

**Terry A. Davis**  
Assistant Secretary and  
Assistant Treasurer

One Energy Place  
Pensacola, Florida 32520-0786

Tei 850.444.6664  
Fax 850.444.6026  
TADAVIS@southernco.com



February 29, 2012

120000-0T

RECEIVED FPSC  
12 MAR -7 AM 9:07  
COMMISSION  
CLERK

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

Dear Mr. Willis:

Attached are an original and seven copies of 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,

nm

Attachment

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

COM \_\_\_\_\_  
APA \_\_\_\_\_  
ECR cb \_\_\_\_\_  
GCL \_\_\_\_\_  
RAD \_\_\_\_\_  
SRC \_\_\_\_\_  
ADM \_\_\_\_\_  
OPC \_\_\_\_\_  
CLK \_\_\_\_\_

DOCUMENT NUMBER-DATE  
01322 MAR-7 09  
FPSC-COMMISSION CLERK

**GULF POWER COMPANY**

**Reliability**

**and**

**Storm Hardening Initiatives**

**Report**

March 1, 2012



DOCUMENT NUMBER - DATE

01322 MAR-7 2012

FPSC-COMMISSION CLERK

# Table of Contents

<b>1.0</b>	<b>STATUS REPORT OF IMPLEMENTATION OF STORM HARDENING PLAN.....</b>	<b>4</b>
1.1	2011 STORM HARDENING ACTIVITIES .....	4
<b>2.0</b>	<b>WOOD POLE INSPECTION PROGRAM .....</b>	<b>6</b>
2.1	WOOD POLE INSPECTION DESCRIPTION.....	6
2.2	2011 ACCOMPLISHMENTS .....	6
2.3	PROJECTED 2012 GOALS .....	7
<b>3.0</b>	<b>VEGETATION MANAGEMENT PROGRAMS.....</b>	<b>7</b>
3.1	DISTRIBUTION VEGETATION MANAGEMENT (VM) PLAN OVERVIEW .....	7
3.2	TRANSMISSION VEGETATION MANAGEMENT PLAN OVERVIEW .....	7
3.3	SUPPLEMENTAL VM PROGRAMS.....	7
3.4	COMPANY'S OVERALL VEGETATION MANAGEMENT SUMMARY .....	8
3.5	2011 DISTRIBUTION PERFORMANCE METRICS (SYSTEM WIDE).....	8
<b>4.0</b>	<b>JOINT USE POLE ATTACHMENT AUDITS .....</b>	<b>9</b>
4.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS .....	9
4.2	JOINT USE ATTACHMENT AUDITS – DISTRIBUTION POLES .....	10
<b>5.0</b>	<b>SIX-YEAR INSPECTION CYCLE FOR TRANSMISSION STRUCTURES .....</b>	<b>10</b>
5.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS .....	10
5.2	TRANSMISSION CIRCUIT, SUBSTATION AND OTHER EQUIPMENT INSPECTIONS.....	11
5.3	TRANSMISSION METAL POLE AND TOWER INSPECTIONS .....	11
5.4	TRANSMISSION POLE INSPECTIONS .....	11
<b>6.0</b>	<b>STORM HARDENING ACTIVITIES FOR TRANSMISSION STRUCTURES.....</b>	<b>11</b>
6.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS .....	11
6.2	HARDENING OF EXISTING TRANSMISSION STRUCTURES (POLES) .....	12
<b>7.0</b>	<b>DISTRIBUTION SUBSTATIONS .....</b>	<b>12</b>
7.1	FIVE-YEAR PATTERNS/TRENDS IN RELIABILITY PERFORMANCE OF DISTRIBUTION SUBSTATIONS.....	12
7.2	DISTRIBUTION SUBSTATION RELIABILITY TRACKING .....	12
7.3	DISTRIBUTION SUBSTATION RELIABILITY PROBLEM IDENTIFICATION PROCESS .....	12
7.4	DISTRIBUTION SUBSTATION INSPECTIONS DURING NORMAL OPERATIONS.....	13
<b>8.0</b>	<b>GEOGRAPHIC INFORMATION SYSTEM (GIS).....</b>	<b>13</b>
8.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS .....	13
8.2	DISTRIBUTION OVERHEAD DATA INPUT .....	13
8.3	DISTRIBUTION UNDERGROUND DATA INPUT .....	13
<b>9.0</b>	<b>POST STORM DATA COLLECTION AND FORENSIC ANALYSIS .....</b>	<b>14</b>
9.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS.....	14
<b>10.0</b>	<b>OUTAGE DATA DIFFERENTIATING BETWEEN OVERHEAD AND UNDERGROUND SYSTEMS.....</b>	<b>15</b>
10.1	ACTIVITIES AND COSTS INCURRED IN 2011 AND 2012 PROJECTIONS.....	15
<b>11.0</b>	<b>COORDINATION WITH LOCAL GOVERNMENTS .....</b>	<b>16</b>
11.1	ONGOING PROGRAMS.....	16
11.2	STORM PREPARATION.....	18
11.3	STORM RESTORATION .....	18
<b>12.0</b>	<b>COLLABORATIVE RESEARCH .....</b>	<b>19</b>
<b>13.0</b>	<b>DISASTER PREPAREDNESS AND RECOVERY PLAN.....</b>	<b>19</b>

13.1	ACTIVITY AND COSTS INCURRED FOR 2011 AND 2012 PROJECTIONS .....	19
13.2	DISASTER RECOVERY PLAN ACTIVITY .....	19
13.3	HURRICANE DRILL .....	19
<b>14.0</b>	<b>STORM SEASON READY STATUS .....</b>	<b>20</b>
<b>15.0</b>	<b>2011 RELIABILITY PERFORMANCE .....</b>	<b>21</b>
15.1	OVERALL PERFORMANCE .....	21
15.2	DATA TRACKING LEVEL .....	22
15.3	CRITICAL REVIEW OF DETAILED RELIABILITY DATA .....	22
15.4	IDENTIFICATION AND SELECTION OF DETAILED RELIABILITY DATA .....	22
15.5	GENERATION EVENTS – ADJUSTMENTS .....	22
15.6	TRANSMISSION EVENTS – ADJUSTMENTS .....	22
15.7	EXTREME WEATHER – ADJUSTMENTS .....	23
15.8	OTHER DISTRIBUTION ADJUSTMENTS .....	23
15.9	ADJUSTED RELIABILITY .....	23
	15.9.1 <i>Outage Event Causes</i> .....	23
	15.9.2 <i>Three Percent Feeder List</i> .....	35
	15.9.3 <i>Regional Reliability Indices</i> .....	36
15.10	OVERHEAD – UNDERGROUND RELIABILITY .....	36
	15.10.1 <i>Five-Year Patterns</i> .....	36
	15.10.2 <i>Identification and Selection/Process Improvements</i> .....	38
	15.10.3 <i>2011 Activities and Budget Allowances</i> .....	38
	15.10.4 <i>Overhead (OH) and Underground (UG) Metrics</i> .....	38
15.11	RELIABILITY RELATED CUSTOMER COMPLAINTS .....	41
	15.11.1 <i>Five-Year Patterns</i> .....	41
	15.11.2 <i>Correlation of Reliability Related Customer Complaints to Indices</i> .....	42
	15.11.3 <i>Identification and Selection/Process Improvements</i> .....	42



# **APPENDICES**

- APPENDIX 1      RELIABILITY DATA**
- APPENDIX 2      ANNUAL WOOD POLE INSPECTION REPORT**
- APPENDIX 3      FEEDER SPECIFIC DATA**
- APPENDIX 4      PURC REPORT ON COLLABORATIVE RESEARCH**

## **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 Storm Hardening Plan. A "Stipulation and Agreement" was signed between Gulf Power Company (Gulf) and the Florida Cable Telecommunications Association (FCTA) on November 9, 2010.

On May 1, 2010, Gulf filed its 2010-2012 Storm Hardening Plan update as required by Rule 25-6.0342 FAC. Docket No. 100265-EI was opened to address the updates. On June 10, 2010, the Florida Public Service Commission (FPSC) Staff conducted a workshop to better understand Gulf's plan. In addition to the workshop, the FPSC Staff sent data requests to obtain clarification and additional information. On November 15, 2010 the Florida Public Service Commission approved Gulf's 2010-2012 Storm Hardening Plan.

### **1.1 2011 Storm Hardening Activities**

The following storm hardening activities were initiated and/or completed in the field during 2011:

#### **Distribution**

Gulf continued to hold meetings in order to enhance communications between Gulf's field personnel and third party attachers. Meeting notifications were sent to the following third party attachers: AT&T, Cox Communications Gulf Coast, MediaCom, Southern Light, LLC, Comcast Joint Holdings, Inc., Springfield Cablevision, Inc., Knology, CenturyLink, Brighthouse Networks, LLC, Century Tel/Madison River Communication, Escambia County School Board, Valparaiso Broadband Communications, Walton County, The Crest Corporation of Panama City, Campbellton Cable TV, Level 3 Communications, LLC, Community Cable Corporation, Peoples First Community Bank, Pineapple Beach Villas, Verizon, Fairpoint Communications, Inc., Windstream KDL, Inc., and Stone Container Corporation. Gulf's permit administrator, ICON Consulting, participated in these meetings as well. Increased communication between these parties is 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) planned major projects related to the scope of work and the location; (2) questions related to designing to Grade B standards; (3) the ongoing pole inspection program

(Osmose); (4) any operational issues; (5) the pole count project (6) Smart Grid Investment Grant (SGIG) construction projects; (7) DOT projects and permitting issues; and (8) the 2010 – 2012 Storm Hardening Plan.

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 2011 meetings were held during the first and third quarters of the year. Attendees at the meetings held on March 9th in Panama City and March 11th in Pensacola included representation from:

- Gulf field personnel, special project engineers, technical services engineers, and their respective supervision and management
- AT&T
- Mediacom
- Cox Communications Gulf Coast
- Brighthouse Networks, LLC
- Escambia County Schools
- Southern Light
- ICON consulting
- Century Link

Attendees at the meetings held on August 30th in Panama City and September 2nd in Pensacola included representation from:

- Gulf field personnel, special project engineers, technical services engineers, and their respective supervision and management
- Century Link
- AT&T
- ICON Consulting
- Cox Communications Gulf Coast
- Southern Light
- Fairpoint Communications
- Davey Resource Group
- Walton County

Prior to the 2011 hurricane season, Gulf, Southern Linc, and AT&T representatives held telephone updates to discuss their respective storm plans in the event of a major event. Since February 11, 2008, Gulf has assigned a liaison to AT&T during storm events. These conversations have already occurred in 2012 on this initiative thus continuing a smooth and timely flow of information that indicates when Gulf has neared

completion of restoration efforts in a particular area so that AT&T can then begin their own restoration work.

Gulf is on schedule and in some instances ahead of schedule with the following projects in its 2010 – 2012 Storm Hardening Plan.

#### Distribution

- Critical infrastructure and major thoroughfares.
- Underground Network Improvements.
- Conversion of 4kV Distribution Feeders.
- Automated Overhead Faulted Circuit Indicators.
- Distribution Supervisory Control and Data Acquisition (DSCADA).

#### Transmission

- All critical lines were aerially 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.

## **2.0 Wood Pole Inspection Program**

### ***2.1 Wood Pole Inspection Description***

Gulf's 2011 Wood Pole Inspection Program was designed to comply with FPSC Order No. PSC-06-0144-PAA-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 2011, Gulf completed the fifth 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 2011 Accomplishments***

In 2011, a total of 53,963 poles were inspected with a rejection rate of 2.53%. See Appendix 2, titled "Annual Wood Pole Inspection Report" for details.

In the 2010 pole inspection, Gulf identified 1,060 reject poles. Gulf began changing out these rejects in 2010 and completed change out of these poles in 2011. Gulf also began to change out poles identified as

rejects from the 2011 inspection and completed 29.7% of the repairs before the end of 2011.

### **2.3 *Projected 2012 Goals***

Gulf intends to continue its pole inspection program to ensure the Company remains on target to achieve an eight year inspection cycle. In addition, the remaining poles identified in the 2011 pole inspection as rejects will be changed out or reinforced in 2012. These poles are now being engineered and will be upgraded to Grade B construction standards.

## **3.0 Vegetation Management Programs**

### **3.1 *Distribution Vegetation Management (VM) Plan Overview***

In 2011, the Company continued the Vegetation Management (VM) program approved in PSC 07-1022-FOF-EI. The combination of the three year cycle on main line feeders, four year cycle on laterals, and an annual cycle of inspections and correction on main line feeders continued to improve system reliability performance.

### **3.2 *Transmission Vegetation Management Plan Overview***

Vegetation hazard removals continued to be the focus of the Company's 2011 Transmission VM programs. Detailed ground patrols were performed on of the Company's transmission ROW corridors in an effort to identify vegetation conditions requiring correction. All vegetation conditions identified by the 2011 patrols were corrected through vegetation removal or pruning activities. In 2011, Gulf was once again in full compliance with NERC Standard FAC 003-1.

### **3.3 *Supplemental VM Programs***

Gulf continues to use the **Distribution Lock-Out Report (DLOR)** which is a tracking process developed by the Company to document and track distribution feeder lock-outs. This program continued to be an effective VM tool throughout 2011. The data collected during field evaluations by our Company engineers, foresters, and arborists helped identify the root causes of feeder breaker lock-outs. This enabled us to modify and improve our VM management practices employed on Gulf's distribution system. The use of DLOR will continue to be a valued element of our future VM programs.

“Tree Gulf” was continued throughout 2011 as a tool to proactively report and address problem vegetation conditions that could pose a future threat to system reliability. “Tree Gulf” streamlined the internal reporting process and electronically produced work-orders directly to Forestry Services to inspect and correct potential vegetation related risks. This tool enabled every Company employee, including non-field personnel, the ability to easily report vegetation concerns through phone, radio, or email communication.

### **3.4 Company’s Overall Vegetation Management Summary**

During 2011, Gulf pruned 259 miles of main line primary on its scheduled three-year cycle. The remaining 510 miles of main line primary were inspected and any vegetation conditions found to be out of specification were pruned or removed. Gulf also pruned 1,530 miles of lateral lines. Gulf is on schedule to establish a four-year cycle on lateral lines.

In comparing 2011 to 2010 system performance, the number of tree caused outages increased, but system reliability improved in terms of adjusted CI and adjusted CMI. An improvement of 7.6% was realized in terms of adjusted CMI.

### **3.5 2011 Distribution Performance Metrics (System Wide)**

#### **1. Distribution VM Reliability**

<b>Outages &amp; Interruptions</b>	<b>FEEDER</b>			<b>LATERAL</b>		
	<b>Unadjusted</b>	<b>Adjusted</b>	<b>Diff.</b>	<b>Unadjusted</b>	<b>Adjusted</b>	<b>Diff.</b>
A) Number of Outages	28	16	12	1,408	930	478
B) Customer Interruptions	32,246	22,146	10,100	74,814	48,334	26,480
C) Outages Per Mile	.047	.027	.020	.275	.181	.094
D) CI Per Mile	54.10	37.16	16.94	15.37	9.42	5.95
E) Customer Minutes of Interruption	2,921,826	1,459,343	1,462,483	13,772,578	6,095,170	7,677,408

## 2. Distribution Performance

<b>VM Miles Cleared and Contractor Cost</b>	<b>Plan (mi)</b>	<b>Actual (mi)</b>	<b>Plan (\$)</b>	<b>Actual (\$)</b>
A) <b>MATS</b> Mainline Annual Trim Schedule (3 Year Cycle)	259	259	\$518,000	\$464,988
B) <b>MICS</b> Mainline Inspect & Correct Schedule (1 Year Cycle)	510	510	\$102,000	\$97,139
C) <b>SALT</b> Scheduled Annual Lateral Trim (4 Year Cycle)	1,486	1,530	\$3,715,000	\$4,846,593
D) <b>TICKETS</b> (T) Hot Spot Tickets Completed with Contract Cost	<b>Feeder (T)</b> 17	<b>Lateral (T)</b> 3,379	<b>Feeder (\$)</b> \$2,411	<b>Lateral (\$)</b> \$419,958

## 3. Total Distribution Vegetation Cost

<b>VM Planned Vs Actual Program Costs</b>	<b>Plan (\$)</b>	<b>Actual (\$)</b>
A) <b>VM Contractor Costs</b> (MATS, MICS, SALT, and TICKETS)	\$4,887,644	\$5,831,089
B) <b>VM Other Program Costs</b> (Internal Labor and Miscellaneous)	\$30,456	\$81,023
C) <b>Total Distribution Vegetation Cost</b>	\$4,918,100	\$5,912,112

## 4.0 Joint Use Pole Attachment Audits

Gulf performs its joint use inventory audits, covering the overhead distribution system as required by FPSC Order No. PSC-06-0781-PAA-EI every five years. The most recent audit was completed on December 15, 2011. The next audit is scheduled for 2016.

### 4.1 Activity and Costs Incurred for 2011 and 2012 Projections

The 2012 Joint Use Pole Count was completed at a cost of \$337,721.64. No additional costs are anticipated in 2012.

## 4.2 Joint Use Attachment Audits – Distribution Poles

(A) Number of company owned distribution poles (See Note 1)	200,866
(B) Number of company distribution poles leased: 8 Telecomm attachers on Gulf's poles (See Note 1)	115,058
(C) Number of owned distribution pole attachments: 7 CATV, numerous Government and other 3 <sup>rd</sup> party attachers on Gulf's poles (See Note 1)	160,726
(D) Number of leased distribution pole attachments: Foreign poles Gulf Power is attached to (See Note 1)	58,247
(E) Number of authorized attachments: Sum of all attachments to Gulf Power Company poles (See Note 1)	297,773
(F) Number of unauthorized attachments: (See Note 2)	26,317
(G) Number of apparent NESC violations involving electric infrastructure	Note 3
(H) Number of apparent NESC violations involving 3 <sup>rd</sup> party facilities	Note 3

### NOTES:

**Note 1:** Data has been updated based on the 2011 pole audit.

**Note 2:** Data based on the 2012 invoicing.

**Note 3:** 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 takes corrective measures.

## 5.0 Six-Year Inspection Cycle for Transmission Structures

### 5.1 Activity and Costs Incurred for 2011 and 2012 Projections

In 2004, Gulf participated with Georgia Power Company, Alabama Power Company, and Mississippi Power Company to develop and adopt 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 result in a structure being inspected at least every six years. As part of the Transmission Line Inspection Standards, Gulf performs at least 4 routine aerial patrols each year.

In 2011, Gulf Power spent a total of \$49,658 on a combination of comprehensive walking and ground line treatments for metal poles and towers. In addition to this amount, Gulf spent \$256,232 on a combination of comprehensive walking inspections and ground line treatments for wood and concrete poles. These amounts are shown in Section 5.3 and 5.4 respectively. All inspections are on schedule to meet the six-year timeline. Additionally, Gulf performed 4 aerial inspections of its system with an actual cost of \$11,291.

**Note:** After completing over 50% of the fourth aerial inspection the plane used for aerial inspections developed mechanical problems and was not able to complete the final patrol until January, 2012.



## 5.2 Transmission Circuit, Substation and Other Equipment Inspections

Gulf completed 33 transmission substation inspections during 2011 as planned. The costs associated with inspections are not tracked separately from general maintenance expenses. Gulf transmission does not inspect by circuit.

## 5.3 Transmission Metal Pole and Tower Inspections

	2011 Activity		2011 Costs		2012	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total Transmission Metal Poles and Towers Inspections <sup>(Note 1)</sup>	-	3,298	-	-	-	-
(B) Transmission Metal Poles and Towers	300	611	\$37,571	\$49,658	362	\$43,341
(C) Percent of transmission Metal Poles and Tower inspections completed	-	19%	-	-	-	-

## 5.4 Transmission Pole Inspections

	2011 Activity		2011 Costs		2012	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of Transmission Poles	-	14,861	-	-	-	-
(B) Number of transmission poles inspected.	1,682	2,734	\$212,908	\$256,232	2,609	\$296,710
(C) Number of transmission poles passing inspection.	-	2,230	-	-	-	-
(D) Number of transmission poles failing strength test (overloaded)	-	N/A	-	-	-	-
(E) Number of transmission poles failing inspection (other reasons).	-	504	-	-	-	-
(F) Number of transmission poles corrected (strength failure)	-	0	-	-	-	-
(G) Number of transmission poles corrected (other reasons)	-	578	-	-	-	-
(H) Total transmission poles replaced	-	578	-	-	N.A. (Note 1)	-

### NOTES:

**Note 1:** Gulf uses current year inspections and prior years' inspections in determining the poles to be replaced in the current year. Therefore a goal for poles to be replaced in 2012 is not applicable.

## 6.0 Storm Hardening Activities for Transmission Structures

### 6.1 Activity and Costs Incurred for 2011 and 2012 Projections

Gulf Power Company identified two priority hardening activities for transmission structures: installation of guys on H-frame structures and

replacement of wooden cross arms with steel cross arms. These activities will add additional strength capacity to the existing structures.

Gulf Power Company believes these two activities 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 (Poles)**

	2011 Activity		2011 Costs		2012	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Transmission structures hardened	858	900	(Note 1)	(Note 1)	850	(Note 1)
(B) Percent Transmission structures hardening completed	-	104%	-	-	-	-

### **NOTES:**

**Note 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 similar-caused outage occurring in the future. The review of data for the past five years does not show any trends or patterns in items affecting distribution substation reliability.

### **7.2 Distribution Substation Reliability Tracking**

Each abnormal substation related outage is reviewed. Analyses are performed and corrections are made to reduce the potential for future outages 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. These inspections include visual checks on all equipment including breakers, regulators, transformers and battery banks. The substation is verified to ensure that proper signs are installed. The fence is checked for security and proper grounding. Security lights are checked and weed

problems are noted. Any abnormal condition is documented in Gulf Power's existing Standard Transmission Operation and Maintenance Program (STOMP) and scheduled for repair.

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. Preventative diagnostics on Oil Breakers are performed every two years. Preventative diagnostics on 12kV vacuum breakers are performed every four years. Preventative diagnostics on regulators are performed every year. A dissolved gas analysis is performed on transformers every year and power factor testing is performed every six years.

#### ***7.4 Distribution Substation Inspections During Normal Operations***

Gulf inspected all of its distribution substations at least once during 2011.

### **8.0 Geographic Information System (GIS)**

#### ***8.1 Activity and Costs Incurred for 2011 and 2012 Projections***

Gulf completed its distribution facilities mapping transition to its new Distribution Geographic Information System (DistGIS) in 2009.

The Transmission system has been completely captured in the Transmission GIS database. Transmission GIS continues to be updated with any additions and changes as the associated work orders for maintenance, system improvements, and new business are completed.

#### ***8.2 Distribution Overhead Data Input***

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

#### ***8.3 Distribution Underground Data Input***

All underground distribution equipment has been captured in Gulf's

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

## **9.0 Post Storm Data Collection and Forensic Analysis**

### ***9.1 Activity and Costs Incurred for 2011 and 2012 Projections***

#### **Distribution:**

While Gulf did feel some effects from Tropical Storm Lee in September 2011, the event was not significant enough to bring the forensic collection team on the system. The contractor did conduct a refresher training course during 2011 to ensure the inspectors stay current on the procedures for forensic collection.

Gulf feels confident that it is ready to perform post-storm forensics if needed in the 2012 storm season.

#### **Transmission:**

Gulf Power Company's Transmission department's forensics team will be led 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 the 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 inspection 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 of the facilities.

## 10.0 Outage Data Differentiating Between Overhead and Underground Systems

Gulf did experience outages and damage from several FPSC excludable storms in 2011. These storms, although excludable under the FPSC rules, did not produce major storm related data.

### 10.1 Activities and Costs Incurred in 2011 and 2012 Projections

As reported previously, Gulf expanded its record keeping and analysis of data associated with overhead and underground outages, some of which is included in Section 15.10.4 of this report. Gulf continued 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 the Company's Trouble Call Management System (TCMS). Data collected in 2011 is shown in the tables below. This data includes transmission, planned outages, and all exclusions. The costs of collecting this data were minimal as existing systems and processes were utilized.

Customers	System	N	CI	CMI	Duration	SAIDI	SAIFI	CAIDI	L-Bar
432,536	Overhead	12,399	778,992	74,670,725	1,689,676	172.63	1.801	95.86	136.28
432,536	URD - Direct Burial	595	12,469	2,224,123	111,730	5.14	0.029	178.37	187.78
432,536	URD - In Conduit	157	5,103	883,362	23,811	2.04	0.012	173.11	151.66
432,536	URD - Injected	-	-	-	-	-	-	-	-
432,536	URD - Undetermined	316	7,372	1,218,819	57,186	2.82	0.017	165.33	180.97

Customers	Failure	N	CI	CMI	Duration	SAIDI	SAIFI	CAIDI	L-Bar
432,536	Pole - Wood	22	2,211	455,955	5,940	1.05	0.005	206	270
432,536	Pole - Concrete	1	14	4,545	324	0.01	0.000	324	324

## **11.0 Coordination with Local Governments**

Gulf Power Company is committed to coordinating with local governments on major projects and storm preparedness. For all major projects, Gulf Power meets with governmental entities as appropriate to discuss the scope of the projects and coordinate activities involved with project implementation. Gulf Power 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 an ongoing survey with the four active EOCs in Northwest Florida to gauge the company's collaboration with the EOCs. In the surveys, the Directors for the Escambia County, Santa Rosa County, Okaloosa County, and Bay County EOCs are asked to gauge Gulf Power's participation level, responsiveness, presence in the EOC, and overall information exchange. Three surveys of this type have been conducted over the years. In all cases, all four EOCs rated Gulf Power's coordination efforts as "Outstanding." The surveys show that Gulf Power values and actively pursues a positive and cooperative relationship with the leadership in every community served.

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

Gulf Power has hosted Community Leader Forums 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 the company'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 the issues.

Gulf Power hosts an annual economic symposium where relationships with these key officials are nurtured.

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

### ***11.1 Ongoing Programs***

Gulf Power Company has several employees with local government liaison responsibilities in Northwest Florida. District managers are located in Pensacola, Ft. Walton, and Panama City. Local managers, who report to the district managers, are located in Milton, Crestview, Niceville, and Chipley. These employees interact with city and county personnel on a daily/weekly

basis regarding numerous issues, including emergency preparedness as needed. These employees are also actively involved in specific government/business committees that focus on emergency preparedness needs in Northwest Florida. Examples of those include:

- 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.
- 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.

Gulf Power Line Clearance Specialists and Forestry Services Technicians also communicate routinely with members of the community, government officials, and military leaders concerning area vegetation management projects and other issues such as: (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 range from office and field visits to phone and radio conversations.

In addition to numerous planning meetings with the EOCs, Gulf Power personnel also participated in the following hurricane activities with local governments during 2011:

- Escambia County EOC
  - Hurricane Drill
  - All EOC Activations
  - News Media Storm Drill/Training
  - EOC Representative Training
- Santa Rosa Co. EOC
  - Hurricane Drill
  - All EOC Activations
  - News Media Storm Drill/Training
  - EOC Representative Training
- Okaloosa County EOC
  - Hurricane Drill
  - All EOC Activations
  - EOC Representative Training
  - Media Storm Training Session (Emergency Communication Procedures)
  - Storm response training in North and South Okaloosa County where we met with local disaster

preparedness officials to go over storm readiness and response plans and to get their feedback.

- Bay County EOC
  - Hurricane Drill
  - All EOC Activations
  - News Media Storm Drill/Training
  - Three-day training class on EOC operations and storm restoration sponsored by The National Domestic Preparedness Consortium (NDPC) through Texas A&M University.

## ***11.2 Storm Preparation***

Thirteen employees are assigned to the county EOCs throughout Northwest Florida. Each of those employees received federal certification under the National Incident Management System (NIMS) through FEMA. The EOC Representatives assist city 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.

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***

Gulf Power maintains an active communication link with the activated EOCs for storm events. Assigned Gulf Power representatives coordinated pre-storm activities with the County EOCs to establish emergency communication links with local and state officials, the media, and restoration crews for all 2011 EOC activations.

Gulf Power strives to restore emergency services as quickly as possible. In addition, Gulf Power has completed storm-hardened pilot projects for 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. Gulf's service area was affected by Tropical Storm Lee in September 2011. Restoration of the resulting outages was handled by the local district offices working together to allocate resources as needed. It was



therefore not necessary to activate Gulf's Company Emergency Management Center (CEMC).

## **12.0 Collaborative Research**

As a member of the Public Utility Research Center (PURC), Gulf participates in the research activities for Storm Hardening as described by PURC management in Appendix 4.

## **13.0 Disaster Preparedness and Recovery Plan**

Gulf's 2011 Disaster Preparedness and Recovery Plan had no major revisions from what was submitted in the Company's March 1, 2010 annual filing. A copy can be provided upon request.

### ***13.1 Activity and Costs Incurred for 2011 and 2012 Projections***

Gulf continues to provide annual refresher training in the area of storm preparedness for various storm roles at minimal cost.

### ***13.2 Disaster Recovery Plan Activity***

Gulf's 2012 Storm Procedures Manual is currently being reviewed by management. Revisions, if any, will be returned and incorporated in the Manual by June 1, 2012. Storm assignments and training schedules are being finalized with plans for training to be completed prior to hurricane season.

### ***13.3 Hurricane Drill***

A mock hurricane drill was conducted on May 23, 2011, at Gulf's Corporate Office. The purpose of this drill was to raise awareness and continue a culture of preparedness both at work and at home. All participants rehearsed departmental readiness plans in response to a natural disaster. Discussions focused on:

- The preparedness cycle of (1) updating plans and procedures (2) organizing, training, and equipping personnel (3) conducting exercises to test our thought processes and plans and to identify and correct any gaps and (4) evaluating and improving processes

- The importance of employees preparing their homes and family both prior to and after landfall
- Safety precautions both before, during, and after a storm
- Worst case scenarios
- The expectation of providing our customers with the best/most current information related to their restoration time
- The drill scenario called for a “Katrina” type hurricane landfall at Destin, Florida as a category 3 with a hurricane severity index of 36. The storm then changed course and struck Panama City with 135 mph winds and a 17 foot storm surge along with tornado activity. Participants tested their responses and the quality of existing plans based on the availability of outside resources and logistics capabilities.

Gulf Power Company’s next hurricane drill is scheduled for May 1, 2012.

## **14.0 Storm Season Ready Status**

### **Storm Recovery Plan**

Gulf uses the strategy described in its Storm Recovery Plan to respond to any natural disaster that may occur in our service area. The plan has previously proven to be very effective in recovering from multiple storms that have impacted Gulf and its customers. As part of its annual operations, Gulf 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 from lessons learned while assisting other utilities that have experienced 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.

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 while protecting the safety of everyone involved.

The company acquires support from a number of resources including but not limited to 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'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 2011 Reliability Performance**

### ***15.1 Overall Performance***

Gulf's 2011 System Average Interruption Duration Index (SAIDI) is reported as 111 minutes, which is a decrease of 35 minutes over 2010 results. The System Average Interruption Frequency Index (SAIFI) decreased to 1.25 interruptions: the 2010 result was 1.74 interruptions, which shows a decrease compared to 2010. The Customer Average Interruption Index (CAIDI) increased to 89 minutes compared to the 84 minutes in 2010. Momentary Interruptions that Gulf's customers experienced decreased to 5.5 momentary interruptions in 2011 compared to 7.1 momentary interruptions in 2010. In 2011 the percent of customers experiencing more than 5 interruptions decreased to 1.9 percent compared to 3.3 percent in 2010.

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

Gulf had several distribution weather exclusions for 2011. These are listed in section 15.7.

In 2011, Gulf continued to seek improvements in the company's distribution reliability.

