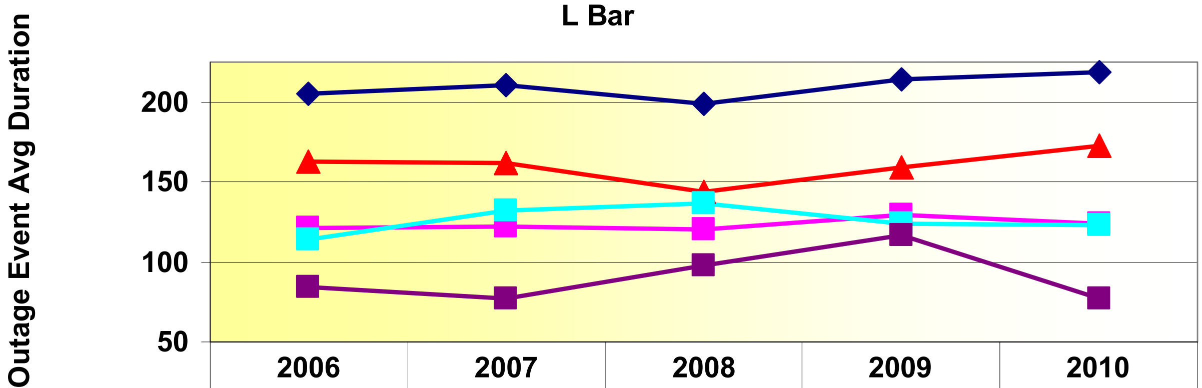


Figure 4-7 represents the average duration of outage events (Adjusted L-Bar) for each IOU. FPL's average outage duration remains higher than the other IOUs and appears to be increasing with the category "Equipment Failure" representing approximately 35 percent of FPL's outages. Correspondingly, TECO's outages appear to be increasing with 39.3% of TECO's outages attributed to animals (20.0%) and vegetation (19.3%). FPUC, Gulf and PEF L-Bar values decreased in 2010. FPUC's L Bar decreased to its lowest level in the past five years.

Figure 4-7. Average Duration of Outage Events (Adjusted L-Bar)



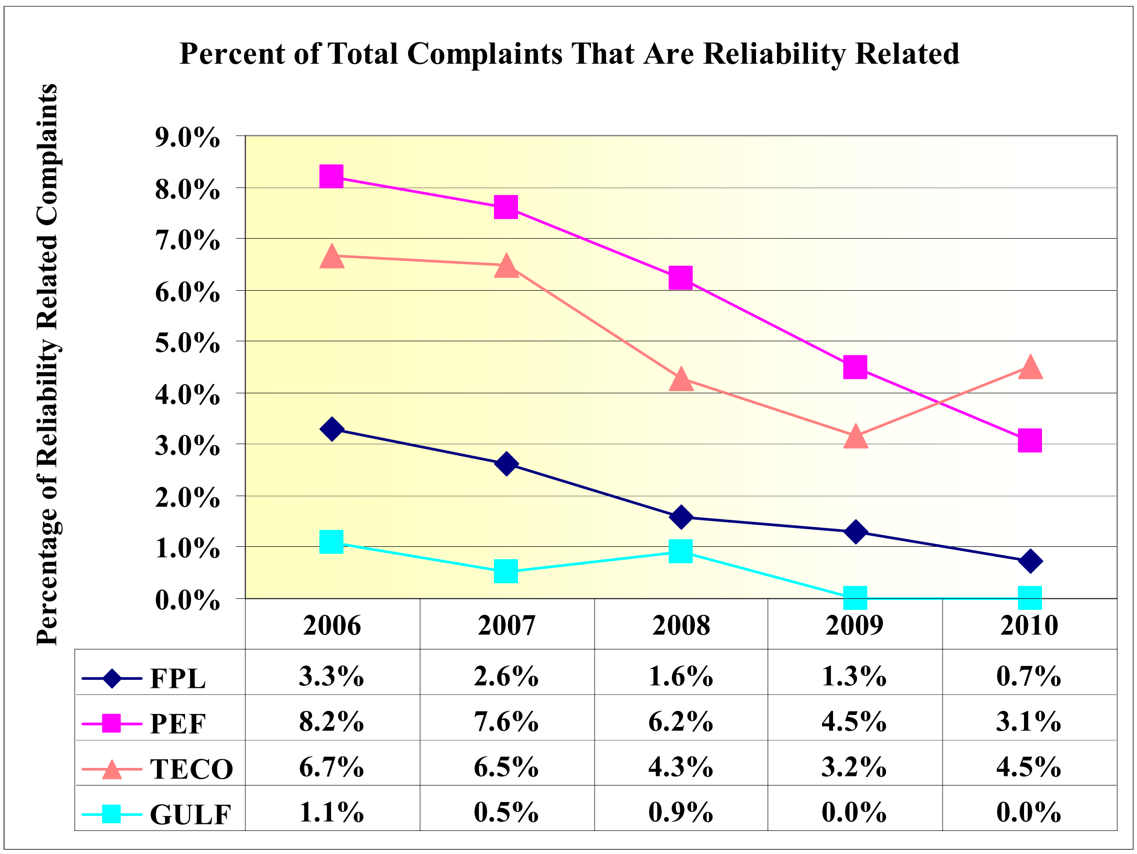
	2006	2007	2008	2009	2010
FPL	205	211	199	214	219
PEF	121	122	120	129	124
TECO	163	162	144	159	173
GULF	114	132	137	124	123
FPUC	84	77	98	117	77

Inter-Utility Comparisons of Reliability Related Complaints

Figures 4-8 and 4-9 represents consumer complaint data that was extracted from the Commission's Consumer Activity Tracking System (CATS). Each customer 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[19].

Figure 4-8 shows the percentage of reliability related customer complaints in relation to the total number of complaints for each IOU and overall, it appears to be trending downward. FPUC was excluded from the comparison because FPUC has relatively few customer reliability complaints and a much smaller customer base in comparison to the other utilities.

Figure 4-8. Percent of Complaints That Are Reliability related



	2006	2007	2008	2009	2010
FPL	3.3%	2.6%	1.6%	1.3%	0.7%
PEF	8.2%	7.6%	6.2%	4.5%	3.1%
TECO	6.7%	6.5%	4.3%	3.2%	4.5%
GULF	1.1%	0.5%	0.9%	0.0%	0.0%

[19] The "Quality of Service" category pertains 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.

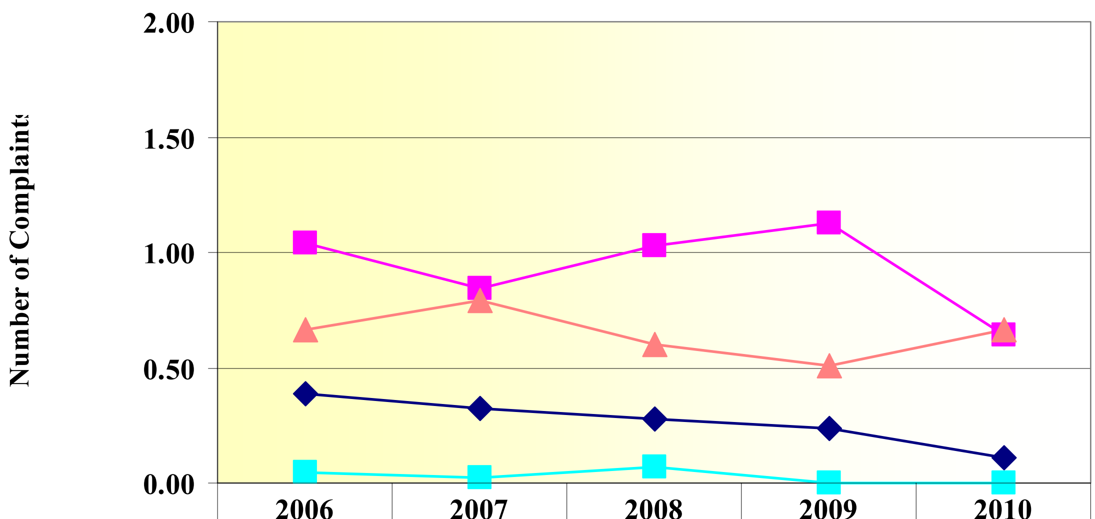
Figure 4-9 charts the volume of reliability related complaints per ten thousand customers for the IOUs. FPL, PEF, TECO, and Gulf, for 2010, have less than one reliability complaint for ten thousand customers. For the five year period, FPL, PEF, and TECO appear to be trending downward. Gulf has the fewest reliability complaints in comparison to the other utilities and is staying relatively flat.

