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GULF POWER
A SOUTHERN COMPANY

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 Gulf Power Company's Annual Distribution Service Reliability Report as required by Rule 25-6.0455, along with annual storm hardening initiatives as required in Order No. PSC-06-0781-PAA-EI and the status report on Gulf's Storm Hardening Plan as required by Paragraph 7 of the "Process to Engage Third Party Attachers" Stipulated Agreement dated September 26, 2007 in Docket No.: 070299-EI.

Sincerely,

Susan D. Ritenour (lw)

mv

Attachments

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

GULF POWER COMPANY

Reliability

and

Storm Hardening Initiatives

Report

March 1, 2009

GULF POWER

A SOUTHERN COMPANY

Table of Contents

APPENDICES

1.0 Status Report of Implementation of Storm Hardening Plan

This section is intended to fulfill the requirement for filing a status report of Gulf Power Company's (Gulf, Gulf Power, the Company) Storm Hardening Plan as required by paragraph seven of the "Process to Engage Third Party Attachers" Stipulated Agreement dated September 26, 2007.

1.1 2008 Storm Hardening Activities

The following storm hardening activities were initiated and/or completed in the field during 2008:

Distribution

Pursuant to the "Process to Engage Third Party Attachers" Stipulated Agreement, Gulf Power Company continues to hold meetings in order to enhance communications between Gulf's field personnel and third party attachers. Meeting notifications are sent to the following third party attachers: AT&T, Cox Cable, MediaCom, SouthernLight, TelCove, GTC, Comcast, Springfield Knology, Embarq, Brighthouse, Madison River, Escambia County School Board, City of Valparaiso, Walton County, The Crest Corporation of Panama City and Cambelton Cable TV. Increased communications between these parties are vital to the success of Gulf's storm hardening initiatives since detailed information on actual or proposed attachments is required to complete computer modeling of poles to determine the type and class of pole required.

During these meetings, Gulf reviewed (1) the transition plan from Grade C construction standards to Grade B construction standards on all new construction, major projects, and maintenance work; (2) the extreme wind loading projects worked in 2008 and the projects planned for 2009; (3) the pole loading results of the 5% sampling of poles identified with three or more attachers that are older than twenty years; and (4) the ongoing pole inspection program (Osmose).

Organizational charts and maps identifying Gulf field personnel responsibility areas were provided to the third party attachers.

All participants had the opportunity to ask questions and to clarify any issues. The 2008 meetings were held in January and July. The first series of meetings for 2009 are scheduled for February.

Attendees at the meetings included:

- Pensacola meeting held on July 29, 2008
    - Gulf field personnel, special project engineers, technical services engineers, and their respective supervision and management representing the Pensacola, Gulf Breeze, Pace, and Milton areas
    - AT&T
    - Mediacom
    - SouthernLight
    - Cox Cable
    - Brighthouse
    - Escambia County Schools

- Panama City meeting held on July 30, 2008
    - Gulf field personnel, special project engineers, technical services engineers, and their respective supervision and management representing Panama City, Panama City Beach, and Chipley
    - Embarq
    - Mediacom
    - Comcast
    - AT&T

Prior to the hurricane season of 2008, Gulf Power Company, Southern Linc, and AT&T representatives held telephone updates to ensure the plan below operates smoothly by providing each other with information and support in the event of a major storm. As of February 11, 2008, Gulf Power has assigned a liaison to AT&T during storm events. This initiative will continue in 2009 and should facilitate a smooth and timely flow of information that indicates when Gulf Power has neared completion of restoration efforts in a particular area so that AT&T can then begin their own restoration work.

- Distribution
    - 2008 Extreme Wind Loading Projects
        - Bayou Chico 6522 – Feeds the Texaco fuel depot
        - Romana 5912 – Primary feed for Escambia County Utilities Authority sewage plant
        - DeVilliers 7402 – Backup feed for Escambia County Utilities Authority sewage plant
        - Valparaiso 9252 – Feeds the Citgo fuel depot
        - Destin 9132 – Feeds the Destin hospital on Airport Road.

Location	Poles Analyzed	# w/ Attachers	Upgraded*	Added Guying**
Central / Citgo Fuel Depot - Valparaiso 9252	88	80	47	41
Central / Destin Hospital - Destin 9132	24	24	12	15
Western / ECUA - Romana 5912	22	21	0	22
Western / ECUA - Devillars 7402	54	42	32	26
Western / Fuel Depot - Bayou Chico 6522	50	27	38	22
Total	**238**	**194**	**129**	**126**

***Upgraded means pole change out or truss**

****Added guying means new guy or upgrade of existing guy**

Bayou Chico 6522, Romana 5912, and DeVilliers 7402 feeder projects are all complete. Destin 9132 feeder project will be completed by June 2009. Valparaiso 9252 feeder project will be completed by July 2009. The communication of these projects to affected third party attachers was accomplished through joint use update meetings held on the following dates:

County	Date
Escambia/Santa Rosa	1/23/08
Washington/Holmes/Bay/Jackson	2/01/08
Okaloosa/Walton	2/06/08
Escambia/Santa Rosa/Okaloosa/Walton	7/29/08
Washington/Holmes/Bay/Jackson	7/30/08

Transmission

- All critical lines were inspected.
- Four separate aerial patrols of the total system were completed.
- Comprehensive walking/climbing and groundline inspections as part of the six-year inspection program were completed.

PURC Undergrounding Study - Phase III Modeling Tool Update

Gulf Power Company used a small overhead to underground conversion project in downtown Pensacola to test the Phase III Model. The project is located approximately two blocks from the Pensacola Bay. In gathering the required data for the model, the following inputs were determined to be "Unknowns".

General Data

- **Cost per Customer Interruption Hour** - This value is used to reflect the average hourly loss to customers due to sustained power interruptions. The user provides the hourly customer interruption cost for both storm condition and non-storm condition. (This data would have to be provided by each individual customer that is affected to determine an average.)
- **Direct hurricane cost multipliers (OH & UG)** - A scalar to adjust the total restoration cost. The model only takes into account operating, material, and labor costs in the hurricane restoration process. It does not take into account logistics and other costs associated with storm restoration. (The multiplier used was an average ratio between the total cost of past storms compared to the logistical cost of those storms)
- **Crew Availability (OH & UG)** - The general hurricane restoration process assumes a certain number of crews are available immediately after the hurricane passes; additional crews are typically added until a maximum number of crews are reached (There is a separate category for OH & UG. The model iterates across multiple hurricane years. This data was not tracked in the past and is not available unless a hurricane hits.)
- **Crew penalty factors**
  Efficiency - Due to extreme conditions (ex. Flooding, blocked roads), crew work efficiencies at the beginning are low. This input is a percentage representative of that efficiency. (This information was not tracked in the past. The data would be different for each individual crew.)
  Duration - The duration of the low efficiency. (This information was not tracked in the past. The data would be different for each individual crew.)
- **Hurricane Restoration Priority** - Percentage assigned to the project area that ranks its importance in the storm restoration process (Ex. Hospital feeders versus residential feeders)

Equipment Data

- **Storm Condition Damage Model Parameter -** The damage models for different types of equipment are modeled as two-parameter functions:
  1) Exponential function for pole damage
  2) Power function for span damage
  3) Linear function for underground equipment damage

  (Due to the lack of knowledge on these functions, the numbers from the model were used.)
- **Non-storm failure rates** - Failure rate of equipment during non-storm conditions

- **Storm fail rates** - Failure rate of equipment during storm conditions
- **Storm repair costs** -Total repair cost (material, labor, etc.) associated with a single piece of equipment during a storm situation.
- **Storm repair time** - Average outage time for a single piece of equipment.

Note: Gulf Power does not track repair costs as storm or non-storm. The same repair costs were used for storm and non-storm.

Once all known and unknown data (unknown data was either a copy of the tools sample data or an educated estimate) were entered, a "Complete Simulation" was run using 1000 hurricane years. The results were a Run-time error '13'. Dr. Ted Kury of PURC was forwarded this information.

Gulf has not determined how the "run-time error" with the "Complete Simulation", affected the Cost-Benefit Analysis.

This analysis tool needs further testing to truly understand all the inputs and the formulas that affect these inputs. During this preliminary analysis several issues were revealed:

- The initial installation costs of the underground equipment and the removal costs of overhead equipment are not taken into consideration in determining overall benefit.
- Some inputs are not within the utilities control in gathering the information and are very subjective. (ex. Cost per Customer Interruption Hour)
- Some inputs will require detailed study and acquisition during the storm restoration process which may pose an excessive burden on utilities (Ex. Crew Availability and Crew Penalty Factor), diverting valuable manpower, during a major crisis.
- The Phase III Modeling Tool does not model a single hurricane or type of hurricane (Category I, II, III, etc.). It only models a potential average hurricane season over a set number of simulated hurricane years

Further collaborative analysis with the other IOU's and Dr. Ted Kury will continue. A team of testers is scheduled to meet March 16-17, 2009 for further testing.

Special Projects

During 2008, the following underground storm hardening project was designed and is scheduled for installation by summer 2009.

- Ft. Pickens Beach
  This project will encompass a distance of 23,736 feet where Gulf Power will install 2 phases of 1/0 aluminum primary conductor along Santa Rosa Island to the Ft. Pickens area which was damaged from the effects of Hurricane Ivan. The conductors will be installed at a depth of six feet by being directly buried using a vibrating plow injection method. Four separate flush mounted concrete enclosures will provide points for lighting arrestors along the route. This is a pilot project similar to the Opal Beach project identified in the 2008 report. Both Opal Beach and Ft. Pickens are part of the National Seashore park area. It is believed this project will assist in determining storm surge mitigation effectiveness in coastline areas. The estimated cost of this project is $337,000.

2.0 Wood Pole Inspection Program

2.1 Wood Pole Inspection Description

Gulf's 2008 Wood Pole Inspection Program was designed to comply with Florida Public Service Commission (FPSC) Order No. PSC-06-0144PAA-EI (eight-year inspection cycle) and FPSC Order No. PSC-07-0078-PAA-EU (allowed certain deviations regarding CCA poles less than 15 years in age and poles surrounded by concrete and asphalt). In 2008, Gulf completed the second year of the eight-year inspection cycle, utilizing its existing wood pole inspection matrix. This matrix is based on pole age, treatment type and condition, and allows the selective excavation and boring of newer poles.

2.2 2008 Accomplishments

In 2008, a total of 35,482 poles were inspected with a rejection rate of 2.73%. See Appendix 2, entitled "Wood Pole Inspection Report" for details.

As noted earlier, Gulf uses an inspection matrix that is based on pole age, condition, and treatment type. Gulf received Commission approval to continue the use of this matrix, which calls for a sound and selective bore on CCA poles 0 to 14 years of age. Gulf also agreed to sample 1% of the

CCA poles that would not normally qualify for full excavation under its inspection matrix and perform a full excavation inspection on the sample poles. This was performed to further ensure validity of Gulf's inspection matrix and provide reassurance that Gulf's inspection process is not allowing reject poles to remain in service or go untreated.

During 2008, Gulf performed full excavation on 328 poles that had passed the initial sound and selective bore process. This reflects a 1.03 % sample rate of the 32,000 planned number of poles to be inspected this cycle. Of the sampled poles, 20.1% showed signs of decay in the early stages but none of these poles qualified as rejects. This sample clearly indicates Gulf's sound and selective bore process is not allowing defective poles to remain in service.

In the 2007 pole inspection, Gulf identified 736 reject poles. Gulf changed out 720 of these rejects and reinforced 32 poles during 2008. The remaining 16 poles have been engineered and are scheduled to be worked in the first quarter of 2009.

2.3 Projected 2009 Accomplishments

Gulf will continue its pole inspection program in 2009 to ensure the Company remains on target to achieve an eight-year inspection cycle. In addition, poles identified in the 2008 pole inspection as rejects will be changed out or reinforced in 2009. These poles are now being engineered and will be upgraded to Grade B construction standards.

3.0 Vegetation Management Programs

3.1 Vegetation Management Review

During 2008, the Company continued the Vegetation Management (VM) Programs that received Commission approval in FPSC Order No. PSC-06-0947-PAA-EI.

Vegetation hazard removals continued to be the focus of the Company's Transmission VM programs. Detailed ground patrols were continued during 2008 on every mile of the Company's transmission ROW corridors to identify vegetation conditions requiring correction. On the Company's 230kV system, an additional patrol by helicopter was performed. All vegetation conditions identified by the patrols were corrected through removal or pruning.

3.2 2008 Distribution Vegetation Management Program Activity

Gulf continued to utilize the **D**istribution **L**ock-**O**ut **R**eport, or **DLOR**, a tracking process developed by the Company to document and track distribution feeder lock-outs, identifies root causes of feeder breaker lock-outs, along with system and operational modifications that could be implemented to improve system reliability by the prevention of future feeder lock-outs.

All feeder outages classified as "vegetation caused" were evaluated in the field by a Company Forester or Arborist. None of these outages were the result of grow-ins or on-ROW tree failures that would normally be addressed by routine VM activities. The lessons learned from this data are being used to refine the criteria used to determine which off-ROW trees should be targeted for removal.

3.3 2008 Distribution Performance Metrics (System Wide)

2008 System Vegetation Management Performance Metrics

System Wide	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	29	20	9	1,190	966	224
(B) Customer Interruptions	35,434	27,189	8,245	56,125	45,402	10,723
(C) Miles Cleared	821	821	0	980	980	0
(D) Remaining Miles	0	0	0	4,054	4,054	0
(E) Outages per Mile [A/(C+D)]	.035	.024	.11	.236	.192	.044
(F) Vegetation CI per Mile [B/(C+D)]	43.16	33.17	9.99	11.15	9.02	2.13
(G) Number of Hotspot Trims	20	20	0	874	874	0
(H) All Vegetation Management Costs ($)	761,652	761,652	0	2,794,294	2,794,294	0
(I) Customer Minutes of Interruption	3,193,907	1,752,846	1,441, 061	8,613,562	7,039,541	1,574,021
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	N/A
(K) Vegetation Budget 2008 ($)	N/A	2,020,918	N/A	N/A	2,107,500	N/A
(L) Vegetation Goal 2008 (Mi)	N/A	803	0	N/A	843	0
(M) Vegetation Budget 2009($)	1,139,617	1,139,617	0	3,098,339	3,098,339	0
(N) Vegetation Goal 2009 (Mi)	816	816	0	844	844	0
(O) Trim-Back Distance (ft)	10	10	0	10	10	0

3.4 2008 Distribution Performance Metrics (Western Region)

2008 Management Region Vegetation Management Performance Metrics

Western Region	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	17	11	6	757	583	174
(B) Customer Interruptions	25,705	17,970	7,735	38,078	28,540	9,538
(C) Miles Cleared	436	436	0	550	550	0
(D) Remaining Miles	0	0	0	2,186	2,186	0
(E) Outages per Mile [A/(C+D)]	.039	.025	.014	.277	.213	.064
(F) Vegetation CI per Mile [B/(C+D)]	58.96	41.22	17.74	13.92	10.43	3.49
(G) Number of Hotspot Trims	1	1	0	569	569	0
(H) All Vegetation Management Costs ($)	420,292	420,292	0	1,423,665	1,423,665	0
(I) Customer Minutes of Interruption	2,528,516	1,127,820	1,400,696	6,011,421	4,596,221	1,415,200
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	N/A
(K) Vegetation Budget 2008($)	1,010,459	1,010,459	0	1,053,750	1,053,750	0
(L) Vegetation Goal 2008(Mi)	436	436	0	456	456	0
(M) Vegetation Budget 2009($)	624,591	624,591	0	1,694,366	1,694,366	0
(N) Vegetation Goal 2009 (Mi)	430	430	0	458	458	0
(O) Trim-Back Distance (ft)	10	10	0	10	10	0

3.5 2008 Distribution Performance Metrics (Central Region)

2008 Management Region Vegetation Management Performance Metrics

Central Region	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	5	3	2	162	143	19
(B) Customer Interruptions	1,228	725	503	3,513	3,181	332
(C) Miles Cleared	178	178	0	198	198	0
(D) Remaining Miles	0	0	0	783	783	0
(E) Outages per Mile [A/(C+D)]	.028	.017	.011	.165	.149	.016
(F) Vegetation CI per Mile [B/(C+D)]	6.90	4.07	2.83	3.58	3.24	.34
(G) Number of Hotspot Trims	13	13	0	255	255	0
(H) All Vegetation Management Costs ($)	156,502	156,502	0	648,348	648,348	0
(I) Customer Minutes of Interruption	71,063	32,168	38,895	380,703	353,040	27,663
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	N/A
(K) Vegetation Budget 2008($)	505,230	505,230	0	526,875	526,875	0
(L) Vegetation Goal 2008(Mi)	178	178	0	164	164	0
(M) Vegetation Budget 2009($)	219,287	219,287	0	590,213	590,213	0
(N) Vegetation Goal 2009 (Mi)	178	178	0	164	164	0
(O) Trim-Back Distance (ft)	10	10	0	10	10	0

3.6 2008 Distribution Performance Metrics (Eastern Region)

2008 Management Region Vegetation Management Performance Metrics

Eastern Region	Feeders			Laterals		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	7	6	1	271	240	31
(B) Customer Interruptions	8,501	8,494	7	14,534	13,681	853
(C) Miles Cleared	207	207	0	232	232	0
(D) Remaining Miles	0	0	0	1,097	1,097	0
(E) Outages per Mile [A/(C+D)]	.034	.029	.005	.204	.181	.023
(F) Vegetation CI per Mile [B/(C+D)]	41.07	41.03	.04	10.94	10.29	.65
(G) Number of Hotspot Trims	6	6	0	50	50	0
(H) All Vegetation Management Costs ($)	184,858	184,858	0	722,281	722,281	0
(I) Customer Minutes Of Interruption	594,328	592,858	1,470	2,221,438	2,090,280	131,158
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	0
(K) Vegetation Budget 2008($)	505,230	505,230	0	526,875	526,875	0
(L) Vegetation Goal 2008(Mi)	188	188	0	223	223	0
(M) Vegetation Budget 2009($)	295,740	295,740	0	813,760	813,760	0
(N) Vegetation Goal 2009 (Mi)	207	207	0	222	222	0
(O) Trim-Back Distance (ft)	10	10	0	10	10	0

3.7 2008 Distribution Feeder Comparison

2008 Feeder Comparison – Three-Year Cycle Based Program Vs Company Programs

System Wide	Three-Year Cycle Program			Company Program		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	N/A	20	N/A	29	20	9
(B) Customer Interruptions	N/A	31,893	N/A	35,434	27,189	8,245
(C) Miles Cleared	N/A	274	N/A	821	821	0
(D) Remaining Miles	N/A	547	N/A	0	0	0
(E) Outages per Mile [A/(C+D)]	N/A	.024	N/A	.035	.024	.011
(F) Vegetation Cl per Mile [B/(C+D)]	N/A	38.84	N/A	43.16	33.12	10.04
(G) Number of Hotspot Trims	N/A	N/A	N/A	20	20	0
(H) All Vegetation Management Costs ($)	N/A	959,000	N/A	761,652	761,652	0
(I) Customer Minutes of Interruption	N/A	2,379,514	N/A	3,193,907	1,752,846	1,441,061
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	N/A
(K) Trim-Back Distance (ft)	N/A	10	0	10	10	0

3.8 2008 Distribution Lateral Comparison

2008 Lateral Comparison – Three-Year Cycle Based Program Vs Company Programs

System Wide*	Three-Year Cycle Program			Company Program		
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.
(A) Number of Outages	N/A	936	N/A	1,190	966	224
(B) Customer Interruptions	N/A	35,964	N/A	56,125	45,402	10,723
(C) Miles Cleared	N/A	1,682	N/A	980	980	0
(D) Remaining Miles	N/A	3,364	N/A	4,066	4,066	0
(E) Outages per Mile [A/(C+D)]	N/A	.185	N/A	.236	.191	.045
(F) Vegetation CI per Mile [B/(C+D)]	N/A	7.13	N/A	11.12	8.98	2.14
(G) Number of Hotspot Trims	N/A	N/A	N/A	874	874	0
(H) All Vegetation Management Costs ($)	N/A	5,887,000	N/A	2,794,294	2,794,294	0
(I) Customer Minutes of Interruption	N/A	5,056,467	N/A	8,613,562	7,039,541	1,574,021
(J) Outage Restoration Costs	N/A	N/A	N/A	N/A	N/A	N/A
(K) Trim-Back Distance (ft)	10	10	0	10	10	0

3.9 2009 Distribution Vegetation Management Programs

The Company's 2009 Distribution Vegetation Management Programs will employ all of the elements of the Company's successful 2008 Programs including the following:

- Main-Line Annual Trim Schedule (MATS)
- Main-line Inspect & Correct Schedule (MICS)
- Scheduled Annual Lateral Trim (SALT)
- Storm Hardening Annual Removal Program (SHARP)
- Customer Ticket Activity

A more detailed explanation of the above programs is found in Gulf's March 1, 2008 Reliability & Storm Hardening Report.

Feeder Outage Investigating and Reporting System

Forestry Services is one of the six area contributors to DLOR and, as such, provides forensic investigation of all tree-caused feeder lock-outs. Forestry Services evaluates each tree-caused event to determine if the outage should have been prevented by the Company's VM program. The forensic data is also used to refine VM programs to ensure the trees-causing outages fit the tree profile targeted by the Company's SHARP program.

3.10 Company's Overall Vegetation Management Summary

When comparing 2006, 2007, and 2008 reliability data with 2006 and 2007 data, the following benefits and outage reductions are realized from the Company's main-line feeder management programs:

Reduction	2006 to 2007	2007 to 2008	2006 to 2008
1) In CI	29%	40%	53%
2) In CMI	25%	49%	58%
3) # Outages	37%	29%	55%

During 2008, the Company continued its vegetation Storm Hardening activities, which included the removal of 1,494 off right-of-way danger trees that might pose a hazard to the distribution system under adverse weather conditions.

Gulf completed the second year of its main line feeder program. This program consists of full maintenance pruning on one third of the Company's main line feeders plus an annual patrol with corrective pruning for the remaining two-thirds of the main line feeders. This aggressive pruning program has not only improved reliability, but decreased the annual cost associated with maintaining main line feeders due to reduced work loads associated with vegetation management (See Sections 3.3 through 3.5).

Gulf's 2008 vegetation management accomplishments met or exceeded the Company's expectations while improving system reliability.

Centralized oversight for these VM programs is achieved through the Company's Contract Services' Forestry Services section. Forestry Services, staffed by degreed Foresters and /or ISA Certified Arborists, develop and manage all VM programs and the contract resources responsible for performing the Company's T&D VM work. These personnel also assist the Company's efforts to provide safety and educational information to the public. A "bill Insert" was developed to help Gulf's customers understand safety and reliability issues related to tree planting near power lines. Company employees also spoke to numerous grammar school classes across the Company's service territory about power line safety.

The Company's 2009 VM activities will continue the program that received Commission approval in FPSC Order No. PSC-06-0947-PAA-E

4.0 Joint Use Pole Attachment Audits

Gulf performs its joint use inventory audits every five years, covering the overhead distribution system as required in FPSC Order No. PSC-06-0781-PAA-EI. The next audit is scheduled for 2011.

a) Percent of system audited: 100%
   Feeders: 100% Laterals: 100%
b) Date audit conducted? May 1, 2006 through September 30, 2006
c) Date of previous audit? 2001
d) List of audits conducted annually: None in the out years

Gulf Power has also initiated an annual program to perform pole strength and loading analysis of 500 poles. The poles selected are twenty years or older and have at least three third party attachers. The results of the 2008 testing program are shown in Section 4.2 below.