Gulf is on schedule with the implementation of its 2010 – 2012 Storm Hardening Plan. In addition, improved processes such as those mentioned previously, the **Distribution Lock-Out Report** and "Tree Gulf" continue to be utilized.

See Appendix 1 for 2011 actual data and adjusted data.

## **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 2011, Gulf was impacted by several storm events which did meet the FPSC exclusion criteria.

For the third year in a row, Gulf's adjusted system outages decreased. Gulf's adjusted total system outages from 2010 to 2011 showed a significant improvement with reduced outages of approximately 7%. Seven of the top ten outage causes showed improvements.

Gulf Power has recorded more Planned Outages in 2011 than in previous years. Since the implementation of AMI, the AMI meter reports an outage at the time of the outage thus helping to capture these types of outages more consistently.

## **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 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 2011.

## **15.6 Transmission Events – Adjustments**

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

## **15.7 Extreme Weather – Adjustments**

March 9, 2011 Tornado indices are as follows:

- N = 62
- CI = 4,652
- CMI = 323,324
- SAIDI = .75
- SAIFI = .011
- CAIDI = 69.50

April 4<sup>th</sup>, 2011 Tornado indices are as follows:

- N = 337
- CI = 22,743
- CMI = 7,677,442
- SAIDI = 17.75
- SAIFI = .053
- CAIDI = 337.57

Tropical Storm Lee indices are as follows:

- N = 913
- CI = 71,959
- CMI = 16,962,485
- SAIDI = 39.22
- SAIFI = .166
- CAIDI = 235.72

## **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 the 2011 data to determine the need for any specific improvement

activities beyond current programs and storm hardening initiatives which are underway.

<b>Cause</b>	<b>(All)</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	2,404	2,567	2,819	2,984	2,495	2,371
	% Change	1%	7%	10%	6%	-16%	-5%
Eastern	N	2,273	1,917	2,133	1,964	1,913	1,753
	% Change	32%	-16%	11%	-8%	-3%	-8%
Western	N	5,199	5,466	6,481	6,294	5,929	5,465
	% Change	-6%	5%	19%	-3%	-6%	-8%
Company	N	9,876	9,950	11,433	11,242	10,337	9,589
	% Change	2%	1%	15%	-2%	-8%	-7%

<b>Cause</b>	<b>Animal</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	611	730	1,009	942	847	843
	% Change	15%	19%	38%	-7%	-10%	0%
Eastern	N	412	345	402	314	344	338
	% Change	56%	-16%	17%	-22%	10%	-2%
Western	N	586	1,014	2,006	1,856	1,772	1,832
	% Change	-15%	73%	98%	-7%	-5%	3%
Company	N	1,609	2,089	3,417	3,112	2,963	3,013
	% Change	8%	30%	64%	-9%	-5%	2%

<b>Cause</b>	<b>Deterioration</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	497	573	557	661	536	427
	% Change	13%	15%	-3%	19%	-19%	-20%
Eastern	N	365	430	500	449	451	459
	% Change	6%	18%	16%	-10%	0.50%	2%
Western	N	1,052	1,185	1,243	1,223	1,224	1,042
	% Change	23%	13%	5%	-2%	0.08%	-15%
Company	N	1,914	2,188	2,300	2,333	2,211	1,928
	% Change	17%	14%	5%	1%	-5%	-13%

<b>Cause</b>		<b>Lightning</b>					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	427	447	397	469	299	385
	% Change	18%	5%	-11%	18%	-36%	29%
Eastern	N	461	378	433	352	305	282
	% Change	71%	-18%	15%	-19%	-13%	-8%
Western	N	1,419	1,287	1,324	1,259	965	860
	% Change	16%	-9%	3%	-5%	-23%	-11%
Company	N	2,307	2,112	2,154	2,080	1,569	1,527
	% Change	25%	-8%	2%	-3%	-25%	-3%

<b>Cause</b>		<b>Tree</b>					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	217	219	234	244	218	227
	% Change	28%	1%	7%	4%	-11%	4%
Eastern	N	249	325	314	296	235	244
	% Change	46%	31%	-3%	-6%	-21%	4%
Western	N	826	875	766	753	698	703
	% Change	29%	6%	-12%	-2%	-7%	1%
Company	N	1,292	1,419	1,314	1,293	1,151	1,174
	% Change	32%	10%	-7%	-2%	-11%	2%

<b>Cause</b>		<b>Unknown</b>					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	218	224	282	289	170	200
	% Change	-58%	3%	26%	2%	-41%	18%
Eastern	N	274	151	152	200	136	154
	% Change	-26%	-45%	1%	32%	-32%	13%
Western	N	495	367	440	499	333	337
	% Change	-63%	-26%	20%	13%	-33%	1%
Company	N	987	742	874	988	639	691
	% Change	-56%	-25%	18%	13%	-35%	8%

Cause		Vehicle					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	62	62	68	66	57	57
	% Change	-27%	0%	10%	-3%	-14%	0%
Eastern	N	65	63	68	76	66	67
	% Change	25%	-3%	8%	12%	-13%	2%
Western	N	157	211	152	133	141	125
	% Change	-45%	34%	-28%	-13%	6%	-11%
Company	N	284	336	288	275	264	249
	% Change	-33%	18%	-14%	-5%	-4%	-6%

Cause		Overload					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	46	71	42	58	66	50
	% Change	-30%	54%	-41%	38%	14%	-24%
Eastern	N	65	63	57	60	97	38
	% Change	-23%	-3%	-10%	5%	62%	-61%
Western	N	112	137	99	127	251	74
	% Change	8%	22%	-28%	28%	98%	-71%
Company	N	223	271	198	245	414	162
	% Change	-12%	22%	-27%	24%	69%	-61%

Cause		Contamination/Corrosion					
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	36	35	52	72	90	52
	% Change	13%	-3%	49%	38%	25%	-42%
Eastern	N	29	37	52	56	79	34
	% Change	4%	28%	41%	8%	41%	-57%
Western	N	72	71	99	84	97	65
	% Change	24%	-1%	39%	-15%	15%	-33%
Company	N	137	143	203	212	266	151
	% Change	16%	4%	42%	4%	25%	-43%



Cause	Other						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	33	38	16	38	74	56
	% Change	38%	15%	-58%	138%	95%	-24%
Eastern	N	29	27	16	37	71	30
	% Change	81%	-7%	-41%	131%	92%	-58%
Western	N	57	46	39	91	143	136
	% Change	46%	-19%	-15%	133%	57%	-5%
Company	N	119	111	71	166	288	222
	% Change	51%	-7%	-36%	134%	73%	-23%

Cause	Vines						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	16	30	45	30	35	32
	% Change	0%	88%	50%	-33%	17%	-9%
Eastern	N	21	18	38	29	41	45
	% Change	-13%	-14%	111%	-24%	41%	10%
Western	N	46	70	79	91	113	110
	% Change	15%	52%	13%	15%	24%	-3%
Company	N	83	118	162	150	189	187
	% Change	4%	42%	37%	-7%	26%	-1%

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	2006	2007	2008	2009	2010	2011
Central	SAIDI	174.13	109.35	98.93	106.63	115.3	89.9
	% Change	44%	-37%	-10%	8%	8%	-22%
Eastern	SAIDI	331.38	100.44	140.23	140.08	133.41	110.29
	% Change	321%	-70%	40%	0%	-5%	-17%
Western	SAIDI	157.55	145.73	145.89	157.47	168.02	123.49
	% Change	21%	-8%	0%	8%	7%	-27%
Company	SAIDI	205.12	124.8	132.45	140.01	145.64	111.46
	% Change	79%	-39%	6%	6%	4%	-23%

Cause	(All)						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	1.276	0.952	1.142	1.082	1.577	1.086
	% Change	-5%	-25%	20%	-5%	46%	-31%
Eastern	SAIFI	1.288	1.121	1.127	1.2	1.637	1.309
	% Change	81%	-13%	1%	6%	36%	-20%
Western	SAIFI	1.274	1.323	1.449	1.589	1.88	1.301
	% Change	3%	4%	10%	10%	18%	-31%
Company	SAIFI	1.278	1.176	1.288	1.359	1.74	1.247
	% Change	13%	-8%	10%	6%	28%	-28%

Cause	Animal						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	7.49	11.67	9.86	10.08	8.82	7.66
	% Change	56%	56%	-16%	2%	-13%	-13%
Eastern	SAIDI	9.51	5.03	5.53	2.63	9.8	3.94
	% Change	166%	-47%	10%	-52%	273%	-60%
Western	SAIDI	3.23	5.33	11.14	13.81	13.52	7.81
	% Change	13%	65%	109%	24%	-2%	-42%
Company	SAIDI	5.9	6.88	9.37	9.97	11.36	6.78
	% Change	67%	17%	36%	6%	14%	-40%

Cause	Animal						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.103	0.153	0.166	0.177	0.183	0.132
	% Change	62%	49%	8%	7%	3%	-28%
Eastern	SAIFI	0.105	0.063	0.058	0.033	0.103	0.08
	% Change	203%	-39%	-8%	-43%	212%	-22%
Western	SAIFI	0.042	0.074	0.144	0.133	0.172	0.121
	% Change	15%	78%	94%	-8%	29%	-30%
Company	SAIFI	0.073	0.092	0.128	0.119	0.157	0.113
	% Change	71%	25%	39%	-7%	32%	-28%

Cause		Deterioration					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	42.01	17.45	17.35	26.72	26.85	16.26
	% Change	78%	-58%	-1%	54%	0.50%	-39%
Eastern	SAIDI	16.14	15.99	25.09	23.76	25.26	21.74
	% Change	85%	-1%	57%	-5%	6%	-14%
Western	SAIDI	13.61	19.37	21.65	26.83	29.24	20.28
	% Change	43%	42%	12%	24%	9%	-31%
Company	SAIDI	21.62	18.01	21.44	26.01	27.6	19.62
	% Change	67%	-17%	19%	21%	6%	-29%

Cause		Deterioration					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.159	0.163	0.193	0.225	0.291	0.152
	% Change	-14%	2%	18%	17%	29%	-48%
Eastern	SAIFI	0.115	0.168	0.22	0.16	0.239	0.267
	% Change	94%	46%	30%	-27%	49%	12%
Western	SAIFI	0.104	0.173	0.207	0.239	0.359	0.189
	% Change	71%	66%	20%	15%	50%	-47%
Company	SAIFI	0.121	0.169	0.207	0.215	0.31	0.2
	% Change	31%	40%	22%	4%	44%	-35%

Cause		Lightning					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	37.07	32.78	20.3	21.23	17.39	29.37
	% Change	62%	-12%	-38%	5%	-18%	69%
Eastern	SAIDI	52.12	26.47	32.75	44.16	15.87	26.52
	% Change	143%	-49%	24%	35%	-64%	67%
Western	SAIDI	44.79	36.73	43.47	52.58	33.64	28.41
	% Change	12%	-18%	18%	21%	-36%	-16%
Company	SAIDI	44.61	33.09	34.8	42.41	24.92	28.17
	% Change	44%	-26%	5%	22%	-41%	13%

Cause		Lightning					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.261	0.269	0.208	0.237	0.173	0.269
	% Change	-11%	3%	-23%	14%	-27%	55%
Eastern	SAIFI	0.29	0.268	0.22	0.317	0.12	0.237
	% Change	62%	-7%	-18%	44%	-62%	98%
Western	SAIFI	0.306	0.311	0.313	0.394	0.254	0.249
	% Change	7%	1%	1%	26%	-36%	-2%
Company	SAIFI	0.29	0.289	0.262	0.334	0.199	0.251
	% Change	11%	0%	-9%	27%	-40%	26%

Cause		Tree					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	10.76	5.94	3.66	7.03	9.78	9.78
	% Change	71%	-45%	-38%	92%	39%	0%
Eastern	SAIDI	15.49	22.01	25	22.43	19.13	13.01
	% Change	75%	42%	14%	-10%	-15%	-32%
Western	SAIDI	36.55	37.4	27.71	20.63	25.3	25.17
	% Change	135%	2%	-26%	-26%	23%	-1%
Company	SAIDI	24.61	25.39	20.88	17.63	19.75	18.09
	% Change	114%	3%	-18%	-16%	12%	-8%

Cause		Tree					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.101	0.053	0.037	0.086	0.075	0.103
	% Change	17%	-47%	-30%	132%	-13%	37%
Eastern	SAIFI	0.131	0.18	0.206	0.22	0.187	0.133
	% Change	28%	37%	15%	7%	-15%	-29%
Western	SAIFI	0.332	0.358	0.225	0.189	0.216	0.22
	% Change	81%	8%	-37%	-16%	14%	2%
Company	SAIFI	0.222	0.234	0.172	0.171	0.173	0.168
	% Change	60%	5%	-26%	-1%	1%	-3%

Cause		Unknown					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	14	16.37	9.87	5.85	9.1	8.09
	% Change	-41%	17%	-40%	-41%	56%	-11%
Eastern	SAIDI	26.24	9.92	5.31	5.67	13.41	19.37
	% Change	49%	-62%	-46%	7%	137%	44%
Western	SAIDI	11.15	9.04	9.86	7.91	10.08	11.35
	% Change	-59%	-19%	9%	-20%	27%	13%
Company	SAIDI	15.65	11.15	8.69	6.81	10.69	12.58
	% Change	-35%	-29%	-22%	-22%	57%	18%

Cause		Unknown					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.208	0.079	0.14	0.087	0.146	0.115
	% Change	-41%	-62%	77%	-38%	68%	-21%
Eastern	SAIFI	0.119	0.16	0.063	0.066	0.128	0.206
	% Change	-34%	34%	-61%	6%	94%	61%
Western	SAIFI	0.129	0.107	0.154	0.14	0.146	0.141
	% Change	-62%	-17%	44%	-9%	4%	-3%
Company	SAIFI	0.147	0.114	0.127	0.107	0.141	0.151
	% Change	-51%	-23%	12%	-15%	32%	7%

Cause		Vehicle					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	6.54	6.27	20.85	10.65	8.55	7.99
	% Change	-47%	-4%	233%	-49%	-20%	-7%
Eastern	SAIDI	8.36	5.63	18.26	25.97	8.96	13.88
	% Change	41%	-33%	224%	42%	-66%	55%
Western	SAIDI	15.43	22.28	19.9	16.4	23.91	10.4
	% Change	-19%	44%	-11%	-18%	46%	-57%
Company	SAIDI	11.36	13.91	19.72	17.4	16.14	10.67
	% Change	-19%	22%	42%	-12%	-7%	-34%

Cause	Vehicle						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.067	0.049	0.147	0.066	0.069	0.074
	% Change	9%	-26%	197%	-55%	5%	7%
Eastern	SAIFI	0.072	0.084	0.056	0.174	0.141	0.236
	% Change	50%	17%	-34%	213%	-19%	67%
Western	SAIFI	0.093	0.147	0.236	0.137	0.167	0.102
	% Change	-43%	58%	60%	-42%	22%	-39%
Company	SAIFI	0.081	0.106	0.167	0.129	0.135	0.13
	% Change	-25%	31%	57%	-23%	5%	-4%

Cause	Overload						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	1.81	3.56	3.28	4.36	2.23	3.42
	% Change	-59%	96%	-8%	33%	-49%	53%
Eastern	SAIDI	1.51	2.82	4.69	3.61	14.04	0.75
	% Change	-66%	87%	66%	-23%	289%	-95%
Western	SAIDI	4.49	3.42	2.65	3.62	17.06	2.15
	% Change	60%	-24%	-22%	37%	371%	-87%
Company	SAIDI	3.05	3.3	3.34	3.81	12.49	2.12
	% Change	-16%	8%	1%	14%	228%	-83%

Cause	Overload						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.025	0.066	0.025	0.048	0.031	0.041
	% Change	-56%	160%	-62%	92%	-35%	32%
Eastern	SAIFI	0.015	0.04	0.078	0.045	0.181	0.01
	% Change	-47%	159%	97%	-42%	302%	-94%
Western	SAIFI	0.045	0.042	0.031	0.037	0.149	0.022
	% Change	26%	-7%	-25%	19%	303%	-85%
Company	SAIFI	0.033	0.048	0.042	0.042	0.127	0.024
	% Change	-18%	46%	-12%	1%	202%	-81%

Cause		Contamination/Corrosion					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	1.61	1.3	0.55	1.19	5.02	3.22
	% Change	460%	-19%	-58%	118%	322%	-36%
Eastern	SAIDI	3.85	0.72	7.92	3.5	2.065	.76
	% Change	2008%	-81%	1002%	-56%	-41%	-63%
Western	SAIDI	0.53	1.96	1.44	0.59	0.93	0.42
	% Change	218%	268%	-26%	-59%	58%	-55%
Company	SAIDI	1.64	1.47	2.88	1.49	2.26	1.23
	% Change	711%	-10%	96%	-48%	52%	-46%

Cause		Contamination/Corrosion					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.033	0.012	0.005	0.006	0.061	0.029
	% Change	1225%	-64%	-57%	24%	917%	-52%
Eastern	SAIFI	0.034	0.006	0.025	0.059	0.035	0.004
	% Change	2416%	-83%	334%	136%	93%	-89%
Western	SAIFI	0.004	0.017	0.014	0.014	0.007	0.004
	% Change	416%	336%	-18%	4%	50%	-43%
Company	SAIFI	0.019	0.013	0.014	0.024	.028	0.01
	% Change	1307%	-33%	14%	65%	17%	-64%

Cause		Other					
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	1.85	0.49	2.55	0.53	13.01	2.6
	% Change	44%	-73%	416%	-79%	2355%	-80%
Eastern	SAIDI	4.19	2.73	0.91	2.22	18.57	2.21
	% Change	2830%	-35%	-66%	143%	736%	-88%
Western	SAIDI	2.5	3.96	1.49	5.34	4.79	11.19
	% Change	366%	59%	-62%	259%	-10%	134%
Company	SAIDI	2.75	2.75	1.61	3.3	10.43	6.67
	% Change	336%	0%	-42%	105%	216%	-36%

Cause	Other						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.029	0.026	0.052	0.014	0.297	0.084
	% Change	-42%	-12%	103%	-74%	2021%	-72%
Eastern	SAIFI	0.023	0.064	0.027	0.032	0.384	0.043
	% Change	1060%	182%	-57%	17%	1100%	-89%
Western	SAIFI	0.028	0.041	0.023	0.112	0.245	0.164
	% Change	351%	48%	-43%	377%	119%	-33%
Company	SAIFI	0.027	0.043	0.032	0.066	0.294	0.112
	% Change	63%	60%	-26%	108%	345%	-62%

Cause	Vines						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	0.1	0.08	0.27	0.19	0.0945	0.24
	% Change	86%	-25%	243%	-28%	-50%	154%
Eastern	SAIDI	1.51	0.06	0.3	0.35	0.088	0.35
	% Change	515%	-96%	365%	18%	-75%	298%
Western	SAIDI	0.17	0.17	0.17	0.51	0.419	0.44
	% Change	-23%	-3%	2%	196%	-18%	5%
Company	SAIDI	0.49	0.12	0.23	0.39	0.25	0.36
	% Change	161%	-76%	93%	70%	-36%	44%

Cause	Vines						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.001	0.001	0.004	0.002	0.001	0.003
	% Change	86%	-30%	394%	-48%	-50%	200%
Eastern	SAIFI	0.004	0.001	0.003	0.002	0.001	0.005
	% Change	415%	-83%	242%	-12%	-50%	400%
Western	SAIFI	0.002	0.002	0.001	0.015	0.002	0.002
	% Change	11%	-28%	-22%	1005%	-87%	0%
Company	SAIFI	0.003	0.001	0.002	0.008	0.002	0.003
	% Change	78%	-52%	86%	263%	-75%	50%



### **15.9.1.2 Identification and Selection/Process Improvements**

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

### **15.9.1.3 2011 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 associated with this program are provided in Section 3.0.

## **15.9.2 Three Percent Feeder List**

### **15.9.2.1 Five-Year Patterns**

Gulf had two feeders in the Actual report, and two feeders in the adjusted report which were listed in last year's report.

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 system wide top ten outage causes through its existing programs and the new storm hardening efforts.

### **15.9.2.3 2011 Activities and Budget Allowances**

Please see the response to Section 15.9.1.3 for 2011 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 system wide top ten outage causes through its existing programs and the new storm hardening efforts.

**15.9.3.3 2011 Activities and Budget Allowances**

Please see the response to 15.9.1.3 for 2011 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	2006	2007	2008	2009	2010	2011
Central	N-	2,112	2,224	2,498	2,672	2,207	2,097
	% Change	4%	5%	12%	7%	-17%	-5%
Eastern	N-	2,080	1,727	1,914	1,739	1,667	1,521
	% Change	40%	-17%	11%	-9%	-4%	-9%
Western	N-	4,597	4,963	5,964	5,840	5,412	5,019
	% Change	-4%	8%	20%	-2%	-7%	-7%
Company	N-	8,789	8,914	10,376	10,251	9,288	8,637
	% Change	5%	1%	16%	-1%	-9%	-7%

<b>System</b>	<b>Underground</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	N	292	343	321	312	288	274
	% Change	-12%	17%	-6%	-3%	-8%	-5%
Eastern	N	193	190	219	225	244	232
	% Change	-18%	-2%	15%	3%	8%	-5%
Western	N	602	503	517	454	517	446
	% Change	-19%	-16%	3%	-12%	14%	-14%
Company	N	1,087	1,036	1,057	991	1049	952
	% Change	-17%	-5%	2%	-6%	6%	-9%

<b>System</b>	<b>Overhead</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	161.46	85.85	85.87	92.25	107.84	81.89
	% Change	48%	-47%	0%	7%	17%	-24%
Eastern	SAIDI	319.65	92.62	132.47	121.9	121.73	97.16
	% Change	360%	-71%	43%	-8%	-0.10%	-20%
Western	SAIDI	145.43	136.5	136.55	148.13	157.26	115.31
	% Change	24%	-6%	0%	8%	6%	-27%
Company	SAIDI	192.96	112.27	122.57	127.1	135.49	102.05
	% Change	87%	-42%	9%	4%	7%	-25%

<b>System</b>	<b>Underground</b>						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIDI	12.67	23.5	13.06	14.38	7.45	8.02
	% Change	5%	85%	-44%	10%	-48%	8%
Eastern	SAIDI	11.73	7.82	7.76	18.18	11.67	13.13
	% Change	26%	-33%	-1%	134%	-36%	13%
Western	SAIDI	12.13	9.22	9.34	9.34	10.76	8.18
	% Change	-1%	-24%	1%	0%	15%	-24%
Company	SAIDI	12.17	12.53	9.88	12.91	10.15	9.41
	% Change	6%	3%	-21%	31%	-21%	-7%

System	Overhead						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	1.216	0.865	1.018	0.999	1.522	1.036
	% Change	-4%	-29%	18%	-2%	52%	-32%
Eastern	SAIFI	1.235	1.07	1.089	1.135	1.573	1.241
	% Change	84%	-13%	2%	4%	39%	-21%
Western	SAIFI	1.203	1.272	1.406	1.542	1.814	1.256
	% Change	2%	6%	11%	10%	18%	-31%
Company	SAIFI	1.214	1.116	1.225	1.298	1.677	1.195
	% Change	13%	-8%	10%	6%	29%	-29%

System	Underground						
Region	Data	2006	2007	2008	2009	2010	2011
Central	SAIFI	0.06	0.087	0.124	0.082	0.055	0.050
	% Change	-32%	44%	42%	-34%	-33%	-9%
Eastern	SAIFI	0.053	0.051	0.038	0.066	0.603	0.068
	% Change	27%	-4%	-25%	71%	814%	-89%
Western	SAIFI	0.071	0.051	0.043	0.047	0.068	0.045
	% Change	13%	-29%	-15%	9%	45%	-34%
Company	SAIFI	0.064	0.06	0.062	0.061	0.064	0.052
	% Change	-1%	-6%	4%	-3%	5%	-19%

### 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 2011 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 2011.

SYSTEM	REGION	Miles	Customers	N	Duration	CMI	CI
Overhead	CENTRAL	1,162	59,784	2,097	198,062	9,103,168	115,164
	EASTERN	1,550	61,084	1,521	163,506	10,802,431	137,941
	WESTERN	3,187	132,109	5,019	585,438	24,236,302	263,948
	SYSTEM	5,899	252,977	8,637	947,006	44,141,901	517,053
Underground	CENTRAL	428	49,478	274	45,983	891,308	5,523
	EASTERN	448	47,602	232	43,233	1,459,243	7,563
	WESTERN	935	72,059	446	88,106	1,720,009	9,427
	SYSTEM	1,811	169,139	952	177,322	4,070,560	22,513

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	152.27	1.926	0.13	94.45	54.92	79.05
	EASTERN	176.85	2.258	0.11	107.50	90.69	78.31
	WESTERN	183.46	1.998	0.06	116.64	52.59	91.82
	SYSTEM	174.49	2.004	0.03	109.65	59.86	85.37
Underground	CENTRAL	18.01	0.112	0.04	167.82	20.16	161.38
	EASTERN	30.66	0.159	0.07	186.35	32.60	192.95
	WESTERN	23.87	0.131	0.03	197.55	21.14	182.46
	SYSTEM	24.07	0.133	0.01	186.26	23.65	180.81

Note: The above metrics are for 2010.

A review of the above data continues to reinforce observations made in Gulf's March 1, 2011 report.

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 as many. 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 includes both small-scale and large-scale outages.

Fourth, comparing the CAIDI calculation for overhead and underground shows underground has a CAIDI value that is 2 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 year’s Reliability Report, the problem of scale is raised 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, Gulf's experience after major storms has shown that there is a higher failure rate 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.

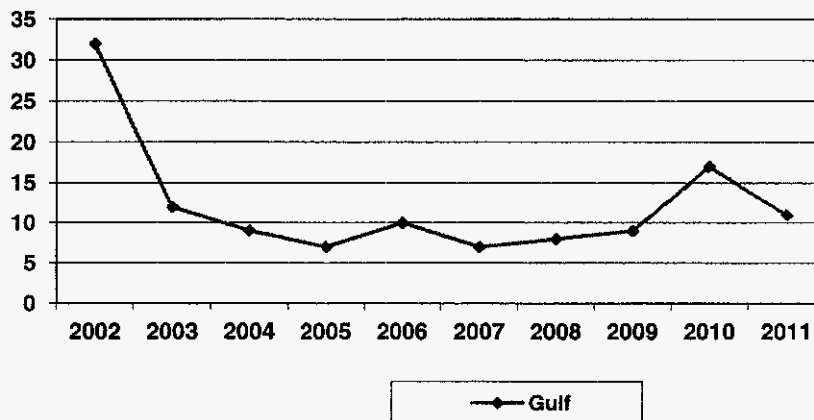
## 15.11 Reliability Related Customer Complaints

### 15.11.1 Five-Year Patterns

Gulf Power management reviews a monthly report which supplies data on FPSC complaints and inquiries. Gulf Power's complaint activity as reflected in the FPSC Consumer Activity Report has remained at very low levels.

The graph below, based on the FPSC Consumer Activity Report, is provided to illustrate Gulf Power's customer complaint trend. The numbers include Service and Billing. Gulf's logged complaints for 2011 decreased to 11.