The volume of service reliability related complaints is normalized to a 10,000-customer base for comparative purposes. This is calculated for each IOU by dividing the total number of reliability complaints reported to the Commission by the total number of the utility's customers. This fraction is then multiplied by 10,000 for graphing purposes.

FPUC was also examined and for 2010, the utility had 53 total complaints of which five were reliability related. Normalizing to a 10,000-customer basis results in 1.790 reliability related complaints. The results for the previous years varied from 0.347 in 2006 to a high of 4.256 in 2008. The volatility of FPUC's results can be attributed to its small customer base, which typically averages 28,000 or fewer customers.

Figure 4-9. Service Reliability Related Complaints per 10,000 Customers

Reliability Related Complaints per 10,000 Customers



	2006	2007	2008	2009	2010
FPL	0.390	0.323	0.277	0.238	0.109
PEF	1.040	0.842	1.030	1.126	0.639
TECO	0.664	0.791	0.599	0.508	0.667
GULF	0.047	0.023	0.070	0.000	0.000

Appendix A-Adjusted Service Reliability Data

Florida Power & Light Company

Table A-1. FPL's Number of customers (year end)

	2006	2007	2008	2009	2010
Boca Raton	347,030	350,336	349,157	349,273	351,056
Brevard	281,090	284,097	282,691	283,298	285,276
Central Dade	242,649	247,429	254,825	257,751	263,305
Central Florida	261,990	265,365	264,699	264,524	266,261
Ft. Myers	-	184,719	183,172	184,230	186,626
Gulf Coast	414,519	-	-	-	-
Gulf Stream	316,390	318,594	315,782	315,117	317,296
Manasota	358,098	360,152	358,368	357,938	360,971
North Dade	222,019	224,805	223,159	221,592	223,875
North Florida	134,688	138,398	139,271	139,400	140,248
Naples	-	236,111	235,816	236,430	239,150
Pompano	299,874	298,881	294,881	294,184	298,007
South Dade	293,656	297,229	295,591	280,926	283,708
Toledo Blade	164,917	168,429	167,401	167,850	169,698
Treasure Coast	264,835	270,525	268,713	269,792	271,429
West Dade	221,686	223,049	221,682	237,215	240,579
West Palm	337,612	340,513	339,105	337,471	339,417
Wingate	254,358	254,455	252,931	251,991	254,976
FPL System	**4,415,411**	**4,463,087**	**4,447,244**	**4,448,982**	**4,491,878**

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)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Boca Raton	75	68	54	67	73	1.39	1.23	1.04	1.29	0.93	54	56	52	52	79
Brevard	55	70	76	75	71	1.03	1.16	1.07	1.18	1.01	54	60	71	64	71
Central Dade	64	64	50	75	69	1.05	1.20	0.94	1.16	0.78	61	53	54	65	89
Central Florida	70	84	80	71	69	1.27	1.49	1.24	1.05	0.91	55	56	64	68	76
Ft. Myers	-	75	79	73	79	-	1.26	1.24	1.11	1.09	0	60	63	66	73
Gulf Coast	80	-	-	-	-	1.53	-	-	-	-	-	-	-	-	-
Gulf Stream	60	55	54	76	77	1.28	1.13	1.03	1.03	0.82	47	49	52	75	94
Manasota	66	68	73	83	78	1.01	0.87	1.01	0.94	0.91	66	78	72	88	86
North Dade	78	72	62	84	84	1.19	1.13	0.83	0.89	0.82	65	64	75	95	103
North Florida	74	94	129	103	82	1.14	1.38	1.58	1.30	1.02	65	69	82	79	80
Naples	0	59	64	73	92	0	1.12	0.93	0.98	0.86	0	53	69	74	107
Pompano	68	61	49	57	71	1.16	1.03	0.91	0.82	0.79	58	59	54	70	90
South Dade	83	96	89	122	88	1.25	1.42	1.35	1.52	1.04	66	67	66	80	84
Toledo Blade	82	74	60	79	78	1.42	0.96	0.77	1.02	0.96	58	77	78	78	81
Treasure Coast	81	94	67	70	79	1.41	1.31	1.05	1.10	1.01	58	72	64	63	79
West Dade	94	78	66	86	88	1.64	1.40	1.17	1.19	1.15	57	56	57	72	77
West Palm	83	70	55	62	67	1.27	1.21	0.88	0.98	0.78	66	58	63	67	85
Wingate	83	76	71	88	81	1.51	1.50	1.35	1.42	0.97	55	51	53	62	83
FPL System	**74**	**73**	**67**	**78**	**77**	**1.29**	**1.21**	**1.07**	**1.11**	**0.92**	**58**	**60**	**63**	**70**	**84**

Table A-3. FPL'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%)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Boca Raton	8.8	9.6	8.9	10.6	7.1	2.11%	2.28%	0.71%	1.64%	0.37%
Brevard	15.8	16.6	14.1	13.6	11.1	0.85%	0.94%	0.82%	1.09%	0.92%
Central Dade	8.9	10.2	8.5	9.5	7.1	1.24%	1.11%	1.16%	1.32%	0.42%
Central Florida	12.7	14.1	13.3	12.3	10.7	1.96%	1.80%	2.64%	1.16%	0.96%
Ft. Myers	-	11.2	9.4	8.5	8.1	-	1.08%	2.26%	0.82%	0.77%
Gulf Coast	9.8	-	-	-	-	3.10%	-	-	-	-
Gulf Stream	8.9	9.0	8.5	9.3	7.7	5.39%	1.00%	0.46%	1.68%	1.04%
Manasota	9.3	9.5	9.2	8.5	8.1	1.21%	1.08%	1.06%	0.65%	0.74%
North Dade	9.7	10.0	7.8	8.8	7.2	2.53%	2.75%	1.19%	1.08%	0.71%
North Florida	12.5	12.9	15.9	15.3	13.0	1.40%	2.42%	5.54%	2.84%	1.81%
Naples	-	8.3	7.5	7.7	7.2	-	4.29%	1.21%	1.04%	0.51%
Pompano	7.8	7.6	7.2	7.3	5.7	2.33%	1.59%	0.92%	0.49%	0.16%
South Dade	10.3	10.2	8.9	11.0	8.2	2.27%	3.32%	2.30%	3.91%	0.67%
Toledo Blade	20.4	17.1	16.5	18.2	16.3	2.85%	3.00%	0.67%	1.15%	0.58%
Treasure Coast	14.6	17.6	17.5	15.2	13.4	4.58%	3.23%	2.17%	1.09%	1.46%
West Dade	10.6	10.0	9.0	9.7	9.1	7.43%	2.89%	1.45%	1.26%	1.07%
West Palm	11.7	10.8	10.0	10.7	9.0	2.50%	1.87%	0.67%	0.82%	0.57%
Wingate	12.8	13.1	11.0	13.9	10.2	2.30%	3.01%	2.02%	1.14%	0.52%
FPL System	**11.1**	**11.4**	**10.5**	**10.9**	**9.1**	**2.74%**	**2.15%**	**1.45%**	**1.33%**	**0.75%**