4.1 Activity and Costs Incurred for 2008 and 2009 Projections

1	2008 Joint Use Pole Audit	N/A
2	2009 Pole Strength and Loading Engineering and Replacements	$436,000

4.2 Joint Use Attachment Audits – Distribution Poles

(A) Number of company owned distribution poles (See Note 1)	248,744
(B) Number of company distribution poles leased: 9 Telecomm attachers on Gulf's poles (See Note 2)	130,005
(C) Number of owned distribution pole attachments: 9 CATV, numerous Government and other 3rd party attachers on Gulf's poles (See Note 3)	134,231
(D) Number of leased distribution pole attachments: Foreign poles Gulf Power is attached to (See Note 4)	63,691
(E) Number of authorized attachments: Sum of all attachments to Gulf Power Company poles (See Note 4)	262,831
(F) Number of unauthorized attachments: Gulf's best estimate based on Joint Use Pole Inventory results (See Note 3)	6,379
(G) Number of distribution poles strength tested:	513
(H) Number of distribution poles passing strength test	512
(I) Number of distribution poles failing strength test (overloaded)	1
(J) Number of distribution poles failing strength test (other reasons)	0
(K) Number of distribution poles corrected (strength failure)	1
(L) Number of distribution poles corrected (other reasons)	0
(M) Number of distribution poles replaced: M=I + J (See Note 5)	1
(N) Number of apparent NESC violations involving electric infrastructure:	Note 6
(O) Number of apparent NESC violations involving 3rd party facilities:	Note 6

Note 1: As of December 2008.
Note 2: Numbers based on permitting, ATT's forecast of attachments in 2008 and the 2006 pole count.
Note 3: Numbers based on 2008 permitting and the 2006 pole count.
Note 4: Data based on the 2006 pole count and ATT's forecast of attachments for 2008.
Note 5: Data based on the 2006 pole count.
Note 6: Gulf Power does not collect this type of data as part of the Joint Use process. When Gulf becomes or is made aware of NESC violations, Gulf has corrective measures that are taken.

5.0 Six-Year Inspection Cycle for Transmission Structures

5.1 Activity and Costs Incurred for 2008 and 2009 Projections

In 2004, Gulf adopted the Southern Company Transmission Line Inspection Standards. Gulf contracts ground line inspections and uses a combination of Company employees and contractors to perform comprehensive walking and aerial inspections. Gulf Power Company's transmission inspection program is based on two alternating twelve-year cycles which results in a structure being inspected at least every six years.

In 2008, Gulf Power spent a total of $98,209 on a combination of wood ground line treatment and steel ground line inspections contractors. In

addition to this amount, Gulf Power spent $80,159 on a combination of comprehensive walking inspections, aerial inspections and emergency inspections. The number of structures inspected and the amount of dollars spent, as shown in Section 5.4, were for the comprehensive walking and the wood ground line treatment inspections. All inspections are proceeding as planned to meet the required six-year timeline.

In 2009, Gulf Power plans to continue its inspection schedule at a rate such that one sixth of the system's structures will be addressed. The projected expenditure for these inspections is $90,000. The breakdown of this amount is shown in the 2009 columns of Section 5.3 and Section 5.4.

5.2 Transmission Circuit, Substation and Other Equipment Inspections

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total Transmission Circuits	N/A See Note 2					
(B) Planned Transmission circuit inspections						
(C) Completed Transmission circuit inspections						
(D) Percent of transmission circuit inspections completed						
(E) Planned transmission substation inspections	33	33	Note 1	Note 1	33	Note 1
(F) Completed transmission substation inspections	-	33	-	-	-	-
(G) Percent transmission substation inspections completed	-	100%	-	-	-	-
(H) Planned transmission equipment inspections (other equipment)	-	-	-	-	-	-
(I) Completed transmission equipment inspections (other equipment)	-	-	-	-	-	-
(J) Percent of transmission equipment inspections completed (other equipment)	-	-	-	-	-	-

Notes:

Note 1 Substation inspection dollars are not tracked separate from general Maintenance.
Note 2 Gulf Transmission does not inspect by circuit.

5.3 Transmission Tower Structure Inspections

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total Transmission tower structures[Note 1]	-	1,158	-	-	-	-
(B) Planned Transmission tower structure inspections	137		$34,250	$44,965	97	$35,000
(C) Completed Transmission tower structure inspections	-	140	-	-	-	-
(D) Percent of transmission tower structure inspections completed	-	12%	-	-	-	-

Notes

Note 1: The total number of towers reduced due to improved database information from GIS. This number is for steel and aluminum lattice towers or guyed "Y" towers.

5.4 Transmission Pole Inspections

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of Transmission Poles[Note 1]	-	15,023	-	-	-	-
(B) Number of transmission poles strength tested	2,787	2,787	$41,805	$53,244	2,504	$55,000
(C) Number of transmission poles passing strength test	-	2,509	-	-	-	-
(D) Number of transmission poles failing strength test (overloaded)	-	0	-	-	-	-
(E) Number of transmission poles failing strength test (other reasons)	-	278	-	-	-	-
(F) Number of transmission poles corrected (strength failure)	-	0	-	-	-	-
(G) Number of transmission poles corrected (other reasons)	-	287	-	-	-	-
(H) Total transmission poles replaced	-	287	-	-	-	-

Notes:

Note 1: The total number of transmission poles increased due to improved database information from GIS. This is allowing for more accurate tracking of poles. This is the number of wood poles on Gulf's system.

6.0 Storm Hardening Activities for Transmission Structures

6.1 Activity and Costs Incurred for 2008 and 2009 Projections

Gulf Power Company identified two priority hardening activities for transmission structures: installation of guys on H-frame structures and the replacement of wooden cross arms with steel cross arms. These activities will add additional strength capacity to the existing structures.

Gulf Power Company believes that the two activities chosen are the best alternatives for existing transmission assets most at risk. All replacements and installations are proceeding on schedule to meet the target completion dates.

6.2 Hardening of Existing Transmission Structures

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Transmission structures scheduled for hardening	300	-	$600,000	-	300	$600,000
(B) Transmission structures hardening completed	-	312	-	N/A (Note 1)	-	-
(C) Percent Transmission structures hardening completed	-	104%	-	-	-	-

NOTES:

1. Actual dollars spent are incorporated into a budget for maintenance replacement of capital items and not separated by hardening activity.

7.0 Distribution Substations

7.1 Five-Year Patterns/Trends in Reliability Performance of Distribution Substations

Gulf reviews each substation related outage, and actions are taken to reduce the possibility of a trend occurring in the future. The review of data for the past five years does not show any trends or patterns for distribution substation reliability.

7.2 Distribution Substation Reliability Tracking

Each abnormal substation related outage is reviewed and analyses are performed to reduce possible future outages from happening as a result of a similar system disturbance.

7.3 Distribution Substation Reliability Problem Identification Process

In order to promote substation reliability, inspections are performed which include visual checks on all equipment including breakers, regulators, transformers and battery banks. The substation is verified to have the proper signs installed, the fence is checked for security and proper grounding, yard lights checked, and weed problems noted. A visual inspection of all structures, buss work, switches and capacitor banks is also completed. Any abnormal condition is repaired immediately or recorded

as an abnormal situation to be repaired at some time scheduled in the future based on priority.

Along with station inspections, equipment maintenance is performed on a regular cycle to maintain reliability. A detailed battery inspection is completed every six months with impedance tests performed every four years. Oil Breakers preventative diagnostics are performed every two years. 12kV vacuum breakers have a preventative diagnostic performed every four years. Preventative diagnostics are performed every year on regulators. Transformers have a dissolved gas analysis performed every year and power factor testing is performed every six years.

7.4 Distribution Substation Inspections during Normal Operations

In 2008, Gulf inspected all of its distribution substations at least once.

8.0 Geographic Information System (GIS)

8.1 Activity and Costs Incurred for 2008 and 2009 Projections

In respect to distribution, Gulf has completed its mapping transition to its new Distribution Geographic Information System, called **DistGIS.**

The Transmission group has now completed entering all transmission system data into the GIS format ahead of schedule. No additional costs were incurred to accomplish this task.

8.2 Distribution Overhead Data Input

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

8.3 Distribution Underground Data Input

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

8.4 Transmission Overhead Data Input

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide OH transmission assets for input	11,859	11,859	N/A Note 1		-	N/A Note 1
(B) Number of OH transmission assets currently on system	7,593	11,859			-	
(C) Percent of OH transmissions assets already on system	-	100%			-	
(D) Annual OH transmission assets targeted for input	1,064	10,795			-	
(E) Annual OH transmission assets input to system	-	9,704			-	
(F) Annual percent of OH transmission assets input	-	81.8%			-	

Notes:

1. This data is captured as part of the inspection process and, therefore, is not tracked separately.

8.5 Transmission Underground Data Input

	2008 Activity		2008 Budget		2009	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide UG transmission assets for input	N/A Note 2	-	N/A Note 2			
(B) Number of UG transmission assets currently on system		-				
(C) Percent of UG transmission assets already on system		-				
(D) Annual UG transmission assets targeted for input		-				
(E) Annual UG transmission assets input to system		-				
(F) Annual percent of UG transmission assets input		-				

Notes:

1. Gulf Power Company defines an underground transmission asset as the complete installation from termination to termination.
2. Gulf Power Company already has GIS data on the location of all of its underground transmission facilities.

9.0 Post Storm Data Collection and Forensic Analysis

9.1 Activity and Costs Incurred for 2008 and 2009 Projections

Distribution:

During 2008, the data collection and transfer process was tested by Gulf's post-storm forensic team contractors in Panama City following Tropical Storm Fay. Damage was insignificant as a result of this storm; however the data collection crews that were brought on the system still collected information on a sample of poles and transferred this data to the data analysis agent. This test was performed to ensure that there were no problems with the data transfer and that all systems were functioning properly. The test was successful and Gulf is prepared for forensic data collection and analysis following the next major storm. Charges that were incurred for the forensic data collection amounted to $6,467.55.

Transmission:

Gulf Power Company's Transmission department's forensics team will be lead by the transmission engineering function. Utilizing an aerial patrol with a fixed wing aircraft, the team will capture an initial assessment of the level of damage to the transmission system. A follow-up aerial patrol utilizing helicopters will capture GPS coordinates for each failure and record these failures with the Transmission Line Inspection System (TLIS). When ground crews arrive on the scene, the construction inspector with the crew will be responsible for assessing all damage and making a determination as to the cause of the failure. Gulf's Transmission Engineering department will review all findings of the field inspectors and determine if additional information should be gathered.

Gulf Power's existing Common Transmission Data Base (CTDB) will be utilized to capture all forensic information. The TLIS tool will be used to track all facility failures and create work orders to associate those failures with the affected facilities. TLIS utilizes geographic mapping software to track the location facilities.

10.0 Outage Data Differentiating Between Overhead and Underground Systems

Although Gulf was slightly impacted by several named storms in 2008, they did not provide any significant forensic data collection opportunities.

10.1 Activities and Costs Incurred in 2008 and 2009 Projections

As reported last year, Gulf expanded its record keeping and data analysis associated with overhead and underground outages, some of which is included in Section 15.10.4 of this report.

In addition, Gulf began collecting the following data on outages as they occur:

- UG cable is:
  - direct buried
  - direct buried but cable injected
  - in conduit
- Pole type is:
  - concrete
  - wood

This data was collected as each outage occurred using its Trouble Call Management System (TCMS). Data collected in 2008 is shown in the tables below. This data includes Transmission, Planned Outages, and all exclusions.

Cust	System	N	CI	CMI	Dur	SAIDI	SAIFI	CAIDI	L-Bar
427,929	Overhead	11,470	726,199	66,044,549	1,471,708	154.34	1.697	90.95	128.31
427,929	URD - Direct Burial	227	4,049	1,044,460	54,158	2.44	0.009	257.96	238.58
427,929	URD - In Conduit	55	995	204,407	15,067	0.48	0.002	205.43	273.95
427,929	URD - Injected	3	33	8,280	738	0.02	0.000	250.91	246.00
427,929	URD - Undetermined	793	22,156	3,112,381	173,661	7.27	0.052	140.48	218.99

Cust	Failure	N	CI	CMI	Dur	SAIDI	SAIFI	CAIDI	L-Bar
427,929	Pole - Concrete	2	2	398	398	0.00	0.000	199.00	199.00
427,929	Pole - Wood	86	14,005	2,271,444	19,555	5.31	0.033	162.19	227.38

The costs for this were minimal as it utilizes existing systems and processes.

11.0 Coordination with Local Governments

For years, Gulf Power has emphasized the importance of coordinating with local governments on major projects and storm preparedness. For all major projects, Gulf meets with the governmental entities involved to review the scope of the projects, the steps involved in the design, and discuss the coordination of activities involved with project implementation. Gulf also works very closely with the county Emergency Operation Centers (EOC) in its service area for storm preparedness and restoration activities as needed. In 2007, Gulf initiated a communication survey with the four active EOCs in Northwest Florida to gauge the Company's participation and communication levels with the EOCs. The Directors for the Escambia County, Santa Rosa County, Okaloosa County, and Bay County EOCs were asked to complete a survey regarding Gulf's participation level, responsiveness, presence in the EOC, and overall information exchange. This survey was conducted again for 2008. All four EOCs rated Gulf Power's coordination efforts as outstanding in 2007 and again in 2008. As the surveys attest Gulf Power values and actively pursues a positive, cooperative relationship with the leadership in every community served.

In addition to being active partners with these emergency centers, Gulf maintains year-round contact with city and county officials to ensure cooperation in planning, good communications and coordination of activities.

Gulf Power hosts Community Leader Forums each year in the three geographic districts. Community, government, education and business leaders are invited to these half-day events where Gulf Power gives an update on Gulf's plans and activities and asks for input from the community. Working with the community leaders, two or three key community issues are identified and brought to the forum for leaders to listen to each other and build consensus on how to address.

Once a year, Gulf invites community leaders from all over Northwest Florida to the Gulf Power Economic Symposium – a two-day event designed to bring together regional and state decision-makers. This meeting is normally attended by more than 450 decision-makers who discuss common challenges and opportunities. Included in this meeting is a presentation by the FPSC to ensure good, open communications and cooperation between communities, Gulf Power, and the state.

Gulf also has employees designated in every community served whose job is to keep in regular contact with city, county and business leadership.

11.1 Ongoing Programs

a) Number of city/county liaisons initiated.

Gulf Power Company has several employees with local government liaison responsibilities in Northwest Florida.

District managers are located in Pensacola, Ft. Walton, and Panama City. Local managers, who report to the district managers, are located in Milton, Crestview, Niceville, and Chipley. These positions interact with city and county personnel on a daily/weekly basis regarding numerous issues, including emergency preparedness as needed. Due to the regularity of interaction, it would not be feasible to document all liaisons initiated. These employees are also actively involved in specific government/business committees that focus on emergency preparedness needs in Northwest Florida. Examples of those include:

- Executive Board Member of BRACE (Be Ready Alliance for Coordinating for Emergencies). BRACE is an Escambia County organization unique to Florida but part of a federal government directive that encourages communities to develop more effective preparedness programs for various types of disasters. The federal government organization is called COAD (Communities Organized and Active in Disasters). BRACE meets on a monthly basis.
- Member of Okaloosa County Emergency Management Committee. This Committee is a coordinated effort between government and business to address emergency preparedness issues on a monthly basis.
- Member of Walton County Mitigating Committee. This Committee provides an interactive dialogue between Walton County officials and businesses in order to coordinate efforts on many issues, including emergency preparedness and infrastructure needs.

Gulf Power Line Clearance Specialists and Forestry Services Technicians also communicate routinely with members of the community; local municipal, county, state, and federal officials; and military leaders concerning area vegetation projects, needs, and concerns associated with: (1) new customer and Company construction projects; (2) utility right-of-way maintenance; (3) major initial clearing projects (i.e. road additions and re-sizing projects,

new distribution feeders, water and sewer projects, military projects and missions, etc); and (4) storm preparation and recovery activities. Routine communications can range from office and field visits to phone and radio conversations.

b) Number of periodic communications initiated with cities/counties.

Gulf Power personnel communicate with local government personnel on a daily/weekly basis.

c) Number of restoration training and assistance programs conducted.

In addition to numerous planning meetings with the EOCs, Gulf Power personnel also participated in the following hurricane activities with local governments in 2008:

- Escambia County EOC:
  - Hurricane Drill
  - All EOC Activations
  - Media Storm Training Session (Emergency Communication Procedures)
  - EOC Representative Training
- Santa Rosa Co. EOC:
  - Hurricane Drill
  - All EOC Activations
  - EOC Representative Training
- Okaloosa County EOC:
  - Hurricane Drill
  - All EOC Activations
  - EOC Representative Training
  - Media Storm Training Session (Emergency Communication Procedures)
  - Conducted Storm Training for all Sewer and Water Utilities in Okaloosa County
- Bay County EOC:
  - Hurricane Drill
  - Media Storm Training Session (Emergency Communication Procedures)

d) Number of city/county problem resolution plans.

Gulf Power has developed a single Emergency Operations Plan. There is no need for multiple plans.

11.2 Storm Preparation

a) Number of communication links and contingency plans established.

Gulf Power Company has 12 employees dedicated to the county EOCs throughout Northwest Florida. Each of those employees has received federal certification under the National Incident Management System (NIMS). The EOC Representatives assist city and county agencies and officials during emergencies that warrant activation of the county EOCs. Gulf Power provides 24-hour coverage throughout the duration of the EOC activation. All actions are based on the Company's central Emergency Operations Plan.

b) Number of operational contingency plans developed for emergency services.

All Gulf Power contingency plans are incorporated into its central Emergency Operations Plan.

c) Number of public communication plans developed prior to, during and after the storm.

Gulf Power's Emergency Operations Plan includes ongoing communications, pre-storm communications, and post-storm communications supplied by the Corporate Communications Department. Company News Releases are delivered to the County EOCs at least twice daily during storm restoration events to keep local government agencies and officials apprised of the latest Company restoration activities.

11.3 Storm Restoration

a) Number of emergency communication links maintained.

Gulf has 12 employees assigned to the Northwest Florida EOCs. Depending on the number of counties that activate their emergency operations centers for a storm event, Gulf maintains a communication link with the activated EOCs. For each activation during 2008, assigned Gulf Power representatives immediately coordinated pre-storm activities with the County EOCs to establishment emergency communication links with local and state officials, the media, and all restoration crews.

b) Number of priority emergency services restored.

Gulf Power always restores priority emergency services as quickly as possible. In addition, Gulf Power continues to storm-harden the electrical feeder lines that serve critical infrastructures such as hospitals, water treatment facilities and fuel depots to minimize outages of these facilities during major storm events. There were no hurricane-related outages to priority emergency services during 2008.

c) For each tropical storm, hurricane and other emergency event impacting the utility's service area, what community coordination action did the utility pursue not otherwise in a) and b) above?

No additional coordination efforts were required in 2008 due to the minimal impact of the tropical storms on NW Florida.

12.0 Collaborative Research

12.1 Activity and Costs Incurred for 2008 and 2009 Projections

1	2008 Collaborative Research	$21,245
2	2009 Collaborative Research Expenditures to date	-0-

12.2 Project Planning Report

As a member of PURC, Gulf is participating in the research activities for Storm Hardening as described by PURC management in Appendix 4.

13.0 Disaster Preparedness and Recovery Plan

Gulf's 2008 Disaster Preparedness and Recovery Plan had no major revisions from what was submitted in the Company's March 1, 2008 annual filing. A copy can be provided upon request.

13.1 Activity and Costs Incurred for 2008 and 2009 Projections

Gulf's expenditures for 2008 were $9,269 to enhance the communication infrastructure in the Pine Forest bunker facility and the Crestview local

office (as an emergency backup in the event of catastrophic destruction). In 2009, improvements will continue to be made to the Pine Forest facility in support of the bunker facility at an estimated cost of $5,000 - $10,000. This work will be completed by June 1, 2009.

13.2 Disaster Recovery Plan Activity

Gulf's 2009 Storm Procedures Manual is currently being reviewed by management. Revisions, if any, will be returned and incorporated in the Manual by June 1, 2009. Training schedules are being developed with plans for training to be completed prior to hurricane season.

13.3 Hurricane Drill

A mock hurricane drill was conducted on July 8, 2008, at Gulf Power Company's Corporate Office. The purpose of this drill was to enhance coordination and cooperation by involving all departments in their response to a natural disaster. Mock weather advisories were sent to all participants beginning July 3. Normal "field" participants were available at their respective district offices and participated as called upon. Major points covered included:

- Discussion of the preparedness cycle of (1) planning (2) organizing, training, and equipping personnel (3) conducting exercises and (4) evaluating and improving processes.
- Various scenarios were assigned to the participants to test their responses and the quality of existing plans in place. Examples included damage to the transmission system, a fatality, loss of telecommunications to the call center, and staging of materials.

Gulf Power is in the process of planning another mock hurricane drill prior to the start of the 2009 hurricane season.

14.0 Storm Season Ready Status

The following is an overview of Gulf Power Company's 2009 Hurricane Preparedness Briefing.

- Transmission Inspections
  - All critical lines will be inspected by May 1, 2009
  - The complete transmission system has been inspected aerially once in 2009. Gulf Power typically performs four aerial inspections annually;
  - Comprehensive walking/climbing and ground line inspection six-year program ensures:
    - 85% of inspections will be complete by August 1, 2009
- Vegetation Management
  - VM Contracts for Storm Restoration Resources
    - Storm Restoration contracts have been established with numerous VM contractors to ensure sufficient crew and equipment resources are available to support the Company's T&D ROW corridor VM storm restoration requirements.
  - Transmission Rights-of-Way (ROW) Corridors
    - All transmission ROW corridors will be inspected to identify and correct vegetation conditions that pose a hazard to the transmission system within the following 12 months and/or during periods of adverse weather conditions.
  - Distribution Rights-of-Way (ROW) Corridors
    - All main-line three phase feeder ROW corridors will be inspected to identify and correct vegetation conditions that pose a hazard to the distribution main-line three phase feeder systems within the following 12 months and/or during periods of adverse weather conditions.
    - Off ROW danger tree removal will continue to take place throughout 2009.

In summary, Gulf Power Company is fully prepared for the 2009 hurricane season. The following summarizes Gulf's intent for the 2009 season.

Storm Recovery Plan

Gulf Power Company uses the plans described in its Storm Recovery Plan to respond to any natural disaster that may occur in northwest Florida. These plans have previously proven to be very effective in recovering from multiple storms that have impacted Gulf Power and its customers. As part of its annual operations, Gulf Power has developed and refined its planning and preparations

for the possibility of a natural disaster in the Florida panhandle. This planning is updated annually to build on what works well and to improve in areas that do not work as well as intended. In these updates, Gulf strives for continuous improvement by building on experiences from recovery efforts within northwest Florida as well as serving to assist other utilities that have suffered weather related natural disasters.

Gulf's plan has been encapsulated within a detailed and proprietary Storm Recovery Plan procedure manual as an element of its Natural Disaster preparedness and Recovery program. The manual will follow the guidelines and philosophy set forth in the Storm Recovery Plan.

As previously stated, the Storm Recovery Plan is annually updated as improvements or modifications arise. For 2009, the following updates will be incorporated into the Storm Recovery Plan:

- In the event of a storm, a core group of Gulf employees will occupy the Company Emergency Management Center (CEMC) "Bunker Facility".
- System Control will relocate to the new Distribution Operations Center located at the Pine Forest facility in the event of a major storm.

The restoration procedure establishes a plan of action to be utilized for the operation and restoration of generation, transmission, and distribution facilities during major disasters. Such disasters include hurricanes, tornadoes, and storms that could cause widespread outages to Gulf's customers.

The overall objective is to restore electric service to Gulf's customers as quickly as possible consistent with protecting the safety of everyone involved.

The company garners support from the Southeastern Electric Exchange (SEE) Mutual Assistance Group and Southern Company for distribution, logistics and the Transmission Emergency Restoration Plan.

In the logistics and support areas, contracts are negotiated and confirmed with vendors for services such as food, lodging, materials, transportation, fuel and other support functions. Staging sites are secured, and if needed, agreements are negotiated and signed. Gulf Power's Supply Chain Management department ensures that materials on hand, along with available supplies from the material vendors, are sufficient to meet the anticipated demands of the storm season.