Customer Complaint History



### **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

# Appendix 1

## Form 102 - Actual Data

### 2011 Distribution Service Reliability Reports – Actual

Service Reliability Indices – Actual					
Gulf Power Company					
District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFle (e)	CEMI5 (f)
Central	146.36	96.51	1.517	7.48	3.12%
Eastern	194.87	102.81	1.895	4.64	6.77%
Western	195.36	96.70	2.020	6.67	4.50%
System Averages	182.64	98.26	1.859	6.36	4.73%

# Appendix 1

## 2011 Distribution Service Reliability Reports - Actual

	CENTRAL		EASTERN		WESTERN		SYSTEM	
<b>SAIDI = System Average Interruption Duration Index</b>								
Total Number of Customer Minutes of Interruption (CMI)	16,270,133		21,665,179		41,061,716		78,997,028	
Total Number of Customers Served (C)	111,168	146.36	111,180	194.87	210,188	195.36	432,536	182.64
<b>CAIDI = Customer Average Interruption Duration Index</b>								
Total Number of Customer Minutes of Interruption (CMI)	16,270,133		21,665,179		41,061,716		78,997,028	
Total Number of Customer Interruptions (CI)	168,590	96.51	210,730	102.81	424,616	96.70	803,936	98.26
<b>SAIFI = System Average Interruption Frequency Index</b>								
Total Number of Customer Interruptions (CI)	168,590		210,730		424,616		803,936	
Total Number of Customers Served (C)	111,168	1.517	111,180	1.895	210,188	2.020	432,536	1.859
<b>MAIFI<sub>e</sub> = Momentary Average Interruption Frequency Index</b>								
Total Number of Customer Momentary Interruption Events (CME)	831,922		515,474		1,402,452		2,749,848	
Total Number of Customers Served (C)	111,168	7.48	111,180	4.64	210,188	6.67	432,536	6.36
<b>CEMI5 = Customers Experiencing More Interruptions than 5</b>								
Number of Customers Experiencing More Interruptions than 5	3,467		7,525		9,452		20,444	
Total Number of Customers Served (C)	111,168	3.12%	111,180	6.77%	210,188	4.50%	432,536	4.73%
<b>L-Bar</b>								
Minutes of Interruption							1,882,402	139.78
Total Number of Outages							13,467	

## Appendix 1

### 2011 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)
Animal	3,024	72.65	60.08
Planned Outage	2,503	102.93	48.71
Deterioration	1,988	158.65	98.84
Lightning	1,809	176.72	140.10
Tree	1,721	231.91	155.86
Unknown	750	103.33	86.84
Wind/Rain	350	346.82	204.40
Vehicle	249	180.30	82.41
Other	239	114.67	66.97
Vines	203	121.41	120.78
All Others	631	118.92	50.93
<b>System Totals</b>	<b>13,467</b>	<b>139.78</b>	<b>98.26</b>

# Appendix 1

## 2011 Distribution Service Reliability Reports - Actual

3 Percent Feeder List - Actual													
Utility Name: Gulf Power Company      Year: 2011													
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)						
9592	Sunnyhills	EASTERN	966	90			1,056	12	203.18	17	Y	1	December 2012
9092	Appalachee	EASTERN	3	5	1		9	6	2,228.85	371	N	1	December 2012
6612	Goulding	WESTERN	1,111	101			1,212	5	648	145	N		December 2012
8572	Parker	EASTERN	2,296	270			2,566	5	96.78	19	N		December 2012
8602	Highland City	EASTERN	2,578	104			2,682	5	216.1	62	Y	1	December 2012
9522	Vernon	EASTERN	1,364	228	2		1,594	5	70.17	15	N	2	December 2012
6792	Pine Forest	Western	2,183	178			2,361	4	51	12	N		December 2012
9828	Laurel Hill	CENTRAL	163	42			205	4	339.88	101	N	1	December 2012
7702	Bayou Marcus	WESTERN	1,394	76			1,470	4	97.2	65	N		December 2012

# Appendix 1

## Form 103 - Adjusted Data

2011 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	89.90	82.81	1.086	6.39	0.91%
EASTERN	110.29	84.27	1.309	4.42	2.45%
WESTERN	123.49	94.95	1.301	5.60	2.08%
System	111.46	89.35	1.247	5.50	1.87%

# Appendix 1

## 2011 Distribution Service Reliability Reports - Adjusted

	CENTRAL		EASTERN		WESTERN		SYSTEM	
<b>SAIDI = System Average Interruption Duration Index</b>								
Total Number of Customer Minutes of Interruption (CMI)	9,994,476	89.90	12,261,674	110.29	25,956,311	123.49	48,212,460	111.46
Total Number of Customers Served (C)	111,168		111,180		210,188		432,536	
<b>CAIDI = Customer Average Interruption Duration Index</b>								
Total Number of Customer Minutes of Interruption (CMI)	9,994,476	82.81	12,261,674	84.27	25,956,311	94.95	48,212,460	89.35
Total Number of Customer Interruptions (CI)	120,687		145,504		273,375		539,566	
<b>SAIFI = System Average Interruption Frequency Index</b>								
Total Number of Customer Interruptions (CI)	120,687	1.086	145,504	1.309	273,375	1.301	539,566	1.247
Total Number of Customers Served (C)	111,168		111,180		210,188		432,536	
<b>MAIFI<sub>e</sub> = Momentary Average Interruption Frequency Index</b>								
Total Number of Customer Momentary Interruption Events (CME)	710,040	6.39	491,591	4.42	1,176,348	5.60	2,377,979	5.50
Total Number of Customers Served (C)	111,168		111,180		210,188		432,536	
<b>CEMI5 = Customers Experiencing More Interruptions than 5</b>								
Number of Customers Experiencing More Interruptions than 5	1,008	.91%	2,727	2.45%	4,369	2.08%	8,104	1.87%
Total Number of Customers Served (C)	111,168		111,180		210,188		432,536	
<b>L-Bar</b>								
Minutes of Interruption							1,124,329	117.25
Total Number of Outages							9,589	

## Appendix 1

### 2011 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)
Animal	3,013	72.29	59.96
Deterioration	1,928	153.88	98.27
Lightning	1,527	147.95	112.20
Tree	1,174	137.73	107.88
Unknown	691	95.99	83.41
Vehicle	249	180.30	82.41
Other	222	103.00	59.54
Vines	187	109.66	115.36
Overload	162	96.92	88.63
Contamination/Corrosion	151	118.47	121.10
All Others	285	119.44	59.85
<b>Total</b>	<b>9,589</b>	<b>117.25</b>	<b>89.35</b>



## Appendix 1

### 2011 Distribution Service Reliability Reports - Adjusted

3 Percent Feeder List - Adjusted													
Utility Name: Gulf Power Company      Year: 2011													
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)						
8572	Parker	EASTERN	2,296	270			2,566	5	19	19	N		December 2012
9092	Appalachee	EASTERN	3	5	1		9	5	289	289	N	1	December 2012
6612	Goulding	WESTERN	1,111	101			1,212	4	155	163	N		December 2012
8602	Highland City	EASTERN	2,578	104			2,682	4	45	72	Y	1	December 2012
5652	Turner	CENTRAL	1,356	139			1,495	3	26	30	N		December 2012
6792	Pine Forest	WESTERN	2,183	178			2,361	3	17	16	N	1	December 2012
6922	Cantonment	WESTERN	1,190	98	1		1,288	3	139	187	N		December 2012
9592	Sunnyhills	EASTERN	966	90			1,056	3	24	24	Y	1	December 2012
9828	Laurel Hill	CENTRAL	1,63	42			205	3	58	55	N		December 2012

8

# Appendix 1

## 2011 Excluded Transmission Events Resulting in Customer Outages

Outage Event Description	Reason of Exclusion	N	CMI Excluded	CI Excluded	Duration
Transmission Outages	Transmission Outage	63	1,961,068.14	85,772	2,526.26

Event Code	Date	Reason of Exclusion	CMI	CI	Duration	Causation	Resolution
828185	3/3/2011	Transmission	9,324	2,331	4	Contact	Supervisory
828186	3/3/2011	Transmission	2,790	1,395	2	Contact	Supervisory
828189	3/3/2011	Transmission	6,292	1,573	4	Contact	Supervisory
828191	3/3/2011	Transmission	7,884	1,971	4	Contact	Supervisory
828192	3/3/2011	Transmission	2,584	1,292	2	Contact	Supervisory
828204	3/3/2011	Transmission	8,908	2,227	4	Contact	Supervisory
828206	3/3/2011	Transmission	3,346	1,673	2	Contact	Supervisory
828208	3/3/2011	Transmission	696	348	2	Contact	Supervisory
829185	3/14/2011	Transmission	3,194	1,597	2	Deterioration	Supervisory
829186	3/14/2011	Transmission	3,180	1,060	3	Deterioration	Manual
829187	3/14/2011	Transmission	105,175	3,005	35	Deterioration	Supervisory
829189	3/14/2011	Transmission	6,996	2,332	3	Deterioration	Supervisory
829192	3/14/2011	Transmission	50,155	1,433	35	Deterioration	Manual
829198	3/14/2011	Transmission	98,346	2,658	37	Deterioration	Manual
829201	3/14/2011	Transmission	23,940	665	36	Deterioration	Manual
829202	3/14/2011	Transmission	16,835	481	35	Deterioration	Manual
829203	3/14/2011	Transmission	6,573	2,191	3	Deterioration	Supervisory
832974	4/5/2011	Transmission	141,181.9	187	754.98	Major Storm	Manual
838923	5/14/2011	Transmission	5,309	20	265.45	Failed Trim	Manual
840899	5/30/2011	Transmission	88,867.1	1,607	55.3	Down Wire	Manual
840934	5/30/2011	Transmission	58,708.67	1,061	55.33	Down Wire	Manual
848870	7/4/2011	Transmission	1,654.58	19	87.08	Alabama Transmission Outage	Alabama Transmission Outage
848871	7/4/2011	Transmission	6,531.25	75	87.08	Alabama Transmission Outage	Alabama Transmission Outage
849363	7/7/2011	Transmission	106,094	1,993	53.23	Animal	Manual
849364	7/7/2011	Transmission	128,409.8	2,367	54.25	Animal	Manual
850600	7/13/2011	Transmission	31,655.33	2,060	15.37	Failed Transformer	Supervisory
850607	7/13/2011	Transmission	38,943.67	2,470	15.77	Failed Transformer	Supervisory
850687	7/13/2011	Transmission	13,275.6	888	14.95	Failed Transformer	Supervisory
850769	7/13/2011	Transmission	8,657.97	1,058	8.18	Lightning	Supervisory
850771	7/13/2011	Transmission	14,768.1	1,614	9.15	Lightning	Supervisory
851025	7/14/2011	Transmission	5,876.5	805	7.3	Failed Switch	Manual

## Appendix 1

### 2011 Excluded Transmission Events Resulting in Customer Outages

851050	7/14/2011	Transmission	2,614.87	643	4.07	Failed Switch	Manual
853944	7/31/2011	Transmission	2,630.87	19	138.47	Alabama Transmission Outage	Alabama Transmission Outage
854832	8/4/2011	Transmission	1,630	1,630	1	Deterioration	Supervisory
854835	8/4/2011	Transmission	1,592	1,592	1	Deterioration	Supervisory
854836	8/4/2011	Transmission	1,505	1,505	1	Deterioration	Supervisory
854837	8/4/2011	Transmission	1,747	1,747	1	Deterioration	Supervisory
854838	8/4/2011	Transmission	2,276	2,276	1	Deterioration	Supervisory
854839	8/4/2011	Transmission	1	1	1	Deterioration	Supervisory
857546	8/18/2011	Transmission	2,8314.15	2,547	11.12	Animal	Supervisory
862085	9/5/2011	Transmission	1,32026	2,510	52.6	Major Storm	Manual
862138	9/5/2011	Transmission	112,180.1	2,403	46.68	Major Storm	Manual
862831	9/5/2011	Transmission	28,318.95	297	95.35	Major Storm	Manual
863011	9/5/2011	Transmission	17,082.57	179	95.43	Major Storm	Manual
865225	9/8/2011	Transmission	55,545.6	1,584	35.07	Deterioration	Manual
865266	9/8/2011	Transmission	68,635	1,961	35	Deterioration	Manual
868537	9/29/2011	Transmission	2,748.38	1,601	1.72	Planned	Supervisory
868560	9/29/2011	Transmission	1,774.23	1,054	1.68	Planned	Supervisory
868752	9/30/2011	Transmission	31,542.15	479	65.85	Deterioration	Manual
868753	9/30/2011	Transmission	260413.2	2,999	86.83	Deterioration	Manual
869470	10/5/2011	Transmission	1,738.65	603	2.88	Relay Operation	Manual
869472	10/5/2011	Transmission	1,886.87	682	2.77	Relay Operation	Manual
869785	9/5/2011	Transmission	150,980.5	1,567	96.35	Major Storm	Manual
870738	10/13/2011	Transmission	7,621.2	1,566	4.87	Human Error	Manual
870756	10/13/2011	Transmission	7,680.58	1,961	3.92	Human Error	Manual
872110	10/21/2011	Transmission	1,093	1,093	1	Switching Error	Supervisory
872121	10/21/2011	Transmission	2,025	2,025	1	Switching Error	Supervisory
872144	10/21/2011	Transmission	222	222	1	Switching Error	Supervisory
876083	11/18/2011	Transmission	1,540.25	1,515	1.02	Deterioration	Manual
876147	11/18/2011	Transmission	1	1	1	Deterioration	Manual
876197	11/19/2011	Transmission	21,242	645	32.93	Animal	Supervisory
876198	11/19/2011	Transmission	2,911.42	1,127	2.58	Animal	Supervisory
876199	11/19/2011	Transmission	3,397.3	1,282	2.65	Animal	Supervisory

## Appendix 1

### 2011 Planned Outages Table

Outage Event Description	Reason of Exclusion	N	GMI	CI	Duration
Planned Outage	Planned Outage	2,503	3,860,248.6	79,244	257,637.46

Event Code	Date	Reason of Exclusion	GMI	CI	Duration
823698	1/3/2011	Planned Outage	227.00	1	227.00
823699	1/3/2011	Planned Outage	231.00	1	231.00
823731	1/3/2011	Planned Outage	294.00	3	98.00
823732	1/3/2011	Planned Outage	359.40	4	89.85
823779	1/4/2011	Planned Outage	272.00	2	136.00
823787	1/4/2011	Planned Outage	728.00	8	91.00
823797	1/4/2011	Planned Outage	345.00	1	345.00
823811	1/4/2011	Planned Outage	292.00	4	73.00
823826	1/5/2011	Planned Outage	217.00	7	31.00
823856	1/5/2011	Planned Outage	162.60	1	162.60
823870	1/5/2011	Planned Outage	915.83	7	130.83
823924	1/6/2011	Planned Outage	141.00	1	141.00
823935	1/6/2011	Planned Outage	720.00	18	40.00
823943	1/6/2011	Planned Outage	193.67	2	96.83
824053	1/7/2011	Planned Outage	201.00	1	201.00
824057	1/7/2011	Planned Outage	45.00	5	9.00
824263	1/10/2011	Planned Outage	42.85	3	14.28
824284	1/10/2011	Planned Outage	50.50	6	8.42
824311	1/11/2011	Planned Outage	128.00	8	16.00
824363	1/12/2011	Planned Outage	1,364.40	9	151.60
824373	1/12/2011	Planned Outage	372.67	2	186.33
824374	1/12/2011	Planned Outage	186.38	1	186.38
824377	1/12/2011	Planned Outage	1,862.58	31	60.08
824387	1/12/2011	Planned Outage	117.50	2	58.75
824395	1/12/2011	Planned Outage	805.07	4	201.27
824396	1/12/2011	Planned Outage	768.00	4	192.00
824505	1/13/2011	Planned Outage	583.70	6	97.28
824507	1/13/2011	Planned Outage	590.00	5	118.00
824772	1/18/2011	Planned Outage	137.00	1	137.00
824776	1/18/2011	Planned Outage	21.63	2	10.82
824828	1/18/2011	Planned Outage	33,990.00	2266	15.00
825019	1/19/2011	Planned Outage	4,246.00	22	193.00
825025	1/19/2011	Planned Outage	608.65	7	86.95
825034	1/19/2011	Planned Outage	1,127.00	7	161.00
825067	1/19/2011	Planned Outage	21,697.20	196	110.70

## Appendix 1

### 2011 Planned Outages Table

825107	1/20/2011	Planned Outage	567.00	3	189.00
825117	1/20/2011	Planned Outage	538.00	3	179.33
825124	1/21/2011	Planned Outage	486.00	3	162.00
825159	1/21/2011	Planned Outage	252.00	4	63.00
825227	1/23/2011	Planned Outage	6,699.40	86	77.90
825246	1/24/2011	Planned Outage	372.00	3	124.00
825251	1/24/2011	Planned Outage	1,881.00	11	171.00
825268	1/24/2011	Planned Outage	96.00	2	48.00
825269	1/24/2011	Planned Outage	1,390.00	10	139.00
825270	1/24/2011	Planned Outage	234.00	2	117.00
825271	1/24/2011	Planned Outage	280.00	4	70.00
825272	1/24/2011	Planned Outage	893.32	7	127.62
825283	1/24/2011	Planned Outage	651.60	6	108.60
825307	1/25/2011	Planned Outage	440.00	4	110.00
825311	1/25/2011	Planned Outage	680.00	4	170.00
825312	1/25/2011	Planned Outage	228.00	3	76.00
825313	1/25/2011	Planned Outage	1,020.00	5	204.00
825322	1/25/2011	Planned Outage	368.00	4	92.00
825326	1/25/2011	Planned Outage	363.42	7	51.92
825330	1/25/2011	Planned Outage	45.00	3	15.00
825337	1/25/2011	Planned Outage	1,106.67	4	276.67
825343	1/25/2011	Planned Outage	84.00	3	28.00
825361	1/26/2011	Planned Outage	388.43	2	194.22
825369	1/26/2011	Planned Outage	5,405.00	23	235.00
825370	1/26/2011	Planned Outage	3,369.33	19	177.33
825374	1/26/2011	Planned Outage	291.15	3	97.05
825379	1/26/2011	Planned Outage	238.00	2	119.00
825385	1/26/2011	Planned Outage	325.27	2	162.63
825418	1/26/2011	Planned Outage	210.00	6	35.00
825419	1/26/2011	Planned Outage	2,820.00	2820	1.00
825438	1/27/2011	Planned Outage	47.20	2	23.60
825448	1/27/2011	Planned Outage	1,140.00	19	60.00
825449	1/27/2011	Planned Outage	10,976.00	56	196.00
825508	1/28/2011	Planned Outage	306.90	9	34.10
825510	1/28/2011	Planned Outage	499.95	11	45.45
825516	1/28/2011	Planned Outage	17.97	1	17.97
825527	1/28/2011	Planned Outage	65.00	5	13.00
825645	1/31/2011	Planned Outage	8.10	2	4.05
825676	1/31/2011	Planned Outage	299.07	4	74.77
825696	2/1/2011	Planned Outage	1,205.25	9	133.92
825700	2/1/2011	Planned Outage	919.33	4	229.83

## Appendix 1

### 2011 Planned Outages Table

825714	2/1/2011	Planned Outage	1,064.93	4	266.23
825956	2/1/2011	Planned Outage	339.43	1	339.43
825995	2/2/2011	Planned Outage	31.00	31	1.00
826149	2/2/2011	Planned Outage	1,569.00	3	523.00
826165	2/2/2011	Planned Outage	112.00	1	112.00
826174	2/2/2011	Planned Outage	3,696.00	16	231.00
826187	2/2/2011	Planned Outage	109.18	1	109.18
826193	2/2/2011	Planned Outage	170.00	2	85.00
826250	2/3/2011	Planned Outage	79.87	1	79.87
826254	2/3/2011	Planned Outage	64.85	1	64.85
826268	2/3/2011	Planned Outage	283.67	1	283.67
826270	2/3/2011	Planned Outage	344.17	1	344.17
826303	2/3/2011	Planned Outage	1,280.00	20	64.00
826473	2/6/2011	Planned Outage	45.57	1	45.57
826513	2/7/2011	Planned Outage	387.40	4	96.85
826558	2/8/2011	Planned Outage	3,264.00	16	204.00
826559	2/8/2011	Planned Outage	760.00	10	76.00
826565	2/8/2011	Planned Outage	402.00	6	67.00
826566	2/8/2011	Planned Outage	6,387.33	52	122.83
826577	2/8/2011	Planned Outage	141.87	2	70.93
826586	2/8/2011	Planned Outage	159.42	1	159.42
826592	2/8/2011	Planned Outage	4,043.00	13	311.00
826599	2/8/2011	Planned Outage	702.40	4	175.60
826607	2/8/2011	Planned Outage	413.00	7	59.00
826626	2/9/2011	Planned Outage	2,167.00	11	197.00
826627	2/9/2011	Planned Outage	2,347.67	10	234.77
826636	2/9/2011	Planned Outage	329.50	2	164.75
826655	2/9/2011	Planned Outage	432.00	3	144.00
826657	2/9/2011	Planned Outage	1,159.90	7	165.70
826662	2/9/2011	Planned Outage	33,384.00	234	142.67
826708	2/10/2011	Planned Outage	352.80	6	58.80
827049	2/11/2011	Planned Outage	108.00	3	36.00
827051	2/11/2011	Planned Outage	1,348.00	4	337.00
827055	2/11/2011	Planned Outage	134.62	1	134.62
827057	2/11/2011	Planned Outage	1,282.53	8	160.32
827058	2/11/2011	Planned Outage	134.87	1	134.87
827060	2/11/2011	Planned Outage	1,428.00	17	84.00
827080	2/11/2011	Planned Outage	2,257.00	37	61.00
827089	2/11/2011	Planned Outage	131.62	1	131.62
827135	2/12/2011	Planned Outage	45.00	1	45.00
827157	2/13/2011	Planned Outage	161.15	1	161.15

## Appendix 1

### 2011 Planned Outages Table

827181	2/13/2011	Planned Outage	52.85	1	52.85
827184	2/13/2011	Planned Outage	132.33	1	132.33
827203	2/14/2011	Planned Outage	552.00	3	184.00
827205	2/14/2011	Planned Outage	135.13	1	135.13
827209	2/14/2011	Planned Outage	2,401.40	6	400.23
827211	2/14/2011	Planned Outage	320.00	5	64.00
827234	2/14/2011	Planned Outage	950.00	5	190.00
827255	2/14/2011	Planned Outage	96.00	1	96.00
827268	2/14/2011	Planned Outage	122.45	1	122.45
827308	2/15/2011	Planned Outage	3,310.37	47	70.43
827309	2/15/2011	Planned Outage	848.42	5	169.68
827323	2/15/2011	Planned Outage	187.10	6	31.18
827337	2/15/2011	Planned Outage	74.77	2	37.38
827338	2/15/2011	Planned Outage	380.00	2	190.00
827362	2/16/2011	Planned Outage	347.77	2	173.88
827383	2/16/2011	Planned Outage	416.00	15	27.73
827389	2/16/2011	Planned Outage	270.00	5	54.00
827411	2/17/2011	Planned Outage	458.17	5	91.63
827412	2/17/2011	Planned Outage	174.50	6	29.08
827413	2/17/2011	Planned Outage	2,108.00	10	210.80
827416	2/17/2011	Planned Outage	1,600.13	8	200.02
827418	2/17/2011	Planned Outage	1,152.00	8	144.00
827423	2/17/2011	Planned Outage	68.13	2	34.07
827432	2/17/2011	Planned Outage	1,688.00	8	211.00
827439	2/17/2011	Planned Outage	43.05	1	43.05
827459	2/17/2011	Planned Outage	50.95	1	50.95
827527	2/19/2011	Planned Outage	53.93	1	53.93
827562	2/21/2011	Planned Outage	490.95	1	490.95
827567	2/21/2011	Planned Outage	264.00	132	2.00
827573	2/21/2011	Planned Outage	46,184.00	1354	216.00
827574	2/21/2011	Planned Outage	40,158.00	194	207.00
827580	2/21/2011	Planned Outage	275.47	4	68.87
827594	2/21/2011	Planned Outage	704.60	4	176.15
827637	2/21/2011	Planned Outage	385.00	11	35.00
827656	2/22/2011	Planned Outage	708.00	3	236.00
827663	2/22/2011	Planned Outage	391.63	2	195.82
827664	2/22/2011	Planned Outage	1,371.53	7	195.93
827682	2/22/2011	Planned Outage	859.20	6	143.20
827686	2/22/2011	Planned Outage	2,805.00	11	255.00
827717	2/23/2011	Planned Outage	3,497.00	13	269.00
827723	2/23/2011	Planned Outage	128.37	1	128.37

## Appendix 1

### 2011 Planned Outages Table

827724	2/23/2011	Planned Outage	110.00	1	110.00
827725	2/23/2011	Planned Outage	1,464.00	8	183.00
827729	2/23/2011	Planned Outage	169.55	1	169.55
827750	2/23/2011	Planned Outage	1,208.72	11	109.88
827757	2/23/2011	Planned Outage	471.47	13	36.27
827762	2/23/2011	Planned Outage	162.33	1	162.33
827791	2/23/2011	Planned Outage	130.43	13	10.03
827817	2/24/2011	Planned Outage	5,196.80	42	123.73
827843	2/23/2011	Planned Outage	4,725.00	175	27.00
827910	2/25/2011	Planned Outage	81.45	1	81.45
827928	2/26/2011	Planned Outage	153.75	1	153.75
827958	2/27/2011	Planned Outage	792.00	3	264.00
827988	2/28/2011	Planned Outage	188.00	4	47.00
827991	2/28/2011	Planned Outage	1,092.00	13	84.00
828048	3/1/2011	Planned Outage	52.20	2	26.10
828072	3/1/2011	Planned Outage	1,474.67	10	147.47
828107	3/2/2011	Planned Outage	1,220.27	4	305.07
828108	3/2/2011	Planned Outage	153.00	17	9.00
828110	3/2/2011	Planned Outage	525.02	17	30.88
828111	3/2/2011	Planned Outage	433.53	14	30.97
828113	3/2/2011	Planned Outage	271.10	2	135.55
828117	3/2/2011	Planned Outage	204.00	17	12.00
828119	3/2/2011	Planned Outage	2,327.87	17	136.93
828120	3/2/2011	Planned Outage	1,917.53	14	136.97
828128	3/2/2011	Planned Outage	66.48	1	66.48
828129	3/2/2011	Planned Outage	661.20	4	165.30
828136	3/2/2011	Planned Outage	440.00	20	22.00
828155	3/2/2011	Planned Outage	747.00	9	83.00
828165	3/3/2011	Planned Outage	386.67	4	96.67
828176	3/3/2011	Planned Outage	29,342.10	94	312.15
828371	3/6/2011	Planned Outage	11,802.00	843	14.00
828375	3/6/2011	Planned Outage	31,025.00	85	365.00
828376	3/6/2011	Planned Outage	8,328.00	24	347.00
828395	3/6/2011	Planned Outage	2,815.00	563	5.00
828396	3/6/2011	Planned Outage	1,686.00	843	2.00
828397	3/6/2011	Planned Outage	486.00	243	2.00
828409	3/6/2011	Planned Outage	585.47	8	73.18
828425	3/7/2011	Planned Outage	51.48	1	51.48
828428	3/7/2011	Planned Outage	918.00	9	102.00
828456	3/7/2011	Planned Outage	206.00	2	103.00
828510	3/8/2011	Planned Outage	112.23	1	112.23



## Appendix 1

### 2011 Planned Outages Table

828511	3/8/2011	Planned Outage	810.00	27	30.00
828520	3/8/2011	Planned Outage	1,126.73	4	281.68
828524	3/8/2011	Planned Outage	117.60	8	14.70
828538	3/8/2011	Planned Outage	2,107.20	32	65.85
828546	3/8/2011	Planned Outage	1,507.50	10	150.75
828578	3/9/2011	Planned Outage	129.03	7	18.43
828604	3/9/2011	Planned Outage	13.30	3	4.43
828907	3/10/2011	Planned Outage	29.57	2	14.78
828910	3/10/2011	Planned Outage	876.00	12	73.00
828924	3/10/2011	Planned Outage	2,231.40	36	61.98
828991	3/11/2011	Planned Outage	666.00	6	111.00
829000	3/11/2011	Planned Outage	11.40	4	2.85
829004	3/11/2011	Planned Outage	90.23	2	45.12
829085	3/12/2011	Planned Outage	897.00	13	69.00
829104	3/13/2011	Planned Outage	858.55	21	40.88
829109	3/13/2011	Planned Outage	410.00	10	41.00
829113	3/13/2011	Planned Outage	2,140.00	20	107.00
829151	3/14/2011	Planned Outage	3,074.07	26	118.23
829153	3/14/2011	Planned Outage	104.30	2	52.15
829165	3/14/2011	Planned Outage	278.27	4	69.57
829172	3/14/2011	Planned Outage	1,080.73	4	270.18
829173	3/14/2011	Planned Outage	51.02	1	51.02
829178	3/14/2011	Planned Outage	362.55	9	40.28
829180	3/14/2011	Planned Outage	52.00	1	52.00
829510	3/15/2011	Planned Outage	9,141.00	18	507.83
829515	3/15/2011	Planned Outage	1,320.47	4	330.12
829571	3/16/2011	Planned Outage	2,577.03	38	67.82
829581	3/16/2011	Planned Outage	531.60	2	265.80
829589	3/16/2011	Planned Outage	23.73	4	5.93
829590	3/16/2011	Planned Outage	22.20	3	7.40
829591	3/16/2011	Planned Outage	1,555.00	15	103.67
829596	3/16/2011	Planned Outage	727.25	5	145.45
829656	3/17/2011	Planned Outage	19.93	1	19.93
829682	3/18/2011	Planned Outage	5.25	1	5.25
829683	3/18/2011	Planned Outage	708.00	4	177.00
829795	3/21/2011	Planned Outage	500.00	4	125.00
829803	3/21/2011	Planned Outage	1,312.30	6	218.72
829809	3/21/2011	Planned Outage	465.50	6	77.58
829810	3/21/2011	Planned Outage	248.00	4	62.00
829815	3/21/2011	Planned Outage	45.00	3	15.00
829819	3/21/2011	Planned Outage	2,223.00	13	171.00

## Appendix 1

### 2011 Planned Outages Table

829839	3/21/2011	Planned Outage	529.20	3	176.40
829840	3/21/2011	Planned Outage	26,000.00	1300	20.00
829879	3/22/2011	Planned Outage	470.00	2	235.00
829880	3/22/2011	Planned Outage	705.00	3	235.00
829882	3/22/2011	Planned Outage	2,675.33	10	267.53
829899	3/22/2011	Planned Outage	63.88	1	63.88
829903	3/22/2011	Planned Outage	190.00	5	38.00
829909	3/22/2011	Planned Outage	392.00	8	49.00
829916	3/22/2011	Planned Outage	6,776.00	44	154.00
829939	3/23/2011	Planned Outage	1,482.00	2	741.00
829946	3/23/2011	Planned Outage	105.52	1	105.52
830011	3/23/2011	Planned Outage	400.47	4	100.12
830510	3/23/2011	Planned Outage	148.00	4	37.00
830537	3/24/2011	Planned Outage	677.73	4	169.43
830541	3/24/2011	Planned Outage	173.28	1	173.28
830559	3/24/2011	Planned Outage	12,783.60	268	47.70
831041	3/25/2011	Planned Outage	217.37	2	108.68
831051	3/25/2011	Planned Outage	87.20	2	43.60
831312	3/28/2011	Planned Outage	792.00	9	88.00
831327	3/28/2011	Planned Outage	363.30	3	121.10
831332	3/28/2011	Planned Outage	19.23	1	19.23
831340	3/28/2011	Planned Outage	51.87	4	12.97
831343	3/28/2011	Planned Outage	60.78	1	60.78
831370	3/28/2011	Planned Outage	168.15	3	56.05
831398	3/28/2011	Planned Outage	1,378.40	8	172.30
831401	3/28/2011	Planned Outage	179.75	3	59.92
831511	3/29/2011	Planned Outage	68.97	1	68.97
831512	3/29/2011	Planned Outage	248.00	1	248.00
831514	3/29/2011	Planned Outage	729.00	3	243.00
831517	3/29/2011	Planned Outage	2,615.48	23	113.72
831529	3/29/2011	Planned Outage	253.75	3	84.58
831538	3/29/2011	Planned Outage	93.05	1	93.05
831544	3/29/2011	Planned Outage	76.57	1	76.57
831551	3/29/2011	Planned Outage	20.55	1	20.55
831556	3/29/2011	Planned Outage	65.60	4	16.40
831602	3/30/2011	Planned Outage	6,526.00	130	50.20
831726	3/30/2011	Planned Outage	365.87	98	3.73
831751	3/30/2011	Planned Outage	356.30	2	178.15
831782	3/30/2011	Planned Outage	264.45	1	264.45
831794	3/31/2011	Planned Outage	230.83	2	115.42
831797	3/31/2011	Planned Outage	30.70	1	30.70

## Appendix 1

### 2011 Planned Outages Table

831801	3/31/2011	Planned Outage	115.90	1	115.90
831802	3/31/2011	Planned Outage	232.33	2	116.17
831806	3/31/2011	Planned Outage	7,048.20	68	103.65
831813	3/31/2011	Planned Outage	44.67	1	44.67
831817	3/31/2011	Planned Outage	101.78	1	101.78
831818	3/31/2011	Planned Outage	22.00	2	11.00
831824	3/31/2011	Planned Outage	639.33	7	91.33
831825	3/31/2011	Planned Outage	1,625.25	9	180.58
831866	4/1/2011	Planned Outage	165.53	1	165.53
831869	4/1/2011	Planned Outage	152.30	1	152.30
831880	4/1/2011	Planned Outage	676.00	4	169.00
831882	4/1/2011	Planned Outage	38.08	1	38.08
831898	4/1/2011	Planned Outage	189.20	4	47.30
831901	4/1/2011	Planned Outage	256.00	8	32.00
831905	4/1/2011	Planned Outage	132.80	2	66.40
831906	4/1/2011	Planned Outage	310.00	4	77.50
832030	4/2/2011	Planned Outage	45,019.80	1565	29.00
832075	4/3/2011	Planned Outage	1,058.67	5	211.73
832076	4/3/2011	Planned Outage	418.00	2	209.00
832088	4/3/2011	Planned Outage	283.97	7	40.57
832091	4/3/2011	Planned Outage	84.88	1	84.88
832112	4/4/2011	Planned Outage	98.00	1	98.00
832116	4/4/2011	Planned Outage	81.15	1	81.15
832123	4/4/2011	Planned Outage	492.00	3	164.00
832124	4/4/2011	Planned Outage	181.00	3	60.33
832125	4/4/2011	Planned Outage	85.52	1	85.52
832126	4/4/2011	Planned Outage	223.03	1	223.03
832131	4/4/2011	Planned Outage	5,305.88	623	8.52
832158	4/4/2011	Planned Outage	253.07	2	126.53
832159	4/4/2011	Planned Outage	211.67	5	42.33
832164	4/4/2011	Planned Outage	220.00	2	110.00
832165	4/4/2011	Planned Outage	110.02	1	110.02
832166	4/4/2011	Planned Outage	330.45	3	110.15
832175	4/4/2011	Planned Outage	540.00	4	135.00
832216	4/4/2011	Planned Outage	1,004.80	4	251.20
832236	4/4/2011	Planned Outage	2,500.12	13	192.32
832246	4/4/2011	Planned Outage	446.67	5	89.33
833452	4/5/2011	Planned Outage	420.35	7	60.05
833849	4/5/2011	Planned Outage	10,686.90	466	22.93
834046	4/5/2011	Planned Outage	121.00	1	121.00
834059	4/5/2011	Planned Outage	142.83	1	142.83