Table A-4. FPL's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2006	2007	2008	2009	2010	Cumulative % ages	2006	2007	2008	2009	2010
Equipment Failure	27,692	30,102	29,904	31,933	33,047	34.5%	255	256	238	261	273
Unknown	17,273	12,016	11,639	11,806	11,737	12.3%	183	170	164	172	144
Vegetation	8,911	12,201	13,916	14,866	16,201	16.9%	192	206	205	219	215
Animal	10,006	9,655	10,297	9,343	9,688	10.1%	113	115	113	116	109
Remaining Causes	5,318	4,536	3,841	3,745	5,849	6.1%	203	208	207	214	323
Other Weather	7,148	8,318	6,903	8,185	5,142	5.4%	156	164	148	152	148
Other	10,165	7,343	6,940	7,654	7,297	7.6%	193	191	191	191	182
Lightning	4,575	6,059	4,431	4,292	2,492	2.6%	301	306	277	297	285
Equipment Connect	2,925	2,631	2,442	2,488	3,052	3.2%	227	228	208	253	253
Vehicle	2,181	1,678	1,334	1,088	1,149	1.2%	231	228	236	257	250
FPL System	**96,194**	**94,539**	**91,647**	**95,400**	**95,654**	**100%**	**205**	**211**	**199**	**214**	**219**

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".
(3) Where the number of outages was too small, to be among the top ten causes of outage events they are blanks.

Table A-5. PEF's Number of Customers (Year End)

	2006	2007	2008	2009	2010
North Central	371,357	373,325	373,050	370,929	372,724
North Coastal	190,414	192,295	192,498	191,826	192,482
South Central	401,943	411,225	412,576	411,992	417,540
South Coastal	651,800	651,029	652,167	650,613	644,765
PEF System	**1,615,514**	**1,627,874**	**1,630,291**	**1,625,360**	**1,627,511**

Table A-6. PEF's Adjusted Regional Indices SAIDI, SAIFI, and CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
North Central	77	81	82	81	101	1.13	1.13	1.13	0.97	1.25	68	72	72	83	81
North Coastal	89	144	125	136	145	1.02	1.61	1.51	1.55	1.65	87	90	82	88	88
South Central	75	72	74	71	74	1.12	1.02	0.96	0.90	1.04	66	70	77	79	71
South Coastal	70	61	59	76	86	1.07	1.05	0.92	1.11	1.21	65	58	64	68	71
PEF System	75	78	76	83	93	1.09	1.13	1.05	1.08	1.23	69	69	72	77	76

Progress Energy Florida, Inc.

Table A-7. PEF'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)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
North Central	9.1	9.9	10.1	11.1	11.4	0.77%	1.08%	1.38%	0.53%	1.21%
North Coastal	8.2	11.5	10.5	9.8	8.6	0.60%	2.75%	3.20%	2.60%	4.33%
South Central	10.6	10.1	10.5	9.7	8.5	0.44%	0.36%	0.42%	0.64%	0.66%
South Coastal	12.5	12.9	12.3	11.5	13.2	0.51%	0.55%	0.34%	0.38%	0.81%
PEF System	**10.7**	**11.3**	**11.1**	**10.8**	**11.1**	**0.56%**	**0.88%**	**0.94%**	**0.74%**	**1.28%**

Progress Energy Florida, Inc.

Table A-8. PEF's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2006	2007	2008	2009	2010	Cumulative % ages	2006	2007	2008	2009	2010
Animals	**4,602**	**4,414**	**5,732**	**4,589**	**-**	**-**	**140**	**65**	**66**	**68**	**-**
Storm	**4,534**	**3,817**	**3,538**	**4,405**	**3,711**	**9.0%**	**158**	**105**	**101**	**122**	**107**
Tree-Preventable	**3,552**	**3,728**	**3,992**	**4,827**	**5,469**	**13.2%**	**109**	**113**	**115**	**126**	**128**
Unknown	**3,685**	**3,973**	**5,472**	**5,582**	**4,595**	**11.1%**	**74**	**74**	**77**	**79**	**79**
All Other	**3,064**	**3,101**	**3,168**	**8,248**	**12,634**	**30.6%**	**138**	**119**	**113**	**139**	**101**
Defective Equipment	**3,317**	**3,144**	**2,991**	**3,718**	**3,681**	**8.9%**	**181**	**186**	**181**	**183**	**173**
Vehicle-Const. Equipment	**4,464**	**4,122**	**4,761**	**353**	**326**	**0.8%**	**158**	**166**	**171**	**210**	**208**
Connector Failure	**2,967**	**3,010**	**2,982**	**3,244**	**3,078**	**7.4%**	**106**	**102**	**103**	**113**	**113**
Tree Non-preventable	**1,823**	**3,197**	**3,347**	**3,474**	**3,612**	**8.7%**	**119**	**133**	**131**	**149**	**140**
UG Primary	**2,735**	**2,566**	**2,506**	**2,521**	**2,175**	**5.3%**	**184**	**188**	**209**	**228**	**227**
Lightning	**875**	**2,551**	**2,217**	**1,525**	**1,073**	**2.6%**	**189**	**131**	**128**	**158**	**187**
Overload	**-**	**-**	**-**	**-**	**968**	**2.3%**	**-**	**-**	**-**	**-**	**154**
PEF System	**35,618**	**37,623**	**40,706**	**42,486**	**41,322**	**100%**	**121**	**122**	**120**	**129**	**124**

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-9. TECO's Number of Customers (Year End)

	2006	2007	2008	2009	2010
Central	179,020	180,380	179,224	179,160	179,810
Dade City	13,818	13,778	13,806	13,686	13,692
Eastern	105,687	107,861	107,495	108,206	109,383
Plant City	53,081	53,612	53,925	54,103	54,470
South Hillsborough	57,675	59,315	59,540	60,356	61,530
Western	185,868	187,390	186,062	186,960	187,932
Winter Haven	67,362	67,775	67,243	66,979	67,560
TECO System	**662,511**	**670,111**	**667,295**	**669,450**	**674,377**

Table A-10. 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)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Central	55	62	47	62	64	0.67	0.84	0.61	0.82	0.73	83	75	76	75	88
Dade City	209	127	127	138	135	2.78	1.74	2.00	1.85	1.65	75	73	64	75	82
Eastern	62	77	69	64	67	0.87	1.11	0.94	0.90	0.70	71	70	74	70	96
Plant City	96	128	108	141	144	1.25	1.54	1.37	1.85	1.48	77	83	79	76	97
South Hills	96	74	65	85	101	1.15	1.12	0.90	0.89	0.89	84	66	73	95	114
Western	64	77	70	79	89	0.75	0.95	0.89	1.01	0.90	85	81	78	78	99
Winter Haven	58	66	52	59	79	1.00	0.91	0.97	0.84	0.99	58	72	53	70	80
TECO System	**69**	**77**	**66**	**77**	**84**	**0.89**	**1.02**	**0.89**	**1.00**	**0.89**	**78**	**75**	**73**	**77**	**95**

Table A-11. 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)				
	2006	**2007**	**2008**	**2009**	**2010**	**2006**	**2007**	**2008**	**2009**	**2010**
Central	10.6	11.7	12.4	8.8	10.0	0.35%	1.22%	0.29%	1.22%	0.56%
Dade City	21.8	25.4	16.9	13.4	16.5	37.90%	6.13%	5.12%	11.50%	0.60%
Eastern	12.6	15.8	15.3	12.0	13.0	0.66%	2.98%	0.23%	0.59%	1.64%
Plant City	17.3	19.9	19.0	19.9	14.8	11.05%	3.82%	3.84%	11.27%	2.02%
South Hillsborough	15.4	14.7	15.3	13.3	14.2	1.05%	2.45%	1.20%	2.47%	1.05%
Western	12.6	12.1	12.6	10.4	11.8	0.61%	1.97%	0.82%	1.74%	0.73%
Winter Haven	12.3	13.6	14.2	11.2	11.6	1.19%	0.31%	1.00%	1.69%	3.62%
TECO System	**12.8**	**13.9**	**14.0**	**11.4**	**12.0**	**2.26%**	**2.04%**	**0.97%**	**2.45%**	**1.25%**