15.0 2008 Reliability Performance

15.1 Overall Performance

Gulf Power's indices, both actual and adjusted, show a slight decline in reliability for 2008. There was an approximate 6% decline in both the actual and adjusted SAIDI. There continues to be indications that the "lingering affects" from the 2004 and 2005 storm seasons are beginning to diminish. An indicator of this is the continual decrease in the number of transformer failures.

Gulf experienced several outage events in 2008 that were uncontrollable. These outages were caused by others, including a crane that collapsed on a feeder. In addition, there was an extreme weather event that was not excludable because it was not a named storm or NWS recordable tornado. The total SAIDI impact for these events is 13.15. This results in a Gulf Adjusted SAIDI of 119 or a 5% decrease from 2007 to 2008.

In 2008, Gulf continued to seek improvements in the company's distribution reliability by utilizing the **D**istribution **L**ock-**O**ut **R**eport which was discussed in last year's report. DLOR was developed to document and track distribution feeder lock-outs, recognize root causes of feeder lock-outs, and identify systems and operational modifications that could be implemented to prevent future feeder lock-outs.

See Appendix 1 for 2008 actual data and adjusted data.

During the preparation of this year's Reliability filing, an inadvertent error was discovered in the CEMI5 (Actual) calculation from last year's filing. To correct this error, the "2007 Distribution Service Reliability Reports – Actual" spreadsheet containing the corrected 2007 CEMI5 values were included with this year's filing in Appendix 1 along with the most current 2008 values.

15.2 Data Tracking Level

Gulf continues to collect outage data down to the customer meter level using the Trouble Call Management System (TCMS).

15.3 Critical Review of Detailed Reliability Data

In 2008, Gulf was impacted by several storm events which met the FPSC exclusion criteria. The impacts of these events are shown in Section 15.7.

In 2008, there were several outage events that were uncontrollable. These outages were caused by others (CATV, telephone, fire, vandalism, trees cut by others, and dig-ins) and one major outage involved a construction crane that collapsed on a feeder. In addition, there was an extreme weather event that was not excludable; because it was not a named storm or NWS recordable tornado. The total SAIDI impact for these events is 13.15. This results in a Gulf Adjusted SAIDI of 119 or a 4% decrease from 2007 to 2008.

Gulf's review of reliability and system data indicates that the carry over effects from the 2004 and 2005 storm season are diminishing. This is demonstrated in Gulf's summary of the equipment scrapping data for overhead and pad-mounted transformers shown below. In 2008, both the overhead and pad-mounted transformers scrapped have dropped to a level which is below the five year average prior to Ivan in 2004.

YEAR	OVERHEADS	% OH CHANGE Compared to 99 - 03 Average of 1523	PAD-MOUNTS	% UG CHANGE Compared to 99 - 03 Average Of 226
1999	1,509		214	
2000	1,639		180	
2001	1,727		220	
2002	1,516		272	
2003	1,224		246	
2004	1,967	29%	244	8%
2005	3,004	97%	433	92%
2006	2,212	45%	333	47%
2007	1,576	4%	336	49%
2008	1,451	-5%	222	-2%

Gulf's adjusted total system outages (N) from 2007 to 2008 increased approximately 15%. The top causes contributing to this increase were Animal, Deterioration and Lightning.

15.4 Identification and Selection of Detailed Reliability Data

The identification and selection of detailed reliability data continues to be a part of Gulf's Trouble Call Management System (TCMS) process. Gulf's outage data collection captures information down to the customer meter level. As a result, Gulf can review data and the resulting reliability indices at the system level and by its three districts – Western, Central, and Eastern.

15.5 Generation Events – Adjustments

There were no generation events excluded from distribution reliability reporting in 2008.

15.6 Transmission Events – Adjustments

See Appendix 1 for transmission excluded events and associated outage causes and resolutions.

15.7 Extreme Weather – Adjustments

Gulf had the following weather events which met the FPSC exclusion criteria.

The February 17th Tornado indices are as follows:

- N = 26
- CI = 6,127
- CMI = 1,885,620
- SAIDI = 4.41
- SAIFI = 0.014
- CAIDI = 307.76

The Hurricane Fay Storm indices are as follows:

- N = 234
- CI = 10,980
- CMI = 1,087,167
- SAIDI = 2.54
- SAIFI = 0.026
- CAIDI = 99.01

The Hurricane Gustav indices are as follows:

- N = 248
- CI = 16,842
- CMI = 2,914,818
- SAIDI = 6.81
- SAIFI = 0.039
- CAIDI = 173.07

15.8 Other Distribution Adjustments

Please see Appendix 1 for Planned Outage excluded events.

15.9 Adjusted Reliability

15.9.1 Outage Event Causes

15.9.1.1 Five-Year Patterns

Below are trend tables showing the percentage of change in N and separate tables for SAIDI and SAIFI showing the percentage change for five years for the top ten outage causes.

Gulf is still in the process of analyzing data to determine the need for any specific improvement activities beyond current programs and storm hardening initiatives which are underway.

Cause	(All)						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	2,544	2,097	2,371	2,404	2,567	2,819
	% Change		-18%	13%	1%	7%	10%
Eastern	N	1,863	1,572	1,719	2,273	1,917	2,133
	% Change		-16%	9%	32%	-16%	11%
Western	N	5,587	5,214	5,548	5,199	5,466	6,481
	% Change		-7%	6%	-6%	5%	19%
Company	N	9,994	8,883	9,638	9,876	9,950	11,433
	% Change		-11%	8%	2%	1%	15%

Cause	Animal						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	811	556	532	611	730	1,009
	% Change		-31%	-4%	15%	19%	38%
Eastern	N	349	264	264	412	345	402
	% Change		-24%	0%	56%	-16%	17%
Western	N	1,840	1,192	690	586	1,014	2,006
	% Change		-35%	-42%	-15%	73%	98%
Company	N	3,000	2,012	1,486	1,609	2,089	3,417
	% Change		-33%	-26%	8%	30%	64%

Cause	Deterioration						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	394	400	439	497	573	557
	% Change		2%	10%	13%	15%	-3%
Eastern	N	325	319	343	365	430	500
	% Change		-2%	8%	6%	18%	16%
Western	N	875	892	852	1,052	1,185	1,243
	% Change		2%	-4%	23%	13%	5%
Company	N	1,594	1,611	1,634	1,914	2,188	2,300
	% Change		1%	1%	17%	14%	5%

Cause	Lightning						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	458	334	361	427	447	397
	% Change		-27%	8%	18%	5%	-11%
Eastern	N	413	275	270	461	378	433
	% Change		-33%	-2%	71%	-18%	15%
Western	N	956	932	1,220	1,419	1,287	1,324
	% Change		-3%	31%	16%	-9%	3%
Company	N	1,827	1,541	1,851	2,307	2,112	2,154
	% Change		-16%	20%	25%	-8%	2%

Cause	Tree						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	169	197	170	217	219	234
	% Change		17%	-14%	28%	1%	7%
Eastern	N	207	211	170	249	325	314
	% Change		2%	-19%	46%	31%	-3%
Western	N	630	785	640	826	875	766
	% Change		25%	-18%	29%	6%	-12%
Company	N	1,006	1,193	980	1,292	1,419	1,314
	% Change		19%	-18%	32%	10%	-7%

Cause	Unknown						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	474	330	518	218	224	282
	% Change		-30%	57%	-58%	3%	26%
Eastern	N	315	243	368	274	151	152
	% Change		-23%	51%	-26%	-45%	1%
Western	N	827	817	1,351	495	367	440
	% Change		-1%	65%	-63%	-26%	20%
Company	N	1,616	1,390	2,237	987	742	874
	% Change		-14%	61%	-56%	-25%	18%

Cause	Vehicle						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	50	59	85	62	62	68
	% Change		18%	44%	-27%	0%	10%
Eastern	N	51	58	52	65	63	68
	% Change		14%	-10%	25%	-3%	8%
Western	N	126	186	287	157	211	152
	% Change		48%	54%	-45%	34%	-28%
Company	N	227	303	424	284	336	288
	% Change		33%	40%	-33%	18%	-14%

Cause	Contamination/Corrosion						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	6	21	32	36	35	52
	% Change		250%	52%	13%	-3%	49%
Eastern	N	15	24	28	29	37	52
	% Change		60%	17%	4%	28%	41%
Western	N	16	18	58	72	71	99
	% Change		13%	222%	24%	-1%	39%
Company	N	37	63	118	137	143	203
	% Change		70%	87%	16%	4%	42%

Cause	Overload						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	38	51	66	46	71	42
	% Change		34%	29%	-30%	54%	-41%
Eastern	N	76	53	84	65	63	57
	% Change		-30%	58%	-23%	-3%	-10%
Western	N	87	108	104	112	137	99
	% Change		24%	-4%	8%	22%	-28%
Company	N	201	212	254	223	271	198
	% Change		5%	20%	-12%	22%	-27%

Cause	Wind/Rain						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	30	28	38	172	37	24
	% Change		-7%	36%	353%	-78%	-35%
Eastern	N	29	29	41	251	40	44
	% Change		0%	41%	512%	-84%	10%
Western	N	36	61	156	257	98	101
	% Change		69%	156%	65%	-62%	3%
Company	N	95	118	235	680	175	169
	% Change		24%	99%	189%	-74%	-3%

Cause	Vines						
Region	Data	2003	2004	2005	2006	2007	2008
Central	N	41	16	16	16	30	45
	% Change		-61%	0%	0%	88%	50%
Eastern	N	13	23	24	21	18	38
	% Change		77%	4%	-13%	-14%	111%
Western	N	74	78	40	46	70	79
	% Change		5%	-49%	15%	52%	13%
Company	N	128	117	80	83	118	162
	% Change		-9%	-32%	4%	42%	37%

The SAIDI and SAIFI Trend Tables showing the percentage change for five years for the top ten causes are shown below.

Cause	**(All)**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	67.29	75.37	121.09	174.13	109.35	98.93
	% Change		12%	61%	44%	-37%	-10%
Eastern	SAIDI	74.39	68.53	78.74	331.38	100.44	140.23
	% Change		-8%	15%	321%	-70%	40%
Western	SAIDI	83.57	116.50	129.79	157.55	145.73	145.89
	% Change		39%	11%	21%	-8%	0%
Company	SAIDI	77.18	93.91	114.87	205.12	124.80	132.45
	% Change		22%	22%	79%	-39%	6%

Cause	**(All)**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.818	0.748	1.349	1.276	0.952	1.142
	% Change		-9%	80%	-5%	-25%	20%
Eastern	SAIFI	0.830	0.650	0.712	1.288	1.121	1.127
	% Change		-22%	10%	81%	-13%	1%
Western	SAIFI	0.927	1.077	1.237	1.274	1.323	1.449
	% Change		16%	15%	3%	4%	10%
Company	SAIFI	0.876	0.886	1.135	1.278	1.176	1.288
	% Change		1%	28%	13%	-8%	10%

Cause	**Animal**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	5.83	5.66	4.81	7.49	11.67	9.86
	% Change		-3%	-15%	56%	56%	-16%
Eastern	SAIDI	6.05	1.80	3.58	9.51	5.03	5.53
	% Change		-70%	99%	166%	-47%	10%
Western	SAIDI	7.16	6.41	2.84	3.23	5.33	11.14
	% Change		-10%	-56%	13%	65%	109%
Company	SAIDI	6.55	5.07	3.53	5.90	6.88	9.37
	% Change		-23%	-30%	67%	17%	36%

Cause	Animal						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.088	0.077	0.063	0.103	0.153	0.166
	% Change		-12%	-18%	62%	49%	8%
Eastern	SAIFI	0.093	0.024	0.035	0.105	0.063	0.058
	% Change		-74%	42%	203%	-39%	-8%
Western	SAIFI	0.110	0.079	0.037	0.042	0.074	0.144
	% Change		-29%	-54%	15%	78%	94%
Company	SAIFI	0.100	0.065	0.043	0.073	0.092	0.128
	% Change		-35%	-34%	71%	25%	39%

Cause	Deterioration						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	9.57	13.70	23.54	42.01	17.45	17.35
	% Change		43%	72%	78%	-58%	-1%
Eastern	SAIDI	10.99	13.08	8.71	16.14	15.99	25.09
	% Change		19%	-33%	85%	-1%	57%
Western	SAIDI	8.05	10.76	9.51	13.61	19.37	21.65
	% Change		34%	-12%	43%	42%	12%
Company	SAIDI	9.15	12.10	12.93	21.62	18.01	21.44
	% Change		32%	7%	67%	-17%	19%

Cause	Deterioration						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.089	0.100	0.184	0.159	0.163	0.193
	% Change		12%	84%	-14%	2%	18%
Eastern	SAIFI	0.104	0.120	0.059	0.115	0.168	0.220
	% Change		15%	-51%	94%	46%	30%
Western	SAIFI	0.063	0.071	0.061	0.104	0.173	0.207
	% Change		13%	-15%	71%	66%	20%
Company	SAIFI	0.080	0.091	0.092	0.121	0.169	0.207
	% Change		14%	2%	31%	40%	22%

Cause	Lightning						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	20.30	20.90	22.86	37.07	32.78	20.30
	% Change		3%	9%	62%	-12%	-38%
Eastern	SAIDI	15.86	19.05	21.41	52.12	26.47	32.75
	% Change		20%	12%	143%	-49%	24%
Western	SAIDI	29.66	26.90	40.01	44.79	36.73	43.47
	% Change		-9%	49%	12%	-18%	18%
Company	SAIDI	23.92	23.40	30.97	44.61	33.09	34.80
	% Change		-2%	32%	44%	-26%	5%

Cause	**Lightning**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.229	0.201	0.292	0.261	0.269	0.208
	% Change		-12%	46%	-11%	3%	-23%
Eastern	SAIFI	0.145	0.119	0.178	0.290	0.268	0.220
	% Change		-18%	50%	62%	-7%	-18%
Western	SAIFI	0.294	0.197	0.288	0.306	0.311	0.313
	% Change		-33%	46%	7%	1%	1%
Company	SAIFI	0.241	0.179	0.262	0.290	0.289	0.262
	% Change		-26%	46%	11%	0%	-9%

Cause	**Tree**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	3.80	7.47	6.28	10.76	5.94	3.66
	% Change		97%	-16%	71%	-45%	-38%
Eastern	SAIDI	10.39	10.23	8.87	15.49	22.01	25.00
	% Change		-2%	-13%	75%	42%	14%
Western	SAIDI	14.93	28.96	15.58	36.55	37.40	27.71
	% Change		94%	-46%	135%	2%	-26%
Company	SAIDI	10.98	18.72	11.52	24.61	25.39	20.88
	% Change		70%	-39%	114%	3%	-18%

Cause	**Tree**						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.048	0.086	0.086	0.101	0.053	0.037
	% Change		80%	1%	17%	-47%	-30%
Eastern	SAIFI	0.133	0.123	0.103	0.131	0.180	0.206
	% Change		-8%	-16%	28%	37%	15%
Western	SAIFI	0.182	0.333	0.184	0.332	0.358	0.225
	% Change		83%	-45%	81%	8%	-37%
Company	SAIFI	0.136	0.216	0.138	0.222	0.234	0.172
	% Change		59%	-36%	60%	5%	-26%

Cause	Unknown						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	11.87	11.30	23.73	14.00	16.37	9.87
	% Change		-5%	110%	-41%	17%	-40%
Eastern	SAIDI	11.57	12.65	17.65	26.24	9.92	5.31
	% Change		9%	40%	49%	-62%	-46%
Western	SAIDI	9.23	16.87	27.49	11.15	9.04	9.86
	% Change		83%	63%	-59%	-19%	9%
Company	SAIDI	10.47	14.37	24.08	15.65	11.15	8.69
	% Change		37%	67%	-35%	-29%	-22%

Cause	Unknown						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.154	0.153	0.352	0.208	0.079	0.140
	% Change		-1%	131%	-41%	-62%	77%
Eastern	SAIFI	0.141	0.145	0.180	0.119	0.160	0.063
	% Change		3%	24%	-34%	34%	-61%
Western	SAIFI	0.137	0.172	0.335	0.129	0.107	0.154
	% Change		25%	95%	-62%	-17%	44%
Company	SAIFI	0.142	0.160	0.301	0.147	0.114	0.127
	% Change		13%	88%	-51%	-23%	12%

Cause	Vehicle						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	7.83	9.44	12.29	6.54	6.27	20.85
	% Change		20%	30%	-47%	-4%	233%
Eastern	SAIDI	5.33	6.45	5.94	8.36	5.63	18.26
	% Change		21%	-8%	41%	-33%	224%
Western	SAIDI	8.04	15.62	19.03	15.43	22.28	19.90
	% Change		94%	22%	-19%	44%	-11%
Company	SAIDI	7.33	11.74	14.04	11.36	13.91	19.72
	% Change		60%	20%	-19%	22%	42%

Cause	Vehicle						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.104	0.043	0.061	0.067	0.049	0.147
	% Change		-59%	44%	9%	-26%	197%
Eastern	SAIFI	0.065	0.041	0.048	0.072	0.084	0.056
	% Change		-37%	18%	50%	17%	-34%
Western	SAIFI	0.059	0.113	0.163	0.093	0.147	0.236
	% Change		93%	44%	-43%	58%	60%
Company	SAIFI	0.072	0.077	0.108	0.081	0.106	0.167
	% Change		7%	41%	-25%	31%	57%

Cause	Contamination/Corrosion						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	0.02	0.11	0.29	1.61	1.30	0.55
	% Change		483%	157%	460%	-19%	-58%
Eastern	SAIDI	0.04	0.32	0.18	3.85	0.72	7.92
	% Change		661%	-43%	2008%	-81%	1002%
Western	SAIDI	0.07	0.10	0.17	0.53	1.96	1.44
	% Change		36%	68%	218%	268%	-26%
Company	SAIDI	0.05	0.16	0.20	1.64	1.47	2.88
	% Change		204%	29%	711%	-10%	96%

Cause	Contamination/Corrosion						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.000	0.002	0.002	0.033	0.012	0.005
	% Change		1478%	58%	1225%	-64%	-57%
Eastern	SAIFI	0.000	0.003	0.001	0.034	0.006	0.025
	% Change		870%	-60%	2416%	-83%	334%
Western	SAIFI	0.001	0.001	0.001	0.004	0.017	0.014
	% Change		-6%	-5%	416%	336%	-18%
Company	SAIFI	0.001	0.002	0.001	0.019	0.013	0.014
	% Change		208%	-17%	1307%	-33%	14%

Cause	Overload						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	1.76	1.38	4.42	1.81	3.56	3.28
	% Change		-21%	219%	-59%	96%	-8%
Eastern	SAIDI	8.55	1.29	4.40	1.51	2.82	4.69
	% Change		-85%	240%	-66%	87%	66%
Western	SAIDI	1.69	4.22	2.81	4.49	3.42	2.65
	% Change		149%	-34%	60%	-24%	-22%
Company	SAIDI	3.37	2.76	3.62	3.05	3.30	3.34
	% Change		-18%	31%	-16%	8%	1%

Cause	Overload						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.022	0.020	0.058	0.025	0.066	0.025
	% Change		-11%	196%	-56%	160%	-62%
Eastern	SAIFI	0.085	0.013	0.029	0.015	0.040	0.078
	% Change		-85%	132%	-47%	159%	97%
Western	SAIFI	0.019	0.037	0.036	0.045	0.042	0.031
	% Change		99%	-3%	26%	-7%	-25%
Company	SAIFI	0.036	0.026	0.040	0.033	0.048	0.042
	% Change		-26%	51%	-18%	46%	-12%

Cause	Wind/Rain						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	2.42	0.73	1.32	47.53	6.31	2.82
	% Change		-70%	82%	3494%	-87%	-55%
Eastern	SAIDI	1.77	1.42	4.58	189.18	7.07	11.57
	% Change		-20%	223%	4028%	-96%	64%
Western	SAIDI	0.60	1.62	4.33	20.87	4.20	4.08
	% Change		169%	167%	382%	-80%	-3%
Company	SAIDI	1.35	1.34	3.62	69.69	5.47	5.69
	% Change		-1%	170%	1826%	-92%	4%

Cause	Wind/Rain						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.022	0.008	0.012	0.243	0.044	0.030
	% Change		-62%	44%	1960%	-82%	-31%
Eastern	SAIFI	0.023	0.013	0.040	0.342	0.059	0.107
	% Change		-46%	221%	752%	-83%	82%
Western	SAIFI	0.005	0.016	0.051	0.138	0.036	0.015
	% Change		191%	229%	169%	-74%	-57%
Company	SAIFI	0.014	0.013	0.038	0.216	0.044	0.043
	% Change		-7%	197%	463%	-80%	-2%

Cause	Vines						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	0.20	0.09	0.06	0.10	0.08	0.27
	% Change		-54%	-39%	86%	-25%	243%
Eastern	SAIDI	0.05	0.26	0.25	1.51	0.06	0.30
	% Change		413%	-7%	515%	-96%	365%
Western	SAIDI	0.72	0.37	0.23	0.17	0.17	0.17
	% Change		-48%	-39%	-23%	-3%	2%
Company	SAIDI	0.42	0.27	0.19	0.49	0.12	0.23
	% Change		-36%	-31%	161%	-76%	93%

Cause	Vines						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.003	0.001	0.001	0.001	0.001	0.004
	% Change		-66%	-36%	86%	-30%	394%
Eastern	SAIFI	0.001	0.003	0.001	0.004	0.001	0.003
	% Change		460%	-71%	415%	-83%	242%
Western	SAIFI	0.011	0.005	0.002	0.002	0.002	0.001
	% Change		-59%	-53%	11%	-28%	-22%
Company	SAIFI	0.006	0.003	0.001	0.003	0.001	0.002
	% Change		-50%	-55%	78%	-52%	86%

15.9.1.2 Identification and Selection/Process Improvements

Gulf continues to focus its process improvement efforts on the top ten outage causes system wide through its existing programs and the new storm hardening efforts.

15.9.1.3 2009 Activities and Budget Allowances

In general, it is not practical to provide an itemized list of all activities that Gulf has included in its budget that are related to distribution reliability. Gulf's budget and accounting systems do not separately categorize and track capital expenditures or O & M expenses on the basis that they are related specifically to distribution reliability. Virtually all distribution functional capital projects and O & M expenses have been or will be undertaken as part of Gulf's commitment to provide customers with reliable and high quality electric service.

Gulf's Vegetation Management Program is an exception to the above. The activities and budgets are provided in Section 3.0.

15.9.2 Three Percent Feeder List

15.9.2.1 Five-Year Patterns

Gulf had six feeders in the actual report and four feeders in the adjusted report which were repeats in the last five years.

The initial review of the reports showed that in all cases, the associated feeder problems were corrected at the same time of the outage. Additional reviews of the feeders will be conducted to determine if there are any specific improvements that can be performed to avoid having these feeders becoming repeats.

15.9.2.2 Identification and Selection/Process Improvements

Gulf continues to focus its process improvement efforts on the top ten outage causes system wide through its existing programs and the new storm hardening efforts.

15.9.2.3 2009 Activities and Budget Allowances

Please see the response to Section 15.9.1.3 for 2009 activities and budget allowances.

15.9.3 Regional Reliability Indices

15.9.3.1 Five-Year Patterns

Please see tables given in Section 15.9.1.1.

15.9.3.2 Identification and Selection/Process Improvements

Gulf continues to focus its process improvement efforts on the top ten outage causes system wide through its existing programs and the new storm hardening efforts.

15.9.3.3 2009 Activities and Budget Allowances

Please see the response in Section 15.9.1.3 for 2009 Activities and Budget allowances.

15.10 Overhead – Underground Reliability

15.10.1 Five-Year Patterns

Note: % Change is from one year to the next.