## Appendix 1

### 2011 Planned Outages Table

834096	4/5/2011	Planned Outage	189.25	3	63.08
834252	4/6/2011	Planned Outage	1,845.00	3	615.00
834334	4/6/2011	Planned Outage	245.00	5	49.00
834361	4/6/2011	Planned Outage	314.50	5	62.90
834370	4/7/2011	Planned Outage	3,159.00	27	117.00
834374	4/7/2011	Planned Outage	219.00	15	14.60
834384	4/7/2011	Planned Outage	82.05	1	82.05
834388	4/7/2011	Planned Outage	11.48	1	11.48
834392	4/7/2011	Planned Outage	9.70	1	9.70
834403	4/7/2011	Planned Outage	4.77	1	4.77
834408	4/7/2011	Planned Outage	66.97	2	33.48
834422	4/7/2011	Planned Outage	1,333.23	94	14.18
834432	4/7/2011	Planned Outage	1,164.00	12	97.00
834476	4/8/2011	Planned Outage	644.00	4	161.00
834484	4/8/2011	Planned Outage	80.30	1	80.30
834489	4/8/2011	Planned Outage	352.00	22	16.00
834716	4/11/2011	Planned Outage	443.40	4	110.85
834731	4/11/2011	Planned Outage	125.27	1	125.27
834734	4/11/2011	Planned Outage	43.90	3	14.63
834740	4/11/2011	Planned Outage	295.13	2	147.57
834773	4/11/2011	Planned Outage	21.78	1	21.78
834814	4/12/2011	Planned Outage	355.35	1	355.35
834820	4/12/2011	Planned Outage	313.33	8	39.17
834824	4/12/2011	Planned Outage	2,128.00	8	266.00
834837	4/12/2011	Planned Outage	62.15	3	20.72
834842	4/12/2011	Planned Outage	248.00	4	62.00
834857	4/12/2011	Planned Outage	354.67	32	11.08
834909	4/13/2011	Planned Outage	23.88	1	23.88
834913	4/13/2011	Planned Outage	441.20	2	220.60
834923	4/13/2011	Planned Outage	224.00	2	112.00
834924	4/13/2011	Planned Outage	12,581.40	83	151.58
834932	4/13/2011	Planned Outage	225.00	4	56.25
835013	4/13/2011	Planned Outage	28.00	2	14.00
835052	4/14/2011	Planned Outage	1,185.73	8	148.22
835054	4/14/2011	Planned Outage	600.00	4	150.00
835068	4/14/2011	Planned Outage	506.70	2	253.35
835069	4/14/2011	Planned Outage	7,246.80	66	109.80
835076	4/14/2011	Planned Outage	83.20	3	28.00
835078	4/14/2011	Planned Outage	555.00	5	111.00
835079	4/14/2011	Planned Outage	228.82	1	228.82
835080	4/14/2011	Planned Outage	333.67	5	66.73

## Appendix 1

### 2011 Planned Outages Table

835085	4/14/2011	Planned Outage	483.00	7	69.00
835089	4/14/2011	Planned Outage	115.27	2	57.63
835092	4/14/2011	Planned Outage	21,294.00	78	273.00
835094	4/14/2011	Planned Outage	104.40	4	26.10
835133	4/15/2011	Planned Outage	55.65	3	18.55
835134	4/15/2011	Planned Outage	44.00	1	44.00
835135	4/15/2011	Planned Outage	272.00	4	68.00
835147	4/15/2011	Planned Outage	321.93	4	80.48
835150	4/15/2011	Planned Outage	142.00	1	142.00
835152	4/15/2011	Planned Outage	141.30	3	47.10
835356	4/18/2011	Planned Outage	119.13	4	29.78
835364	4/18/2011	Planned Outage	93.00	1	93.00
835370	4/18/2011	Planned Outage	342.60	2	171.30
835371	4/18/2011	Planned Outage	1,892.73	22	86.03
835374	4/18/2011	Planned Outage	293.73	4	73.43
835379	4/18/2011	Planned Outage	303.53	4	75.88
835380	4/18/2011	Planned Outage	452.00	6	75.33
835384	4/18/2011	Planned Outage	161.27	4	40.32
835385	4/18/2011	Planned Outage	912.92	25	36.52
835386	4/18/2011	Planned Outage	177.33	5	35.47
835387	4/18/2011	Planned Outage	210.33	2	105.17
835405	4/18/2011	Planned Outage	184.60	3	61.53
835438	4/18/2011	Planned Outage	76.43	2	38.22
835440	4/18/2011	Planned Outage	250.60	4	62.65
835490	4/19/2011	Planned Outage	553.20	2	276.60
835491	4/19/2011	Planned Outage	80.00	40	2.00
835495	4/19/2011	Planned Outage	729.00	3	243.00
835497	4/19/2011	Planned Outage	24.03	2	12.02
835498	4/19/2011	Planned Outage	52.13	4	13.03
835499	4/19/2011	Planned Outage	688.58	5	137.72
835501	4/19/2011	Planned Outage	428.00	4	107.00
835518	4/19/2011	Planned Outage	31.72	1	31.72
835519	4/19/2011	Planned Outage	76.90	2	38.45
835531	4/19/2011	Planned Outage	371.70	2	185.85
835545	4/19/2011	Planned Outage	275.83	2	137.92
835546	4/19/2011	Planned Outage	827.40	9	91.93
835574	4/20/2011	Planned Outage	45.00	1	45.00
835616	4/20/2011	Planned Outage	2,554.53	14	182.47
835621	4/20/2011	Planned Outage	88.13	1	88.13
835630	4/20/2011	Planned Outage	236.90	3	78.97
835641	4/20/2011	Planned Outage	101.60	2	50.80

## Appendix 1

### 2011 Planned Outages Table

835643	4/20/2011	Planned Outage	121.00	1	121.00
835645	4/20/2011	Planned Outage	66.25	3	22.08
835660	4/20/2011	Planned Outage	376.00	4	94.00
835662	4/20/2011	Planned Outage	426.15	3	142.05
835668	4/20/2011	Planned Outage	108.33	5	21.67
835709	4/21/2011	Planned Outage	195.00	5	39.00
835729	4/21/2011	Planned Outage	28.52	1	28.52
835764	4/21/2011	Planned Outage	872.60	6	145.43
835766	4/21/2011	Planned Outage	12.00	3	4.00
835904	4/22/2011	Planned Outage	125.97	1	125.97
835906	4/22/2011	Planned Outage	15,551.80	139	111.88
835907	4/22/2011	Planned Outage	52.90	1	52.90
835918	4/22/2011	Planned Outage	184.98	1	184.98
836069	4/25/2011	Planned Outage	155.70	2	77.85
836081	4/25/2011	Planned Outage	7,744.75	65	119.15
836082	4/25/2011	Planned Outage	531.00	3	177.00
836086	4/25/2011	Planned Outage	138.00	1	138.00
836096	4/25/2011	Planned Outage	35.28	1	35.28
836103	4/25/2011	Planned Outage	231.47	4	57.87
836105	4/25/2011	Planned Outage	497.25	5	99.45
836113	4/25/2011	Planned Outage	427.55	3	142.52
836135	4/25/2011	Planned Outage	74.48	1	74.48
836137	4/25/2011	Planned Outage	338.10	9	37.57
836260	4/26/2011	Planned Outage	21.60	1	21.60
836265	4/26/2011	Planned Outage	80.38	1	80.38
836268	4/26/2011	Planned Outage	233.10	3	77.70
836270	4/26/2011	Planned Outage	277.90	3	92.63
836271	4/26/2011	Planned Outage	41.62	1	41.62
836272	4/26/2011	Planned Outage	41.33	1	41.33
836273	4/26/2011	Planned Outage	271.50	3	90.50
836274	4/26/2011	Planned Outage	89.40	1	89.40
836276	4/26/2011	Planned Outage	83.83	1	83.83
836284	4/26/2011	Planned Outage	2,447.20	84	29.13
836309	4/26/2011	Planned Outage	77.23	1	77.23
836310	4/26/2011	Planned Outage	77.38	1	77.38
836315	4/26/2011	Planned Outage	28.28	1	28.28
836325	4/26/2011	Planned Outage	144.00	5	28.80
836333	4/26/2011	Planned Outage	107.57	1	107.57
836356	4/27/2011	Planned Outage	39.32	1	39.32
836360	4/27/2011	Planned Outage	1,000.00	20	50.00
836362	4/27/2011	Planned Outage	99.00	3	33.00

## Appendix 1

### 2011 Planned Outages Table

836364	4/27/2011	Planned Outage	471.00	3	157.00
836367	4/27/2011	Planned Outage	129.95	1	129.95
836369	4/27/2011	Planned Outage	96.00	3	32.00
836373	4/27/2011	Planned Outage	108.87	4	27.22
836374	4/27/2011	Planned Outage	201.00	1	201.00
836379	4/27/2011	Planned Outage	660.00	11	60.00
836380	4/27/2011	Planned Outage	409.80	12	34.15
836382	4/27/2011	Planned Outage	1,420.32	31	45.82
836392	4/27/2011	Planned Outage	776.00	8	97.00
836398	4/27/2011	Planned Outage	416.00	8	52.00
836426	4/27/2011	Planned Outage	118.27	2	59.13
836789	4/28/2011	Planned Outage	2,582.00	2	1,291.00
836790	4/28/2011	Planned Outage	3,819.00	3	1,273.00
836791	4/28/2011	Planned Outage	80.23	2	40.12
836874	4/29/2011	Planned Outage	7,701.65	57	135.12
836887	4/29/2011	Planned Outage	12.45	1	12.45
836894	4/29/2011	Planned Outage	1,066.67	80	13.33
836911	4/29/2011	Planned Outage	21.63	1	21.63
836942	4/29/2011	Planned Outage	196.00	2	98.00
836950	4/29/2011	Planned Outage	162.50	5	32.50
837129	5/2/2011	Planned Outage	427.00	7	61.00
837133	5/2/2011	Planned Outage	4,200.00	60	70.00
837136	5/2/2011	Planned Outage	7,560.00	70	108.00
837137	5/2/2011	Planned Outage	438.50	15	29.23
837138	5/2/2011	Planned Outage	558.00	31	18.00
837140	5/2/2011	Planned Outage	289.00	17	17.00
837143	5/2/2011	Planned Outage	328.53	7	46.93
837145	5/2/2011	Planned Outage	969.00	51	19.00
837147	5/2/2011	Planned Outage	107.43	2	53.72
837152	5/2/2011	Planned Outage	132.07	4	33.02
837157	5/2/2011	Planned Outage	102.63	2	51.32
837179	5/2/2011	Planned Outage	134.50	1	134.50
837196	5/2/2011	Planned Outage	39.00	1	39.00
837197	5/2/2011	Planned Outage	154.58	5	30.92
837214	5/3/2011	Planned Outage	280.00	2	141.03
837222	5/3/2011	Planned Outage	19.70	1	19.70
837261	5/3/2011	Planned Outage	1,271.87	8	158.98
837265	5/3/2011	Planned Outage	306.83	1	306.83
837266	5/3/2011	Planned Outage	401.42	5	80.28
837299	5/3/2011	Planned Outage	729.00	27	27.00
837303	5/3/2011	Planned Outage	86.77	1	86.77

## Appendix 1

### 2011 Planned Outages Table

837307	5/3/2011	Planned Outage	229,278.00	1442	159.00
837309	5/3/2011	Planned Outage	38.53	1	38.53
837348	5/3/2011	Planned Outage	33,973.30	104	326.67
837445	5/4/2011	Planned Outage	341.00	11	31.00
837489	5/4/2011	Planned Outage	104.20	1	104.20
837544	5/5/2011	Planned Outage	604.73	2	302.37
837545	5/5/2011	Planned Outage	6,928.37	23	301.23
837571	5/5/2011	Planned Outage	126.00	2	63.00
837607	5/5/2011	Planned Outage	445.00	5	89.00
837646	5/6/2011	Planned Outage	409.20	4	102.30
837663	5/6/2011	Planned Outage	112.90	1	112.90
837705	5/6/2011	Planned Outage	198.72	1	198.72
837798	5/7/2011	Planned Outage	118.00	1	118.00
837896	5/9/2011	Planned Outage	146.30	3	48.77
837904	5/9/2011	Planned Outage	369.05	3	123.02
837905	5/9/2011	Planned Outage	122.08	1	122.08
837906	5/9/2011	Planned Outage	380.00	50	7.60
837910	5/9/2011	Planned Outage	180.75	1	180.75
837957	5/9/2011	Planned Outage	418.00	2	209.00
838022	5/10/2011	Planned Outage	209.05	3	69.68
838092	5/11/2011	Planned Outage	354.00	2	177.00
838093	5/11/2011	Planned Outage	692.00	4	173.00
838097	5/11/2011	Planned Outage	1,344.00	3	448.00
838098	5/11/2011	Planned Outage	453.00	3	151.00
838099	5/11/2011	Planned Outage	477.00	3	159.00
838102	5/11/2011	Planned Outage	256.30	2	128.15
838103	5/11/2011	Planned Outage	231.00	3	77.00
838104	5/11/2011	Planned Outage	410.00	2	205.00
838107	5/11/2011	Planned Outage	406.17	1	406.17
838113	5/11/2011	Planned Outage	14.42	1	14.42
838119	5/11/2011	Planned Outage	780.00	30	26.00
838120	5/11/2011	Planned Outage	15.00	1	15.00
838125	5/11/2011	Planned Outage	436.00	4	109.00
838128	5/11/2011	Planned Outage	1,136.00	4	284.00
838129	5/11/2011	Planned Outage	9.00	1	9.00
838138	5/11/2011	Planned Outage	157.00	1	157.00
838148	5/11/2011	Planned Outage	1,853.50	33	56.17
838204	5/12/2011	Planned Outage	62.50	3	20.83
838205	5/12/2011	Planned Outage	167.60	8	20.95
838207	5/12/2011	Planned Outage	359.02	13	27.62
838209	5/12/2011	Planned Outage	2,340.62	11	212.78



## Appendix 1

### 2011 Planned Outages Table

838215	5/12/2011	Planned Outage	225.33	5	45.07
838216	5/12/2011	Planned Outage	229.20	4	57.30
838217	5/12/2011	Planned Outage	12.78	1	12.78
838221	5/12/2011	Planned Outage	132.00	6	22.00
838235	5/12/2011	Planned Outage	19.27	2	9.63
838307	5/12/2011	Planned Outage	1,547.00	13	119.00
838339	5/13/2011	Planned Outage	903.45	9	100.38
838356	5/13/2011	Planned Outage	487.10	3	162.37
838366	5/13/2011	Planned Outage	55.67	2	27.83
839119	5/16/2011	Planned Outage	322.00	14	23.00
839133	5/16/2011	Planned Outage	296.00	1	296.00
839137	5/16/2011	Planned Outage	1,105.00	13	85.00
839174	5/16/2011	Planned Outage	501.40	3	167.13
839178	5/16/2011	Planned Outage	945.05	3	315.02
839189	5/16/2011	Planned Outage	810.00	9	90.00
839195	5/16/2011	Planned Outage	109.75	3	36.58
839200	5/16/2011	Planned Outage	508.07	4	127.02
839310	5/17/2011	Planned Outage	1,124.00	2	562.00
839313	5/17/2011	Planned Outage	442.00	1	442.00
839326	5/17/2011	Planned Outage	716.00	2	358.00
839340	5/17/2011	Planned Outage	100.50	10	10.05
839343	5/17/2011	Planned Outage	1,814.30	6	302.38
839371	5/17/2011	Planned Outage	4,284.00	36	119.00
839377	5/17/2011	Planned Outage	972.00	9	108.00
839380	5/17/2011	Planned Outage	100.00	5	20.00
839393	5/17/2011	Planned Outage	564.00	3	188.00
839431	5/18/2011	Planned Outage	3,759.00	21	179.00
839443	5/18/2011	Planned Outage	111.18	1	111.18
839453	5/18/2011	Planned Outage	291.42	1	291.42
839454	5/18/2011	Planned Outage	2,358.00	18	131.00
839455	5/18/2011	Planned Outage	780.50	6	130.08
839459	5/18/2011	Planned Outage	316.00	2	158.00
839461	5/18/2011	Planned Outage	524.57	2	262.28
839465	5/18/2011	Planned Outage	831.50	10	83.15
839467	5/18/2011	Planned Outage	266.75	5	53.35
839480	5/18/2011	Planned Outage	344.30	6	57.38
839490	5/18/2011	Planned Outage	159.60	7	22.80
839494	5/18/2011	Planned Outage	346.00	2	173.00
839509	5/18/2011	Planned Outage	327.80	2	163.90
839559	5/19/2011	Planned Outage	979.00	30	32.63
839572	5/19/2011	Planned Outage	267.10	2	133.55

## Appendix 1

### 2011 Planned Outages Table

839574	5/19/2011	Planned Outage	7,299.27	1063	6.87
839651	5/19/2011	Planned Outage	24,307.30	1063	22.87
839667	5/19/2011	Planned Outage	171.00	1	171.00
839675	5/19/2011	Planned Outage	408.00	4	102.00
839680	5/19/2011	Planned Outage	88.73	1	88.73
839786	5/20/2011	Planned Outage	498.00	6	83.00
839794	5/20/2011	Planned Outage	176.50	3	58.83
839813	5/21/2011	Planned Outage	378.00	9	42.00
839915	5/22/2011	Planned Outage	114.40	4	28.60
839954	5/23/2011	Planned Outage	25.00	1	25.00
839955	5/23/2011	Planned Outage	95.00	5	19.00
839957	5/23/2011	Planned Outage	436.15	3	145.38
839958	5/23/2011	Planned Outage	2,320.32	23	100.88
839959	5/23/2011	Planned Outage	197.15	1	197.15
839962	5/23/2011	Planned Outage	889.00	5	177.80
839963	5/23/2011	Planned Outage	200.00	4	50.00
839964	5/23/2011	Planned Outage	3,603.17	26	138.58
839966	5/23/2011	Planned Outage	209.60	4	52.40
839975	5/23/2011	Planned Outage	2,664.00	18	148.00
839980	5/23/2011	Planned Outage	418.83	7	59.83
839995	5/23/2011	Planned Outage	477.25	3	159.08
839999	5/23/2011	Planned Outage	337.98	7	48.28
840003	5/23/2011	Planned Outage	68.80	1	68.80
840102	5/24/2011	Planned Outage	4,983.00	33	151.00
840278	5/24/2011	Planned Outage	9,102.87	44	206.88
840293	5/24/2011	Planned Outage	4,784.00	26	184.00
840329	5/25/2011	Planned Outage	177.58	1	177.58
840339	5/25/2011	Planned Outage	96.87	1	96.87
840340	5/25/2011	Planned Outage	324.27	2	162.13
840353	5/25/2011	Planned Outage	1,280.53	7	182.93
840354	5/25/2011	Planned Outage	118.88	1	118.88
840355	5/25/2011	Planned Outage	272.00	4	68.00
840358	5/25/2011	Planned Outage	272.00	4	68.00
840367	5/25/2011	Planned Outage	2,784.83	62	44.92
840369	5/25/2011	Planned Outage	298.63	17	17.57
840373	5/25/2011	Planned Outage	1,300.00	4	325.00
840374	5/25/2011	Planned Outage	10,791.00	44	245.25
840385	5/25/2011	Planned Outage	558.00	3	186.00
840388	5/25/2011	Planned Outage	4,105.00	5	821.00
840408	5/25/2011	Planned Outage	1,142.12	29	39.38
840419	5/25/2011	Planned Outage	1,169.00	7	167.00

## Appendix 1

### 2011 Planned Outages Table

840425	5/26/2011	Planned Outage	1,023.00	3	341.00
840426	5/26/2011	Planned Outage	2,728.00	8	341.00
840428	5/26/2011	Planned Outage	588.00	4	147.00
840437	5/26/2011	Planned Outage	97.00	1	97.00
840439	5/26/2011	Planned Outage	350.00	2	175.00
840446	5/26/2011	Planned Outage	627.43	7	89.63
840458	5/26/2011	Planned Outage	598.00	12	49.83
840473	5/26/2011	Planned Outage	1,268.80	13	97.60
840564	5/27/2011	Planned Outage	58.00	1	58.00
840580	5/27/2011	Planned Outage	284.00	4	71.00
841081	5/31/2011	Planned Outage	448.00	4	112.00
841083	5/31/2011	Planned Outage	261.00	9	29.00
841087	5/31/2011	Planned Outage	52.33	4	13.08
841096	5/31/2011	Planned Outage	1,025.00	5	205.00
841098	5/31/2011	Planned Outage	92.72	1	92.72
841116	5/31/2011	Planned Outage	528.00	3	176.00
841119	5/31/2011	Planned Outage	55.50	1	55.50
841124	5/31/2011	Planned Outage	258.00	1	258.00
841150	5/31/2011	Planned Outage	41.43	1	41.43
841158	5/31/2011	Planned Outage	916.00	4	229.00
841193	6/1/2011	Planned Outage	183.13	1	183.13
841195	6/1/2011	Planned Outage	13.02	1	13.02
841206	6/1/2011	Planned Outage	332.60	3	110.87
841207	6/1/2011	Planned Outage	9,087.07	323	28.13
841208	6/1/2011	Planned Outage	5,278.67	107	49.33
841212	6/1/2011	Planned Outage	836.00	4	209.00
841225	6/1/2011	Planned Outage	68.37	1	68.37
841234	6/1/2011	Planned Outage	177.93	1	177.93
841264	6/1/2011	Planned Outage	49.70	1	49.70
841295	6/1/2011	Planned Outage	389.38	1	389.38
841337	6/2/2011	Planned Outage	228.83	2	114.42
841343	6/2/2011	Planned Outage	129.85	1	129.85
841348	6/2/2011	Planned Outage	158.90	2	79.45
841349	6/2/2011	Planned Outage	94.08	5	18.82
841355	6/2/2011	Planned Outage	337.10	3	112.37
841361	6/2/2011	Planned Outage	37.40	2	18.70
841377	6/2/2011	Planned Outage	449.00	2	224.50
841500	6/3/2011	Planned Outage	23.00	1	23.00
841567	6/3/2011	Planned Outage	2,329.00	73	68.00
841571	6/3/2011	Planned Outage	17,143.00	71	241.45
841634	6/3/2011	Planned Outage	70.00	2	35.00

## Appendix 1

### 2011 Planned Outages Table

841635	6/3/2011	Planned Outage	107.30	3	35.77
841638	6/3/2011	Planned Outage	112.95	3	37.65
841688	6/3/2011	Planned Outage	62.00	2	31.00
842113	6/5/2011	Planned Outage	770.55	3	256.85
842114	6/5/2011	Planned Outage	619.77	2	309.88
842267	6/6/2011	Planned Outage	790.18	7	112.88
842270	6/6/2011	Planned Outage	9,575.80	52	184.15
842274	6/6/2011	Planned Outage	1,160.00	5	232.00
842276	6/6/2011	Planned Outage	161.15	3	53.72
842284	6/6/2011	Planned Outage	1,820.00	10	182.00
842288	6/6/2011	Planned Outage	1,699.55	19	89.45
842290	6/6/2011	Planned Outage	42.18	1	42.18
842291	6/6/2011	Planned Outage	267.70	3	89.23
842295	6/6/2011	Planned Outage	34.38	1	34.38
842300	6/6/2011	Planned Outage	11.58	1	11.58
842301	6/6/2011	Planned Outage	95.10	3	31.70
842606	6/7/2011	Planned Outage	376.05	3	125.35
842642	6/7/2011	Planned Outage	176.80	4	44.20
842663	6/7/2011	Planned Outage	1,470.00	10	147.00
842681	6/7/2011	Planned Outage	78.00	1	78.00
842696	6/7/2011	Planned Outage	70.55	1	70.55
842701	6/7/2011	Planned Outage	39.57	1	39.57
842703	6/7/2011	Planned Outage	25.72	1	25.72
842709	6/7/2011	Planned Outage	54.70	2	27.35
842732	6/7/2011	Planned Outage	264.13	7	37.73
842857	6/8/2011	Planned Outage	110.75	5	22.15
842863	6/8/2011	Planned Outage	352.73	2	176.37
842864	6/8/2011	Planned Outage	335.43	2	167.72
842872	6/8/2011	Planned Outage	640.92	5	128.18
842877	6/8/2011	Planned Outage	312.33	5	62.47
842879	6/8/2011	Planned Outage	26,803.10	1371	19.55
842926	6/8/2011	Planned Outage	34.17	1	34.17
842937	6/8/2011	Planned Outage	662.00	4	165.50
843152	6/9/2011	Planned Outage	23,735.00	235	101.00
843153	6/9/2011	Planned Outage	562.85	3	187.62
843174	6/9/2011	Planned Outage	1,557.50	7	222.50
843223	6/9/2011	Planned Outage	106.75	1	106.75
843254	6/10/2011	Planned Outage	155.90	1	155.90
843512	6/10/2011	Planned Outage	1,201.33	1060	1.13
843573	6/10/2011	Planned Outage	15,678.00	134	117.00
843577	6/10/2011	Planned Outage	2,473.33	1060	2.33

## Appendix 1

### 2011 Planned Outages Table

843603	6/10/2011	Planned Outage	31,075.70	1060	29.32
843692	6/10/2011	Planned Outage	376.77	2	188.38
843726	6/10/2011	Planned Outage	182.42	5	36.48
843728	6/10/2011	Planned Outage	107.17	2	53.58
843736	6/10/2011	Planned Outage	137.78	1	137.78
843781	6/10/2011	Planned Outage	15,467.40	1565	9.88
843782	6/10/2011	Planned Outage	2,351.75	1227	1.92
843787	6/10/2011	Planned Outage	34,713.90	2792	12.43
843886	6/11/2011	Planned Outage	1,046.50	130	8.05
844394	6/13/2011	Planned Outage	204.77	1	204.77
844397	6/13/2011	Planned Outage	300.00	6	50.00
844918	6/14/2011	Planned Outage	60.80	3	20.27
845155	6/15/2011	Planned Outage	412.20	3	137.40
845193	6/15/2011	Planned Outage	178.03	1	178.03
845197	6/15/2011	Planned Outage	273.00	21	13.00
845201	6/15/2011	Planned Outage	598.50	9	66.50
845203	6/15/2011	Planned Outage	1,672.00	44	38.00
845206	6/15/2011	Planned Outage	1,122.00	66	17.00
845217	6/15/2011	Planned Outage	210.35	7	30.05
845218	6/15/2011	Planned Outage	69.63	1	69.63
845231	6/15/2011	Planned Outage	609.23	7	87.03
845232	6/15/2011	Planned Outage	47.43	2	23.72
845270	6/15/2011	Planned Outage	393.00	3	131.00
845279	6/15/2011	Planned Outage	428.47	4	107.12
845326	6/16/2011	Planned Outage	959.87	23	41.73
845537	6/16/2011	Planned Outage	3,057.45	17	179.85
845539	6/16/2011	Planned Outage	3,834.00	54	71.00
845542	6/16/2011	Planned Outage	3,718.80	27	137.73
845566	6/16/2011	Planned Outage	320.00	4	80.00
845637	6/16/2011	Planned Outage	6,370.00	91	70.00
845693	6/17/2011	Planned Outage	1,329.90	66	20.15
845698	6/17/2011	Planned Outage	213.87	4	53.47
845700	6/17/2011	Planned Outage	443.53	4	110.88
845701	6/17/2011	Planned Outage	71.62	1	71.62
845703	6/17/2011	Planned Outage	308.00	7	44.00
845705	6/17/2011	Planned Outage	48.03	2	24.02
845707	6/17/2011	Planned Outage	254.05	3	84.68
845711	6/17/2011	Planned Outage	316.40	3	105.47
845723	6/17/2011	Planned Outage	24,166.40	354	68.27
845750	6/17/2011	Planned Outage	422.80	4	105.70
845809	6/18/2011	Planned Outage	9.48	1	9.48

## Appendix 1

### 2011 Planned Outages Table

846034	6/20/2011	Planned Outage	288.00	16	18.00
846081	6/20/2011	Planned Outage	73.20	2	36.60
846089	6/20/2011	Planned Outage	1,031.68	7	147.38
846090	6/20/2011	Planned Outage	2,044.33	20	102.22
846091	6/20/2011	Planned Outage	6,037.67	59	102.33
846100	6/20/2011	Planned Outage	471.57	7	67.37
846119	6/20/2011	Planned Outage	508.50	10	50.85
846120	6/20/2011	Planned Outage	50.78	1	50.78
846141	6/20/2011	Planned Outage	1,181.95	7	168.85
846171	6/20/2011	Planned Outage	96.97	2	48.48
846207	6/21/2011	Planned Outage	118.68	1	118.68
846213	6/21/2011	Planned Outage	5,277.08	17	310.42
846222	6/21/2011	Planned Outage	749.10	9	83.23
846225	6/21/2011	Planned Outage	85.10	2	42.55
846267	6/21/2011	Planned Outage	22.10	2	11.05
846276	6/21/2011	Planned Outage	55.17	1	55.17
846293	6/21/2011	Planned Outage	473.57	2	236.78
846368	6/22/2011	Planned Outage	37.35	1	37.35
846412	6/22/2011	Planned Outage	35.00	1	35.00
846438	6/22/2011	Planned Outage	103.10	2	51.55
846446	6/22/2011	Planned Outage	79.12	1	79.12
846454	6/22/2011	Planned Outage	517.40	12	43.12
846479	6/22/2011	Planned Outage	335.70	54	6.22
846500	6/23/2011	Planned Outage	101.00	1	101.00
846529	6/23/2011	Planned Outage	30.30	2	15.15
846542	6/23/2011	Planned Outage	25.07	1	25.07
846545	6/23/2011	Planned Outage	2,119.88	11	192.72
846547	6/23/2011	Planned Outage	687.60	2	343.80
846549	6/23/2011	Planned Outage	45.17	2	22.58
846551	6/23/2011	Planned Outage	113.75	3	37.92
846893	6/24/2011	Planned Outage	888.63	53	16.77
846908	6/24/2011	Planned Outage	218.40	1	218.40
846918	6/24/2011	Planned Outage	15.65	1	15.65
846919	6/24/2011	Planned Outage	122.70	2	61.35
847022	6/25/2011	Planned Outage	236.52	1	236.52
847028	6/25/2011	Planned Outage	175.45	1	175.45
847052	6/25/2011	Planned Outage	565.75	73	7.75
847064	6/25/2011	Planned Outage	1,753.50	10	175.35
847269	6/26/2011	Planned Outage	10,033.10	16	627.07
847294	6/27/2011	Planned Outage	547.00	4	136.75
847295	6/27/2011	Planned Outage	74.47	1	74.47