Table A-12. TECO's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length Of Outages				
	2006	2007	2008	2006	2010	Cumulative % Ages	2006	2007	2008	2009	2010
Lightning	1,723	1,921	1,570	1,498	1,226	12.0%	224	222	189	82	233
Animal	1,656	1,708	2,252	1,555	2,040	20.0%	82	81	79	198	84
Vegetation	1,564	2,086	2,035	2,059	1,975	19.3%	153	157	147	163	187
Unknown	895	727	703	721	753	7.4%	123	113	113	209	128
Other Weather	703	578	645	636	727	7.1%	163	151	143	149	186
Electrical	954	979	864	1,204	1,380	13.5%	189	179	165	181	193
Bad Connection	704	726	785	880	1,090	10.7%	186	188	181	128	227
Vehicle	334	261	220	234	245	2.4%	180	184	181	145	219
Defective Equipment	441	508	511	396	245	2.4%	209	219	202	203	147
All Other	264	254	249	235	206	2.0%	177	152	151	155	146
Down Wire	237	249	264	301	336	3.3%	197	170	158	-	218
TECO System	**9,475**	**9,997**	**10,098**	**9,719**	**10,223**	**100%**	**163**	**162**	**144**	**159**	**173**

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-13. Gulf's Number of Customers (Year End)

	2006	2007	2008	2009	2010
Central	108,859	109,817	109,168	109,250	110,040
Eastern	104,254	109,410	110,191	110,532	110,791
Western	205,779	208,436	208,570	208,372	209,827
Gulf System	**418,892**	**427,663**	**427,929**	**428,154**	**430,658**

Table A-14. 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)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Central	174	109	99	107	115	1.28	0.95	1.14	1.08	1.58	136	115	87	99	73
Eastern	331	100	140	140	133	1.29	1.12	1.13	1.20	1.64	257	90	124	117	82
Western	158	146	146	157	168	1.27	1.32	1.45	1.59	1.88	124	110	101	99	89
Gulf System	**205**	**125**	**132**	**140**	**146**	**1.28**	**1.18**	**1.29**	**1.36**	**1.74**	**161**	**106**	**103**	**103**	**84**

Gulf Power Company

Table A-15. 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)				
	2006	**2007**	**2008**	**2009**	**2010**	**2006**	**2007**	**2008**	**2009**	**2010**
Central	7.5	7.6	8.6	8.5	7.6	2.01%	0.52%	0.42%	0.53%	1.12%
Eastern	6.7	4.8	7.9	5.9	5.6	2.06%	4.08%	2.26%	2.83%	4.25%
Western	9.3	7.4	10.5	9.5	7.7	2.01%	2.15%	3.20%	2.91%	4.01%
Gulf System	**8.2**	**6.7**	**9.4**	**8.3**	**7.1**	**2.02%**	**2.22%**	**2.25%**	**2.28%**	**3.33%**

Table A-16. Gulf's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2006	2007	2008	2009	2010	Cumulative Percentages	2006	2007	2008	2009	2010
Animal	1,609	2,089	3,417	3,112	2,963	28.7%	163	83	94	81	79
Lightning	2,307	2,112	2,154	2,080	1,569	15.2%	170	151	165	155	167
Deterioration	1,914	2,188	2,300	2,333	2,211	21.4%	174	165	172	150	152
Unknown	987	742	874	988	639	6.2%	157	91	99	90	96
Trees	1,293	1,419	1,314	1,293	1,151	11.1%	157	144	158	155	137
Vehicle	284	336	288	275	264	2.6%	381	165	167	173	179
All Other	299	345	354	388	383	3.7%	139	96	152	135	132
Wind/Rain	680	175	169	0	0	0	219	160	170	0	0
Overload	223	271	198	245	414	4.0%	156	99	109	104	113
Vines/Dig-in	144	130	162	150	189	1.8%	109	210	134	108	90
Other	0	0	0	166	288	2.8%	0	0	0	85	85
Contamination Corrosion	137	143	203	212	266	2.6%	182	127	134	116	118
Gulf System	**9,877**	**9,950**	**11,433**	**11,242**	**10,337**	**100%**	**114**	**132**	**137**	**124**	**123**

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.

Table A-17. FPUC's Number of Customers (Year End)

	2006	2007	2008	2009	2010
Fernandina(NE)	14,859	15,120	15,376	15,254	15,276
Marianna (NW)	13,934	12,846	12,822	12,730	12,654
FPUC System	**28,793**	**27,966**	**28,198**	**27,984**	**27,930**

Table A-18. 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)				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
NE	105	87	91	225	120	1.15	1.05	1.26	1.29	1.29	91	83	72	116	93
NW	206	67	239	210	136	1.72	1.19	2.70	2.09	1.57	119	56	88	101	86
FPUC System	**154**	**78**	**158**	**218**	**127**	**1.43**	**1.12**	**1.92**	**2.01**	**1.42**	**108**	**70**	**83**	**109**	**90**

Table A-19. FPUC's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2006	2007	2008	2009	2010	Cumulative % ages	2006	2007	2008	2009	2010
Vegetation	257	220	409	284	259	25.7%	95	73	93	89	77
Animal	250	127	283	231	315	31.3%	50	57	62	63	59
Lightning	72	52	71	95	47	4.7%	99	60	82	115	88
Unknown	202	37	71	90	101	10.0%	69	74	67	119	65
Corrosion	59	74	102	120	97	9.6%	124	100	127	101	92
All Other	33	47	46	43	50	5.0%	73	56	113	98	104
Other Weather	50	67	97	149	84	8.3%	103	75	207	275	89
Trans. Failure	32	35	22	24	20	2.0%	170	83	114	150	137
Vehicle	28	27	31	27	35	3.5%	162	107	105	63	135
Cut-Out Failure	5	4	10	0	0	0	55	61	68	0	0
Fuse Failure	6	6	8	0	0	0	95	53	39	0	0
FPUC System	**994**	**696**	**1,150**	**1,063**	**1,008**	**100%**	**84**	**77**	**98**	**117**	**77**

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 events.

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Inspection cycle is on an 8-year cycle (12.5% per year) The City of Alachua owns only distribution poles, no transmission	Planned 12.5% and completed 352 poles (12.4%). The City of Alachua has 2,839 distribution poles	95 decayed or weakened poles; 38 rejected due to shell rot, decay top, and woodpecker holes	All failed poles were 45-50 foot, class 3; replaced or C-trussed. All other poles were treated and wrapped.	Continue to use the information from PURC conference held Jan, 2009, to improve vegetation management.	Sixty-two miles of overhead distribution on a 3-yr. cycle. Twenty-three percent trimmed in 2010.
Bartow, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	Inspection cycle is 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 planned, and completed 1,629 in 2010.	309 (19%) poles failed inspection due to pole top rot or rotten ground decay.	177 poles replaced ranging in size from 30 to 50 foot; class 3, 4, 5, and 7.	4-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.	Current 4-year cycle complete and has proven effective.
Beaches Energy Services	Yes	Yes	10 year Capital Funding Program to provide for relocating all overhead within 3 city blocks of Atlantic Ocean to underground	Yes	Yes	T: Annual inspection D: 8-year cycle. Use sound and bore for every wood pole over 10 yrs. Old and complete visual inspection	T: 100% planned and completed of 355 structures D: In 2010, 77 new concrete/wood poles installed & inspected	T: No failures D: No inspections in 2010. Next inspection process to be conducted in 2015	All failed inspections prior to 2009 have been replaced	T: Inspected, mowed, and trimmed annually D: Tree trimming crews work year round to maintain a 2-3 yr. VMP cycle	100% complete in 2010 for all vegetation management practices and 2011 VMP is on schedule