System	Overhead						
Region	Data	2003	2004	2005	2006	2007	2008
Central	Num	2,272	1,826	2,040	2,112	2,224	2,498
	% Change		-20%	12%	4%	5%	12%
Eastern	Num	1,700	1,387	1,484	2,080	1,727	1,914
	% Change		-18%	7%	40%	-17%	11%
Western	Num	5,046	4,675	4,807	4,597	4,963	5,964
	% Change		-7%	3%	-4%	8%	20%
Company	Num	9,018	7,888	8,331	8,789	8,914	10,376
	% Change		-13%	6%	5%	1%	16%

System	URD						
Region	Data	2003	2004	2005	2006	2007	2008
Central	Num	272	271	331	292	343	321
	% Change		0%	22%	-12%	17%	-6%
Eastern	Num	163	185	235	193	190	219
	% Change		13%	27%	-18%	-2%	15%
Western	Num	541	539	741	602	503	517
	% Change		0%	37%	-19%	-16%	3%
Company	Num	976	995	1,307	1,087	1,036	1,057
	% Change		2%	31%	-17%	-5%	2%

System	Overhead						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	60.23	65.79	109.01	161.46	85.85	85.87
	% Change		9%	66%	48%	-47%	0%
Eastern	SAIDI	66.95	59.96	69.46	319.65	92.62	132.47
	% Change		-10%	16%	360%	-71%	43%
Western	SAIDI	77.70	106.27	117.55	145.43	136.50	136.55
	% Change		37%	11%	24%	-6%	0%
Company	SAIDI	70.63	84.26	103.41	192.96	112.27	122.57
	% Change		19%	23%	87%	-42%	9%

System	URD						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIDI	7.06	9.57	12.07	12.67	23.50	13.06
	% Change		36%	26%	5%	85%	-44%
Eastern	SAIDI	7.44	8.57	9.29	11.73	7.82	7.76
	% Change		15%	8%	26%	-33%	-1%
Western	SAIDI	5.87	10.23	12.24	12.13	9.22	9.34
	% Change		74%	20%	-1%	-24%	1%
Company	SAIDI	6.55	9.65	11.46	12.17	12.53	9.88
	% Change		47%	19%	6%	3%	-21%

System	Overhead						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.748	0.694	1.260	1.216	0.865	1.018
	% Change		-7%	81%	-4%	-29%	18%
Eastern	SAIFI	0.717	0.602	0.671	1.235	1.070	1.089
	% Change		-16%	11%	84%	-13%	2%
Western	SAIFI	0.860	1.008	1.174	1.203	1.272	1.406
	% Change		17%	16%	2%	6%	11%
Company	SAIFI	0.797	0.826	1.071	1.214	1.116	1.225
	% Change		4%	30%	13%	-8%	10%

System	URD						
Region	Data	2003	2004	2005	2006	2007	2008
Central	SAIFI	0.069	0.053	0.088	0.060	0.087	0.124
	% Change		-23%	65%	-32%	44%	42%
Eastern	SAIFI	0.114	0.049	0.042	0.053	0.051	0.038
	% Change		-57%	-14%	27%	-4%	-25%
Western	SAIFI	0.067	0.069	0.063	0.071	0.051	0.043
	% Change		3%	-8%	13%	-29%	-15%
Company	SAIFI	0.079	0.060	0.064	0.064	0.060	0.062
	% Change		-24%	7%	-1%	-6%	4%

15.10.2 Identification and Selection/Process Improvements

Gulf continues to focus its process improvement efforts on the top ten outage causes system wide through its existing programs and the new storm hardening efforts.

15.10.3 2008 Activities and Budget Allowances

Please see Section 10.0.

15.10.4 Overhead (OH) and Underground (UG) Metrics

Please see Appendix 3 for specific feeder data for Gulf's overhead and underground lines.

The tables below represent reliability metrics for Gulf's overhead and underground system for 2008.

It should be noted that the miles of Overhead and miles of Underground data shown in a similar table supplied in the March 1, 2008 Reliability and Storm Hardening Initiatives Report was incorrect. In the process of performing the needed data queries for this report, an error was discovered in the programming. The error does not change the analysis that was provided in the March 1, 2008 report.

Corrected data cannot be provided since Gulf's DistGIS system did not capture the needed year-end data. Gulf has initiated a process change that will capture year-end data beginning with the 2009 reporting year.

System	Region	Miles	Cust	N	Duration	CMI	CI
Overhead	CENTRAL	1,161.81	60,297	2,498	262,820	9,374,285	111,119
	EASTERN	1,539.13	62,395	1,914	264,948	14,596,839	119,976
	WESTERN	3,180.73	133,388	5,964	799,421	28,480,183	293,214
	System	5,881.66	256,080	10,376	1,327,189	52,451,307	524,309
Underground	CENTRAL	409.72	46,866	321	75,572	1,425,295	13,550
	EASTERN	397.59	45,290	219	47,734	854,926	4,223
	WESTERN	890.50	69,087	517	116,289	1,948,332	8,966
	System	1,697.80	161,245	1,057	239,595	4,228,553	26,739

Note: Total Customers above are from Gulf's Trouble Call Management System, which does not include non-metered accounts.

System	Region	SAIDI	SAIFI	SAIDI / mile	L-Bar	CI / N	CAIDI
Overhead	CENTRAL	155.47	1.84	0.13	105.21	44.5	84.36
	EASTERN	233.94	1.92	0.15	138.43	62.7	121.67
	WESTERN	213.51	2.20	0.07	134.04	49.2	97.13
	System	204.82	2.05	0.03	127.91	50.5	100.04
Underground	CENTRAL	30.41	0.29	0.07	235.43	42.2	105.19
	EASTERN	18.88	0.09	0.05	217.96	19.3	202.45
	WESTERN	28.20	0.13	0.03	224.9	17.3	217.30
	System	26.22	0.17	0.02	226.68	25.3	158.14

Note: The above metrics are for 2008.

A review of the above data continues to reinforce observations made in Gulf's March 1, 2008 report.

It was recognized that there are several difficulties with comparing overhead outage statistics and underground outage statistics. The first is trying to ensure a true "apples to apples" comparison. This is very difficult to do given that historically the construction standard for Gulf's system has been overhead and as a result is approximately three times that of Gulf's underground system. The main difficulty is that the comparison suffers from problems of scale. The growth of Gulf's underground system is driven by customer demand based on aesthetic reasons. This results in the construction of underground subdivisions, commercial developments and conversion of overhead lines that are spread across Gulf's distribution system, in neighborhoods and near businesses. Over time the effect of this growth pattern on the distribution system results in the development of an overhead backbone serving "pockets" of underground distribution facilities.

A review of the data in the tables above continues to bring out the same important points.

First, Gulf has less than one-fourth of its system installed as underground. This means that overhead is over three times as exposed to outage-causing events and hence should experience more outages than underground, which it does. The result of dividing the SAIDI by miles of OH or by miles of UG indicates that both overhead and underground are comparable when you compare their SAIDI on a per mile basis as shown in the bottom chart.

Second, comparing the L-Bar of overhead and underground shows that underground outages last nearly twice as long as overhead outages. This continues to support the long held assertion that underground outages require more time to locate the problem and restore power than overhead outages.

Third, comparing the calculation of CI/N for overhead and underground which gives the average number of customers affected by an outage indicates that underground outages typically affect fewer customers than an overhead outage, in fact, about half. This supports the observation of an overhead backbone serving "pockets" of underground. Thus the data available to Gulf for

underground outages, at this time, continues to be limited to mostly small-scale outages whereas Gulf's overhead outage data include both small-scale and large-scale outages.

Fourth, comparing the CAIDI calculation for overhead and underground shows underground has a CAIDI value that is 1.6 times that of overhead's which continues to be consistent with Gulf's previous observations that underground outages have longer durations and fewer customers affected.

As discussed in last years report, the problem of scale appears in attempting to answer the question, "Would Gulf Power be more or less reliable if their entire system was underground?" Gulf's underground is currently located in isolated "pockets" served from an overhead backbone. This limits Gulf's underground outage data to mostly small-scale outages, which, in turn, limits the number of customers that can be affected by any single underground outage. This places an upper limit on underground's SAIDI. If that limitation were to be removed by creating a system with an underground backbone, the analysis of L-Bar and CAIDI predicts that Gulf's reliability could degrade significantly simply due to the extended duration of each outage that occurs. In addition, equipment scrapping data, such as shown in Section 15.3, which fairly represents the failures of overhead and underground transformers, indicates a longer recovery period for underground facilities that may have been subjected to high water due to a major storm. In summary, without taking into consideration the recognized high cost of underground, continued analysis of available overhead and underground metrics at this time does not support using underground as a storm hardening option. It will be re-evaluated each year, as more data is accumulated, and technology evolves.

Gulf's installation of underground distribution facilities continues to outpace overhead due to customer demand based on aesthetic reasons.

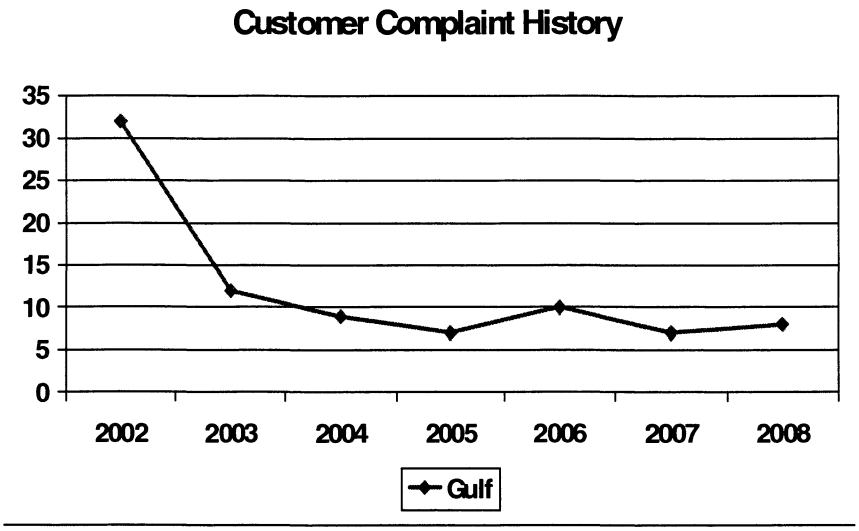
15.11 Reliability Related Customer Complaints

15.11.1 Five-Year Patterns

Gulf Power management reviews a monthly report which supplies data on FPSC complaints and inquiries. Gulf Power has avoided any infractions for over seven years, and the complaint

activity as reflected in the FPSC Consumer Activity Report has remained at very low levels.

In order to illustrate Gulf Power's customer complaint trend, the graph below, based on the FPSC Consumer Activity Report, is provided.



15.11.2 Correlation of Reliability Related Customer Complaints to Indices

Gulf Power has not determined a correlation of reliability related customer complaints to indices. Management continues to review complaints as they occur to determine if there are any deficiencies, and if so, takes action to correct them.

15.11.3 Identification and Selection/Process Improvements

Due to Gulf's very low FPSC Consumer Activity Report complaints and no apparent correlation of reliability-related customer complaints to outage indices, Gulf has not implemented any programs to identify and select systemic actions to improve reliability based on customer complaints. Gulf will continue to review complaints as they occur to determine if there are any deficiencies and will take the needed action to correct them.

Appendix 1

Form 102 - Actual Data

Corrected - 2007 Distribution Service Reliability Reports – Actual

Service Reliability Indices — Actual Gulf Power Company					
District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
Central	128.72	84.00	1.532	7.55	1.54 %
Eastern	134.50	86.09	1.562	4.76	4.97 %
Western	179.89	88.08	2.042	7.75	4.05 %
System Averages	155.14	86.74	1.789	6.93	3.64 %

Note: During the preparation of this year's Reliability filing, an inadvertent error was discovered in the CEMI5 (Actual) calculation from last year's filing. To correct this error, the '2007 Distribution Service Reliability Reports - Actual' spreadsheet containing the corrected 2007 CEMI5 values were included with this year's filing in Appendix 1along with the most current 2008 values.

Appendix 1

Corrected 2007 Distribution Service Reliability Reports - Actual

	CENTRAL		EASTERN		WESTERN		SYSTEM	
SAIDI = System Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI)	14,135,753	128.72	14,715,246	134.50	37,496,523	179.89	66,347,522	155.14
Total Number of Customers Served (C)	109,817		109,410		208,436		427,663	
CAIDI = Customer Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI)	14,135,753	84.00	14,715,246	86 09	37,496,523	88 08	66,347,522	86 74
Total Number of Customer Interruptions (CI)	168,284		170,919		425,725		764,928	
SAIFI = System Average Interruption Frequency Index								
Total Number of Customer Interruptions (CI)	168,284	1.532	170,919	1.562	425,725	2.042	764,928	1 789
Total Number of Customers Served (C)	109,817		109,410		208,436		427,663	
MAIFI$_e$ = Momentary Average Interruption Frequency Index								
Total Number of Customer Momentary Interruption Events (CME)	828,954	7.55	520,983	4.76	1,614,960	7.75	2,964,897	6.93
Total Number of Customers Served (C)	109,817		109,410		208,436		427,663	
CEMI5 = Customers Experiencing More Interruptions than 5								
Number of Customers Experiencing More Interruptions than 5	1,694	1.54%	5,439	4.97%	8,448	4.05%	15,581	3 64%
Total Number of Customers Served (C)	109,817		109,410		208,436		427,663	
L-Bar								
Minutes of Interruption							1,387,368	127.60
Total Number of Outages							10,873	

Appendix 1

Form 102 - Actual Data

2008 Distribution Service Reliability Reports – Actual

Service Reliability Indices — Actual Gulf Power Company					
District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
Central	122.98	70.08	1.755	8.76	6.04%
Eastern	154.44	102.52	1.506	8.11	4.51%
Western	191.64	100.97	1.898	11.23	5.16%
System Averages	164.55	93.46	1.761	9.80	5.22%

Appendix 1

2008 Distribution Service Reliability Reports - Actual

	CENTRAL		EASTERN		WESTERN		SYSTEM	
SAIDI = System Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI) / Total Number of Customers Served (C)	13,424,991 / 109,168	122.98	17,017,872 / 110,191	154.44	39,971,215 / 208,570	191.64	70,414,078 / 427,929	164 55
CAIDI = Customer Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI) / Total Number of Customer Interruptions (CI)	13,424,991 / 191,579	70.08	17,017,872 / 165,992	102.52	39,971,215 / 395,861	100 97	70,414,078 / 753,432	93 46
SAIFI = System Average Interruption Frequency Index								
Total Number of Customer Interruptions (CI) / Total Number of Customers Served (C)	191,579 / 109,168	1.755	165,992 / 110,191	1.506	395,861 / 208,570	1.898	753,432 / 427,929	1.761
MAIFI$_e$ = Momentary Average Interruption Frequency Index								
Total Number of Customer Momentary Interruption Events (CME) / Total Number of Customers Served (C)	956,313 / 109,168	8.76	893,692 / 110,191	8 11	2,342,170 / 208,570	11 23	4,192,175 / 427,929	9 80
CEMI5 = Customers Experiencing More Interruptions than 5								
Number of Customers Experiencing More Interruptions than 5 / Total Number of Customers Served (C)	6,597 / 109,168	6.04%	4,972 / 110,191	4.51%	10,762 / 208,570	5.16%	22,331 / 427,929	5 22%
L-Bar								
Minutes of Interruption / Total Number of Outages							1,715,332 / 12,548	136 70

Appendix 1

2008 Distribution Services Reliability Reports - Actual

Causes of Outage Events - Actual Gulf Power Company			
Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Animal	3,417	94.02	73.45
2. Deterioration	2,337	171.19	102.55
3. Lightning	2,208	165.55	133.60
4. Tree	1,603	159.77	129.03
5. Unknown	905	99.79	79.88
6. Planned Outage	546	100.32	65.36
7. Vehicle	288	167.24	118.31
8. Wind/Rain	245	196.11	158.91
9. Contamination/Corrosion	213	134.63	199.95
10. Overload	198	109.16	79.95
All Other Causes	588	137.39	35.32
System Totals	12,548	136.70	93.46

Appendix 1

2008 Distribution Service Reliability Reports - Actual

3 Percent Feeder List - Actual													
Utility Name: Gulf Power 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)						
5382	Molino	Western	1,677	200	4	-	1,881	9	71	58	N	1	December 2009
7752	Bayou Marcus	Western	1,984	141	-	-	2,125	6	124	124	N	-	December 2009
7902	Glendale Road	Central	1,523	509	-	-	2,032	6	20	19	N	-	December 2009
7962	Ponc De Leon	Central	255	50	-	-	305	6	69	69	Y	1	December 2009
7912	Glendale Road	Central	1,337	200	-	-	1,537	5	12	12	N	1	December 2009
7952	Ponc De Leon	Central	119	64	-	-	183	5	68	69	Y	1	December 2009
8882	Miramar	Central	4,257	249	-	-	4,506	5	35	35	N	1	December 2009
9522	Vernon	Eastern	1,653	277	1	-	1,931	5	16	16	N	1	December 2009
9828	Laurel Hill	Central	165	45	-	-	210	5	68	68	N	-	December 2009

Appendix 1

Form 103 - Adjusted Data

2008 Distribution Service Reliability Reports – Adjusted

Service Reliability Indices - Adjusted Gulf Power Company					
District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
Central	98.93	86.63	1.142	8.59	0.42%
Eastern	140.23	124.41	1.127	7.89	2.26%
Western	145.89	100.70	1.449	10.53	3.20%
System Averages	132.45	102.86	1.288	9.36	2.25%

Appendix 1

2008 Distribution Service Reliability Reports - Adjusted

	CENTRAL		EASTERN		WESTERN		SYSTEM	
SAIDI = System Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI)	10,799,580	98 93	15,451,765	140 23	30,428,515	145 89	56,679,860	132 45
Total Number of Customers Served (C)	109,168		110,191		208,570		427,929	
CAIDI = Customer Average Interruption Duration Index								
Total Number of Customer Minutes of Interruption (CMI)	10,799,580	86 63	15,451,765	124 41	30,428,515	100 70	56,679,860	102 86
Total Number of Customer Interruptions (CI)	124,669		124,199		302,180		551,048	
SAIFI = System Average Interruption Frequency Index								
Total Number of Customer Interruptions (CI)	124,669	1 142	124,199	1 127	302,180	1 449	551,048	1.288
Total Number of Customers Served (C)	109,168		110,191		208,570		427,929	
MAIFI$_e$ = Momentary Average Interruption Frequency Index								
Total Number of Customer Momentary Interruption Events (CME)	938,142	8 59	869,762	7.89	2,196,642	10 53	4,004,546	9 36
Total Number of Customers Served (C)	109,168		110,191		208,570		427,929	
CEMI5 = Customers Experiencing More Interruptions than 5								
Number of Customers Experiencing More Interruptions than 5	454	0 42%	2,491	2.26%	6,667	3 20%	9,612	2 25%
Total Number of Customers Served (C)	109,168		110,191		208,570		427,929	
L-Bar								
Minutes of Interruption							1,566,784	137.04
Total Number of Outages							11,433	

Appendix 1

2008 Distribution Service Reliability Reports - Adjusted

Causes of Outage Events - Adjusted Gulf Power Company			
Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Animal	3,417	94.02	73.45
2. Deterioration	2,300	171.72	103.70
3. Lightning	2,154	165.07	132.84
4. Tree	1,314	157.75	121.27
5. Unknown	874	98.88	68.49
6. Vehicle	288	167.24	118.31
7. Contamination/Corrosion	203	133.85	200.21
8. Overload	198	109.16	79.95
9. Wind/Rain	169	170.30	132.84
10. Vines	162	133.64	98.54
All Other Causes	354	152.30	43.53
System Totals	11,433	137.04	102.86

Appendix 1

2008 Distribution Service Reliability Reports - Adjusted

3 Percent Feeder List - Adjusted													
Utility Name: Gulf Power 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)						
5382	Molino	Western	1,677	200	4	-	1,881	7	64	64	N	1	December 2009
7752	Bayou Marcus	Western	1,984	141	-	-	2,125	6	124	124	N	-	December 2009
2619	Clear Springs	Central	70	10	-	-	80	4	102	102	N	-	December 2009
5612	Black Water	Western	2,116	176	-	-	2,292	4	54	54	Y	1	December 2009
6052	Beach Haven	Western	1,323	61	-	-	1,384	3	77	77	N	-	December 2009
6482	Eastgate	Western	2,230	45	1	-	2,276	3	49	49	N	1	December 2009
6652	Goulding	Western	2,335	159	-	-	2,494	3	71	69	N	-	December 2009
7902	Glendale Road	Central	1,523	509	-	-	2,032	3	36	44	N	-	December 2009
7912	Glendale Road	Central	1,337	200	-	-	1,537	3	17	17	N	1	December 2009

Appendix 1

2008 Excluded Transmission Events Resulting in Customer Outages

Outage Event Description	Reason of Exclusion	N	CMI Excluded	CI Excluded	Duration
Transmission Outages	Transmission Outage	61	2,558,026	87,524	3,432

Event Code	Date	Reason of Exclusion	CMI	CI	Dur	Causation	Resolution
626040	2/17/2008	Transmission	1,910	955	2	Tornado	Supervisory restoration
628860	2/17/2008	Transmission	3,768	1,884	2	Tornado	Supervisory restoration
626734	2/21/2008	Transmission	58,308	1,356	43	Bank Differential	Manual restoration
626735	2/21/2008	Transmission	10,836	252	43	Bank Differential	Manual restoration
630171	3/22/2008	Transmission	12,532	3,133	4	Broken Crossarm	Supervisory restoration
630172	3/22/2008	Transmission	9,656	2,414	4	Broken Crossarm	Supervisory restoration
630175	3/22/2008	Transmission	92,862	2,814	33	Broken Crossarm	Supervisory restoration
630177	3/22/2008	Transmission	106,194	3,218	33	Broken Crossarm	Supervisory restoration
630178	3/22/2008	Transmission	93,192	2,824	33	Broken Crossarm	Supervisory restoration
630454	3/22/2008	Transmission	7,096	1,774	4	Broken Crossarm	Supervisory restoration
632977	4/19/2008	Transmission	32,680	817	40	Animal	Manual Restoration
632979	4/19/2008	Transmission	181,000	4,525	40	Animal	Manual Restoration
634778	5/3/2008	Transmission	17,385	183	95	Unknown	Manual Restoration
634779	5/3/2008	Transmission	29,165	307	95	Unknown	Manual Restoration
636745	5/14/2008	Transmission	3,540	885	4	Vine	Supervisory restoration
637143	5/14/2008	Transmission	40	10	4	Vine	Supervisory restoration
637398	5/17/2008	Transmission	34,632	312	111	Vehicle	Manual Restoration
637401	5/17/2008	Transmission	20,535	185	111	Vehicle	Manual Restoration
638234	5/23/2008	Transmission	68,544	2,448	28	Lightning	Supervisory restoration
638241	5/23/2008	Transmission	72,968	2,606	28	Lightning	Supervisory restoration
640375	6/6/2008	Transmission	25,272	312	81	Tree	Manual restoration
640378	6/6/2008	Transmission	14,904	184	81	Tree	Manual restoration
640543	6/7/2008	Transmission	6,244	1,561	4	Lightning	Manual restoration
640544	6/7/2008	Transmission	9,486	3,162	3	Lightning	Manual restoration
640555	6/7/2008	Transmission	8,156	2,039	4	Lightning	Manual restoration
640603	6/8/2008	Transmission	21,736	209	104	Animal	Manual restoration
646361	6/8/2008	Transmission	18,497	349	53	Tree	Manual restoration
640788	6/9/2008	Transmission	14,003	209	67	Fuse	Manual restoration
640806	6/9/2008	Transmission	5,952	1,984	3	Lightning	Supervisory restoration
640818	6/9/2008	Transmission	7,305	2,435	3	Lightning	Supervisory restoration
640820	6/9/2008	Transmission	4,218	1,406	3	Lightning	Supervisory restoration
640821	6/9/2008	Transmission	5,007	1,669	3	Lightning	Supervisory restoration
640827	6/9/2008	Transmission	8,529	2,843	3	Lightning	Supervisory restoration
640829	6/9/2008	Transmission	4,344	1,448	3	Lightning	Supervisory restoration
640831	6/9/2008	Transmission	6,873	2,291	3	Lightning	Supervisory restoration
640836	6/9/2008	Transmission	8,496	2,832	3	Lightning	Supervisory restoration
640844	6/9/2008	Transmission	996	332	3	Lightning	Supervisory restoration
642034	6/14/2008	Transmission	7,712	1,928	4	Lightning	Supervisory restoration
643380	6/20/2008	Transmission	71,791	1,751	41	Equipment Failure	Manual restoration
643381	6/20/2008	Transmission	35,616	848	42	Equipment Failure	Manual restoration
643383	6/20/2008	Transmission	33,894	807	42	Equipment Failure	Manual restoration
644694	6/29/2008	Transmission	82,800	2,070	40	Animal	Manual restoration
644703	6/29/2008	Transmission	15,560	389	40	Animal	Manual restoration

