FLORIDA PUBLIC UTILITIES

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February 27, 2009

Mr. Tim Devlin, Director
Division of Economic Regulation
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0868

Dear Mr. Devlin,

Attached is Florida Public Utilities Company's required 2008 Annual Update. The update includes the Annual Distribution Service Reliability Report required by Rule 25-6.0455, the Annual Wood Pole Inspection Report required by Order No. PSC-06-0144, and updates of our Storm Hardening Plan and Ten Storm Preparedness Initiatives, as required by Order No. PSC-06-0781.

If you have any questions, please call 904-277-1957 or e-mail mcutshaw@fpuc.com .

Sincerely,

P Mark Cutshaw

P. Mark Cutshaw
General Manager, NE Florida Division
Florida Public Utilities Company

Attachments

cc: Chuck Stein
Don Myers
Jorge Puentes
Buddy Shelley

COM ___
ECR 1
GCL ___
OPC ___
RCP ___
SSC ___
SGA ___
ADM ___
CLK ___

cc w/attachments: Ms. Ann Cole, Commission Clerk

Florida Public Utilities Company

Florida Public Utilities Company

Reliability, Wood Pole Inspections, Storm Hardening Plan, and Storm Preparedness Initiatives

2008 Annual Update

March 1, 2009

FLORIDA PUBLIC UTILITIES

Florida Public Utilities Company

**Reliability, Wood Pole Inspections,
Storm Hardening, and Storm Preparedness Initiatives**

2008 Annual Update

Table of Contents

Introduction

Rule 25-6.0342, FAC, "Electric Infrastructure Storm Hardening, required each investor-owned electric utility (IOU) to file a comprehensive storm hardening plan for review and approval by the Florida Public Service Commission (FPSC). Florida Public Utilities Company (FPUC) submitted its 2007 Storm Hardening Plan to the Commission on 7/3/07. Docket No. 070300-EI was opened to address FPUC's filing (Storm Plan Docket).

By letter dated 4/27/07, FPUC requested test year approval in order to file an application for an increase in its rates and charges for its Marianna (NW) and Fernandina Beach (NE) Divisions. FPUC filed its petition and minimum filing requirements (MFRs) on 8/30/07 and, per FPUC's request, the rate case was scheduled directly for hearing. Docket No. 070304-EI was opened to address FPUC's forthcoming general rate increase proceeding (Rate Case Docket).

By Order No. PSC-07-0647-PCO-EI, issued 8/9/07, the Storm Plan Docket and the Rate Case Docket were consolidated. Evidentiary hearings were scheduled for February 27-29, 2008.

By Order No. PSC-08-0327-FOF-EI, issued 5/19/08, FPSC issued the final order on the FPUC 2007 electric infrastructure storm hardening plan and the petition for rate increase.

FPUC fully implemented new and ongoing storm hardening and reliability improvement plans following the rate case order was issued.

This is FPUC's required 2008 Annual Update. The update includes the Annual Distribution Service Reliability Report required by Rule 25-6.0455, the Annual Wood Pole Inspection Report required by Order No. PSC-06-0144, and updates of our Storm Hardening Plan and Ten Storm Preparedness Initiatives, as required by Order No. PSC-06-0781. The update is divided into four main sections: I. Reliability Indices; II. Wood Pole Inspections; III. Storm Hardening; and, IV. Storm Preparedness Initiatives. Completed FPUC forms, contractor reports, and other available relevant supporting documentation are incorporated into appropriate sections of the update. Also, forms provided by FPSC for reporting reliability indices have been completed and are included.

FPUC has two electric divisions, Northwest (NW) Division, also referred to as Marianna, and Northeast (NE) Division, also referred to as Fernandina Beach. In some cases, each division's results are reported separately. For example, NW has no transmission facilities. Therefore, only NE will be reporting on Storm Preparedness Initiatives #3 (Six Year Transmission Structure Inspections) and #4 (Storm Hardening of Existing Transmission Structures). Also, the two divisions are approximately 250 miles apart and, although they may supply resources to support one another during emergency situations, each division will prepare separate emergency response plans to address Initiative #10 (Natural Disaster Preparedness and Recovery Program). In other cases, consolidated reports or a combination of individual and consolidated reports provide a more complete overview and the reports are prepared accordingly.

I. Reliability Indices

This section contains the Florida Public Utilities Company 2008 Annual Distribution Service Reliability Report required by Florida Public Service Commission (FPSC) Rule 25-6.0455.

In addition to supporting data provided by FPUC, the Report was prepared using forms provided by FPSC that require the following information on an ***actual*** and ***adjusted*** basis:

a. Total number of Outage Events (N), categorized by cause for the highest ten causes.

b. Identification of three percent (3%) of Primary Circuits (feeders) with the highest number of feeder breaker interruptions.

c. SAIDI, CAIDI, SAIFI, and L-Bar reliability indices by district and by company total*.

Indices are calculated as follows:

SAIDI = System Average Interruption Duration Index $= \frac{\text{Total Customer Minutes of Interruption (CMI)}}{\text{Total Number of Customers Served (C)}}$

CAIDI = Customer Average Interruption Duration Index $= \frac{\text{Total Customer Minutes of Interruption (CMI)}}{\text{Total Number of Customer Interruptions (CI)}}$

SAIFI = System Average Interruption Frequency Index $= \frac{\text{Total Number of Customer Interruptions (CI)}}{\text{Total Number of Customers Served (C)}}$

L-Bar = Average Duration of Outage Events $= \frac{\text{Sum of All Outage Event Durations (L)}}{\text{Total Number of Outage Events (N)}}$

* The FPUC total electric retail customer count is well below 50,000. Per Rule 25-6.0455, (3) (c), MAIFIe and CEMI5 indices are not applicable (N/A).

Forms reporting ***actual*** data include <u>all</u> Outage Events. Forms reporting ***adjusted*** data exclude Outage Events directly caused by one or more of the following, if applicable:

a. Planned Service Interruptions;
b. A storm named by the National Hurricane Center;
c. A tornado recorded by the National Weather Service;
d. Ice on lines;
e. A planned load management event;
f. Electric generation or transmission events not governed by subsections 25-6.018 (2) and (3);
g. Extreme weather or fire events causing activation of the county emergency operation center.

The installation of the Outage Management System (OMS) in NW Division resulted in significant improvement in data collection and retrieval capability for analyzing and reporting reliability indices. However, the improved data collection resulted in higher (poorer) reliability numbers. This was expected and can be attributed to better data collection, not a decline in system or personnel performance.

While FPUC is anxious to use the new OMS system to gauge the effectiveness of storm hardening programs by observing trends in reliability indices, it is apparent that enhanced data for 2008 compared to prior year's information will not produce credible results for NW Division. Since NE Division did not implement OMS until 1/1/09, only NE Division will provide trend data thru 2008.

FPUC NE Division 2008 – Reliability Indicators, Analysis and Trends

Our NE division reliability indicators continue to be heavily affected by the weather as our territory is relatively small when compared to other large companies. This can be clearly seen in chart No. 1 below as in 2006 and 2007 our territory was not impacted by major storms or hurricanes. However, in 2008 our territory did experience several non-named storms that contributed to a slight increase in the number of outage events to 258. This number is still below the 328 peak and represents a 21% reduction from 2004. We have also managed to continue the trend of decreasing outages related to vegetation by reaching and improvement of 61.3% below the 2004 peak and 38.6% below 2005. These achievements are a direct result of our focused tree trimming efforts. In 2008 FPUC's NE Division had the following budget and actual expenditures:

2008 Actual	2008 Budget
$126,944	**$117,000**

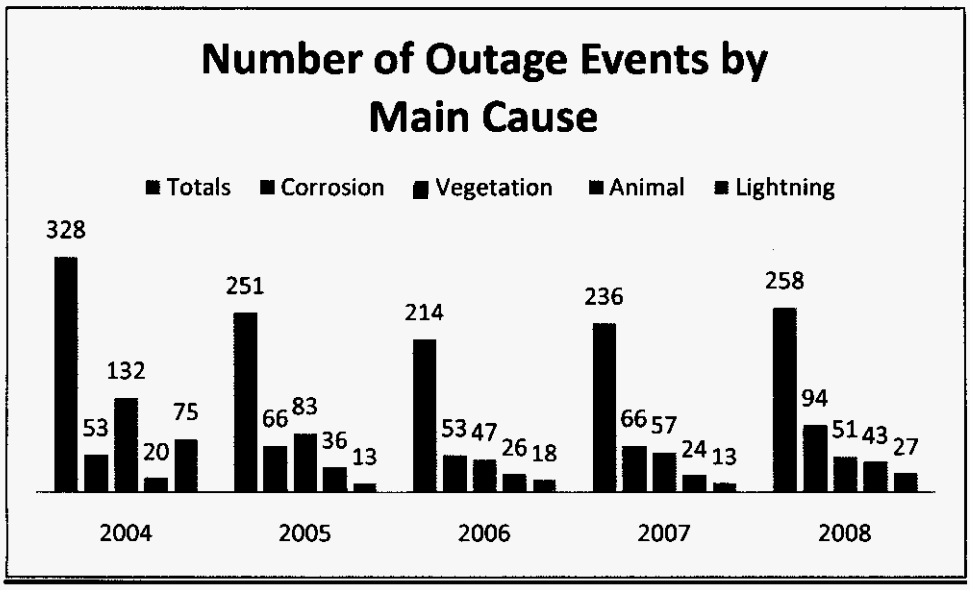


Chart No. 1

Categories that have increased significantly have been our outages related to corrosion, animal and lightning. We have a long range plan to reduce the corrosion issue by replacing sections of outdated underground cable. In addition, we will continue to purchase and install stainless steel vs. galvanized steel hardware. In the animal category, we will continue our program of installing squirrel and animal guards as well as insulating the primary taps of service transformers. We will also continue to monitor the animal related outages to see if a trend develops or if it is just a temporary spike. In terms of the lightning category, we believe that the 2008 increase was due to the impact of non-named storms to our area. However, we will continue to monitor the indicators and adjust the program as necessary.

Reliability Indicators

In 2008 we continued our trend of improving CAIDI. When compared to last year we achieved improvements of 12.9 %. However, for the reaming indicators when compared to last year, we experienced a minor increase. We believe that the minor increase was due to the higher number of non-named storms that passed through our territory.

We are confident that the above plans and programs, which are aimed to provide customers with a reliable electrical service, will continue to address reliability issues of our electrical system.

Definitions from Rule 25-6.044 'Continuity of Service' are provided below for clarification:

a. **"Area of Service."** A geographic area where a utility provides retail electric service. An Area of Service can be the entire system, a district, or a sub-region of the utility's system in which centralized distribution service functions are carried out.
b. **"Average Duration of Outage Events (L-Bar)."** The sum of each Outage Event Duration (L) for all Outage Events occurring during a given time period, divided by the Number of Outage Events (N) over the same time period within a specific Area of Service.
c. **"Customer Average Interruption Duration Index (CAIDI)."** The average time to restore service to interrupted retail customers within a specified Area of Service over a given period of time. It is determined by dividing the sum of Customer Minutes of Interruption (CMI) by the total number of Service (aka Customer) Interruptions (CI) for the respective Area of Service.
d. **N/A** (CEMI5).
e. **"Customer Minutes of Interruption (CMI)".** For a given Outage Event, CMI is the sum of each affected retail customer's Service Interruption Duration.
f. thru h. **N/A** (MAIFIe)
i. **"Number of Customers Served (C)."** The sum of all retail customers on the last day of a given time period within a specific Area of Service.
j. **"Number of Outage Events (N)."** The sum of Outage Events for an Area of Service over a specified period of time.
k. **"Outage Event."** An occurrence that results in one or more individual retail customer Service Interruptions.
l. **"Outage Event Duration (L)."** The time interval, in minutes, between the time a utility first becomes aware of an Outage Event and the time of restoration of service to the last retail customer affected by that Outage Event.
m. **"Service Interruption."** The complete loss of voltage of at least one minute to a retail customer. (CI for one customer).
n. **"Service Interruption Duration."** The time interval, in minutes, between the time a utility first becomes aware of a Service Interruption and the time of restoration of service to that retail customer. (CMI for one customer).
o. **"System Average Interruption Duration Index (SAIDI)."** The average minutes of Service Interruption Duration per retail customer served within a specified Area of Service over a given period of time. It is determined by dividing the total Customer Minutes of Interruption (CMI) by the total Number of Customers Served (C) for the respective Area of Service.
p. **"System Average Interruption Frequency Index (SAIFI)."** The average number of Service Interruptions per retail customer within a specified Area of Service over a given period of time. 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.
q. **"Planned Service Interruption."** A Service Interruption initiated by the utility to perform necessary scheduled activities, such as maintenance, infrastructure improvements, and new construction due to customer growth.

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ACTUAL

PART I

CAUSES OF OUTAGE EVENTS – ACTUAL

Utility Name: Florida Public Utilities Company- NE Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1) Corrosion	94	127.35	98.73
2) Weather	87	1,107.89	206.59
3) Vegetation	51	76.61	64.52
4) Animal	43	68.81	74.61
5) Lightning	27	78.48	66.59
6) Vehicles	14	89.43	68.99
7) Other	9	159.00	94.51
8) Transformer	8	94.63	91.60
9) Unknown	6	74.50	64.22
10) Dig in	6	180.00	176.67
11)Transmission	4	209.00	159.26
12) Substation	1	300.00	300.00
System Totals NE	350	352.45	141.44

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ADJUSTED

PART I

CAUSES OF OUTAGE EVENTS – ADJUSTED

Utility Name: Florida Public Utilities Company- NE Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1) Corrosion	94	127.35	98.73
2) Vegetation	51	76.61	64.52
3) Animal	43	68.81	74.61
4) Lightning	27	78.48	66.59
5) Vehicles	14	89.43	68.99
6) Other	9	159.00	94.51
7) Transformer	8	94.63	91.60
8) Unknown	6	74.50	64.22
9) Dig in	6	180.00	176.67
System Totals NE	258	100.48	71.97

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ACTUAL

PART I

CAUSES OF OUTAGE EVENTS – ACTUAL

Utility Name: Florida Public Utilities Company- NW Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Vegetation	369	94.15	107.57
2. Weather	252	413.79	274.96
3. Animal	240	60.10	64.80
4. Unknown	65	65.62	36.89
5. Lightning	44	82.73	64.41
6 Vehicle	17	111.94	118.18
7. Transformer	14	116.61	125.48
8. Cutout Failure	10	68.19	74.79
9. Corrosion	8	121.03	310.42
10. Fuse Failure	8	39.34	42.01
All Other Causes	41	205.12	49.39
System Totals NW	1068	165.62	124.90

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ADJUSTED

PART I

CAUSES OF OUTAGE EVENTS – ADJUSTED

Utility Name: Florida Public Utilities Company- NW Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Vegetation	358	95.45	107.32
2. Animal	240	60.10	64.80
3. Weather	97	206.63	102.54
4. Unknown	65	65.62	36.89
5. Lightning	44	82.73	64.41
6. Vehicle	17	111.94	118.18
7. Transformer	14	116.61	125.48
8. Cutout Failure	10	68.19	74079
9. Corrosion	8	121.03	310.42
10. Fuse Failure	8	39.34	42.01
All Other Causes	31	87.30	43.19
System Totals: NW	892	97.53	88.39

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ACTUAL

PART I

CAUSES OF OUTAGE EVENTS – ACTUAL

Utility Name: Florida Public Utilities Company – FPUC Total Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Vegetation	420	92.24	101.21
2. Weather	339	594.11	240.03
3. Animal	283	62.12	68.07
4. Corrosion	102	126.85	111.99
5. Lightning	71	82.28	66.12
6. Unknown	71	67.29	48.03
7. Vehicle	31	105.38	95.30
8. Transformer	22	113.92	101.15
9. Cutout Failure	10	68.19	74.79
10. Fuse Failure	8	39.34	42.01
All Other Causes	61	59.79	136.79
System Totals: FPUC	1418	211.74	132.92

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ADJUSTED

PART I

CAUSES OF OUTAGE EVENTS – ADJUSTED

Utility Name: Florida Public Utilities Company – FPUC Total Year: 2008

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Vegetation	409	93.34	100.25
2. Animal	283	61.63	68.09
3. Corrosion	102	126.86	111.99
4. Weather	97	206.63	102.54
5. Lightning	71	82.28	66.12
6. Unknown	71	67.29	48.03
7. Vehicle	31	105.38	95.30
8. Transformer	22	113.92	101.15
9. Cutout Failure	10	68.19	74.79
10. Fuse Failure	8	39.34	42.01
All Other Causes	46	113.42	46.81
System Totals: FPUC	1150	98.19	82.49

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

PART II

THREE PERCENT FEEDER LIST – ACTUAL

Utility Name: Florida Public Utilities Company

Year: 2008

Primary Circuit Id. No. or Name (a)	Sub-station Origin (b)	Location (c)	Number of Customers					Outage Events "N" (i)	Avg Duration "L-Bar" (j)	CAIDI (k)	Listed Last Year? (l)	No. of Years in the Last 5 (m)	Corrective Action Completion Date (n)
			Residential (d)	Commercial (e)	Industrial (f)	Other (g)	Total (h)						
9872 Hospital	Marianna	Marianna	709	160	0	0	869	3	84.32	84.48	No	0	2008
311	Stepdown	Fernandina	2155	104	0	0	2259	4	101.25	202.5	No	2	N/A Tropical Storm Fay

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

PART II

THREE PERCENT FEEDER LIST – ADJUSTED

Utility Name: Florida Public Utilities Year: 2008

Primary Circuit Id. No. or Name (a)	Sub-station Origin (b)	Location (c)	Number of Customers					Outage Events "N" (i)	Avg Duration "L-Bar" (j)	CAIDI (k)	Listed Last Year? (l)	No. of Years in the Last 5 (m)	Corrective Action Completion Date (n)
			Residential (d)	Commercial (e)	Industrial (f)	Other (g)	Total (h)						
9872 Hospital	Marianna	Marianna	709	160	0	0	869	2	103.97	103.97	No	0	2008
211	JLTerry	Fernandina	1676	88	0	0	1764	4	29	38.60	No	0	N/A

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

PART III

SYSTEM RELIABILITY INDICES – ACTUAL

Utility Name: Florida Public Utilities Company Year: 2008

District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
NE Division	410.39	141.44	2.90	N/A*	N/A*
NW Division	461.37	124.90	3.69	N/A*	N/A*
System Averages	433.57	132.92	3.26	N/A*	N/A*

• Total # of Electric Retail Customers is well below 50,000. N/A by Rule 25-6.0455 (3)(c)

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

PART III

SYSTEM RELIABILITY INDICES – ADJUSTED

Utility Name: Florida Public Utilities Company Year: 2008

District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
NE Division	90.86	71.97	1.26	N/A*	N/A*
NW Division	238.80	88.39	2.70	N/A*	N/A*
System Averages	158.13	82.49	1.92	N/A*	N/A*

* Total # of Electric Retail Customers is well below 50,000. N/A by Rule 25-6.0455 (3)(c)

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455,
Florida Administrative Code

2008 - Reliability Indicators By Feeder - Northeast Division - FPUC (Adjusted)

Feeder No.	Number of Outage Events (N)	Average Duration (L-Bar)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
102	27	93.04	108.68	30864	284	2512		
104	5	90.60	88.80	4884	55	453		
110	41	158.66	75.24	170190	2262	6505		
111	19	175.21	111.62	213863	1916	3329		
209	15	98.87	96.42	254445	2639	1483		
210	29	72.28	48.92	112169	2293	2096		
211	38	73.29	51.29	373956	7291	2785		
212	22	91.41	141.21	144318	1022	2011		
214	12	50.50	43.70	28228	646	606		
215	5	86.60	50.74	30700	605	433		
310	13	76.85	78.29	7438	95	999		
311	32	84.72	85.39	26045	305	2711		
	258	**100.48**	**71.97**	**1,397,100**	**19,413**	**25,923**	**90.86**	**1.26**

Total No. of Customers at end of 2008 ==> **15,376**

2008 Reliability Indicators By Feeder – Northwest Division (Adjusted)

Feeder	Number of Outage Events (N)	Average Duration (L-BAR)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
Altha	44	101.66	117.39	146148.60	1245.00	4473.03		
Blountstown	8	59.73	57.64	10432.65	181.00	477.82		
Bristol	69	86.33	71.71	97739.98	1363.00	5956.85		
College	116	97.46	58.73	249847.50	4254.00	11305.72		
Cottondale	135	109.97	70.08	357424.00	5100.00	14846.18		
Dogwood Heights	14	103.15	40.31	17335.02	430.00	1444.05		
Greenwood/ Malone	82	115.52	103.79	314809.00	3033.00	9473.01		
Hospital	49	107.69	102.37	330348.20	3227.00	5277.05		
Hwy 90 E	87	97.47	132.32	417340.10	3154.00	8479.70		
Hwy 90 W	46	75.98	62.05	273873.60	4414.00	3494.88		
Industrial Park	7	90.68	118.09	12517.32	106.00	634.73		
Indian Springs	78	83.99	103.00	335373.90	3256.00	6551.67		
Prison	8	90.51	87.74	2105.82	24.00	724.05		
Railroad	54	71.51	96.73	207577.50	2146.00	3861.32		
South Street	93	105.80	106.74	288844.30	2706.00	9839.40		
Family Dollar	2	79.21	79.21	158.42	2.00	158.42		
NW System	892	97.53	88.39	3061875.75	34641.00	86997.88	238.80	2.70

Total No. of Customers at end of 2008 ==> 12822

		NE Division		NW Division		FPUC Total	
		Actual		Actual		Actual	
Index							
SAIDI =	(CMI) / (C)	6310098.00 / 15376.00 =	410.39	5915642.00 / 12822.00 =	461.37	12225740.00 / 28198.00 =	433.57
CAIDI =	(CMI) / (CI)	6310098.00 / 44614.00 =	141.44	5915642.00 / 47364.00 =	124.90	12225740.00 / 91978.00 =	132.92
SAIFI =	(CI) / (C)	44614.00 / 15376.00 =	2.90	47364.00 / 12822.00 =	3.69	91978.00 / 28198.00 =	3.26
L-Bar =	(L) / (N)	123359.00 / 350.00 =	352.45	176883.80 / 1068.00 =	165.62	300242.80 / 1418.00 =	211.74

		Adjusted		Adjusted		Adjusted	
Index							
SAIDI =	(CMI) / (C)	1397100.00 / 15376.00 =	90.86	3061875.75 / 12822.00 =	238.80	4458975.75 / 28198.00 =	158.13
CAIDI =	(CMI) / (CI)	1397100.00 / 19413.00 =	71.97	3061875.75 / 34641.00 =	88.39	4458975.75 / 54054.00 =	82.49
SAIFI =	(CI) / (C)	19413.00 / 15376.00 =	1.26	34641.00 / 12822.00 =	2.70	54054.00 / 28198.00 =	1.92
L-Bar =	(L) / (N)	25923.00 / 258.00 =	100.48	86997.88 / 892.00 =	97.53	112920.88 / 1150.00 =	98.19

Actual			Actual			Actual		
(C)	=	15376	(C)	=	12822	(C)	=	28198
(CI)	=	44614	(CI)	=	47364	(CI)	=	91978
(CMI)	=	6310098	(CMI)	=	5915642	(CMI)	=	12225740
(L)	=	123359	(L)	=	176884	(L)	=	300243
(N)	=	350	(N)	=	1068	(N)	=	1418

Adjusted			Adjusted			Adjusted		
(C)	=	15376	(C)	=	12822	(C)	=	28198
(CI)	=	19413	(CI)	=	34641	(CI)	=	54054
(CMI)	=	1397100	(CMI)	=	3061876	(CMI)	=	4458976
(L)	=	25923	(L)	=	86998	(L)	=	112921
(N)	=	258	(N)	=	892	(N)	=	1150

FPUC 2008 – Description of Excluded Events for Named Storms, Transmission, Distribution and Substations

Named Storms

The NE Division's territory was impacted by Tropical Storm Fay during August 21 to 25, 2008. To confront the event, we implemented our Emergency Plan Procedures, secured assistance from our NW Division and hired several contractors. Prior to and during the storm we diligently worked with our local emergency officials, law enforcing authorities and customers to successfully restore power to the electrical system. After the storm we held meetings to self-assess our performance and to generate ideas to implement in future events.

The Northwest Division's territory was impacted by Tropical Storm Fay during August 22 to 25, 2008. We implemented our Emergency Plan Procedures and we secured assistance from an outside Contractor since several of our line crews were earlier dispatched to assist our Northeast Division.

From August 31 to September 1 the NW Division was impacted again with several high wind related outages caused by Hurricane Gustav. These were handled by our own crews and were not long duration events.

Prior to and during the Tropical Storm Fay and Hurricane Gustav, we worked diligently with local emergency officials, law enforcing authorities, and customers to successfully restore power to the electrical system. After the storm, we held meetings to self-assess our performance and to generate ideas to implement in future events.

Transmission

Failure of 69KV Insulators in NE Division (3-7-08 and 6-29-08)

A 69KV Lapp, RG porcelain type, insulator failed on the transmission line that connects between Stepdown and AIP Substations. As a result, it interrupted the normal power flow to the AIP substation and thereby the southern end of the island. After replacing the failed insulators power was restored to all customers the same day. Our plan is to replace a section of the transmission line that has some of these types of insulators. Please refer to section IV, Initiative #4 – Storm Hardening of Existing Transmission Structures, for more details.

Failure of 69KV Static Shield Wire in NE Division (8-9-08)

During a severe thunderstorm, lighting hit the 69KV static shield wire which, when combined with strong winds, caused it to break and fall on top of the 69KV line and the 12KV under-built distribution line. Crews were immediately dispatched to site to remove the wire and they restored power to all customers the same day. Engineering and Operations have been evaluating different types of materials that can be installed in our costal corrosive environment that would be more reliable.

Northwest Division had a power interruption to our Marianna Substation caused by our power supplier, Gulf Power on June 15, 2008 for approximately 45 minutes due to a failed breaker.

Substation

Opening of 15KV Circuit Breaker Bus-tie in NE Division (04-05-08)

At our AIP Substation, a 15KV circuit breaker bus-tie unexpectedly opened and interrupted power flow to two feeders at the south end of our territory. Crews and management were immediately dispatched to site and they restored power to all customers the same day. While testing and trouble shouting the circuit breaker, the technicians were not able to pinpoint a precise cause for the operation of the breaker. Since placing the breaker back in service, we have been monitoring the equipment and as of this writing the breaker has continued to operate normally.

2008 NE DIVISION - EXCLUDED EVENTS

Point of Interruption	Date	Feeder number	Number of Customers Out	Outage Duration	Cause	SYS INT CMI
1st Ave to AIP	3/7/2008	TRANSMISSION	5228	180	TRANSMISSION	941040
AIP substation	4/5/2008	SUBSTATION	2610	300	SUBSTATION	783000
South Fletcher to AIP	6/29/2008	TRANSMISSION	5228	120	TRANSMISSION	627360
69KV Line to Smurfit/ Underbuilt(Feeder 212)	8/9/2008	TRANSMISSION	889	268	TRANSMISSION	238252
69KV Line to Smurfit	8/9/2008	TRANSMISSION	1	268	TRANSMISSION	268
Feeder 311	8/21/2008	311	2259	54	Weather - Storm Fay	121986
814 Curnet Dr	8/21/2008	311	10	41	Weather - Storm Fay	410
Feeder 215	8/21/2008	215	530	58	Weather - Storm Fay	30740
311 BAILEY ROAD	8/22/2008	311	156	44	Weather - Storm Fay	6895
-826874977	8/22/2008	311	3	277	Weather - Storm Fay	830
Feeder 311	8/22/2008	311	2259	351	Weather - Storm Fay	792909
Feeder 310	8/22/2008	310	1875	57	Weather - Storm Fay	106875
1969502539	8/22/2008	214	1	136	Weather - Storm Fay	136
Feeder 214	8/22/2008	214	520	61	Weather - Storm Fay	31720
-1464913145	8/22/2008	212	5	191	Weather - Storm Fay	955
-936347999	8/22/2008	212	3	274	Weather - Storm Fay	822
212 ELEVENTH STREET	8/22/2008	212	55	874	Weather - Storm Fay	48076
212 ELEVENTH STREET	8/22/2008	212	32	876	Weather - Storm Fay	28021
211 JASMINE STREET	8/22/2008	211	7	579	Weather - Storm Fay	4052
-2135254371	8/22/2008	211	4	467	Weather - Storm Fay	1868
211 JASMINE STREET	8/22/2008	211	12	1010	Weather - Storm Fay	12118
Feeder 210	8/22/2008	210	772	17	Weather - Storm Fay	13124
111 PLANTATION FIELDSIDE	8/22/2008	111	22	81	Weather - Storm Fay	1771

111 PLANTATION FIELDSIDE	8/22/2008	111	26	92	Weather - Storm Fay	2387
1984293180	8/22/2008	111	6	98	Weather - Storm Fay	589
-1780458536	8/22/2008	111	3	124	Weather - Storm Fay	372
111 PLANTATION FIELDSIDE	8/22/2008	111	50	139	Weather - Storm Fay	6931
111 PLANTATION FIELDSIDE	8/22/2008	111	36	185	Weather - Storm Fay	6658
111 PLANTATION FIELDSIDE	8/22/2008	111	43	772	Weather - Storm Fay	33206
1652442744	8/22/2008	111	5	422	Weather - Storm Fay	2111
111 PLANTATION FIELDSIDE	8/22/2008	111	394	252	Weather - Storm Fay	99334
380072455	8/22/2008	111	1	393	Weather - Storm Fay	393
111 PLANTATION FIELDSIDE	8/22/2008	111	26	739	Weather - Storm Fay	19214
111 PLANTATION FIELDSIDE	8/22/2008	111	33	782	Weather - Storm Fay	25806
110 PLANTATION ROADSIDE	8/22/2008	110	33	110	Weather - Storm Fay	3626
-1130814842	8/22/2008	110	5	200	Weather - Storm Fay	1001
110 PLANTATION ROADSIDE	8/22/2008	110	20	484	Weather - Storm Fay	9673
110 PLANTATION ROADSIDE	8/22/2008	110	25	824	Weather - Storm Fay	20604
102 SOUTH FLETCHER	8/22/2008	102	11	45	Weather - Storm Fay	498
133034184	8/22/2008	102	1	48	Weather - Storm Fay	48
102 SOUTH FLETCHER	8/22/2008	102	1620	160	Weather - Storm Fay	258984
536075236	8/23/2008	311	6	40	Weather - Storm Fay	239
-60629617	8/23/2008	311	1	885	Weather - Storm Fay	885
969967201	8/23/2008	311	5	886	Weather - Storm Fay	4430
915931356	8/23/2008	311	11	938	Weather - Storm Fay	10323
-879116926	8/23/2008	311	9	997	Weather - Storm	8974

					Fay	
592798108	8/23/2008	212	3	1424	Weather - Storm Fay	4271
1113537176	8/23/2008	212	6	1426	Weather - Storm Fay	8559
212 ELEVENTH STREET	8/23/2008	212	4	1558	Weather - Storm Fay	6230
212 ELEVENTH STREET	8/23/2008	212	29	1620	Weather - Storm Fay	46976
244807508	8/23/2008	212	4	1623	Weather - Storm Fay	6490
-1219434110	8/23/2008	212	4	1774	Weather - Storm Fay	7096
-1017662916	8/23/2008	212	2	2048	Weather - Storm Fay	4097
-1395963219	8/23/2008	211	7	58	Weather - Storm Fay	405
-2135254371	8/23/2008	211	4	857	Weather - Storm Fay	3428
-510381884	8/23/2008	211	1	887	Weather - Storm Fay	887
-269803535	8/23/2008	211	4	1218	Weather - Storm Fay	4874
-849925759	8/23/2008	211	7	1543	Weather - Storm Fay	10800
1844461750	8/23/2008	211	7	1797	Weather - Storm Fay	12580
-1395963219	8/23/2008	211	7	1826	Weather - Storm Fay	12784
-801380715	8/23/2008	211	4	2013	Weather - Storm Fay	8053
-1802479759	8/23/2008	211	9	2102	Weather - Storm Fay	18915
-1478919570	8/23/2008	211	5	2337	Weather - Storm Fay	11686
-1808181097	8/23/2008	211	10	2737	Weather - Storm Fay	27368
-59141101	8/23/2008	209	4	81	Weather - Storm Fay	324
708250337	8/23/2008	111	7	1481	Weather - Storm Fay	10368
1471516077	8/23/2008	111	4	1522	Weather - Storm Fay	6088
111 PLANTATION FIELDSIDE	8/23/2008	111	18	2344	Weather - Storm Fay	42188
1617161661	8/23/2008	111	2	2426	Weather - Storm Fay	4852
111 PLANTATION FIELDSIDE	8/23/2008	111	12	2432	Weather - Storm Fay	29189
110 PLANTATION ROADSIDE	8/23/2008	110	23	1215	Weather - Storm Fay	27948
-527549556	8/23/2008	110	8	1395	Weather - Storm Fay	11160
102969567	8/23/2008	110	13	1399	Weather - Storm	18192