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	No underground facilities Evaluation process of current electrical system to look 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 T and D poles.	City owns 1,704 utility poles and does 100% visual inspections annually	The City of Blountstown is currently finalizing a practical inspection system to be implemented as part of major construction project	100% of all poles inspected annually	25 poles (class 5 and replaced with class 3) required replacement due to ground rot and clearance issues	4-year tree trim cycle with 10 foot clearance of lines and facilities. Policy adopted to remove dead, dying, or problematic trees before damage occurs	25% of system with 10 foot clearance to be cleared in 2011
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. Attachment audit conducted in 2009	T: None D: After initial inspection, once every 7 yrs. Do visual, sound/bore, pole condition, and wind loading	311 poles inspected in 2010 that makes 97% of entire system inspected since 2007. The remaining 3% is scheduled for Spring of 2011	11 poles failed rejection due to shell rot, splitting, and decay	All poles that were rejected during the 2010 inspection have been replaced	Tree trim contract on 3-year cycle for tree removal, power line trim, and right of way clearing. Annual trimming performed before hurricane season	Current vegetation management practices are believed to be effective based upon outage history

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	3-year cycle for 100% inspection using visual, excavation around base, sounding, and probing with steel rod	1,957 distribution poles inspected in January, 2009. None reported for 2010	Reported 58 poles failed due to ground line and pole top decay for 2009, and none reported for 2010	Replacement of all 58 poles began in February, 2009 and will continue through 2011. Poles ranged in size from 30'-6 to -45 '-4	Trees trimmed on an annual basis, and any leaned, dead, or diseased, are removed	The 2007 and 2009 PURC workshops and FEMA conference notes are used to improve vegetation management
Clewiston, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	No standard guidelines for pole attachments as all attachments are reviewed by engineers, and place all new construction underground	8-year cycle using sound and bore with strength test inspection. Infrared inspections on 3-4 year cycle	670 (25%) poles inspected in 2010 which completed the entire system for 4-yr. New inspections to begin again in 2014	62 poles (9.2% of inspected poles) rejected due to rot and decay	Currently reviewing results of 4-yr. repair or replace reject poles inspection to determine which poles to replace or remediate	Procedures for VMP include addressing landscaping and problem tree removal. City ordinance prohibits planting in easements	All transmission and feeders checked and trimmed in 2010 as every year, and completed 30 customer requests for tree trimming
Fort Meade City of	Yes	Yes	Current procedures address flooding and storm surges, also a participant in PURC study on conversion of overhead to underground	Yes	Yes	8-year cycle using visual and the sound and probe technique. The City of Fort Meade has distribution lines only	Inspected 522 (19.2%) of the distribution poles in 2010	16 poles (6%) failed inspection due to age deterioration and animal infestation (woodpeckers)	Replaced 18 poles; size 40 foot, class 4 and 30 foot, class 5	3-year inspection cycle, and has a low outage rate due to problem vegetation	Completed approximately 33% of trimming system in 2010. The city reported 144 outages in 2010, with 28 (19%) due to tree limbs

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Not on a system wide basis, but is 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	T: Annual visual, sound and bore for wood poles; 3-year for concrete & steel D: 8-year cycle	T: 446 (100%) planned and completed D: 100% completed in 2008, no planned inspections for 2009 or 2010	T: No transmission poles failed inspection in 2010 D: No inspections 2010	No failures 2010	Maintains year round contract for tree trimming, removal, clearing on a 3-yr. cycle. Vegetation is monitored and patrolled annually, trees quarterly	PURC held VMP conference in 2009, through FMEA and Ft. Pierce will use information to improve VMP. Next conference is to be held in 2011
Gainesville Regional Utilities	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	On an 8-year cycle for all lines, includes visual, sound and bore, and includes below ground line inspection to 18 in. around the base of each pole	T: None planned or completed 2010 D: Planned 2,913 inspections and completed 3,165 (109% completed)	T: None in 2010 D: 9 Poles failed due to shell rot, heart rot, and decay	D: 9 poles replaced in 2010, ranging in size from 30'5 to 55'3	The VMP includes 560 mi. overhead distribution lines on a 3-yr. schedule. Herbicide program and standards from NESC, ANSI A300, and Shigo-Pruning	On going and year round program for T: 76.2 miles-138kV and 2.5 miles 230kV 100% in 2010 D: 192 circuit miles trimmed in 2010

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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, for new construction and continue to evaluate through PURC research programs to justify costs	Yes	Yes	8-year cycle doing visual and sound and bore techniques. Does not have transmission lines as defined by 69kV and above	Planned and completed on schedule, while in the process of upgrades to two major sections of 4kV during next 4 years	14 wood poles replaced on visual inspection	18 poles replaced in 2010 ranging from 30 to 50 foot, class 3 and 5, due to rot	Contracts annual trim of 100% if system including all sub-transmission and distribution feeder facilities	100% of system was trimmed in 2010, with scheduled trim cycle of entire system for 2011 to begin in the fall
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 1,169 poles; inspected several times annually	100% planned and completed in 2010	3 poles failed inspection	3 failed poles were size 40'5, 30'4, and 35'4, and were replaced	Written policy requires one-third of entire system trimmed annually	50% of the entire system was trimmed in 2010
Homestead, City of	Yes	Yes	Participating in PURC's study on the conversion of overhead to underground facilities through FMEA	Yes	Yes	All transmission poles concrete. Distribution on 8-year cycle; & annual thermo graphic inspection, completed July, 2010	During 2010, no distribution poles inspected due to contract issues with the pole contractor. A new contract is in place to inspect 25% in 2011	Transmission (all poles concrete) D: No distribution poles inspected in 2010 due to contract issues with pole contractor	D: Replaced 25 (35-40'-4) poles due to decay; removed 1 (45'4)pole not needed; replaced 32 (45'4) poles as part of storm hardening plan	Trimming services are contracted out and entire system is trimmed on a 2-year cycle. There are no issues for transmission facilities	City of Homestead enacted code changes which require property owners to keep vegetation trimmed to maintain 6-feet of clearance from city utilities

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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									
Jacksonville Electric Authority (JEA)	Yes	Yes	Yes, currently has written Storm Policy and associated procedures addressed for Category 3 storms or greater	Yes	Yes	T: 4-year cycle, except critical N-1 240kV on a 2-year cycle D: 8-yr inspection cycle, using sound and bore with excavation	T: In 2010, 43 of 143 inspected D: Planned and completed 40 circuits per year	T: 11 poles failed at ground level inspections D: 13% of inspections failed due to ground decay & pole top decay	T: 24 poles from 2009 replaced; a total of 38 poles replaced in 2010. D: 3,828 poles replaced. Poles not rejected per NESC but over 15 yrs are treated.	Transmission in accordance with NERC FAC-003-1 D: 3-year trim cycle for more than 8 years; 2.5 year completed 2010	JEA is fully compliant with NERC standard for vegetation management in 2010. VMP activities are on schedule for 2011
Keys Energy Services	Yes	Yes	Yes	Yes	Yes	T: No wood poles. D: 2 year cycle includes visual, sound and bore, excavation, helicopter, and infrared inspections	D: 7,453 wood poles tested to date with 2,232 (30%) rejected due to ground/shell rot, structural overload, pole top rot, and other	D: Replaced 605 rejected poles in 2010	KEYS have a contract to replace approx. 2,300 poles over 5 years; with 1,980 replaced 2007 thru 2010. Planned 340 for 2011	230 miles 3 phase distribution lines; 66 miles transmission lines on 2-year trim cycle, plus quarterly maintenance on all transmission lines	KEYS on target for trim cycle, plus follow revisit list to handle tropical climate and substantial growth rate throughout year