## Appendix 1

### 2011 Planned Outages Table

847297	6/27/2011	Planned Outage	275.72	1	275.72
847299	6/27/2011	Planned Outage	208.00	8	26.00
847300	6/27/2011	Planned Outage	529.20	2	264.60
847301	6/27/2011	Planned Outage	488.43	2	244.22
847302	6/27/2011	Planned Outage	1,019.70	3	339.90
847304	6/27/2011	Planned Outage	161.00	7	23.00
847305	6/27/2011	Planned Outage	440.27	2	220.13
847309	6/27/2011	Planned Outage	256.00	2	128.00
847311	6/27/2011	Planned Outage	221.83	5	44.37
847314	6/27/2011	Planned Outage	104.85	3	34.95
847329	6/27/2011	Planned Outage	488.58	13	37.58
847335	6/27/2011	Planned Outage	572.00	4	143.00
847342	6/27/2011	Planned Outage	20.52	1	20.52
847345	6/27/2011	Planned Outage	222.00	3	74.00
847346	6/27/2011	Planned Outage	74.00	1	74.00
847348	6/27/2011	Planned Outage	2,703.00	102	26.50
847350	6/27/2011	Planned Outage	4,978.80	36	138.30
847356	6/27/2011	Planned Outage	91.50	9	10.17
847366	6/27/2011	Planned Outage	109.13	2	54.57
847389	6/27/2011	Planned Outage	20.98	1	20.98
847391	6/27/2011	Planned Outage	63.57	1	63.57
847400	6/27/2011	Planned Outage	83.20	4	20.80
847405	6/27/2011	Planned Outage	98.00	2	49.00
847465	6/28/2011	Planned Outage	700.00	4	175.00
847479	6/28/2011	Planned Outage	253.95	9	28.22
847536	6/28/2011	Planned Outage	682.72	13	52.52
847549	6/28/2011	Planned Outage	44.90	1	44.90
847563	6/28/2011	Planned Outage	123.00	1	123.00
847642	6/28/2011	Planned Outage	26.85	1	26.85
847655	6/28/2011	Planned Outage	1,433.55	19	75.45
847656	6/28/2011	Planned Outage	821.10	69	11.90
847657	6/28/2011	Planned Outage	228.95	19	12.05
847659	6/28/2011	Planned Outage	231.00	1	231.00
847917	6/29/2011	Planned Outage	3,389.20	74	45.80
847930	6/29/2011	Planned Outage	194.83	10	19.48
847947	6/29/2011	Planned Outage	191.87	4	47.97
847955	6/29/2011	Planned Outage	328.00	2	164.00
847958	6/29/2011	Planned Outage	269.00	1	269.00
847965	6/29/2011	Planned Outage	7.12	1	7.12
847973	6/29/2011	Planned Outage	120.00	3	40.00
847983	6/29/2011	Planned Outage	58.00	1	58.00



## Appendix 1

### 2011 Planned Outages Table

847985	6/29/2011	Planned Outage	780.00	10	78.00
847987	6/29/2011	Planned Outage	2,324.00	7	332.00
847988	6/29/2011	Planned Outage	114.00	1	114.00
848007	6/29/2011	Planned Outage	68.00	4	17.00
848008	6/29/2011	Planned Outage	146.70	9	16.30
848015	6/29/2011	Planned Outage	405.00	5	81.00
848026	6/29/2011	Planned Outage	95.97	1	95.97
848068	6/30/2011	Planned Outage	668.12	1	668.12
848071	6/30/2011	Planned Outage	6,615.90	27	245.03
848079	6/30/2011	Planned Outage	1,531.40	19	80.60
848086	6/30/2011	Planned Outage	168.00	6	28.00
848093	6/30/2011	Planned Outage	1,221.20	86	14.20
848115	6/30/2011	Planned Outage	53.67	5	10.73
848157	6/30/2011	Planned Outage	1,088.53	13	83.73
848867	7/4/2011	Planned Outage	288.17	2	144.08
848929	7/5/2011	Planned Outage	512.13	2	256.07
848931	7/5/2011	Planned Outage	1,279.43	2	639.72
848932	7/5/2011	Planned Outage	639.00	1	639.00
848933	7/5/2011	Planned Outage	1,915.85	3	638.62
848937	7/5/2011	Planned Outage	6,127.18	209	29.32
848948	7/5/2011	Planned Outage	77.05	1	77.05
848950	7/5/2011	Planned Outage	437.00	3	145.67
848954	7/5/2011	Planned Outage	480.10	6	80.02
848962	7/5/2011	Planned Outage	20.00	1	20.00
848965	7/5/2011	Planned Outage	199.00	1	199.00
848979	7/5/2011	Planned Outage	1,449.00	42	34.50
848980	7/5/2011	Planned Outage	1,510.10	3	503.37
848981	7/5/2011	Planned Outage	625.73	2	312.87
849113	7/6/2011	Planned Outage	10,867.20	24	452.80
849119	7/6/2011	Planned Outage	181.00	1	181.00
849141	7/6/2011	Planned Outage	107.00	1	107.00
849161	7/6/2011	Planned Outage	45.00	3	15.00
849263	7/7/2011	Planned Outage	108.00	3	36.00
849264	7/7/2011	Planned Outage	112.00	8	14.00
849269	7/7/2011	Planned Outage	220.60	4	55.00
849273	7/7/2011	Planned Outage	15.00	3	5.00
849274	7/7/2011	Planned Outage	43.75	7	6.25
849277	7/7/2011	Planned Outage	115.83	5	23.17
849278	7/7/2011	Planned Outage	126.85	1	126.85
849293	7/7/2011	Planned Outage	34.73	1	34.73
849309	7/7/2011	Planned Outage	5,996.00	1499	4.00



## Appendix 1

### 2011 Planned Outages Table

849328	7/7/2011	Planned Outage	156.00	2	78.00
849521	7/8/2011	Planned Outage	455.82	7	65.12
849538	7/8/2011	Planned Outage	142.00	1	142.00
849541	7/8/2011	Planned Outage	192.63	2	96.32
849565	7/8/2011	Planned Outage	198.45	3	66.15
849577	7/8/2011	Planned Outage	121.62	1	121.62
850135	7/11/2011	Planned Outage	160.67	5	32.13
850148	7/11/2011	Planned Outage	339.40	2	169.70
850152	7/11/2011	Planned Outage	57.87	1	57.87
850153	7/11/2011	Planned Outage	32.00	4	8.00
850165	7/11/2011	Planned Outage	333.00	3	111.00
850167	7/11/2011	Planned Outage	12.40	1	12.40
850184	7/11/2011	Planned Outage	16.77	2	8.38
850186	7/11/2011	Planned Outage	210.00	28	7.50
850187	7/11/2011	Planned Outage	110.00	2	55.00
850201	7/11/2011	Planned Outage	564.67	22	25.67
850207	7/11/2011	Planned Outage	64.87	4	16.22
850235	7/11/2011	Planned Outage	3,180.00	1272	2.50
850299	7/11/2011	Planned Outage	194.57	1	194.57
850325	7/11/2011	Planned Outage	714.27	44	16.23
850335	7/11/2011	Planned Outage	443.87	4	110.97
850469	7/12/2011	Planned Outage	940.17	2	470.08
850473	7/12/2011	Planned Outage	210.00	5	42.00
850483	7/12/2011	Planned Outage	40.10	1	40.10
850488	7/12/2011	Planned Outage	125.60	4	31.40
850490	7/12/2011	Planned Outage	24.00	3	8.00
850491	7/12/2011	Planned Outage	61.28	1	61.28
850502	7/12/2011	Planned Outage	537.33	31	17.33
850504	7/12/2011	Planned Outage	11.63	1	11.63
850509	7/12/2011	Planned Outage	112.25	3	37.42
850510	7/12/2011	Planned Outage	68.10	1	68.10
850517	7/12/2011	Planned Outage	740.00	5	148.00
850536	7/12/2011	Planned Outage	4,015.92	143	28.08
850576	7/13/2011	Planned Outage	145.00	1	145.00
850579	7/13/2011	Planned Outage	252.00	1	252.00
850735	7/13/2011	Planned Outage	7,370.00	737	10.00
850747	7/13/2011	Planned Outage	6,300.00	25	252.00
850757	7/13/2011	Planned Outage	29.03	1	29.03
850775	7/13/2011	Planned Outage	284.00	2	142.00
850789	7/13/2011	Planned Outage	260.00	5	52.00
850819	7/13/2011	Planned Outage	205.00	5	41.00

## Appendix 1

### 2011 Planned Outages Table

851060	7/14/2011	Planned Outage	563.55	9	62.62
851073	7/14/2011	Planned Outage	570.83	2	285.42
851077	7/14/2011	Planned Outage	1,180.53	16	73.78
851081	7/14/2011	Planned Outage	57.85	1	57.85
851083	7/14/2011	Planned Outage	372.25	3	124.08
851087	7/14/2011	Planned Outage	191.97	2	95.98
851088	7/14/2011	Planned Outage	88.80	2	44.40
851091	7/14/2011	Planned Outage	337.18	1	337.18
851095	7/14/2011	Planned Outage	850.00	425	2.00
851113	7/14/2011	Planned Outage	217.82	1	217.82
851114	7/14/2011	Planned Outage	176.30	1	176.30
851122	7/14/2011	Planned Outage	150.07	2	75.03
851126	7/14/2011	Planned Outage	270.50	6	45.08
851269	7/15/2011	Planned Outage	75.85	3	25.28
851273	7/15/2011	Planned Outage	314.40	4	79.00
851279	7/15/2011	Planned Outage	1,757.80	33	53.27
851285	7/15/2011	Planned Outage	16.60	1	16.60
851286	7/15/2011	Planned Outage	50.60	1	50.60
851288	7/15/2011	Planned Outage	2,959.55	33	89.68
851290	7/15/2011	Planned Outage	523.33	4	130.83
851295	7/15/2011	Planned Outage	6,080.00	95	64.00
851325	7/15/2011	Planned Outage	327.00	3	109.00
851358	7/15/2011	Planned Outage	5,502.93	134	41.07
851367	7/15/2011	Planned Outage	93.00	31	3.00
851756	7/17/2011	Planned Outage	102.05	3	34.02
851768	7/18/2011	Planned Outage	475.67	1	475.67
851769	7/18/2011	Planned Outage	1,101.83	11	100.17
851799	7/18/2011	Planned Outage	2,322.00	18	129.00
851808	7/18/2011	Planned Outage	142.00	142	1.00
851809	7/18/2011	Planned Outage	34.53	1	34.53
851810	7/18/2011	Planned Outage	29,896.00	148	202.00
851812	7/18/2011	Planned Outage	8.12	1	8.12
851815	7/18/2011	Planned Outage	592.80	2	296.40
851816	7/18/2011	Planned Outage	24.55	1	24.55
851817	7/18/2011	Planned Outage	10.98	1	10.98
851818	7/18/2011	Planned Outage	27.72	1	27.72
851875	7/18/2011	Planned Outage	7,556.25	45	167.92
851913	7/18/2011	Planned Outage	3.00	1	3.00
851915	7/18/2011	Planned Outage	69.00	1	69.00
852003	7/18/2011	Planned Outage	771.20	8	96.40
852051	7/19/2011	Planned Outage	105.00	7	15.00

## Appendix 1

### 2011 Planned Outages Table

852052	7/19/2011	Planned Outage	320.00	2	160.00
852056	7/19/2011	Planned Outage	16.18	1	16.18
852067	7/19/2011	Planned Outage	162.63	1	162.63
852080	7/19/2011	Planned Outage	81.13	4	20.28
852112	7/19/2011	Planned Outage	51.00	2	25.50
852126	7/19/2011	Planned Outage	481.67	10	48.17
852143	7/19/2011	Planned Outage	187.60	24	7.82
852190	7/20/2011	Planned Outage	82,734.40	267	309.87
852201	7/20/2011	Planned Outage	53.88	1	53.88
852205	7/20/2011	Planned Outage	698.27	8	87.28
852208	7/20/2011	Planned Outage	221.10	2	110.55
852220	7/20/2011	Planned Outage	469.73	4	117.43
852221	7/20/2011	Planned Outage	1,354.45	3	451.48
852223	7/20/2011	Planned Outage	15.23	1	15.23
852227	7/20/2011	Planned Outage	136.00	4	34.00
852229	7/20/2011	Planned Outage	1,080.00	12	90.00
852230	7/20/2011	Planned Outage	127.80	3	42.60
852243	7/20/2011	Planned Outage	220.00	4	55.00
852256	7/20/2011	Planned Outage	809.33	40	20.23
852282	7/20/2011	Planned Outage	5,235.97	86	60.88
852284	7/20/2011	Planned Outage	121.67	5	24.33
852318	7/20/2011	Planned Outage	41.40	2	20.70
852341	7/21/2011	Planned Outage	62,320.00	779	80.00
852348	7/21/2011	Planned Outage	280.00	14	20.00
852349	7/21/2011	Planned Outage	48.62	1	48.62
852353	7/21/2011	Planned Outage	734.25	9	81.58
852354	7/21/2011	Planned Outage	295.40	6	49.23
852355	7/21/2011	Planned Outage	191.60	4	47.90
852357	7/21/2011	Planned Outage	304.00	19	16.00
852363	7/21/2011	Planned Outage	32.02	1	32.02
852364	7/21/2011	Planned Outage	31.98	1	31.98
852365	7/21/2011	Planned Outage	166.75	23	7.25
852369	7/21/2011	Planned Outage	420.00	4	105.00
852370	7/21/2011	Planned Outage	780.00	3	260.00
852371	7/21/2011	Planned Outage	40.68	1	40.68
852375	7/21/2011	Planned Outage	939.95	3	313.32
852380	7/21/2011	Planned Outage	272.00	1	272.00
852387	7/21/2011	Planned Outage	119.27	2	59.63
852409	7/21/2011	Planned Outage	70.00	7	10.00
852499	7/22/2011	Planned Outage	1,589.03	13	122.23
852507	7/22/2011	Planned Outage	301.00	7	43.00

## Appendix 1

### 2011 Planned Outages Table

852547	7/22/2011	Planned Outage	26.90	1	26.90
852564	7/22/2011	Planned Outage	155.55	3	51.85
852568	7/22/2011	Planned Outage	26.73	1	26.73
852638	7/23/2011	Planned Outage	35.10	1	35.10
852650	7/23/2011	Planned Outage	68.42	1	68.42
852829	7/24/2011	Planned Outage	431.55	63	6.85
852881	7/24/2011	Planned Outage	1,451.67	26	55.83
852913	7/25/2011	Planned Outage	102.48	1	102.48
852918	7/25/2011	Planned Outage	97.83	1	97.83
852929	7/25/2011	Planned Outage	354.00	2	177.00
852932	7/25/2011	Planned Outage	839.33	40	20.98
852933	7/25/2011	Planned Outage	21.57	1	21.57
852934	7/25/2011	Planned Outage	95.15	1	95.15
852939	7/25/2011	Planned Outage	765.70	6	127.62
852942	7/25/2011	Planned Outage	8.97	1	8.97
852945	7/25/2011	Planned Outage	745.33	40	18.63
852946	7/25/2011	Planned Outage	474.28	13	36.48
852949	7/25/2011	Planned Outage	92.45	3	30.82
852961	7/25/2011	Planned Outage	6.00	1	6.00
852962	7/25/2011	Planned Outage	14.23	2	7.12
852964	7/25/2011	Planned Outage	122.33	1	122.33
852965	7/25/2011	Planned Outage	1,222.40	192	6.37
852968	7/25/2011	Planned Outage	3.00	1	3.00
853067	7/25/2011	Planned Outage	308.73	4	77.18
853129	7/26/2011	Planned Outage	18,939.30	291	65.08
853182	7/26/2011	Planned Outage	372.08	25	14.88
853239	7/26/2011	Planned Outage	60.70	6	10.12
853249	7/26/2011	Planned Outage	140.00	4	35.00
853292	7/27/2011	Planned Outage	47.98	1	47.98
853300	7/27/2011	Planned Outage	88.93	2	44.47
853305	7/27/2011	Planned Outage	270.25	3	90.08
853317	7/27/2011	Planned Outage	400.40	3	133.47
853325	7/27/2011	Planned Outage	410.30	6	68.38
853327	7/27/2011	Planned Outage	244.58	5	48.92
853340	7/27/2011	Planned Outage	243.00	15	16.20
853342	7/27/2011	Planned Outage	787.60	12	65.63
853375	7/27/2011	Planned Outage	126.25	3	42.08
853440	7/27/2011	Planned Outage	1,617.20	6	269.53
853446	7/27/2011	Planned Outage	126.00	7	18.00
853458	7/27/2011	Planned Outage	9.97	1	9.97
853507	7/27/2011	Planned Outage	1,642.83	10	164.28

## Appendix 1

### 2011 Planned Outages Table

853515	7/27/2011	Planned Outage	154.10	1	154.10
853552	7/27/2011	Planned Outage	10.70	1	10.70
853599	7/28/2011	Planned Outage	10.77	1	10.77
853602	7/28/2011	Planned Outage	268.00	2	134.00
853605	7/28/2011	Planned Outage	38.90	3	12.97
853703	7/28/2011	Planned Outage	70.05	3	23.35
853704	7/28/2011	Planned Outage	22.98	1	22.98
853705	7/28/2011	Planned Outage	24.05	1	24.05
853747	7/29/2011	Planned Outage	136.32	1	136.32
853752	7/29/2011	Planned Outage	5,252.40	27	194.53
853757	7/29/2011	Planned Outage	207.50	6	34.58
853769	7/29/2011	Planned Outage	204.50	3	68.17
853778	7/29/2011	Planned Outage	134.63	1	134.63
853779	7/29/2011	Planned Outage	73.80	6	12.30
853780	7/29/2011	Planned Outage	130.07	1	130.07
853782	7/29/2011	Planned Outage	476.00	14	34.00
853789	7/29/2011	Planned Outage	66.60	6	11.10
853838	7/29/2011	Planned Outage	1,038.00	6	173.00
853848	7/29/2011	Planned Outage	13,350.00	150	89.00
854077	8/1/2011	Planned Outage	71.97	2	35.98
854088	8/1/2011	Planned Outage	39,566.30	140	282.62
854103	8/1/2011	Planned Outage	43.00	1	43.00
854110	8/1/2011	Planned Outage	62.75	5	12.55
854111	8/1/2011	Planned Outage	142.40	6	23.73
854112	8/1/2011	Planned Outage	5,508.53	104	52.97
854149	8/1/2011	Planned Outage	780.00	26	30.00
854153	8/1/2011	Planned Outage	207.70	2	103.85
854279	8/1/2011	Planned Outage	96.27	16	6.02
854280	8/1/2011	Planned Outage	606.00	101	6.00
854451	8/2/2011	Planned Outage	468.00	3	156.00
854452	8/2/2011	Planned Outage	31.00	1	31.00
854454	8/2/2011	Planned Outage	113.28	1	113.28
854469	8/2/2011	Planned Outage	70.00	2	35.00
854473	8/2/2011	Planned Outage	228.00	3	76.00
854475	8/2/2011	Planned Outage	340.87	2	170.43
854480	8/2/2011	Planned Outage	39.63	2	19.82
854487	8/2/2011	Planned Outage	619.30	2	309.65
854488	8/2/2011	Planned Outage	215.32	1	215.32
854564	8/3/2011	Planned Outage	510.95	3	170.32
854567	8/3/2011	Planned Outage	890.00	10	89.00
854568	8/3/2011	Planned Outage	93.00	1	93.00

## Appendix 1

### 2011 Planned Outages Table

854572	8/3/2011	Planned Outage	747.10	2	373.55
854573	8/3/2011	Planned Outage	373.03	1	373.03
854575	8/3/2011	Planned Outage	37,570.00	85	442.00
854577	8/3/2011	Planned Outage	135.90	2	67.95
854582	8/3/2011	Planned Outage	90.32	1	90.32
854614	8/3/2011	Planned Outage	233.47	8	29.18
854654	8/3/2011	Planned Outage	471.30	3	157.10
854685	8/4/2011	Planned Outage	697.33	4	174.33
854695	8/4/2011	Planned Outage	426.00	2	213.00
854697	8/4/2011	Planned Outage	90.40	2	45.20
854703	8/4/2011	Planned Outage	215.47	2	107.73
854707	8/4/2011	Planned Outage	86.50	1	86.50
854708	8/4/2011	Planned Outage	1,113.23	7	159.03
854714	8/4/2011	Planned Outage	338.67	1	338.67
854718	8/4/2011	Planned Outage	83.40	4	20.85
854744	8/4/2011	Planned Outage	37.67	2	18.83
854745	8/4/2011	Planned Outage	370.00	1	370.00
854747	8/4/2011	Planned Outage	17.28	1	17.28
854753	8/4/2011	Planned Outage	235.67	5	47.13
854923	8/5/2011	Planned Outage	3,370.00	10	337.00
854943	8/5/2011	Planned Outage	277.60	1	277.60
854949	8/5/2011	Planned Outage	114.00	4	28.50
854955	8/5/2011	Planned Outage	16,744.00	299	56.00
855040	8/5/2011	Planned Outage	91.77	1	91.77
855076	8/6/2011	Planned Outage	21,753.20	119	182.80
855222	8/7/2011	Planned Outage	508.30	1	508.30
855456	8/8/2011	Planned Outage	129.15	1	129.15
855457	8/8/2011	Planned Outage	127.50	1	127.50
855461	8/8/2011	Planned Outage	885.00	5	177.00
855467	8/8/2011	Planned Outage	322.00	4	80.50
855470	8/8/2011	Planned Outage	238.80	2	119.40
855472	8/8/2011	Planned Outage	785.17	5	157.03
855473	8/8/2011	Planned Outage	8,614.93	58	148.53
855488	8/8/2011	Planned Outage	35.55	1	35.55
855494	8/8/2011	Planned Outage	70.40	4	17.60
855495	8/8/2011	Planned Outage	871.73	14	62.27
855502	8/8/2011	Planned Outage	81.27	4	20.32
855531	8/8/2011	Planned Outage	413.87	4	103.47
855537	8/8/2011	Planned Outage	303.97	2	151.98
855595	8/8/2011	Planned Outage	9,753.18	29	336.00
855618	8/8/2011	Planned Outage	850.42	13	65.42

## Appendix 1

### 2011 Planned Outages Table

855622	8/8/2011	Planned Outage	610.65	27	22.62
855660	8/9/2011	Planned Outage	401.60	4	100.40
855665	8/9/2011	Planned Outage	393.00	6	65.50
855669	8/9/2011	Planned Outage	609.00	3	203.00
855670	8/9/2011	Planned Outage	99.00	9	11.00
855672	8/9/2011	Planned Outage	516.00	3	172.00
855673	8/9/2011	Planned Outage	154.13	1	154.13
855674	8/9/2011	Planned Outage	154.00	1	154.00
855689	8/9/2011	Planned Outage	106.37	1	106.37
855694	8/9/2011	Planned Outage	140.67	5	28.13
855696	8/9/2011	Planned Outage	93.30	1	93.30
855708	8/9/2011	Planned Outage	986.00	17	58.00
855710	8/9/2011	Planned Outage	71.00	1	71.00
855711	8/9/2011	Planned Outage	123.27	2	61.63
855713	8/9/2011	Planned Outage	1,122.00	34	33.00
855717	8/9/2011	Planned Outage	957.00	33	29.00
855718	8/9/2011	Planned Outage	213.60	8	26.70
855719	8/9/2011	Planned Outage	160.30	6	26.72
855724	8/9/2011	Planned Outage	78.67	2	39.33
855727	8/9/2011	Planned Outage	38.05	3	12.68
855728	8/9/2011	Planned Outage	223.13	2	111.57
855732	8/9/2011	Planned Outage	83.13	4	20.78
855736	8/9/2011	Planned Outage	593.27	4	148.32
855737	8/9/2011	Planned Outage	234.40	2	117.20
855739	8/9/2011	Planned Outage	117.12	1	117.12
855743	8/9/2011	Planned Outage	12.00	1	12.00
855751	8/9/2011	Planned Outage	55.00	2	27.50
855755	8/9/2011	Planned Outage	264.00	6	44.00
855756	8/9/2011	Planned Outage	36.00	1	36.00
855763	8/9/2011	Planned Outage	4,622.80	28	165.10
855769	8/9/2011	Planned Outage	96.30	9	10.70
855775	8/9/2011	Planned Outage	31.87	1	31.87
855776	8/9/2011	Planned Outage	47.75	1	47.75
855778	8/9/2011	Planned Outage	57.57	2	28.78
855781	8/9/2011	Planned Outage	17.10	1	17.10
855784	8/9/2011	Planned Outage	91.93	14	6.57
855785	8/9/2011	Planned Outage	3.23	1	3.23
855787	8/9/2011	Planned Outage	193.63	1	193.63
855990	8/10/2011	Planned Outage	92.45	1	92.45
856029	8/10/2011	Planned Outage	603.92	5	120.78
856044	8/10/2011	Planned Outage	101.80	4	25.45



## Appendix 1

### 2011 Planned Outages Table

856078	8/10/2011	Planned Outage	9.83	2	4.92
856085	8/10/2011	Planned Outage	73.67	2	36.83
856087	8/10/2011	Planned Outage	344.73	2	172.37
856094	8/10/2011	Planned Outage	177.77	2	88.88
856132	8/10/2011	Planned Outage	385.00	77	5.00
856182	8/11/2011	Planned Outage	88.00	1	88.00
856196	8/11/2011	Planned Outage	352.67	2	176.33
856198	8/11/2011	Planned Outage	10.00	1	10.00
856203	8/11/2011	Planned Outage	635.20	2	317.60
856216	8/11/2011	Planned Outage	416.00	4	104.00
856222	8/11/2011	Planned Outage	32.73	1	32.73
856524	8/12/2011	Planned Outage	193.60	4	48.40
856528	8/12/2011	Planned Outage	220.00	4	55.00
856534	8/12/2011	Planned Outage	55.87	4	13.97
856572	8/12/2011	Planned Outage	15.25	1	15.25
856892	8/13/2011	Planned Outage	1,104.20	4	276.05
856925	8/13/2011	Planned Outage	703.27	4	175.82
856963	8/14/2011	Planned Outage	29.62	1	29.62
856964	8/14/2011	Planned Outage	26.20	1	26.20
856982	8/14/2011	Planned Outage	13.25	1	13.25
857035	8/15/2011	Planned Outage	332.87	1	332.87
857039	8/15/2011	Planned Outage	4,842.00	27	179.33
857053	8/15/2011	Planned Outage	500.27	4	125.07
857080	8/15/2011	Planned Outage	493.90	2	246.95
857082	8/15/2011	Planned Outage	175.47	2	87.73
857098	8/15/2011	Planned Outage	500.00	4	125.00
857108	8/15/2011	Planned Outage	159.13	2	79.57
857118	8/15/2011	Planned Outage	41.35	3	13.78
857119	8/15/2011	Planned Outage	83.50	6	13.92
857131	8/15/2011	Planned Outage	501.87	4	125.47
857168	8/16/2011	Planned Outage	133.47	1	133.47
857172	8/16/2011	Planned Outage	526.13	4	131.53
857174	8/16/2011	Planned Outage	1,350.65	17	79.45
857179	8/16/2011	Planned Outage	76.57	2	38.28
857180	8/16/2011	Planned Outage	3,509.00	121	29.00
857187	8/16/2011	Planned Outage	381.75	3	127.25
857192	8/16/2011	Planned Outage	358.10	1	358.10
857196	8/16/2011	Planned Outage	349.25	1	349.25
857206	8/16/2011	Planned Outage	2,261.00	19	119.00
857216	8/16/2011	Planned Outage	178.23	1	178.23
857217	8/16/2011	Planned Outage	177.93	1	177.93



## Appendix 1

### 2011 Planned Outages Table

857232	8/16/2011	Planned Outage	74.73	4	18.68
857245	8/16/2011	Planned Outage	34.00	2	17.00
857254	8/16/2011	Planned Outage	210.87	1	210.87
857257	8/16/2011	Planned Outage	176.35	1	176.35
857276	8/16/2011	Planned Outage	819.00	9	91.00
857277	8/16/2011	Planned Outage	633.80	3	211.27
857281	8/16/2011	Planned Outage	184.00	4	46.00
857323	8/17/2011	Planned Outage	204.08	1	204.08
857328	8/17/2011	Planned Outage	254.20	1	254.20
857330	8/17/2011	Planned Outage	66.87	1	66.87
857331	8/17/2011	Planned Outage	471.73	2	235.87
857333	8/17/2011	Planned Outage	78.00	1	78.00
857338	8/17/2011	Planned Outage	524.00	4	131.00
857339	8/17/2011	Planned Outage	396.00	11	36.00
857343	8/17/2011	Planned Outage	319.77	1	319.77
857345	8/17/2011	Planned Outage	285.00	5	57.00
857346	8/17/2011	Planned Outage	168.40	1	168.40
857353	8/17/2011	Planned Outage	254.00	1	254.00
857357	8/17/2011	Planned Outage	500.63	2	250.32
857361	8/17/2011	Planned Outage	82.80	4	20.70
857380	8/17/2011	Planned Outage	128.08	1	128.08
857383	8/17/2011	Planned Outage	120.00	4	30.00
857388	8/17/2011	Planned Outage	678.00	3	226.00
857389	8/17/2011	Planned Outage	75.37	1	75.37
857390	8/17/2011	Planned Outage	160.30	1	160.30
857408	8/17/2011	Planned Outage	22.00	1	22.00
857416	8/17/2011	Planned Outage	32.00	3	10.67
857441	8/18/2011	Planned Outage	352.87	4	88.22
857442	8/18/2011	Planned Outage	147.60	3	49.20
857446	8/18/2011	Planned Outage	13.48	1	13.48
857452	8/18/2011	Planned Outage	384.92	5	76.98
857453	8/18/2011	Planned Outage	196.00	2	98.00
857454	8/18/2011	Planned Outage	440.30	6	73.38
857455	8/18/2011	Planned Outage	306.60	4	76.65
857458	8/18/2011	Planned Outage	98.42	5	19.68
857459	8/18/2011	Planned Outage	76.82	1	76.82
857460	8/18/2011	Planned Outage	63.40	4	15.85
857462	8/18/2011	Planned Outage	1,582.47	28	64.35
857463	8/18/2011	Planned Outage	387.80	3	129.00
857464	8/18/2011	Planned Outage	22.07	1	22.07
857465	8/18/2011	Planned Outage	584.00	4	146.00

## Appendix 1

### 2011 Planned Outages Table

857466	8/18/2011	Planned Outage	2,323.00	23	101.00
857467	8/18/2011	Planned Outage	150.00	3	50.00
857468	8/18/2011	Planned Outage	113.00	1	113.00
857471	8/18/2011	Planned Outage	496.65	7	70.95
857473	8/18/2011	Planned Outage	134.83	2	67.42
857475	8/18/2011	Planned Outage	15.15	3	5.05
857485	8/18/2011	Planned Outage	256.23	2	128.12
857486	8/18/2011	Planned Outage	18.00	3	6.00
857487	8/18/2011	Planned Outage	67.30	3	22.43
857488	8/18/2011	Planned Outage	1,132.30	26	43.55
857511	8/18/2011	Planned Outage	173.90	6	29.00
857512	8/18/2011	Planned Outage	463.73	16	28.98
857516	8/18/2011	Planned Outage	22.00	11	2.00
857519	8/18/2011	Planned Outage	1,012.00	11	92.00
857533	8/18/2011	Planned Outage	15.47	4	3.87
857535	8/18/2011	Planned Outage	82.50	11	7.50
857536	8/18/2011	Planned Outage	2,186.07	22	99.37
857575	8/19/2011	Planned Outage	539.00	5	107.80
857751	8/19/2011	Planned Outage	954.00	6	159.00
857753	8/19/2011	Planned Outage	742.80	6	123.80
857756	8/19/2011	Planned Outage	2,202.60	18	122.37
857766	8/19/2011	Planned Outage	183.95	3	61.32
857781	8/19/2011	Planned Outage	21.90	1	21.90
857782	8/19/2011	Planned Outage	2,033.53	44	46.22
857812	8/19/2011	Planned Outage	264.40	3	88.13
857867	8/20/2011	Planned Outage	117.70	3	39.23
857961	8/21/2011	Planned Outage	831.00	12	69.25
857968	8/21/2011	Planned Outage	352.65	9	39.18
858102	8/22/2011	Planned Outage	216.60	2	108.30
858121	8/22/2011	Planned Outage	88.75	1	88.75
858138	8/22/2011	Planned Outage	52.00	2	26.00
858139	8/22/2011	Planned Outage	389.15	3	129.72
858145	8/22/2011	Planned Outage	8.90	1	8.90
858152	8/22/2011	Planned Outage	476.57	17	28.03
858160	8/22/2011	Planned Outage	228.00	228	1.00
858188	8/22/2011	Planned Outage	188.23	2	94.12
858191	8/22/2011	Planned Outage	524.00	4	131.00
858192	8/22/2011	Planned Outage	14,266.70	64	222.92
858329	8/22/2011	Planned Outage	92.90	2	46.45
858349	8/22/2011	Planned Outage	212.40	36	5.90
858370	8/23/2011	Planned Outage	875.00	5	175.00