					Fay	
1716355698	8/23/2008	110	3	1406	Weather - Storm Fay	4217
659162289	8/23/2008	110	30	1428	Weather - Storm Fay	42844
834326067	8/23/2008	110	1	1510	Weather - Storm Fay	1510
-1520165276	8/23/2008	110	18	1538	Weather - Storm Fay	27679
110 PLANTATION ROADSIDE	8/23/2008	110	18	1536	Weather - Storm Fay	27654
-258191973	8/23/2008	110	3	1539	Weather - Storm Fay	4618
PLANTATION ROADSIDE	8/23/2008	110	13	1594	Weather - Storm Fay	20723
-843382014	8/23/2008	110	7	2018	Weather - Storm Fay	14124
-521276219	8/23/2008	110	7	2026	Weather - Storm Fay	14185
502377398	8/23/2008	110	6	2059	Weather - Storm Fay	12353
-1149765076	8/23/2008	110	13	2062	Weather - Storm Fay	26810
72988429	8/23/2008	102	1	40	Weather - Storm Fay	40
1385324283	8/25/2008	214	3	2770	Weather - Storm Fay	8309
-2090313724	8/25/2008	212	3	2754	Weather - Storm Fay	8263
526377421	8/25/2008	211	3	3016	Weather - Storm Fay	9049
-467897818	8/25/2008	210	6	2755	Weather - Storm Fay	16533
1882898443	8/25/2008	102	2	2657	Weather - Storm Fay	5315
102 SOUTH FLETCHER	8/25/2008	102	3	2683	Weather - Storm Fay	8049
-2027517029	8/25/2008	102	2	2701	Weather - Storm Fay	5401

2008 NW DIVISION - EXCLUDED EVENTS

Feeder	Predicted Device	Aff Cust Count	Cause	Weather	Creation Date	Outage Duration	CMI
RAILROAD	RAILROAD	1136	GULF POWER	Severe Storm	6/15/2008	45	50855
FAMILY DOL	FAMILY DOL	24	GULF POWER	Severe Storm	6/15/2008	45	1088
COTTONDALE	COTTONDALE	1759	GULF POWER	Severe Storm	6/15/2008	45	79507
HOSPITAL	HOSPITAL	920	GULF POWER	Severe Storm	6/15/2008	45	41431
SOUTH ST	SOUTH ST	1952	GULF POWER	Severe Storm	6/15/2008	45	88230
BRISTOL	FUS_1396	4	Other Weather	Named Storm	8/22/2008	67	269
COLLEGE	REC_1904	78	Other Weather	Named Storm	8/22/2008	56	4341
COLLEGE	FUS_1812	27	Other Weather	Named Storm	8/22/2008	36	977
ALTHA	FUS_1549	80	Other Weather	Named Storm	8/22/2008	99	7916
ALTHA	FUS_1541	26	Other Weather	Named Storm	8/22/2008	138	3590
DOGWOOD HT	FUS_1	29	Other Weather	Named Storm	8/22/2008	129	3745
	9192	2	Other Weather	Named Storm	8/23/2008	68	136
HWY 90E	FUS_2200	8	Other Weather	Named Storm	8/22/2008	475	3803
HWY 90E	FUS_2205	59	Other Weather	Named Storm	8/22/2008	603	35555
HWY 90E	FUS_2206	21	Other Weather	Named Storm	8/22/2008	825	17326
GREENWOOD	11835	1	Other Weather	Named Storm	8/23/2008	246	246
BRISTOL	FUS_1379	50	Other Weather	Named Storm	8/23/2008	256	12820
BRISTOL	9337	2	Other Weather	Named Storm	8/23/2008	404	809
HOSPITAL	REC_1013	111	Other Weather	Named Storm	8/22/2008	601	66724
GREENWOOD	FUS_175	12	Other Weather	Named Storm	8/22/2008	815	9783
COLLEGE	REC_2080	653	Other Weather	Named Storm	8/22/2008	624	407352
INDIAN SPR	FUS_1747	30	Other Weather	Named Storm	8/23/2008	27	800
GREENWOOD	FUS_204	21	Other Weather	Named Storm	8/23/2008	138	2901
HWY 90E	FUS_2166	18	Other Weather	Named Storm	8/22/2008	805	14488
RAILROAD	REC_756	187	Other Weather	Named Storm	8/23/2008	379	70854
RAILROAD	REC_758	142	Other	Named	8/23/2008	371	52642

			Weather	Storm			
HWY 90E	FUS_2139	68	Other Weather	Named Storm	8/22/2008	1012	68800
BRISTOL	REC_1403	82	Other Weather	Named Storm	8/22/2008	744	61007
BRISTOL	REC_1404	109	Other Weather	Named Storm	8/22/2008	988	107652
HWY 90W	FUS_2555	15	Other Weather	Named Storm	8/22/2008	133	1995
HWY 90W	FUS_2556	21	Other Weather	Named Storm	8/22/2008	134	2812
BLOUNTSTWN	FUS_1570	24	Other Weather	Named Storm	8/22/2008	123	2953
HWY 90E	REC_2183	38	Other Weather	Named Storm	8/22/2008	250	9513
	10611	6	Other Weather	Named Storm	8/22/2008	230	1382
HWY 90E	FUS_2200	8	Other Weather	Named Storm	8/22/2008	244	1956
HWY 90E	REC_2222	530	Other Weather	Named Storm	8/22/2008	397	210286
HWY 90W	FUS_2556	21	Other Weather	Named Storm	8/22/2008	474	9944
COLLEGE	FUS_1851	9	Other Weather	Named Storm	8/23/2008	1858	16722
SOUTH ST	11644	2	Other Weather	Named Storm	8/23/2008	324	648
BRISTOL	9738	5	Other Weather	Named Storm	8/22/2008	716	3578
COLLEGE	FUS_2037	7	Other Weather	Named Storm	8/23/2008	315	2208
COLLEGE	FUS_2048	10	Other Weather	Named Storm	8/22/2008	1012	10117
HWY 90E	FUS_2142	7	Other Weather	Named Storm	8/23/2008	97	676
HWY 90E	FUS_2156	9	Other Weather	Named Storm	8/23/2008	61	553
HWY 90E	FUS_2157	14	Other Weather	Named Storm	8/23/2008	61	853
INDIAN SPR	FUS_1654	29	Other Weather	Named Storm	8/23/2008	160	4640
COLLEGE	FUS_2038	3	Other Weather	Named Storm	8/22/2008	782	2347
DOGWOOD HT	FUS_54	7	Other Weather	Named Storm	8/23/2008	381	2665
SOUTH ST	REC_924	184	Other Weather	Named Storm	8/22/2008	883	162408
DOGWOOD HT	FUS_35	10	Other Weather	Named Storm	8/22/2008	1080	10801
BRISTOL	FUS_1427	2	Other Weather	Named Storm	8/23/2008	45	89
SOUTH ST	FUS_706	57	Other Weather	Named Storm	8/22/2008	828	47186
COLLEGE	FUS_1867	14	Other Weather	Named Storm	8/23/2008	246	3438
RAILROAD	FUS_694	52	Other Weather	Named Storm	8/23/2008	536	27868
INDIAN SPR	FUS_1700	7	Other	Named	8/23/2008	281	1967

			Weather	Storm			
SOUTH ST	FUS_886	15	Other Weather	Named Storm	8/22/2008	927	13902
SOUTH ST	FUS_679	27	Other Weather	Named Storm	8/22/2008	865	23368
COTTONDALE	FUS_543	49	Other Weather	Named Storm	8/22/2008	930	45581
INDIAN SPR	REC_1710	27	Other Weather	Named Storm	8/23/2008	303	8172
COTTONDALE	FUS_614	12	Other Weather	Named Storm	8/22/2008	1205	14464
INDIAN SPR	FUS_1717	10	Other Weather	Named Storm	8/23/2008	319	3188
COLLEGE	FUS_1950	16	Other Weather	Named Storm	8/23/2008	260	4157
COTTONDALE	FUS_665	10	Other Weather	Named Storm	8/23/2008	857	8570
COLLEGE	FUS_1926	6	Other Weather	Named Storm	8/23/2008	331	1983
COLLEGE	FUS_46	4	Other Weather	Named Storm	8/23/2008	166	664
COTTONDALE	FUS_529	3	Other Weather	Named Storm	8/22/2008	1031	3093
COTTONDALE	FUS_567	6	Other Weather	Named Storm	8/23/2008	130	779
HWY 90W	FUS_2555	15	Other Weather	Named Storm	8/22/2008	475	7129
ALTHA	REC_1547	88	Other Weather	Named Storm	8/23/2008	885	77852
COLLEGE	FUS_1856	10	Other Weather	Named Storm	8/23/2008	395	3947
HOSPITAL	REC_1209	140	Other Weather	Named Storm	8/23/2008	109	15204
HOSPITAL	REC_1210	70	Other Weather	Named Storm	8/23/2008	120	8412
HOSPITAL	8935	3	Other Weather	Named Storm	8/23/2008	431	1294
SOUTH ST	FUS_980	109	Other Weather	Named Storm	8/23/2008	234	25453
COTTONDALE	FUS_457	39	Other Weather	Named Storm	8/23/2008	677	26413
COLLEGE	FUS_1842	7	Other Weather	Named Storm	8/23/2008	414	2898
COTTONDALE	FUS_443	18	Other Weather	Named Storm	8/22/2008	1353	24349
SOUTH ST	FUS_970	45	Other Weather	Named Storm	8/23/2008	413	18577
SOUTH ST	FUS_980	109	Other Weather	Named Storm	8/23/2008	63	6825
HOSPITAL	7714	1	Other Weather	Named Storm	8/23/2008	726	726
COTTONDALE	FUS_389	7	Other Weather	Named Storm	8/22/2008	1345	9413
COLLEGE	9206	4	Other Weather	Named Storm	8/23/2008	322	1288
COLLEGE	10621	2	Other Weather	Named Storm	8/23/2008	509	1019
SOUTH ST	FUS_982	15	Other	Named	8/23/2008	35	523

			Weather	Storm			
ALTHA	REC_1450	119	Other Weather	Named Storm	8/22/2008	1390	165438
COLLEGE	FUS_1827	2	Other Weather	Named Storm	8/23/2008	502	1003
SOUTH ST	FUS_970	45	Other Weather	Named Storm	8/23/2008	45	2013
ALTHA	FUS_1495	43	Other Weather	Named Storm	8/22/2008	1202	51683
SOUTH ST	FUS_949	5	Other Weather	Named Storm	8/22/2008	1497	7485
RAILROAD	5447	1	Other Weather	Named Storm	8/23/2008	-19503	-19503
INDIAN SPR	10147	12	Other Weather	Named Storm	8/23/2008	246	2958
GREENWOOD	REC_223	94	Other Weather	Named Storm	8/23/2008	676	63546
GREENWOOD	4312	1	Other Weather	Named Storm	8/22/2008	1821	1821
GREENWOOD	9979	1	Other Weather	Named Storm	8/23/2008	497	497
GREENWOOD	FUS_172	5	Other Weather	Named Storm	8/23/2008	630	3151
RAILROAD	9924	2	Other Weather	Named Storm	8/23/2008	73	145
GREENWOOD	4734	2	Other Weather	Named Storm	8/23/2008	857	1714
GREENWOOD	Incident Near: 3255	1	Other Weather	Named Storm	8/23/2008	1130	1130
COLLEGE	9982-043	1	Other Weather	Named Storm	8/23/2008	1251	1251
COTTONDALE	7815	3	Other Weather	Named Storm	8/23/2008	1599	4796
HWY 90E	10308	1	Other Weather	Named Storm	8/23/2008	1163	1163
HOSPITAL	8935	3	Other Weather	Named Storm	8/23/2008	962	2886
HWY 90E	FUS_2143	11	Other Weather	Named Storm	8/24/2008	203	2236
PRISON	FUS_361	6	Other Weather	Named Storm	8/23/2008	796	4779
HWY 90E	FUS_2319	18	Other Weather	Named Storm	8/23/2008	747	13445
SOUTH ST	4068	3	Other Weather	Named Storm	8/23/2008	1649	4947
COTTONDALE	7986	1	Other Weather	Named Storm	8/23/2008	1019	1019
COTTONDALE	3534	1	Other Weather	Named Storm	8/23/2008	1405	1405
COLLEGE	FUS_1931	9	Other Weather	Named Storm	8/23/2008	1116	10043
DOGWOOD HT	2434X	1	Other Weather	Named Storm	8/22/2008	2171	2171
SOUTH ST	3100	1	Other Weather	Named Storm	8/23/2008	898	898
BRISTOL	9882-503	4	Other Weather	Named Storm	8/23/2008	668	2671
BLOUNTSTWN	FUS_1570	24	Other	Named	8/22/2008	861	20667

			Weather	Storm			
SOUTH ST	8825	1	Other Weather	Named Storm	8/22/2008	2188	2188
HWY 90E	8148	1	Other Weather	Named Storm	8/23/2008	1565	1565
INDIAN SPR	FUS_1647	44	Other Weather	Named Storm	8/24/2008	121	5345
BLOUNTSTWN	8521	2	Other Weather	Named Storm	8/22/2008	2400	4800
BLOUNTSTWN	4773	2	Other Weather	Named Storm	8/23/2008	1704	3407
SOUTH ST	11455	3	Other Weather	Named Storm	8/22/2008	2389	7168
ALTHA	2675X	2	Other Weather	Named Storm	8/22/2008	2311	4623
INDIAN SPR	FUS_1743	2	Other Weather	Named Storm	8/23/2008	1350	2701
HWY 90E	FUS_2385	6	Other Weather	Named Storm	8/23/2008	1016	6094
INDIAN SPR	4804	1	Other Weather	Named Storm	8/23/2008	1165	1165
COLLEGE	FUS_1848	17	Other Weather	Named Storm	8/24/2008	81	1374
COLLEGE	FUS_1847	19	Other Weather	Named Storm	8/24/2008	73	1395
INDIAN SPR	6051	1	Other Weather	Named Storm	8/23/2008	1189	1189
INDIAN SPR	9502	2	Other Weather	Named Storm	8/23/2008	1190	2380
COLLEGE	FUS_1915	13	Other Weather	Named Storm	8/23/2008	1570	20416
COLLEGE	7649	1	Other Weather	Named Storm	8/23/2008	1506	1506
HWY 90E	10594	1	Other Weather	Named Storm	8/23/2008	1729	1729
ALTHA	11221	1	Other Weather	Named Storm	8/23/2008	1812	1812
COTTONDALE	11876	1	Other Weather	Named Storm	8/23/2008	124	124
HOSPITAL	3503	1	Other Weather	Named Storm	8/23/2008	521	521
GREENWOOD	FUS_66	13	Other Weather	Named Storm	8/24/2008	40	524
ALTHA	7883	1	Other Weather	Named Storm	8/23/2008	1126	1126
SOUTH ST	8063	4	Other Weather	Named Storm	8/23/2008	1313	5252
HWY 90E	9942-056	1	Other Weather	Named Storm	8/23/2008	1608	1608
INDIAN SPR	Device At ArcID: 10059	9	Other Weather	Named Storm	8/23/2008	1007	9064
HWY 90E	FUS_2156	9	Other Weather	Named Storm	8/24/2008	87	781
COLLEGE	7928	1	Other Weather	Named Storm	8/23/2008	259	259
HWY 90E	1219	1	Other Weather	Named Storm	8/24/2008	115	115
SOUTH ST	FUS_923	12	Other	Named	8/24/2008	24	294

			Weather	Storm			
COLLEGE	3682	1	Other Weather	Named Storm	8/23/2008	1152	1152
COLLEGE	9982-017	1	Other Weather	Named Storm	8/23/2008	1462	1462
COLLEGE	8210	3	Other Weather	Named Storm	8/24/2008	181	543
HWY 90W	6482	3	Other Weather	Named Storm	8/22/2008	2736	8207
ALTHA	9317	2	Other Weather	Named Storm	8/24/2008	91	182
INDIAN SPR	FUS_1700	7	Other Weather	Named Storm	8/24/2008	86	604
HWY 90E	6518	1	Other Weather	Named Storm	8/31/2008	60	60
HWY 90E	FUS_2378	3	Other Weather	Named Storm	8/31/2008	45	134
SOUTH ST	FUS_989	5	Other Weather	Named Storm	8/31/2008	76	378
ALTHA	REC_1450	120	Other Weather	Named Storm	8/31/2008	61	7294
SOUTH ST	FUS_961	6	Other Weather	Named Storm	8/31/2008	120	718
HWY 90E	3681	2	Other Weather	Named Storm	8/31/2008	30	59
SOUTH ST	FUS_892	65	Other Weather	Named Storm	8/31/2008	240	15604
GREENWOOD	8074	1	Other Weather	Named Storm	9/1/2008	1515	1515
INDIAN SPR	FUS_1640	33	Other Weather	Named Storm	8/31/2008	59	1958
HWY 90E	FUS_2139	69	Other Weather	Named Storm	8/31/2008	31	2118
HWY 90E	FUS_2319	20	Other Weather	Named Storm	8/31/2008	30	595
SOUTH ST	6368	1	Other Weather	Named Storm	9/1/2008	190	190
HWY 90E	FUS_2319	20	Other Weather	Named Storm	9/1/2008	90	1796
BRISTOL	REC_1361	107	Other Weather	Named Storm	9/1/2008	60	6402

II. Wood Pole Inspections

Introduction

To comply with FPSC Order No. PSC-06-0144, Florida Public Utilities Company (FPUC) has implemented an eight year inspection program for all wooden transmission and distribution poles. The National Electric Safety Code (NESC) serves as a basis for the design of replacement poles for wood poles that fail inspection. Grade 'B' construction, as described in Section 24 of the 2007 edition of the NESC, has been adopted as the standard of construction for designing the installation of new poles and the replacement of reject poles in each FPUC Electric Division (NE & NW). Extreme wind loading, as specified in figure 250-2(d) of the 2007 edition of the NESC, has been adopted, as follows: 130 mph wind speed for wind loading in NE Division (Fernandina); and, 120 mph wind speed for wind loading in NW Division (Marianna).

Prior to 2008, several hundred pole inspections were completed annually by company employees in each FPUC Electric Division. These inspections were safety oriented and resulted in numerous pole replacements to enhance the safety of the public, FPUC employees, FPUC contractors, and third party attachers. However, FPUC has since determined that these inspections did not necessarily meet the intent and criteria of storm hardening initiatives. Therefore, 2008 wood pole inspections were bid out to and performed by a qualified wood pole inspection contractor for each FPUC Electric Division. Inspections were conducted in NE Division between 12/8/08 and 12/13/08, and in NW division between 11/3/08 and 12/6/08. Inspection results are summarized in the Wood Pole Inspection Reports for each division that are included in this section. Also included in this section are pie charts that show failure rate for each division and pole age tables that show the age range in five year age bands for failure poles. FPUC has determined that 2008 is the first inspection year that will produce measurable and reliable results that meet the intent and criteria of storm hardening initiatives. For this reason, FPUC considers 2008 to be year #1 of the eight year wood pole inspection cycle.

The number of inspections may vary from year-to-year based upon a variety of factors. For example, 2008 inspections were delayed approximately five months pending the issuance of an order by FPSC for the FPUC rate case. However, FPUC will work diligently to complete all required wood pole inspections during the eight year wood pole inspection cycle.

Inspection Process

The first inspection was a visual inspection to determine if there were any defects that required pole replacement. If the visual inspection indicated that the pole was not suited for continued use, it was rejected by the contractor and reported to FPUC for follow-up.

If the pole passed visual inspection, the pole was sound and bore tested to determine the internal condition of the pole. If the sound and bore inspection indicated that the pole was not suited for continued use, the pole was rejected by the contractor and reported to FPUC for follow-up.

If the pole passed the sound and bore test, the pole was excavated a minimum of 18 inches in depth and tested. If this test indicated the pole was suitable for continued service, the pole was treated and backfilled. If this test indicated that the pole was not suited for continued use, it was rejected by the contractor and reported to FPUC for follow-up.

Strength and Loading Assessment

The contractor performed Strength Assessment tests on selected poles to compare the current measured circumference to the original circumference of the pole. The effective circumference of the pole was determined to ensure that the current condition of the pole met the requirements of NESC Section 26 "Strength Requirements". If the test indicated that the pole was not suited for continued use, the contractor rejected the pole and reported it to FPUC for follow-up.

Poles having 3rd party attachments of ½" or larger in diameter were selected for Loading Assessment using a contractor supplied computer program called LoadCalc. When conducting the Loading Assessment, span lengths, attachment heights, wire sizes, and 3rd party attachments were analyzed to estimate pole loading. Poles with loading estimated to be at or above 100% of design load were referred to FPUC for follow-up. Additional discussion is provided in Storm Preparedness Initiatives section under Initiative #2, "Joint Use Pole Attachment Audit".

Post Inspection Follow-Up (Company Totals)

During the 2008 inspection process, 42 maintenance follow-up items were identified by the contractor. Upon completion of the project, a list of these maintenance items was provided to FPUC for follow-up. These items will be scheduled for follow-up inspection and repair by FPUC crews during 2009.

During the 2008 inspection process, 162 poles were identified as reject poles. Present FPUC policy is to replace all reject poles in lieu of bracing "restorable" reject poles. Poles are identified for replacement using a priority system that is based upon the reject severity level awarded by the inspector. Each replacement pole is analyzed by FPUC engineering using a computer program called Pole Foreman to make sure the new pole will meet the storm hardening criteria discussed in the first paragraph of this section. The goal is to replace all reject poles before the end of the next reporting period. Forty seven reject poles were replaced in 2008. FPUC plans to replace the remaining 115 reject poles by year end 2009. The 2009 report will update any remaining backlog of poles to be replaced, if any, and will discuss plans for reducing any backlog.

During the 2008 inspection process, 14 poles were identified as having loading levels estimated to be at or above 100%. Additional discussion on FPUC follow-up plans for poles with excessive loading levels is provided in Storm Preparedness Initiatives section under Initiative #2, "Joint Use Pole Attachment Audit".

Summary

FPUC collects and stores relevant pole inspection data upon completion of the annual wood pole inspections. The contractor provided FPUC with wood pole inspection data using a spreadsheet that included pole location, pole size, pole class, test results, and general comments. The contractor also provided a computer program called Fast Gate Viewer that allows FPUC to view detailed or summary information and to create specific reports. The Fast Gate Viewer is an essential tool for post inspection follow-up by FPUC.

To ensure the integrity of the pole inspection process, contractors are required to perform quality control assessments of their work to make sure FPUC pole inspection requirements are being

met, and to provide documentation that these assessments have taken place. As part of the follow-up process, FPUC random samples contractor reported test data in order to verify test results.

Florida Public Utilities Company - NE Division
Annual Wood Pole Inspection Report
Cycle Year #1 of 8 Year Cycle
(Inspection Year 2008)

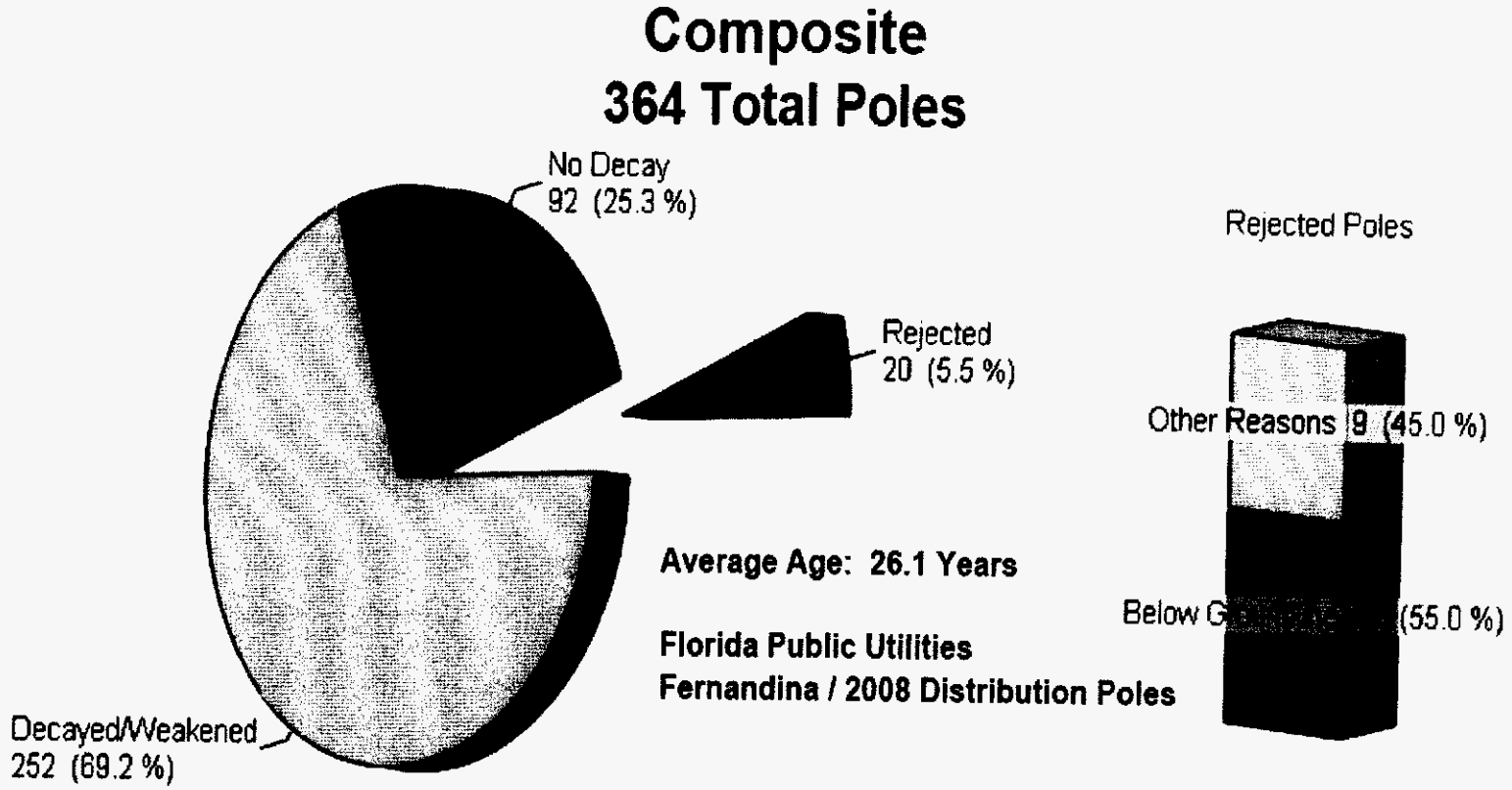
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Total # of wood poles in NE Division	# of pole inspections planned for this year	Backlog included in plans for this year	# of pole inspections completed this year	# of poles failing inspection this year	% failure rate this year	# failures replaced this year	# failures repaired this year	Total # of failures remaining to be replaced	Total # of failures remaining to be repaired	# of poles requiring maint. follow-up this year	# of poles overloaded this year	Total # of poles inspected in 8 yr cycle to date	Total % of poles inspected in 8 yr cycle to date	# of pole inspections planned next year
4998	**364**	**0**	**364**	**20**	**5.5**	**0**	**N/A***	**20**	**N/A***	**15**	**7**	**364**	**7.3**	**662**

If d < b, provide explanation	Include reason for variance, resulting backlog, and plans to address backlog: N/A. See "Additional information" below for discussion of backlog.
If g + h < e, provide explanation	Include reason for variance, resulting backlog, and plans to address backlog: Pole inspections were completed the week ending 12/13/2008. This did not allow sufficient time for any pole replacements by year end 2008. The current backlog of 20 failure poles will be replaced during 2009. The 2009 report will update progress. * Present FPUC policy is to replace all failure poles in lieu of bracing "restorable" failure poles. Therefore, columns (h) and (j) are not applicable (N/A) to FPUC at this time.
Additional Information	NE Division delayed the pole inspection program pending outcome of the FPUC rate case. An 8 year inspection cycle requires inspection of approximately 52 poles per month. There were approximately 7 months remaining in 2008 following the rate case ruling. Seven months at 52 inspections per month equals 364 poles which equals the number of poles inspected for 2008. The remaining backlog of 261 poles will be divided by 7 (years remaining in 8 year cycle) and added to future inspections. This will result in 662 planned inspections for 2009 (625 annual + 37 backlog). Prior year inspections done by FPUC employees did not meet FPSC inspection criteria. Therefore, FPUC considers 2008 to be year #1 of 8 year inspection cycle. Wood pole count includes 4666 distribution poles, 142 distribution guy poles, 181 transmission poles, and 9 transmission guy poles (4998 total).

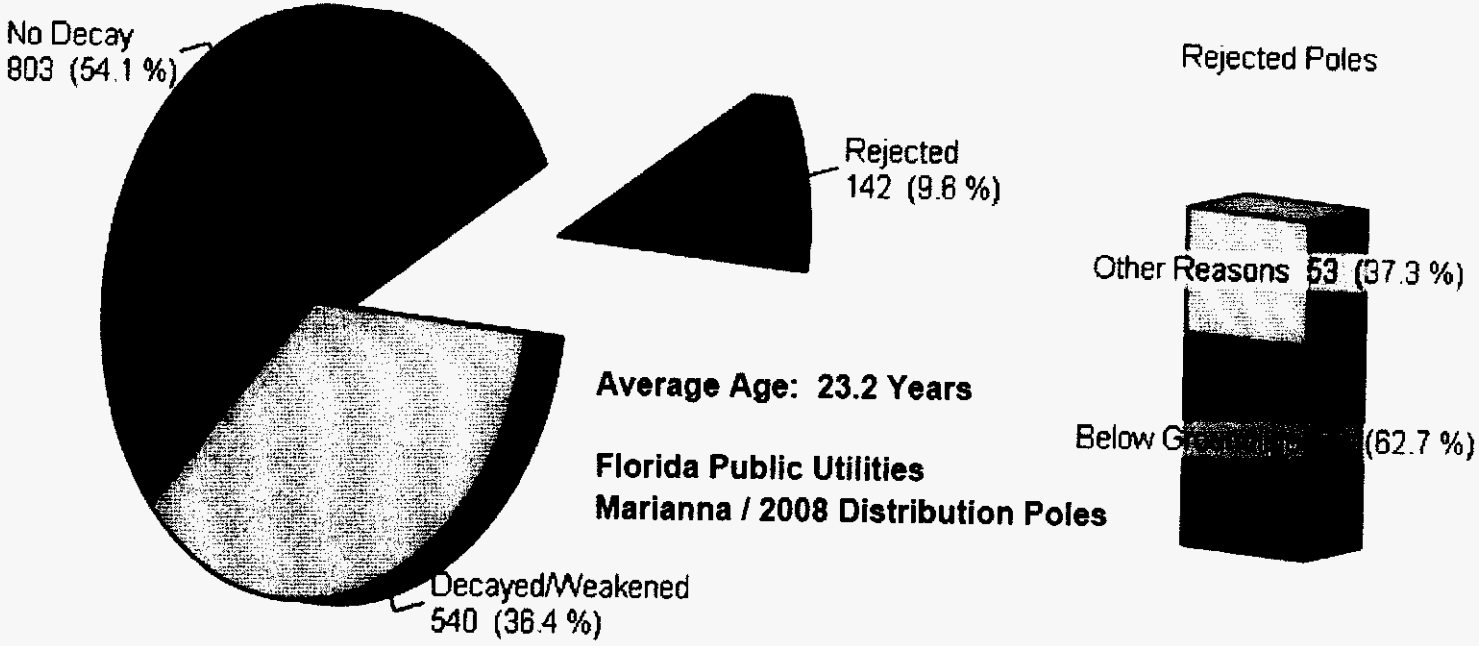
Florida Public Utilities Company - NW Division
Annual Wood Pole Inspection Report
Cycle Year #1 of 8 year Cycle
(Inspection Year 2008)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Total # of wood poles in NW Division	# of pole inspections planned for this year	Backlog included in plans for this year	# of pole inspections completed this year	# of poles failing inspection this year	% failure rate this year	# failures replaced this year	# failures repaired this year	Total # of failures remaining to be replaced	Total # of failures remaining to be repaired	# of poles requiring maint. follow-up this year	# of poles overloaded this year	Total # of poles inspected in 8 yr cycle to date	Total % of poles inspected in 8 yr cycle to date	# of pole inspections planned next year
21703	**1485**	**0**	**1485**	**142**	**9.56**	**47**	**N/A***	**95**	**N/A***	**27**	**7**	**1485**	**6.84**	**2888**

If d < b, provide explanation	Include reason for variance, resulting backlog, and plans to address backlog: N/A. See "Additional information" below for discussion of backlog.
If g + h < e, provide explanation	Include reason for variance, resulting backlog, and plans to address backlog: The pole inspections performed in 2008 were done by Osmose Utilities Services and completed very late in the year. We are currently working to get the worst case poles replaced first and plan to have the remaining backlog of 95 failure poles replaced by the end of 2009. The 2009 report will update progress. * Present FPUC policy is to replace all failure poles in lieu of bracing "restorable" failure poles. Therefore, columns (h) and (j) are not applicable (N/A) to FPUC at this time.
Additional Information	NW Division delayed the pole inspection program pending outcome of the FPUC rate case. An 8 year inspection cycle requires inspection of approximately 226 poles per month. There were approximately 7 months remaining in 2008 following the rate case ruling. Seven months at 226 inspections per month equals 1582 poles which is close the number of poles inspected for 2008. The remaining backlog of 1227 poles will be divided by 7 (years remaining in 8 year cycle) and added to future inspection years. This will result in 2888 planned inspections for 2009 (2712 annual + 176 backlog). Prior year inspections done by FPUC employees did not meet FPSC inspection criteria. Therefore, FPUC considers 2008 to be year #1 of 8 year inspection cycle.