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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									
Kissimmee Utilities Authority	Yes	Yes; replaced 79 distribution 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	T: 100% completed in 2009. D: 2,000 planned and 2,839 completed in 2009. Visual & infra-red on a 5-yr. cycle	A total of 80 poles failed inspection due to shell rot, heart rot, decay, split top, mechanical damage above, heart rot, & woodpecker holes	72 poles failing inspection in 2009 were replaced in 2010. Size 25-45 foot, class 3-7. The 2010 inspection had 80 poles fail; 8 replaced in 2010	Use written Transmission Vegetation Management Plan (TVMT); conducts visual of all transmission lines. Distribution on a 3-yr. trim cycle	T: 100% required remediation during inspection was completed. D: 107 miles inspected in 2009 and 100% completed 2010
Lake Worth Utilities Department	Yes	Not at this time, 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	T: Visual inspection on an annual basis. D: 8-yr. cycle. Pole tests include hammer sounding, pole prod penetration 6 in. below ground	Inspected 995 poles in 2010, and rotation will complete in 2014	100 poles failed inspection. Poles are replaced when pole prod penetration exceeds two inches or there is evidence of pole top shell rot	Replaced 49 poles in 2010, with 51 poles still pending replacement	On-going VMP on a system wide, two-year cycle. Minimum clearance of 10 ft. in any direction from CLW conductors	Contractor attempts to get property owners permission to remove trees dead or defective which are a hazard; fast growing soft-wooded or weed trees, etc.

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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									
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	8-year inspection cycle using visual, sound and bore, with ground line excavation and in addition; visual inspection during normal course of daily activities	T: 147 (12.5%) planned and 216 (18.4%) completed. D: 7,500 (12.5%) planned and 11,371 (18.9%) completed	T: 15 poles failed the strength test due to decay. D: 937 poles failed minimum strength requirements due to decay	All poles recommended in 2009 assessed for appropriate action. 79 distribution poles reinforced and 364 replaced, repaired, or removed in 2010	3-year inspection cycle for transmission and 3-1/2 year cycle for distribution. VMP also provides in between cycle trim to enhance reliability	T: 40 miles planned, 30.6 miles completed D: 350 miles planned, 238 miles complete. The shortage due to an underperforming contractor/replaced
Leesburg, City of	Yes	Yes, and Participation in PURC granular wind research study through the Florida Municipal Electric Assoc.	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	No transmission facilities. D: 8-year cycle. Visual, sound/bore, excavation method, and ground level strength test	7,039 poles were inspected in 2010; together with the inspections from 2007-2009, completes the current 8-yr. cycle	205 poles failed minimum strength and were replaced; 1,195 failed due to split top, woodpecker holes, and other conditions	95 wood poles were replaced of the 205 that failed inspection. Height and class varied	4-year trim cycle for feeder and lateral circuits. Use foliage and herbicidal treatments, and problem trees are trimmed or removed	VMP activities were completed as scheduled during 2010

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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									
Moore Haven, City of	Yes	No. Participating in PURC granular wind research study through FEMA. In 2010, the City of Moore Haven increased storm hardening activities	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	Annual visual inspections, as the city is one square mile and easily inspected on a routine basis	No transmission lines. D: 100% planned and completed. 410 Distribution poles in system.	Continue to upgrade 3-phase poles by replacing poles as necessary	In 2010, replaced 10 poles and added 13 new poles	Continuous tree trimming in easements and right of way. 100% of distribution system is trimmed each year	Expended approximately 20-25% of Electric Dept. Resources to vegetation management
Mount Dora, City of	In 2010, the City of Mount Dora retained an engineering firm to make a review and help determine compliance with NESC	Subject to future budget constraints, the City intends to make further evaluations to insure compliance with Extreme Wind Loading Standards of the NESC	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, including cable pole attachments	No transmission lines. Distribution lines and structures are visually inspected for cracks and a sounding technique used to determine rot	Completed 100% of planned distribution circuit inspections in 2010	The City had 5 rotten or damaged poles in 2010. A total of 41 wood poles were replaced with concrete poles	The city had 1,957 poles in 2010 and plans to 1,916 wood poles as of 12/31/10	Tree trimming is completed on a 12 month cycle by an outside contractor working two crews 40 hours per week.	Trimmed trees on a 12 month cycle, also removed limbs from trees in right of way and easements that could create clearance problems
New Smyrna Beach	Yes	Yes	Yes, where eco feasible. Only install stainless steel dead front pad mounted transformers on major planned work-rebuild	Yes	Yes	8-year inspection cycle for transmission and distribution facilities which are all contracted Osmoses Utilities	T: 12.5% planned and 16.4% complete. D: 12.5% planned and 12.5% completed	T: 1 failed/rejected due to decay D: 342 failed/rejected due to decay, split top, woodpecker damage	T: Scheduled to replace in 2012 D: Replaced 235 poles, restored 27 poles, repaired 80 poles. Size 30-60 ft./Class 2-6	Maintains two crews on continuous basis to do main feeder and "hot spot" trimming	Trimmed approximately 20% of distribution system in 2010, and performed clear cutting on 20% of the transmission lines

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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									
Newberry, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	3-year inspection cycle at ground line for deterioration, entire upper art of the pole for cracks, and soundness of upper part of pole	1,007 (100%) distribution poles inspected in 2009, and will be inspected again in 2012 per cycle stated	Next inspection cycle scheduled for 2012	7 poles replaced in 2010 as a result of poles failing 2009 inspections; class 4 & 5, size 30 to 45 foot wood poles	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
Ocala Electric Utility	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	8-year inspection cycle which include above ground inspection, sounding, boring, excavation, chipping, and internal treatment	6,457 distribution poles inspected in 2010 (19.9% of total); 100% of transmission poles were completed in 2007; will not be inspected again until 2015	612 poles failed inspection due to shell rot or decayed top. Transmission poles to be inspected again in 2015	482 of the rejected poles were replaced and 130 poles braced. Poles were 30 to 55 foot, class 1, 3 & 5	3-year trim cycle, with additional pruning over areas allowed minimal trimming. Contractor performs annual VMP over 1/3 of the system	Mowed entire 230kV transmission corridor between substations in 2010, & completed 130 miles of primary circuits. Approx. 240 lines miles scheduled yearly

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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									
Orlando Utilities Commission & City of St. Cloud	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	8-year inspection cycle which include above ground visual inspection, sounding, boring, excavation, chipping, and internal treatment	Distribution and Transmission planned 6,400 (12%); completed 6,534 (13%)	642 poles (9.8%) failed inspection. Failure causes include: decay top, shell/heart rot, split top, woodpecker holes, and other. (Detailed Osmosis Report included)	7 poles replaced, 121 poles restored, and the remaining 514 poles have work orders being generated for replacement in 2011	T: 200 miles of lines on a 3-year trim cycle. D: 1,261 miles of lines on a 4-year trim cycle. OUC follows safety methods in ANSI A300 & Z133.1	T: 99 miles planned; 66% completed to date (VMP allows till 5/30/11 for completion) D: 329 miles planned & completed (100%)
Quincy, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	City of Quincy did drive-by patrols of all poles in the distribution system in 2010	2,842 poles had drive-by inspections, 100 circuit feeder poles had sound and bore inspections in 2010	7 distribution poles failed inspection due to signs of rotting around the base of the pole	7 distribution poles were replaced in 2010 with Class 3 wood poles	14% of medium vegetation completed on the distribution system in 2010. 100% of transmission lines inspected in 2010	City of Quincy attended PURC workshops in 2007 and 2009, and uses the information to continually improve VMP