Appendix 1

2008 Excluded Transmission Events Resulting in Customer Outages

644705	6/29/2008	Transmission	34,850	850	41	Animal	Manual restoration
647437	6/29/2008	Transmission	18,900	350	54	Wind	Manual restoration
647889	7/12/2008	Transmission	12,246	2,041	6	Equipment Failure	Supervisory restoration
647890	7/12/2008	Transmission	9,390	1,565	6	Equipment Failure	Supervisory restoration
647891	7/12/2008	Transmission	1,860	310	6	Equipment Failure	Supervisory restoration
647893	7/12/2008	Transmission	1,122	187	6	Equipment Failure	Supervisory restoration
649921	7/12/2008	Transmission	14,226	2,371	6	Equipment Failure	Supervisory restoration
649923	7/12/2008	Transmission	4,806	801	6	Equipment Failure	Supervisory restoration
651814	8/5/2008	Transmission	3,982	1,991	2	Deterioration	Manual restoration
651820	8/5/2008	Transmission	1,255	1,255	1	Deterioration	Manual restoration
651822	8/5/2008	Transmission	1,570	1,570	1	Deterioration	Manual restoration
654878	8/21/2008	Transmission	71,427	821	87	Animal	Manual restoration
654879	8/21/2008	Transmission	380,600	4,325	88	Animal	Manual restoration
657639	9/7/2008	Transmission	318,288	2,094	152	Deterioration	Manual restoration
660249	9/27/2008	Transmission	123,970	253	490	Deterioration	Manual restoration
660253	9/27/2008	Transmission	253,820	518	490	Deterioration	Manual restoration
661070	9/27/2008	Transmission	3,430	7	490	Deterioration	Manual restoration
671385	12/25/2008	Transmission	28,050	255	110	Animal	Manual restoration

Appendix 1

2008 Planned Outages Table

Outage Event Description	Reason of Exclusion	N	CMI	CI	Duration
Planned Outages	Planned Outage	546	5,288,587	80,911	54,772

Event Code	Date	Reason of Exclusion	CMI	CI	Duration
621313	1/2/2008	Planned Outage	2,812	38	74
621365	1/2/2008	Planned Outage	11	1	11
621366	1/2/2008	Planned Outage	14	1	14
621368	1/2/2008	Planned Outage	8	1	8
621369	1/2/2008	Planned Outage	8	1	8
621371	1/2/2008	Planned Outage	6	1	6
621373	1/2/2008	Planned Outage	429	13	33
621388	1/2/2008	Planned Outage	492	41	12
621394	1/2/2008	Planned Outage	4,998	102	49
621396	1/2/2008	Planned Outage	45	1	45
621399	1/2/2008	Planned Outage	540	36	15
621455	1/2/2008	Planned Outage	55,642	647	86
621671	1/3/2008	Planned Outage	4,216	62	68
621674	1/3/2008	Planned Outage	2,912	52	56
621678	1/3/2008	Planned Outage	925	37	25
621715	1/3/2008	Planned Outage	83	1	83
621723	1/3/2008	Planned Outage	318	3	106
621729	1/3/2008	Planned Outage	21	1	21
621736	1/3/2008	Planned Outage	7	1	7
622063	1/8/2008	Planned Outage	300	12	25
622255	1/9/2008	Planned Outage	6	1	6
622256	1/9/2008	Planned Outage	4	1	4
622259	1/9/2008	Planned Outage	1	1	1
622260	1/9/2008	Planned Outage	18	2	9
622276	1/9/2008	Planned Outage	119	1	119
622278	1/9/2008	Planned Outage	122	1	122
622317	1/10/2008	Planned Outage	552	6	92
622392	1/11/2008	Planned Outage	26	1	26
622496	1/13/2008	Planned Outage	480	10	48
622497	1/13/2008	Planned Outage	7,392	42	176
622543	1/14/2008	Planned Outage	119	7	17
622556	1/14/2008	Planned Outage	2,580	2,580	1
622566	1/14/2008	Planned Outage	48	1	48
622595	1/15/2008	Planned Outage	16	4	4
622599	1/15/2008	Planned Outage	174	1	174
622606	1/15/2008	Planned Outage	40	4	10
622627	1/15/2008	Planned Outage	33,743	823	41
622834	1/18/2008	Planned Outage	16	4	4
622835	1/18/2008	Planned Outage	83,952	159	528
623014	1/19/2008	Planned Outage	312,179	1,127	277
623044	1/20/2008	Planned Outage	112,680	180	626
623136	1/21/2008	Planned Outage	2,680	67	40
623197	1/22/2008	Planned Outage	77	1	77

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2008 Planned Outages Table

623277	1/23/2008	Planned Outage	782	2	391
623509	1/23/2008	Planned Outage	18,200	65	280
623520	1/23/2008	Planned Outage	100	25	4
623522	1/23/2008	Planned Outage	375	25	15
623906	1/25/2008	Planned Outage	75	1	75
623991	1/27/2008	Planned Outage	903	21	43
624058	1/28/2008	Planned Outage	650	10	65
624092	1/29/2008	Planned Outage	77	7	11
624093	1/29/2008	Planned Outage	72	6	12
624112	1/29/2008	Planned Outage	245	5	49
624226	1/30/2008	Planned Outage	14,742	91	162
624281	1/30/2008	Planned Outage	5,174	2,587	2
624389	1/31/2008	Planned Outage	36	1	36
624481	1/31/2008	Planned Outage	1,248	24	52
624565	2/1/2008	Planned Outage	75	1	75
624639	2/2/2008	Planned Outage	66	1	66
624733	2/4/2008	Planned Outage	928	16	58
624750	2/4/2008	Planned Outage	30	5	6
624814	2/5/2008	Planned Outage	1,040	20	52
624822	2/5/2008	Planned Outage	39	1	39
625042	2/7/2008	Planned Outage	8	1	8
625057	2/7/2008	Planned Outage	34	1	34
625269	2/8/2008	Planned Outage	70	5	14
625270	2/8/2008	Planned Outage	80	4	20
625311	2/8/2008	Planned Outage	6,222	3,111	2
625440	2/11/2008	Planned Outage	366	3	122
625452	2/11/2008	Planned Outage	548	4	137
625742	2/13/2008	Planned Outage	68	17	4
626580	2/19/2008	Planned Outage	12,405	2,481	5
626633	2/19/2008	Planned Outage	7,360	920	8
626634	2/19/2008	Planned Outage	17,367	2,481	7
626841	2/21/2008	Planned Outage	408	3	136
626858	2/22/2008	Planned Outage	16,950	30	565
626864	2/22/2008	Planned Outage	97,376	716	136
627039	2/22/2008	Planned Outage	1,800	45	40
627125	2/23/2008	Planned Outage	53	1	53
627157	2/24/2008	Planned Outage	443	1	443
627203	2/25/2008	Planned Outage	59	1	59
627223	2/25/2008	Planned Outage	126	14	9
627226	2/25/2008	Planned Outage	14	14	1
627585	2/27/2008	Planned Outage	40	1	40
627659	2/28/2008	Planned Outage	847	1	847
627768	2/29/2008	Planned Outage	31	1	31
627847	3/2/2008	Planned Outage	2,981	11	271
627905	3/3/2008	Planned Outage	191	1	191
627920	3/3/2008	Planned Outage	276	6	46
627928	3/3/2008	Planned Outage	26	1	26
628081	3/4/2008	Planned Outage	65,610	2,187	30

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2008 Planned Outages Table

628176	3/4/2008	Planned Outage	65,610	2,187	30
628237	3/4/2008	Planned Outage	63,720	3,186	20
628272	3/5/2008	Planned Outage	14	1	14
628399	3/6/2008	Planned Outage	46	1	46
628499	3/7/2008	Planned Outage	2,120	265	8
628522	3/7/2008	Planned Outage	85	1	85
628742	3/9/2008	Planned Outage	8,200	2,050	4
628819	3/11/2008	Planned Outage	4,368	16	273
628879	3/12/2008	Planned Outage	3,712	16	232
629001	3/13/2008	Planned Outage	240	5	48
629146	3/15/2008	Planned Outage	1,968	6	328
629174	3/15/2008	Planned Outage	800	100	8
629183	3/15/2008	Planned Outage	616	4	154
629280	3/17/2008	Planned Outage	23	1	23
629345	3/18/2008	Planned Outage	186	2	93
629349	3/18/2008	Planned Outage	516	4	129
629359	3/18/2008	Planned Outage	192	6	32
629361	3/18/2008	Planned Outage	286	26	11
629365	3/18/2008	Planned Outage	90	6	15
629395	3/18/2008	Planned Outage	496	8	62
629536	3/19/2008	Planned Outage	2	1	2
629691	3/20/2008	Planned Outage	6	1	6
629706	3/20/2008	Planned Outage	264	2	132
630003	3/20/2008	Planned Outage	96	1	96
630038	3/21/2008	Planned Outage	102,810	745	138
630039	3/21/2008	Planned Outage	29,792	98	304
630046	3/21/2008	Planned Outage	8,241	123	67
630312	3/24/2008	Planned Outage	455	5	91
630315	3/24/2008	Planned Outage	910	5	182
630451	3/25/2008	Planned Outage	876	4	219
630534	3/26/2008	Planned Outage	110	2	55
630544	3/26/2008	Planned Outage	198	6	33
630592	3/27/2008	Planned Outage	124	2	62
630637	3/27/2008	Planned Outage	158	1	158
630704	3/28/2008	Planned Outage	252	3	84
630726	3/29/2008	Planned Outage	490	2	245
630734	3/29/2008	Planned Outage	18,544	122	152
630776	3/30/2008	Planned Outage	3,096	1,548	2
630814	3/31/2008	Planned Outage	249	1	249
630856	4/1/2008	Planned Outage	108,160	1,352	80
630904	4/1/2008	Planned Outage	828	6	138
630989	4/2/2008	Planned Outage	37	1	37
631082	4/4/2008	Planned Outage	21,762	806	27
631262	4/5/2008	Planned Outage	43,677	207	211
631531	4/7/2008	Planned Outage	6,625	125	53
631563	4/8/2008	Planned Outage	6,380	319	20
631599	4/8/2008	Planned Outage	350	7	50
631613	4/8/2008	Planned Outage	428	4	107

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2008 Planned Outages Table

631621	4/8/2008	Planned Outage	42	1	42
631647	4/9/2008	Planned Outage	55,545	345	161
631736	4/10/2008	Planned Outage	60	30	2
631737	4/10/2008	Planned Outage	20,580	98	210
631741	4/10/2008	Planned Outage	85	1	85
631837	4/11/2008	Planned Outage	180	6	30
631866	4/12/2008	Planned Outage	442,892	1,052	421
631872	4/12/2008	Planned Outage	56,202	102	551
631873	4/12/2008	Planned Outage	3,836	28	137
631901	4/12/2008	Planned Outage	124,942	349	358
632072	4/14/2008	Planned Outage	1,640	8	205
632080	4/14/2008	Planned Outage	48	1	48
632116	4/15/2008	Planned Outage	1,290	19	68
632121	4/15/2008	Planned Outage	15,122	85	178
632514	4/16/2008	Planned Outage	5,989	53	113
632755	4/16/2008	Planned Outage	82	1	82
632791	4/17/2008	Planned Outage	1,405	5	281
632833	4/17/2008	Planned Outage	98	7	14
632845	4/17/2008	Planned Outage	822	6	137
632854	4/17/2008	Planned Outage	11,374	94	121
632907	4/18/2008	Planned Outage	294	3	98
633151	4/21/2008	Planned Outage	4,623	23	201
633154	4/21/2008	Planned Outage	270	2	135
633156	4/21/2008	Planned Outage	306	1	306
633208	4/21/2008	Planned Outage	585	9	65
633357	4/22/2008	Planned Outage	1,768	68	26
633375	4/23/2008	Planned Outage	1,668	6	278
633474	4/23/2008	Planned Outage	792	36	22
634026	4/25/2008	Planned Outage	32,724	303	108
634057	4/25/2008	Planned Outage	256	1	256
634068	4/25/2008	Planned Outage	399	3	133
634242	4/27/2008	Planned Outage	87	2	44
634257	4/27/2008	Planned Outage	16,146	702	23
634290	4/28/2008	Planned Outage	8	2	4
634305	4/28/2008	Planned Outage	6	2	3
634307	4/28/2008	Planned Outage	5,346	66	81
634338	4/28/2008	Planned Outage	4,407	13	339
634348	4/28/2008	Planned Outage	640	4	160
634395	4/29/2008	Planned Outage	2,390	10	239
634444	4/29/2008	Planned Outage	1,335	15	89
634457	4/29/2008	Planned Outage	351	3	117
634459	4/29/2008	Planned Outage	105	1	105
634506	4/29/2008	Planned Outage	122	2	61
634552	4/30/2008	Planned Outage	336	21	16
634861	5/3/2008	Planned Outage	2,668	46	58
634877	5/3/2008	Planned Outage	63	1	63
634908	5/3/2008	Planned Outage	1,792	28	64
635045	5/5/2008	Planned Outage	25,272	702	36

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2008 Planned Outages Table

635099	5/5/2008	Planned Outage	214	2	107
635276	5/7/2008	Planned Outage	158	2	79
635389	5/8/2008	Planned Outage	176	4	44
635390	5/8/2008	Planned Outage	996	4	249
635398	5/8/2008	Planned Outage	11,330	55	206
635432	5/8/2008	Planned Outage	2,772	12	231
635751	5/9/2008	Planned Outage	366	3	122
635774	5/9/2008	Planned Outage	5,609	79	71
635794	5/9/2008	Planned Outage	1	1	1
635860	5/10/2008	Planned Outage	32,390	82	395
636721	5/14/2008	Planned Outage	3,640	56	65
636781	5/15/2008	Planned Outage	2	1	2
636782	5/15/2008	Planned Outage	2	1	2
636891	5/15/2008	Planned Outage	7,776	81	96
637524	5/19/2008	Planned Outage	33,024	256	129
637755	5/19/2008	Planned Outage	44	2	22
637853	5/20/2008	Planned Outage	1,206	18	67
637951	5/21/2008	Planned Outage	441	3	147
637975	5/21/2008	Planned Outage	10,611	81	131
638561	5/24/2008	Planned Outage	2,320	29	80
638573	5/24/2008	Planned Outage	8,993	391	23
638640	5/25/2008	Planned Outage	336	7	48
638850	5/27/2008	Planned Outage	1,215	5	243
638858	5/27/2008	Planned Outage	48,556	122	398
638972	5/28/2008	Planned Outage	21	3	7
639008	5/28/2008	Planned Outage	504	6	84
639253	5/28/2008	Planned Outage	2,784	928	3
639360	5/29/2008	Planned Outage	352	4	88
639381	5/29/2008	Planned Outage	156	4	39
639386	5/29/2008	Planned Outage	472	4	118
639396	5/29/2008	Planned Outage	310	1	310
639756	6/2/2008	Planned Outage	26,134	358	73
639854	6/3/2008	Planned Outage	312	3	104
639856	6/3/2008	Planned Outage	204	2	102
639905	6/3/2008	Planned Outage	610	61	10
639936	6/4/2008	Planned Outage	47	1	47
640025	6/5/2008	Planned Outage	1,386	63	22
640027	6/5/2008	Planned Outage	320	1	320
640333	6/6/2008	Planned Outage	7,755	55	141
640712	6/8/2008	Planned Outage	9,583	1,369	7
640741	6/9/2008	Planned Outage	325	5	65
640749	6/9/2008	Planned Outage	1,704	8	213
640784	6/9/2008	Planned Outage	648	6	108
640786	6/9/2008	Planned Outage	6	3	2
640787	6/9/2008	Planned Outage	17,928	249	72
640797	6/9/2008	Planned Outage	650	2	325
641116	6/10/2008	Planned Outage	174	3	58
641117	6/10/2008	Planned Outage	186	2	93

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2008 Planned Outages Table

641146	6/10/2008	Planned Outage	1,056	96	11
641158	6/10/2008	Planned Outage	1,062	18	59
641208	6/10/2008	Planned Outage	81	1	81
641301	6/11/2008	Planned Outage	210	6	35
641326	6/11/2008	Planned Outage	357	3	119
641391	6/12/2008	Planned Outage	224	8	28
641398	6/12/2008	Planned Outage	1,488	48	31
641444	6/12/2008	Planned Outage	15	3	5
641473	6/12/2008	Planned Outage	9,792	612	16
641872	6/13/2008	Planned Outage	15,288	78	196
642097	6/14/2008	Planned Outage	1,624	29	56
642216	6/15/2008	Planned Outage	1,856	64	29
642380	6/16/2008	Planned Outage	77	1	77
642412	6/16/2008	Planned Outage	192	6	32
642502	6/17/2008	Planned Outage	86	1	86
642516	6/17/2008	Planned Outage	35	5	7
642521	6/17/2008	Planned Outage	113	1	113
642759	6/17/2008	Planned Outage	89,009	206	433
642956	6/18/2008	Planned Outage	10	2	5
643060	6/19/2008	Planned Outage	2,170	31	70
643063	6/19/2008	Planned Outage	2,934	1,467	2
643111	6/19/2008	Planned Outage	48	3	16
643265	6/19/2008	Planned Outage	25	5	5
643271	6/19/2008	Planned Outage	1,044	58	18
643272	6/19/2008	Planned Outage	144	8	18
643334	6/20/2008	Planned Outage	198	6	33
643848	6/23/2008	Planned Outage	672	4	168
643982	6/24/2008	Planned Outage	10	2	5
644086	6/25/2008	Planned Outage	868	4	217
644114	6/25/2008	Planned Outage	80	8	10
644121	6/25/2008	Planned Outage	906	6	151
644298	6/27/2008	Planned Outage	219	219	1
644549	6/28/2008	Planned Outage	1,254	11	114
644550	6/28/2008	Planned Outage	226	2	113
644557	6/28/2008	Planned Outage	91	1	91
644561	6/28/2008	Planned Outage	16,064	64	251
644590	6/29/2008	Planned Outage	204	4	51
644608	6/29/2008	Planned Outage	308	7	44
644611	6/29/2008	Planned Outage	210	5	42
644637	6/29/2008	Planned Outage	56	4	14
644654	6/29/2008	Planned Outage	222	6	37
644851	6/29/2008	Planned Outage	228	3	76
644878	6/29/2008	Planned Outage	1,311	57	23
645029	6/29/2008	Planned Outage	602	1	602
645311	6/30/2008	Planned Outage	6,270	285	22
645486	6/30/2008	Planned Outage	9	1	9
645491	6/30/2008	Planned Outage	313,962	1,474	213
645551	6/30/2008	Planned Outage	116	1	116

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2008 Planned Outages Table

645681	7/1/2008	Planned Outage	40	5	8
645874	7/2/2008	Planned Outage	9,400	100	94
645880	7/2/2008	Planned Outage	855	9	95
645907	7/2/2008	Planned Outage	378	18	21
646261	7/2/2008	Planned Outage	16,665	3,333	5
646289	7/3/2008	Planned Outage	205	5	41
646404	7/4/2008	Planned Outage	81	1	81
646537	7/5/2008	Planned Outage	6,254	53	118
646559	7/5/2008	Planned Outage	100	5	20
646724	7/5/2008	Planned Outage	11,440	110	104
646832	7/6/2008	Planned Outage	3,648	76	48
647425	7/9/2008	Planned Outage	7	7	1
647432	7/9/2008	Planned Outage	9,589	43	223
647504	7/10/2008	Planned Outage	9,016	49	184
647550	7/10/2008	Planned Outage	126	2	63
647610	7/11/2008	Planned Outage	546	13	42
647611	7/11/2008	Planned Outage	525	5	105
647799	7/12/2008	Planned Outage	535	3	179
648036	7/13/2008	Planned Outage	1,196	23	52
648041	7/13/2008	Planned Outage	604	4	151
648351	7/13/2008	Planned Outage	233	1	233
648601	7/15/2008	Planned Outage	42	1	42
648641	7/15/2008	Planned Outage	30,753	1,139	27
648696	7/15/2008	Planned Outage	265,387	1,139	233
648741	7/16/2008	Planned Outage	22,156	116	191
648747	7/16/2008	Planned Outage	282	3	94
648762	7/16/2008	Planned Outage	146	1	146
648777	7/16/2008	Planned Outage	124	1	124
648789	7/16/2008	Planned Outage	21,180	1,059	20
648821	7/16/2008	Planned Outage	300	4	75
649031	7/17/2008	Planned Outage	693	9	77
649032	7/17/2008	Planned Outage	390	5	78
649033	7/17/2008	Planned Outage	114	6	19
649090	7/17/2008	Planned Outage	526	2	263
649464	7/21/2008	Planned Outage	371	7	53
649471	7/21/2008	Planned Outage	132,804	3,162	42
649480	7/21/2008	Planned Outage	170	10	17
649674	7/23/2008	Planned Outage	4,180	95	44
649807	7/23/2008	Planned Outage	736	16	46
649914	7/24/2008	Planned Outage	364	4	91
649988	7/25/2008	Planned Outage	1,680	84	20
649992	7/25/2008	Planned Outage	64	1	64
650195	7/26/2008	Planned Outage	408	6	68
650796	7/28/2008	Planned Outage	4	1	4
650800	7/28/2008	Planned Outage	112	7	16
650906	7/29/2008	Planned Outage	11,052	36	307
650944	7/29/2008	Planned Outage	156	13	12
650968	7/29/2008	Planned Outage	354,900	975	364

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2008 Planned Outages Table

651003	7/29/2008	Planned Outage	5,475	219	25
651190	7/31/2008	Planned Outage	60	1	60
651453	8/3/2008	Planned Outage	32,760	273	120
651520	8/4/2008	Planned Outage	161	1	161
651953	8/6/2008	Planned Outage	650	10	65
651969	8/6/2008	Planned Outage	546	7	78
652085	8/7/2008	Planned Outage	776	4	194
652170	8/7/2008	Planned Outage	1,012	2	506
653141	8/11/2008	Planned Outage	899	29	31
653174	8/12/2008	Planned Outage	147	7	21
653398	8/13/2008	Planned Outage	42,572	116	367
653404	8/13/2008	Planned Outage	3,567	29	123
653723	8/13/2008	Planned Outage	358	2	179
653746	8/13/2008	Planned Outage	500	2	250
653854	8/13/2008	Planned Outage	32	2	16
653893	8/13/2008	Planned Outage	11,438	86	133
654120	8/15/2008	Planned Outage	2,975	17	175
654135	8/15/2008	Planned Outage	1,884	1,884	1
654163	8/15/2008	Planned Outage	140	10	14
654428	8/18/2008	Planned Outage	225	5	45
654446	8/13/2008	Planned Outage	497	7	71
654777	8/19/2008	Planned Outage	1,048	8	131
654784	8/19/2008	Planned Outage	58	2	29
654794	8/20/2008	Planned Outage	247	13	19
654804	8/20/2008	Planned Outage	130	26	5
654898	8/21/2008	Planned Outage	3,136	32	98
654901	8/21/2008	Planned Outage	1,552	8	194
654906	8/21/2008	Planned Outage	1,629	9	181
655006	8/22/2008	Planned Outage	244	4	61
655012	8/22/2008	Planned Outage	11,520	128	90
655027	8/22/2008	Planned Outage	776	4	194
655036	8/22/2008	Planned Outage	243	3	81
655110	8/23/2008	Planned Outage	321	3	107
655118	8/23/2008	Planned Outage	153	3	51
655341	8/23/2008	Planned Outage	1,581	17	93
655378	8/24/2008	Planned Outage	342	18	19
655445	8/24/2008	Planned Outage	2,652	17	156
655893	8/27/2008	Planned Outage	674	2	337
655935	8/27/2008	Planned Outage	7,562	38	199
655946	8/27/2008	Planned Outage	162	6	27
656039	8/28/2008	Planned Outage	45	1	45
656052	8/28/2008	Planned Outage	150	2	75
656120	8/29/2008	Planned Outage	343	7	49
656123	8/29/2008	Planned Outage	120	10	12
656464	9/1/2008	Planned Outage	49,972	961	52
656608	9/1/2008	Planned Outage	3,800	200	19
656799	9/1/2008	Planned Outage	24	2	12
657273	9/3/2008	Planned Outage	81	3	27