Composite
364 Total Poles
No Decay
92 (25.3 %)
Rejected
20 (5.5 %)
Decayed/Weakened
252 (69.2 %)
Average Age: 26.1 Years
Florida Public Utilities
Fernandina / 2008 Distribution Poles
Rejected Poles
Other Reasons 9 (45.0 %)
(55.0 %)

Composite
1,485 Total Poles



Osmose.

Osmose Inspection
Groundline Decay by Age Group
Composite

Florida Public Utilities
Fernandina / 2008 Distribution Poles

		POLES REJECTED				POLES DECAYING AND WEAKENED					TOTAL POLES REJECTED OR DECAYED	
Age Span	Total Poles Inspected	Interior Decay	Exterior Decay	Other	% of Age Group Total	Interior Decay	Exterior Decay	Interior & Exterior Decay	Other	% of Age Group Total	Pole Count	% of Age Group Total
0-5 Years	35	0	0	0	0.0%	0	0	17	2	54.3%	19	54.3%
6-10 Years	28	0	0	0	0.0%	0	0	11	4	53.6%	15	53.6%
11-15 Years	51	0	0	0	0.0%	1	1	16	11	56.9%	29	56.9%
16-20 Years	46	0	0	0	0.0%	0	4	25	6	76.1%	35	76.1%
21-25 Years	67	0	1	1	3.0%	1	5	35	15	83.6%	58	86.6%
26-30 Years	34	0	2	3	14.7%	0	8	13	5	76.5%	31	91.2%
31-35 Years	15	2	1	0	20.0%	0	3	6	2	73.3%	14	93.3%
36-40 Years	61	1	3	2	9.8%	0	8	32	9	80.3%	55	90.2%
41-45 Years	13	0	2	0	15.4%	0	0	9	2	84.6%	13	100.0%
46-50 Years	2	0	2	0	100.0%	0	0	0	0	0.0%	2	100.0%
51-55 Years	0	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
56-60 Years	0	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
61+ Years	0	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
Unknown	6	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
TOTALS	364	3	11	6	5.5%	2	29	164	56	69.0%	271	74.5%

Average Age - 26.1

Osmose.

Osmose Inspection
Groundline Decay by Age Group
Composite

Florida Public Utilities
Marianna / 2008 Distribution Poles

		POLES REJECTED				POLES DECAYING AND WEAKENED					TOTAL POLES REJECTED OR DECAYED	
Age Span	Total Poles Inspected	Interior Decay	Exterior Decay	Other	% of Age Group Total	Interior Decay	Exterior Decay	Interior & Exterior Decay	Other	% of Age Group Total	Pole Count	% of Age Group Total
0-5 Years	241	0	0	0	0.0%	1	1	26	4	13.3%	32	13.3%
6-10 Years	253	0	0	0	0.0%	1	1	20	24	18.2%	46	18.2%
11-15 Years	121	0	1	0	0.8%	2	0	11	14	22.3%	28	23.1%
16-20 Years	128	0	2	1	2.3%	1	4	21	22	37.5%	51	39.8%
21-25 Years	56	1	3	2	10.7%	1	4	8	10	41.1%	29	51.8%
26-30 Years	182	0	18	13	17.0%	1	25	43	33	56.0%	133	73.1%
31-35 Years	190	0	20	14	17.9%	2	33	51	40	66.3%	160	84.2%
36-40 Years	161	8	37	9	33.5%	3	22	43	26	58.4%	148	91.9%
41-45 Years	41	0	3	5	19.5%	2	5	14	4	61.0%	33	80.5%
46-50 Years	11	0	4	0	36.4%	0	2	3	0	45.5%	9	81.8%
51-55 Years	0	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
56-60 Years	1	0	1	0	100.0%	0	0	0	0	0.0%	1	100.0%
61+ Years	0	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
Unknown	43	0	0	0	0.0%	0	0	0	0	0.0%	0	0.0%
TOTALS	1,485	9	89	44	9.6%	14	97	240	177	35.6%	670	45.1%

Average Age - 23.2

III. Storm Hardening Update

FPUC fully implemented the Storm Hardening Plan following the issuance of FPSC Order No. PSC-08-0327-FOF-EI on 5/19/08. This was the final order on the combined dockets for the FPUC 2007 electric infrastructure storm hardening plan and the FPUC petition for rate increase.

This is the required annual update of the FPUC 2007 Electric Infrastructure Storm Hardening Plan that was filed July 3, 2007 pursuant to Rule 25-6.0342, F.A.C. and FPSC Order No. PSC-07-0558. Wood pole inspections were addressed in the previous Section II of the update. The ongoing Ten (10) Storm Preparedness Initiatives are addressed separately in Section IV.

Compliance with NESC Requirements:

The National Electric Safety Code (NESC) serves as a basis for the design and construction of new and replacement FPUC facilities. Pursuant to subsection 25-6.0345 (2), F.A.C., all FPUC facilities were installed in accordance with NESC requirements in effect at the time of their installation. To enhance FPUC storm hardening efforts, more stringent Grade 'B' construction, as described in Section 24 of the 2007 edition of the NESC, has been adopted as the standard for the design and installation of all future new and replacement poles in each FPUC Electric Division (NE & NW).

Extreme Wind Loading:

Extreme wind loading, as specified in figure 250-2(d) of the 2007 edition of the NESC, has been adopted, as follows: 130 mph wind speed for wind loading in NE Division (Fernandina); and, 120 mph wind speed for wind loading in NW Division (Marianna).

Mitigation of Damage Due to Storm Surge and Flooding:

FPUC is developing specifications for mitigating damage to underground and overhead distribution and transmission facilities caused by flooding and storm surges. Additionally, FPUC is participating along with other investor owned, cooperative, and municipal electric utilities in the Public Utility Research Center (PURC) research regarding hurricane winds and storm surge within the state.

FPUC transmission facilities are located in the Northeast Florida Division only. Transmission lines constructed near and across coastal waterways were originally designed to meet, at a minimum, NESC requirements for those applications. Where necessary, foundations and casings were used to stabilize the structures due to the soil conditions.

Some overhead distribution lines in both divisions are subject to storm surges and flooding. Lines located near the coast or inland waterways that are subject to storm surges or flooding will be evaluated and additional supporting mechanisms will be installed as practicable. This may include storm guys or pole bracing if needed. Storm guys or bracing will be placed so that additional support is achieved perpendicular to the distribution line. Potentially affected lines that have reclosers, capacitors, or regulators that require electronic controls shall have the controls mounted above maximum anticipated surge or flood levels.

Underground distribution lines subject to potential storm surges and flooding are mainly located in Northeast Florida Division. Storm hardening specifications include the use of reinforced concrete pads with legs on each corner that are poured approximately two feet into the ground to provide additional stability. Equipment can then be securely attached to the pad. At present, underground distribution lines are placed in conduit but are not typically encased in concrete. Future installations of underground distribution feeders will be evaluated based upon potential exposure to storm surges and flooding. Additional information and conclusions from research performed by the PURC will be included in the evaluation. If it is determined that storm surges could cause excessive damage, the installation may be encased in concrete ducts if feasible and validated by research.

Placement of New and Replacement Facilities:

Pursuant to Rule 25-6.0341, F.A.C., FPUC will locate new and replacement facilities in areas that are easily accessible. Facilities will be placed along public rights of way or located on private easements that are readily accessible from public streets. These requirements are necessary in order to efficiently and safely perform all necessary installation and maintenance on FPUC facilities. Placement of facilities along rear lot lines will not occur except in certain commercial applications were easily accessible concrete or asphalt driveways are located at the rear of the development or in residential neighborhoods with alleyways designed specifically for the purpose of installing utility services behind the homes.

Deployment Strategy:

As discussed in the first paragraph, FPUC has fully implemented its storm hardening strategy. The significant areas of implementation include:

1. FPUC implemented an 8 year cycle wood pole inspection program during 2008. Specific results are reported in Section II - Wood Pole Inspections.
2. Vegetation management activities include trimming main feeders every three years, laterals every six years, and addressing danger trees as soon as possible. Additional information about the FPUC vegetation management program can be found in Section IV - Storm Preparedness Initiatives, Initiative #1 - Vegetation Management Program for Distribution Circuits.
3. Extensive joint use audits are in the planning stages and will include plans to conduct them once every five years. Some detailed pole loading inspections were performed in both divisions as part of the Wood Pole Inspection Program. Additional information about the pole loading inspections can be found in Section II - Wood Pole Inspections, and Section IV - Storm Preparedness Initiatives, Initiative #2 - Joint Use Pole Attachment Audit.
4. Transmission poles are only located in NE Division. Detailed climbing inspections on all transmission line poles will be conducted so all poles are inspected at least once every six years. Additional information can be found in Section IV - Storm Preparedness Initiatives, Initiative #3 - Six Year Transmission Structure Inspection Program.
5. See Section IV - Storm Preparedness Initiatives, Initiative #4 - Storm Hardening of Existing Transmission Structures, for additional information concerning transmission structure storm hardening.
6. Engineering of new underground facilities will be designed to mitigate damage from storm surges and flooding.
7. FPUC will continue to place facilities on public rights of way and, if this is not possible, will ensure that private easements are secured.

Communities and Areas Affected by Electric Infrastructure Improvements:

The majority of the items listed above affect all areas of the FPUC electric service territory. The intent is to ensure both divisions benefit from these strategies. Transmission inspection and transmission storm hardening programs only affect the Northeast Florida Division since there are no transmission facilities in the Northwest Florida Division. Distribution line rebuilding to comply with the NESC extreme wind loading standards equally benefits both divisions.

Upgrading of Joint Use Facilities

FPUC proposed several projects in the Storm Hardening Plan for 2007 – 2009 intended to upgrade existing infrastructure to serve critical facilities. A significant portion of the poles upgraded had one or more joint use attachments. Listed below are the FPUC projects proposed for 2008:

Division	Critical Load	Feeder
Northwest	Sewer Treatment	#9992
Northeast	Hospital	#209

NW Division completed the storm hardening of feeder #9992 to serve the sewer treatment plant. In addition, NW replaced seven (7) Class 3 wood poles with Class G (equivalent to a Class 1 wood pole) concrete poles and twenty-five (25) Class 3 wood poles with Class 1 wood poles on the Marianna.Highway 90 West Feeder. This feeder serves several critical customers and parts of downtown central business district.

NE Division delayed the start of the storm hardening project for distribution feeder #209 that serves the hospital based upon the need to focus on two higher priority transmission storm hardening projects. The hospital is currently served with dual feeders that operate thru an automatic transfer switch. In addition, the hospital has back-up generators. One of the storm hardening transmission projects involves the 69kV line that feeds the substation serving not only the hospital but also serving the central business district, high school, middle school, and several nursing homes. Therefore, focusing attention on transmission storm hardening was given higher priority at this time. Additional information about these transmission storm hardening projects can be found in Section IV - Storm Preparedness Initiatives, Initiative #4 - Storm Hardening of Existing Transmission Structures.

IV. Storm Preparedness Initiatives

This is the required FPUC annual update of the ongoing Ten (10) Storm Preparedness Initiatives pursuant to FPSC Order No. PSC-06-0781 that required all investor-owned utilities to file ongoing storm preparedness plans.

Initiative #1 - Vegetation Management Programs for Distribution Circuits

In 2007, FPUC implemented a three (3) year main feeder and a six (6) year lateral vegetation program. The program includes the following:

1. Three year vegetation management cycle on all main feeders.
2. Six year vegetation management cycle on all laterals.
3. Annual inspection of main feeders serving critical customers prior to storm season to identify and perform any proactive trimming.
4. Quickly addressing danger trees located outside the normal trim zone that threaten main feeders.
5. Participation with local governments to address vegetation management issues in order to improve overall reliability due to tree related outages.
6. Public education regarding the maintenance and placement of trees.

Performance Metrics: Adjusted data includes only activities that are budgeted and included in the Company's filed vegetation management plan. Unadjusted (actual) data includes all performance data, such as, hurricane performance and all other vegetation caused outage events FPUC believes to be excludable pursuant to 25-6.0455,F.A.C. The difference between unadjusted data and adjusted data are the storm reliability performance metrics.

Because the vegetation management program was implemented in 2007, not enough data is available to complete the feeder and laterals comparison tables at this time.

FPUC Consolidated Vegetation Management Performance Metrics - 2008

	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	72	70	2	348	339	9
(B) Customer Interruptions	4541	4301	240	33145	32818	327
(C) Miles Cleared	NA	70.26	NA	NA	86.08	NA
(D) Remaining Miles	NA	99.28	NA	NA	404.92	NA
(E) Outages per Mile [A ÷ (C + D)]	NA	0.41	NA	NA	0.69	NA
(F) Vegetation CI per Mile [B ÷ (C + D)]	NA	25.37	NA	NA	66.84	NA
(G) Number of Hotspot trims	NA	NA	NA	NA	NA	NA
(H) All Vegetation Management Costs	$622,742	$622,742	0	(Note 4)	NA	NA
(I) Customer Minutes of Interruption	1091868	978131	113737	861912	753296	108616
(J) Outage restoration costs	(Note 5)	(Note 5)	NA	NA	NA	NA
(K) Vegetation Budget (current year)	$617,000	$617,000	0	NA	NA	NA
(L) Vegetation Goal (current year)	$617,000	$617,000	0	NA	NA	NA
(M) Vegetation Budget (next year)	$617,000	$617,000	0	NA	NA	NA
(N) Vegetation Goal (next year)	$617,000	$617,000	0	NA	NA	NA
(O) Trim-Back Distance	NA	(Note 6)	NA	NA	(Note 6)	NA

Danger Trees (FPUC Totals) – Additional Questions
a) Number of danger trees removed? 391 (estimated)
b) Expenditures on danger tree removal? $24,570 (estimated)
c) Number of request for removals that were denied? 26 (estimated)
d) Avoided CI with danger trees removed (estimate)? _____
e) Avoided CMI with danger trees removed (estimate)? _____

NE Division Vegetation Management Performance Metrics - 2008

	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	51	51	0	NA	NA	NA
(B) Customer Interruptions	2851	2851	0	NA	NA	NA
(C) Miles Cleared (Notes 1 & 2)	20.53	20.53	0	NA	NA	NA
(D) Remaining Miles (Note 2)	18.8	18.8	0	NA	NA	NA
(E) Outages per Mile [A ÷ (C + D)]	1.3	1.3	0	NA	NA	NA
(F) Vegetation Cl per Mile [B ÷ (C + D)]	72	72	0	NA	NA	NA
(G) Number of Hotspot trims	(Note 3)	(Note 3)	NA	NA	NA	NA
(H) All Vegetation Management Costs	$126,944	$126,944	0	(Note 4)	NA	NA
(I) Customer Minutes of Interruption	183940	183940	0	NA	NA	NA
(J) Outage restoration costs	(Note 5)	(Note 5)	NA	NA	NA	NA
(K) Vegetation Budget (2008)	$117,000	$117,000	0	NA	NA	NA
(L) Vegetation Goal (2008)	$117,000	$117,000	0	NA	NA	NA
(M) Vegetation Budget (2009)	$117,000	$117,000	0	NA	NA	NA
(N) Vegetation Goal (2009)	$117,000	$117,000	0	NA	NA	NA
(O) Trim-Back Distance	NA	(Note 6)	NA	N/A	(Note 6)	NA

Danger Trees (NE Division) – Additional Questions

a) Number of danger trees removed? 100 (est)

b) Expenditures on danger tree removal? $5,670 (est)

c) Number of request for removals that were denied? 0

d) Avoided CI with danger trees removed (estimate)? _____

e) Avoided CMI with danger trees removed (estimate)? _____

Notes: Tracking of NE Division Vegetation Management activities has not been documented to separate Main Line Feeders vs Laterals. New tracking procedures using Outage Management program are in their initial stages of implementation and have not been in service long enough to quantify actual performance.

Note 1: Miles cleared in 2008 include total miles of Main Feeders, Laterals and Transmission, but do not include any Hot Spot trimming.

Note 2: In 2008 the NE Division was able to use the new GIS system to obtain miles of feeders and laterals.

Note 3: The Number of Hot Spot trims has not been historically documented.

Note 4: Vegetation Management Costs have not been separated between Main Feeders and Laterals.

Note 5: Outage Restoration Costs has not been historically documented.

Note 6: Distribution is 10 feet. Transmission (138KV is 30 feet and 69KV is 15 feet)

NW Division Vegetation Management Performance Metrics - 2008

	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	21	19	2	348	339	9
(B) Customer Interruptions	1690	1450	240	33145	32818	327
(C) Miles Cleared	NA	49.73	NA	NA	86.08	NA
(D) Remaining Miles	NA	80.48	NA	NA	404.92	NA
(E) Outages per Mile [A ÷ (C + D)]	NA	0.146	NA	NA	0.69	NA
(F) Vegetation CI per Mile [B ÷ (C + D)]	NA	11.14	NA	NA	66.84	NA
(G) Number of Hotspot trims	NA	16	NA	NA	74	NA
(H) All Vegetation Management Costs	$495,798	$495,798	0	(Note 4)		
(I) Customer Minutes of Interruption	907928	794191	113737	861912	753296	108616
(J) Outage restoration costs	(Note 5)	(Note 5)	NA	NA	NA	NA
(K) Vegetation Budget (current year)	$500,000	$500,000	0	NA	NA	NA
(L) Vegetation Goal (current year)	$500,000	$500,000	0	NA	NA	NA
(M) Vegetation Budget (next year)	$500,000	$500,000	0	NA	NA	NA
(N) Vegetation Goal (next year)	$500,000	$500,000	0	NA	NA	NA
(O) Trim-Back Distance	NA	10	NA	NA	10	NA

Danger Trees (NW Division) – Additional Questions

a) Number of danger trees removed? 291

b) Expenditures on danger tree removal? $18,900

c) Number of request for removals that were denied? 26 (estimated)

d) Avoided CI with danger trees removed (estimate)? _____

e) Avoided CMI with danger trees removed (estimate)? _____

NW TREE TRIM SCHEDULE – MAIN FEEDERS
2008 - 2010

2008:
1. OCB#9942: HWY 90E Feeder
2. OCB#9992: HWY 90W Feeder
3. OCB#9854: South Street Feeder
4. OCB#9882: Bristol Feeder
5. OCB#9872: Family Dollar Feeder

2009:
1. OCB#9866: Cottondale Feeder
2. OCB#9952: Altha Feeder
3. OCB#9972: Blountstown Feeder
4. OCB#9512: Railroad Feeder
5. OCB#9872: Hospital Feeder
6. OCB#9752: Industrial Park Feeder

2010:
1. OCB#9742: Greenwood/Malone Feeder
2. OCB#9722: Dogwood Heights Feeder
3. OCB#9982: College Feeder
4. OCB#9932: Indian Springs Feeder
5. OCB#9732: Prison Feeder

NW TREE TRIM SCHEDULE – LATERALS
2008 - 2013

2008:
1. OCB#9932: Indian Springs Feeder
2. OCB#9942: HWY 90E Feeder
3. OCB#9732: Prison Feeder

2009:
1. OCB#9992: HWY 90W Feeder
2. OCB#9854: South Street Feeder
3. OCB#9872: Family Dollar Feeder

2010:
1. OCB#9866: Cottondale Feeder
2. OCB#9952: Altha Feeder

2011:
1. OCB#9512: Railroad Feeder
2. OCB#9872: Hospital Feeder
3. OCB#9982: College Feeder

2012:
1. OCB#9742: Greenwood/Malone Feeder
2. OCB#9722: Dogwood Heights Feeder
3. OCB#9752: Industrial Park Feeder

2013:
1. OCB#9882: Bristol Feeder
2. OCB#9972: Blountstown Feeder

NE DIVISION - TREE TRIM SCHEDULE – Main Feeders
2008 – 2010

2008:
1. Feeder#102
2. Feeder#104
3. Feeder#211
4. Feeder#212
5. Feeder#802(138KV)
6. Feeder#803(138KV)

2009:
1. Feeder#110
2. Feeder#111
3. Feeder#209
4. Feeder#214
5. Feeder#210
6. Feeder#215
7. Feeder#313 (69KV)

2010:
1. Feeder#310
2. Feeder#311
3. Feeder#201(69KV)
4. Feeder#202 (69KV)
5. Feeder#315 (69KV)

NE DIVISION - TREE TRIM SCHEDULE – Laterals
2008 – 2013

2008:
1. Feeder#311
2. Feeder#212

2009:
1. Feeder#214
2. Feeder#215

2010:
1. Feeder#110
2. Feeder#111

2011:
1. Feeder#104
2. Feeder#209

2012:
1. Feeder#210
2. Feeder#211

2013:
1. Feeder#310
2. Feeder#102

FPUC NE Division - D&T Vegetation Management*

Feeder #	Main Feeder		Feeder Laterals		Main Feeder		Feeder Laterals		TOTALS	
	OH (feet)	UG (feet)	OH (feet)	UG (feet)	OH (miles)	UG (miles)	OH (miles)	UG (miles)	OH (miles)	UG (miles)
311	27,672	260	52,529	95,681	5.24	0.05	9.95	18.12	15.19	18.17
310	16,080	1,485	32,580	51,837	3.05	0.28	6.17	9.82	9.22	10.10
209	25,423	1,062	22,253	37,236	4.81	0.20	4.21	7.05	9.03	7.25
210	9,990	2,245	27,961	6,700	1.89	0.43	5.30	1.27	7.19	1.69
211	13,992	225	60,222	23,852	2.65	0.04	11.41	4.52	14.06	4.56
212	17,477	110	55,966	8,505	3.31	0.02	10.60	1.61	13.91	1.63
214	14,935	305	22,435	3,491	2.83	0.06	4.25	0.66	7.08	0.72
215	11,264	1,250	14,549	38,850	2.13	0.24	2.76	7.36	4.89	7.59
102	19,249	2,207	37,931	114,746	3.65	0.42	7.18	21.73	10.83	22.15
104	1,438	6,799		51,595	0.27	1.29	0.00	9.77	0.27	11.06
110	10,292		7,762	163,381	1.95	0.00	1.47	30.94	3.42	30.94
111	10,354	6,020	7,990	90,453	1.96	1.14	1.51	17.13	3.47	18.27
Dist. Totals	**178,166**	**21,968**	**342,178**	**686,327**	**33.74**	**4.16**	**64.81**	**129.99**	**98.55**	**134.15**
69KV Line									**11.45**	
138KV Line									**8.02**	
D&T Totals	**178,166**	**21,968**	**342,178**	**686,327**	**33.74**	**4.16**	**64.81**	**129.99**	**118.02**	**134.15**

* - Basis for tracking and managing 2008 and future tree trimming cycles (3 yr. mains and 6 yr. laterals) - Data source is our mapping system.

1/26/2009

2008 FPUC NE Division - D&T Vegetation Manangement**										
Feeder #	Main Feeder		Feeder Laterals		Main Feeder		Feeder Laterals		TOTALS	
	OH (feet)	UG (feet)	OH (feet)	UG (feet)	OH (miles)	UG (miles)	OH (miles)	UG (miles)	OH (miles)	UG (miles)
311		0		0	0.00	0.00	0.00	0.00	0.00	0.00
310		0		0	0.00	0.00	0.00	0.00	0.00	0.00
209	15,960	0	5,100	0	3.02	0.00	0.97	0.00	3.99	0.00
210		0		0	0.00	0.00	0.00	0.00	0.00	0.00
211	6,600	0	2,100	0	1.25	0.00	0.40	0.00	1.65	0.00
212	2,250	0	450	0	0.43	0.00	0.09	0.00	0.51	0.00
214		0		0	0.00	0.00	0.00	0.00	0.00	0.00
215		0		0	0.00	0.00	0.00	0.00	0.00	0.00
102	19,249	0	1,950	0	3.65	0.00	0.37	0.00	4.01	0.00
104	1,438	0		0	0.27	0.00	0.00	0.00	0.27	0.00
110		0		0	0.00	0.00	0.00	0.00	0.00	0.00
111		0		0	0.00	0.00	0.00	0.00	0.00	0.00
Dist. Totals	**45,497**	**0**	**9,600**	**0**	**8.62**	**0.00**	**1.82**	**0.00**	**10.44**	**0.00**
69KV Line	**53,329**				**10.10**				**10.10**	
138KV Line										
D&T Totals	**98,826**	**0**	**9,600**	**0**	**18.72**	**0.00**	**1.82**	**0.00**	**20.54**	**0.00**

** 2008 Trim Totals

2/25/2009

FPUC NW Division - D&T Vegetation Management*

Feeder #	Main Feeder		Feeder Laterals		Main Feeder		Feeder Laterals		TOTALS	
	OH (feet)	UG (feet)	OH (feet)	UG (feet)	OH (miles)	UG (miles)	OH (miles)	UG (miles)	OH (miles)	UG (miles)
9742 Greenwood/ Malone	78,442	0	238,837	5,420	14.86	0.00	45.23	1.03	60.09	1.03
9722 Dogwood Heights	22,492	0	62,410	2,870	4.26	0.00	11.82	0.54	16.08	0.54
9982 College	70,950	0	217,104	24,260	13.44	0.00	41.12	4.59	54.56	4.59
9932 Indian Springs	30,117	0	140,560	38,895	5.70	0.00	26.62	7.37	32.33	7.37
9732 Prison	16,950	0	13,505	14,742	3.21	0.00	2.56	2.79	5.77	2.79
9942 Hwy 90E	67,057	0	259,711	21,503	12.70	0.00	49.19	4.07	61.89	4.07
9992 Hwy 90W	15,096	0	58,897	1,365	2.86	0.00	11.15	0.26	14.01	0.26
9854 South Street	80,724	0	441,570	11,934	15.29	0.00	83.63	2.26	98.92	2.26
9882 Bristol	60,851	0	221,202	4,787	11.52	0.00	41.89	0.91	53.42	0.91
9872 Family Dollar	15,910	365	4,559	2,698	3.01	0.07	0.86	0.51	3.88	0.58
9866 Cottondale	71,809	0	348,188	8,838	13.60	0.00	65.94	1.67	79.54	1.67
9952 Altha	47,917	0	237,241	1,521	9.08	0.00	44.93	0.29	54.01	0.29
9972 Blountstown	32,921	0	70,769	1,562	6.24	0.00	13.40	0.30	19.64	0.30
9512 Railroad	41,251	0	81,053	8,206	7.81	0.00	15.35	1.55	23.16	1.55
9872 Hospital	16,417	0	193,307	1,843	3.11	0.00	36.61	0.35	39.72	0.35
9752 Industrial Park	18,609	0	3,589	1,371	3.52	0.00	0.68	0.26	4.20	0.26
Dist. Totals	**687,513**	**365**	**2,592,502**	**151,815**	**130.21**	**0.07**	**491.00**	**28.75**	**621.21**	**28.82**
69KV Line	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
138KV Line	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
D&T Totals	**687,513**	**365**	**2,592,502**	**151,815**	**130.21**	**0.07**	**491.00**	**28.75**	**621.21**	**28.82**

* - Basis for tracking and managing 2008 and future tree trimming cycles (3 yr. mains and 6 yr. laterals) - Data source is our mapping system.

1/26/2009

2008 FPUC NW Division - D&T Vegetation Management**										
Feeder #	Main Feeder		Feeder Laterals		Main Feeder		Feeder Laterals		TOTALS	
	OH (feet)	UG (feet)	OH (feet)	UG (feet)	OH (miles)	UG (miles)	OH (miles)	UG (miles)	OH (miles)	UG (miles)
9742 Greenwood/ Malone	0	0	155,232	0	0.00	0.00	29.40	0.00	29.40	0.00
9722 Dogwood Heights	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9982 College	0	0	122,496	0	0.00	0.00	23.20	0.00	23.20	0.00
9932 Indian Springs	29,040	0	49,196	0	5.50	0.00	9.32	0.00	14.82	0.00
9732 Prison	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9942 Hwy 90E	67,057	0	64,928	0	12.70	0.00	12.30	0.00	25.00	0.00
9992 Hwy 90W	15,096	0	0	0	2.86	0.00	0.00	0.00	2.86	0.00
9854 South Street	80,724	0	30,960	0	15.29	0.00	5.86	0.00	21.15	0.00
9882 Bristol	54,766	0	10,560	0	10.37	0.00	2.00	0.00	12.37	0.00
9872 Family Dollar	15,910	0	0	0	3.01	0.00	0.00	0.00	3.01	0.00
9866 Cottondale	0	0	21,120	0	0.00	0.00	4.00	0.00	4.00	0.00
9952 Altha	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9972 Blountstown	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9512 Railroad	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9872 Hospital	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
9752 Industrial Park	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
Dist. Totals	**262,593**	**0**	**454,492**	**0**	**49.73**	**0.00**	**86.08**	**0.00**	**135.81**	**0.00**
69KV Line	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
138KV Line	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
D&T Totals	**262,593**	**0**	**454,492**	**0**	**49.73**	**0.00**	**86.08**	**0.00**	**135.81**	**0.00**

**- 2008 Trim Totals

1/26/2009

Initiative #2 – Joint Use Pole Attachment Audit

During 2008, two hundred and eighty six (286) detailed pole loading inspections were performed in both divisions by a contractor as part of the Wood Pole Inspection Program. Poles having 3rd party attachments of ½" or larger in diameter were selected for Loading Assessment using a contractor supplied computer program called LoadCalc. When conducting the Loading Assessment, span lengths, attachment heights, wire sizes, and 3rd party attachments were analyzed to estimate pole loading. A complete loading data report was supplied to FPUC by the inspector. Poles with loading estimates at or above 100% of design load are automatically included in the FPUC post inspection follow-up plan. During the 2008 inspection, 14 poles were identified in both divisions as having loading levels estimated to be at or above 100%. FPUC will perform an additional load assessment on these poles using a computer program called Pole Foreman and using the extreme wind criteria discussed in Section III – Storm Hardening Update. Based upon the results of the Pole Foreman assessment, poles with load levels between 90% and 100% may also need to be included in the follow-up assessment. Poles that are overloaded following the Pole Foreman assessment will be scheduled for replacement. Joint Use partners will be notified of the replacements and their locations so their attachments can be transferred.

FPUC currently has joint use agreements with multiple telecommunication and cable television providers in both electric divisions. Although the agreements include provisions for joint use attachment audits, these audits have not been performed regularly as allowed by the contracts. Audits will be initiated as soon as practicable with all joint use attachers in order to identify the total number of attachments and identify any attachment problems that may exist. Data collected during the audit process will be analyzed in order to determine the number of poles found to be overloaded, the number of unauthorized joint use attachments, and the number of customer outages related to these situations, if applicable. The goal is to conduct a thorough joint use audit once every five years.

Joint use attachment information gathering for mapping purposes was recently completed and the data was uploaded into the new FPUC geographic information system (GIS) in both divisions. The GIS joint use attachment information will be used as a basis when conducting the audits.

Initiative #3 – Six Year Transmission Structure Inspection Program

Transmission inspections will be completed on all transmission facilities and will include climbing patrols of the 138 KV and 69 KV transmission lines owned by FPUC. This inspection will ensure that all structures have a detailed inspection performed at a minimum of every six years. The inspection will include ninety five (95) 138 KV structures and two hundred two (202) 69 KV structures. The inspections will ensure that all transmission towers and other transmission line supporting equipment such as insulators, guying, grounding, conductor splicing, cross-braces, cross-arms, bolts, etc structurally sound and firmly attached. Customers who own 69 KV transmission line structures connected to FPUC will be strongly encouraged to complete a similar type inspection. In addition to the six year climbing inspections mentioned above, wood transmission poles are also included in the 8 year wood pole ground-line condition inspection and treatment program.

Substation equipment will also be inspected annually to document the integrity of the facility and identify any deficiencies that require action. Substations will be inspected to ensure that all structures, buss work, insulators, grounding, bracing, bolts, etc are structurally sound and firmly attached.

Transmission Circuit, Substation and Other Equipment Inspections

	Activity		Current Budget**		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total transmission circuits.	19.5	19.5	NA	NA	19.5	NA
(B) Planned transmission circuit inspections *	19.5	19.5	NA	NA	19.5	NA
(C) Completed transmission circuit * inspections.	19.5	19.5	NA	NA	19.5	NA
(D) Percent of transmission circuit inspections completed. *	100%	100%	NA	NA	100%	NA
(E) Planned transmission substation inspections	48	48	NA	NA	48	NA
(F) Completed transmission substation * inspections.	48	48	NA	NA	48	NA
(G) Percent transmission substation inspections completed.*	100%	100%	NA	NA	100%	NA
(H) Planned transmission equipment inspections (other equipment).	NA	NA	NA	NA	NA	NA
(I) Completed transmission equipment inspections (other equipment).	NA	NA	NA	NA	NA	NA
(J) Percent of transmission equipment inspections completed (other equipment).	NA	NA	NA	NA	NA	NA

* Inspections performed were visual

** Current accounting system does not provide data to this level

Transmission Tower Structure Inspections

	Activity		Current Budget**		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total transmission tower structures.	2	2	NA	NA	2	NA
(B) Planned transmission tower structure Inspections *	2	2	NA	NA	2	NA
(C) Completed transmission tower structure inspections. *	2	2	NA	NA	2	NA
(D) Percent of transmission tower structure inspections completed.	100%	100%	NA	NA	100%	NA

* Inspections performed were visual
** Current accounting system does not provide data to this level

Transmission Pole Inspections

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of transmission poles.	NA	NA	NA	NA	NA	NA
(B) Number of transmission poles strength tested.	NA	NA	NA	NA	NA	NA
(C) Number of transmission poles passing strength test.	NA	NA	NA	NA	NA	NA
(D) Number of transmission poles failing strength test (overloaded).	NA	NA	NA	NA	NA	NA
(E) Number of transmission poles failing strength test (other reasons).	NA	NA	NA	NA	NA	NA
(F) Number of transmission poles corrected (strength failure).	NA	NA	NA	NA	NA	NA
(G) Number of transmission poles corrected (other reasons).	NA	NA	NA	NA	NA	NA
(H) Total transmission poles replaced.	NA	NA	NA	NA	NA	NA

Note: FPUC includes wood transmission poles in the eight year ground-line condition inspection and treatment program. The inspections include strength testing. No wood transmission poles were inspected in the 2008 cycle.