## Appendix 1

### 2011 Planned Outages Table

858374	8/23/2011	Planned Outage	409.40	1	409.40
858377	8/23/2011	Planned Outage	162.00	2	81.00
858385	8/23/2011	Planned Outage	163.37	2	81.68
858394	8/23/2011	Planned Outage	600.00	4	150.00
858402	8/23/2011	Planned Outage	131.00	1	131.00
858410	8/23/2011	Planned Outage	176.65	1	176.65
858415	8/23/2011	Planned Outage	24,082.10	64	376.28
858418	8/23/2011	Planned Outage	2,723.40	51	53.40
858422	8/23/2011	Planned Outage	11,804.00	65	181.60
858427	8/23/2011	Planned Outage	295.42	1	295.42
858429	8/23/2011	Planned Outage	16,181.50	51	317.28
858495	8/24/2011	Planned Outage	35.00	1	35.00
858496	8/24/2011	Planned Outage	404.50	6	67.42
858497	8/24/2011	Planned Outage	264.07	4	66.02
858501	8/24/2011	Planned Outage	144.00	1	144.00
858502	8/24/2011	Planned Outage	148.37	1	148.37
858503	8/24/2011	Planned Outage	259.30	3	86.43
858504	8/24/2011	Planned Outage	210.45	1	210.45
858507	8/24/2011	Planned Outage	17,839.80	51	349.80
858514	8/24/2011	Planned Outage	784.60	12	65.38
858525	8/24/2011	Planned Outage	158.80	4	39.70
858526	8/24/2011	Planned Outage	3,787.33	230	16.47
858548	8/24/2011	Planned Outage	186.63	2	93.32
858555	8/24/2011	Planned Outage	695.40	228	3.05
858566	8/24/2011	Planned Outage	686.47	14	49.03
858866	8/25/2011	Planned Outage	97.00	1	97.00
858872	8/25/2011	Planned Outage	350.00	5	70.00
858879	8/25/2011	Planned Outage	588.00	4	147.00
858888	8/25/2011	Planned Outage	5,229.00	63	83.00
858897	8/25/2011	Planned Outage	315.00	5	63.00
858920	8/25/2011	Planned Outage	2,191.00	7	313.00
858929	8/25/2011	Planned Outage	75.43	1	75.43
858976	8/26/2011	Planned Outage	684.00	6	114.00
858983	8/26/2011	Planned Outage	18.90	3	6.30
858996	8/26/2011	Planned Outage	116.90	1	116.90
858998	8/26/2011	Planned Outage	15.30	3	5.10
859021	8/26/2011	Planned Outage	4,191.67	2515	1.67
859042	8/26/2011	Planned Outage	241.80	4	60.45
859190	8/28/2011	Planned Outage	529.47	38	13.93
859201	8/28/2011	Planned Outage	407.23	38	10.72
859216	8/28/2011	Planned Outage	1,022.00	14	73.00

## Appendix 1

### 2011 Planned Outages Table

859257	8/29/2011	Planned Outage	32.35	1	32.35
859291	8/29/2011	Planned Outage	349.90	2	174.95
859312	8/29/2011	Planned Outage	81.58	5	16.32
859317	8/29/2011	Planned Outage	619.93	4	154.98
859322	8/29/2011	Planned Outage	13.00	1	13.00
859330	8/29/2011	Planned Outage	52.40	4	13.10
859367	8/30/2011	Planned Outage	41.12	1	41.12
859368	8/30/2011	Planned Outage	387.15	9	43.02
859369	8/30/2011	Planned Outage	560.00	2	280.00
859371	8/30/2011	Planned Outage	356.10	2	178.05
859383	8/30/2011	Planned Outage	26.77	2	13.38
859412	8/30/2011	Planned Outage	337.00	3	112.33
859422	8/30/2011	Planned Outage	26,323.00	165	159.53
859430	8/30/2011	Planned Outage	313.05	9	34.78
859431	8/30/2011	Planned Outage	42.50	1	42.50
859434	8/30/2011	Planned Outage	149.13	4	37.28
859449	8/30/2011	Planned Outage	3,071.28	127	24.18
859470	8/31/2011	Planned Outage	196.60	3	65.53
859476	8/31/2011	Planned Outage	3,993.00	33	121.00
859485	8/31/2011	Planned Outage	65.93	1	65.93
859488	8/31/2011	Planned Outage	215.47	4	53.87
859490	8/31/2011	Planned Outage	143.67	4	35.92
859498	8/31/2011	Planned Outage	979.67	2	489.83
859500	8/31/2011	Planned Outage	39.37	2	19.68
859501	8/31/2011	Planned Outage	240.00	4	60.00
859502	8/31/2011	Planned Outage	46.00	1	46.00
859508	8/31/2011	Planned Outage	52.60	4	13.15
859509	8/31/2011	Planned Outage	280.00	4	70.00
859513	8/31/2011	Planned Outage	384.00	4	96.00
859518	8/31/2011	Planned Outage	275.93	4	68.98
859520	8/31/2011	Planned Outage	239.60	12	19.97
859522	8/31/2011	Planned Outage	79.87	4	19.97
859524	8/31/2011	Planned Outage	166.00	1	166.00
859525	8/31/2011	Planned Outage	136.53	4	34.13
859529	8/31/2011	Planned Outage	76.55	3	25.52
859530	8/31/2011	Planned Outage	48.00	2	24.00
859532	8/31/2011	Planned Outage	69.00	3	23.00
859574	8/31/2011	Planned Outage	465.97	2	232.98
859615	8/31/2011	Planned Outage	28.00	1	28.00
859664	9/1/2011	Planned Outage	249.05	3	83.02
859671	9/1/2011	Planned Outage	32.60	3	10.87

## Appendix 1

### 2011 Planned Outages Table

859681	9/1/2011	Planned Outage	102.67	4	25.67
859689	9/1/2011	Planned Outage	9.82	1	9.82
859692	9/1/2011	Planned Outage	252.00	4	63.00
859712	9/1/2011	Planned Outage	80.37	1	80.37
859720	9/1/2011	Planned Outage	17.47	4	4.37
859782	9/2/2011	Planned Outage	139.90	3	46.63
859817	9/2/2011	Planned Outage	173.58	1	173.58
859818	9/2/2011	Planned Outage	163.15	1	163.15
859858	9/2/2011	Planned Outage	184.20	3	61.40
860281	9/3/2011	Planned Outage	65,929.60	192	343.38
860477	9/3/2011	Planned Outage	79.00	1	79.00
860732	9/4/2011	Planned Outage	24.83	10	2.48
864395	9/6/2011	Planned Outage	710.27	4	177.57
864595	9/6/2011	Planned Outage	181.40	12	15.12
864760	9/6/2011	Planned Outage	14,438.30	100	144.38
865043	9/7/2011	Planned Outage	458.30	6	76.38
865052	9/7/2011	Planned Outage	761.20	8	95.15
865083	9/7/2011	Planned Outage	1,778.00	7	254.00
865087	9/7/2011	Planned Outage	3,639.60	81	44.93
865140	9/7/2011	Planned Outage	3,538.00	29	122.00
865186	9/8/2011	Planned Outage	935.00	17	55.00
865190	9/8/2011	Planned Outage	2,303.53	109	21.13
865191	9/8/2011	Planned Outage	480.67	2	240.33
865192	9/8/2011	Planned Outage	27.70	3	9.23
865197	9/8/2011	Planned Outage	1,755.00	60	29.25
865200	9/8/2011	Planned Outage	113.70	2	56.85
865202	9/8/2011	Planned Outage	83.12	1	83.12
865203	9/8/2011	Planned Outage	1,572.70	6	262.00
865204	9/8/2011	Planned Outage	1,310.58	5	262.00
865207	9/8/2011	Planned Outage	153.40	2	76.70
865214	9/8/2011	Planned Outage	8.52	1	8.52
865278	9/8/2011	Planned Outage	6,646.40	268	24.80
865302	9/8/2011	Planned Outage	596.98	17	35.12
865307	9/8/2011	Planned Outage	271.05	13	20.85
865314	9/8/2011	Planned Outage	213.97	14	15.28
865384	9/9/2011	Planned Outage	159.27	1	159.27
865387	9/9/2011	Planned Outage	1,095.62	7	156.52
865402	9/9/2011	Planned Outage	2,928.33	20	146.42
865406	9/9/2011	Planned Outage	63.00	3	21.00
865428	9/9/2011	Planned Outage	55.03	1	55.03
865430	9/9/2011	Planned Outage	23.10	2	11.55

## Appendix 1

### 2011 Planned Outages Table

865433	9/9/2011	Planned Outage	375.07	4	93.77
865447	9/9/2011	Planned Outage	263.53	4	65.88
865506	9/9/2011	Planned Outage	165.07	4	41.27
865628	9/10/2011	Planned Outage	36.80	2	18.40
865643	9/11/2011	Planned Outage	243.00	1	243.00
865708	9/12/2011	Planned Outage	120.23	1	120.23
865710	9/12/2011	Planned Outage	882.80	3	294.27
865719	9/12/2011	Planned Outage	13,367.90	91	146.90
865721	9/12/2011	Planned Outage	1,447.75	5	289.55
865731	9/12/2011	Planned Outage	35.72	1	35.72
865746	9/12/2011	Planned Outage	62.62	1	62.62
865749	9/12/2011	Planned Outage	292.20	3	97.40
865754	9/12/2011	Planned Outage	48.95	1	48.95
865756	9/12/2011	Planned Outage	2,827.25	43	65.75
865762	9/12/2011	Planned Outage	305.78	7	43.68
865767	9/12/2011	Planned Outage	277.90	3	92.63
865787	9/12/2011	Planned Outage	1,827.17	10	182.72
865789	9/12/2011	Planned Outage	1,351.60	8	168.95
865822	9/12/2011	Planned Outage	181.10	3	60.37
865827	9/12/2011	Planned Outage	484.00	2	242.00
865829	9/12/2011	Planned Outage	175.00	5	35.00
865830	9/12/2011	Planned Outage	315.52	11	28.68
865832	9/12/2011	Planned Outage	214.50	2	107.25
865834	9/12/2011	Planned Outage	197.50	2	98.75
865836	9/12/2011	Planned Outage	87.48	1	87.48
865849	9/12/2011	Planned Outage	498.50	15	33.23
865867	9/13/2011	Planned Outage	597.82	1	597.82
865875	9/13/2011	Planned Outage	241.80	4	60.45
865878	9/13/2011	Planned Outage	96,686.70	166	582.45
865884	9/13/2011	Planned Outage	145.33	1	145.33
865887	9/13/2011	Planned Outage	9,563.67	65	147.13
865890	9/13/2011	Planned Outage	11,428.10	41	278.73
865892	9/13/2011	Planned Outage	202.93	2	101.47
865893	9/13/2011	Planned Outage	86.07	4	21.52
865895	9/13/2011	Planned Outage	468.00	4	117.00
865898	9/13/2011	Planned Outage	90.48	1	90.48
865900	9/13/2011	Planned Outage	66.33	1	66.33
865907	9/13/2011	Planned Outage	208.30	3	69.43
865911	9/13/2011	Planned Outage	453.00	3	151.00
865912	9/13/2011	Planned Outage	5,126.80	24	213.62
865913	9/13/2011	Planned Outage	8.30	1	8.30

## Appendix 1

### 2011 Planned Outages Table

865924	9/13/2011	Planned Outage	191.20	3	63.73
865932	9/13/2011	Planned Outage	355.00	5	71.00
865947	9/13/2011	Planned Outage	498.17	10	49.82
865950	9/13/2011	Planned Outage	86.00	1	86.00
865954	9/13/2011	Planned Outage	848.00	5	169.60
866004	9/13/2011	Planned Outage	40.73	1	40.73
866013	9/13/2011	Planned Outage	791.27	4	197.82
866038	9/14/2011	Planned Outage	798.00	7	114.00
866041	9/14/2011	Planned Outage	73.90	2	36.95
866043	9/14/2011	Planned Outage	73.70	3	24.57
866045	9/14/2011	Planned Outage	419.30	1	419.30
866046	9/14/2011	Planned Outage	72.43	1	72.43
866059	9/14/2011	Planned Outage	664.00	4	166.00
866075	9/14/2011	Planned Outage	131.93	1	131.93
866076	9/14/2011	Planned Outage	117.00	1	117.00
866089	9/14/2011	Planned Outage	240.00	4	60.00
866113	9/14/2011	Planned Outage	247.20	2	123.60
866116	9/14/2011	Planned Outage	34.83	1	34.83
866259	9/15/2011	Planned Outage	171.10	1	171.10
866262	9/15/2011	Planned Outage	104.00	52	2.00
866263	9/15/2011	Planned Outage	1,987.70	13	152.90
866264	9/15/2011	Planned Outage	1,252.00	4	313.00
866268	9/15/2011	Planned Outage	532.00	2	266.00
866272	9/15/2011	Planned Outage	59.00	1	59.00
866282	9/15/2011	Planned Outage	8.97	2	4.48
866283	9/15/2011	Planned Outage	8.22	1	8.22
866285	9/15/2011	Planned Outage	20.00	1	20.00
866375	9/16/2011	Planned Outage	33,467.60	372	89.97
866414	9/16/2011	Planned Outage	78.53	4	19.63
866416	9/16/2011	Planned Outage	100.63	1	100.63
866419	9/16/2011	Planned Outage	20.23	1	20.23
866443	9/16/2011	Planned Outage	127.33	1	127.33
866478	9/16/2011	Planned Outage	220.00	4	55.00
866569	9/18/2011	Planned Outage	108,434.00	717	151.23
866722	9/19/2011	Planned Outage	68.97	2	34.48
866738	9/19/2011	Planned Outage	97.00	1	97.00
866742	9/19/2011	Planned Outage	182.57	2	91.28
866750	9/19/2011	Planned Outage	78.00	2	39.00
866752	9/19/2011	Planned Outage	60.33	2	30.17
866755	9/19/2011	Planned Outage	35.00	1	35.00
866756	9/19/2011	Planned Outage	60.00	5	12.00

## Appendix 1

### 2011 Planned Outages Table

866757	9/19/2011	Planned Outage	93.00	3	31.00
866772	9/19/2011	Planned Outage	278.30	1	278.30
866773	9/19/2011	Planned Outage	63.00	9	7.00
866774	9/19/2011	Planned Outage	390.00	5	78.00
866776	9/19/2011	Planned Outage	219.93	1	219.93
866781	9/19/2011	Planned Outage	1,210.30	13	93.10
866783	9/19/2011	Planned Outage	512.00	4	128.00
866790	9/19/2011	Planned Outage	193.97	1	193.97
866796	9/19/2011	Planned Outage	352.87	2	176.43
866797	9/19/2011	Planned Outage	194.00	2	97.00
866811	9/19/2011	Planned Outage	362.00	2	181.00
866843	9/19/2011	Planned Outage	22.10	1	22.10
866876	9/20/2011	Planned Outage	190.00	2	95.00
866935	9/20/2011	Planned Outage	2,329.00	17	137.00
866936	9/20/2011	Planned Outage	580.00	5	116.00
866937	9/20/2011	Planned Outage	882.00	18	49.00
866942	9/20/2011	Planned Outage	72.00	4	18.00
866945	9/20/2011	Planned Outage	105.00	1	105.00
866947	9/20/2011	Planned Outage	87.40	1	87.40
866948	9/20/2011	Planned Outage	87.23	1	87.23
866949	9/20/2011	Planned Outage	56.00	1	56.00
866952	9/20/2011	Planned Outage	3,711.60	54	68.73
866954	9/20/2011	Planned Outage	374.00	6	62.33
866955	9/20/2011	Planned Outage	32.00	2	16.00
866956	9/20/2011	Planned Outage	37.03	1	37.03
866966	9/20/2011	Planned Outage	54.00	1	54.00
866967	9/20/2011	Planned Outage	138.30	3	46.10
866969	9/20/2011	Planned Outage	48.00	4	12.00
866981	9/20/2011	Planned Outage	72.00	2	36.00
866986	9/20/2011	Planned Outage	172.40	3	57.47
867000	9/20/2011	Planned Outage	320.00	2	160.00
867004	9/20/2011	Planned Outage	62.00	2	31.00
867017	9/20/2011	Planned Outage	43.00	1	43.00
867053	9/21/2011	Planned Outage	14.42	1	14.42
867054	9/21/2011	Planned Outage	155.00	5	31.00
867064	9/21/2011	Planned Outage	33.00	1	33.00
867066	9/21/2011	Planned Outage	38.00	1	38.00
867070	9/21/2011	Planned Outage	32.00	1	32.00
867071	9/21/2011	Planned Outage	204.00	2	102.00
867073	9/21/2011	Planned Outage	154.00	2	77.00
867074	9/21/2011	Planned Outage	231.00	3	77.00



## Appendix 1

### 2011 Planned Outages Table

867075	9/21/2011	Planned Outage	350.00	5	70.00
867076	9/21/2011	Planned Outage	172.40	4	43.10
867080	9/21/2011	Planned Outage	32.53	1	32.53
867082	9/21/2011	Planned Outage	380.00	2	190.00
867083	9/21/2011	Planned Outage	254.60	3	84.87
867085	9/21/2011	Planned Outage	76.00	2	38.00
867101	9/21/2011	Planned Outage	40.00	1	40.00
867107	9/21/2011	Planned Outage	64.00	2	32.00
867108	9/21/2011	Planned Outage	1,020.00	6	170.00
867111	9/21/2011	Planned Outage	345.00	5	69.00
867116	9/21/2011	Planned Outage	24.58	1	24.58
867140	9/21/2011	Planned Outage	210.00	6	35.00
867246	9/22/2011	Planned Outage	1,800.00	54	33.33
867268	9/22/2011	Planned Outage	42.67	1	42.67
867278	9/22/2011	Planned Outage	150.00	2	75.00
867373	9/22/2011	Planned Outage	67.00	2	33.50
867385	9/22/2011	Planned Outage	810.00	6	135.00
867414	9/23/2011	Planned Outage	335.20	4	83.80
867415	9/23/2011	Planned Outage	408.53	8	51.07
867416	9/23/2011	Planned Outage	84.65	1	84.65
867418	9/23/2011	Planned Outage	124.73	2	62.37
867422	9/23/2011	Planned Outage	39.80	2	19.90
867423	9/23/2011	Planned Outage	1,108.95	9	123.22
867431	9/23/2011	Planned Outage	224.00	16	14.00
867434	9/23/2011	Planned Outage	153.00	3	51.00
867435	9/23/2011	Planned Outage	226.33	2	113.17
867449	9/23/2011	Planned Outage	122.65	3	40.88
867453	9/23/2011	Planned Outage	134.87	7	19.27
867742	9/26/2011	Planned Outage	73.77	2	36.88
867747	9/26/2011	Planned Outage	690.00	5	138.00
867749	9/26/2011	Planned Outage	152.00	2	76.00
867750	9/26/2011	Planned Outage	90.00	6	15.00
867775	9/26/2011	Planned Outage	1,330.20	12	110.85
867776	9/26/2011	Planned Outage	25.00	1	25.00
867777	9/26/2011	Planned Outage	391.47	2	195.73
867778	9/26/2011	Planned Outage	149.00	1	149.00
867815	9/26/2011	Planned Outage	238.00	2	119.00
867855	9/26/2011	Planned Outage	1,329.25	15	88.62
867882	9/27/2011	Planned Outage	184.53	4	46.13
867883	9/27/2011	Planned Outage	19.00	1	19.00
867889	9/27/2011	Planned Outage	266.60	4	66.65

## Appendix 1

### 2011 Planned Outages Table

867897	9/27/2011	Planned Outage	534.00	2	267.00
867921	9/27/2011	Planned Outage	155.65	3	51.88
867943	9/27/2011	Planned Outage	300.00	3	100.00
867955	9/27/2011	Planned Outage	6,429.15	63	102.05
868076	9/28/2011	Planned Outage	204.00	12	17.00
868108	9/28/2011	Planned Outage	50.30	2	25.15
868109	9/28/2011	Planned Outage	23.63	1	23.63
868177	9/28/2011	Planned Outage	124.00	2	62.00
868198	9/28/2011	Planned Outage	2,255.25	15	150.35
868227	9/28/2011	Planned Outage	62.27	2	31.13
868282	9/28/2011	Planned Outage	455.07	1	455.07
868423	9/29/2011	Planned Outage	19,928.00	94	212.00
868429	9/29/2011	Planned Outage	386.75	3	128.92
868430	9/29/2011	Planned Outage	925.00	5	185.00
868447	9/29/2011	Planned Outage	196.73	4	49.18
868454	9/29/2011	Planned Outage	63.42	1	63.42
868467	9/29/2011	Planned Outage	364.07	2	182.03
868469	9/29/2011	Planned Outage	121.95	1	121.95
868470	9/29/2011	Planned Outage	121.72	1	121.72
868471	9/29/2011	Planned Outage	86.07	2	43.03
868489	9/29/2011	Planned Outage	164.00	4	41.00
868515	9/29/2011	Planned Outage	75.43	2	37.72
868521	9/29/2011	Planned Outage	97.98	1	98.00
868524	9/29/2011	Planned Outage	42.77	1	42.77
868701	9/30/2011	Planned Outage	261.47	4	65.37
868704	9/30/2011	Planned Outage	35.17	2	17.58
868705	9/30/2011	Planned Outage	104.20	1	104.20
868716	9/30/2011	Planned Outage	342.77	7	48.97
868845	10/1/2011	Planned Outage	117.70	3	39.23
868997	10/3/2011	Planned Outage	417.70	3	139.23
869001	10/3/2011	Planned Outage	4,187.70	54	77.55
869006	10/3/2011	Planned Outage	11,156.50	782	14.27
869035	10/3/2011	Planned Outage	187.20	1	187.20
869047	10/3/2011	Planned Outage	236.60	2	118.30
869049	10/3/2011	Planned Outage	487.05	51	9.55
869051	10/3/2011	Planned Outage	826.00	4	206.50
869084	10/3/2011	Planned Outage	5,115.67	515	9.93
869093	10/3/2011	Planned Outage	389.93	2	194.97
869097	10/3/2011	Planned Outage	14.10	1	14.10
869098	10/3/2011	Planned Outage	79.45	1	79.45
869103	10/3/2011	Planned Outage	1,913.20	24	79.72

## Appendix 1

### 2011 Planned Outages Table

869111	10/3/2011	Planned Outage	3,913.87	26	150.53
869113	10/3/2011	Planned Outage	70.42	1	70.42
869114	10/3/2011	Planned Outage	276.33	4	69.08
869115	10/3/2011	Planned Outage	6,164.77	782	7.88
869146	10/3/2011	Planned Outage	282.30	2	141.15
869149	10/3/2011	Planned Outage	38.62	1	38.62
869150	10/3/2011	Planned Outage	32.75	3	10.92
869165	10/3/2011	Planned Outage	354.03	2	177.02
869236	10/4/2011	Planned Outage	92.40	1	92.40
869238	10/4/2011	Planned Outage	136.37	1	136.37
869241	10/4/2011	Planned Outage	200.35	1	200.35
869243	10/4/2011	Planned Outage	22,531.30	515	43.75
869307	10/4/2011	Planned Outage	3,492.25	61	57.25
869310	10/4/2011	Planned Outage	369.00	1	369.00
869312	10/4/2011	Planned Outage	291.15	9	32.35
869317	10/4/2011	Planned Outage	105.00	3	35.00
869326	10/4/2011	Planned Outage	41.75	3	13.92
869328	10/4/2011	Planned Outage	100.00	1	100.00
869334	10/4/2011	Planned Outage	180.00	5	36.00
869341	10/4/2011	Planned Outage	95.13	1	95.13
869342	10/4/2011	Planned Outage	214.77	2	107.38
869343	10/4/2011	Planned Outage	108.50	1	108.50
869353	10/4/2011	Planned Outage	32.43	2	16.22
869374	10/4/2011	Planned Outage	9,527.50	515	18.50
869376	10/4/2011	Planned Outage	2,272.05	17	133.65
869380	10/4/2011	Planned Outage	56.87	2	28.43
869382	10/4/2011	Planned Outage	176.42	1	176.42
869384	10/4/2011	Planned Outage	2,057.08	5	411.42
869400	10/4/2011	Planned Outage	241.50	2	120.75
869401	10/4/2011	Planned Outage	952.93	8	119.12
869410	10/4/2011	Planned Outage	1,189.05	9	132.12
869433	10/5/2011	Planned Outage	119.60	1	119.60
869452	10/5/2011	Planned Outage	154.00	14	11.00
869465	10/5/2011	Planned Outage	4,596.67	1970	2.33
869584	10/5/2011	Planned Outage	1,236.00	618	2.00
869605	10/5/2011	Planned Outage	17,598.20	58	303.42
869649	10/5/2011	Planned Outage	784.33	4	196.08
869653	10/5/2011	Planned Outage	508.70	3	169.57
869676	10/6/2011	Planned Outage	137,676.00	447	308.00
869715	10/6/2011	Planned Outage	243.10	6	40.52
869726	10/6/2011	Planned Outage	43.53	2	21.77

## Appendix 1

### 2011 Planned Outages Table

869731	10/6/2011	Planned Outage	990.00	6	165.00
869737	10/6/2011	Planned Outage	468.75	9	52.08
869741	10/6/2011	Planned Outage	1,280.25	27	47.00
869751	10/6/2011	Planned Outage	337.25	3	112.00
869762	10/6/2011	Planned Outage	100.30	2	50.15
869771	10/6/2011	Planned Outage	58.87	1	58.87
869773	10/6/2011	Planned Outage	295.20	3	98.40
869821	10/7/2011	Planned Outage	213.87	4	53.47
869826	10/7/2011	Planned Outage	28.83	5	5.77
869836	10/7/2011	Planned Outage	333.90	9	37.10
869840	10/7/2011	Planned Outage	16.30	3	5.43
869847	10/7/2011	Planned Outage	491.25	5	98.25
869850	10/7/2011	Planned Outage	88.80	4	22.20
869853	10/7/2011	Planned Outage	34.42	1	34.42
869856	10/7/2011	Planned Outage	16.40	2	8.20
869900	10/7/2011	Planned Outage	31.00	1	31.00
870024	10/8/2011	Planned Outage	1,251.00	417	3.00
870108	10/10/2011	Planned Outage	2,536.80	1008	2.52
870138	10/10/2011	Planned Outage	276.20	6	46.03
870139	10/10/2011	Planned Outage	46.63	2	23.32
870152	10/10/2011	Planned Outage	28.22	1	28.22
870156	10/10/2011	Planned Outage	363.17	2	181.58
870159	10/10/2011	Planned Outage	511.75	3	170.58
870177	10/10/2011	Planned Outage	2,834.93	16	177.18
870200	10/10/2011	Planned Outage	1,211.93	53	22.87
870204	10/10/2011	Planned Outage	551.37	17	32.43
870212	10/10/2011	Planned Outage	46.73	1	46.73
870217	10/10/2011	Planned Outage	91.58	1	91.58
870240	10/10/2011	Planned Outage	22.62	1	22.62
870272	10/11/2011	Planned Outage	2,233.00	203	11.00
870349	10/11/2011	Planned Outage	624.00	2	312.00
870352	10/11/2011	Planned Outage	2,422.67	8	302.83
870356	10/11/2011	Planned Outage	177.73	4	44.43
870363	10/11/2011	Planned Outage	84.03	1	84.03
870375	10/11/2011	Planned Outage	1,421.75	141	10.08
870387	10/11/2011	Planned Outage	481.83	2	240.92
870388	10/11/2011	Planned Outage	478.30	2	239.15
870406	10/11/2011	Planned Outage	201.85	3	67.28
870411	10/11/2011	Planned Outage	417.40	3	139.13
870414	10/11/2011	Planned Outage	133.00	1	133.00
870416	10/11/2011	Planned Outage	63.03	1	63.03

## Appendix 1

### 2011 Planned Outages Table

870421	10/11/2011	Planned Outage	115.35	3	38.45
870448	10/12/2011	Planned Outage	1,000.00	10	100.00
870449	10/12/2011	Planned Outage	144.00	4	36.00
870454	10/12/2011	Planned Outage	312.00	2	156.00
870459	10/12/2011	Planned Outage	256.00	2	128.00
870468	10/12/2011	Planned Outage	122.93	16	7.68
870470	10/12/2011	Planned Outage	1,109.60	6	184.93
870472	10/12/2011	Planned Outage	108.57	2	54.28
870510	10/12/2011	Planned Outage	5,019.00	21	239.00
870518	10/12/2011	Planned Outage	9.05	1	9.05
870521	10/12/2011	Planned Outage	564.00	282	2.00
870570	10/12/2011	Planned Outage	172.87	2	86.43
870571	10/12/2011	Planned Outage	68.00	1	68.00
870576	10/12/2011	Planned Outage	94.87	2	47.43
870579	10/12/2011	Planned Outage	42.13	1	42.13
870581	10/12/2011	Planned Outage	156.43	2	78.22
870622	10/13/2011	Planned Outage	196.70	2	98.35
870629	10/13/2011	Planned Outage	31.00	1	31.00
870630	10/13/2011	Planned Outage	2,003.73	4	500.93
870633	10/13/2011	Planned Outage	217.07	8	27.13
870636	10/13/2011	Planned Outage	179.33	1	179.33
870639	10/13/2011	Planned Outage	464.75	3	154.92
870675	10/13/2011	Planned Outage	471.50	5	94.30
870676	10/13/2011	Planned Outage	851.25	9	94.58
870687	10/13/2011	Planned Outage	139.87	1	139.87
870691	10/13/2011	Planned Outage	101.85	3	33.95
870706	10/13/2011	Planned Outage	43.13	2	21.57
870963	10/14/2011	Planned Outage	38.85	1	38.85
870969	10/14/2011	Planned Outage	715.00	13	55.00
870970	10/14/2011	Planned Outage	57.00	1	57.00
870973	10/14/2011	Planned Outage	274.27	4	68.57
870977	10/14/2011	Planned Outage	1,703.00	13	131.00
870983	10/14/2011	Planned Outage	4.00	1	4.00
870984	10/14/2011	Planned Outage	256.50	3	85.50
870985	10/14/2011	Planned Outage	625.40	4	156.35
870987	10/14/2011	Planned Outage	26.92	1	26.92
870988	10/14/2011	Planned Outage	21.53	1	21.53
870997	10/14/2011	Planned Outage	630.00	5	126.00
871003	10/14/2011	Planned Outage	190.07	1	190.07
871004	10/14/2011	Planned Outage	377.83	2	188.92
871008	10/14/2011	Planned Outage	27.88	1	27.88