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2008 Planned Outages Table

657288	9/3/2008	Planned Outage	51	3	17
657413	9/4/2008	Planned Outage	1,053	9	117
657688	9/7/2008	Planned Outage	43,250	125	346
657727	9/7/2008	Planned Outage	3,400	40	85
657833	9/8/2008	Planned Outage	385	7	55
657834	9/8/2008	Planned Outage	12,528	696	18
657878	9/9/2008	Planned Outage	144	1	144
658307	9/12/2008	Planned Outage	3,620	181	20
658542	9/13/2008	Planned Outage	954	53	18
658670	9/14/2008	Planned Outage	2	1	2
658671	9/14/2008	Planned Outage	10	2	5
658962	9/15/2008	Planned Outage	524	2	262
658971	9/16/2008	Planned Outage	204	34	6
659104	9/16/2008	Planned Outage	519	3	173
659360	9/18/2008	Planned Outage	5,823	1,941	3
659366	9/18/2008	Planned Outage	3,213	1,071	3
659388	9/18/2008	Planned Outage	222	6	37
659489	9/19/2008	Planned Outage	1,956	6	326
659503	9/19/2008	Planned Outage	128	4	32
659523	9/19/2008	Planned Outage	54	3	18
659732	9/22/2008	Planned Outage	513	9	57
659867	9/23/2008	Planned Outage	20,992	328	64
659929	9/24/2008	Planned Outage	5,405	47	115
659954	9/24/2008	Planned Outage	1,271	41	31
659972	9/24/2008	Planned Outage	266	2	133
659991	9/24/2008	Planned Outage	56	7	8
660062	9/25/2008	Planned Outage	16	4	4
660078	9/25/2008	Planned Outage	2,376	18	132
660716	10/1/2008	Planned Outage	3,276	84	39
660726	10/1/2008	Planned Outage	8,568	68	126
661032	10/2/2008	Planned Outage	789	3	263
661039	10/2/2008	Planned Outage	950	25	38
661115	10/3/2008	Planned Outage	126	14	9
661378	10/6/2008	Planned Outage	2,280	15	152
661379	10/6/2008	Planned Outage	52	1	52
661390	10/6/2008	Planned Outage	1,044	18	58
661410	10/6/2008	Planned Outage	1,225	7	175
661532	10/7/2008	Planned Outage	472	8	59
661581	10/7/2008	Planned Outage	1,152	12	96
662157	10/9/2008	Planned Outage	1,920	24	80
662456	10/12/2008	Planned Outage	395	5	79
662516	10/13/2008	Planned Outage	54	6	9
662517	10/13/2008	Planned Outage	17,861	53	337
662618	10/14/2008	Planned Outage	1,666	17	98
662641	10/14/2008	Planned Outage	906	6	151
662648	10/14/2008	Planned Outage	642	6	107
662707	10/15/2008	Planned Outage	61	1	61
662709	10/15/2008	Planned Outage	480	4	120

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2008 Planned Outages Table

662744	10/15/2008	Planned Outage	990	22	45
662880	10/17/2008	Planned Outage	336	12	28
663004	10/19/2008	Planned Outage	642	3	214
663010	10/19/2008	Planned Outage	640	4	160
663106	10/20/2008	Planned Outage	594	6	99
663107	10/20/2008	Planned Outage	744	8	93
663117	10/20/2008	Planned Outage	306	3	102
663130	10/20/2008	Planned Outage	705	47	15
663206	10/21/2008	Planned Outage	1,235	19	65
663226	10/21/2008	Planned Outage	142	1	142
663238	10/21/2008	Planned Outage	45	1	45
663339	10/23/2008	Planned Outage	24,010	98	245
664124	10/27/2008	Planned Outage	147	3	49
664162	10/27/2008	Planned Outage	174	3	58
664176	10/27/2008	Planned Outage	249	3	83
664239	10/28/2008	Planned Outage	11,220	66	170
664413	10/29/2008	Planned Outage	84	3	28
664414	10/29/2008	Planned Outage	100	4	25
664416	10/29/2008	Planned Outage	130	5	26
664440	10/29/2008	Planned Outage	260	5	52
664935	11/1/2008	Planned Outage	2,198	14	157
664960	11/1/2008	Planned Outage	1,362	6	227
665064	11/2/2008	Planned Outage	711	3	237
665279	11/3/2008	Planned Outage	240	12	20
665295	11/3/2008	Planned Outage	492	2	246
665299	11/3/2008	Planned Outage	801	3	267
665305	11/3/2008	Planned Outage	798	6	133
665319	11/3/2008	Planned Outage	728	7	104
665348	11/4/2008	Planned Outage	312	4	78
665359	11/4/2008	Planned Outage	716	4	179
665376	11/4/2008	Planned Outage	966	7	138
665392	11/4/2008	Planned Outage	270	1	270
665438	11/5/2008	Planned Outage	100	5	20
665440	11/5/2008	Planned Outage	96	8	12
665469	11/5/2008	Planned Outage	11,132	121	92
665474	11/5/2008	Planned Outage	3,264	64	51
665648	11/7/2008	Planned Outage	100	4	25
666092	11/11/2008	Planned Outage	2,385	9	265
666124	11/11/2008	Planned Outage	432	3	144
666199	11/12/2008	Planned Outage	872	8	109
666220	11/12/2008	Planned Outage	84	3	28
666221	11/12/2008	Planned Outage	33	3	11
666223	11/12/2008	Planned Outage	95	1	95
666230	11/12/2008	Planned Outage	470	5	94
666235	11/12/2008	Planned Outage	64,250	1,285	50
666245	11/12/2008	Planned Outage	111,330	2,474	45
666543	11/13/2008	Planned Outage	2,406	6	401
666594	11/13/2008	Planned Outage	207	3	69

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2008 Planned Outages Table

666630	11/14/2008	Planned Outage	315	3	105
666631	11/14/2008	Planned Outage	108	2	54
666967	11/18/2008	Planned Outage	72	4	18
666968	11/18/2008	Planned Outage	203	1	203
666969	11/18/2008	Planned Outage	424	4	106
666984	11/18/2008	Planned Outage	1,104	6	184
666985	11/18/2008	Planned Outage	644	4	161
666989	11/18/2008	Planned Outage	260	4	65
666996	11/18/2008	Planned Outage	192	2	96
667015	11/18/2008	Planned Outage	6,704	419	16
667046	11/19/2008	Planned Outage	280	10	28
667157	11/20/2008	Planned Outage	588	6	98
667159	11/20/2008	Planned Outage	424	4	106
667165	11/20/2008	Planned Outage	99,405	705	141
667170	11/20/2008	Planned Outage	378	54	7
667217	11/21/2008	Planned Outage	438	2	219
667249	11/21/2008	Planned Outage	2,829	23	123
667527	11/24/2008	Planned Outage	48	12	4
667530	11/24/2008	Planned Outage	108	18	6
667533	11/24/2008	Planned Outage	980	28	35
667547	11/24/2008	Planned Outage	120	2	60
667552	11/24/2008	Planned Outage	208	4	52
667595	11/25/2008	Planned Outage	156	1	156
667611	11/25/2008	Planned Outage	798	6	133
667636	11/25/2008	Planned Outage	44	2	22
668552	12/2/2008	Planned Outage	774	9	86
668570	12/2/2008	Planned Outage	681	3	227
668633	12/3/2008	Planned Outage	736	2	368
668637	12/3/2008	Planned Outage	155	31	5
668667	12/3/2008	Planned Outage	155	31	5
668716	12/4/2008	Planned Outage	1,152	6	192
668725	12/4/2008	Planned Outage	12	12	1
668726	12/4/2008	Planned Outage	632	2	316
668727	12/4/2008	Planned Outage	18	9	2
668731	12/4/2008	Planned Outage	20	20	1
668733	12/4/2008	Planned Outage	12,250	98	125
668735	12/4/2008	Planned Outage	360	10	36
668736	12/4/2008	Planned Outage	35	7	5
668737	12/4/2008	Planned Outage	459	17	27
668755	12/4/2008	Planned Outage	29	1	29
669010	12/5/2008	Planned Outage	465	15	31
669011	12/5/2008	Planned Outage	341	1	341
669236	12/8/2008	Planned Outage	632	8	79
669241	12/8/2008	Planned Outage	53	1	53
669321	12/9/2008	Planned Outage	177	1	177
669380	12/9/2008	Planned Outage	430	5	86
669609	12/10/2008	Planned Outage	126,720	1,760	72
669679	12/11/2008	Planned Outage	2,240	28	80

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2008 Planned Outages Table

669761	12/11/2008	Planned Outage	225	5	45
669775	12/11/2008	Planned Outage	354	6	59
669832	12/11/2008	Planned Outage	954	6	159
669863	12/11/2008	Planned Outage	9,024	376	24
670021	12/12/2008	Planned Outage	244	4	61
670238	12/14/2008	Planned Outage	26,004	394	66
670258	12/14/2008	Planned Outage	407,040	1,272	320
670552	12/16/2008	Planned Outage	676	4	169
670701	12/18/2008	Planned Outage	144	8	18
670702	12/18/2008	Planned Outage	3,496	76	46
670765	12/19/2008	Planned Outage	308	2	154
670773	12/19/2008	Planned Outage	116	2	58
670784	12/19/2008	Planned Outage	513	3	171
670785	12/19/2008	Planned Outage	478	2	239
670806	12/19/2008	Planned Outage	2,160	9	240
670808	12/19/2008	Planned Outage	254	2	127
671321	12/24/2008	Planned Outage	981	9	109
671412	12/25/2008	Planned Outage	1,536	512	3
671419	12/25/2008	Planned Outage	3,580	767	5
671736	12/30/2008	Planned Outage	33,616	382	88
671743	12/30/2008	Planned Outage	32,160	67	480
671813	12/31/2008	Planned Outage	729	3	243
671817	12/31/2008	Planned Outage	3	1	3

APPENDIX 2

Gulf Power Company
Annual Wood Pole Inspection Report
(Reporting Year 2008)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of Wooden Poles in the Company Inventory	# of Pole Inspections Planned this Annual Inspection	# of Poles Inspected this Annual Inspection*	# of Poles Failing Inspection this Annual Inspection	Pole Failure Rate (%) this Annual Inspection	# of Poles Designated for Replacement this Annual Inspection	Total # of Poles Replaced this Annual Inspection	# of Poles Requiring Minor Follow-up this Annual Inspection	# of Poles Overloaded this Annual Inspection	Method(s) V = Visual E = Excavation P= Prod S = Sound B= Bore R = Resistograph	# of Pole Inspections Planned for Next Annual Inspection Cycle	Total # of Poles Inspected (Cumulative) in the 8-Year Cycle To Date	% of Poles Inspected (Cumulative) in the 8-Year Cycle To Date
258,404	32,000	35,482	969	2.73	897	55 (See Note 2)	72	1	V, E, S, B	27,500	68,508	26.5%

Note 1 If b – c > 0, provide explanation	
Note 2 If d – g > 0, provide explanation	Pole inspection was completed in the fourth quarter of 2008 and repairs have been scheduled for 2009.
Note 3 Description of selection criteria for inspections	Gulf is systematically moving across its system. Poles are selected for inspection on a geographical basis.

APPENDIX 3 FEEDER SPECIFIC DATA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	(a) Feeder ID	(b) Sub Region	(c) Number of Overhead Lateral Lines	(d) Number of Overhead Lateral Miles	(e) Number of Customers served on Overhead Lateral Lines	(f) CMI for Overhead Lateral Lines	(g) CI for Overhead Lateral Lines	(h) Number of Underground Lateral Lines	(i) Number of Underground Lateral Miles	(j) Number of Customers served on Underground Lateral Lines	(k) CMI for Underground Lateral Lines	(l) CI for Underground Lateral Lines	(m) Number of Automatic line Sectionalizing devices on the Lateral Lines	(n) Number of Automatic line Sectionalizing devices on the Feeder	(o) Whether the feeder Circuit is Loop	(p) Total Length of the Feeder Circuit	(q) Length of Underground portion of the Feeder Circuit	(u) Length of Overhead portion of the Feeder circuit	(v) Number of customers served by Overhead Feeders	(w) CMI for Overhead Feeders	(x) CI for Overhead Feeders	(y) Load growth %	(z) Peak load MVA
2	514	WESTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	0.00	0.00	0.00	0	0	0	0.1	5.43
3	804	WESTERN	1	0.07	0	0	0	1	0.54	0	0	0	0	1	No	0.66	0.54	0.11	0	0	0	n/a	n/a
4	2222	EASTERN	0	0.00	1	0	0	1	0.54	3	0	0	0	0	No	0.72	0.64	0.08	4	0	0	n/a	n/a
5	2613	CENTRAL	1	1.99	19	2,579	11	0	0.00	0	0	0	0	0	No	2.42	0.00	2.42	19	2,579	11	n/a	n/a
6	2619	CENTRAL	11	3.55	80	812	13	0	0.00	0	0	0	0	0	No	5.37	0.00	5.37	80	25,661	256	n/a	n/a
7	5332	WESTERN	85	15.65	710	271,810	1,624	39	8.54	754	17,315	274	0	1	Yes	26.08	8.54	17.54	1,464	289,125	1,898	0.5	9.25
8	5342	WESTERN	27	3.82	194	9,074	64	19	5.15	919	4,318	55	0	1	Yes	10.65	5.15	5.50	1,113	13,392	119	2.0	7.67
9	5352	WESTERN	43	6.36	134	4,349	17	30	2.92	89	331	2	0	1	Yes	11.48	2.92	8.56	223	5,142	250	0.5	12.36
10	5362	WESTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	3.23	0.08	3.15	0	0	0	0.5	1.94
11	5372	WESTERN	0	0.01	0	0	0	0	0.00	0	0	0	0	0	No	3.19	0.08	3.11	0	0	0	0.5	2.25
12	5382	WESTERN	421	129.13	1,824	368,935	2,132	27	5.28	57	86	1	2	4	Yes	142.27	5.28	136.99	1,881	1,203,710	15,117	1.8	11.71
13	5392	WESTERN	224	60.86	932	301,548	1,618	14	1.88	19	386	2	0	2	No	64.57	1.88	62.69	951	301,934	1,620	2.0	5.58
14	5412	WESTERN	1	0.47	1	542	2	0	0.00	0	0	0	0	0	No	1.01	0.00	1.01	1	542	2	0.1	7.33
15	5502	WESTERN	50	8.31	249	37,647	347	2	1.11	39	0	0	0	1	Yes	11.12	1.11	10.01	288	55,003	759	1.0	1.62
16	5512	WESTERN	165	45.71	1,131	214,407	1,417	21	7.94	454	0	0	1	2	Yes	57.07	7.94	49.13	1,585	254,997	4,123	2.0	8.08
17	5522	WESTERN	95	23.67	557	41,978	252	13	3.75	193	0	0	0	1	Yes	31.10	3.75	27.35	750	41,978	252	0.1	4.56
18	5542	WESTERN	105	32.27	1,631	55,942	611	27	19.07	869	7,241	82	0	2	Yes	55.74	19.07	36.67	2,500	63,183	693	1.0	14.69
19	5562	WESTERN	82	24.28	1,802	141,735	1,375	16	5.22	325	2,865	11	1	0	Yes	31.25	5.22	26.03	2,127	485,178	3,528	0.2	9.21
20	5572	WESTERN	32	12.51	962	50,700	528	13	5.23	321	5,817	21	0	2	Yes	18.93	5.23	13.70	1,283	266,787	1,839	3.0	8.54
21	5582	WESTERN	102	14.50	895	43,422	337	15	7.91	923	61,484	190	1	0	Yes	27.00	7.91	19.09	1,818	438,268	4,216	2.0	11.10
22	5592	WESTERN	34	7.39	418	55,166	943	15	7.56	1,245	534	2	0	1	Yes	17.64	7.56	10.08	1,663	55,700	945	1.0	4.81
23	5602	WESTERN	291	74.26	1,837	344,094	3,059	34	11.28	126	7,528	44	0	1	Yes	91.77	11.28	80.49	1,963	392,058	6,920	1.0	14.62
24	5612	WESTERN	350	136.67	2,149	483,515	4,178	9	3.95	143	192	2	0	2	Yes	144.56	3.95	140.61	2,292	974,955	13,365	2.0	13.84
25	5632	WESTERN	19	5.73	499	404,151	2,463	23	6.67	696	610	3	0	0	Yes	15.08	7.94	7.14	1,195	508,813	4,632	2.0	4.71
26	5642	WESTERN	104	25.97	1,537	52,657	516	19	27.27	1,379	54,720	330	0	0	Yes	59.42	27.27	32.14	2,916	107,377	846	4.0	15.87
27	5652	CENTRAL	82	17.40	1,084	313,696	2,108	30	4.92	401	24,827	187	1	1	Yes	25.08	4.92	20.16	1,485	588,763	3,767	0.5	8.65
28	5662	CENTRAL	96	17.83	1,618	285,898	2,569	55	8.22	1,188	22,076	61	1	2	Yes	28.32	8.22	20.10	2,806	307,974	2,630	0.2	11.56
29	5682	CENTRAL	48	7.85	886	68,299	517	25	2.34	232	7,941	19	1	1	Yes	12.57	2.34	10.23	1,118	124,152	1,440	1.0	9.85
30	5752	WESTERN	190	40.99	1,810	78,835	1,100	30	23.41	1,267	4,897	26	2	1	Yes	68.60	23.41	45.19	3,077	83,732	1,126	2.0	15.45
31	5762	WESTERN	159	45.65	1,794	128,745	1,032	30	17.16	1,124	9,287	48	0	1	Yes	66.12	17.16	48.96	2,918	138,032	1,080	4.0	14.19
32	5772	WESTERN	61	12.92	611	46,669	534	8	4.24	295	416	8	0	0	Yes	19.95	4.24	15.71	906	47,085	542	2.0	3.40
33	5782	WESTERN	202	66.42	1,905	588,987	3,979	22	18.46	513	3,233	36	0	1	Yes	88.24	18.46	69.77	2,418	592,220	4,015	1.5	14.35
34	5792	WESTERN	278	99.67	2,310	381,363	3,576	37	11.63	523	0	0	3	3	No	117.82	11.63	106.19	2,833	453,278	4,333	1.5	14.60
35	5812	WESTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	0.04	0.00	0.04	0	0	0	0.0	0.00
36	5822	WESTERN	97	22.42	1,149	23,701	192	24	9.34	382	697	4	1	1	Yes	35.65	9.34	26.32	1,531	24,398	196	1.0	10.48
37	5832	WESTERN	197	61.50	2,197	58,949	421	15	1.52	67	0	0	0	1	Yes	67.67	1.52	66.15	2,264	58,949	421	2.0	11.18
38	5852	WESTERN	90	25.98	816	158,422	1,185	5	0.93	6	0	0	1	1	Yes	29.64	0.93	28.71	822	187,297	2,010	1.0	6.79
39	5872	WESTERN	44	11.54	640	124,806	726	30	15.20	917	13,187	110	1	2	Yes	27.97	15.20	12.76	1,557	165,608	2,151	2.0	9.79
40	5882	CENTRAL	72	20.30	2,014	102,760	1,052	34	4.82	641	2,864	14	0	0	Yes	29.75	4.82	24.93	2,655	105,624	1,066	2.0	10.35
41	5892	CENTRAL	101	27.48	2,005	145,021	1,138	52	17.66	1,299	36,829	269	1	0	Yes	51.75	17.66	34.09	3,304	181,850	1,407	2.0	15.40
42	5902	WESTERN	43	7.24	583	47,115	456	13	2.60	112	3,497	9	0	1	Yes	11.19	2.96	8.23	695	88,628	1,617	0.1	7.71
43	5912	WESTERN	26	2.13	261	34,021	329	38	4.81	311	308	2	0	1	Yes	10.84	5.81	5.04	572	34,329	331	1.0	10.22
44	5922	WESTERN	40	7.14	665	19,387	162	26	25.30	1,638	26,216	181	0	0	Yes	36.07	25.30	10.77	2,303	45,603	343	2.0	14.61
45	5932	WESTERN	68	13.93	1,107	188,652	1,699	27	14.17	864	5,097	35	0	2	Yes	29.70	14.17	15.53	1,971	201,661	3,712	1.0	11.16
46	5942	WESTERN	20	9.51	582	104,188	607	52	8.47	1,616	71,235	374	0	2	No	21.25	10.59	10.67	2,198	175,423	981	2.0	15.25
47	5952	WESTERN	0	0.01	0	0	0	0	0.00	0	0	0	0	0	No	0.01	0.00	0.01	0	0	0	0.0	0.00
48	5972	WESTERN	38	9.61	658	14,455	96	20	5.20	474	24,364	107	0	2	Yes	16.74	5.29	11.45	1,132	38,819	203	0.5	7.77
49	5982	WESTERN	47	13.19	980	343,129	1,862	47	12.32	1,409	43,516	339	0	2	Yes	29.15	12.58	16.57	2,389	386,645	2,201	0.1	15.44
50	5992	WESTERN	35	7.41	633	6,695	75	22	10.86	1,040	37,068	194	0	2	Yes	21.86	10.96	10.90	1,673	52,126	3,613	0.1	9.13
51	6022	WESTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	0.01	0.00	0.01	0	0	0	0.0	0.00
52	6032	WESTERN	33	6.71	353	28,565	169	15	3.98	747	11,278	75	0	2	Yes	13.80	3.98	9.82	1,100	127,533	1,354	0.4	7.60
53	6042	WESTERN	83	16.48	1,701	327,987	2,319	6	0.49	41	1,824	16	0	2	Yes	19.73	0.49	19.24	1,742	329,811	2,335	0.5	7.63
54	6052	WESTERN	72	14.98	1,076	83,618	632	7	3.85	308	1,599	8	0	0	Yes	21.46	3.85	17.62	1,384	409,327	4,833	0.1	5.58
55	6062	WESTERN	71	18.41	1,613	200,014	1,479	7	0.26	9	0	0	0	0	Yes	23.20	0.26	22.94	1,622	200,014	1,479	0.1	7.43
56	6072	WESTERN	103	22.72	1,181	56,895	624	35	22.31	1,557	22,042	244	0	2	Yes	51.47	22.47	29.00	2,738	807,157	3,616	0.5	14.75
57	6082	WESTERN	167	41.84	1,947	137,880	897	31	18.68	1,783	16,239	98	0	4	Yes	67.67	18.68	48.99	3,730	225,369	4,745	0.1	14.89
58	6092	WESTERN	41	14.43	858	72,291	381	26	8.69	1,008	31,103	96	0	1	Yes	26.73	8.69	18.05	1,866	103,394	477	0.5	9.40
59	6212	WESTERN	84	23.27	831	59,870	984	27	22.59	1,148	160,947	576	0	1	Yes	48.36	22.59	25.77	1,979	220,817	1,560	1.0	12.15
60	6338	WESTERN	0	0.00	0	0	0	0	0.88	45	0	0	0	0	No	0.88	0.88	0.00	45	0	0	n/a	n/a
61	6348	WESTERN	0	0.00	0	0	0	0	0.92	34	0	0	0	0	No	0.92	0.92	0.00	34	0	0	n/a	n/a
62	6352	WESTERN	0	0.00	0	0	0	0	0.86	58	0	0	0	0	No	0.86	0.86	0.00	58	0	0	n/a	n/a
63	6412	CENTRAL	70	23.36	467	15,562	212	5	1.83	45	0	0	1	0	No	27.83	1.83	26.00	512	15,562	212	0.1	1.42
64	6432	CENTRAL	23	6.34	209	4,413	43	3	0.48	9	0	0	0	0	No	8.57	0.48	8.09	218	4,413	43	0.1	2.65
65	6452	CENTRAL	3	0.26	6	0	0	1	0.13	1	0	0	0	0	No	4.11	0.13	3.97	7	0	0	0.1	1.42
66	6482	WESTERN	36	8.55	864	130,085	651	43	11.83	1,412	135,059	560	0	1	Yes	26.75	11.87	14.88	2,276	581,891	7,628	1.0	10.34
67	6508	WESTERN	11	0.58	17	280	4	9	0.34	4	0	0	0	0	Yes	2.45	0.41	2.04	21	1,141	25	0.1	8.82
68	6522	WESTERN	115	15.22	1,351	193,460	1,586	35	3.04	442	313	1	0	2	Yes	22.02	3.05	18.97	1,793	379,310	5,224	0.4	10.82
69	6532	WESTERN	109	20.27	1,818	232,721	1,423	8	0.36	300	0	0	0	1	Yes	24.83	0.36	24.47	2,118	232,721	1,423	0.5	10.23
70	6542	WESTERN	58	14.17	1,533	214,010	1,290	14	1.24	221	1,847	6	0	2	Yes	19.24	1.24	18.00	1,754	215,857	1,296	1.0	12.12
71	6572	WESTERN	120	21.25	1,654	97,703	784	20	0.84	184	101	1	0	1	No	24.37	0.84	23.52	1,838	294,688	4,333	3.0	11.22
72	6582	WESTERN	99	18.51	1,545	223,945	1,498	4	0.22	35	3,878	10	0	1	Yes	21.18	0.22	20.96	1,580	275,093	3,138	0.5	7.36
73	6592	WESTERN	20	2.32	189	7,343	36	9	0.93	221	10,314	54	0	0	Yes	6.54	0.93	5.60	410	18,887	500	0.1	8.22
74	6602	WESTERN	33	7.60	675	128,152	741	4	0.16	26	0	0	0	0	Yes	9.07	0.16	8.91	701	128,152	741	2.5	2.87
75	6612	WESTERN	58	16.15	1,285	45,452	259	4	0.08	3	0	0	3	0	Yes	18.44	0.18	18.27	1,288	45,452	259	0.1	8.75
76	6622	WESTERN	41	7.36	688	81,782	703	3	0.08	3	0	0	0	2	Yes	8.94	0.23	8.71	691	81,782	703	0.6	3.38
77	6632	WESTERN	89	8.60	667	36,592	499	10	0.95	14	0	0	0	2	Yes	11.55	0.96	10.60	681	59,950	1,186	0.3	9.14
78	6642	WESTERN	60	10.25	562	26,846	149	6	0.31	5	0	0	1	0	Yes	12.36	0.31	12.05	567	26,846	149	0.1	8.38
79	6652	WESTERN	159	25.40	2,339	123,999	1,138	10	0.93	155	0	0	0	3	Yes	29.46	0.93	28.54	2,494	635,278	8,598	1.4	11.09
80	6662	WESTERN	81	16.71	1,004	154,935	1,517	22	3.71	350	1,451	5	0	0	Yes	25.24	3.71	21.53	1,354	156,386	1,522	1.0	10.42
81	6672	WESTERN	0	0.05	0	0	0	0	0.00	0	0	0	0	0	No	0.05	0.00	0.05	0	0	0	0.0	0.00
82	6678	WESTERN	53	18.30	1,728	190,748	957	22	5.42	707	1,113	3	0	1	No	25.10	5.42	19.68	2,435	191,861	960	0.1	10.34
83	6682	WESTERN	34	9.72	735	51,906	468	11	2.41	211	26,036	71	0	2	Yes	16.45	2.41	14.04	946	78,870	1,467	0.5	5.54
84	6692	WESTERN	54	13.77	1,173	25,045	173	12	2.89	432	4,501	27	0	1	Yes	19.02	2.89	16.13	1,605	29,546	200	2.0	6.99
85	6706	WESTERN	52	12.70	827	53,793	318	4	0.11	4	0	0	0	0	Yes	14.91	0.11	14.80	831	53,793	318	0.5	5.07
86	6716	WESTERN	69	11.67	843	78,952	621	17	1.04	164	1,584	6	0	1	Yes	18.41	1.04	17.37	1,007	80,536	627	0.1	6.38
87	6722	WESTERN	0	0.00	0	0	0	2	0.00	0	0	0	0	0	Yes	0.70	0.06	0.64	0	0	0	0.1	8.45
88	6732	WESTERN	0	0.00	0	0	0	2	0.00	0	0	0	0	0	No	0.60	0.05	0.55	0	0	0	0.1	7.27
89	6742	WESTERN	28	10.63	1,166	80,819	839	11	6.73	574	30,639	123	0	0	Yes	21.03	6.81	14.22	1,740	111,458	962	0.1	7.52
90	6774	WESTERN	60	15.21	717	128,698	1,329	30	1.91	81	0	0	0	1	Yes	20.81	1.91	18.90	798	128,698	1,329	0.5	7.32