Initiative #4 – Storm Hardening of Existing Transmission Structures

FPUC's existing 138 KV system was constructed using concrete and steel poles or towers. The construction generally complies with the new storm hardening requirements. This system will continue to be inspected as outlined in Initiative #3 - Six Year Transmission Structure Inspection Program to ensure the integrity of the system.

FPUC's 69 KV system consist of a total of 212 poles of which 22 are concrete poles. All installations met the NESC code requirements in effect at the time of construction. A policy of replacing existing wood poles with concrete has been in place for some time. This policy requires that when it becomes necessary to replace a wood pole due to construction requirements or concerns with the integrity of the pole, a concrete pole that meets current NESC codes and storm hardening requirements will be utilized.

There are currently two transmission storm hardening projects in pre-construction planning. A transmission pole replacement project for South Fletcher Avenue was initiated in 2008 and is in design phase. The current pole line contains a mix of wooden and concrete structures. The project will replace the remaining 14 wood poles with concrete poles. Design should be complete by April 1, 2009. Materials, including poles should be received by July 1, 2009. The estimated projected completion date is October 1, 2009.

The second project is to replace 11 wood poles with concrete poles along SR 200. Design work will begin around August 1, 2009. Anticipated completion of this project is March 1, 2010.

Design for these projects will be completed in accordance with the new storm hardening criteria outlined in the FPUC Storm Hardening Plan (130MPH Extreme wind and grade B construction).

There are no other transmission hardening projects under consideration at this time.

Hardening of Existing Transmission Structures

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Transmission structures scheduled for hardening.	**14**	**0**	**$563.6K**	**$9.4K**	**11**	**$170K***
(B) Transmission structures hardening completed.	**0**	**0**	**0**	**0**	**0**	**0**
(C) Percent transmission structures hardening completed.	**0**	**0**	**0**	**0**	**0**	**0**

* Partial budget for 2009. Project scheduled for completion in 2010.

Initiative #5 – Geographic Information System

FPUC has implemented a GIS mapping system for both divisions. The UAI system is an ESRI based system using ArcGIS to identify the distribution and transmission facilities overlaid on a land base system. The system locates the facilities on the land base while allowing the ability to enter data on all 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. The OMS was fully implemented in the Northwest Division in 2008. The improved data collection resulted in higher (poorer) reliability numbers. This was expected and can be attributed to better data collection, not a decline in system or personnel performance. The OMS was fully implemented in Northeast Division on January 1, 2009. A similar decline is anticipated in reliability indices for NE for 2009. While FPUC is anxious to use the OMS data to gauge the effectiveness of storm hardening programs by observing trends in reliability indices, it is apparent that using prior year's information will not produce credible trending data at this time. Looking to the future, FPUC considers 2008 to be the baseline year for OMS data for Northwest Division and 2009 will be the baseline year for Northeast Division.

The GIS 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.

Initiative #6 - Post-Storm Data Collection and Forensic Analysis

FPUC has started the process of establishing an internal forensics team. Preliminary plans include hiring a consultant to collect, analyze, and report on field data and the additional data entered into the Outage manage System (OMS). FPUC attended the Public Utility Research Center (PURC) May 15, 2008 meeting of the Forensics Research Team to participate in formulating standard procedures for collecting and reporting post storm data. FPUC intends to utilize the standard reporting forms located at http://www.rodtec.org/PURC/ for submitting forensic data to the FPSC.

The following is a preliminary copy of the FPUC "FORENSIC DATA COLLECTION AND REPORTING" procedure:

FORENSIC DATA COLLECTION AND REPORTING

PURPOSE:

To set standards and responsibilities for the collection, assessment, and reporting of storm related damage to FPUC transmission, substation, and distribution structures and equipment. To accomplish these tasks in an orderly manner, safely, and with a minimum of interference with the process of system restoration following a storm.

PROCESS:

A minimum of 72 hours prior to the storm; FPU will initiate the forensic process by alerting team members both in-house and external of the impending event. All contact information will be verified for accuracy and all equipment will be checked to make sure it is in good working order.

48 hours prior to the storm; begin the process of accessing where the storm is most likely to strike and determine the best locations for forensic teams. Inform team members of more specific information as it becomes available.

24 hours prior to the storm; notify all team members of actual crew personnel, mobilization plan, safety procedures, and reporting instructions.

After the storm; perform a forensic investigation at each location encountered that meets reportable criteria. Damage locations to include but not limited to poles, wires, crossarms, insulators, transformers, reclosers, capacitor banks, cutouts, any other equipment that is damaged or has caused a customer outage.

Damage areas will be determined and teams dispatched utilizing FPU's outage management system, reports from customers, and reports from restoration crews.

RESPONSIBILITIES:

An FPUC Forensic Team Leader will be assigned and will be responsible for managing the overall forensic effort. This will include tracking storm progress, coordinating team deployment, communication with local ERT Centers, review findings, and generating final reports.

Florida Public Utilities Company will hire a consultant to provide forensic investigative teams that will be responsible for safely collecting information on storm damage. Damaged facilities are defined as broken poles, leaning poles, broken or downed wires, damaged line equipment, and any other incident that has caused a customer outage.

REPORTING:

All post storm forensic data collected will be entered in the PURC form that can be accessed at http://www.rodtec.org/PURC/ in your browser. The form allows both overhead and underground damage to be entered and data must be entered separately for each incident.

Initiative #7 – Reliability Performance of Overhead vs Underground Systems

FPUC will continue to collect outage data for overhead and underground systems in order to evaluate the reliability indices associated with the two systems. The systems are in place for this type of analysis and have been enhanced with the installation of Customer Outage Management Systems (OMS) in both divisions. Comparative reliability indices for both divisions are included in the section.

There were no projects in 2008 in which overhead lines were converted to underground. FPUC has not been officially contacted by any government agency requesting that FPUC provide cost estimates for converting overhead lines to underground.

2008 - Reliability Indicators by (OH and UG) FPUC Total

OH or UG	Number of Outage Events (N)	Average Duration (L-Bar)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
Overhead	1087	94.74	81.65	4,182,320	51,225	102,981	148.32	1.82
Underground	63	157.78	97.79	276,656	2,829	9,940	9.81	0.10
FPUC Total	1150	98.19	82.49	4,458,976	54,054	112,921	158.13	1.92

Total No. of Customers at end of 2008 ==> **28,198**

2008 - Reliability Indicators by Feeder (OH) Northeast Division – FPUC (Adjusted)

Feeder	Number of Outage Events (N)	Average Duration (L-Bar)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
102	24	92.88	108.06	30041	278	2229		
104	3	95.00	86.09	3960	46	285		
110	6	133.50	118.45	16465	139	801		
111	7	135.29	78.22	100908	1290	947		
209	13	100.23	96.38	253965	2635	1303		
210	28	70.96	48.89	112060	2292	1987		
211	38	73.29	51.29	373956	7291	2785		
212	21	93.62	141.31	144273	1021	1966		
214	12	50.50	43.70	28228	646	606		
215	5	86.60	50.74	30700	605	433		
310	11	62.36	49.42	3608	73	686		
311	27	72.41	83.13	22280	268	1955		
NE	**195**	**81.96**	**67.56**	**1,120,444**	**16,584**	**15,983**	**72.87**	**1.08**

Total No. of Customers at end of 2008 ==> **15,376**

2008 - Reliability Indicators by Feeder (UG) Northeast Division - FPUC (Adjusted)

Feeder	Number of Outage Events (N)	Average Duration (L-Bar)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
102	3	94.33	137.17	823	6	283		
104	2	84.00	102.67	924	9	168		
110	35	162.97	72.41	153725	2123	5704		
111	12	198.50	180.44	112955	626	2382		
209	2	90.00	120.00	480	4	180		
210	1	109.00	109.00	109	1	109		
212	1	45.00	45.00	45	1	45		
310	2	156.50	174.09	3830	22	313		
311	5	151.20	101.76	3765	37	756		
NE	**63**	**157.78**	**97.79**	**276,656**	**2,829**	**9,940**	**17.99**	**0.18**

Total No. of Customers at end of 2008 ==> **15,376**

2008 - Reliability Indicators by Feeder (OH) Northwest Division – FPUC (Adjusted)

Feeder	Number of Outage Events (N)	Average Duration (L-BAR)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
Altha	44	101.66	117.39	146148.60	1245.00	4473.03		
Blountstown	8	59.73	57.64	10432.65	181.00	477.82		
Bristol	69	86.33	71.71	97739.98	1363.00	5956.85		
College	116	97.46	58.73	249847.50	4254.00	11305.72		
Cottondale	135	109.97	70.08	357424.00	5100.00	14846.18		
Dogwood Heights	14	103.15	40.31	17335.02	430.00	1444.05		
Greenwood/ Malone	82	115.52	103.79	314809.00	3033.00	9473.01		
Hospital	49	107.69	102.37	330348.20	3227.00	5277.05		
Hwy 90 E	87	97.47	132.32	417340.10	3154.00	8479.70		
Hwy 90 W	46	75.98	62.05	273873.60	4414.00	3494.88		
Industrial Park	7	90.68	118.09	12517.32	106.00	634.73		
Indian Springs	78	83.99	103.00	335373.90	3256.00	6551.67		
Prison	8	90.51	87.74	2105.82	24.00	724.05		
Railroad	54	71.51	96.73	207577.50	2146.00	3861.32		
South Street	93	105.80	106.74	288844.30	2706.00	9839.40		
Family Dollar	2	79.21	79.21	158.42	2.00	158.42		
NW System	892	97.53	88.39	3,061,875.75	34,641.00	86,997.88	238.80	2.70

Total No. of Customers at end of 2008 ==> 12822

2008 - Reliability Indicators by Feeder (UG) Northwest Division – FPUC

Feeder	Number of Outage Events (N)	Average Duration (L-Bar)	CAIDI	Sum of all Customer Min. Interrupted (CMI)	Total Customer Interruptions (CI)	Total Outage Duration (L)	SAIDI	SAIFI
NA (None)	NA	NA	NA	NA	NA	NA	NA	NA

Total No. of Customers at end of 2008 ==> **12,822**

Initiative #8 – Utility Company Coordination with Local Governments

FPUC actively participates with local governments in pre-planning for emergency situations and in coordinating activities during emergency situations. During 2008, Tropical Storm Fay afforded both divisions the opportunity to work with local governments as the storm moved from east to west along the I-10 corridor. Current practice is to have FPUC personnel located at the county EOC's on a 24 hour basis during emergency situations to ensure good communications. However, Tropical Storm Fay did not reach an intensity level or cause significant enough damage to require 24 hour participation. However, FPUC personnel were on hand for daily storm updates made by EOC personnel.

FPUC continues to cooperate with local governments in actively discussing both undergrounding and tree trimming issues as they arise. For example, in the fall of 2005, the City of Fernandina Beach passed a resolution to form an ad hoc committee to study the costs and benefits of undergrounding utilities in areas of the City that pose the greatest risk for service interruption due to natural events. Florida Public Utilities and joint use pole attachment partners have been active participants on this committee since its inception. This participation has not only fostered improved relationships with City personnel but has also served to improve the working relationship with joint use partners.

Initiative #9 – Collaborative Research

FPUC is currently participating with the Public Utility Research Center (PURC) along with other investor owned, cooperative, and municipal electric utilities in order to perform beneficial research regarding hurricane winds and storm surge within the state. PURC has demonstrated the ability to lead and coordinate multiple groups in research activities. FPUC will continue to support this effort but does not intend to conduct any additional research at this time.

PURC made a progress report to the Hurricane Hardening Steering Committee on February 18, 2009. The agenda from the meeting (teleconference) is included in this section. Progress report highlights attached to this section include the PURC Hurricane Hardening Report to the steering committee dated February 16, 2009 and an overview of the PURC project continuation budget for 2009.

Attached at the end of this update report as Attachment A is an additional report presentation on the 2nd Workshop for Best Practices in Vegetation Management.

Hurricane Hardening Steering Committee
Conference Call **3:30 PM 02/18/2009**
Call-in #800-747-5150; Code 3926148

Agenda

1. PURC report for Steering Committee – Ted
    a. Draft of final report distributed with agenda
    b. Report from Kurt
    c. Feedback from committee

2. Undergrounding
    a. Final model updates – Ted Kury
    b. Testing workshop

3. Vegetation Management – Ted and Barry
    a. Final report from workshop

4. PURC – Ted
    a. PURC 2009 budgets
    b. Steering Committee Meeting Minutes

5. **Next conference call is Wednesday, March 4 2009 at 3:30 pm**

Report on Collaborative Research for Hurricane Hardening

Provided by

The Public Utility Research Center
University of Florida

To the

Utility Sponsor Steering Committee

February 16, 2009

I. Introduction

The Florida Public Service Commission (FPSC) issued Order No. PSC-06-00351-PAA-EI on April 25, 2006 (Order 06-0351) directing each investor-owned electric utility (IOU) 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. This order directed IOUs to solicit participation from municipal electric utilities and rural electric cooperatives in addition to available educational and research organizations. As means of accomplishing this task, the IOUs joined with the municipal electric utilities and rural electric cooperatives in the state (collectively referred to as the Project Sponsors) to form a Steering Committee of representatives from each utility and entered into a Memorandum of Understanding (MOU) with the University of Florida's Public Utility Research Center (PURC).

The MOU has a term beginning March 1, 2006 and ending May 31, 2009, and may be renewed by mutual agreement of the Project Sponsors and PURC. In serving as the research coordinator for the Project outlined by the MOU, PURC manages the work flow 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. PURC's budgets for this work are in Appendix A.

The work in this effort began with a workshop in June 2006 at which utility managers and hazard research professionals discussed means to prepare Florida's electric infrastructure to better withstand and recover from hurricanes.[1] The presentations and subsequent dialogue indicated interest in wind research, materials development and analysis, forensic analysis, cost-effectiveness of storm hardening options, joint-use loads, and the economics of undergrounding.

Based in part on the results of the initial workshop, the Steering Committee at its initial meeting identified four primary research areas, namely the economics of undergrounding, the measurement and analysis of hurricane winds at a granular level, best practices in vegetation management, and improved materials for distribution facilities. The Steering Committee decided to initiate research on the first two topics, to hold a workshop on the vegetation management topic, and to look to vendors to conduct research on improved materials. The Steering Committee continues to hold regular conference calls and meet on a regular basis, with the 2009 annual Steering Committee meeting held February 5, 2009 in Gainesville, FL.

This report summarizes the work completed on the Steering Committee's areas of focus, with detail about specific accomplishments and activities from March 2008 through February 2009.[2] Sections II through IV provide information on the undergrounding research, wind research, and vegetation management workshop respectively. The budgeted dollars shown for each project are allocated on a percentage basis to each of the Project Sponsors as outlined in the MOU. PURC's budgets for work completed in 2008 are listed as Appendix A. The Conclusion of this report provides an overall assessment of the collaborative research program to date, including operational and financial viability and future planning to the extent these items are not already covered in the other sections of this report.

II. Undergrounding

An important consequence of hurricanes is that they often cause major power outages, which can last for days or even weeks. These outages almost always lead to a public outcry for electric utilities to move overhead power lines under ground. To some it seems intuitive that undergrounding facilities should protect them from damage. However, research shows that this is not necessarily the case: while underground systems on average have fewer outages than overhead systems, they can sometimes take longer to repair. Furthermore forensic

[1] Presentations and the workshop report are available at http://www.cba.ufl.edu/purc/research/energy.asp under the heading "Hurricane Hardening Workshop."

[2] Previous reports are available at http://www.cba.ufl.edu/purc/docs/report_PURC_Collaborative_Research_2007.pdf and http://www.cba.ufl.edu/purc/docs/report_PURC_Collaborative_Research_2008.pdf.

analyses of recent hurricane damage in Florida found that underground systems may be particularly susceptible to storm surge.

The purpose of the collaborate research on undergrounding is to address the lacuna in existing research on the economics and effects of hardening strategies, including undergrounding, so that service providers, regulators, and customers can make informed decisions about the desirability of undergrounding policies and specific undergrounding projects.

The initial project was divided into three phases. Phase I was a meta-analysis of existing research, reports, methodologies, and case studies.[3] 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.[4] Phase III developed an *ex ante* methodology to identify and evaluate the costs and benefits of undergrounding specific facilities in Florida. Each phase of the project included tasks of data collection, analysis, and reporting. Although the primary focus is the impact of undergrounding on hurricane performance, this study also considered benefits and drawbacks of undergrounding during non-hurricane conditions.

The Steering Committee received the final deliverables on the Undergrounding project from the vendor Quanta Technologies[5] (formerly InfraSource Technology), including the final Phase III model. The final Phase III model was delivered on May 21, 2008 as the culmination of Phase III.[6]

The utility sponsors and PURC are currently testing the model for validity and robustness to ensure that it provides useful and reliable results. The testing culmination is scheduled for 2009. PURC and the utility sponsors are also working to fill information gaps for model inputs. Some historical data needed to examine the economics of undergrounding do not exist. These data needs have been identified and the utilities are putting in place procedures to gather or approximate the information that is needed.

Appendix A provides the 2008 budgets for this work.

III. Wind Data Collection

[3] The Phase I report is available at http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment.pdf.
[4] The Phase II report is available at http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment2.pdf.
[5] The Request for Proposal is available at http://www.cba.ufl.edu/purc/docs/initiatives_HHRequestProposal.pdf.
[6] The Phase III report is available at http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment3.pdf.

Appropriate hardening of the electric utility infrastructure against hurricane winds requires: 1) an accurate characterization of severe dynamic wind loading, 2) an understanding of the likely failure modes for different wind conditions, and 3) a means of evaluating the effectiveness of hardening solutions prior to implementation.

The Project Sponsors addressed the first requirement by contracting with the University of Florida's Department of Civil & Coastal Engineering (Department) to establish a granular wind observation network designed to capture the behavior of the dynamic wind field upon hurricane landfall. Through a partnership with WeatherFlow, the network plans were expanded to include permanent stations around the coast of Florida that capture wind, temperature, and barometric pressure data 24/7. In 2008 the opportunities for data collected on wind continued to expand this year with the addition of 50 wind stations. Appendix B details the locations of the wind data collection sites. Appendix C has a detailed annual report prepared by Dr. Kurt Gurley.

To address the second purpose of this project, namely to better understand the likely failure modes for different severe weather conditions, PURC developed a uniform forensics data gathering system for use by the utilities and a database that will allow for data sharing and that will match the forensics data with the wind monitoring and other weather data. The data gathering system consists of a uniform entry method that can be used on a tablet PC or entered onto the web once gathered by another means. Once a hurricane occurs and wind data is captured, forensic investigations of utilities infrastructure failure, conducted by the utility companies, will be overlaid with wind observations to correlate failure modes to wind speed and turbulence characteristics. Utility sponsors and PURC will analyze such data.

Investment in research collaboration reached outside of the State of Florida this year with expertise and resources invested in the states of Texas and Louisiana. PURC is reaching out to officials in those states to determine if synergies can be developed that will add information to the Florida research and economize on costs.

IV. Vegetation Management

The goal of this project was 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. The initial Vegetation Management workshop was held March 5-6, 2007; based upon the success of the workshop, the Steering Committee decided to host the workshop again in 2009.

The second Vegetation Management workshop was held on January 26 & 27,

2009. The meeting hosted representatives involved with all aspects of vegetation management for two days in Orlando, FL. Based upon the success and collaborative benefits reaped from the initial workshop, this meeting once again brought together industry experts in the field of vegetation management within Florida utilities and afforded time to share best practices in a collaborative learning environment.

The workshop began with an introduction from Mr. Barry Moline, Executive Director of FMEA, and Dr. Mark Jamison, Director of PURC. Mr. Moline gave a brief overview of the events that led to the March 2007 workshop on vegetation management, and the work that was accomplished there. Dr. Jamison also welcomed the participants, introduced representatives from the FPSC and PURC in attendance, and offered a short discussion on the three other research initiatives of the steering committee: wind research, the economics of undergrounding, and forensics.
Representatives in attendance were then requested to deliver presentations on the status of their respective utility's vegetation management practices. Presentations included detail about trimming cycles, budgetary and staffing information, best practices, and other issues. Presentations were delivered by: Mr. Ken Lecasse of Sumter Electric Cooperative, Mr. Barry Grubb of FP&L, Mr. Mark Brown from the City of Winter Park, Mr. Dennis Spellicy of Progress Energy, Mr. Luke DiRuzza of TECO, and Ms. Diana Gillman of Lee County Electric Cooperative.

After each presentation, participants engaged in question and answer sessions. The issues raised during the presentations and during the question and answer periods included: problems with hiring and retaining qualified crews, the usefulness of third party audits of vegetation management practices and crew performance, growing support for reliability-based vegetation management programs, the relationship between best practices for day-to-day reliability versus reliability for extreme weather events, data gathering to learn more about costs and reliability for undergrounding versus overhead line placement and the formulation of new best practices.

Mr. Devlin Higgins then delivered the FPSC staff presentation. The presentation discussed the severity of the 2004-2005 storm seasons and how the FPSC tried to learn from these events. This led the PSC to open dockets to discuss undergrounding, initiate the storm plan process, and review distribution construction standards. He reported that the FPSC has ten on-going initiatives, of which vegetation management is included, and that all investor owned utilities (IOUs), municipally-owned utilities, and cooperatives are on track in the third year of the program. In response, the volume of customer complaints is down and utility reporting is going well. He also pointed out that all reports to the legislature and other documents are on the FPSC website.

Mr. Higgins then answered questions on the criteria considered by the FPSC to evaluate trim cycles, the level of review given to utility reports, and the status of regulatory changes that might be introduced based on these reports. Finally, Mr. Higgins reminded the participants that utilities can always bring their concerns to the FPSC.

Mr. Moline's presentation addressed the development of public policy relevant to vegetation management and how utilities can work with the FPSC on these issues. He talked about how vegetation management tends to be a post-hurricane issue because that is when it is urgent and noticeable. Otherwise, the legislature is generally occupied with more pressing matters. He also talked about the difficulties that utilities and cities encountered when pursuing standards for vegetation management practices that would have improved uniformity across governmental and community organizations.

The last presentation of the day was from Mr. Ted Kury, Director of Energy Studies at PURC, who summarized the roundtable findings from the 2007 workshop. This presentation sought to frame the issues from the 2007 workshop and lay the foundation for the discussion of these, and other issues, on the second day of the workshop.

V. Conclusions

In response to the FPSC's Order 06-0351, IOUs, municipal electric utilities and rural electric cooperatives joined together and retained PURC to coordinate research on electric infrastructure hardening. Costs have been incurred according to the funding schedule set by the Steering Committee. This year, costs incurred have been towards research in the initiatives of granular wind research, undergrounding research, vegetation management, and PURC's coordinating work. The Steering Committee is currently considering next steps in these research areas.

The benefits of the work realized from the time of the last report (March 2008) to the time of this report include increased and sustained collaboration and discussion between the members of the Steering Committee, greater knowledge of the determinants of damage during storm and non-storm times, greater knowledge and data from wind collection stations and post-hurricane forensics in the State of Florida, and increased state-to-state collaboration with others in the Atlantic Basin Hurricane Zone.

Appendix A. PURC Budgets for 2008

RESEARCH COORDINATION FOR ELECTRICITY INFRASTRUCTURE HARDENING

Phase V - *commencing January 1, 2008 and ending June 30, 2008*

Undergrounding Study			
Personnel			
PURC Faculty	$ 11,200.00		
Grad Student	$ 1,650.00		
Administrative	$ 2,800.00		
		$ 15,650.00	
Wind Study			
Personnel			
PURC Faculty	$ 11,200.00		
Administrative	$ 2,800.00		
		$ 14,000.00	
Travel & Meetings			
Steering Comm. Mtgs	$ 300.00		
Tallahassee Meetings	$ 500.00		
Forensics Workshop	$ 300.00		
		$ 300.00	
Miscellaneous			
Conference Calls		$ 2,500.00	
Subtotal			$ 32,450.00
University Overhead (25%)			$ 10,816.67
Total			$ 43,266.67

Faculty Activities

Examining & editing reports on work plan for testing ex ante methodology

Investigating hurricane models

Performing background research on hardening issues

Drafting report for FPSC

Plan steering committee meeting for early 2008

Planning Forensics Workshop - spring 2008

Coordinating webinar for model testing

Organizing and managing weekly conference calls

Attending meetings with FPSC staff or sponsors

Managing PURC staff working on project

Graduate Student Activities

Participating in and taking minutes for weekly conference calls

Maintaining PURC work plan for overseeing projects

Administrative Activities

Proofreading all materials

Taking minutes on conference calls

Organizing conference calls and meetings

Developing all administrative documents, such as contact lists and invoices

Developing budgets

Financial management

	Phase VI -	commencing July 1, 2008 and ending December 31, 2008		
Undergrounding Study				
Personnel				
PURC Faculty	$ 7,000.00			Faculty Activities
Grad Student	$ 3,960.00			Coordinating work on model data gaps
Administrative	$ 2,800.00			Developing forensic data input formats
		$ 13,760.00		Plan vegetation management workshop for early 2009
Wind Study				Plan steering committee meeting for early 2009
Personnel				Coordinating testing of model for report to FPSC
PURC Faculty	$ 11,200.00			Organizing and managing conference calls
Grad Student	$ 1,320.00			Attending meetings with FPSC staff or sponsors
Administrative	$ 2,800.00			Managing PURC staff working on project
		$ 15,320.00		
				Graduate Student Activities
Miscellaneous				Developing forensic data input formats
Grad Student	$ 1,320.00			Maintaining forensics database
Conference Calls	$ 1,000.00			Planning vegetation management
		$ 2,320.00		workshop for early 2009
				Testing of undergrounding model
Subtotal		$ 29,080.00		Participating in and taking minutes for weekly conference calls
University Overhead (25%)		$ 9,693.33		Maintaining PURC work plan for overseeing projects
Total		$ 38,773.33		Administrative Activities
				Proofreading all materials
				Taking minutes on conference calls
				Organizing conference calls and meetings
				Developing all administrative documents,
				such as contact lists and invoices
				Developing budgets
				Financial management

Appendix B. Wind Stations

Appendix C: Wind Report by Dr. Kurt Gurley

Testing the WeatherFlow instrumentation package for the fixed wind monitoring network
2/12/2009

The Weatherflow (WF) instrumentation package was tested in a full-scale hurricane simulator facility located on the University of Florida Eastside Campus. This facility produces full-scale hurricane intensity winds and wind driven rain over a large enough cross section to immerse the entire WF instrumentation hardware package in these extreme conditions.

The purpose of these tests was to evaluate the performance of the WF instrumentation package when subjected to extreme wind and rain conditions similar to actual hurricane conditions. "Performance" includes the ability of the instrumentation package to collect and transmit data to the WF online data center during high wind and rain events, and the ability to physically withstand these conditions with no apparent damage.

The instrumentation package that was tested includes the anemometer (wind velocity measurement device), the pressure sensor, the two power supplies (mounted solar panel and battery pack), the data collection, data storage, and remote transmission (cellular modem) hardware, and the lightning rod. The batteries, data collection and storage, and cellular communication hardware are contained within a water tight casing. In actual field installation, this casing, anemometer, pressure sensor, solar panel, and lightning rod are mounted in close proximity to each other on either a concrete pole or existing communications tower. The relative orientation of these components to each other was accurately replicated during testing.

The specialized concrete pole to which this instrumentation package is mounted in actual field application was not tested for three reasons. 1) logistics and expense of properly installing the custom pole at the UF testing facility were prohibitive, 2) the wind field generated by the hurricane simulator is not wide / tall enough to properly envelop the entire pole in hurricane conditions (making any results of such a pole-resistance-to-wind experiment of little value for accurate performance evaluation), 3) the performance of concrete poles in hurricanes indicates that the expected performance of the Valmont poles (custom designed, constructed and installed for much higher winds than standard concrete poles) is of far less concern than the performance of the WF instrumentation package. That is, the WF instrumentation package is more vulnerable than the pole it is mounted to, and therefore represents the weakest link and the logical focus of testing.

Test procedure
The WF instrumentation package was mounted to the top of a 6' tall wooden pole that represents the concrete pole. The bottom end of the wooden pole was fixed within a metal sleeve, which was fixed to a heavy scissor lift beneath wind field. By design, the pole was thus impervious to the simulated hurricane winds and rain, and the WF instrumentation package was evaluated as it would have been mounted in an actual installation.

The sleeve housing the bottom of the mounting pole allowed for controlled 360 degree rotation of the pole, clamped into the desired position between tests. This allowed tests of the WF instrumentation package from all possible wind/rain approach angles (wind approaching the front face of the solar panel, the back face, the side, etc.).

A series of tests were conducted at wind approach angles from 0 degree (solar panel facing wind, through 235 degrees, at 45 degree intervals. Each test subjected the WF instrumentation package to simulated full-scale hurricane winds a rain for less than five minutes. The package was inspected for damage during and after each test. Twice, the water tight casing for the batteries, data storage and cellular hardware was opened between tests to inspect for water infiltration. Video was taken of each test, and numerous digital photographs were taken. Testing was conducted on June 20, 2008.

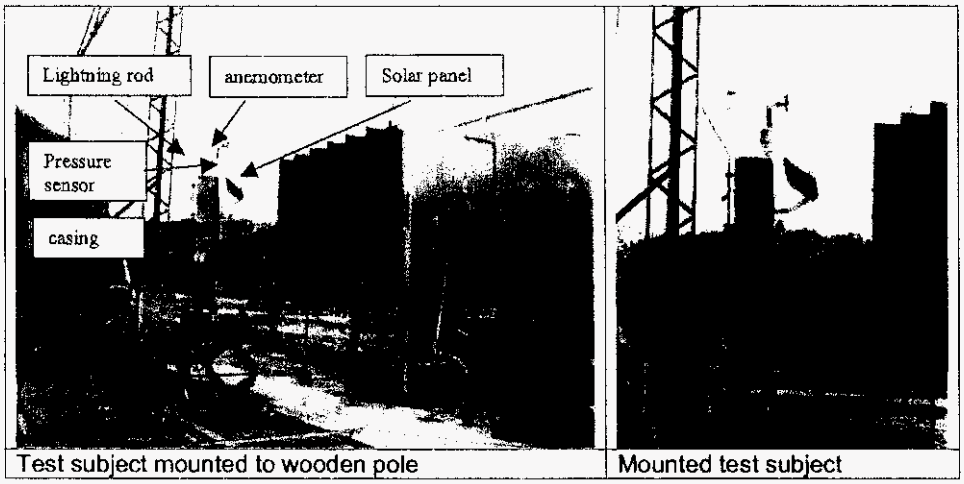
Testing results
Analysis of the testing video footage revealed very slight (expected) vibration of components during testing, but no large magnitude vibrations that would indicate potential problems with fatigue of components or their fasteners. No failures of any components occurred.

The data transmission of wind speed and pressure during testing was successful, indicating that the extreme conditions did not interfere with proper functioning of data collection and transmission.

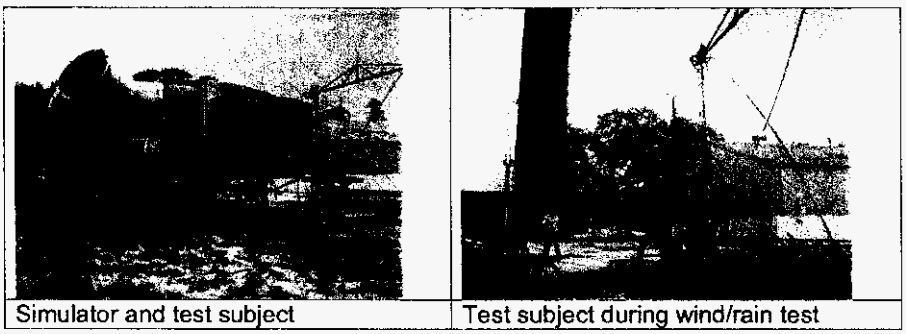
No problems were found regarding water penetration of the water tight enclosure that contains the data storage, batteries, and data transmission hardware.

Summary and comments
The results of the testing did not reveal any causes for concern regarding the proper functioning of the WF instrumentation package during high winds and heavy wind driven rain. While the testing cannot guarantee that the system will function as designed during an actual hurricane event, these results do suggest a high degree of likelihood of the survivability and functionality of the system.