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Reedy Creek Improvement District	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	No foreign attachments on city facilities	D: Visual inspection performed monthly, and inspected every 5-year. Reedy Creek in not a transmission owner or operator	All distribution poles were inspected and treated in 2008; next scheduled inspection in 2010	Based on 2008 inspections, no distribution pole replacements or remediation's were required	Not applicable	15 miles of transmission right-of-way is ridden monthly for visual inspection. District tree trimming each spring clears any issues on right-of-ways	Periodic inspections in 2010 identified several areas of encroachment in early stages & addressed to restore to acceptable conditions
Starke, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	In the process of studying the issue	Visually inspected on an annual basis	3,443 poles visually inspected in 2010	12 poles were found to be bad from rotting and splitting	12 poles (.35%) ranging in size from 30 to 45 foot, class 2, were replaced	Annual tree trim and vegetation contract with Gainesville Regional Utilities. 33% of distribution completed annually by City of Starke	The City of Starke will trim 33% of distribution system in 2011

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Tallahassee, City of	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	Every eight years a new pole inspection cycle is initiated to inspect all poles over a three year period. Includes infrared, flying visual, sound and bore	T: 445 wood poles inspected during 2010. Next cycle to begin FY2012. D: Next treatment and inspection cycle to begin FY2012	D: 64 poles or structures rejected and replaced due to wood decay and woodpecker damage	T: 31 poles replaced due to various projects. D: 300 poles (various sizes) replaced due to construction projects	T: 3-yr. trim cycle with target of 20 ft horizontal clearance on lines. D: 18 month trim cycle on overhead lines to 4-6 ft clearances	Transmission rights of way & easements mowed annually and as needed. D: Working on 8th trim cycle & entire system was treated 4 times since 1997
Vero Beach, City of	Yes	Yes	Facilities installed a minimum of 8 in. above roadway and grading required preventing erosion. Ongoing participation in PURC study	Yes	Yes	T: Lines driven and inspected every 2-3 months; 41.5 total miles. D: Poles and lines inspected on 5-yr. cycle	T: 100% completed in 2010. D: 25% completed in 2010; 100% to be inspected & repairs made within 5 yrs.	T: No failures. D: 2.650 inspected with 72 failures (2.7%) due to ground rot, hit by vehicle, and found broken	D: Replaced 72 poles ranging in size from 30-50 foot; class 3-5; AT&T repl. 140 poles. Once pole fails, it is replaced with steel or concrete pole	3-year cycle includes trimming trees, limbs within 3 feet of neutral or 5 feet of the primary. Top trees in the right of way and maintain proper clearances	3-year vegetation management cycle to complete 60 blocks (~40 square miles of service area) every three years. Transmission is mowed twice/yr.
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	3-year cycle. Completed 1/3 of system in 2010	Less than 1% (out of 1800 poles) have failure due to poles rotting at the ground	D: Six poles replaced in 2010. Size, class, and reason not given	3-year cycle includes trimming trees and herbicides for vines	Complete 1/3 of system every year

APPENDIX B. SUMMARY of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
Williston, City of Extension requested to 4-15-10	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Not yet developed due to turnover in management. The City anticipates to outsource this function in the 2010-2011 budget year	D: 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	3-year cycle. Completed 33% of 1,100 poles in 2010	Two 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	D: 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
Winter Park, City of	Yes	Not on a system wide basis. The city participates in PURC's granular wind research study through FMEA and self-auditing	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	No transmission. D: 8-yr. trim cycle Inspection includes visual, assessment prior to climbing, sounding with a hammer	No transmission D: Had no formal inspections in 2010	The majority of poles were broken or damaged during seasonal storms. 78 poles failed because of base rot, or split top, and these poles have been replaced	78 poles requiring remediation were class 3 wood; damage from decay or insects treated with chemicals to inhibit decay/discourage insects	Vegetation Management is performed by an outside contractor on a 3-year trim cycle, which is augmented as needed between cycles	Trimmed approximately 190,000 ft of distribution lines in 2010 Using FEMA report to improve VMP practices

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Comply with the NESC (ANSI C-2) for facilities constructed on or after February 2007	Wind standard is between 100 mph inland, 130 mph at the coast. Use PURC studies, and look at projects on a case-by-case basis	Continued participation in evaluation of PURC study to determine effectiveness of relocating to underground	Yes	Yes	T: 100% above & ground level annual inspections D: 8-year cycle for inspections	T: 100% inspected D: 9.1% inspected in 2009 and 10.5% planned for 2010	T: Planned and inspected 100% (12 miles in 2010) D: Ground line inspection and treatment of 4,536 poles in 2010	D: 40 poles found to be deteriorated and are scheduled for replacement	Trees trimmed or removed within 15 feet of main lines, taps, and guys on 5-year plan. In 2010, 604 miles of line on the system was cleared	Current 5-year vegetation clearance plan and approximately 586 (20%) miles of line planned for 2011
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 2010, 7,493 poles or 12.6% of 59,331 poles inspected	205 poles failed ranging from spit top to wood rot	148 of 205 failed poles were replaced; the remaining 57 poles to be replaced in 2011	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 ten feet on either side of primary from ground to sky. During 2010, 533 miles were cut on primary lines
Clay Electric Cooperative, Inc	Yes	Not designed by Figure 250-2(d) except as required by rule 250-C	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	T: On a 10-yr. cycle to complete 2013. Start 8-yr. cycle in 2014. D: 8-yr. cycle. Sound/bore, climb, ground/helicopter visual patrol	T: Rebuilt 17 mi. 69kV line; Planned inspected 2,706 poles; 29 needed maint. D: Planned 22,833 poles, completed 26,011 poles in 2010	92 poles rejected due to ground rot, top decay, split, int. rot, holes high, and danger. Sizes were 25-40 ft., class 4, 5, & 6.	100% (92) poles failing inspection were replaced in 2010	T & D: Performs ground patrol, mowing, herbicide spray, and systematic recutting on a 3, 4, & 5-yr. cycle	3,178 mi. mowing; 3,041 mi. spraying; 2,131 mi. recutting completed in 2010. Clay has VMP webpage for details on program for customers

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	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
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Escambia River Electric Cooperative	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	Distribution: 8-year cycle using visual, sound and bore techniques in accordance with RUS standards	Distribution: 3,878 planned and 3,884 completed 2010. No transmission poles owned	15 poles failed due to ground level decay	15 poles replaced in 2010, ranging in size from 30 foot, class 6 to 45 foot, class 4	5-year trim cycle. Planned 20% of distribution lines and right-of-way is cleared 20 feet; 10 feet on each side	In 2010, approximately 350 miles (19.3%) of the power lines were cut
Florida Keys Electric Cooperative Association, Inc	Yes	Yes	Yes	Yes	Yes	Annual helicopter inspection 100%. Distribution: 4-year cycle. All distribution wood poles in system have been tested since 2007	Transmission: Poles and foundations 100% visually inspected in 2010. Distribution: 2,846 inspected in 2010	No transmission failures failed inspection in 2010. Distribution: 212 wood poles failed (7.4%), primarily due to age	Three concrete structures failed in 2009, and were replaced in 2010. Distribution: 89 wood poles replaced and 74 reinforced in 2010	Transmission: 100% annually. Distribution: Trimmed on a 3-year cycle. Trade-a-tree program implemented 2007 for problem trees	Transmission: Trimmed MM 106 to CR 905 in 2010, remainder spot trimmed. Distribution: 200 circuit miles trimmed in 2010
Glades Electric Cooperative, Inc	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue. Glades participated in a workshop on Catastrophic Planning in 2010	Yes	Yes	10-yr.sound/bore with excavation inspection cycle for all wood poles; in addition to System Restoration Plan inspections	T: 100% of total 87 miles completed D: 3,982 poles inspected (10% of total) in 2010.	T: 44 poles rejected due to pole top decay. D: 107 poles failed due to split poles, split pole top, and pole top decay	100% transmission and distribution poles rejected in 2010 were replaced with poles ranging from 40-75 foot, class 2-4	All trimming on a 3-year cycle; right of way trimmed for 10 foot clearance on both sides, and herbicide treatment where needed	Distribution: Planned and completed 490 miles during 2010 Transmission: Planned and completed 1.25 miles in 2010