APPENDIX 3 FEEDER SPECIFIC DATA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	(a) Feeder ID	(b) Sub Region	(c) Number of Overhead Lateral Lines	(d) Number of Overhead Lateral Miles	(e) Number of Customers served on Overhead Lateral Lines	(f) CMI for Overhead Lateral Lines	(g) CI for Overhead Lateral Lines	(h) Number of Underground Lateral Lines	(i) Number of Underground Lateral Miles	(j) Number of Customers served on Underground Lateral Lines	(k) CMI for Underground Lateral Lines	(l) CI for Underground Lateral Lines	(m) Number of Automatic line Sectionalizing devices on the Lateral Lines	(n) Number of Automatic line Sectionalizing devices on the Feeder	(o) Whether the feeder Circuit is Loop	(p) Total Length of the Feeder Circuit	(q) Length of Underground portion of the Feeder Circuit	(u) Length of Overhead portion of the Feeder circuit	(v) Number of customers served by Overhead Feeders	(w) CMI for Overhead Feeders	(x) CI for Overhead Feeders	(y) Load growth %	(z) Peak load MVA
91	6782	WESTERN	109	25.20	1,047	289,114	1,157	20	7.29	699	136	1	1	2	Yes	40.21	7.29	32.92	1,746	432,384	4,511	1.0	9.64
92	6792	WESTERN	147	33.19	1,202	521,065	4,423	39	12.34	1,060	36,057	231	0	2	Yes	48.87	12.34	36.52	2,262	557,122	4,654	2	13.11
93	6912	WESTERN	133	32.62	924	192,957	1,251	17	6.02	263	500	3	0	1	Yes	41.39	6.02	35.37	1,187	193,457	1,254	2.0	7.25
94	6922	WESTERN	165	46.58	1,201	621,697	5,035	4	2.31	114	127	1	3	1	Yes	50.10	2.31	47.80	1,315	629,459	6,563	0.5	7.06
95	6932	WESTERN	85	16.67	770	51,095	405	17	9.08	512	2,813	19	0	0	Yes	33.03	9.08	23.95	1,282	527,164	2,998	2.0	7.13
96	6942	WESTERN	276	52.96	1,478	276,728	1,853	14	1.73	129	234	3	0	3	Yes	59.10	1.73	57.37	1,607	309,357	5,091	1.5	9.04
97	6966	WESTERN	1	0.39	0	0	0	1	0.02	0	0	0	0	0	No	0.42	0.02	0.41	0	0	0	0.1	1.40
98	6982	WESTERN	9	9.93	10	0	0	0	0.00	0	0	0	0	0	No	10.58	0.00	10.58	10	130	10	0.1	0.01
99	6992	WESTERN	116	23.22	1,185	202,864	1,438	37	22.58	1,289	13,285	56	0	1	Yes	51.63	22.58	29.05	2,474	223,562	3,965	2.5	15.80
100	7012	WESTERN	135	33.57	1,779	352,687	2,269	17	5.21	262	7,630	20	0	1	Yes	42.67	5.21	37.47	2,041	360,317	2,289	1.5	15.69
101	7022	WESTERN	52	11.72	573	105,465	956	15	3.67	190	17,628	73	0	0	Yes	19.16	3.67	15.49	763	123,093	1,029	2.5	5.89
102	7032	WESTERN	47	8.93	544	24,785	318	14	4.28	339	2,138	14	0	0	No	15.11	4.28	10.83	883	26,923	332	2	8.54
103	7042	WESTERN	77	21.65	906	42,543	370	18	13.19	558	5,278	9	0	1	Yes	39.07	13.19	25.88	1,464	227,621	1,829	3.0	7.83
104	7112	WESTERN	120	23.49	1,132	157,420	1,932	21	6.28	469	2,113	14	0	2	Yes	30.99	6.28	24.70	1,601	159,533	1,946	0.1	7.38
105	7122	WESTERN	125	22.86	725	120,933	1,033	33	21.45	780	5,173	23	0	2	Yes	48.27	21.45	26.81	1,505	192,279	4,061	1.0	10.01
106	7132	WESTERN	121	18.61	898	113,797	678	22	8.51	498	2,908	4	0	0	Yes	31.74	8.51	23.23	1,396	116,705	682	0.5	7.52
107	7157	WESTERN	1	0.33	0	0	0	1	0.08	1	0	0	0	1	No	0.46	0.08	0.38	1	0	0	n/a	n/a
108	7172	WESTERN	162	40.47	1,811	216,549	1,894	30	15.02	623	2,201	20	0	1	Yes	64.79	15.03	49.76	2,434	218,750	1,914	1.0	13.05
109	7232	WESTERN	195	51.67	1,880	130,795	953	47	7.81	398	4,561	14	0	1	Yes	64.35	7.81	56.54	2,278	135,356	967	2.0	12.92
110	7252	WESTERN	168	38.97	1,374	159,098	1,041	41	13.48	960	0	0	0	1	Yes	55.74	13.48	42.26	2,334	159,098	1,041	2.0	16.77
111	7262	WESTERN	178	64.94	2,479	234,227	1,932	20	4.58	314	2,378	10	1	1	Yes	71.92	4.58	67.34	2,793	236,605	1,942	1.5	13.53
112	7272	WESTERN	238	70.21	2,318	688,119	3,213	28	2.76	220	0	0	0	4	Yes	77.67	2.76	74.90	2,538	688,119	3,213	1.0	13.49
113	7282	WESTERN	102	24.80	1,437	178,783	1,061	22	4.92	221	0	0	0	1	Yes	34.15	4.92	29.23	1,658	185,187	2,662	1.5	10.36
114	7292	WESTERN	87	19.32	1,078	67,444	1,052	13	2.73	312	0	0	0	1	Yes	25.59	2.73	22.86	1,390	67,444	1,052	2.5	11.44
115	7302	WESTERN	1	0.09	0	0	0	2	0.42	2	0	0	0	0	No	0.53	0.42	0.11	2	492	2	0.1	0.35
116	7332	WESTERN	73	19.12	530	66,404	695	28	18.19	958	13,230	53	0	2	Yes	39.16	18.19	20.97	1,488	79,634	748	2.5	8.44
117	7342	WESTERN	34	6.09	361	343,232	4,095	47	6.79	1,530	5,935	58	0	1	Yes	14.56	6.79	7.78	1,891	353,437	4,214	2.0	9.07
118	7352	WESTERN	40	12.70	1,013	272,421	1,341	25	7.54	1,242	174,287	329	0	1	Yes	22.75	7.54	15.21	2,255	446,708	1,670	0.3	9.28
119	7362	WESTERN	146	22.52	1,055	47,015	397	76	15.03	2,248	142,263	309	0	2	Yes	41.95	15.37	26.58	3,303	189,278	706	1.0	14.83
120	7372	WESTERN	73	11.06	830	82,657	274	35	28.44	1,875	1,378	8	0	0	No	45.00	28.44	16.55	2,705	294,401	2,979	2.0	12.73
121	7402	WESTERN	0	0.01	1	0	0	0	0.01	0	0	0	0	0	Yes	1.88	0.08	1.80	1	0	0	0.5	3.62
122	7404	WESTERN	59	7.52	924	85,832	1,054	24	1.56	54	0	0	0	0	Yes	11.31	1.75	9.56	978	85,832	1,054	0.1	9.18
123	7406	WESTERN	96	16.83	1,864	439,328	2,790	10	0.58	165	0	0	0	1	Yes	22.26	1.02	21.24	2,029	913,284	6,266	2	9.24
124	7408	WESTERN	16	2.26	248	3,299	56	6	0.39	12	0	0	0	0	No	3.85	0.45	3.40	260	4,399	276	4.0	9.26
125	7410	WESTERN	3	0.25	29	0	0	0	0.00	0	0	0	0	0	Yes	2.30	0.13	2.18	29	0	0	3.0	2.92
126	7414	WESTERN	5	0.37	89	12,208	58	4	0.10	1	0	0	0	0	Yes	2.90	0.83	2.07	90	14,494	76	0.1	3.63
127	7416	WESTERN	76	7.18	722	64,714	455	23	1.70	45	0	0	0	1	Yes	12.05	1.91	10.15	767	64,714	455	0.1	9.01
128	7492	WESTERN	124	28.98	815	311,060	1,606	10	0.95	63	297	1	0	1	Yes	33.46	0.95	32.51	878	404,116	2,458	1.0	5.89
129	7512	WESTERN	88	14.86	1,227	92,182	1,122	30	4.11	440	1,238	7	0	1	Yes	21.65	4.11	17.54	1,667	93,420	1,129	2.5	11.00
130	7522	WESTERN	53	12.26	857	129,039	967	40	11.29	553	8,638	86	0	2	Yes	27.11	11.29	15.82	1,410	234,526	1,686	1.0	11.86
131	7532	WESTERN	10	2.39	109	44,509	229	10	8.16	1,108	29,482	180	0	1	Yes	15.30	12.00	3.30	1,217	274,079	1,600	2.0	7.08
132	7542	WESTERN	0	0.00	0	0	0	8	5.62	339	10,482	43	0	0	Yes	10.67	9.87	0.80	339	10,482	43	2.0	6.36
133	7582	WESTERN	156	33.46	2,199	195,521	1,832	18	3.99	198	4,592	8	0	1	Yes	42.41	3.99	38.43	2,397	283,108	6,571	1.5	10.80
134	7592	WESTERN	21	5.29	302	171,994	1,978	13	6.18	596	4,425	22	0	1	Yes	12.68	6.18	6.50	898	176,419	2,000	1.0	4.26
135	7602	WESTERN	28	3.38	193	29,668	332	31	3.10	434	29,495	77	0	0	Yes	8.99	3.22	5.76	627	59,163	409	0.1	5.64
136	7612	WESTERN	88	13.71	1,159	150,538	1,180	45	5.06	734	1,081	3	0	2	Yes	21.94	5.06	16.88	1,893	254,969	3,133	1.0	12.36
137	7622	WESTERN	46	9.79	946	44,644	428	19	2.49	352	5,151	51	0	0	Yes	14.43	2.49	11.93	1,298	49,795	479	1.0	7.50
138	7632	WESTERN	93	11.79	1,129	106,244	915	12	4.81	455	126	1	0	0	Yes	19.82	4.81	15.00	1,584	106,370	916	0.1	7.69
139	7642	WESTERN	42	9.52	950	67,572	321	18	3.62	552	44,638	242	1	1	Yes	15.90	3.62	12.28	1,502	112,210	563	1.0	8.09
140	7652	WESTERN	13	0.78	38	1,497	11	24	2.97	109	0	0	0	1	Yes	7.00	3.18	3.82	147	1,497	11	0.1	6.49
141	7662	WESTERN	75	15.48	1,121	195,710	1,772	27	6.65	782	123,346	332	0	0	Yes	26.65	6.65	20.00	1,903	466,357	4,017	1.2	13.40
142	7682	WESTERN	67	10.30	1,032	342,602	1,267	32	8.01	1,066	11,216	55	0	1	Yes	23.17	8.20	14.98	2,098	543,988	3,435	0.1	10.13
143	7692	WESTERN	7	1.52	115	4,579	43	7	0.51	9	0	0	0	0	Yes	3.58	0.51	3.06	124	4,579	43	0.1	1.73
144	7702	WESTERN	44	10.30	984	147,368	1,202	11	5.72	473	15,268	70	0	1	Yes	19.20	5.72	13.48	1,457	292,172	2,744	2.0	11.01
145	7712	WESTERN	42	9.66	713	12,457	93	5	1.02	140	11,753	36	0	1	Yes	12.40	1.02	11.38	853	24,210	129	0.1	5.96
146	7722	WESTERN	43	12.37	1,047	121,555	1,200	1	0.69	47	10,386	176	0	0	Yes	16.26	0.69	15.57	1,094	131,941	1,376	1.0	4.75
147	7742	WESTERN	56	18.24	1,849	230,464	2,203	14	1.83	274	13,172	33	0	3	Yes	24.09	1.83	22.26	2,123	243,636	2,236	0.5	10.22
148	7752	WESTERN	80	19.58	1,354	118,472	1,535	33	5.88	771	7,115	35	0	1	Yes	28.16	5.88	22.28	2,125	1,707,675	14,322	0.1	12.11
149	7762	WESTERN	50	12.04	1,282	99,579	887	5	0.40	67	0	0	0	1	Yes	14.85	0.40	14.44	1,349	118,427	2,065	0.5	5.61
150	7772	WESTERN	40	6.06	419	37,734	297	11	1.20	240	26,400	280	0	1	Yes	9.95	1.21	8.75	659	78,225	1,248	3.0	8.71
151	7782	WESTERN	80	11.62	1,032	45,906	365	11	1.05	149	112	2	1	1	Yes	16.78	1.05	15.73	1,181	46,018	367	1.0	7.16
152	7792	WESTERN	95	20.23	1,401	154,621	858	19	9.26	688	363	2	0	2	Yes	32.60	9.26	23.34	2,089	154,984	860	0.2	10.67
153	7802	WESTERN	27	3.90	273	23,053	727	30	5.25	719	23,381	85	0	1	No	12.55	5.25	7.30	992	46,434	812	1.0	11.53
154	7822	WESTERN	40	7.61	416	189,553	1,852	27	7.33	1,446	42,334	235	0	1	Yes	17.85	7.33	10.52	1,862	370,337	3,933	1.5	9.56
155	7832	WESTERN	128	28.61	1,825	176,829	1,976	20	9.77	1,083	160,140	866	1	2	Yes	43.69	9.77	33.92	2,908	421,301	5,750	1.0	12.47
156	7842	WESTERN	155	30.83	1,611	215,282	2,474	45	11.86	889	19,118	109	2	3	Yes	47.00	11.86	35.15	2,500	250,500	4,883	1.0	13.11
157	7872	WESTERN	33	5.56	349	22,410	83	17	1.34	58	398	1	1	0	Yes	9.16	1.34	7.82	407	22,808	84	2.0	10.42
158	7882	WESTERN	56	9.85	637	44,091	374	27	3.80	251	0	0	0	1	Yes	16.63	3.80	12.83	888	136,283	2,092	2.0	11.19
159	7892	WESTERN	0	0.00	12	0	0	1	1.02	88	0	0	0	0	No	1.57	1.02	0.55	100	0	0	1.0	12.89
160	7902	CENTRAL	187	45.28	1,794	387,185	4,146	26	4.12	238	11,848	14	3	3	No	53.94	4.12	49.82	2,032	557,360	7,749	1.0	12.71
161	7912	CENTRAL	150	57.71	1,462	216,939	1,063	21	1.90	75	0	0	2	4	No	64.11	1.90	62.21	1,537	295,958	5,701	1.0	9.71
162	7922	WESTERN	87	14.42	952	120,768	1,541	30	14.59	1,021	14,013	79	0	1	Yes	31.55	14.59	16.97	1,973	134,781	1,620	1.0	14.42
163	7932	WESTERN	71	12.57	1,014	322,671	1,397	61	8.84	1,021	9,143	82	0	3	Yes	25.23	8.84	16.39	2,035	393,722	2,886	0.2	14.74
164	7942	WESTERN	55	5.48	506	45,481	136	27	2.53	134	10,463	23	0	0	Yes	12.47	3.20	9.27	640	97,587	820	2.0	10.88
165	7952	CENTRAL	22	9.08	179	28,293	210	3	0.23	4	0	0	0	0	No	13.01	0.23	12.78	183	33,886	329	0.5	1.47
166	7962	CENTRAL	48	16.96	304	26,499	173	2	0.12	1	0	0	0	0	No	18.40	0.12	18.28	305	36,729	483	0.5	1.47
167	8012	EASTERN	3	0.74	14	0	0	8	0.51	6	0	0	0	0	No	2.32	0.67	1.65	20	0	0	0.1	1.65
168	8032	EASTERN	44	27.50	312	10,589	67	22	10.16	35	0	0	0	3	No	43.65	10.16	33.49	347	10,589	67	1.2	3.13
169	8038	WESTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	Yes	0.01	0.00	0.01	0	0	0	n/a	n/a
170	8062	EASTERN	127	63.91	1,374	294,660	1,247	48	9.97	497	1,740	14	11	3	Yes	79.59	9.97	69.62	1,871	296,400	1,261	2.0	12.98
171	8112	EASTERN	70	11.90	2,078	50,556	431	41	2.92	2,125	42,981	181	0	0	Yes	18.91	3.15	15.76	4,203	425,817	4,872	3.0	16.51
172	8122	EASTERN	31	5.23	222	10,725	115	25	12.94	1,389	35,256	184	0	1	Yes	19.79	12.94	6.85	1,611	45,981	299	3.75	14.25
173	8132	EASTERN	38	11.08	370	61,665	458	45	31.68	1,807	18,933	47	1	0	No	45.77	31.68	14.09	2,177	80,598	505	4.0	11.59
174	8162	CENTRAL	52	14.04	429	135,442	1,675	54	24.42	1,459	4,760	14	0	2	No	39.54	24.63	14.91	1,888	140,202	1,689	8.0	10.85
175	8172	CENTRAL	4	1.15	27	2,250	12	25	17.13	1,705	7,662	62	0	0	Yes	19.03	17.88	1.15	1,732	9,912	74	10.0	12.05
176	8182	CENTRAL	0	0.00	0	0	0	18	4.30	1,152	342	2	0	0	Yes	6.61	5.39	1.22	1,152	342	2	4	8.95
177	8202	EASTERN	87	24.37	1,483	262,507	2,425	31	5.26	577	6,180	32	0	4	Yes	31.61	5.26	26.35	2,060	268,687	2,457	1.0	12.89
178	8222	EASTERN	2	0.18	0	0	0	0	0.00	0	0	0	2	0	No	0.20	0.00	0.20	0	0	0	0.1	6.20
179	8232	EASTERN	0	0.01	0	0	0	0	0.00	0	0	0	0	0	No	0.02	0.00	0.02	0	0	0	0.1	5.20