See next page for photos



Test subject mounted to wooden pole | Mounted test subject



Simulator and test subject | Test subject during wind/rain test

RESEARCH COORDINATION FOR ELECTRICITY INFRASTRUCTURE HARDENING

Phase VII - commencing January 1, 2009 and ending May 31, 2009

Undergrounding Study			
Personnel			
PURC Faculty (4 weeks)	$ 11,200.00		Faculty Activities
Grad Student (3 weeks)	$ 1,980.00		Coordinating work on model data gaps
			Reprogramming hurricane model when necessary
Administrative (2 weeks)	$ 2,800.00		
Model testing workshop 3/09	$ 400.00		Developing forensic data input formats
			Plan vegetation management workshop for early 2009
		$ 16,380.00	
			Plan steering committee meeting for early 2009
Wind Study			
			Coordinating testing of model for report to FPSC
Personnel			
			Organizing and managing conference calls
PURC Faculty (1 week)	$ 2,800.00		
			Attending meetings with FPSC staff or sponsors
Grad Student (1 week)	$ 660.00		
			Managing PURC staff working on project
Administrative (1 week)	$ 1,400.00		
		$ 4,860.00	
Vegetation Management			
PURC Faculty (1 week)	$ 2,800.00		Graduate Student Activities
Grad Student (1 week)	$ 660.00		Developing forensic data input formats
Administrative (1 week)	$ 1,400.00		Maintaining forensics database
			Planning vegetation management workshop for early 2009
Travel (1/09 workshop)	$ 500.00		
		$ 5,360.00	Testing of undergrounding model
			Participating in and taking minutes for weekly conference calls
Miscellaneous			
			Maintaining PURC work plan for overseeing projects
Global Crossing Conference Calls	$ 500.00		
Annual Steering Comm meeting 2/5/09	$ 250.00		

	$ 750.00	
		Administrative Activities
		Proofreading all materials
		Taking minutes on conference calls
Subtotal	$ 27,350.00	Organizing conference calls and meetings
		Developing all administrative documents, such as contact lists and invoices
University Overhead (25%)	$ 9,116.67	Developing budgets
		Financial management
Total	$ 36,466.67	

FPL	46.71%	$ 17,033.58
FPUC	0.33%	$ 120.34
Gulf	4.46%	$ 1,626.41
Progress	16.88%	$ 6,155.57
TECO	6.93%	$ 2,527.14
FECA	8.39%	$ 3,059.55
FMEA	14.41%	$ 5,254.85
LCEC	1.89%	$ 689.22
	100.00%	$ 36,466.67

RESEARCH COORDINATION FOR ELECTRICITY INFRASTRUCTURE HARDENING

Phase VIII - commencing June 1, 2009 and ending December 31, 2009

Undergrounding Study

Personnel

PURC Faculty (4 weeks)	$ 11,200.00		Faculty Activities
Grad Student (3 weeks)	$ 1,980.00		Coordinating work on model data gaps
Administrative (2 weeks)	$ 2,800.00		Reprogramming hurricane model when necessary
Possible workshop on forensic data	$ 400.00		Developing forensic data input formats
(in the event of a storm)		$ 16,380.00	Coordinating collection of forensic data from utilities
			Facilitating planning meeting(s) and workshop(s)
			Organizing and managing conference calls

Wind Study

Personnel

			Attending meetings with FPSC staff or sponsors
			Managing PURC staff working on project
PURC Faculty (2 weeks)	$ 5,600.00		
Grad Student (2 week)	$ 1,320.00		
Administrative (1 week)	$ 1,400.00		
		$ 8,320.00	Graduate Student Activities

Vegetation Management

			Developing forensic data input formats
PURC Faculty (1 week)	$ 2,800.00		Maintaining forensics database
			Planning vegetation management workshop for early 2009
Grad Student (1 week)	$ 660.00		
Administrative (1 week)	$ 1,400.00		Testing of undergrounding model
			Participating in and taking minutes for weekly conference calls
		$ 4,860.00	
			Maintaining PURC work plan for overseeing projects

Miscellaneous

Global Crossing Conference Calls	$ 500.00		

Travel to FPSC (1 trip)	$ 150.00	
Steering Comm meeting (planning)	$ 400.00	
		$ 1,050.00
Subtotal		$ 30,610.00
University Overhead (25%)		$ 10,203.33
Total		$ 40,813.33

Administrative Activities

Proofreading all materials

Taking minutes on conference calls

Organizing conference calls and meetings

Developing all administrative documents, such as contact lists and invoices

Developing budgets

Financial management

FPL	46.71%	$ 19,063.91
FPUC	0.33%	$ 134.68
Gulf	4.46%	$ 1,820.27
Progress	16.88%	$ 6,889.29
TECO	6.93%	$ 2,828.36
FECA	8.39%	$ 3,424.24
FMEA	14.41%	$ 5,881.20
LCEC	1.89%	$ 771.37
	100.00%	$ 40,813.33

Initiative #10 – Natural Disaster Preparedness and Recovery Program

FPUC will utilize the plan to prepare for storms annually and will ensure all employees are aware of their responsibilities The primary objective of the Disaster Preparedness and Recovery Plan is to provide guidelines under which Florida Public Utilities Company will operate in emergency situations. This information is contained with the Emergency Procedures that are updated on an annual basis, if required. The following objectives are included to ensure orderly and efficient service restoration.

1. The safety of employees, contractors and the general public will have the highest priority.
2. Early damage assessment is required in order to develop manpower requirements.
3. Request additional manpower as soon as conditions and information indicate the need.
4. Provide for orderly restoration activities in order to provide efficient and rapid restoration.
5. Provide all logistical needs for employees and contractors.
6. Provide ongoing preparation of our employees, buildings, equipment and support function in advance of an emergency.
7. Provide support and additional resources for employees and their families should they need assistance to address injury or damage as a result of the emergency situation.

Based on the location of the storm, the division office in that area will be designated as the operations center and all restoration and logistical activities will be coordinated from that location. Restoration activities will be handled in the following manner:

1. During the early stages of the emergency, restoration will be handled in the usual manner. All service will be restored as soon as possible.
2. As the storm intensifies and trouble reaches major proportions, the main restoration activities will be limited to keeping main feeders energized by clearing trouble without making repairs.
3. When the intensity of the storm is such that work can no longer be done safely, all work will cease and personnel will report to the office or other safe locations.
4. When the storm has subsided to a reasonable level and it is safe to begin restoration activities damage assessment and restoration of main feeders to critical customers will begin.
5. Restoration activities will continue in an effort to restore service in the following manner:

    a) Substations
    b) Main feeders to critical customers
    c) Other main feeders
    d) Undamaged primary
    e) Damaged primary, secondary, service, street lights, security lights

These guidelines are not intended to prevent responding to emergency situations. Any life threatening emergency will be handled immediately, in such a manner as to not endanger the lives of others.

Communication efforts with local governments, County EOC's and the media will be a key in ensuring a safe and efficient restoration effort. Key personnel will be designated as the media liaison and will ensure that communications regarding the status of the restoration activities are available on a scheduled basis.

Emergency Procedures for NE were updated during 2008 and are included in this section of the report. Emergency Procedures for NW remained unchanged from 2007 to 2008. The 2007 NW Division Emergency procedures were filed with last year's update and are not included this year.

FLORIDA PUBLIC UTILITIES COMPANY

NORTHEAST FLORIDA DIVISION

2008
EMERGENCY PROCEDURES

1. Objective

The primary objective of the procedure is to provide guidelines under which the Northeast Florida Division of Florida Public Utilities Company will operate in emergency conditions. The following objectives will ensure orderly and efficient service restoration.

A. The safety of employees, contractors and the general public will have the highest priority.

B. Early damage assessment is required in order to develop manpower requirements.

C. Request additional manpower as soon as conditions and information indicate the need.

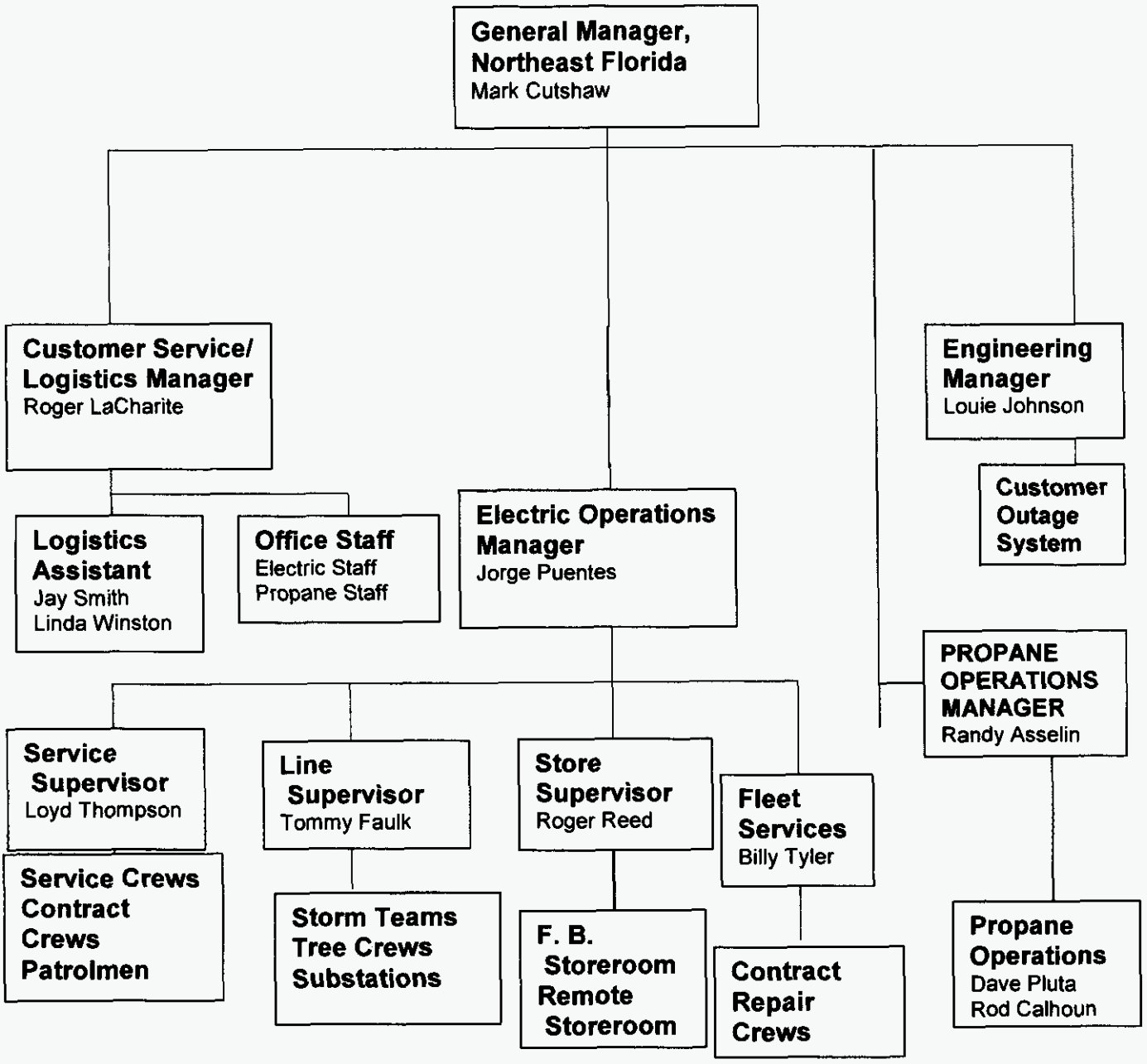
D. Provide for orderly restoration activities in order to provide efficient and rapid restoration.

E. Provide all logistical needs for employees and contractors.

F. Provide ongoing preparation of our employees, buildings, equipment and support function in advance of an emergency.

G. Provide support and additional resources for employees and their families should they need assistance to address injury or damage as a result of the emergency situation.

2. ORGANIZATIONAL CHART



3. Emergency Personnel Policy

As a public utility we provide essential services for our customers and the general public. Therefore, the purpose of the Company's Emergency Personnel Policy is to encourage employees to make every reasonable effort to report to work. Each employee performs an essential role in the Company's operation and it's important that you report to duty as scheduled during as emergency. Restoring and maintaining services after a major storm is a difficult job and requires everyone's best efforts. Of necessity, employees may be required to assist other departments or perform functions outside of their normal daily work assignment. It will take every employee's cooperation before, during and after an emergency.

A. If you are on the job when the storm approaches, your supervisor will inform you of your storm assignment. Employees not directly involved in maintaining services may be released to go home before the storm threatens safe travel.

B. If you are off-duty, call your immediate supervisor as soon as possible after an emergency condition is announced. An Emergency Condition Warning is usually given within 24 hours of occurrence. Your supervisor will inform you as to where and when you'll be needed prior to, during, and after the storm. If your supervisor is not available call his/her immediate supervisor or the Northeast Florida Office. This requirement applies to all electric division employees when an emergency threatens any of the Company's electric service areas.

C. After the emergency passes, all personnel not on duty during the storm will report as soon as possible to their supervisor or his/her designate by telephone. In the event the telephones are not working or you are unable to communicate with your supervisor or the company office, report in person to your regular work station as soon as possible during daylight hours.

D. EMPLOYEES ARE TO MAKE EVERY REASONABLE EFFORT TO REPORT TOWORK. IT'S UNDERSTOOD THAT THERE WILL BE INSTANCES WHERE EMPLOYEES JUST CAN'T GET TO WORK. EMPLOYEES WHO DO NOT REPORT TO WORK WILL NOT BE PAID. IF YOU ARE UNABLE TO REPORT TO WORK MAKE EVERY EFFORT TO CONTACT YOUR SUPERVISOR TO REPORT YOUR ABSENCE. DISCIPLINARY ACTION UP TO AND INCLUDING DISCHARGE MAY BE TAKEN AGAINST EMPLOYEES WHO DO NOT REPORT TO WORK WITHOUT JUST CAUSE.

Personal emergencies are common results of a major hurricane but, unless life threatening, will not be acceptable as an excuse for not reporting to work. Evacuation from a hurricane threatened area to a remote location from which you cannot promptly return to your home is also not acceptable as a reason for not reporting to work.

The Company will endeavor to provide assistance and shelter to employees and their immediate families should an employee need or request assistance.

E. Unless emergency conditions warrant, employees will not be required to work in excess of sixteen (16) consecutive hours.

The success of the emergency plan requires the cooperation and efforts of all of our employees. Employees may be required to return from their vacation or Company sponsored travel. Therefore, it will be the responsibility of each supervisor to determine the location of each of their employees on Company sponsored trips to facilitate their recall if conditions warrant their return when the emergency plan is implemented. Employees who are on vacation will notify, by telephone, their supervisors of their location and availability when an emergency threatens to strike our service area. Supervisors will consult with their department head to determine the feasibility and need to recall employees from vacation or Company sponsored trips. All employees are essential for the continued operation of the Company obligations and Company objectives.

The Company will develop information which will assist employees and their families before, during and after the storm. The General Manager, Northeast Florida will be responsible for obtaining the information and communicating this information to the employees. The Company will attempt to provide as much assistance to the employees and their families during emergency situations.

4. General Restoration Guidelines

These general guidelines are issued to provide overall guidance as to emergency system restoration activities. These guidelines will be followed as much as practical in emergencies caused by hurricanes, tornadoes, ice storms and other natural disasters.

These guidelines are not intended to nor will they put in jeopardy the safety of any employee or their family. Dependent upon the intensity of the storm as determined by the company's management employees will be required to report to work as instructed. If the intensity of the storm is such that weather conditions will be extremely severe, only a skeleton crew will be present at the work location. All others will report for duty as soon as conditions subside to a reasonable level. Those on vacation will be expected to report for duty.

The Northeast Florida office building was designed to withstand 100 mph sustained winds. Should winds be expected to significantly exceed these ratings, alternative locations will be identified and restoration will be relocated to an appropriate facility.

Restoration activities will be handled in the following manner:

A. During the early stages of the emergency, restoration will be handled in the usual manner. All service will be restored as soon as possible.

B. As the storm intensifies and trouble reaches major proportions, the main restoration activities will be limited to keeping main feeder energized by clearing trouble without making repairs.

C. When the intensity of the storm is such that work can no longer be done safely, all work will cease and personnel will report to the office or other safe location.

D. When the storm has subsided to a reasonable level and it is safe to begin restoration activities damage assessment and restoration of main feeders to critical customers will begin.

E. Restoration activities will continue in an effort to restore service in the following manner:
   1) Substations
   2) Main feeders to critical customers
   3) Other main feeders
   4) Undamaged primary
   5) Damaged primary, secondary, service, street lights, security lights

These guidelines are not intended to prevent responding to emergency situations. Any life threatening emergency will be handled immediately, in such a manner as to not endanger the lives of others.

Each employee and contractor should maintain good customer relations during restoration activities. Customer service will continue to be a high priority and every reasonable effort should be made to satisfy our customers.

Press releases and public announcements should be made only by designated company management personnel.

5. Emergency Safety Precaution

All Rules in the Safe Practices Manual Should be Observed. However, in order to point out some particular precautions which should be observed during storms, the following instructions listed below should receive special emphasis:

A. SIZING UP WORK:

Before undertaking any job, the job should be thoroughly discussed and all personnel should understand what is to be done, how it is to be done, and the following:

1) Voltage and position of all wires, or cables, and the sources or source of energy.

2) That the work in hand can be done safely.
3) That there is a sufficient amount of each kind of protective equipment on hand to thoroughly protect the working position and the work man.
4) They should consider the ground and traffic conditions and arrange to protect and guard these against all hazards.

B. INSULATION:

In cases of trouble following storms, all wires, regardless of normal voltage, are to be considered as being at primary voltage and are not to be handled except with protective equipment because of danger of crosses between primary and secondary circuits.

C. DISTRIBUTION CIRCUITS ON OR NEAR TRANSMISSION POLES:

If it is necessary to work on the conductors of a distribution circuit carried on or near transmission line poles with the transmission circuit energized and normal, any work on the conductors of the distribution circuits must be done between sets of grounds or else the distribution circuit must be worked and treated as an energized circuit. To determine positively that the lines to be worked are de-energized, test or investigation must be made before grounds are applied.

If the transmission line is also out of service and apparently in trouble, it must be considered as a possible source from which the distribution circuit may be energized, and it must be definitely determined that the transmission circuit as well as the distribution circuit is de-energized and grounded and the source or sources of supply are open and proper clearance obtained before the distribution circuit may be worked as de-energized.

D. STREET LIGHTING WIRES:

Street lighting wires shall be considered energized at all times and the workman shall protect himself against them with proper protective equipment even when circuits are normally de-energized. Such a line is liable to become energized by accidental induction or lightning and sometimes street lighting wires become crossed with other energized wires.

E. FUSE CUT-OUT CLEARANCE:

When a distribution circuit is to be de-energized and cleared for working on conductors or other equipment by the opening of a fuse cut-out, either of the enclosed or open type, the fuse holder or tube is to be removed completely from the fuse assembly. The removed fuse holder or tube is to be placed at a safe and conspicuous location away from the fuse cut-out as an indication to other employees that the fuse cut-out shall continue in this open position until the work is completed. In addition, a red "hold" switch tag (with Lineman's name) should be attached to the pole in a conspicuous location and then removed when work is completed.

F. REQUIREMENTS FOR USE OF RUBBER PROTECTIVE APPARATUS:

In case of trouble following storms, all wires, regardless of normal voltage, are to be considered as being at primary voltage and are not to be handled except with protective equipment because of danger of crosses between primary and secondary circuits.

1) Energized Conductors - Rubber gloves must always be worn when working on energized lines or energized conductors or equipment up to 15,000 volts between conductors.

2) Working position - Rubber gloves must be put on before coming in reach of energized conductors when work is done on conductors or protective equipment is to be installed.

Because of the possibility of high voltage existing, rubber gloves must be worn until the conductor is grounded on primary circuits and on street lighting circuits.

Care of Rubber Protective Apparatus - At each job, before a workman puts on his rubber gloves, he should test each glove mechanically for cuts and weak spots by rolling it up tightly, beginning at the gauntlet. All of this type equipment, when not in use, must be stored in dry proper containers or compartment provided for this purpose.

G. SWITCHING ORDERS:

In all switching orders, the switches shall be referred to by their numbers and not by the name of the circuit which they control. The sequence, in which the switch numbers are given, in the order, shall indicate the sequence of the switching operation. For example, an order given: "open switches 502-509 and close switches 511-502" shall be executed as follows: first, open switch 502; second, open switch 509; third, close switch 511; fourth, close switch 502.

NO DEVIATION FROM THIS RULE WILL BE PERMITTED.

To avoid misunderstandings and to prevent accidents, all orders concerning switching operation or the handling of lines and equipment must be repeated to the person giving name, and identity of person giving order secured. Likewise, the operator giving an order must secure identity of person to whom it is given.

H. SWITCHING ORDER:

All switching orders must be written on a piece of paper by the person receiving same, and this written order must be carried by the person while doing the switching. ***In no case shall anyone attempt to execute a switching order from memory.***

I. HIGH WATER:

During periods of high water involving lines or equipment, patrolmen shall not attempt to swim sections of the patrol which may be submerged. Necessary patrols over flooded areas must be done with boats and in such instances men engaged in these patrols shall wear suitable life belts or jackets.

J. BROKEN CONDUCTORS:

Before climbing pole, check for broken conductors, which may be in contact with pole. Clear before climbing.

6. **Annual Preparations**

General Manager, Northeast Florida

A. Review emergency procedure prior to May 1 and update as necessary.

B. Review employee assignments with all personnel prior to June 1.

C. Update status of emergency crew assistance (Contractors, NW Florida, SEE, Gulf Power, WFEC, etc.).

D. Schedule and conduct half day emergency procedure training sessions prior to July 1. Written notification is to be sent to Senior Vice President when training is complete.

E. Ensure storm shutters, laundry facilities and cooking facilities are available.

Electric Operations Manager

A. Check all communication equipment for proper operation. Check spare equipment and parts.

B. Check material quantities and emergency stock prior to June 1. Begin necessary purchasing of emergency stock approved for purchase prior to an emergency.

C. Review safety precautions with all line crew personnel prior to June 1.

D. Have necessary emergency material delivered prior to June 1.

E. Review status of all transportation equipment and have repairs made.

F. Update status of remote storeroom site and trailer(s).

G. Update status of emergency fuel suppliers, on site fuel and mobile fuel suppliers.

H. Update status of vehicle repair facilities.

Customer Service Logistic Manager

A. Update the list of critical customers by town/county. Group the critical customers by town/county by classification:

1) Hospitals and clinics
2) Public utilities
3) Municipal and state emergency service
4) Communication and broadcasting services
5) Major food storage/processing facilities
6) Disaster shelter and motels
7) Correctional facilities
8) Airport

B. Update phone list for employees, law enforcement, emergency management, city/towns, utilities, contractors, tree trimming, personnel, news media, PSC, DCA, EDC, GEO, etc.

C. Review emergency telephone arrangements and make additional preliminary arrangements.

D. Have "Emergency Vehicle" cards for vehicles.

E. Update status of thirty (30) motel rooms necessary for emergency/contract crews.

F. Locate sources of food/water for crews and office personnel. Identify local and out of town caterers.

G. Update status of building security firm.

H. Locate sources for provision of the following Division office supplies.

1) Three days supply of food and water. (See section 22, Logistics for List of Supplies)
2) Supply of air mattress/cots.
3) Portable AM/FM radios with batteries.
4) Laundry services/supplies.
5) First aid supplies.
6) Twenty (20) flashlights with batteries.
7) Linen service.
8) Miscellaneous supplies post storm shelter.

I. Update status of ten (10) cellular phones.

J. Update the procedure of the Office Operation.

Engineering Manager

A. Update and have on hand the following:

1) Storm safety precautions
2) General operating instructions
3) Distribution maps
4) Single line switching maps
5) City and county maps

B. Have control room and all necessary information and equipment ready for prompt setup. Phone jacks, radio transmitter connection and distribution map are minimum requirements.

C. Conduct annual refresher training for personnel required to operate the Customer Outage System.

7. **Preparation Just Prior to the Emergency**

General Manager, Northeast Florida

A. Monitor the emergency.

B. Begin making preparations for obtaining emergency assistance from other utilities and contractors.

C. Check the status of personnel on vacation.

D. Handle all media request.

E. Inform all employees as to assignments and emergency information.

F. Consult with Senior Vice President concerning activation of Division Emergency Procedures.

G. Consult with Senior Vice President concerning assistance from other divisions (i.e. mechanics, storeroom, media, family assistance, IT/Communications). Personnel from other divisions will be identified and mobilized. They will move as close as practical to Northeast Florida and then proceed to the office as soon after the emergency as travel can be accomplished safely. This location may change dependant upon the situation.

H. Obtain special job number for all emergency related work.

Electric Operations Manager

A. Have all vehicles stocked with all necessary emergency materials and fuel.

B. Monitor time/material needs of contractors.

C. Check emergency stock levels and fuel supplies.

D. Review plan to supply power to office and warehouse facility.

E. Check all communication equipment.

F. Review safety precautions with all personnel.

G. Review job assignments with personnel and pass out necessary forms, information.

H. Have all hazardous conditions corrected and construction jobs stabilized.

I. Verify emergency generator is fully fueled and operable with back-up fuel available.

J. Make arrangements for a boat and trailer suitable for construction.

K. Ensure all vehicle repairs are made and final arrangements with vehicle repair facilities confirmed.

L. Check on emergency generators and secure additional generators if needed.

Customer Service Logistics Manager

A. Arrange for additional petty cash and cash advances (if necessary).

B. Arrange with telephone company additional lines if necessary.

C. Review assignments with personnel.

D. Ensure all computers are backed up and secured.

E. Ensure all paperwork/documents are filed and secured properly.

F. Provide control room with customer list, addresses, phone numbers and account numbers.

G. Work with HR department and personnel from other divisions to provide assistance to employees and their families. Assistance may include work to prevent further damage to homes, care for children, work with contractors or insurance companies and provide food/lodging/clothing, etc.

H. Make definite arrangements for contract crew lodging.

I. Make definite arrangements for food/water/drinks for all personnel.

J. Purchase food supply for office/warehouse prior to storm (if the severity of the storm warrants this).

K. Run the hurricane report from ORCOM.

L. Make arrangements for an abundant supply of ice.

M. Make definite arrangements for building security.

N. Make definite arrangements for Division Office supplies (See Annual Preparations, Logistics Manager, andItem E.)

Engineering Manager

A. Provide distribution maps, procedures, etc. as necessary.

B. Ensure Mapping System is backed up and operating.

C. Begin constant monitoring customer outages.

8. **During the Emergency**

General Manager, Northeast Florida

A. Be located at the Northeast Florida office and constantly monitor the situation and restoration process.

B. Keep media sources informed.

C. Begin activating additional services that will be needed during the restoration process.

Electric Operations Manager

A. Be located at the Northeast Florida office and constantly monitor the situation and restoration process.

B. Coordinate overall restoration process.

C. Begin analyzing trouble.

D. Activate control room.

Customer Service Logistics Manager

A. Be located at the Northeast Florida office and coordinate the answering and processing of telephone calls.

B. Coordinate assistance to employees and their families.

C. Have food and drinks available to all employees.

D. Work with General Manager and Operations Manager and begin making final logistical arrangements for outside crews.

Engineering Manager

A. Be located at the Northeast Florida office and Continue processing customer outage system analysis and monitoring system to determine outage locations.

B. Work with General Manager and Operations Manager to determine restoration requirements.

9. **After the Emergency**

General Manager Northeast Florida

A. Determine manpower requirement from information provided by Operations Manager. Contact Senior Vice President concerning the situation, if possible, and advice whether or not the additional personnel should continue to the Northeast Florida office. If communications are not possible, the Senior Vice President will determine whether or not the team should continue to Northeast Florida or will return home. .

B. Begin making request for additional manpower to contractors.

C. Keep the media informed until such time that the Manager of Communications is on site. At that time, the Manager of Communications will work with the General Manager to keep the Media informed.

Electric Operations Manager

A. Initiate damage assessment teams.

B. Prioritize and schedule the restoration process.

C. Make assignments and dispatch crews as necessary in order to ensure orderly and efficient restoration.

D. Provide damage assessment to General Manager.

E. Provide updates to General Manager as needed concerning restoration progress.

F. Monitor manpower and equipment requirements and update General Manager as required.

G. Keep a list of all company and outside crews and their locations.

H. Determine and assign appropriate manpower and equipment for each outage situation.

I. Provide outside crews with all necessary information and safety information.

J. Monitor storeroom and remote storeroom for proper operation and inventory. Analyze manpower requirements.

K. Ensure all documents are completed prior to material leaving the storeroom and storeroom yard.

L. Monitor and provide assistance in repairing vehicles.

Customer Service Logistics Manager

A. Coordinate the answering of telephone calls.

B. Provide petty cash and pay bills as needed.

C. Contact critical customer if the restoration time will be lengthy.

D. Provide assistance and serve as liaison to employees and their families.

E. Make final and definite arrangements for lodging, fuel, meals, snacks, coffee, drinks, etc. for all employees and contract employees.

F. Check-in all outside crews and log the personnel and equipment included. Provide assistance with lodging, meals, etc. and keep up with crew locations.

G. Provide assistance as needed.

H. Ensure building security firm is operating at office.

I. Ensure Division office supplies are in place if needed.

J. Ensure caters are available as needed.

Engineering Manager

A. Continue processing customer outage system analysis and monitoring the system to determine outage locations.

B. Work with General Manager and Operations Manager to determine restoration requirements.

10. Operating Procedure

These instructions are intended to give the employee working on the line information as to the general procedure to be followed under hurricane conditions.

The Electric Operations Manager and Customer Service Manager will review these instructions with their employees each year so that they may become familiar with the details. This should be done before July 1, each year.

A. Before the Storm

All operating personnel should be instructed as to:

1) Safety and operating procedures to be followed during the storm.
2) Where and when materials and supplies will be available.
3) Their assigned areas and supervisor.
4) Any provisions made for feeding and lodging.
5) Work days will normally be two shifts. Each shift will consist of at least 12 hours but could be 16 hours.
6) The necessity of dividing line crews for clearing and minor repairs.
7) Radio and telephone communication procedures with appropriate list of call letters and telephone numbers.

B. During the Storm

1) First Stage - Repairing All Cases Reported

In order to reduce the over-all outage time to customers who may be interrupted at the beginning of the storm, trouble will be handled in a normal manner during the early stages.

2) Second Stage - Clearing Trouble From the Lines

In order to maintain service to essential customers and feeders, when volume of trouble increases to the point where large areas are interrupted, the Line Supervisor will instruct crews to clear trouble from the lines without making repairs.

a. Secondary or service wires may be cleared by cutting the conductor away from energized lines or by opening the transformer cut-out.

b. Damaged primary conductors may be cleared by cutting and rolling back, a primary jumper or conductor at the cross arm or by sectionalizing switching, if applicable.

3) Third Stage - De-energizing Main Lines

When the winds reach the point where it is no longer safe for crews to continue clearing operations all restoration activities will cease. The Line Supervisor may instruct crews to de-energize main line feeders at substations if necessary to clear extremely hazardous conditions.

C. After the Storm

1) Sequence of Restoration

The sequence of restoration after the winds subside to a safe working level will be as follows:

a. Transmission
b. Substations
c. Essential customers
d. Feeders
e. Undamaged primaries (fuse replacement only)
f. Damaged primaries
g. Secondaries
h. Services
i. Street lights

2) Line Patrols

To prevent further damage, all distribution lines, which have "locked out" due to the storm, must not be re-energized until patrolled and cleared of primary faults.

11. Telephone Operators Guide

During any major interruption our customers will naturally be concerned about falling wires, burning wires, defrosting refrigeration and even their daily routines in which electricity plays a part. The most important test we have is maintaining good relations during these emergencies. Those employees answering telephones must keep this in mind - be calm, pleasant and sympathetic with the customer and at the same time getting the necessary information needed to clear dangerous conditions and restore service as soon as possible, giving as much information to the customer that is available.

Outlined below is a suggested procedure to be used during three different phases of an interruption (The General Manager or Electric Operations Manager will determine when Phase 1 begins and when movement to Phase 2 and 3 is indicated):

Phase 1 - will be in effect until the time of the first trouble call are worked or until it is evident that there is a widespread damage in that area.

Phase 2 - will be in effect following Phase 1 until damage evaluations have been made and estimate of the time required to make major repairs.

Phase 3 - will begin in an area where an estimate of the time required to make major repairs is available and will continue until all trouble is clear.

Your supervisor will advise you when conditions change from one phase to another in accordance with the routines outlined below:

Suggested Answering Routine to be used by All Operators

Phase 1 - Early Trouble Prior to Extensive Damage

1. "Florida Public Utilities, May we help you please."

   a. If no lights, no power, lights dim, ask: "What is your name, address and telephone number please?"
   b. If wire down, pole broken, tree on a line, ask:
      1) "Is the wire burning?"
      2) "Are your lights working?"
      3) "We hope to be able to make repairs shortly. Thank you very much for calling."

Phase 2 - Extensive Damage Evident But Estimate of Repair Time Not Available

1. "Florida Public Utilities, May we help you please."

   a. If no lights, no power, lights dim, ask: "What is your name, address and telephone number please?"
   b. If wire down, pole broken, tree on a line, ask:
      1) "Is the wire burning?"
      2) "Are your lights working?"
      3) "Our electric system has suffered considerable damage in your area and we haven't been able to make an estimate of the time required for repairs. Our crews are working now and if your service has not been restored by (morning/afternoon) please call again. Thank you."