## Appendix 1

### 2011 Planned Outages Table

871033	10/14/2011	Planned Outage	80.00	1	80.00
871035	10/14/2011	Planned Outage	5.78	1	5.78
871042	10/14/2011	Planned Outage	86.25	5	17.25
871047	10/14/2011	Planned Outage	5,261.07	218	24.13
871094	10/15/2011	Planned Outage	43.27	4	10.82
871135	10/15/2011	Planned Outage	365.25	1	365.25
871195	10/16/2011	Planned Outage	920.00	5	184.00
871287	10/16/2011	Planned Outage	24.10	2	12.05
871338	10/17/2011	Planned Outage	272.00	2	136.00
871363	10/17/2011	Planned Outage	571.17	5	114.23
871364	10/17/2011	Planned Outage	39.97	2	19.98
871365	10/17/2011	Planned Outage	20.73	1	20.73
871366	10/17/2011	Planned Outage	19.15	1	19.15
871367	10/17/2011	Planned Outage	267.92	25	10.72
871374	10/17/2011	Planned Outage	6,681.53	53	126.07
871376	10/17/2011	Planned Outage	404.80	4	101.20
871380	10/17/2011	Planned Outage	67.80	4	16.95
871384	10/17/2011	Planned Outage	68.43	1	68.43
871385	10/17/2011	Planned Outage	62.30	1	62.30
871386	10/17/2011	Planned Outage	49.92	1	49.92
871389	10/17/2011	Planned Outage	112.77	2	56.38
871420	10/17/2011	Planned Outage	42.85	1	42.85
871422	10/17/2011	Planned Outage	64.87	2	32.43
871423	10/17/2011	Planned Outage	30.05	1	30.05
871425	10/17/2011	Planned Outage	453.00	3	151.00
871428	10/17/2011	Planned Outage	731.00	17	43.00
871442	10/17/2011	Planned Outage	703.30	6	117.22
871445	10/17/2011	Planned Outage	54.20	3	18.07
871466	10/18/2011	Planned Outage	1,220.00	4	305.00
871469	10/18/2011	Planned Outage	1,034.00	11	94.00
871481	10/18/2011	Planned Outage	416.70	3	138.90
871482	10/18/2011	Planned Outage	235.00	5	47.00
871488	10/18/2011	Planned Outage	509.03	2	254.52
871493	10/18/2011	Planned Outage	240.62	1	240.62
871500	10/18/2011	Planned Outage	194.05	3	64.68
871520	10/18/2011	Planned Outage	50.00	5	10.00
871521	10/18/2011	Planned Outage	216.85	3	72.28
871522	10/18/2011	Planned Outage	72.18	1	72.18
871529	10/18/2011	Planned Outage	57.40	3	19.13
871533	10/18/2011	Planned Outage	28.00	1	28.00
871596	10/18/2011	Planned Outage	95.17	10	9.52

## Appendix 1

### 2011 Planned Outages Table

871608	10/18/2011	Planned Outage	35.75	1	35.75
871609	10/18/2011	Planned Outage	348.65	3	116.22
871621	10/18/2011	Planned Outage	298.77	1	298.77
871623	10/18/2011	Planned Outage	133.50	5	26.70
871664	10/19/2011	Planned Outage	153.50	2	76.75
871765	10/19/2011	Planned Outage	169.10	3	56.37
871766	10/19/2011	Planned Outage	1,636.25	15	109.08
871767	10/19/2011	Planned Outage	86.25	1	86.25
871768	10/19/2011	Planned Outage	94.23	2	47.12
871770	10/19/2011	Planned Outage	90.37	1	90.37
871771	10/19/2011	Planned Outage	87.98	1	87.98
871777	10/19/2011	Planned Outage	224.00	4	56.00
871779	10/19/2011	Planned Outage	17.85	1	17.85
871780	10/19/2011	Planned Outage	26.62	1	26.62
871783	10/19/2011	Planned Outage	129.47	4	32.37
871784	10/19/2011	Planned Outage	92.65	3	30.88
871788	10/19/2011	Planned Outage	244.20	3	81.40
871790	10/19/2011	Planned Outage	48.50	3	16.17
871792	10/19/2011	Planned Outage	12.68	1	12.68
871793	10/19/2011	Planned Outage	63.10	2	31.55
871799	10/19/2011	Planned Outage	69.80	2	34.90
871800	10/19/2011	Planned Outage	10.00	1	10.00
871801	10/19/2011	Planned Outage	453.30	18	25.18
871803	10/19/2011	Planned Outage	309.28	7	44.18
871806	10/19/2011	Planned Outage	652.00	3	217.33
871807	10/19/2011	Planned Outage	285.28	1	285.28
871813	10/19/2011	Planned Outage	33.37	1	33.37
871816	10/19/2011	Planned Outage	183.00	61	3.00
871827	10/19/2011	Planned Outage	201.05	3	67.02
871830	10/19/2011	Planned Outage	123.27	2	61.63
871831	10/19/2011	Planned Outage	61.18	1	61.18
871832	10/19/2011	Planned Outage	119.70	2	59.85
871834	10/19/2011	Planned Outage	23.65	3	7.88
871841	10/19/2011	Planned Outage	58.23	2	29.12
871843	10/19/2011	Planned Outage	504.00	2	252.00
871848	10/19/2011	Planned Outage	142.73	4	35.68
871850	10/19/2011	Planned Outage	60.55	1	60.55
871851	10/19/2011	Planned Outage	118.48	1	118.48
871871	10/19/2011	Planned Outage	263.40	4	65.85
871895	10/20/2011	Planned Outage	132.00	1	132.00
871904	10/20/2011	Planned Outage	140.67	2	70.33

## Appendix 1

### 2011 Planned Outages Table

871916	10/20/2011	Planned Outage	448.00	2	224.00
871926	10/20/2011	Planned Outage	89.00	1	89.00
871930	10/20/2011	Planned Outage	181.70	1	181.70
871931	10/20/2011	Planned Outage	149.82	1	149.82
871935	10/20/2011	Planned Outage	60.22	1	60.22
871938	10/20/2011	Planned Outage	5,410.00	100	81.60
871947	10/20/2011	Planned Outage	66.00	22	3.00
871951	10/20/2011	Planned Outage	48.60	1	48.60
871952	10/20/2011	Planned Outage	7,812.00	80	97.65
871957	10/20/2011	Planned Outage	39.00	3	13.00
871960	10/20/2011	Planned Outage	41.05	1	41.05
871968	10/20/2011	Planned Outage	199.10	2	99.55
871969	10/20/2011	Planned Outage	448.50	2	224.25
871976	10/20/2011	Planned Outage	88.47	2	44.23
871978	10/20/2011	Planned Outage	30.00	1	30.00
871979	10/20/2011	Planned Outage	121.30	3	40.43
871984	10/20/2011	Planned Outage	132.20	2	66.10
871985	10/20/2011	Planned Outage	339.67	5	67.93
871986	10/20/2011	Planned Outage	206.33	2	103.17
871987	10/20/2011	Planned Outage	18.32	1	18.32
872051	10/21/2011	Planned Outage	66.50	1	66.50
872053	10/21/2011	Planned Outage	43.03	1	43.03
872056	10/21/2011	Planned Outage	1,480.60	2	740.30
872064	10/21/2011	Planned Outage	13,754.10	37	371.73
872071	10/21/2011	Planned Outage	339.57	1	339.57
872076	10/21/2011	Planned Outage	630.67	8	78.83
872079	10/21/2011	Planned Outage	15,285.60	48	318.45
872082	10/21/2011	Planned Outage	213.33	16	13.33
872084	10/21/2011	Planned Outage	136.30	2	68.15
872457	10/24/2011	Planned Outage	181.00	1	181.00
872476	10/24/2011	Planned Outage	66.23	2	33.12
872482	10/24/2011	Planned Outage	1,890.00	18	105.00
872490	10/24/2011	Planned Outage	146.13	2	73.07
872492	10/24/2011	Planned Outage	473.90	2	236.95
872503	10/24/2011	Planned Outage	10,743.20	51	210.65
872519	10/24/2011	Planned Outage	442.43	2	221.22
872520	10/24/2011	Planned Outage	752.40	8	94.05
872525	10/24/2011	Planned Outage	15.00	1	15.00
872529	10/24/2011	Planned Outage	123.80	3	41.27
872531	10/24/2011	Planned Outage	1,004.00	48	20.92
872558	10/24/2011	Planned Outage	874.95	3	291.65



## Appendix 1

### 2011 Planned Outages Table

872559	10/24/2011	Planned Outage	1,201.00	4	300.25
872568	10/24/2011	Planned Outage	102.00	6	17.00
872573	10/24/2011	Planned Outage	52.90	6	8.82
872581	10/24/2011	Planned Outage	178.08	5	35.62
872589	10/24/2011	Planned Outage	184.95	3	61.65
872598	10/24/2011	Planned Outage	1,370.20	39	35.13
872602	10/25/2011	Planned Outage	5,030.10	486	10.35
872622	10/25/2011	Planned Outage	278.00	2	139.00
872623	10/25/2011	Planned Outage	137.00	5	27.40
872625	10/25/2011	Planned Outage	99.75	1	99.75
872626	10/25/2011	Planned Outage	98.98	1	98.98
872632	10/25/2011	Planned Outage	676.00	13	52.00
872642	10/25/2011	Planned Outage	269.13	4	67.28
872646	10/25/2011	Planned Outage	272.67	5	54.53
872647	10/25/2011	Planned Outage	97.87	2	48.93
872651	10/25/2011	Planned Outage	33.00	1	33.00
872673	10/25/2011	Planned Outage	67.85	1	67.85
872678	10/25/2011	Planned Outage	95.00	10	9.50
872684	10/25/2011	Planned Outage	328.00	2	164.00
872685	10/25/2011	Planned Outage	23.15	1	23.15
872688	10/25/2011	Planned Outage	37.03	1	37.03
872729	10/26/2011	Planned Outage	431.20	3	143.73
872734	10/26/2011	Planned Outage	358.47	4	89.62
872745	10/26/2011	Planned Outage	129.98	1	129.98
872747	10/26/2011	Planned Outage	254.83	2	127.42
872748	10/26/2011	Planned Outage	163.37	2	81.68
872756	10/26/2011	Planned Outage	86.62	1	86.62
872763	10/26/2011	Planned Outage	664.00	8	83.00
872768	10/26/2011	Planned Outage	58.32	1	58.32
872773	10/26/2011	Planned Outage	899.40	3	299.80
872774	10/26/2011	Planned Outage	184.00	5	36.80
872777	10/26/2011	Planned Outage	215.47	2	107.73
872778	10/26/2011	Planned Outage	322.90	3	107.63
872783	10/26/2011	Planned Outage	2,593.25	15	172.88
872797	10/26/2011	Planned Outage	859.05	9	95.45
872852	10/27/2011	Planned Outage	471.17	10	47.12
872867	10/27/2011	Planned Outage	12,075.20	32	377.35
872868	10/27/2011	Planned Outage	54.23	2	27.12
872870	10/27/2011	Planned Outage	2,546.00	5	509.20
872874	10/27/2011	Planned Outage	36.12	1	36.12
872876	10/27/2011	Planned Outage	2,301.42	5	460.28

## Appendix 1

### 2011 Planned Outages Table

872901	10/27/2011	Planned Outage	74.00	5	14.80
872909	10/27/2011	Planned Outage	74.30	1	74.30
872918	10/27/2011	Planned Outage	139.15	3	46.38
873002	10/28/2011	Planned Outage	86.27	4	21.57
873005	10/28/2011	Planned Outage	47.28	1	47.28
873010	10/28/2011	Planned Outage	165.95	1	165.95
873013	10/28/2011	Planned Outage	33.45	1	33.45
873014	10/28/2011	Planned Outage	88.83	2	44.42
873022	10/28/2011	Planned Outage	20.88	1	20.88
873030	10/28/2011	Planned Outage	237.80	3	79.27
873034	10/28/2011	Planned Outage	81.87	2	40.93
873042	10/28/2011	Planned Outage	108.93	4	27.23
873050	10/28/2011	Planned Outage	37.13	2	18.57
873094	10/29/2011	Planned Outage	118.08	5	23.62
873183	10/30/2011	Planned Outage	175.13	2	87.57
873184	10/30/2011	Planned Outage	176.97	2	88.48
873187	10/30/2011	Planned Outage	121.02	1	121.02
873264	10/31/2011	Planned Outage	84.85	3	28.28
873266	10/31/2011	Planned Outage	2,850.00	1425	2.00
873268	10/31/2011	Planned Outage	288.00	4	72.00
873271	10/31/2011	Planned Outage	15,895.60	49	324.40
873288	10/31/2011	Planned Outage	5,357.80	28	191.35
873293	10/31/2011	Planned Outage	80.58	1	80.58
873294	10/31/2011	Planned Outage	157.33	2	78.67
873327	10/31/2011	Planned Outage	1,476.00	9	164.00
873334	10/31/2011	Planned Outage	19.00	1	19.00
873338	10/31/2011	Planned Outage	67.57	1	67.57
873344	10/31/2011	Planned Outage	231.53	4	57.88
873347	10/31/2011	Planned Outage	25.65	1	25.65
873361	10/31/2011	Planned Outage	43.47	1	43.47
873372	10/31/2011	Planned Outage	15.00	1	15.00
873376	10/31/2011	Planned Outage	145.72	1	145.72
873404	11/1/2011	Planned Outage	10.85	1	10.85
873406	11/1/2011	Planned Outage	62.20	3	20.73
873408	11/1/2011	Planned Outage	46.97	1	46.97
873409	11/1/2011	Planned Outage	340.77	1	340.77
873415	11/1/2011	Planned Outage	1,902.45	3	634.15
873419	11/1/2011	Planned Outage	450.45	3	150.15
873423	11/1/2011	Planned Outage	183.05	7	26.15
873430	11/1/2011	Planned Outage	195.63	1	195.63
873431	11/1/2011	Planned Outage	48.00	1	48.00

## Appendix 1

### 2011 Planned Outages Table

873443	11/1/2011	Planned Outage	415.00	5	83.00
873444	11/1/2011	Planned Outage	475.90	3	158.63
873480	11/1/2011	Planned Outage	22.95	1	22.95
873485	11/1/2011	Planned Outage	64.08	1	64.08
873487	11/1/2011	Planned Outage	60.48	1	60.48
873495	11/1/2011	Planned Outage	152.47	1	152.47
873624	11/2/2011	Planned Outage	10,065.00	165	61.00
873646	11/2/2011	Planned Outage	302.75	3	100.92
873649	11/2/2011	Planned Outage	2,137.20	104	20.55
873656	11/2/2011	Planned Outage	134.37	1	134.37
873660	11/2/2011	Planned Outage	121.07	2	60.53
873666	11/2/2011	Planned Outage	580.00	4	145.00
873670	11/2/2011	Planned Outage	75.00	15	5.00
873671	11/2/2011	Planned Outage	636.93	8	79.62
873715	11/2/2011	Planned Outage	26,082.70	147	177.43
873724	11/2/2011	Planned Outage	124.20	2	62.10
873728	11/2/2011	Planned Outage	4.00	1	4.00
873749	11/2/2011	Planned Outage	10,026.10	118	84.97
873751	11/2/2011	Planned Outage	95.45	3	31.82
873752	11/2/2011	Planned Outage	220.38	7	31.48
873755	11/2/2011	Planned Outage	70.77	1	70.77
873757	11/2/2011	Planned Outage	48.00	8	6.00
873758	11/2/2011	Planned Outage	135.35	1	135.35
873759	11/2/2011	Planned Outage	131.97	1	131.97
873768	11/2/2011	Planned Outage	161.90	3	53.97
873769	11/2/2011	Planned Outage	62.67	2	31.33
873774	11/2/2011	Planned Outage	23.77	1	23.77
873777	11/2/2011	Planned Outage	56.00	4	14.00
873780	11/2/2011	Planned Outage	48.92	1	48.92
873784	11/2/2011	Planned Outage	171.00	3	57.00
873798	11/2/2011	Planned Outage	237.93	2	118.97
873799	11/2/2011	Planned Outage	595.00	5	119.00
873820	11/2/2011	Planned Outage	605.07	4	151.27
873825	11/2/2011	Planned Outage	235.15	3	78.38
873839	11/3/2011	Planned Outage	5,346.00	729	7.33
873840	11/3/2011	Planned Outage	50.60	4	12.65
873842	11/3/2011	Planned Outage	198.33	1	198.33
873844	11/3/2011	Planned Outage	114.00	6	19.00
873848	11/3/2011	Planned Outage	2,300.00	10	230.00
873849	11/3/2011	Planned Outage	1,244.83	10	124.48
873854	11/3/2011	Planned Outage	200.47	1	200.47

## Appendix 1

### 2011 Planned Outages Table

873855	11/3/2011	Planned Outage	177.05	3	59.02
873859	11/3/2011	Planned Outage	1,094.33	7	156.33
873869	11/3/2011	Planned Outage	41.00	3	13.67
873870	11/3/2011	Planned Outage	114.37	1	114.37
873872	11/3/2011	Planned Outage	201.60	6	33.60
873876	11/3/2011	Planned Outage	229.75	3	76.58
873885	11/3/2011	Planned Outage	24.65	1	24.65
873887	11/3/2011	Planned Outage	106.00	2	53.00
873894	11/3/2011	Planned Outage	303.00	3	101.00
873916	11/3/2011	Planned Outage	176.03	2	88.02
873932	11/3/2011	Planned Outage	18.03	1	18.03
873993	11/4/2011	Planned Outage	190.20	1	190.20
874007	11/4/2011	Planned Outage	230.33	4	57.58
874010	11/4/2011	Planned Outage	290.70	3	96.90
874023	11/4/2011	Planned Outage	1,770.42	25	70.82
874024	11/4/2011	Planned Outage	6,878.90	93	73.97
874025	11/4/2011	Planned Outage	156.30	3	52.10
874030	11/4/2011	Planned Outage	393.70	3	131.23
874037	11/4/2011	Planned Outage	53.95	1	53.95
874109	11/5/2011	Planned Outage	168.27	4	42.07
874216	11/7/2011	Planned Outage	393.00	393	1.00
874223	11/7/2011	Planned Outage	181.30	3	60.43
874234	11/7/2011	Planned Outage	2,327.00	70	34.00
874235	11/7/2011	Planned Outage	462.00	14	33.00
874255	11/7/2011	Planned Outage	1,872.00	26	72.00
874262	11/7/2011	Planned Outage	381.75	3	127.25
874265	11/7/2011	Planned Outage	113.00	1	113.00
874280	11/7/2011	Planned Outage	28.00	1	28.00
874285	11/7/2011	Planned Outage	86.00	2	43.00
874308	11/8/2011	Planned Outage	288.00	36	8.00
874330	11/8/2011	Planned Outage	171.20	8	21.40
874336	11/8/2011	Planned Outage	1,534.00	1534	1.00
874340	11/8/2011	Planned Outage	805.55	3	268.52
874342	11/8/2011	Planned Outage	510.37	122	4.18
874360	11/8/2011	Planned Outage	394.47	4	98.62
874362	11/8/2011	Planned Outage	634.10	17	37.30
874363	11/8/2011	Planned Outage	1,866.80	104	17.95
874372	11/8/2011	Planned Outage	260.00	2	130.00
874373	11/8/2011	Planned Outage	16.73	1	16.73
874384	11/8/2011	Planned Outage	124.00	1	124.00
874385	11/8/2011	Planned Outage	259.70	2	129.85

## Appendix 1

### 2011 Planned Outages Table

874387	11/8/2011	Planned Outage	183.00	5	36.60
874388	11/8/2011	Planned Outage	67.05	1	67.05
874389	11/8/2011	Planned Outage	150.00	3	50.00
874404	11/8/2011	Planned Outage	75.75	3	25.25
874413	11/8/2011	Planned Outage	425.00	5	85.00
874478	11/9/2011	Planned Outage	80.73	1	80.73
874479	11/9/2011	Planned Outage	862.20	2	431.10
874481	11/9/2011	Planned Outage	7,488.00	18	416.00
874484	11/9/2011	Planned Outage	122.00	2	61.00
874491	11/9/2011	Planned Outage	224.00	4	56.00
874503	11/9/2011	Planned Outage	6,361.33	104	61.17
874512	11/9/2011	Planned Outage	184.25	3	61.42
874520	11/9/2011	Planned Outage	419.00	1	419.00
874542	11/9/2011	Planned Outage	22.00	1	22.00
874543	11/9/2011	Planned Outage	48.77	1	48.77
874561	11/9/2011	Planned Outage	901.60	49	18.40
874573	11/9/2011	Planned Outage	18.97	1	18.97
874589	11/9/2011	Planned Outage	736.73	43	17.13
874590	11/9/2011	Planned Outage	64.00	1	64.00
874591	11/9/2011	Planned Outage	252.00	2	126.00
874593	11/9/2011	Planned Outage	5.12	1	5.12
874600	11/9/2011	Planned Outage	368.53	8	46.07
874607	11/9/2011	Planned Outage	39.00	1	39.00
874669	11/10/2011	Planned Outage	790.00	10	79.00
874670	11/10/2011	Planned Outage	4,381.00	13	337.00
874674	11/10/2011	Planned Outage	26.00	1	26.00
874676	11/10/2011	Planned Outage	86.02	1	86.02
874680	11/10/2011	Planned Outage	57.88	1	57.88
874683	11/10/2011	Planned Outage	91.90	1	91.90
874687	11/10/2011	Planned Outage	25.02	1	25.02
874692	11/10/2011	Planned Outage	60.57	1	60.57
874694	11/10/2011	Planned Outage	169.63	1	169.63
874696	11/10/2011	Planned Outage	296.70	2	148.35
874699	11/10/2011	Planned Outage	4,525.40	66	68.57
874992	11/10/2011	Planned Outage	129.62	7	18.52
874994	11/10/2011	Planned Outage	148.00	2	74.00
875004	11/10/2011	Planned Outage	81.05	1	81.05
875006	11/10/2011	Planned Outage	1,547.00	7	221.00
875011	11/10/2011	Planned Outage	14,230.30	42	338.82
875013	11/10/2011	Planned Outage	411.30	6	68.55
875054	11/10/2011	Planned Outage	53.60	1	53.60

## Appendix 1

### 2011 Planned Outages Table

875059	11/10/2011	Planned Outage	1,577.92	7	225.42
875094	11/11/2011	Planned Outage	362.00	3	120.67
875098	11/11/2011	Planned Outage	11,360.50	112	101.43
875110	11/11/2011	Planned Outage	47.55	1	47.55
875111	11/11/2011	Planned Outage	87.47	4	21.87
875112	11/11/2011	Planned Outage	813.50	5	162.70
875114	11/11/2011	Planned Outage	100.70	6	16.78
875119	11/11/2011	Planned Outage	963.85	37	26.05
875133	11/11/2011	Planned Outage	1,400.00	56	25.00
875385	11/13/2011	Planned Outage	238.40	3	79.47
875435	11/14/2011	Planned Outage	35.68	1	35.68
875444	11/14/2011	Planned Outage	2,700.00	45	60.00
875447	11/14/2011	Planned Outage	196.33	2	98.17
875448	11/14/2011	Planned Outage	19.00	1	19.00
875449	11/14/2011	Planned Outage	294.47	2	147.23
875450	11/14/2011	Planned Outage	603.60	4	150.90
875463	11/14/2011	Planned Outage	652.13	4	163.03
875464	11/14/2011	Planned Outage	346.60	6	57.77
875586	11/15/2011	Planned Outage	161.28	1	161.28
875587	11/15/2011	Planned Outage	343.12	7	49.02
875597	11/15/2011	Planned Outage	113.20	4	28.30
875607	11/15/2011	Planned Outage	291.80	4	72.95
875615	11/15/2011	Planned Outage	347.75	3	115.92
875621	11/15/2011	Planned Outage	8.13	2	4.07
875645	11/15/2011	Planned Outage	65.83	1	65.83
875647	11/15/2011	Planned Outage	396.10	2	198.05
875655	11/15/2011	Planned Outage	51.22	1	51.22
875678	11/16/2011	Planned Outage	1,741.75	5	348.35
875682	11/16/2011	Planned Outage	7,765.40	492	15.78
875705	11/16/2011	Planned Outage	815.35	3	271.78
875708	11/16/2011	Planned Outage	115.70	1	115.70
875709	11/16/2011	Planned Outage	111.00	1	111.00
875723	11/16/2011	Planned Outage	183.07	4	45.77
875734	11/16/2011	Planned Outage	364.27	2	182.13
875736	11/16/2011	Planned Outage	238.00	1	238.00
875776	11/16/2011	Planned Outage	111.00	1	111.00
875779	11/16/2011	Planned Outage	300.00	4	75.00
875824	11/16/2011	Planned Outage	32.10	2	16.05
875850	11/16/2011	Planned Outage	5,371.20	216	24.87
875869	11/17/2011	Planned Outage	309.00	1	309.00
875872	11/17/2011	Planned Outage	508.87	4	127.22

## Appendix 1

### 2011 Planned Outages Table

875882	11/17/2011	Planned Outage	247.27	1	247.27
875884	11/17/2011	Planned Outage	2,355.50	42	56.08
875888	11/17/2011	Planned Outage	134.85	1	134.85
875889	11/17/2011	Planned Outage	150.68	1	150.68
875917	11/17/2011	Planned Outage	121.47	2	60.73
875928	11/17/2011	Planned Outage	14.00	1	14.00
875930	11/17/2011	Planned Outage	196.00	1	196.00
875936	11/17/2011	Planned Outage	133.58	1	133.58
875971	11/17/2011	Planned Outage	345.47	8	43.18
875989	11/18/2011	Planned Outage	3,192.17	1070	2.98
876000	11/18/2011	Planned Outage	351.25	15	23.42
876004	11/18/2011	Planned Outage	17.00	1	17.00
876018	11/18/2011	Planned Outage	142.45	1	142.45
876022	11/18/2011	Planned Outage	1,479.40	13	113.80
876024	11/18/2011	Planned Outage	11,483.10	92	124.82
876027	11/18/2011	Planned Outage	316.40	7	45.20
876037	11/18/2011	Planned Outage	921.60	12	76.80
876042	11/18/2011	Planned Outage	17.55	1	17.55
876261	11/20/2011	Planned Outage	120.00	2	60.00
876315	11/21/2011	Planned Outage	50.00	1	50.00
876316	11/21/2011	Planned Outage	96.00	2	48.00
876317	11/21/2011	Planned Outage	65.00	1	65.00
876322	11/21/2011	Planned Outage	27.00	1	27.00
876325	11/21/2011	Planned Outage	172.37	2	86.18
876326	11/21/2011	Planned Outage	414.47	1	414.47
876330	11/21/2011	Planned Outage	9.73	1	9.73
876332	11/21/2011	Planned Outage	1,491.00	7	213.00
876333	11/21/2011	Planned Outage	93.00	1	93.00
876334	11/21/2011	Planned Outage	96.00	6	16.00
876335	11/21/2011	Planned Outage	123.73	1	123.73
876336	11/21/2011	Planned Outage	289.37	2	144.68
876337	11/21/2011	Planned Outage	766.00	2	383.00
876338	11/21/2011	Planned Outage	760.00	2	380.00
876340	11/21/2011	Planned Outage	2,684.27	32	83.88
876353	11/21/2011	Planned Outage	11,588.30	32	362.13
876372	11/21/2011	Planned Outage	150.75	3	50.25
876375	11/21/2011	Planned Outage	76.00	1	76.00
876376	11/21/2011	Planned Outage	135.00	3	45.00
876385	11/21/2011	Planned Outage	247.58	5	49.52
876418	11/22/2011	Planned Outage	14.35	1	14.35
876434	11/22/2011	Planned Outage	101.25	3	33.75

## Appendix 1

### 2011 Planned Outages Table

876435	11/22/2011	Planned Outage	1,436.00	4	359.00
876437	11/22/2011	Planned Outage	661.33	4	165.33
876442	11/22/2011	Planned Outage	568.00	3	189.33
876446	11/22/2011	Planned Outage	68.50	1	68.50
876447	11/22/2011	Planned Outage	206.60	3	68.87
876453	11/22/2011	Planned Outage	295.00	5	59.00
876460	11/22/2011	Planned Outage	124.00	1	124.00
876462	11/22/2011	Planned Outage	64.20	6	10.70
876492	11/22/2011	Planned Outage	1,161.00	27	43.00
876493	11/22/2011	Planned Outage	97.93	2	48.97
876496	11/22/2011	Planned Outage	1,364.00	31	44.00
876502	11/22/2011	Planned Outage	89.17	1	89.17
876513	11/22/2011	Planned Outage	170.83	1	170.83
876529	11/22/2011	Planned Outage	20.00	4	5.00
876670	11/23/2011	Planned Outage	33.20	1	33.20
876677	11/23/2011	Planned Outage	1,087.50	3	362.50
876679	11/23/2011	Planned Outage	1,278.20	4	319.55
876680	11/23/2011	Planned Outage	7,401.10	42	176.22
876683	11/23/2011	Planned Outage	1,043.10	18	57.95
876689	11/23/2011	Planned Outage	144.53	4	36.13
876692	11/23/2011	Planned Outage	25.55	1	25.55
876698	11/23/2011	Planned Outage	175.45	3	58.48
876705	11/23/2011	Planned Outage	32.27	2	16.13
876706	11/23/2011	Planned Outage	151.40	4	37.85
876716	11/23/2011	Planned Outage	469.00	335	1.40
876721	11/23/2011	Planned Outage	1,439.20	1028	1.40
876732	11/23/2011	Planned Outage	16.42	1	16.42
876739	11/23/2011	Planned Outage	115.35	3	38.45
876841	11/24/2011	Planned Outage	109.77	2	54.88
876934	11/26/2011	Planned Outage	42.00	3	14.00
876935	11/26/2011	Planned Outage	93.80	4	23.45
876964	11/26/2011	Planned Outage	60.20	4	15.05
877139	11/28/2011	Planned Outage	4,556.93	8	569.62
877141	11/28/2011	Planned Outage	555.52	1	555.52
877146	11/28/2011	Planned Outage	640.00	8	80.00
877149	11/28/2011	Planned Outage	17.37	1	17.37
877154	11/28/2011	Planned Outage	99.67	5	19.93
877160	11/28/2011	Planned Outage	771.73	8	96.47
877162	11/28/2011	Planned Outage	382.00	2	191.00
877163	11/28/2011	Planned Outage	875.30	2	437.65
877166	11/28/2011	Planned Outage	7,535.92	55	137.02



## Appendix 1

### 2011 Planned Outages Table

877174	11/28/2011	Planned Outage	78.00	3	26.00
877175	11/28/2011	Planned Outage	26.00	1	26.00
877176	11/28/2011	Planned Outage	6,945.25	65	106.85
877179	11/28/2011	Planned Outage	121.00	1	121.00
877183	11/28/2011	Planned Outage	267.80	3	89.27
877207	11/28/2011	Planned Outage	28.57	1	28.57
877213	11/28/2011	Planned Outage	30.00	2	15.00
877214	11/28/2011	Planned Outage	647.10	9	71.90
877218	11/28/2011	Planned Outage	66.00	2	33.00
877248	11/29/2011	Planned Outage	380.00	2	190.00
877253	11/29/2011	Planned Outage	60.00	3	20.00
877255	11/29/2011	Planned Outage	112.00	2	56.00
877267	11/29/2011	Planned Outage	610.00	4	152.50
877311	11/29/2011	Planned Outage	355.03	2	177.52
877331	11/29/2011	Planned Outage	354.67	5	70.93
877368	11/30/2011	Planned Outage	178.70	1	178.70
877370	11/30/2011	Planned Outage	678.00	6	113.00
877381	11/30/2011	Planned Outage	1,554.00	6	259.00
877383	11/30/2011	Planned Outage	5,586.00	42	133.00
877385	11/30/2011	Planned Outage	77.30	2	38.65
877388	11/30/2011	Planned Outage	18,490.70	80	231.13
877391	11/30/2011	Planned Outage	1,672.00	4	418.00
877392	11/30/2011	Planned Outage	1,856.40	26	71.40
877393	11/30/2011	Planned Outage	40,198.00	202	199.00
877411	11/30/2011	Planned Outage	103.00	1	103.00
877428	11/30/2011	Planned Outage	87.55	1	87.55
877440	11/30/2011	Planned Outage	18.67	2	9.33
877441	11/30/2011	Planned Outage	9.05	1	9.05
877442	11/30/2011	Planned Outage	8.55	1	8.55
877448	11/30/2011	Planned Outage	124.20	1	124.20
877530	12/1/2011	Planned Outage	8,169.53	118	69.23
877558	12/1/2011	Planned Outage	177.00	3	59.00
877560	12/1/2011	Planned Outage	96.00	2	48.00
877563	12/1/2011	Planned Outage	1,112.20	6	185.37
877572	12/1/2011	Planned Outage	294.00	6	49.00
877589	12/1/2011	Planned Outage	40.73	1	40.73
877622	12/2/2011	Planned Outage	70.00	2	35.00
877628	12/2/2011	Planned Outage	431.00	3	143.67
877633	12/2/2011	Planned Outage	748.00	11	68.00
877635	12/2/2011	Planned Outage	2.00	1	2.00
877638	12/2/2011	Planned Outage	498.00	3	166.00