APPENDIX 3 FEEDER SPECIFIC DATA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	(a) Feeder ID	(b) Sub Region	(c) Number of Overhead Lateral Lines	(d) Number of Overhead Lateral Miles	(e) Number of Customers served on Overhead Lateral Lines	(f) CMI for Overhead Lateral Lines	(g) CI for Overhead Lateral Lines	(h) Number of Underground Lateral Lines	(i) Number of Underground Lateral Miles	(j) Number of Customers served on Underground Lateral Lines	(k) CMI for Underground Lateral Lines	(l) CI for Underground Lateral Lines	(m) Number of Automatic line Sectionalizing devices on the Lateral Lines	(n) Number of Automatic line Sectionalizing devices on the Feeder	(o) Whether the feeder Circuit is Loop	(p) Total Length of the Feeder Circuit	(q) Length of Underground portion of the Feeder Circuit	(u) Length of Overhead portion of the Feeder circuit	(v) Number of customers served by Overhead Feeders	(w) CMI for Overhead Feeders	(x) CI for Overhead Feeders	(y) Load growth %	(z) Peak load MVA
180	8252	EASTERN	1	0.03	0	0	0	0	0.00	0	0	0	0	1	No	0.07	0.00	0.06	0	0	0	0.1	3.76
181	8262	EASTERN	9	5.17	1	0	0	4	4.02	7	0	0	0	2	No	10.92	4.02	6.89	8	0	0	0.1	9.11
182	8282	EASTERN	104	23.06	2,052	216,233	1,567	43	5.48	793	13,219	51	0	1	Yes	32.33	5.48	26.85	2,845	229,452	1,618	0.2	14.44
183	8332	EASTERN	94	34.07	1,844	332,670	1,988	65	21.75	1,324	7,847	71	3	0	Yes	61.12	21.75	39.36	3,168	340,517	2,059	0.5	13.83
184	8342	EASTERN	96	24.90	2,065	316,016	1,897	42	3.10	464	3,025	12	2	4	Yes	32.48	3.10	29.38	2,529	319,041	1,909	0.5	12.73
185	8352	EASTERN	70	13.73	1,178	1,471,421	15,225	32	4.43	2,133	41,563	148	1	1	No	18.88	4.43	14.45	3,311	1,559,384	15,953	1.5	16.21
186	8362	EASTERN	57	15.65	801	68,924	653	31	12.34	2,192	56,820	373	0	2	Yes	30.79	12.34	18.46	2,993	125,744	1,026	3.0	11.28
187	8372	EASTERN	47	6.43	644	848,177	4,228	24	11.54	2,156	14,501	95	0	1	Yes	20.51	11.54	8.97	2,800	971,512	7,621	3.0	20.01
188	8382	EASTERN	7	0.78	31	11,552	76	6	1.10	89	0	0	0	0	Yes	2.82	1.10	1.72	120	77,376	197	0.5	8.81
189	8392	EASTERN	63	13.30	1,234	47,423	280	16	1.81	279	20,435	61	1	2	Yes	17.65	1.81	15.85	1,513	67,858	341	0.6	8.32
190	8412	EASTERN	54	7.91	959	130,565	933	26	1.42	245	3,042	13	0	2	Yes	13.24	1.42	11.82	1,204	133,607	946	0.5	11.24
191	8432	EASTERN	75	13.16	1,442	300,601	1,727	14	0.72	215	0	0	0	3	Yes	15.68	0.72	14.96	1,657	300,601	1,727	1.0	7.01
192	8442	EASTERN	72	9.89	1,040	22,207	161	12	0.92	127	183	1	1	2	Yes	13.29	0.92	12.37	1,167	22,390	162	1.0	6.71
193	8452	EASTERN	35	5.86	255	12,056	93	55	7.77	705	14,086	108	0	1	Yes	15.99	7.77	8.22	960	26,142	201	0.1	13.88
194	8472	EASTERN	112	17.76	2,147	169,462	995	23	3.06	493	2,415	21	0	2	Yes	27.81	3.11	24.70	2,640	1,397,918	6,115	1.0	12.52
195	8482	EASTERN	87	13.26	1,037	102,060	879	43	2.37	257	377	1	0	2	Yes	23.39	2.47	20.92	1,294	105,763	2,137	0.2	14.23
196	8492	EASTERN	30	3.16	267	16,931	134	13	1.29	114	2,478	7	0	0	Yes	6.17	1.29	4.87	381	19,409	141	0.6	3.42
197	8512	EASTERN	52	12.43	877	89,094	966	51	12.21	1,605	3,766	17	1	1	Yes	30.07	12.49	17.57	2,482	92,860	983	3.0	14.04
198	8522	EASTERN	76	16.77	1,221	306,759	3,195	51	19.05	1,907	96,935	460	1	2	Yes	40.42	19.22	21.21	3,128	457,242	6,089	4.0	16.58
199	8532	EASTERN	24	3.36	148	31,504	290	31	3.01	1,614	42,823	229	0	1	No	7.16	3.01	4.14	1,762	74,327	519	2.0	13.62
200	8542	EASTERN	26	1.36	214	3,094	23	16	1.75	3,122	0	0	0	0	Yes	4.74	1.76	2.98	3,336	3,094	23	4.0	12.55
201	8552	EASTERN	20	3.52	300	24,220	422	22	4.72	1,397	22,448	92	0	0	Yes	11.64	4.75	6.89	1,697	59,916	2,170	2.0	11.52
202	8562	EASTERN	76	11.70	1,178	58,120	364	42	9.60	1,363	22,390	72	3	0	Yes	27.29	9.95	17.34	2,541	80,510	436	0.6	11.39
203	8572	EASTERN	117	23.27	1,929	132,782	1,321	39	5.59	721	16,919	58	2	2	Yes	33.18	5.59	27.60	2,650	149,701	1,379	0.5	13.96
204	8592	EASTERN	0	0.46	14	270	2	11	0.36	1	0	0	0	0	Yes	1.83	0.37	1.46	15	270	2	1.0	6.32
205	8602	EASTERN	101	21.20	1,230	193,054	1,142	44	19.48	1,335	8,847	46	3	2	Yes	45.19	19.48	25.71	2,565	599,166	3,751	4.0	13.70
206	8612	EASTERN	49	12.61	563	13,110	59	16	4.68	84	162	1	4	1	Yes	21.98	4.68	17.31	647	13,272	60	1.0	4.94
207	8622	EASTERN	89	16.61	803	21,375	172	36	11.00	632	5,144	17	1	1	Yes	34.01	11.00	23.01	1,435	26,519	189	3.0	11.20
208	8642	EASTERN	40	4.90	668	30,026	477	34	9.74	1,159	14,584	140	0	0	Yes	18.03	9.74	8.29	1,827	44,610	617	1.0	17.78
209	8672	EASTERN	30	6.18	310	121,904	765	51	24.32	1,797	162,536	777	0	2	Yes	33.95	24.32	9.63	2,107	1,878,167	7,926	3.0	12.84
210	8682	EASTERN	56	10.56	1,210	69,719	497	35	9.44	1,910	42,604	85	1	2	Yes	22.66	9.44	13.21	3,120	443,667	3,768	4.0	14.57
211	8702	EASTERN	70	17.90	1,801	207,085	1,121	16	0.76	88	0	0	0	2	Yes	21.64	0.76	20.88	1,889	207,085	1,121	0.5	8.92
212	8712	EASTERN	69	15.30	1,376	37,863	297	31	3.18	126	894	4	0	4	Yes	22.12	3.18	18.94	1,502	38,757	301	0.5	12.68
213	8722	EASTERN	122	27.93	2,041	50,843	444	19	1.31	202	1,056	6	1	4	Yes	30.65	1.31	29.34	2,243	51,899	450	0.5	11.90
214	8732	EASTERN	89	20.67	2,122	580,793	4,124	19	1.61	243	61	1	4	3	Yes	24.10	1.61	22.49	2,365	580,854	4,125	1.0	9.91
215	8782	EASTERN	36	6.38	250	30,112	321	37	2.67	224	0	0	0	1	Yes	12.03	2.69	9.34	474	30,112	321	1.5	9.57
216	8792	EASTERN	170	37.70	2,678	592,223	2,343	29	3.99	366	23,916	216	2	3	Yes	46.35	3.99	42.37	3,044	649,799	5,619	1.5	15.35
217	8802	EASTERN	84	20.13	1,377	284,779	2,084	38	14.14	1,215	2,456	7	2	4	Yes	37.74	14.14	23.59	2,592	297,667	4,699	0.2	13.90
218	8812	EASTERN	74	17.08	1,281	151,232	1,008	59	10.66	1,416	24,595	130	0	2	Yes	31.50	10.66	20.84	2,697	262,003	3,831	3.0	13.04
219	8822	EASTERN	97	23.37	1,545	392,703	2,098	51	9.00	1,430	6,524	36	0	4	Yes	35.27	9.00	26.27	2,975	399,227	2,134	2.0	15.85
220	8842	CENTRAL	18	2.73	226	114,293	741	61	15.32	1,081	7,868	84	0	0	Yes	20.33	15.32	5.01	1,307	122,161	825	3	16.05
221	8852	EASTERN	84	20.37	1,534	155,853	1,110	14	1.27	142	2,923	37	2	3	Yes	24.87	1.27	23.61	1,676	158,776	1,147	0.1	8.34
222	8872	CENTRAL	22	5.69	317	21,537	264	31	6.44	497	3,028	14	0	0	Yes	14.22	6.44	7.78	814	24,565	278	2.0	7.84
223	8882	CENTRAL	32	4.71	984	192,543	1,570	87	12.22	3,522	245,937	1,020	0	1	Yes	19.89	13.30	6.59	4,506	604,803	14,255	2.0	18.93
224	8892	CENTRAL	30	5.07	516	25,277	295	47	9.97	1,975	109,304	779	1	0	Yes	18.10	10.99	7.11	2,491	134,581	1,074	2.5	14.90
225	8932	CENTRAL	83	25.76	697	16,844	234	13	2.98	175	222	3	0	1	No	31.74	2.98	28.75	872	17,066	237	2.0	9.81
226	8942	CENTRAL	13	1.49	32	74	1	5	0.25	5	0	0	0	0	No	3.38	0.25	3.13	37	74	1	5.0	2.26
227	8952	EASTERN	8	9.01	1	0	0	2	0.28	0	0	0	0	0	No	9.75	0.28	9.47	1	0	0	0.1	1.37
228	8962	EASTERN	59	12.84	1,196	51,162	862	42	12.75	1,524	43,668	234	1	2	No	28.49	12.75	15.74	2,720	94,830	1,096	1.0	10.86
229	8972	EASTERN	86	21.91	2,375	66,270	378	21	13.74	829	6,738	46	0	2	Yes	47.24	13.82	33.42	3,204	73,008	424	2.0	10.70
230	8982	CENTRAL	17	2.27	90	4,363	32	35	18.49	1,661	749	10	0	0	Yes	24.36	18.49	5.87	1,751	5,112	42	8.0	17.28
231	8992	CENTRAL	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	0.00	0.00	0.00	0	0	0	0.0	0.00
232	9042	CENTRAL	70	9.28	537	57,050	732	75	29.75	2,493	6,670	33	0	0	Yes	41.83	29.80	12.03	3,030	326,723	6,813	3.5	16.39
233	9052	CENTRAL	44	8.43	1,148	22,753	248	34	4.72	696	658	3	0	0	Yes	19.57	4.75	14.83	1,844	25,295	2,135	0.5	9.96
234	9082	CENTRAL	9	2.92	78	83,987	635	22	7.80	1,233	42,304	132	1	0	Yes	14.23	8.45	5.78	1,311	186,689	2,080	2.0	3.41
235	9092	EASTERN	5	2.36	7	391	2	0	0.00	0	0	0	0	0	No	4.92	0.00	4.92	7	6,636	24	0.1	1.59
236	9112	EASTERN	85	44.17	1,008	207,619	1,244	20	2.26	141	3,888	12	4	3	No	47.59	2.26	45.33	1,149	212,653	2,402	0.5	7.28
237	9122	EASTERN	19	6.97	231	42,397	358	6	0.66	12	0	0	1	4	No	8.36	0.72	7.64	243	42,397	358	1.0	7.65
238	9132	CENTRAL	85	11.61	839	78,644	484	74	11.89	1,384	18,496	56	0	0	No	26.55	12.25	14.30	2,223	97,140	540	1.0	10.15
239	9142	CENTRAL	117	19.83	1,648	166,684	1,243	42	4.37	451	0	0	0	0	Yes	27.31	4.65	22.66	2,099	166,684	1,243	1.0	10.52
240	9152	CENTRAL	78	13.39	1,226	100,786	1,112	45	3.63	503	16,533	59	0	1	Yes	21.12	3.63	17.49	1,729	119,061	2,913	1.0	9.49
241	9162	CENTRAL	52	13.65	795	203,551	1,635	12	2.46	331	627	1	0	1	No	17.91	2.46	15.44	1,126	204,178	1,636	0.5	5.64
242	9172	CENTRAL	47	13.28	1,355	99,021	726	24	9.89	781	15,625	74	0	1	Yes	26.54	9.89	16.66	2,136	114,646	800	0.5	9.74
243	9182	CENTRAL	154	71.16	791	129,784	1,302	7	0.71	9	570	5	1	1	No	74.36	0.71	73.64	800	130,354	1,307	4.0	17.76
244	9192	CENTRAL	127	37.50	2,126	144,783	1,423	19	3.05	198	574	7	0	2	Yes	44.81	3.05	41.77	2,324	145,357	1,430	4.0	8.99
245	9202	EASTERN	68	32.78	683	48,493	451	9	0.73	36	0	0	3	2	Yes	38.17	0.75	37.43	719	115,639	1,173	0.5	5.71
246	9212	EASTERN	150	81.31	1,640	213,118	1,374	21	1.44	65	0	0	5	3	Yes	87.31	1.44	85.88	1,705	213,118	1,374	1.0	8.67
247	9222	EASTERN	63	21.55	916	37,629	372	31	2.06	100	0	0	1	3	Yes	29.30	2.06	27.24	1,016	37,629	372	1.2	9.07
248	9232	CENTRAL	94	23.17	1,627	324,014	3,087	18	1.95	205	14,430	52	1	2	No	27.01	1.95	25.06	1,832	347,379	6,713	2.0	10.35
249	9242	CENTRAL	59	15.72	731	427,029	2,396	44	8.22	786	22,020	183	0	3	Yes	27.47	8.22	19.25	1,517	531,669	3,065	3.0	10.47
250	9252	CENTRAL	85	17.77	1,336	54,230	499	44	14.40	780	5,241	14	0	2	Yes	36.60	14.42	22.19	2,116	1,350,011	6,865	1.4	9.99
251	9292	CENTRAL	39	11.67	1,504	72,009	699	7	0.96	81	0	0	0	0	Yes	15.52	1.06	14.46	1,585	72,009	699	0.5	6.31
252	9312	CENTRAL	55	13.72	1,844	111,212	1,264	19	1.01	258	842	3	0	0	Yes	17.24	1.07	16.17	2,102	112,054	1,267	0.1	8.95
253	9322	CENTRAL	46	8.00	1,134	162,091	1,442	33	2.94	921	4,486	42	0	1	Yes	13.34	2.96	10.38	2,055	166,577	1,484	0.2	8.27
254	9332	CENTRAL	45	10.20	1,050	137,225	1,394	27	4.09	393	41,508	141	0	3	Yes	16.62	4.13	12.50	1,443	178,733	1,535	0.1	7.82
255	9342	CENTRAL	56	8.82	1,057	68,006	1,063	18	1.12	179	0	0	0	0	Yes	13.61	1.14	12.47	1,236	68,006	1,063	0.5	8.82
256	9352	CENTRAL	56	12.19	1,423	18,291	140	20	2.92	415	66,375	102	0	0	Yes	18.78	2.92	15.86	1,838	84,666	242	0.1	8.17
257	9362	CENTRAL	69	14.14	1,548	50,854	710	22	0.72	157	1,138	5	0	0	Yes	18.02	0.72	17.31	1,705	51,992	715	0.5	10.49
258	9372	CENTRAL	65	13.42	1,416	100,018	968	7	0.16	8	0	0	0	2	Yes	15.63	0.16	15.47	1,424	100,018	968	0.2	7.59
259	9382	CENTRAL	48	8.12	770	98,495	1,045	15	0.73	336	0	0	0	0	Yes	11.06	0.73	10.32	1,106	98,495	1,045	0.5	6.59
260	9402	CENTRAL	36	3.95	781	108,044	813	38	1.67	1,891	11,685	36	0	0	Yes	9.43	2.02	7.41	2,672	119,729	849	1.5	10.50
261	9412	CENTRAL	53	8.02	843	111,069	1,011	30	1.85	1,247	49,571	192	0	1	Yes	12.57	2.13	10.45	2,090	163,128	2,447	0.5	8.67
262	9422	CENTRAL	38	4.53	578	21,001	298	15	0.40	216	0	0	0	0	Yes	7.01	0.40	6.62	794	21,001	298	1.5	4.52
263	9462	CENTRAL	87	20.05	1,835	234,514	2,218	47	12.96	958	50,140	184	0	1	Yes	36.37	12.96	23.41	2,793	284,654	2,402	2.0	14.02
264	9472	CENTRAL	56	14.34	1,020	109,128	1,220	50	24.02	1,191	53,988	235	1	3	No	41.40	24.02	17.38	2,211	163,116	1,455	2.0	11.73
265	9492	CENTRAL	47	6.89	553	57,239	502	30	2.99	645	611	3	0	1	Yes	12.48	3.14	9.34	1,198	57,850	505	1.5	10.45
266	9522	EASTERN	297	193.40	1,886	727,757	5,318	19	4.29	45	0	0	19	2	No	200.04	4.29	195.75	1,931	837,906	8,628	1.0	1.00
267	9532	CENTRAL	25	2.17	144	52,502	363	36	11.62	2,322	88,051	353	0	0	Yes	17.06	11.62	5.44	2,466	140,553	716	1	16.98
268	9562	CENTRAL	56	5.52	688	35,560	327	33	2.90	655	28,576	32	0	0	Yes	10.62	3.28	7.34	1,343	64,136	359	0.5	10.89

APPENDIX 3 FEEDER SPECIFIC DATA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	(a) Feeder ID	(b) Sub Region	(c) Number of Overhead Lateral Lines	(d) Number of Overhead Lateral Miles	(e) Number of Customers served on Overhead Lateral Lines	(f) CMI for Overhead Lateral Lines	(g) CI for Overhead Lateral Lines	(h) Number of Underground Lateral Lines	(i) Number of Underground Lateral Miles	(j) Number of Customers served on Underground Lateral Lines	(k) CMI for Underground Lateral Lines	(l) CI for Underground Lateral Lines	(m) Number of Automatic line Sectionalizing devices on the Lateral Lines	(n) Number of Automatic line Sectionalizing devices on the Feeder	(o) Whether the feeder Circuit is Loop	(p) Total Length of the Feeder Circuit	(q) Length of Underground portion of the Feeder Circuit	(u) Length of Overhead portion of the Feeder circuit	(v) Number of customers served by Overhead Feeders	(w) CMI for Overhead Feeders	(x) CI for Overhead Feeders	(y) Load growth %	(z) Peak load MVA
269	9572	CENTRAL	11	2.81	416	40,908	279	70	7.83	2,477	151,926	473	0	0	Yes	13.42	8.38	5.05	2,893	192,834	752	1.0	15.53
270	9582	CENTRAL	0	0.02	0	0	0	0	0.00	0	0	0	0	0	No	0.02	0.00	0.02	0	0	0	0.0	0.00
271	9592	EASTERN	121	113.17	746	26,486	301	34	15.61	320	13,150	66	9	4	No	135.68	15.61	120.07	1,066	39,636	367	1.0	4.98
272	9602	CENTRAL	53	9.94	615	184,533	1,238	26	8.57	919	3,138	10	0	2	Yes	19.76	8.57	11.19	1,534	226,327	2,456	2.0	9.46
273	9612	CENTRAL	79	17.46	1,562	71,349	730	34	3.40	689	26,327	139	0	1	Yes	23.30	3.40	19.89	2,251	97,676	869	0.1	11.34
274	9622	CENTRAL	84	10.73	929	44,115	424	26	2.03	429	27,055	105	0	0	Yes	16.34	2.03	14.32	1,358	71,170	529	0.2	10.62
275	9632	CENTRAL	38	4.31	222	8,067	73	13	0.48	24	134	2	0	1	Yes	6.10	0.48	5.62	246	8,201	75	1.5	9.95
276	9662	CENTRAL	35	10.26	246	21,566	313	4	0.32	10	0	0	0	1	No	12.66	0.32	12.34	256	21,566	313	0.5	2.00
277	9672	CENTRAL	213	57.72	2,514	212,806	4,028	26	7.69	417	346	3	2	2	No	68.48	7.69	60.80	2,931	359,402	6,956	2.0	15.18
278	9682	CENTRAL	46	10.91	436	95,550	1,291	35	12.52	820	30,233	138	0	0	Yes	25.11	12.52	12.60	1,256	125,783	1,429	2	14.89
279	9692	CENTRAL	103	32.07	1,817	103,269	1,166	17	2.34	355	0	0	1	3	Yes	35.37	2.34	33.04	2,172	248,173	4,442	1	8.82
280	9702	EASTERN	1	0.31	0	0	0	0	0.00	0	0	0	0	0	No	3.43	0.00	3.43	0	0	0	0.1	3.15
281	9792	CENTRAL	116	34.98	2,488	189,031	1,738	24	7.09	729	512	8	1	0	Yes	46.43	7.09	39.34	3,217	189,543	1,746	5	14.53
282	9802	EASTERN	23	12.49	183	11,199	82	1	0.04	0	0	0	3	1	No	15.50	0.04	15.46	183	11,199	82	0.1	1.11
283	9812	CENTRAL	81	38.60	979	139,053	1,676	48	15.62	901	2,858	19	2	2	No	58.75	15.62	43.13	1,880	198,116	5,446	4	10.30
284	9828	CENTRAL	21	7.55	203	603	8	3	0.16	7	0	0	0	0	No	11.26	0.16	11.10	210	22,541	423	1	1.29
285	9832	EASTERN	176	71.54	1,997	268,895	2,522	25	1.30	81	818	14	7	5	No	75.15	1.30	73.85	2,078	342,828	4,625	0.5	14.81
286	9854	EASTERN	0	0.00	0	0	0	0	0.00	0	0	0	0	0	No	0.05	0.00	0.05	0	0	0	n/a	n/a
287	9912	EASTERN	0	0.15	5	0	0	2	0.08	6	0	0	0	0	No	1.57	0.08	1.49	11	0	0	0.1	3.05

APPENDIX 4

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

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[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.

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[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.

III. Wind Data Collection

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 and the dates of the hardened compact package deployment.

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.

APPENDIX 4

The second Vegetation Management workshop was held on January 26 and 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

APPENDIX 4

Phase VI - commencing July 1, 2008 and ending December 31, 2008

Undergrounding Study			
Personnel			
	PURC Faculty	$ 7,000.00	
	Grad Student	$ 3,960.00	
	Administrative	$ 2,800.00	
			$ 13,760.00
Wind Study			
Personnel			
	PURC Faculty	$ 11,200.00	
	Grad Student	$ 1,320.00	
	Administrative	$ 2,800.00	
			$ 15,320.00
Miscellaneous			
	Grad Student	$ 1,320.00	
	Conference Calls	$ 1,000.00	
			$ 2,320.00
Subtotal			$ 29,080.00
University Overhead (25%)			$ 9,693.33
Total			$ 38,773.33

Faculty Activities

Coordinating work on model data gaps

Developing forensic data input formats

Plan vegetation management workshop for early 2009

Plan steering committee meeting for early 2009

Coordinating testing of model for report to FPSC

Organizing and managing conference calls

Attending meetings with FPSC staff or sponsors

Managing PURC staff working on project

Graduate Student Activities

Developing forensic data input formats

Maintaining forensics database

Planning vegetation management workshop for early 2009

Testing of undergrounding model

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

Appendix B. Wind Stations