Phase 3 - Damage Evaluated and Repair Time Estimated

1. "Florida Public Utilities, May we help you please."

   a. If no lights, no power, lights dim, ask: "What is your name, address and telephone number please?"

   b. If wire down, pole broken, tree on a line, ask:

      1) "Is the wire burning?"
      2) "Are your lights working?"
      3) "We have crews working on the lines which serve your area and repairs should be made by (time). If your electricity us not on by that time, please call again. Thank you."

Operators Guide

You will be relieved for meals, etc., and at the end of your shift.

Remember a properly handled telephone conversation with a customer can create an immeasurable amount of good will. When conversing with customers, keep the following points in mind:

1. Be courteous to each customer.
2. Give him as much information as is available of the restoration work.
3. Record each call and report the information vital to restoring the customer's service.
4. Handle each call as briefly as possible.
5. Thank the customer for calling.

6. Do not give the news media information. If a request for new information is received, record the name of the individual, news organization, telephone number and specific request. Inform the caller that a company representative will return the call. The information should be sent immediately to the General Manager, Northeast Florida.

7. During an emergency condition, some customers will contact the company for reasons that do not pertain to the emergency. These calls should be recorded and the exact customer needs should be stated in the remarks column. These calls may include disconnections, reconnections, etc., or may be a personal call to an employee. After the contact has been recorded, the completed form should be given directly to the supervisor.

Entering Outages

Each customer call will be recorded in the ORCOM/Customer Outage System. The information entered should be entered accurately to ensure the system operates properly. The information entered will be stored as a permanent record and will be used to analyze the nature of the outages.

Should emergency situations come to your attention, please notify a supervisor. The method of this documentation will be determined.

12. Media/Public Information Guide

In order to monitor all information given to media and public sources, only the General Manager, Northeast Florida, Manager of Communications or their designee will make press releases. If other employees are asked by media or public agencies for information, politely ask them to contact the General Manager, Northeast Florida or Manager of Communications for the latest information.

13. Warehouse Procedure

During an emergency, material is vital to promptly and efficiently restore service to all customers. It is therefore important to monitor all stock levels to ensure adequate supplies are on-hand and if stock levels get low, be able to quickly order additional materials.

All material taken from the storeroom or remote storeroom will have the appropriate documentation completed before being removed from the stores area. The stores personnel will ensure this is followed.

Only authorized personnel should be in the stores area. Stores personnel will monitor those in the stores area to ensure compliance.

14. Office Procedure

The section will involve that information and other procedures necessary to ensure that the Office operation continues to operate during any emergency that may occur.

Annual

1. The Customer Service Manager will update information regarding the Office operations.
2. The Customer Service Manager will update information regarding the locations of Bank of America locations should it be necessary to take deposits to other banks if the courier service is not available. This may also be necessary should courier service be disrupted due to other reasons.
3. The General Manager, Northeast Florida will initiate conference call with the CFO, Controller, IT Director, Customer Relations Director, NE Florida Customer Service Manager and others as needed to discuss alternatives should a disaster disrupt operations in NE Florida.
4. Information about the contingency plan will be updated by the Customer Service Manager each year.

Prior to the Emergency

1. The General Manager, Northeast Florida will initiate conference call with the CFO, Controller, IT Director, Customer Relations Director, NW Florida Customer Service Manager and others as needed to setup alternative plans for processing payments.
2. The group will decide on the appropriate contingency plan necessary based on the emergency situation and begin contingency operations.
3. The Customer Service Manager will ensure that protective covering is available and installed on all Office equipment and server to ensure damage, if any, is minimized.

After the Emergency

Contingency Plan #1

1. If courier service is not available beginning on the first day of processing, personnel will be sent to BOA locations capable of processing encoded checks to make deposits. The deposits will be sent on the morning following the day's work. Preferably, the deposit will be delivered to the BOA location at 1822 South 8th. This and other locations will be verified on an annual basis.
2. Information concerning daily processing will be updated on a daily basis. This may be accomplished as normally handled, by sending the information via internet from a remote location or by mailing a CD overnight mail to the IT director to be input from WPB.

Contingency Plan #2

1. Due to the damage to the NE FL facilities. If mail can be forwarded in an efficient manner prior to the emergency, all payments will go directly to the Northwest Florida office. This may not be a good alternative due to the issues with the USPS.
2. NW Florida personnel will process the mail using personnel as needed. Deposits will be made normally on a daily basis.
3. As soon as NE FL is capable of processing payments normally, payment processing will be handled normally.

Contingency Plan #3

1. Due to the inability of the Corporate Office to accept updated information from the Office, it will be necessary to send payment information to a remote location.
2. NE FL will continue to process payments normally and make deposits accordingly.
3. The IT Director will provide NE FL with the appropriate directions on where to send the information concerning payments. This information will be added to this procedure when it becomes available.

4. All information on payments will be saved to a CD on a daily basis and stored in a safe place. If possible a hard copy of the information should also be printed and stored in a safe place.

15. Personnel Backup Contingencies

Should the following personnel not be available during the emergencies, personnel in the positions listed below that position will fill in as needed.

General Manager, Northeast Florida
Electric Operations Manager
Engineering Manager
Customer Service Manager

Electric Operations Manager
Engineering Manager

Engineering Manager
Electric Operations Manager

Customer Service Manager
Customer Service Supervisor
Energy Conservation Representative

16. **Employee Assignments**

TENTATIVE SCHEDULE

DAY SHIFT
Begin at 6:00 AM

OFFICE

Mark Cutshaw ***(FR)	General Manager
Jorge Puentes ***(FR)	Electric Operations Mgr.
Louie Johnson (FR)	Engineering Manager
Roger LaCharite (FR)	Customer Service Manager
Randy Asselin (FR)	Propane Manager
Jay Smith (SR)	Logistics
Linda Winston (SR)	Logistics
Rena Kennedy (SR)	Telephone
Linda Gamble (SR)	Telephone
Lorna Benitez (SR)	Telephone
Susan Beale (SR)	Telephone

LINE CREWS

Tommy Faulk (FR)	Line Supervisor
Steve Taylor (FR)	Working Foreman
Clint Brown (FR)	Apprentice Lineman
Billy Clardy (FR)	Working Foreman
Donnie Maxwell (FR)	Apprentice Lineman
Steve Morgan (FR)	Working Foreman

SERVICE CREWS

Loyd Thompson (FR)	Service Supervisor
Charles Wilkes (FR)	Working Foreman
Quentin Robinson (FR)	Apprentice Lineman
Parker Taylor (FR)	Working Foreman
Shannon Wagner (FR)	Working Foreman
Don Scandaliato (FR)	IMC Technician I
Justin Beverly (FR)	Apprentice Lineman
Dean Montgomery (FR)	Apprentice Lineman
Michael Atkins (FR)	Apprentice Lineman

STORES

Roger Reed (FR)	Stores Supervisor
Randy Moore (FR)	Warehouse Assistant

PATROLMAN/GUIDE

Lewis Peacock (SR)	Patrolman/Guide
Sarah Davis (SR)	Patrolman/Guide
Mia Goins*** (SR)	Patrolman/Guide

NIGHT SHIFT
Begin at 6:00 PM

OFFICE

Patti Thornton (FR)	Customer Service Supervisor
Renee Bolyard (SR)	Telephone
Nickie Hunt (SR)	Telephone
Ella Sczubelek (SR)	Telephone
Carl Anderson *** (FR)	Engineering
Mary Atkins (SR)	Engineering

SERVICE CREWS

Alvin Best *** (FR)	Working Foreman
Curtis Boatwright *** (FR)	Apprentice Lineman

OFFICE/PATROLMAN/GUIDE

Jevon Brown*** (SR)	Telephone/Patrolman

PROPANE OPERATIONS

Joe Corrado (FR)	Service Tech. B
Terry Simmons (FR)	Gas Utility Worker

*** Will work the night prior to the storm
Time of work the first night as shown below
Office Personnel to report at 8 PM the first night
Service Personnel to report at 6 PM the first night

DAY SHIFT (CONTINUED)
Begin at 6:00 AM

FLEET OPERATIONS

Billy Tyler (FR)	Fleet Specialist

PROPANE OPERATIONS

Dave Pluta (FR)	Service Tech. A
Rod Calhoun (FR)	Gas Utility Worker
James Moore (FR)	Gas Utility Worker

FR - First Responder
Total - 32 in May 2008

SR- Second Responder
Total - 14 in May 2008

17. **Emergency Assistance List**

Company	Contact	Telephone	Available Resources
Gulf Power Company	Andy McQuagge	(850) 872-3220	Crews
West Florida Electric Coop	Bill Rimes	(850) 263-6518	Crews
FPU-Marianna	Don Myers	(850) 562-6811	Crews, Tree Crews, Support
BellSouth	M. Wyatt	(904) 751-0031	BellSouth Engineering
BellSouth	Jim Burke	(904) 699-5397cell	
Quantas/Dillard Smith	Brian Imsand	(423) 490-2206	Crews
Pike Electric Coop	Barry McCarthy	(850) 545-1753 cell (850) 632-5769 home	Crews
Public Service Commission	Tim Devlin	(850) 413-6400	
Public Service Commission	Dan Hoppe	(850) 413-6802	
Florida Electric Power Coord Group	R J Midulla	(813) 289-5644	Crews
Mastec	Ron Martin	(904) 562-2135	Crews
C & C Powerline	Rick Springer	(904) 751-6020	Crews
Asplundh	Johnny Felker	226-5078 cell	Tree Crews
JEA	Dispatcher	(904) 665-7152	Power Supply

Vehicle Repairs Assistance

Company	Contact	Telephone	Available Resources
Altec	Tony Hardin	(205) 458-3445	Head of Service Technicians
Altec	Bobby Knittel	(352) 303-3894	Mobile Technician
Altec	Tim Hill	(386) 871-1421	Mobile Technician
Altec	Jim DeReus	(229) 854-9658	Mobile Technician
Carter Auto	Tommy Carter	(904) 491-8255	Repairs and Tires
First Coast Fab.	Doug Wolf	(904) 261-7611	Welding And Machine Work
General Truck	Howard Johnson	(904) 588-5423	Crane Repairs and Parts
Maudlin International Trucks	Jerry Green	(904)509-0012	Truck repairs and Parts
Moeller	George Moeller	(904) 415-2094	Vehicle Repairs and Welding
Napa	Tom Cox	(904) 261-4044	Parts and Tools
Power Pro-Tech	Jimmy Evans	(407) 628-8919	Generator Repairs
Tiresoles	Terry Witherspoon	(904) 388-0090	Truck and Equipment Tires
Tiresoles	Robert Garrett	(904) 219-4035	Truck and Equipment Tires

18. **Emergency Stock Requirements**

Bin#	Description	Qty Required	Qty On Hand*	On Order*
31-1065	WIRE,#8 BARE SOL SD CU TIE WIRE (SPOOL)	1000	2500	
31-1095	WIRE,#6 CU SD SOLID POLY,TX RISER WIRE (SPOOL)	1000	2536	
31-1115	WIRE,#4 BARE SOL CU SD OH (SPOOL)	1000	1202	
31-1200	WIRE,1/0 BARE STD CU OH	1000	1150	
31- 1310	WIRE,#4 AL OH SOFT TIE (SPOOL)	1000	4578	
31-1350	WIRE,1/0 BARE STD AL OH (AZUSA)	1000	14717	
31-1410	WIRE,4/0 BARE STD AL OH (ALLIANCE)	1000	24126	
31-1460	WIRE,396.4 BARE STD AL OH (CANTON)	1000	16422	
31-1470	WIRE,#477 BARE STD AL OH (COSMOS)	1000	5839	
31-1475	WIRE,#636 BARE STD AL OH (ORCHID)	1000	9042	
31-1480	WIRE,#6 AL DUPLEX OH (COIL)(SHEPPARD)	600	1996	
31-1585	WIRE,1/0 TRIPLEX OH (COIL & FT)(GAMMARUS)	1000	2000	
31-1610	WIRE,4/0 STD TRIPLEX AL OH (LAPAS)	500	540	
31-1660	WIRE,1/0 QUAD AL OH (SHETLAND)	200	1309	
31-1700	WIRE,GUY 1/4 STAINLESS STEEL	500	3660	
31-1710	WIRE,GUY 3/8 STAINLESS STEEL	500	2660	
33-1030	WIRE,#2 AL URD 15KV	3000	21207	
33-1050	WIRE,4/0 INS STD AL URD 15KV	6000	11857	
33-1070	WIRE,750MCM AL URD 15 KV	3000	6806	
35-1040	ANCHOR SCREW 5' X 10"	10	18	
35-1050	ANCHOR SCREW 8' X 10"	10	42	
35-1145	ARRESTOR,LIGHTNING,SILICONE 9 KV	20	17	100
35-1185	ATTACHMENT,DOWN GUY	20	88	
35-1186	ATTACHMENT,DOWN GUY (POLE EYE PLATE) 35MLB	10	16	
35-1350	BOLT,DOUBLE ARMING,GALV 5/8 X 18	30	118	
35-1360	BOLT,DOUBLE ARMING,GALV 5/8 X 20	20	62	
35-1430	BOLT,DOUBLE ARMING,GALV 3/4 X 22	20	45	
35-1480	BOLT,DOUBLE UPSET,GALV 5/8 X 12	20	76	
35-1640	BOLT,MACHINE,GALV 5/8 X 10	100	131	
35-1650	BOLT,MACHINE,GALV 5/8 X 12	100	124	
35-1660	BOLT,MACHINE,GALV 5/8 X 14	100	491	
35-1800	BOLT,MACHINE,GALV 3/4 X 20	50	139	
35-1810	BOLT,MACHINE,GALV 3/4 X 22	50	82	
35-1820	BOLT,MACHINE,GALV 3/4 X 24	50	52	
35-2060	BRACKET,MOUNTING,AL ONE CUTOUT & ARRES.	20	35	
35-2065	BRACKET,MOUNTING,AL	20	49	
35-2080	BRACKET,MOUNTING,AL HEAVY DUTY	10	12	
35-2245	CLAMP SUPPORT FOR #2,1/0,4/0 CU	50	183	
35-2255	CLAMP SUPPORT FOR #2,1/0,4/0 AL	50	295	
35-2265	CLAMP SUPPORT 394.6-477 AL	50	244	

35-2310	CLAMP,GROUND ROD 5/8"	20	224	
35-2375	CLEVIS,SECONDARY EXTENSION	20	20	
35-2650	COUPLING GROUND ROD 5/8, CU CLAD(NON-THREAD)	50	0	200
35-2661	COVER,SERVICE SLEEVE #C2	200	322	
35-2662	COVER,H-TAP #C5	200	321	
35-2663	COVER,H-TAP #C7	200	196	100
35-2716	CUTOUT,SILICONE,SEACOAST	50	35	84
35-2717	FUSEHOLDER,200A CUTOUT	20	36	
35-2780	EYELET,THIMBLE ANGLE 5/8"	20	103	
35-2835	GUARD,LINE 336.4 MCM AL OR ACSR	30	82	
35-2840	GUARD,LINE 477 MCM AL OR ACSR	30	65	
35-2855	GUARD,SQUIRREL	10	23	
35-2870	GUY GRIP,1/4 STAINLESS STEEL	100	90	50
35-2880	GUY GRIP,3/8 STAINLES STEEL	100	59	100
35-3014	INSULATOR,UPRIGHT 35 KV SILICONE W/BRACKET & STUD	30	82	
35-3025	INSULATOR,HORIZ MOUNT 35KV SILICONE INTEGRAL BASE	60	144	
35-3040	INSULATOR,POST TYPE 88KV W/CLAMP	12	20	
35-3085	INSULATOR,SUSPENSION SILICONE 25 KV	15	50	
35-3120	INSULATOR,GUY STRAIN 8 FT	10	41	
35-3121	INSULATOR,GUY STRAIN 8 FT 35000 LB	10	36	
35-3130	LAG SCREW - 1/2"X4" GALV.	150	267	
35-3260	MOUNT,TX CLUSTER AL ABOVE 3-50KVA	4	4	
35-3290	NUT OVAL EYE,GALV 5/8	30	22	50
35-3300	NUT OVAL EYE,GALV 3/4	30	177	
35-3320	NUT,THIMBLE EYE 5/8	20	168	
35-3520	POLE,30 CL 6 CP	30	33	
35-3545	POLE,40 CL 3 PP	20	22	
35-3575	POLE,45 CL 3	15	18	
35-3760	ROD-GROUND COPPER CLAD 5/8" X 8' NON-THRD	15	290	
35-3881	STRAP,CONDUIT OR PIPE 2" STAINLESS STEEL	40	56	
35-3886	STRAP,CONDUIT OR PIPE 3" STAINLESS STEEL	40	117	
35-3945	SWITCH,UNDERSLUNG	6	13	
35-3946	SWITCH,INLINE	6	13	
35-3970	TAPE,SCOTCH #23-2	20	35	50
35-4020	TAPE,VINYL	50	348	
35-4030	THIMBLE,GUY WIRE 3/8	200	596	
35-4335	WASHER,DOUBLE COIL 5/8"	200	895	
37-1000	CLAMP,DEADEND,#6-#4 AL SERVICE WEDGE	20	111	
37-1020	CLAMP,DEADEND,#2-1/0 AL SERVICE WEDGE	40	90	
37-1040	CLAMP,DEADEND,4/0 AL SERVICE WEDGE	40	93	
37-1250	CLAMP,PARA GR #2 STD AL	50	202	
37-1260	CLAMP,PARA GR #1/0 STD AL W/SS BOLTS	50	104	
37-1270	CLAMP,PARA GR 4/0 STD AL	50	130	
37-1290	CLAMP,PARA GR 350-477 AL OR 336.4-397.5 ACSR	50	158	

37-1380	CONN,H-TYPE (WR9)	50	240	
37-1390	CONN,H-TYPE (WR159)	100	442	
37-1400	CONN,H-TYPE (WR189)	100	525	
37-1415	CONN,H-TYPE (WR1010)	100	229	
37-1420	CONN,H-TYPE (WR379)	100	422	
37-1425	CONN,H-TYPE (WR399)	100	428	
37-1430	CONN,H-TYPE (WR419)	100	173	
37-1455	CONN,H-TYPE (NB500-40)	30	284	
37-1456	CONN,H-TYPE (NB500)	30	72	
37-1620	CONN,VISE ACTION #6 CU	100	645	
37-1630	CONN,VISE ACTION #4 CU	100	497	
37-1640	CONN,VISE ACTION 6 SOL-#2 SOL CU	100	864	
37-1650	CONN,VISE ACTION 2 SOL-#2 STD CU	100	820	
37-1660	CONNECTORS-VISE ACTION 2/0 SOL -1/0 STD CU	100	138	100
37-1670	CONN,VISE ACTION 1/0 SOL-4/0 STD CU	100	170	100
37-1710	CONN,URD FLOOD SEAL 4 POSITION	30	68	
37-1770	DEADEND,AUTOMATIC SS #2 STD CU	20	131	
37-1780	DEADEND,AUTOMATIC SS 1/0 STD CU	20	45	
37-1785	DEADEND,AUTOMATIC SS 2/0 STD CU	10	87	
37- 1790	DEADEND,AUTOMATIC SS 4/0 STD CU	20	108	
37-1800	DEADEND,AUTOMATIC SS #2 STD AL	20	94	
37-1810	DEADEND,AUTOMATIC SS 1/0 STD AL	20	48	
37-1840	DEADEND,AUTOMATIC SS 4/0 STD AL	20	21	
37-1850	DEADEND,AUTOMATIC SS 394.6 AL	20	79	
37-1855	DEADEND,AUTOMATIC SS 477 AL	20	67	
37-1970	LUG,TERM,URD 2/0 AL 2-HOLE	50	341	
37-1980	LUG,TERM,URD 4/0 AL 1-HOLE	50	307	
37-2120	SLEEVE,AUTO SPLICE #8 STD-#6 SOL CU	20	151	
37-2130	SLEEVE,AUTO SPLICE #6 STD-#4 SOL CU	20	128	
37-2141	SLEEVE,AUTO SPLICE #2 STD CU	20	73	
37-2161	SLEEVE,AUTO SPLICE 1/0 CU	20	30	
37-2190	SLEEVE,AUTO SPLICE 4/0 STR CU	20	41	
37-2340	SLEEVE,SERVICE 2/0-2/0 AL/ACSR (IKL47)	100	208	
37-2350	SLEEVE,SERVICE 4/0-1/0 AL (IKL66)	100	333	
37-2360	SLEEVE,SERVICE 4/0-2/0 AL (IKL67)	100	168	
37-2370	SLEEVE,SERVICE 4/0-4/0 AL (IKL69)	100	200	
37-2375	SLEEVE,SERVICE 350-350 AL	50	56	
37-2665	SPLICE KIT,URD 15KV #2 STD AL	12	74	
37-2670	SPLICE KIT,URD 15KV-2/0 AL	17	32	
37-2680	SPLICE KIT,URD 15KV-4/0 AL	12	58	
37-2690	SPLICE KIT,URD 15KV 750 AL	12	37	
37-2820	TERMINAL,PIN #2STD AL	50	118	
37-2830	TERMINAL,PIN 1/0 STD AL	50	257	
37-2835	TERMINAL,PIN 2/0 STD AL	0	5	
37-2840	TERMINAL,PIN 4/0 STD AL	50	99	
37-2845	TERMINAL,PIN 350 AL	10	79	

37-2850	TERMINAL,PIN 500 AL	10	14	50
41-1120	KIT,TERM SILICONE FOR #2 AL	10	21	
41-1148	ELBOW,LOAD BREAK TERMINATOR #2 W/TEST POINT	20	89	
41-1150	ELBOW,LOAD BREAK, URD, 2/0 AL,15KV W/TEST POINT	10	25	
41-1160	TERMINATOR,LOAD BREAK 4/0 W/TEST POINT	20	138	
41-1200	VAULT,SECONDARY,PEDESTAL	6	27	
	Transformer, Pad Mount 50 KVA	7	23	0
	Transformer, Pad Mount 75 KVA	7	18	0
	Transformer, Pad Mount 100 KVA	7	13	0
N/S	#2 Extended Repair Elbows	12	30	0
N/S	#2/0 Extended Repair Elbows	12	16	25
N/S	#4/0 Extended Repair Elbows	12	45	0

*As of 5/23/08

19. **Transportation and Communication Equipment**

TRUCK #	ITEM DESCRIPTION	X	Y	Z	RADIO INSTALLED	RADIO OPERABLE	DATE	BY	CONTACT/ COMMENTS
728	1993 INTL Bucket				Y				
737	1995 S-10 Chevrolet				Y				
740	1995 INTL Bucket				Y				
747	1998 INTL Bucket				Y				
748	1999 Ford F- 350				Y				
749	1999 INTL Derrick				Y				
751	1999 Ford F-150				Y				
752	1999 Chevy S-10				Y				
756	2000 Ford F-150				Y				
757	2000 Ford F-350				Y				
761	2000 Chevy 3500				Y				
762	2000 Chevy 2500				Y				
764	2001 Ford Ranger				Y				
765	2001 Ford Ranger				Y				
766	2001 Ford Ranger				Y				
767	2001 Ford F-150				Y				
768	2001 Ford F-150				Y				
769	2001 Ford F-150				Y				
770	1997 Ford F-350				Y				
774	2001 Ford Ranger				Y				
775	2001 Chevy Malibu				Y				
779	1998 Dodge								
787	2002 Bobtail								
791	2000 Ford F-250								
792	2004 INTL Bucket				Y				
793	2005 Bobtail								
794	2000 Toyota								
795	2006 Chevy Trailblazer								
796	2006 Chevy 1500								
797	2006 Ford F-550								
798	2005 INTL Derrick				Y				
799	2004 Ford F-550								
801	2006 Chevy Trailblazer								
803	Bobtail								
804	2008 INTL Bucket				Y				
Trailers									
691A	1982 Reel Trailer								
692A	1982 Reel Trailer								
705A	1992 Brakehoe Trailer								
708A	1998 Under Ground Trailer								
763A	2000 Trackhoe Trailer								
786	2002 Maintenance Trailer								
790	2003 Pole Trailer								

Note: X = Operational
Y = Material Z = Fuel

20. Critical Customer List

A. Hospitals, Clinics, Nursing Homes

Name	Address	Telephone		Contact Person
Nassau General Hospital	1700 East Lime St	321-3500 (main)		Wayne Arnold
Amelia Island Care Center	2700 Atlantic Ave	261-5518		Sharon Jamison
		261-8361		Home
Quality Health	1625 Lime St	261-0771		Linda Miller
		225-2351 (Answer service)		
Nassau County Health Dept.	30 South 4th St.	277-7280		Eugina Seidel
Savannah Grand	1900 Amelia Trace Ct.	321-0898	Cell 415-1443	Tammi Pletchen
Osprey Village	76 Osprey Village Dr.	277-3337 x11	Cell 753-6220	Kathy Lowe
Jane Adams House	1550 Nectarine St	261-9494	Cell 583-2553	Tom Moss

B. Public Utilities – Major Resorts

Name	Address	Telephone		Contact Person
Fernandina Waste Water/Water	1007 South 5th St	277-7380 Ext. 224	753-1412 (cell)	John Mandrick
Amelia Utilities	5390 First Coast Hwy	261-0822		Doug Hewett
		261-9452		After Hours
		753-4000		Cell
Florida Power and Light		(800) 226-3545		
AIP – Security		491-4445		Gregory Curtis
Ritz Carlton		277-1100	753-1020(cell)	Victor Chavez
			753-2122(cell)	Miguel Maldonado
Bellsouth (Switching Office)	1910 S. 8th St.			
(Dist Office)	3243 Amelia Rd.	261-9606	583-3278 (cell)	Mike Sirmans

C. Major Disaster Shelters/Motels

Name	Address	Telephone	Contact Person
Nassau Holiday	Hwy 17, Yulee	225-2397	
Amelia Hotel	1997 So. Fletcher Ave	261-5735	
Amelia South Condo's	3350 So. Fletcher Ave	261-7991	
Beachside Motel	3172 So. Fletcher Ave	261-4236	
Elizabeth Pointe Lodge	98 So. Fletcher Ave.	277-4851	
Seaside Inn	1998 So. Fletcher Ave	261-5499	
1735 House	584 So. Fletcher Ave	261-5878	
Best Western	2707 Sadler Road	277-2300	
Surf Inn	3199 So. Fletcher Ave	261-5711	
Hardee Elementary	2200 Susan Drive	491-7936	
F. B. High School	435 Citrona Drive	491-7937	
F.B. Middle School	315 Citrona Drive	491-7938	
Southside Elementary	1112 Jasmine St.	491-7941	
Yulee Elementary	86083 Felmore Rd.	491-7943	
Yulee High School	85375 Miner Rd.	225-8641	
Yulee Middle School	85439 Miner Rd.	491-7944	
Yulee Primary	Goodbread Road	491-7945	
Hampton Inn	2549 Sadler Road	321-1111 / 904-860-6631	
Comfort Inn	76043 Sidney Place	225-1092	
Holiday Inn	76071 Sidney Place	849-0200	

Hampton Inn (downtown)	19 South 2nd St	491-4911	

D. Municipal and State Emergency Services

Name	Address	Telephone	Contact Person
Florida Highway Patrol	Jacksonville	695-4115	R. Yates
American Red Cross	NE Chapter	358-8091	
Fernandina Police Dept.	Lime St.	277-7342	Dispatcher
Dept. of Transportation	Jacksonville	360.5400	
Chemtrec		1-800-424-9300	
Chlorine Institute		1-703-741-5760	Autumn Onna

E. Communication and Broadcasting Services

Name	Address	Telephone	Contact Person
WOKV Radio		245-8866	
WQIK Radio		384-4072	
WAPE Radio		245-8500	

F. Major Food Storage/Processing Facilities

Name	Address	Telephone	Contact Person
Publix Super Market	1421 So. 14th St	277-4911	
Winn Dixie Stores	1722 So. 8th St	277-2539	
Hedges Meat Shoppe	Hwy 17 South	225-9709	
Food Lion	2132 Sadler Road	261-0043	
Winn Dixie (Yulee)	22 Lofton Sq	261-6100	
Harris Teeter	4800 1st Coast Hwy	491-1213	

G. Correction Facilities

Name	Address	Telephone	Contact Person
Nassau House	1781 Lisa Ave.	277-4244	

H. Airports

Name	Address	Telephone	Contact Person
McGill Aviation Inc.	F.B. Airport	261-7890	John McGill

G. **News Media**

Name	Address	Telephone	Contact Person
Fernandina Newsleader	261-3696	Fax 261-3698	
WAWS-Channel 30 Jacksonville	564-1599	Fax 642-5665	

21. **Address and Telephone Listing of Active Employees**

Name	Address	Telephone
Anderson, Carl	95596 Arbor Lane	261-4871
Asselin, Randy	2328 Saddler Rd Apt F	753-2957
Atkins, Mary	111 S. 11th St.	753-3208
Atkins, Michael	2330 Cashenwood Dr	310-6565
Beale, Susan	86189 Augustus Ave	225-0416
Benitez, Lorna	96027 Morton Ln, Yulee	553-9546
Best, Alvin	94092 Winterberry Ave.	321-0101
Beverly, Justin	45673 Pickette St, Callahan	507-2949
Boatright, Curtis	768 Wax Wing Lane	261-6988
Bolyard, Renee	96032 Inlet Cove Court	261-2123
Brown, Clint	86710 Worthington Dr, Yulee	305-2863
Brown, Jevon	96171 Somerset #703	491-7675
Calhoun, Rod	87131 Kipling Dr., Yulee	491-9867
Clardy, Bill	97067 Lee Rd. Yulee	261-4269
Corrado, Joe	165 Natures Bounty Trail ,St.Marys	912-673-9690
Cutshaw, Mark	32547 Willow Parke	491-7107
Davis, Sarah	86140 Pages Dairy Rd. Yulee	225-2496
Faulk, Tommy	1796 Drury Road	277-3731
Gamble, Linda	990 Woodstork Pl	277-8682
Goins, Mia	996 Citrona Drive #2201	261-3838
Hunt, Nioka	86054 Cartesian Pt. Dr. Yulee	225-5176
Johnson, Louie	861627 N.Hampton Club	548-1199
LaCharite, Roger	22 Long Point Drive	321-4262
Maxwell, Donnie	411 So. 4th St	583-1536
Montgomery, Dean	87749 Haven Rd, Yulee	261-7786
Moore, James	86212 Bear Lane, Yulee	225-0999
Moore, Randy	76276 Dove Rd. Yulee	225-8769
Morgan, Steve	2308 B First Ave	724-822-1258
Peacock, Lewis	86309 Yulee Hills Rd, Yulee	225-5789
Pluta, Dave	97158 Castle Ridge Dr. Yulee	321-1343
Puentes, Jorge	86125Moriches Drive	430-2011
Reed, Roger	2202 High Rigger Ct	261-3160
Robinson, Quentin	96022 Mt. Zion Way, Yulee	415-6189
Scandaliato, Don	87493 Roses Bluff Rd	261-7952
Sczubelek, Ella	85020 Peacock Ct., Yulee	225-0215
Shelton, Charles	Old Bluff Road	277-1187
Simmons, Terry	622 Spanish Way E	261-0321
Smith, Jay	416 Portside Drive	277-0506
Taylor, Parker	86120 Debbie Rd. Yulee	225-8747
Taylor, Steve	1621 Highland Dr.	261-8738
Thompson, Loyd	96065 Northshore Dr.	321-1159
Thornton, Patti	2035 Bridal Rd.	261-8294
Tyler, Billy	2260 Pirates Bay Dr.	491-8055
Wagner, Darrell	429 N. Fletcher Ave	310-6294
Wilkes, Charles	4856 Why Rd.	261-6355
Williams, Rena	2034 Russell Road	556-2487
Winston, Linda	96075 Starlight Lane, Yulee	548-2051

22. Emergency Telephone List

A. Telephone Repair

AT & T	(888) 757-6500	
Coastal Telephone	225-5603	
(After Hours)	557-1027	
Triad Communications	(904) 296-6110	

B. Radio Repair

Communications service	277-0549	Ed Stotte 651-7929

C. Jacksonville Electric Authority

	800-683-5542	
Dispatcher	(904) 665-4806	
Dispatcher Supervisor	(904) 665-4156	Mr. Allen Putnam
Storm Coordinator	(904)	
SOC (System Operation Center)	(904) 665-4806	

D. Emergency Management

Nassau County	(904)548-4980	Nancy Freeman

E. Law Enforcement - 911

Nassau County	225-0331	Sheriff – Tommy Seagraves
F.B. City	227-7342	City Police Chief – James Hurley

F. Ambulance - 911

WJWB-Channel 17 Jacksonville	641-1700	Fax 642-7201
WJXT-Channel 4 Jacksonville	399-4000	Fax 393-9822
WTLV-Channel 12 Jacksonville	633-8808	Fax 633-8899
WTEV-Channel 47 Jacksonville	564-1599	Fax 642-5665

H. City/County Officials

Nassau County Office	321-5760	
Tom Brannan	(H) 261-7739	753-3489 Cell County Commissioner
Jim Higginbotham	(H) 321-0766	753-3442 Cell County Commissioner
Marianne Marshall	(H) 879-2729 (M) 813-6920 (W) 277-0006	County Commissioner
County Administrator (TBD)	(W) 491-7380	(Ed Sealover)
Bill Leeper – City Mayor	(W) 277-0788	
Michael Czymbor - City Manager	(W) 277-7305	
Danny Leeper - City Fire Chief	(W) 277-7331	
James Hurley - City Police Chief –	(W) 277-7344	

I. Public Service Commission

Tim Devlin-Director	(850)413-6400
Dan Hoppe-Director	(850)413-6802
James W. Dean-Director	(850)413-6058

J. Ring Power

Ben Daniels	(904)737-7730

23. Logistics

Motels:

Amelia Hotel	261-5735	1997 South Fletcher Ave,
Nassau Holiday Motel	225-2397	U.S. 17 South
Amelia South Condo.	261-7991	3350 So. Fletcher Ave.
Elizabeth Point Lodge	277-4851	98 So. Fletcher Ave.
Best Western	277-2300	2707 Sadler Road
Hampton Inn	321-1111	2630 Sadler Road
Hampton Inn Downtown	491-4911	19 South 2nd Street
Comfort Inn	261-0193	2801 Atlantic Ave.