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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	Major Planned Work Expansion, Rebuild or Relocation	Targeted Critical Infrastructures and major thoroughfares									
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	Not designed by Figure 250-2(d) except as required by rule 250-C. Insufficient data to substantiate costs in making major upgrades	Continuing evaluation of PURC study to determine effectiveness of relocating to underground	Yes	Yes	No transmission lines. Performs general pole inspections on an 8-yr. cycle	Inspected 3,240 poles in 2010 with 931 rejects	The majority of the rejected poles was due to butt rot, heart rot, and rotted tops.	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 400 miles per year. GCEC is working progressively into a 12-18 month herbicide spray plan
Lee County Electric Cooperative, Inc	Yes	Yes	Yes	Yes	Yes	T: 2-year cycle by climbing or the use of a bucket truck D: 10-yr. cycle for splitting, cracking, decay, twisting, and bird damage	T: 1,204 poles and structures inspected 100% for 2010. D: Inspected 12,462 poles (96%) of inspections scheduled in 2010	T: 164 poles failed D: 86 poles failed. Failures due to rot, bad ground, woodpecker damage, out of plumb, & bad arm	T: Replaced 106 wood poles with concrete or steel. D: Replaced 46 poles, & replumbed or repaired 40 poles (Various sizes)	VMP strategies include cultural, mechanical, manual, & chemical treatments on a 3-6 yr. cycle for distribution	Transmission and distribution VMP was completed 100% as planned for 2010
Okefenoke Rural Electric Membership Cooperative	Yes	Not on a system wide basis, but has made conscious efforts to replace poles and new lines to upgrade materials	Continuing evaluation of PURC study to determine effectiveness of relocating to underground	Yes	Yes	No transmission lines. Distribution is on an 8-year cycle. Procedure includes visual, sound/bore with excavations, and chemical treatment	D: 7,119 poles inspected in 2010, which is 13% of system total	176 poles rejected due to split top, decay, and mechanical damage	34 poles replaced, 107 repaired, and 18 scheduled for replacement by mid-2011	Vegetation control practices consists of complete clearing to the ground line, trimming, and herbicides	Planned 500 miles and completed 638 miles of right of way, which is 25% of 5-year cycle

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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Peace River Electric Cooperative, Inc.	Yes	Not at this time. Current participant in PURC granular wind research study. Pending results of research before changes to be made	Continuing evaluation of PURC study to determine effectiveness of relocating to underground	Yes	Yes	Currently use RDUP bulletin 1730B-121 for planned inspection and maintenance. Located in Decay Zone 5, on an 8-year cycle	T. 294 poles inspected every 2 years D. 218 poles with 100% inspected annually	T. No rejections D. 2 rejections, both replaced in 2010	T. 89 concrete, 2 steel, & 218 wood poles inspected on 2-year program D. 3,580 wooden poles inspected; 386 poles replaced (From 30-6/55-2)	Adopted plan Dec. 2009 to cut the maintenance plan on a system basis to a 3-year period from the substation to the consumer's meter	Complete maintenance of 2,796 miles distribution in 2010 Year 1 - 36.66% Year 2 - 42.32% Year 3 - 21.02%
Sumter Electric Cooperative, Inc	Yes	Transmission and distribution facilities are designed to withstand winds of 100 MPH in accordance with 2007 NESC extreme wind load	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	T: 5-year cycle using ground line visual inspections D: 8-yr. cycle using sound and bore, excavation and visual	T: 269 poles inspected in 2010 D: 17,775 structures inspected in 2010 (100%)	Transmission: 25 poles failed Distribution: 602 poles failed. Cause due to ground rot, woodpecker holes & top deterioration	T: 25 wood poles replaced with concrete. D: Completed 100% remediation on 602 poles, sizes from 25'-7 to 65'-2	Transmission is on a 3-year trim cycle for feeder and 6-year for laterals. In 2010, trimmed 1,435 circuit miles & removed 26,695 trees	Plan to meet current tree trim cycles and herbicide treatment. An estimated 1,356 miles of underbrush treatment is being scheduled for 2011
Suwannee Valley Electric Cooperative, Inc.	Yes	Not on a system wide basis. SVEC continues to self audit, participate in PURC wind study, and research thru FECA	Non-coastal utility; therefore storm surge is not an issue	Yes	Yes	8-yr. cycle using sound/bore and visual inspection procedures which are followed up as needed with treatment, repair, replacement, etc.	T: 5 inspections (100% complete) D: 9,111 (10.8%) inspections complete in 2010. T: Plan 100% 2011 D: Plan 10,500 inspections	D: 28 inspections failed due to ground line decay and excessive splitting	1,500 poles remediated by ground line treatment and 125 poles replaced	5-year inspection cycle includes cutting, spraying and visual on as-needed basis.	747 miles cut and 578 miles right-of-way sprayed in 2010. 800 miles of right-of-way planned for cutting and 747 miles for spraying in 2011

APPENDIX C. SUMMARY of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. — Calendar Year 2010

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Talquin Electric Cooperative, Inc	Yes	Yes	Very small percentage subject to storm surge. Stronger anchoring systems in place to better secure cabinets	Yes	Yes, inspecting on a 5-year cycle	Transmission: Annual inspections in house. T & D are inspected on 8-yr. rotation since 2007	T: 104 poles inspected in 2010. D: 7,597 poles inspected in 2010 All poles planned for inspection were completed in 2010	T: 2 rejected due to decay. D: 109 rejected due to decay	The priority poles rejected were replaced in 2010 with new poles and other rejected poles are to be repaired or replaced	3-year cycle which includes mechanical cutting, mowing, and herbicidal treatment	640 miles of right of way treated in 2010. Talquin has a right-of-way budget exceeding $3,000,000.00 for 2011 trimming goals
Tri-County Electric Cooperative, Inc.	Yes	Yes	Current standard practice is to restrict electrification of flood prone areas. Due to natural landscape within area, storm surge issues are low	Yes	Yes	T: Annual visual inspections. D: 8-yr. cycle using both ground line and visual inspections	During 2008-2009 inspection, 9 transmission poles were replaced in 2010 with metal poles. No adtl. distribution poles inspected in 2010	Tri-County replaced 465 poles during 2010, and an additional 330 poles will be replaced in 2011	During 2010 inspection of the 115 kV transmission line, (3) single structure poles marked for replacement with steel during 2011	Obtain 30 foot right of way easement for new construction and increase 20 foot to 30 foot on existing to inspect annually	D: Trimmed approximately 327 miles in 2010. Schedule for 2011 plans to concentrate on bringing cycle for entire system to 5-1/2 yrs. or less
West Florida Electric Cooperative Association, Inc	Yes	Yes	Non-coastal utility; therefore storm surge is not an issue	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 2010, inspected 12% of entire system	5% of the 12% inspected during 2010 required maintenance or replacement	Approximately 3,680 (13%) poles inspected and upgraded to 25KV specifications, along with 1.080 poles changed	Ground to sky side trimming along with mechanical mowing and tree removal	Mow and side trim 1/4 of entire distribution system each year

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Withlacoochee River Electric Cooperative, Inc	Yes	Yes	Yes	Yes; in 2020 relocated 30,000 feet of overhead from rear lots to street side; this will continue until older areas are all upgraded	Yes	Line patrol, physical and visual inspections on an on-going basis, and through data from OMS system	T: 62 miles or 100% inspected D:100% inspected annually Inspections include aerial patrol with infra-red checks	Poles are systematically changed out on all wood poles treated with anything other than CCA through various programs	2,298 wood poles ranging in size from 35 to 90 ft. were added; 2,040 wood poles were retired in 2010. Detailed data not available	Aggressive VMP includes problem tree removal, horizontal/vertical clearances and under-brush to ground. 100% achieved in 2010	All transmission lines inspected annually. Five miles of right of way addressed in 2010 line patrols