Restaurants:

Applebee's	206-4300	2006 South 8th Street
Shoney's	277-3768	2709 Sadler Road
Baxter's	277-4503	4919 1st Coast Hwy
Florida House	261-3300	22 South 3rd Street
Sonny's BBQ	261-6632	2742 So. 8th St.
Jinright's	225-0493	53 U.S. 17 South
Waffle House	225-9542	195 – A1A
Barbara Jean's	277-3700	960030 Gateway Blvd.
Huddle House	261-2933	1855 S. 8th St

Food Stores:

Harris Teeter's	491-1213
Food Lion	261-0043
Publix	277-4911
Winn Dixie	277-2539
Winn Dixie (Yulee)	261-6100

Cellular Phones:

Sprint/Nextel	1800-777-4681

Water Supply:

Fernandina City of to supply water
Nantze Springs Water Co. 800-239-7873

Ice Supply:

Winn Dixie 277-2539

Service Stations:

Flash Foods Store's	261-6563
Smile Gas	277-2384

Vehicle Repair Facilities:

Altec Industries Inc (561) 686-8550 West Palm Beach
Carter Auto Repair (904) 491-491-8255
Maudlin International (904) 783-9822

Rental Equipment

United Rental (904)757-9393
Cable Davenport Cell# (904)759-8257

Flashlights (20 w/batteries):

Quantity on hand
WalMart (Additional) 261-5306

Portable AM/FM Radios w/batteries:

WalMart	261-5306
Walmart (Yulee)	261-9410

Necessary Supplies for Northeast Florida Office:

Item	Quantity	Item	Quantity
Bread	15 loafs	Peanut Butter	5 jars
Gallon Size Water	50 Gallons	Bottle Size Water	100 bottles

24. Service Plan to Supply Power to FPU Offices

During an emergency it is imperative that power be restored to the office/complex located at 911 South 8th Street as soon as possible. Also of the utmost importance is to ensure the feeder to the building is maintained in optimum working order at all times. This includes tree trimming, replacing deteriorated poles, replacing defective equipment, etc.

After an emergency in which power is lost to the office, someone will immediately go to the Terry Substation in order to determine the status of the OCB# 214. That feeder will also be patrolled to determine what will be needed to restore service to the office. All available personnel will be utilized to restore power.

If required, downstream switches should be opened so that power may be restored to the office as soon as possible.

Situation 1:
Terry Substation energized. Feeder OCB# 214 disabled. Ride line to determine the location of the fault. If extensive, open deadend jumpers as far from the substation as possible to maintain service to the office.

Situation 2:
Stepdown Substation energized. Open OCB# 214 at Terry Substation and open OCB# 310 at Stepdown Substation, close pole switch number 780 at Clinch Drive and Bonnieview Road. Close OCB# 310. Feeder OCB# 310 should hold the load, if not, shed some load.

25. Damage Assessment Plan

After a major storm or emergency occurs it will be necessary to access the damage to the system as quickly and accurately as possible. The following shows the assignments for a quick visual system inspection, which is to be performed as soon after the storm/emergency as possible.

General Manager, Northeast Florida
Check along South Fletcher Av then down Sadler Road to the office.

Electric Operations Manager
Check along the transmission route from the Step Down to Terry Substation. Terry to ITT and CCA.

Service Supervisor
Check along the transmission route from Wilson's Neck Substation to the West side of lofton Creek.

Line Supervisor
Check along the transmission route from the East side of Lofton Creek to the Stepdown Substation. Check All Substations.

Engineering Manager
Check along the Transmission route from the Step Down to Amelia City Substation.

26. Damage Assessment Form

The Damage Assessment Form to be completed and returned as soon as possible after the storm/emergency. To ensure proper planning it is essential that this form be completed neatly, accurately and completely.

FPUC CONDITIONS OF READINESS

* Condition IV – 72 Hours

* Condition III – 48 Hours

* Condition II – 24 Hours

* Condition I – 12 Hours

Based on arrival of tropical storm force winds (39 mph)

PRECAUTIONARY MEASURES (IV)

* Notify all personnel of Condition "IV"
* Identify critical personnel
* Determine safe havens
* Start securing missile hazards
* Track the storm
* Obtain plastic bags, tape, ect.
* Obtain batteries for flashlights, radios
* Determine feeding / housing requirements
* Coordinate with vendors for deliveries / housing
* Plans reviewed
* Verify all communications equipment
* Verify media / emergency contact numbers

INCREASED CONCERNS (III)

* Notify all personnel of "Condition III"
* Underground fuel tanks topped off
* Keep vehicle tanks topped off
* Vehicle storage locations identified
* Critical personnel allowed time off
* Review personnel assignments
* Back up computer systems
* Secure hazardous materials
* Stage heavy equipment
* Empty / relocate dumpsters
* Secure storm funds

* Make initial media announcement

HURRICANE WATCH (II)

* Notify all personnel of "Condition II"
* Keep watch on elevated tank (full)
* Essential computer programs backed up
* Allow liberal time off for non-critical personnel
* Start securing facilities (install office storm shutters)
* Finish securing any loose objects
* Notify personnel of planned departure time
* Make second media announcement

HURRICANE WARNING (I)

* Notify all personnel of "Condition I"
* Activate command center
* Send non-critical personnel to staging area (Lake City)
* Verify who remains behind
* Increase Patrols until winds of force arrive
* No bucket work after 39 mph winds arrive
* Finalize office closures
* Secure money and computer back ups
* Make third media announcement

CONDITION V – PRESEASON

Confirm vehicle fuel supplies and tire repair
Project transformer uses and stock levels through the end of October
Inventory storm stock list and order appropriately
Perform storm training to include simulated mobilization
* Confirm update status of distribution and switching maps

CONDITION IV – 72 HOURS

Load vehicles with storm stock
Prepare yard area by removing and storing materials that can become uplifted by wind
Check placement of storm stock
Remind employees to review supplies for their family
Distribute maps and directions to safe heavens
Review job assignments with employees
Confirm status of communication equipment and rent addition as needed

CONDITION III – 48 HOURS

Small storm – category one, direct hit not predicted

Maintain stat of readiness

Large storm – Storm track predicted into area

Board up, confirm that lose objects have been removed in all outside areas, stores and substations
Allow employees time to secure personal property

1. Critical personnel
2. Remaining personnel

Verify communication links JEA

CONDITION II – 24 HOURS

Small storm – Category one, direct hit not predicted

Maintain state of readiness

Large storm – Storm track predicted into area

Prepare to evacuate

* Review plans with remaining party
* Determine if short range or long range safe heaven will be used
* Announce assembling station and departure time

CONDITION I – 12 HOURS

Small storm – Category one, direct hit not predicted

Maintain state of readiness

Large storm – Storm track predicted into area

Evacuate

* Pool remaining party and equipment
* Announce safe heaven
* Announce assembling station and departure time

Post evacuation

* Verify and list remaining party by name
* Confirm assembling point for departure of remaining party

Storm departure criteria

Attachment A

Report on the 2nd Workshop for Best Practices in Vegetation Management

Held on January 26-27, 2009
The Florida Hotel and Conference Center
Orlando, Florida

Sponsored by
Florida's Electric Utilities

Organized and Coordinated by
Florida Municipal Electric Association

And the
Public Utility Research Center
University of Florida

Purpose

The purpose of this workshop was to provide a forum to review and benchmark best practices in Florida utility line clearance and vegetation management to maximize the reliability of transmission and distribution assets during and after major storms. The discussion included field procedures, program design specifications and measurements, and the current state of Florida regulatory issues. The workshop, coordinated by the Florida Municipal Electric Association (FMEA), is a component of storm hardening research being sponsored and conducted by the Florida Electric Cooperative Association (FECA), Florida Municipal Electric Association (FMEA), Florida Power & Light, Florida Public Utilities Company, Gulf Power, Lee County Electric Cooperative, Progress Energy Florida, and Tampa Electric Company (collectively referred to as Florida's electric utilities), and coordinated through the Public Utility Research Center (PURC) at the University of Florida. The workshop attendance consisted of vegetation management personnel, utility engineers and management, and other personnel from municipal, cooperative, and investor-owned utilities serving customers in Florida. Additional workshop participants included staff from the Florida Public Service Commission (FPSC), FMEA, and PURC.

The idea for the workshop stemmed from the June 9, 2006 Workshop for Research in Electricity Infrastructure Hardening held in Gainesville, Florida. The June 9 workshop was the beginning of a research coordination effort launched by Florida's electric utilities in response to the Florida Public Service Commission's Order No. PSC-06-00351-PAA-EI, issued April 25, 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. Following the Workshop for Research in Electricity Infrastructure Hardening, a

steering committee was formed of representatives from each sponsoring utility organization to provide direction, guidance, and a work plan on the topics to be addressed by the collaborative research effort. The steering committee's work plan is comprised of four main components: undergrounding, wind, vegetation management, and materials.

The first Best Practices in Vegetation Management workshop was conducted in response to the sponsoring utility organizations' interest in vegetation management, as identified during the June 9, 2006 workshop on March 5-6, 2007. The report from this workshop is available at http://www.cba.ufl.edu/purc/docs/report_VegetationManagementWorkshop.pdf.

This report summarizes the second Best Practices in Vegetation Management workshop and identifies areas of interest for further research coordination. It is organized as follows. The next two sections describe the proceedings for each day of the workshop. The last section concludes with a summary and synthesis of the dialogue and information shared at the workshop along with 10 important lessons that can be taken from the workshop. This report also contains the following appendices:

Appendix A Workshop Participants
Appendix B Workshop Agenda
Appendix C PURC Presentation: Review of 2007 Workshop
Appendix D Utility Presentations
Appendix E FPSC Presentation
Appendix F Best Practices Identified at the Workshop
Appendix G Sample VEGETATION MANAGEMENT Forensic Data Collection Form

Day One Workshop Proceedings

The workshop opened with registration and an informal luncheon at noon on Monday, January 26, 2009. Mr Barry Moline began the conference, introducing that this meeting follows from the initial 2007 best practices in vegetation management workshop, and as participation in joint research from the PSC initiative in 2006, towards understanding the activities, which assist in better preparation or hardening for hurricanes. We learned at the initial workshop that there had not been enough opportunities for you all to interact and collaborate. At the meeting (report available at the PURC website and at the meeting in hard copy), we identified best practices in vegetation management. At this meeting, we seek to identify strategies and best practices in vegetation management that can assist in guiding policy best to assist in hardening at the state level. Participants have been invited to give short presentations about your vegetation management strategies the last few years. Dr. Mark Jamison also welcomed the participants, introduced representatives from the FPSC and PURC in attendance, and offered a short discussion on the three other research initiatives of the

steering committee: wind research, the economics of undergrounding, and forensics.

Presentations by utility representatives

Representatives in attendance were requested to deliver presentations on the status of their respective utilities vegetation management practices. Presentations included detail about trimming cycles, budgetary and staffing information, best practices, as well as other information, which varied by presenter. The following persons delivered presentations at the workshop:

Ken Lecasse: Sumter Electric Cooperative
Barry Grubb: FPL
Mark Brown: City of Winter Park
Dennis Spellicy: Progress Energy
Luke DiRuzza: TECO
Diana Gillman: Lee County Electric Cooperative, Inc.

Appendix D presents the power point slides used in delivering these presentations. After each presentation, participants engaged in question and answer sessions. Many questions arose regarding the following topics:

- Hiring and retaining crews
- Third party audits
- Reliability versus trim cycle program effectiveness
- Variation on best practices for day-to-day versus extreme events
- Undergrounding versus overhead trimming practices
- Right-of-way and clearance concerns
- Forensic data collection[1] and timing to event
- Saidi and industry standard practices

Presentation by Florida Public Service Commission

The presentation by the FPSC was delivered by Devlin Higgins. A copy of the power point slides for this presentation are available as Appendix E. He offered a thank you for the invitation and good work being done at the respective utilities.

The presentation reviewed that the 2004-2005 storm seasons were particularly bad and we have tried to learn from these events towards further hardening our grid. On January 23, 2006, the PSC conducted a workshop on ideas towards strengthening the grid and subsequently the internal affairs met from this meeting. A docket would be open to discuss undergrounding, a docket to initiate the storm plan process and a docket for distribution construction standards. There have 10 on-going initiatives, of which VEGETATION MANAGEMENT is included. All IOUs, munis, and cooperatives have reported to be on track and

[1] Appendix G has two sample forensics data forms provided by FPL.

are in the third year. There have not been significant problems – volume of complaints is down, reporting is going well. On the commission website, all reports to the legislature are posted with data.

Questions from presentation (presented with *question* and answer):

Question: How did the PSC choose what the trim cycles would be and how was this analyzed? It was based on prudent review of the company reports. We want it such that the marginal benefits do not wane.

Question: The last two years, we have reported but have not received much feedback. At what detail are the reports reviewed? There is a lot of stuff taking place behind the scenes. It is a status rather than compliance report.

Question: When reviewed, are you looking for impacts, lessons learned – what do you focus on? We like to look at the frequency information but we do like to review it all. We have created some databases to assess why are problems occurring, even down to the feeder level. But again, it is more a status report and we are creating a dataset to be ready on a whim.

Question: Is there a timeframe on when there may be regulatory changes or mandates – these could move our programs forward? I just do not have the answer to the question, but I can understand the question. Another response from Barry, my feeling about the response is that the utilities asked for the general parameters but flexibility to try different things on our own and learn from each other. So, based upon what we have said to the PSC, there may continue to be this flexibility rather than specifically telling us what to do.

Question: How is the cumulative outage events reported or weighted? It is reported and is a percentage of all outage events caused by trees (it is the total outages reported which are stated to be tree-related).

Question: Is there any change of opinion on the initiatives? The overall impression I have is that we are still focused on data collection. Luckily we have not had a major storm event to bring the fruit of the plans to realization.

Question: We have learned a vast amount about our systems from these initiatives, but will the PSC revisit tweaking these initiatives? It is a possibility and we seek the most effective methods. Barry suggests that if we want to do this, we can request the PSC to revisit the initiatives in a forum such as this.

Question: If there is a utility with significant issue to the initiative, can they bring it to the PSC? Yes. The commission has left doors open, for example, to the trim cycles and are very receptive to alternatives.

Question: As we gather more information, in leveraging new tools, we do not want to direct resources towards areas that are no longer the most cost or reliability effective – for example, the trim cycle versus Saidi? This is why we revisit the plans each 3 years. There are many things outside of your control with reliability? These programs need to be built into rates, and there may be resulting rate disparities.

Policy Presentation by Barry Moline

Barry's presentation was framed at addressing information from speaking with the utility lobbyists; this was be a discussion of where we may be able to go and how we can work with the PSC as related to VEGETATION MANAGEMENT.

The consensus of the lobbyists is that VEGETATION MANAGEMENT as a regulatory issue is a post-hurricane issue; lobbyists often respond to the issue of the day, which was reliability after the 2004-2005 storm seasons. There is a perception that we are working on this issues, but there is also absent a "squeaky wheel" which mean it is hard to get the attention of the legislatures and to bring it back to the headlines, though we do not necessarily want this. We cannot do anything today to grab their attention, but we can be prepared for when the time arises.

We (utilities) previously decided we wanted to develop minimum standards for VEGETATION MANAGEMENT that are minimum and offer uniformity whereas the League of Cities balked at this. The feedback after some discussion between utilities and the League of Cities was that the relationship was not very cooperative. We may want to try to take some baby steps towards developing minimum standards and we do seek information on relationships between cities and utilities that are working very well. What is interesting about storm events, we have the same constituents (customers or citizens). The problem is that there is difficulty in agreeing on the best way to restore power post-storm and pre-storm hardening, even though we have similar goals.

Our challenge in this workshop is to think about what we can work on which we might develop some minimum standard or method to work with the cities we serve that we can share with other cities. Some discussion included city permit requirements to have a set amount of canopy conflicting with trimming practices – development plans should include clause that excludes easements and such from these canopy requirements.

At this workshop, we should define or plan minimum requirements and specify if they are short-term, long-term, or emergency status. The following comments were made as or in response to participant discussion;

- We may be able to choose a different path other than law – we may be able to pursue education. The League of Cities or other agencies that

may use our "Best Practices" or model towards educating our communities; this requires us to first have the right tool to do this education.
- "Right Tree – Right Place" program
- There needs to be enforcement and partnership – we are after the same goal but we need to have some self-enforcement at the city or county level, and proper language in the ordinance.
- There is less bargaining and enforcement after the planting - so there should be more planning prior to planting.
- Attempts to pursue with the city if they will not let us cut a tree shown to cause damages, bill the customer for the damage.

PURC Presentation: Roundtable Findings from the 2007 Workshop

Ted Kury, Energy Economist at PURC, delivered the roundtable findings from the 2007 workshop. Appendix C has the power point slides from this presentation.

The presentation assisted in preparing the participants for collaborative work tomorrow, indicating that it will focus mostly on where we will go from here, we will spend time now reflecting on where we have been. Reflecting on today's discussion, we can see that what was important last meeting is still quite relevant but some may not be as salient as they were and identify issues that we did not previously, for example, the legislative issues.

There were 7 small groups in 2007, which will guide the areas of discussion tomorrow:
1. Trimming strategies
2. Trimming around Distribution Facilities
3. Proactive Strategies for Hazardous Trees and Damage Reduction
4. Strategies for Working with the Public and Government
5. Strategies for Working with the Public
6. Operations and Management
7. Relations and Operations Management

At the end of the presentation, copies of the full 2007 Best Practices in Vegetation Management report were provided to participants[2].

Day Two Workshop Proceedings

The second day of the workshop, Tuesday, January 27, 2009, Dr. Jamison welcomed the group and presented the agenda for the day as planning action

[2] A copy of this report is available on line at http://www.cba.ufl.edu/purc/docs/report_VegetationManagementWorkshop.pdf.

items to bring back to the steering committee and FPSC by generating a report from this meeting. The detailed list of action items and best practices developed by the group is located in Appendix I.

After a short break, Dr. Jamison framed the rest of the workshop as development of these **action items** to bring back to the steering committee (with reference to their initial presentation day 1 or 2, as listed above). The following lists the action items, as collaboratively decided upon by the participants:

1. **Forensic Data (3a)**
2. **Closure on FPSC policies (11)**
3. **FEMA Funding (12)**
4. **Tracking (17 & 18)**
5. **Community education and the use of 3rd party audits (20 & 21)**
6. **Best practices report (24)**

Synthesis and Conclusion

The smaller group size of the second workshop allowed all participants to work as one homogenous group, rather than breaking into smaller groups. This enhanced the cohesion of the group..

The need for better communication and public education on vegetation management was deemed to be of significant importance in both best practices and areas for improvement, mirroring findings from the last workshop.

Another theme that was observed in the group discussions and that was seen as a valuable best practice was the need to adequately audit vegetation management practices. Many utilities indicated hiring third party auditors and all utilities seek better practices for collecting timely and accurate forensics data towards understanding system performance and failure more completely.

Other best practices and areas for improvement were also cited with respect to specific vegetation management support from constituents, such as cities, communities, legislation, communities, and the media. Various effective strategies were presented, such as working with the local media and developers to foster greater public knowledge.

This workshop was demonstrated as effective by participant feedback of the workshop. Attendees had the opportunity to interact together during the course of the two-day workshop; the smaller group size allowed the entire group to participate in collaborative identification of best practices and future endeavors.

Appendix A: Workshop Participants.

Company	Name	Location
City of Leesburg	Mr. Gregory David	Leesburg, FL
Florida Power & Light	Mr. Barry Grubb	Sarasota, FL
Florida Public Service Commission	Mr. Devlin Higgins	Tallahassee, FL
	Mr. Paul Vickery	Tallahassee, FL
FMEA	Mr. Barry J. Moline	Tallahassee, FL
Fort Pierce Utilities Association	Mr. Robert Brewer	Fort Pierce, FL
Gainesville Regional Utilities	Mr. Tracy Maxwell	Gainesville, FL
	Mr. P. Joseph Wolf	Gainesville, FL
Glades Electric Cooperative, Inc.	Mr. Kevin Bryant	Moore Haven, FL
Gulf Power Company	Mr. Steve Burns	Pensacola, FL
Lee County Electric Cooperative, Inc.	Ms. Diana Gillman	North Fort Myers, FL
Lewis Tree Service	Mr. William Commander	Webster, FL
Ocala Electric Utility	Ms. Sherie Burch	Ocala, FL
Progress Energy	Mr. Richard Alexander	Lake Mary, FL
	Mr. Robert Duncan (DAY 2 ONLY)	Lake Mary, FL
	Mr. Dennis Spellicy	Inverness, FL
Public Utility Research Center	Dr. Mark Jamison	Gainesville, FL
	Mr. Ted Kury	Gainesville, FL
	Ms. Megan Silbert	Gainesville, FL
Sumter Electric Cooperative, Inc.	Mr. Kenneth Lecasse	Sumterville, FL

Tampa Electric Company	Mr. Luke DiRizza	Tampa, FL
	Mr. Chip Turner	Tampa, FL
	Mr. John Webster	Tampa, FL
Winter Park Electric Utility	Mr. Mark Brown	Winter Park, FL

Appendix B: Workshop Agenda

Best Practices in Vegetation Management Workshop

January 26-27, 2009
Orlando, Florida
Day 1: Noon - 5:00 p.m.
Day 2: 8:30 a.m. - 2:00 p.m. (or earlier)

(All times are estimates)

Day 1: Noon - 5:00 p.m.

Noon – 1	Lunch
1-1:15	Introductions
1:15-2:30	Utility presentations – Every utility that attends is invited to provide a brief presentation on vegetation management practices they have changed since the hurricane seasons of 2004-05 and to discuss the results, if any, of those changes.
2:30-2:45	Break
2:45-3:30	Florida Public Service Commission Perspective – FPSC staff is invited to provide us with a summary of the recent regulatory changes related to storm hardening in general, and vegetation management specifically. FPSC representatives will attend on the first day only.
3:30-3:45	Government Relations Representative – A Florida utility government relations representative will review the legislative environment for change and discuss strategies for possible future changes.
3:45-5:00	Review from the 2007 Best Practices meeting the "Areas for Improvement" list to: 1) determine if they are still valid; 2) update priorities if necessary; and 3) decide on action to take to address each one.

Day 2: 8:00 a.m. - 2:00 p.m.

8-8:45	Breakfast
8:45 a.m.-2	Priorities for Action – Discuss priorities for action to improve reliability as it relates to hurricanes and major storm events, including legislative, regulatory and technical issues and opportunities.

Appendix C: PURC Presentation.

Roundtable Findings from 2007 Workshop

2007 Roundtables

- Workshop participants participated in small roundtable discussions
  - Trimming Strategies
  - Trimming around Distribution Facilities
  - Proactive Strategies for Hazardous Trees and Damage Reduction
  - Strategies for Working with the Public and Government
  - Strategies for Working with the Public
  - Operations and Management
  - Relations and Operations Management

Trimming Strategies

- Impractical to eliminate all tree-related outages – programs are designed for afternoon thunderstorms
- Public education is crucial
- No preference for cyclical or reliability-based programs
- Management of overhanging, dead, diseased, or damaged trees is a priority

Trimming Around Distribution Facilities

- Impractical to eliminate all tree-related outages – programs are designed for afternoon thunderstorms
- Public education regarding the species of tree to plant (or remove) around distribution facilities is crucial
- Controlling overhanging trees is important
- Importance of continuity of tree trimming crews
- Need for data regarding reliability and trimming

Proactive Strategies for Hazardous Trees

- Increased inspection and removal of problem trees
- Consistent and adequate financial resources imperative – budgets are easy to cut, so approval of well-defined program is important
- Changing workforce has made it difficult to find well-trained, qualified personnel

Strategies for Working with the Government

- Requires additional support from government entities and improved municipal development codes
- Cooperation with EOCs on preparedness and restoration
- Sharing consequences and results of vegetation management programs with stakeholders
- Consistency when interacting with the media – common language or terminology

Strategies for Working with the Public

- Work with all types of media
- Consistent and repetitive message
- Improve line clearances and right-of-way widths
- Customer worries and misconceptions about vegetation management – personal contact is effective to put customers at ease

Operations and Management

- Preparation steps
  - Training
  - Matching skills with tasks
  - Pre-determine storm assignments
  - Practice
  - Patrolling critical infrastructure
- Restoration steps
  - Coordinate vegetation management with line work
  - Grounding crew to accompany several tree crews
  - Pre-printed material for imported crews
  - Don't release crews too soon

Relations and Operations Management

- Expand and develop FDOT relationship in siting of T&D facilities and improvement of engineering options to ensure line clearance
- Restoration should identify critical infrastructure to clear first
- Need for adequate and consistent resources
- Designated forensic team to identify the cause of tree failures

Appendix D-1: Sumter Electric Cooperative Presentation

Sumter Electric Cooperative

Integrated Vegetation Management Program

FMEA Best Practices Workshop

January 26, 2009

System Statistics

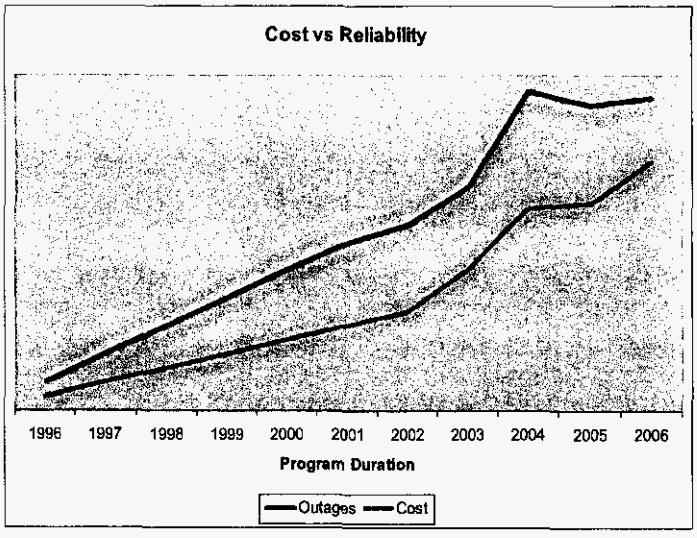
- Maintain approximately 4620 miles of overhead line
- Serve 166,000 Customers in 7 counties
- Vegetation Management is the single highest line item maintenance expense

1996 - 2006

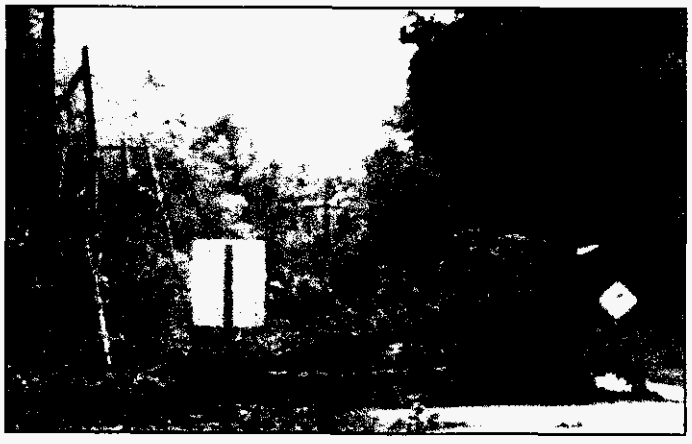
- **Structured vegetation management program**
- **Three year cycle on all overhead lines**
- **10 foot clearance maintained on all feeder and laterals**
- **Program managed by 2 employees**
- **Lump sum contract**

Program Performance Issues

- **Customer reluctance**
  - Contractors only cut what consumers would allow
- **Tree Removals**
  - No contractual obligation to remove trees or brush
- **System Reliability**
  - Majority of outages were tree caused



2004 Hurricanes



System Evaluation

- In 2005 SECO hired consultant, ACRT
  - Trimming practices
  - Specifications
  - Overall impact of vegetation on SECO's electrical system
- Evaluation Results
  - High density of trees and brush per mile
  - Little to no wire contact with vegetation
  - Improper pruning techniques evident
- Recommendations
  - Revise specifications
  - Easement reclamation
  - Contracting method from "Lump Sum" to "Unit Based"

Program Modifications

- **Trimming Clearances**
  - Based on species growth rates to maintain 3 year cycle
    - Slow growth species trimmed to minimum to 10 feet
    - Medium growth species to 12 feet
    - Fast growing species to 15 feet
  - All new construction and circuit upgrades trimmed 30 ft. wide "ground to sky"
- **Pruning Practices**
  - "Shigo" industry standard pruning practices
  - Adherence to these standards allow trees to remain healthy after pruning
- **Target Removals**
  - All 4"-10" DBH trees removed with customer consent
  - All brush manually cleared from easements
- **Circuit Prioritization**
  - Trimming order based on reliability indices
  - 2 Tree Outage reporting categories- trim related/non-trim related

Program Modifications

- **Unit Based Planning and Trimming**
  - All work is preplanned by trained foresters
  - Each customer is contacted prior to trimming
  - Trees marked for trim/type or for total removal
  - 500 square feet of brush = 1 unit
  - All work is audited by third party audit staff
  - Data allows for accurate tracking of completed trims, removals and location
- **Herbicide Program**
  - Applied to brush on previous years trimmed circuits
  - Dyed Stump treatment applied to all removals
- **Tree Replacement Program**
  - SECO offers "Utility Friendly" replacement trees when customers allow the removal of large trees in close proximity to our conductors

Implementation Challenges

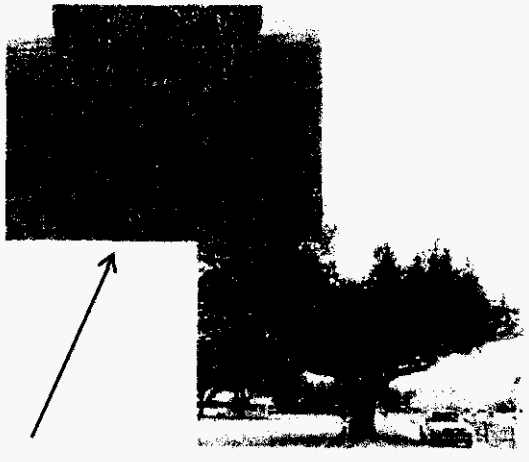
- **Contracting Resources**
  - Availability of trained workforce
  - Limited pool due to FPSC mandates in Florida
- **Pricing Increases**
  - Cost of out of state workforce passed on directly to utility
  - Rapid fuel price fluctuations
- **Budgetary Constraints**
  - High unit counts drastically increase cost per mile
  - Difficult to project annual costs
- **Biomass Disposal**
  - Significant increase due to removals
- **County and City Governments**
  - City and local ordinances are sometimes restrictive

Current Situation

- **Tree Removals**
  - Annual removals exceeded more than 20% of all unit work
  - Equates to perpetual cost reductions over time
  - Improved health for existing trees
- **Customer Acceptance**
  - Desire for removal far exceeded expectations
  - Not a single customer complaint resulting from herbicide application
  - National Arbor Day Foundation "Treeline USA" utility

Members / Customers Modify Paint Marks

Example: Crown Reduction (Dot) to Remove ("X")



Questions?

FPL Distribution
VM Best Practices Workshop
Jan 26th, 2009

Florida Power & Light
Hurricane preparedness

Infrastructure
- Hardening, vegetation and pole inspection

Organization
- Trained and ready

Restoration Plan
- Improved processes and technology

Communications
- Additional/Better information available

Distribution Infrastructure Hardening - Process

Program	Pre-Storm Service	Post Storm Service	
Customer Infrastructure Facilities (CIF) feeders	Grade B	Extreme Wind	Thermovision Pole Inspection Vault Inspection Vegetation Management
Community Projects	Grade B	Incremental Hardening – Up to and including Extreme Wind	
Targeted Critical Poles	Grade B	Extreme Wind	
New Construction Daily work Major Planned work Relocations	Grade B	Extreme wind	
Pole Maintenance	Grade B	Non Top-CIF - Grade B Top CIF – Extreme Wind	

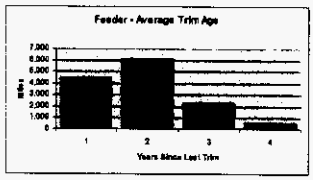
Updated 10/10/08 by SC

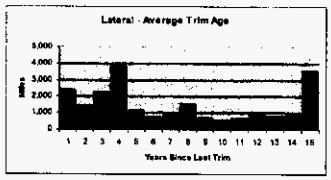
Region	Extreme Wind Zone	Incremental Hardening
North Central	105 MPH	105 MPH
North & West	130 MPH	115 MPH
East & South	145 MPH	125 MPH

Vegetation Management

Process	Prior to Storm Secure	Post Storm Secure
[illegible]	3 year trim cycle	3 year average trim cycle
[illegible]	No proactive program until 2005	All circuits prior to storm season
[illegible]	completed each year	completed each year
[illegible]	based on lateral performance	6 year average trim cycle
[illegible]	As needed	As needed

State of the Infrastructure





Updated 10/10/08 by SA

FPL Distribution VM
Planned Maintenance Schedule

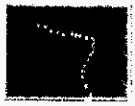
FPL will continue 3 year average Feeder cycle, in 2012, Laterals will begin 6 year cycle, and Midcycle Feeder trim targets hazard trees and cycle busters.

2008 - 2012 Plan

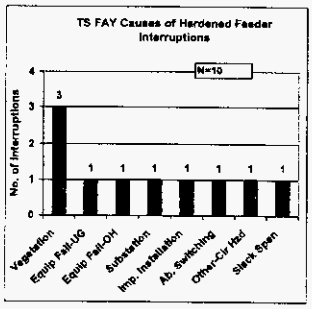
FPL's 3 yr. feeder / 6 yr. lateral

Year	Dollars (M's)	Total (miles)	Feeder	Lateral	Mid-cycle
2008	$63.4	6,250	4,219	2,031	5,170
2009	$68.4	6,970	4,224	2,746	4,700
2010	$72.3	8,400	4,468	3,100	4,700
2011	$73.0	8,900	4,573	3,300	4,700
2012	$73.6	8,900	4,508	3,700	4,700

Distribution 2008 Update
Performance during T.S. Fay



10 feeder outages on 9 hardened feeders



- **8 of the 10 interruptions were not related to the hardening of the facilities on the feeder**
  - Substation breaker failure
  - Abnormal switching with non-hardened feeder
  - UG cable splice failure
  - Disconnect switch and insulator failed on sections of the feeder not worked on during hardening project
  - Palm frond contact caused 11 minute interruption
  - Hazard tree from outside trim zone fell into feeder; 2nd interruption to clear tree from feeder
- **2 of the 10 interruptions can be considered related to hardening**
  - Sagging slack span
  - Tree within trim zone

Continuing to monitor hardened feeder performance to improve standards/practices.

City of Winter Park
Electric Utility

Vegetation Management Program

In the Beginning:

- Burford's Tree Surgeons' were working in Winter Park for Progress Energy, to clean up after the 04 storms
- Winter Park purchased the electric distribution system from Progress Energy in June 2005
- ENCO Utility Services is the O & M contractor
- Winter Park kept Burford's on as its vegetation management contractor. They are guided by ENCO and continue to serve Winter Park
- Winter Park has 17 circuits originating from 2 substations, with a total of 47miles of mainline feeder and 351 branch lines covering 56.6 miles
- Winter Park has an annual budget of $600,000 for line clearance trimming

Continued:

The original contract specified :
- One bucket truck with crew of Two people
- One climbing crew of Two people
- One chipper truck, with chipper and one operator
- One project coordinator/trouble shooter and pickup truck

We found that a more efficient distribution of personnel and equipment was needed to respond to emergency tree trimming, special requests from the City, working hot spots, or get an idea on how long a trim cycle would be.

Burford's personnel and equipment roster today:

- One 55ft. Bucket truck with a crew of two
- A chipper truck with chipper and a climbing crew of four
- One "squirt" bucket truck with a crew of two
- One supervisor and pick-up truck

This compliment of manpower and equipment allows Burford's to respond to special situations without a huge impact on production trimming schedules.
The Electric Utility has developed better working relationships and cooperation with other departments in the City.

Challenges:

- The City would allow no more than a 3 ft clearance around the conductor, which included overhangs. This restriction would create the need for crews to trim heavily wooded areas sooner than expected.
- The City's Forestry department does not trim around power lines.
- 65% of the branch lines are back lot, and over well developed landscaping making these areas more difficult to access.

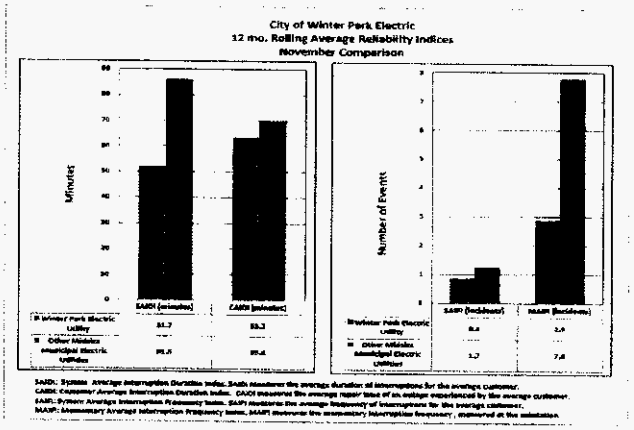
The Plan

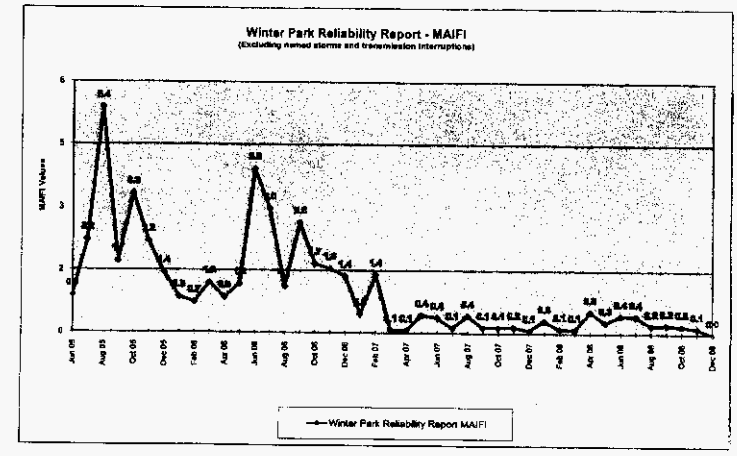
Undergrounding:

- Overall goal is to put the entire distribution system underground
- City issues $18 million in bonds to fund Phase 1
- This initial phase is comprised of two parts:
  - 9.3 miles of mainline feeders put underground at the Utility's expense. The City has started four different projects that will put 6 miles of feeder underground. Other projects are being engineered.
  - $2.5 million in matching funds for the "PLUG-IN Program" for neighborhoods that want to participate in the funding to put the neighborhood branch lines underground now. There are 15 neighborhoods in this process.

The Plan continued:

- The City will continue to use a contractor for line clearance trimming however, there has been some discussion of bringing it in-house as a division of the City's Forestry department.
- The clearance distance requirements have relaxed somewhat and crews have been trimming 4 to 6 ft if absolutely necessary.
- With Burford's revised manpower and equipment roster in place, the City will be able to track the efficiency and effectiveness of its vegetation management program.





Appendix D-4: TECO Presentation

Tampa Electric Overview

TECO Energy, Inc. Overview

TECO Energy, Inc.

TECO Energy, Inc. (NYSE:TE)

- Energy-related holding company
- $3.5 billion in revenues (2008)
- Based in Tampa, Florida
- Began in 1895 as Tampa Gas Company and 1899 as Tampa Electric Company
- One company, four businesses

One Company, Four Businesses

Our People

4,400 team members – all four companies

2,800 are local to Tampa Bay area

Our Core Values

Safety

Integrity/Ethical Behavior

Respect for Others

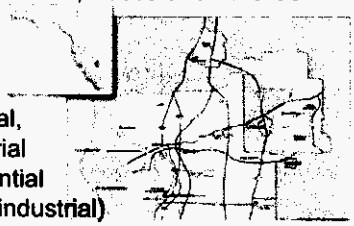
Achievement with a Sense of Urgency

Customer Service

Tampa Electric

Supplied Tampa area with electricity since 1899

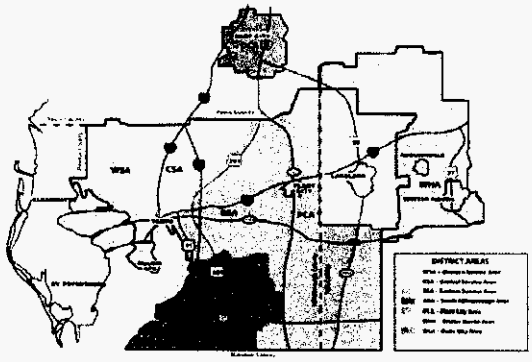
West Central Florida: 2,000 square miles, all of Hillsborough and parts of Polk, Pasco and Pinellas counties



4,800 MWs

Over 660,000 residential, commercial and industrial customers (88% residential and 12% commercial / industrial)

Vegetation Management



Vegetation Management

Tampa Electric has approximately 6,100 miles of overhead distribution and 1,200 miles of overhead transmission facilities

The Line Clearance & Inspection Department is responsible for all issues related to vegetation management and groundline pole inspections

- Department is comprised of one Manager, five Right-of-Way Supervisors, one Transmission Field Specialist, one Planner-Scheduler, and one Budget Analyst

Vegetation Management

Distribution Contract Workforce – 01/23/09

- Two primary contractors with a current total workforce of 246 tree trim personnel
  - 224 Personnel are dedicated to "proactive" circuit maintenance
  - 22 Personnel are dedicated to "reactive" work order crews trimming for new construction, trouble memos, and customer driven work requests – field check approximately 4,500 work requests with only 53% required tree work per year

Vegetation Management

Transmission Contract Workforce – 01/23/09

- 29 Dedicated overhead transmission tree trim personnel split between two contractors

Vegetation Management

Objective

- Tampa Electric's Line Clearance & Inspection Department utilizes an Integrated Vegetation Management approach to provide the Utility and customers with a safe, environmentally friendly and economically sound program.

Vegetation Management

Distribution Practices & Approved Procedures
(highlights)

- Service territory is broken down into seven (7) service areas
- Annual overhead tree trimming mileage targets and cycles are established by service areas through the use of specialized vegetation management software
  - Multi-year circuit reliability performance data
  - Trim cycles
  - Cost

Vegetation Management

Distribution Practices & Approved Procedures
(highlights Cont.)

- Storm Hardening Activities
  - Currently transitioning to a 3-year trim cycle
  - Anticipates trimming one-third of the system by 2010
  - Complete patrol on 5% of TEC's worst performing circuits prior to storm season
    - Goal is to complete either full circuit maintenance or hot spot trimming by June 1, 2009

Vegetation Management

Transmission Practices & Approved Procedures
(highlights)

- Performs two "ground patrols" of it 230kV lines on an annual basis, 470 miles
- 138kV, and 69kV lines are patrolled once a year, 730 miles
- Information from the "ground patrols" are documented into the "annual work plan"
- Work is identified as "critical", < 6 months, or "non-critical"

Vegetation Management

Tampa Electric's NERC & FERC requirement FAC-003-1, Transmission Vegetation Management Plan or (TVMP) was audited by the Florida Regional Reliability Council (FRCC) in the 4th Qtr of 2008.

Tampa Electric's TVMP was found to be "fully compliant" and is "a well organized and high quality document".

Vegetation Management

Common Industry Challenges

- NERC/FERC Requirements
  - FAC-003-1 or TVMP
- Technology
  - Developing and implementing high quality Vegetation Management Inventory & GIS systems
- Transmission Vegetation Management Experience
  - Attracting & retaining experienced arborists with extensive backgrounds in Utility Vegetation Management
  - Attracting & retaining high quality Line Clearance contractor personnel, this is a major industry issue.

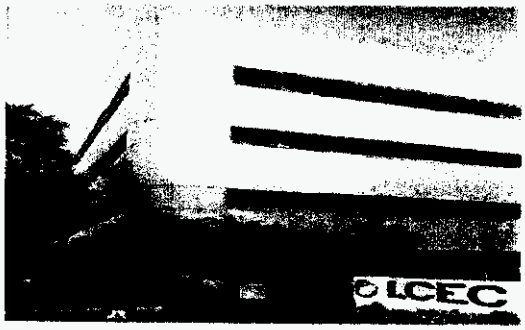
tampaelectric.com

Questions?

Appendix D-5: Lee County Electric Cooperative, Inc. Presentation

LCEC

PEOPLE. POWER. POSSIBILITIES.



Lee County Electric Cooperative

N. Ft. Myers, FL

- Over 200,000 service points
- Vegetation Management Program
  - 102 Circuits
  - 230 kV bi-annual Inspections
    - 39 miles
  - 138 kV Annual Inspections
    - 152 miles
  - 3 Ph Distribution 4 year plan
    - 1,056 miles
  - 1 Ph Distribution 6 year plan
    - 2,844 miles

TREES

To Inspect, Maintain and Protect the Environment Safely

LCEC

LCEC Vegetation Management

- Recent enhancements
  - defined our processes
    - chop and drop
    - 4 yr & 6 yr trim cycle
  - 4 criteria analysis
    - Saidi minutes
    - No. of events
    - Saidi minutes/mile
    - No. of events/mile
    - = 8% reduction in tree related outage minutes since 2005

Appendix E: FPSC Presentation

Storm Hardening and its Changing Regulatory Landscape

A Look at the Recent Florida Public Service Commission Decisions Related to Storm Hardening with an emphasis on Vegetation Management

January 26, 2009
The Florida Hotel and Conference Center
Best Practices in Vegetation Management Workshop
Presented by Devlin Higgins
Florida Public Service Commission

Response to 2004 – 2005 Hurricane Damage and Customer Outages

Studying the 2004-2005 hurricane impacts led to three overarching recommendations:

First, Florida citizens and utilities should maintain a high level of storm preparation, regardless of whether recent hurricane seasons have been mild or severe.

Second, Florida utilities should use a wide range of hardening activities implemented continuously over time to strengthen the state's electric infrastructure to better withstand the impacts of severe weather.

Third, making informed decisions about conversion of existing overhead electric facilities to underground that will require the development of comprehensive planning tools.

2

Response to 2004 – 2005 Hurricane Damage and Customer Outages

On January 23, 2006, Commission staff conducted a workshop to discuss damages to electric utility facilities resulting from recent hurricanes and to explore ways of minimizing future storm damages and customer outages.

At the February 27, 2006, Internal Affairs, staff briefed the Commission on recommended actions to address the effects of extreme weather events on electric infrastructure.

3

Response to 2004 – 2005 Hurricane Damage and Customer Outages

Staff was directed to file a proposed agency action recommendation for the April 4, 2006, agenda conference requiring each investor-owned electric utility to file plans and estimated implementation costs for ongoing storm preparedness initiatives.

All Florida electric utilities, including municipal utilities and rural electric cooperative utilities, were directed to provide a 2006 Hurricane Preparedness Briefing at the Internal Affairs on June 5, 2006.

Response to 2004 – 2005 Hurricane Damage and Customer Outages

A docket would be opened to initiate rulemaking to adopt distribution construction standards that are more stringent than the minimum safety requirements of the National Electrical Safety Code.

A docket would be opened to initiate rulemaking to identify areas and circumstances where distribution facilities should be required to be constructed underground.

On April 25, 2006 the Commission issued Order No. PSC-06-0351-PAA-EI, requiring the investor-owned electric utilities to file plans and estimated implementation costs for ten ongoing storm preparedness initiatives on or before June 1, 2006.

The Ten Ongoing Initiatives:

A Three-year Vegetation Management Cycle for Distribution Circuits.
An Audit of Joint-Use Attachment Agreements.
A Six-year Transmission Structure Inspection Program.
Hardening of Existing Transmission Structures.
A Transmission and Distribution Geographic Information System.
Post-Storm Data Collection and Forensic Analysis.
Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems.
Increased Utility Coordination with Local Governments.
Collaborative Research on Effects of Hurricane Winds and Storm Surge.
A Natural Disaster Preparedness and Recovery Program.

Initiative 1: Three-year Vegetation Management Cycle for Distribution Circuits

Specified in Order No. PSC-06-0351-PAA-EI, the Commission required each investor-owned electric utility (IOU) to provide plans to implement a three-year trim cycle for all distribution feeders and a three-year trim cycle for distribution laterals, but allowed utilities the opportunity to file an alternative to the three-year lateral trim cycle.

Three-year Vegetation Management Cycle for Distribution Circuits (cont.)

More specifically, the Commission allowed the IOUs the flexibility to propose an alternative plan for lateral circuits if the alternative could be shown to be equivalent to or better than a three-year trim cycle in terms of costs and reliability.

Vegetation Management Programs

In general, IOUs are on schedule to meet the vegetation management goals associated with their Commission-approved trim cycles.

The majority of municipals and cooperatives also appear to be on track with vegetation management schedules.

Figure 1: IOU Vegetation Management Performed in 2007

	Feeder		Lateral		
Utility	Trim Cycle	Miles Trimmed	Trim Cycle	Miles Trimmed	Goal Achieved
FPL	3 Years	4,454	6 Years	2,215	YES
PEF	3 Years	2,112	5 Years	2,203	YES
TECO	3 Years	363	3 Years	945	YES
Gulf	3 Years	1,878	6 Years	675	YES
FPUC	3 Years	36	6 Years	54	YES

Figure 2: Number of Outage Events Caused by Tree / Vegetation

Utility	2003	2004	2005	2006	2007	Cumulative % of all Outage Events	Average 5-Year Adjusted L-Bar
FPL	19,307	15,225	10,571	8,911	12,201	14.09%	185
PEF	5,380	4,546	3,814	3,552	3,728	10.97%	111
TECO	2,003	1,880	1,797	1,564	2,086	17.36%	168
Gulf	1,016	1,193	254	1,292	1,419	10.66%	135
FPUC	153	216	135	257	220	24.72%	81

2007 Accomplishments: FPL

FPL is on schedule to meet the vegetation management goals associated with its Commission-approved trim cycle. In addition to the cyclical trimming of lateral and feeder lines, FPL performs targeted trimming of circuits identified as critical infrastructure between normal trimming cycles. For example, in 2007, FPL trimmed 5,271 circuit miles in mid-cycle to address conditions most likely to cause an interruption before the next regularly scheduled trimming cycle.

2007 Accomplishments: PEF

In 2007, PEF exceeded its annual goal for number of miles trimmed, and the company is on schedule to meet the vegetation management goals associated with its Commission-approved trim cycle. Additionally, 12,253 hotspot trims were performed on feeders, and 18,247 were performed on laterals in 2007.

2007 Accomplishments: TECO

During 2007, TECO increased total miles trimmed by 15 percent over the prior year. The company has implemented a new procedure that routes all externally based tree trim requests to TECO's Customer Service–One Source Department to be put into the work order management system. Line clearance personnel or contractors conduct a field inspection and make contact with the customer prior to taking any action.

2007 Accomplishments: Gulf

In 2007, Gulf inspected every mile of its main line distribution system and performed maintenance trimming on one-third of its feeder miles. Annual schedules are established based on company reliability reports, field patrol data, and customer feedback to ensure that the worst performing lateral circuits are identified and scheduled for maintenance.

2007 Accomplishments: Municipal Electric Utilities

Of the municipal electric utilities reporting on their vegetation management programs, trim cycles for distribution lines ranged from one to four years. If not performing vegetation management on an annual basis, cities usually complete trimming and inspection for vegetation growth on about one-third of their distribution system each year.

2007 Accomplishments: Rural Electric Cooperatives

Trim cycles for transmission lines range from one to three years, while trim cycles for distribution lines ranged from three to six years.

All cooperatives are on schedule to complete the trim cycles defined in their plans, based on the trimming accomplished in 2007.

PSC Informational Resources

Information concerning the Public Service Commission storm hardening efforts can be located via the FPSC Website at

http://www.psc.state.fl.us/utilities/electricgas/eiproject/index.aspx

This specific page contains information concerning

- Storm Hardening Reports to Legislature
- Congressional Activities
- Collaborative Research Projects
- Information on the 2006 Staff Rule Development Workshop
- Dockets Related to Storm Hardening Activities

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Appendix F: Best Practices Identified at the Workshop

Categorized items as **best practices** or ***action items***.

New or Continued Action Items Identified in Day 1 proceedings:

1. Customers are becoming more accepting of VEGETATION MANAGEMENT practices
    a. Rural versus urban differences

2. We have learned about best practices in VEGETATION MANAGEMENT
    a. Herbicide practices
    b. Trimming practices
    c. **Prioritizing reliability or cyclical programs (trending towards reliability)**
    d. Tree growth after trimming

3. Things to learn about VEGETATION MANAGEMENT
    a. ***Forensics research***
        i. Collaborate with Dr. Ed Gillman (Professor at UF)
        ii. In-house utility studies
        iii. Classify high risk trees
        iv. ***Void in research as to what you cannot harden***
        v. Data collection plans
            1. We have an extensive forensics form for utilities to use, but we may want to have this group review it for appropriateness in collecting VEGETATION MANAGEMENT forensics and ensure that facilities information is also accounted for
            2. There is a California database with a standard form; FP&L collects data on 15 forms (FP&L and California forms are located in Appendix 1 & 2 at end of this document)
    b. Time to effect

4. Back lot access

5. Improving city and regional relationships (*connects with 20.)
    a. Meetings
    b. Communication

6. Consistency, compatibility and conflicts in city, state, federal and community rules (*connects with 20.)
    a. Liabilities and enforcement

7. Public awareness of what causes outages

8. Cross-training crews: climbing and bucket work

9. **Finding and retaining qualified crews – more plentiful with labor market changes**
    a. Public perception of legal status
    b. Resource availability from weaker economy

10. 3rd party audits; arborists follow up

11. ***Come to closure on FPSC policies***
    a. Tallahassee meeting with FPSC

12. ***FEMA funding of hazard mitigation (low priority and IOU's are not eligible)***
    a. Clarification needed
    b. Applies to co-ops (FECA) and municipalities (FMEA)

13. Stimulus package

Additional items added day 2:

14. New learning: normal programs versus hurricane/extreme weather programs (connects with 17.)
    a. What practices are congruent for both day-to-day and hardening
    b. How do you prepare for hurricane events with crews and plans
    c. What will forensics data be able to provide to us
    d. Do we need different rights of way and can we improve access
    e. Keeping roads clear and in good condition
    f. Will hardening for storms translate into hardening for day-to-day
    g. **Can we speed restoration if we cannot prevent damage**

15. Education of road builders, designers, etc.

16. "Right tree – Right place" programs
    a. Utility policy or public party

17. ***Track progress and improvements towards learning about cost/benefits***
    a. Perhaps apply undergrounding model

18. ***Track effects of Undergrounding***

19. Community/customer education
    a. Enforcement of utility right/responsibility for utility
    b. Timing issue: customer support higher with recent storm event

20. Third party/local representative assistance with community

a. Government call attention to the issue

21. Florida Statute 11.163.3209[3]

a. Implications for franchise agreements
b. 2007 statute with limitations to where cities can plant, should give utilities right to trim
c. This has given some leverage, but need awareness with cities
d. Requires ANSI standards

22. Get information to important supporters (local groups)

a. Take message to city, legislature

23. Sending crews – how to get the arborists in the field

24. Best practices report

25. Trim specifications for restoration crews

26. Annual report to FPSC (with 11.)

[3] See Appendix H for detailed statute.

Appendix G: Sample VEGETATION MANAGEMENT Forensic Data Collection Forms.

PROFILE OF TREE RELATED FEEDER INTERRUPTIONS

1 TICKET NUMBER	#23
2. TICKET DATE	1-26-09
3 FEEDER NUMBER	502837
4. MANAGER AREA	MS
5 ADDRESS / LOCATION OF TREE	331 No. Washington Dr
6. CAUSE REPORTED (CAUSE CODE) (AS STATED ON THE INTERRUPTION REPORT)	20
7. FIELD CAUSE IDENTIFIED (CAUSE CODE)	21
8 SPECIES OF TREE	Washingtonia Palm
9. LAST COMPLETE DATE ON FEEDER/BACKBONE	3-5-08
10. TREE ORIENTATION TO CONDUCTOR (N = NORTH, S = SOUTH, E = EAST, W = WEST, U = UNDER N/A = NON-APPLICABLE)	W
11. WEATHER CONDITIONS (1 = CLEAR, 2 = WINDY, 3 = RAINY, 4 = WINDY & RAINY)	2
12 CONSTRUCTION TYPE (1 = VERTICAL, 2 = MODIFIED VERTICAL, 3 = TRIANGULAR, 4 = CROSSARM)	1
13. CONDUCTOR TYPE (1 = ALUMINUM, 2 = COPPER)	1
14. CONDUCTOR SIZE (1 = 568, 2 = SMALLER-SOLID)	1
15 LINE VOLTAGE (1 = 23KV, 2 = 13KV; TO DETERMINE VOLTAGE – IF 4TH DIGIT OF FDR # IS A "3" THEN 13KV, IF IT IS A "0" THEN 23KV)	2
16. TREE CONDITION (1 = HEALTHY, 2 = DECLINING, 3 – DEAD, 4 – N/A)	1
17 CAUSE OF OUTAGE (1 = TREE FALLEN, 2 = GREW OR BLEW INTO LINE, 3 = OTHER)	frond blew into feeder
18 IF TREE FAILED- What part failed, (ROOTS, TRUNK, LEADER, BRANCH, OR PALM FROND, BOOT, SEED POD)	palm frond
19. IF TREE IS OUTSIDE NORMAL TRIM STANDARDS WAS THERE ANY INDICATION THAT IT WOULD FAIL?	palm
20. WAS TREE A CYCLE BUSTER- Condition of rest of BB	no / good
21. CURRENT CYCLE LENGTH ON FEEDER BACKBONE	3yrs
22. REVISED CYCLE LENGTH ON FEEDER BACKBONE	none
23. ON CURRENT YEAR DEPLOYMENT PLAN	no
24. FOLLOW ACTION TAKEN/ Other comments	

Next Spear Royal Palms at 4 other address

Tree at 331 No. Washington Setts back about 25' and is 25' higher than power line

James M. Falk

2/17/09

Accession #

CALIFORNIA TREE FAILURE REPORT

Tree Genus

Species

Cultivar (if known)

Common name

Approx. age ___ yrs Height ___ ft DBH ___

Crown spread

Date of Report

University of California, Davis, CA 95616

Tree Owner

Site County

City

Address Place

Site category (choose one): 1 Residential 2 Street 3 Park 4 School 5 Highway 6 Parking lot 7 Mall 8 Other

DETAILS OF TREE FAILURE

1 Date of failure ___ (Mo/day/yr)

2 Time of failure ___ am AM or PM

3 Location of failure on tree (choose one)

1 Trunk ___ ft above ground ___ in trunk diameter at ground level? ___ (Y/N)

2 Branch ___ ft from attachment ___ in branch diam.

at point of attachment? ___ (Y/N)

trunk diameter? ___ ft height on trunk

estimated branch angle at point of failure ___

weight concentrated at end of branch? ___ (Y/N)

3 Root including uprooting

4 Site use (choose one) (Explain on p.2 Additional Info)

1-[illegible]

2-Low use (intermittent vehicles and/or people)

3-Medium use (permanent structures, intermittent vehicles and/or people)

4 High use (permanent structures, frequent vehicles and/or people)

5 Stand type

1 Natural 2 Planted 3 Mixed

6 Tree exposure

1-Alone (at least one crown diameter apart)

2-In a group (less than one crown diameter apart)

3 Altered stand (trees removed from stand)

TREE STRUCTURAL DEFECTS

7 Choose up to three in the order of importance

1-Failed pruning cuts	8-Embedded bark in crotch
2-Multiple trunks/codominant stems	9-Crook or sweep
3-Dense crown	10-Leaning trunk
4 Heavy lateral limbs (describe p.2)	11 Cracks or splits
5 Uneven branch distribution (one side)	12 Kinked or girdling roots
6 Uneven branch distribution (top)	13 None apparent
7 Multiple branches at same point	14 Other (describe p.2)

TREE DECAY OR INJURY

8 Type of decay at failure location (choose one)

1-Root rot

2 Heart rot

3 Sap rot

4 Heart rot and sap rot

5-No decay evident

9 Extent of decay or cavity (% cross-sectional area)

(For root failure estimate % of roots decayed)

1 25% or less	4 75-100%
2 25-50%	5 Unknown
3 50-75%	6 None

10 Fungal sporophores or conks found near failure location?

1-Yes 2-No

11 Other injury at failure location

(Choose up to three, in order of importance)

1 Mechanical	4 Animal	7 Fire
2 Lightning	5 Chemical	8 None
3-Insect	6-Vehicle	9-Other (p.2)

12 Other injury, entire tree (same choices as 11)

(Choose up to three, in order of importance)

MAINTENANCE HISTORY

13 Pruning at failure location (choose up to two)

1-Heading cuts (moderate, cut diameter ___ in)

2 Heading cuts (severe, cut diameter ___ in)

3 Thinning cuts (or crown cleaning)

4 Lion tailing

5 Flush cuts

6 Root pruning

7 No pruning

8 Other (p.2)

14 Pruning on entire tree (Same choices as 13)

(Choose up to three)

15 Other maintenance (Choose up to two)

1 Cabling/hardware failure	4 Cavity treatment
2 Staking/brace	5 Injection
3-Girdling wire, rope, etc.	6-None

SOIL AND ROOT CONDITIONS AT SITE

16 Restricted roots (Choose up to two)

1 Raised planter or bed	4 Root cutting
2 Container or boxed tree	5 Not applicable
3 Root barriers	6 Other (p.2)

17 Irrigation

1-None	3-More than once per mo.
2-Less than once per mo.	4-More than 3x per mo.

18 Ground cover under tree (Choose up to two)

1 Bare soil	6 Shrubs
2 Mulch	7 Mixed planting
3-Turf	8-Paving
4-Native cover	9-Other
5-Herbaceous plants	

19 Soil in tree vicinity (Choose one)

1 Good condition	3 Saturated	5 Shallow
2 Compacted	4 Dry	6 Other (p.2)

20 Site topography, soil changes (Choose up to two)

1-Excavation-depth ___ ft, distance from trunk ___ ft	
2-Grade change + ft	5-Stream bank erosion
3-Grade change - ft	6-Not applicable
4 Slope erosion	

WEATHER AT TIME OF FAILURE

21 Wind speed

1-Low (less than 5 mph)

2-Moderate (5-25 mph)

3-High (25+ mph)

22 Wind

1 Gusty

2 Steady

23 Wind in prevailing direction for season?

1-Yes

2-No

24 If branch failure, was wind direction (Omit if no wind)

1 Parallel to

2 At right angles to branch direction?

25 Temperature ___ degrees F

26 Precipitation (Choose one)

1-Rain	4-Fog or mist
2-Snow	5 None
3-Ice	

Appendix H: Florida Statute Regarding Electric Transmission and Distribution Right-of-Way Maintenance

The 2007 Florida Statutes

Title XI	Chapter 163	View Entire Chapter
COUNTY ORGANIZATION AND INTERGOVERNMENTAL RELATIONS	INTERGOVERNMENTAL PROGRAMS	

163.3209 Electric transmission and distribution line right-of-way maintenance.--After a right-of-way for any electric transmission or distribution line has been established and constructed, no local government shall require or apply any permits or other approvals or code provisions for or related to vegetation maintenance and tree pruning or trimming within the established right-of-way. The term "vegetation maintenance and tree pruning or trimming" means the mowing of vegetation within the right-of-way, removal of trees or brush within the right-of-way, and selective removal of tree *branches that extend within the right-of-way*. The provisions of this section do not include the removal of trees outside the right-of-way, which may be allowed in compliance with applicable local ordinances. Prior to conducting scheduled routine vegetation maintenance and tree pruning or trimming activities within an established right-of-way, the utility shall provide the official designated by the local government with a minimum of 5 business days' advance notice. Such advance notice is not required for vegetation maintenance and tree pruning or trimming required to restore electric service or to avoid an imminent vegetation-caused outage or when performed at the request of the property owner adjacent to the right-of-way, provided that the owner has approval of the local government, if needed. Upon the request of the local government, the electric utility shall meet with the local government to discuss and submit the utility's vegetation maintenance plan, including the utility's trimming specifications and maintenance practices. Vegetation maintenance and tree pruning or trimming conducted by utilities shall conform to ANSI A300 (Part I)-2001 pruning standards and ANSI Z133.1-2000 Pruning, Repairing, Maintaining, and Removing Trees, and Cutting Brush--Safety Requirements. Vegetation maintenance and tree pruning or trimming conducted by utilities must be supervised by qualified electric utility personnel or licensed contractors trained to conduct vegetation maintenance and tree trimming or pruning consistent with this section or by Certified Arborists certified by the Certification Program of the International Society of Arboriculture. A local government shall not adopt an ordinance or land development regulation that requires the planting of a tree or other vegetation that will achieve a height greater than 14 feet in an established electric utility right-of-way or intrude from the side closer than the clearance distance specified in Table 2 of ANSI Z133.1-2000 for lines affected by the North American Electric Reliability Council Standard, FAC 003.1 requirement R1.2. This section does not supersede or nullify the terms of specific franchise agreements between an electric utility and a local government and shall not be construed to limit a local government's franchising authority. This section does not supersede local government ordinances or regulations governing planting, pruning, trimming, or removal of specimen trees or historical trees, as defined in a local government's ordinances or regulations, or trees within designated canopied protection areas. This section shall not apply if a local government develops, with input from the utility, and the local government adopts, a written plan specifically for vegetation maintenance, tree pruning, tree removal, and tree trimming by the utility within the local government's established *rights-of-way and the plan is not* inconsistent with the minimum requirements of the National Electrical Safety Code as adopted by the Public Service Commission; provided, however, such a plan shall not require the planting of a tree or other vegetation that will achieve a height greater than 14 feet in an established electric right-of-way. Vegetation maintenance costs shall be considered recoverable costs.

History.--s. 2, ch. 2006-268.