## Appendix 1

### 2011 Planned Outages Table

877650	12/2/2011	Planned Outage	14.70	1	14.70
877655	12/2/2011	Planned Outage	50.00	1	50.00
877656	12/2/2011	Planned Outage	162.33	5	32.47
877669	12/2/2011	Planned Outage	72.25	5	14.45
877675	12/2/2011	Planned Outage	404.25	35	11.55
877682	12/2/2011	Planned Outage	4.00	1	4.00
877684	12/2/2011	Planned Outage	46.00	2	23.00
877827	12/3/2011	Planned Outage	12,411.00	540	22.98
877883	12/4/2011	Planned Outage	361.87	1	361.87
877887	12/4/2011	Planned Outage	354.03	1	354.03
877890	12/4/2011	Planned Outage	12,264.00	84	146.00
877893	12/4/2011	Planned Outage	120.00	2	60.00
877897	12/4/2011	Planned Outage	169.00	1	169.00
877898	12/4/2011	Planned Outage	316.00	2	158.00
877913	12/4/2011	Planned Outage	107.95	3	35.98
877947	12/5/2011	Planned Outage	178.73	1	178.73
877949	12/5/2011	Planned Outage	1,404.00	16	87.75
877950	12/5/2011	Planned Outage	161.80	1	161.80
877952	12/5/2011	Planned Outage	2,618.00	7	374.00
877955	12/5/2011	Planned Outage	506.90	2	253.45
877965	12/5/2011	Planned Outage	214.23	2	107.12
877968	12/5/2011	Planned Outage	946.05	7	135.15
877969	12/5/2011	Planned Outage	22.73	1	22.73
877970	12/5/2011	Planned Outage	2,282.92	25	91.32
877972	12/5/2011	Planned Outage	3,534.00	38	93.00
877973	12/5/2011	Planned Outage	4,876.00	53	92.00
877974	12/5/2011	Planned Outage	4,991.00	115	43.40
877983	12/5/2011	Planned Outage	3,224.80	87	37.07
877985	12/5/2011	Planned Outage	249.30	3	83.10
877989	12/5/2011	Planned Outage	37.02	1	37.02
877990	12/5/2011	Planned Outage	247.80	6	41.30
877994	12/5/2011	Planned Outage	589.20	36	16.37
878005	12/5/2011	Planned Outage	65.25	9	7.25
878007	12/5/2011	Planned Outage	2,065.00	59	35.00
878008	12/5/2011	Planned Outage	630.00	18	35.00
878011	12/5/2011	Planned Outage	146.00	2	73.00
878013	12/5/2011	Planned Outage	6,042.00	114	53.00
878015	12/5/2011	Planned Outage	26.23	1	26.23
878032	12/5/2011	Planned Outage	5,251.40	31	169.40
878044	12/6/2011	Planned Outage	67.60	1	67.60
878060	12/6/2011	Planned Outage	207.42	1	207.42

## Appendix 1

### 2011 Planned Outages Table

878080	12/6/2011	Planned Outage	903.17	5	180.63
878084	12/6/2011	Planned Outage	2,366.83	22	107.58
878127	12/6/2011	Planned Outage	90.62	1	90.62
878134	12/6/2011	Planned Outage	56.00	4	14.00
878135	12/6/2011	Planned Outage	137.10	2	68.55
878136	12/6/2011	Planned Outage	276.05	3	92.02
878137	12/6/2011	Planned Outage	57.57	1	57.57
878142	12/6/2011	Planned Outage	460.85	3	153.62
878143	12/6/2011	Planned Outage	20.62	1	20.62
878146	12/6/2011	Planned Outage	219.30	2	109.65
878147	12/6/2011	Planned Outage	85.50	3	28.50
878148	12/6/2011	Planned Outage	657.15	3	219.05
878158	12/6/2011	Planned Outage	800.67	8	100.08
878235	12/6/2011	Planned Outage	19.47	1	19.47
878240	12/6/2011	Planned Outage	71.77	1	71.77
878250	12/6/2011	Planned Outage	216.00	2	108.00
878251	12/6/2011	Planned Outage	99.60	18	5.53
878253	12/6/2011	Planned Outage	805.00	7	115.00
878265	12/6/2011	Planned Outage	68.00	1	68.00
878269	12/6/2011	Planned Outage	358.73	2	179.37
878270	12/6/2011	Planned Outage	29.07	1	29.07
878285	12/6/2011	Planned Outage	113.20	2	56.60
878288	12/6/2011	Planned Outage	490.53	13	37.73
878289	12/6/2011	Planned Outage	62.75	3	20.92
878292	12/6/2011	Planned Outage	924.00	7	132.00
878319	12/6/2011	Planned Outage	1,673.00	10	167.30
878339	12/6/2011	Planned Outage	99.00	27	3.67
878349	12/7/2011	Planned Outage	170.33	2	85.17
878356	12/7/2011	Planned Outage	63,998.70	140	457.13
878357	12/7/2011	Planned Outage	2,119.58	25	84.78
878358	12/7/2011	Planned Outage	243.08	1	243.08
878362	12/7/2011	Planned Outage	4,255.62	37	115.02
878366	12/7/2011	Planned Outage	7,574.58	53	142.92
878367	12/7/2011	Planned Outage	1,969.05	9	218.78
878389	12/7/2011	Planned Outage	228.00	4	57.00
878405	12/7/2011	Planned Outage	162.20	1	162.20
878407	12/7/2011	Planned Outage	540.67	4	135.17
878408	12/7/2011	Planned Outage	154.60	3	51.53
878420	12/7/2011	Planned Outage	23.20	3	7.73
878425	12/7/2011	Planned Outage	314.93	8	39.37
878428	12/7/2011	Planned Outage	9,130.00	55	166.00

## Appendix 1

### 2011 Planned Outages Table

878437	12/7/2011	Planned Outage	675.00	3	225.00
878511	12/8/2011	Planned Outage	101.75	1	101.75
878532	12/8/2011	Planned Outage	33.92	1	33.92
878533	12/8/2011	Planned Outage	1,632.00	3	544.00
878540	12/8/2011	Planned Outage	84.00	7	12.00
878541	12/8/2011	Planned Outage	138.40	3	46.13
878542	12/8/2011	Planned Outage	1,153.75	25	46.15
878543	12/8/2011	Planned Outage	126.65	3	42.22
878546	12/8/2011	Planned Outage	38.22	1	38.22
878550	12/8/2011	Planned Outage	34.75	1	34.75
878556	12/8/2011	Planned Outage	366.00	3	122.00
878557	12/8/2011	Planned Outage	100.95	9	11.22
878560	12/8/2011	Planned Outage	2,174.90	7	310.70
878602	12/8/2011	Planned Outage	545.70	9	60.63
878604	12/8/2011	Planned Outage	108.60	4	27.15
878611	12/8/2011	Planned Outage	37.07	2	18.53
878620	12/8/2011	Planned Outage	25.77	1	25.77
878671	12/9/2011	Planned Outage	26.87	1	26.87
878674	12/9/2011	Planned Outage	557.40	3	185.80
878676	12/9/2011	Planned Outage	748.93	8	93.62
878680	12/9/2011	Planned Outage	142.60	3	47.53
878681	12/9/2011	Planned Outage	158.00	1	158.00
878685	12/9/2011	Planned Outage	103.42	5	20.68
878686	12/9/2011	Planned Outage	41.67	2	20.83
878693	12/9/2011	Planned Outage	684.00	3	228.00
878710	12/9/2011	Planned Outage	105.60	2	52.80
878712	12/9/2011	Planned Outage	10.02	1	10.02
878713	12/9/2011	Planned Outage	26.70	3	8.90
878765	12/10/2011	Planned Outage	2,211.87	4	552.97
878766	12/10/2011	Planned Outage	7,189.00	13	553.00
878781	12/10/2011	Planned Outage	11.77	1	11.77
878982	12/12/2011	Planned Outage	96.00	1	96.00
878997	12/12/2011	Planned Outage	942.83	2	471.42
879001	12/12/2011	Planned Outage	529.00	1	529.00
879004	12/12/2011	Planned Outage	153.85	3	51.28
879005	12/12/2011	Planned Outage	186.00	1	186.00
879014	12/12/2011	Planned Outage	684.93	4	171.23
879017	12/12/2011	Planned Outage	143.00	1	143.00
879019	12/12/2011	Planned Outage	1,777.78	11	161.62
879048	12/12/2011	Planned Outage	192.00	1	192.00
879050	12/12/2011	Planned Outage	208.00	2	104.00

## Appendix 1

### 2011 Planned Outages Table

879055	12/12/2011	Planned Outage	415.33	20	20.77
879058	12/12/2011	Planned Outage	308.60	4	77.15
879083	12/13/2011	Planned Outage	335.00	5	67.00
879097	12/13/2011	Planned Outage	1,629.00	9	181.00
879099	12/13/2011	Planned Outage	106.47	4	26.62
879104	12/13/2011	Planned Outage	2,601.20	6	433.53
879108	12/13/2011	Planned Outage	489.00	3	163.00
879110	12/13/2011	Planned Outage	36.87	4	9.22
879112	12/13/2011	Planned Outage	3,033.45	7	433.35
879119	12/13/2011	Planned Outage	52.75	1	52.75
879120	12/13/2011	Planned Outage	228.00	4	57.00
879125	12/13/2011	Planned Outage	593.33	4	148.33
879132	12/13/2011	Planned Outage	374.53	2	187.27
879134	12/13/2011	Planned Outage	125.47	4	31.37
879142	12/13/2011	Planned Outage	105.95	3	35.32
879143	12/13/2011	Planned Outage	16.95	1	16.95
879144	12/13/2011	Planned Outage	13.73	2	6.87
879147	12/13/2011	Planned Outage	81.77	2	40.88
879149	12/13/2011	Planned Outage	503.47	4	125.87
879156	12/13/2011	Planned Outage	1,000.00	6	166.67
879162	12/13/2011	Planned Outage	37.60	4	9.40
879163	12/13/2011	Planned Outage	23.10	3	7.70
879181	12/14/2011	Planned Outage	2,597.83	5	519.57
879185	12/14/2011	Planned Outage	502.80	4	125.70
879186	12/14/2011	Planned Outage	333.33	4	83.33
879189	12/14/2011	Planned Outage	503.73	4	125.93
879190	12/14/2011	Planned Outage	1,438.05	3	479.35
879198	12/14/2011	Planned Outage	2,611.80	6	435.30
879213	12/14/2011	Planned Outage	699.00	6	116.50
879224	12/14/2011	Planned Outage	1,303.83	5	260.77
879226	12/14/2011	Planned Outage	853.30	6	142.22
879259	12/14/2011	Planned Outage	59.23	1	59.23
879283	12/15/2011	Planned Outage	342.90	6	57.15
879285	12/15/2011	Planned Outage	302.13	8	37.77
879288	12/15/2011	Planned Outage	345.33	5	69.07
879290	12/15/2011	Planned Outage	545.00	5	109.00
879291	12/15/2011	Planned Outage	173.00	1	173.00
879294	12/15/2011	Planned Outage	210.00	3	70.00
879296	12/15/2011	Planned Outage	84.00	6	14.00
879299	12/15/2011	Planned Outage	39,183.70	356	110.07
879303	12/15/2011	Planned Outage	102.00	1	102.00

## Appendix 1

### 2011 Planned Outages Table

879310	12/15/2011	Planned Outage	309.27	4	77.32
879314	12/15/2011	Planned Outage	356.00	4	89.00
879328	12/15/2011	Planned Outage	864.73	34	25.43
879343	12/15/2011	Planned Outage	664.00	8	83.00
879351	12/15/2011	Planned Outage	26.62	1	26.62
879357	12/15/2011	Planned Outage	98.77	2	49.38
879396	12/16/2011	Planned Outage	1,060.00	5	212.00
879404	12/16/2011	Planned Outage	206.70	2	103.35
879406	12/16/2011	Planned Outage	338.10	6	56.35
879408	12/16/2011	Planned Outage	657.40	4	164.35
879419	12/16/2011	Planned Outage	860.65	3	286.88
879423	12/16/2011	Planned Outage	67.23	1	67.23
879426	12/16/2011	Planned Outage	605.35	3	201.78
879427	12/16/2011	Planned Outage	228.95	1	228.95
879433	12/16/2011	Planned Outage	20.50	1	20.50
879434	12/16/2011	Planned Outage	18.27	1	18.27
879439	12/16/2011	Planned Outage	263.30	3	87.77
879441	12/16/2011	Planned Outage	222.00	3	74.00
879444	12/16/2011	Planned Outage	888.00	6	148.00
879611	12/18/2011	Planned Outage	719.40	3	239.80
879618	12/18/2011	Planned Outage	67.60	12	5.63
879620	12/18/2011	Planned Outage	480.00	12	40.00
879621	12/18/2011	Planned Outage	1,483.50	46	32.25
879626	12/18/2011	Planned Outage	607.57	11	55.23
879627	12/18/2011	Planned Outage	1,020.60	18	56.70
879651	12/19/2011	Planned Outage	173.53	1	173.53
879655	12/19/2011	Planned Outage	433.75	5	86.75
879663	12/19/2011	Planned Outage	220.98	1	220.98
879664	12/19/2011	Planned Outage	329.87	16	20.62
879667	12/19/2011	Planned Outage	119.63	2	59.82
879670	12/19/2011	Planned Outage	902.85	3	300.95
879672	12/19/2011	Planned Outage	178.12	1	178.12
879674	12/19/2011	Planned Outage	115.00	4	28.75
879676	12/19/2011	Planned Outage	578.73	4	144.68
879678	12/19/2011	Planned Outage	85.00	2	42.50
879685	12/19/2011	Planned Outage	507.40	6	84.57
879700	12/19/2011	Planned Outage	183.53	2	91.77
879703	12/19/2011	Planned Outage	75.18	1	75.18
879708	12/19/2011	Planned Outage	84.93	8	10.62
879711	12/19/2011	Planned Outage	260.67	1	260.67
879715	12/19/2011	Planned Outage	11.35	1	11.35

## Appendix 1

### 2011 Planned Outages Table

879719	12/19/2011	Planned Outage	11,323.00	130	87.10
879727	12/19/2011	Planned Outage	317.25	5	63.45
879736	12/19/2011	Planned Outage	346.33	4	86.58
879756	12/19/2011	Planned Outage	99.60	4	24.90
879763	12/19/2011	Planned Outage	29.15	1	29.15
880017	12/20/2011	Planned Outage	62.00	1	62.00
880019	12/20/2011	Planned Outage	9.68	1	9.68
880028	12/20/2011	Planned Outage	140.50	1	140.50
880046	12/20/2011	Planned Outage	104.00	4	26.00
880124	12/21/2011	Planned Outage	578.13	4	144.53
880133	12/21/2011	Planned Outage	541.95	1	541.95
880139	12/21/2011	Planned Outage	41.60	1	41.60
880144	12/21/2011	Planned Outage	624.00	2	312.00
880153	12/21/2011	Planned Outage	2,218.73	92	24.12
880172	12/21/2011	Planned Outage	51.78	1	51.78
880180	12/21/2011	Planned Outage	99.55	3	33.18
880203	12/21/2011	Planned Outage	998.20	6	166.37
880204	12/21/2011	Planned Outage	361.00	3	120.33
880207	12/21/2011	Planned Outage	272.95	1	272.95
880212	12/21/2011	Planned Outage	114.78	1	114.78
880213	12/21/2011	Planned Outage	167.67	4	41.92
880289	12/22/2011	Planned Outage	55.30	3	18.43
880290	12/22/2011	Planned Outage	35.47	2	17.73
880293	12/22/2011	Planned Outage	62.00	2	31.00
880296	12/22/2011	Planned Outage	171.10	3	57.03
880303	12/22/2011	Planned Outage	64.28	1	64.28
880305	12/22/2011	Planned Outage	63.68	1	63.68
880306	12/22/2011	Planned Outage	92.73	4	23.18
880319	12/22/2011	Planned Outage	2,064.00	9	229.33
880323	12/22/2011	Planned Outage	64.00	1	64.00
880397	12/22/2011	Planned Outage	22.00	1	22.00
880444	12/22/2011	Planned Outage	146.20	4	36.55
880535	12/23/2011	Planned Outage	136.93	4	34.23
880697	12/26/2011	Planned Outage	24.00	3	8.00
880775	12/27/2011	Planned Outage	580.93	4	145.23
880794	12/27/2011	Planned Outage	32.45	1	32.45
880798	12/27/2011	Planned Outage	528.05	3	176.02
880824	12/27/2011	Planned Outage	57.85	1	57.85
880849	12/27/2011	Planned Outage	163.95	3	54.65
880877	12/27/2011	Planned Outage	111.50	2	55.75
880878	12/27/2011	Planned Outage	8.37	1	8.37



## Appendix 1

### 2011 Planned Outages Table

880897	12/27/2011	Planned Outage	150.67	4	37.67
880942	12/28/2011	Planned Outage	595.12	7	85.02
880948	12/28/2011	Planned Outage	118.00	1	118.00
880949	12/28/2011	Planned Outage	158.00	12	13.17
880950	12/28/2011	Planned Outage	7,155.87	68	105.23
880954	12/28/2011	Planned Outage	25.50	3	8.50
880958	12/28/2011	Planned Outage	245.00	1	245.00
880960	12/28/2011	Planned Outage	560.25	5	112.05
880961	12/28/2011	Planned Outage	1,121.83	10	112.18
880965	12/28/2011	Planned Outage	273.40	4	68.35
880968	12/28/2011	Planned Outage	86.27	4	21.57
880972	12/28/2011	Planned Outage	642.02	7	91.72
880982	12/28/2011	Planned Outage	277.83	2	138.92
880994	12/28/2011	Planned Outage	1,004.12	11	91.28
880995	12/28/2011	Planned Outage	639.45	7	91.35
881010	12/28/2011	Planned Outage	67.25	3	22.42
881018	12/28/2011	Planned Outage	36.53	2	18.27
881019	12/28/2011	Planned Outage	57.98	1	57.98
881022	12/28/2011	Planned Outage	190.42	25	7.62
881025	12/28/2011	Planned Outage	288.00	6	48.00
881031	12/28/2011	Planned Outage	116.83	1	116.83
881038	12/28/2011	Planned Outage	258.83	2	129.42
881039	12/28/2011	Planned Outage	240.42	5	48.08
881042	12/28/2011	Planned Outage	41.68	1	41.68
881043	12/28/2011	Planned Outage	106.40	2	53.20
881067	12/29/2011	Planned Outage	490.95	3	163.65
881070	12/29/2011	Planned Outage	814.67	47	17.33
881072	12/29/2011	Planned Outage	164.97	2	82.48
881075	12/29/2011	Planned Outage	595.05	3	198.35
881093	12/29/2011	Planned Outage	29.17	1	29.17
881098	12/29/2011	Planned Outage	14,699.90	151	97.35
881099	12/29/2011	Planned Outage	80.38	1	80.38
881102	12/29/2011	Planned Outage	1,345.57	37	36.37
881103	12/29/2011	Planned Outage	61.03	1	61.03
881131	12/29/2011	Planned Outage	107.05	1	107.05
881132	12/29/2011	Planned Outage	138.33	2	69.17
881133	12/29/2011	Planned Outage	10.42	1	10.42
881180	12/29/2011	Planned Outage	98.62	1	98.62
881184	12/29/2011	Planned Outage	1,390.57	26	53.48
881188	12/29/2011	Planned Outage	189.60	4	47.40
881191	12/29/2011	Planned Outage	222.57	2	111.28



# Appendix 1

## 2011 Planned Outages Table

881233	12/30/2011	Planned Outage	420.20	6	70.03
881248	12/30/2011	Planned Outage	174.20	4	43.55
881249	12/30/2011	Planned Outage	38.40	4	9.60
881250	12/30/2011	Planned Outage	64.90	1	64.90
881254	12/30/2011	Planned Outage	72.55	1	72.55
881255	12/30/2011	Planned Outage	11.43	1	11.43
881258	12/30/2011	Planned Outage	19.27	1	19.27
881262	12/30/2011	Planned Outage	174.07	4	43.52

## Appendix 2

APPENDIX 2

## Gulf Power Company Annual Wood Pole Inspection Report (Reporting Year 2011)

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
208,281 Note 1	32,000	53,963	1,364	2.53%	1,209	873	156	N/A Note 2	V, E, S, B	32,000	182,064	87%
If b – c > 0, provide explanation												
If d – g > 0, provide explanation		Pole inspections were completed in 2011 and remaining repairs have been scheduled for 2012.										
Description of selection criteria for inspections		Gulf is systematically moving across its system. Poles are selected for inspection on a geographical basis.										

Note 1 - Data has been updated based on the 2011 pole audit

Note 2 – Program was discontinued in PSC approved 2010 – 2012 Storm Hardening Plan

Appendix 3

### APPENDIX 3 FEEDER SPECIFIC DATA

(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
514	WESTERN	0	0.00	1	-	-	0	0.00	-	-	-
804	WESTERN	0	0.29	1	-	-	4	1.06	-	-	-
2222	EASTERN	0	0.08	1	-	-	1	0.54	6	-	-
2613	CENTRAL	2	2.42	19	2,531	19	0	0.00	-	-	-
2619	CENTRAL	14	5.32	73	18,352	78	0	0.00	-	-	-
5202	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5212	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5222	WESTERN	0	0.00	-	-	-	1	0.00	-	-	-
5232	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5242	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5262	WESTERN	0	0.00	-	-	-	1	0.00	-	-	-
5332	WESTERN	90	16.71	752	101,161	1,306	53	11.43	1,273	19,831	217
5342	WESTERN	27	3.87	180	59,754	374	21	5.24	917	1,491	19
5352	WESTERN	42	6.52	133	622	8	30	2.96	90	-	-
5362	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5372	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5382	WESTERN	449	134.53	1,820	214,567	1,104	32	6.01	80	929	2
5392	WESTERN	231	60.46	926	110,830	1,081	15	1.95	21	849	3
5412	WESTERN	1	0.42	3	-	-	0	0.00	-	-	-
5502	WESTERN	50	8.30	248	11,775	93	2	1.11	72	-	-
5512	WESTERN	172	45.01	1,074	227,248	1,380	22	9.07	489	212	2
5522	WESTERN	103	24.62	605	78,470	748	13	3.99	244	-	-
5542	WESTERN	107	32.73	1,692	14,074	158	29	22.22	969	5,975	33
5562	WESTERN	83	24.29	1,780	354,996	2,704	16	5.17	345	38,456	120
5572	WESTERN	30	12.83	922	81,461	1,068	13	5.29	338	7,365	51
5582	WESTERN	102	15.93	889	35,711	389	15	7.91	916	-	-
5592	WESTERN	27	4.71	242	143,759	950	15	8.68	1,277	18,463	135
5602	WESTERN	292	76.15	1,842	104,816	1,623	31	12.21	125	2,087	7
5612	WESTERN	446	137.42	2,186	1,764,145	12,963	10	4.29	155	-	-
5632	WESTERN	19	6.40	461	25,328	82	23	6.70	706	864	3
5642	WESTERN	106	25.87	1,551	44,522	484	16	24.80	1,456	20,000	155
5652	CENTRAL	84	17.01	1,096	248,097	1,875	33	5.07	399	1,937	18
5662	CENTRAL	97	19.03	1,634	504,585	4,947	56	8.39	1,209	2,038	11
5682	CENTRAL	47	9.31	899	336,630	2,495	25	2.41	234	294	5
5752	WESTERN	138	28.23	1,285	213,030	2,044	25	19.34	946	280,304	791
5762	WESTERN	171	37.60	1,507	188,755	1,030	19	6.45	554	161	3
5772	WESTERN	19	3.94	129	12,945	349	5	2.79	198	2,562	11
5782	WESTERN	205	65.58	1,905	128,511	1,147	25	18.61	515	7,206	26
5792	WESTERN	273	99.49	2,286	184,354	1,445	42	12.56	526	3,371	28
5812	WESTERN	0	0.04	-	-	-	0	0.00	-	-	-
5822	WESTERN	101	25.49	1,278	94,744	1,188	28	10.71	482	48	1
5832	WESTERN	200	59.59	2,241	231,616	2,953	16	1.62	92	-	-
5842	WESTERN	49	19.78	869	38,495	841	15	15.91	1,027	1,069	6
5852	WESTERN	88	25.87	788	28,071	784	5	0.93	6	-	-
5872	WESTERN	48	11.53	636	9,654	143	32	15.47	935	6,054	36
5882	CENTRAL	91	23.33	1,969	183,971	2,415	36	5.16	648	567	12
5892	CENTRAL	106	27.68	2,025	246,103	1,823	52	17.66	1,368	13,198	113

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
514	WESTERN	0	0	No	0.01	0.00	0.01	1	-	-	0.1	5.69
804	WESTERN	0	0	No	2.18	1.06	1.12	1	-	-	0	0.46
2222	EASTERN	0	0	No	0.72	0.64	0.08	7	-	-	n/a	n/a
2613	CENTRAL	0	0	No	2.43	0.00	2.43	19	2531	19	0.1	0.08
2619	CENTRAL	0	1	No	5.34	0.00	5.34	73	18352	78	0.1	0.35
5202	WESTERN	0	0	No	0.03	0.00	0.03	-	-	-	0.1	4.28
5212	WESTERN	0	0	No	0.02	0.00	0.02	-	-	-	0.1	2.53
5222	WESTERN	0	0	Yes	0.99	0.97	0.03	-	-	-	0.1	4.98
5232	WESTERN	0	0	Yes	1.08	1.05	0.02	-	-	-	0.1	8.98
5242	WESTERN	0	0	No	0.02	0.00	0.02	-	-	-	0.1	1.28
5262	WESTERN	0	0	Yes	1.04	0.97	0.07	-	-	-	0.1	4.73
5332	WESTERN	0	0	Yes	30.47	11.43	19.04	2,025	125899	2750	0.5	11.00
5342	WESTERN	0	0	Yes	10.84	5.24	5.60	1,097	61245	393	0.1	7.38
5352	WESTERN	0	0	Yes	11.68	2.96	8.72	223	622	8	0.5	12.20
5362	WESTERN	0	0	No	3.21	0.06	3.15	-	-	-	0.5	0.95
5372	WESTERN	0	0	No	3.18	0.06	3.11	-	-	-	0.5	1.70
5382	WESTERN	4	0	No	144.47	6.01	138.46	1,900	459517	2766	0.5	9.26
5392	WESTERN	1	0	No	64.94	1.95	62.99	947	111679	1084	0.5	4.26
5412	WESTERN	0	0	No	1.01	0.00	1.01	3	-	-	0.1	0.43
5502	WESTERN	0	1	Yes	11.13	1.11	10.02	320	12237	412	1	1.94
5512	WESTERN	2	0	No	56.90	9.07	47.83	1,563	415927	4055	1.5	7.63
5522	WESTERN	1	0	Yes	32.88	3.99	28.90	849	97120	2453	0.5	3.91
5542	WESTERN	0	0	Yes	59.39	22.22	37.17	2,661	20049	191	2	15.28
5562	WESTERN	1	0	Yes	31.17	5.17	26.00	2,125	607997	7082	0.2	8.66
5572	WESTERN	0	0	No	18.94	5.29	13.65	1,260	88826	1119	0.5	6.84
5582	WESTERN	1	0	Yes	27.04	7.91	19.13	1,805	223972	4020	0.5	11.47
5592	WESTERN	0	0	Yes	16.45	8.68	7.77	1,519	162221	1085	2.5	5.41
5602	WESTERN	0	0	Yes	93.09	12.22	80.87	1,967	106903	1630	1.5	12.70
5612	WESTERN	0	1	Yes	145.11	4.29	140.82	2,341	1764145	12963	1.5	14.47
5632	WESTERN	1	1	Yes	15.20	7.97	7.23	1,167	26192	85	2.5	5.05
5642	WESTERN	1	0	Yes	56.87	24.80	32.07	3,007	64522	639	2	15.45
5652	CENTRAL	0	1	No	24.58	5.07	19.51	1,495	365908	5804	0.1	8.69
5662	CENTRAL	3	0	No	28.54	8.39	20.15	2,843	506623	4958	0.1	11.64
5682	CENTRAL	1	0	No	12.73	2.41	10.32	1,133	336924	2500	0.1	10.87
5752	WESTERN	1	0	Yes	52.08	19.34	32.74	2,231	660038	5000	1.5	15.37
5762	WESTERN	1	1	Yes	46.25	6.45	39.81	2,061	255136	4043	2.5	15.34
5772	WESTERN	0	0	Yes	8.43	2.79	5.64	327	16149	681	1	3.31
5782	WESTERN	0	0	Yes	88.69	18.61	70.08	2,420	235947	5618	1	12.46
5792	WESTERN	3	0	No	118.63	12.56	106.07	2,812	187725	1473	1	13.37
5812	WESTERN	0	0	No	0.04	0.00	0.04	-	-	-	0	0.00
5822	WESTERN	0	0	Yes	39.40	10.71	28.69	1,760	188590	2926	1	11.08
5832	WESTERN	1	0	Yes	67.85	1.62	66.23	2,333	231616	2953	1.5	12.10
5842	WESTERN	0	0	Yes	38.94	15.91	23.03	1,896	85669	2589	1	8.52
5852	WESTERN	1	0	Yes	29.56	0.93	28.63	794	348714	2384	0.1	5.61
5872	WESTERN	1	1	No	28.14	15.47	12.67	1,571	15709	179	0.5	8.66
5882	CENTRAL	0	0	No	30.02	5.16	24.86	2,617	624022	5050	0.5	9.96
5892	CENTRAL	0	0	No	51.87	17.66	34.21	3,393	259300	1936	1.5	15.79

### APPENDIX 3 FEEDER SPECIFIC DATA

(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
5902	WESTERN	40	7.39	563	14,140	73	6	2.56	120	31,450	74
5912	WESTERN	24	2.23	265	16,336	229	32	4.92	328	5,059	44
5922	WESTERN	40	6.96	675	32,540	139	27	25.42	1,636	148,396	1,133
5932	WESTERN	68	13.60	1,101	32,021	275	26	14.19	877	96,164	435
5942	WESTERN	16	6.55	600	11,016	105	43	8.60	1,636	5,329	30
5952	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
5972	WESTERN	37	10.83	661	119,388	1,016	20	4.86	427	11,656	95
5982	WESTERN	46	14.78	969	17,388	145	48	12.38	1,401	50,209	391
5992	WESTERN	37	8.23	632	22,840	278	22	11.12	1,061	38,552	319
6022	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
6032	WESTERN	32	6.61	347	7,272	47	16	4.00	766	4,080	10
6042	WESTERN	81	17.66	1,657	65,626	470	6	0.49	44	-	-
6052	WESTERN	128	31.01	1,483	275,019	4,802	25	12.38	1,140	175	2
6062	WESTERN	69	19.87	1,592	48,092	591	7	0.26	12	316	1
6072	WESTERN	105	25.81	1,241	168,237	2,189	41	23.21	1,610	15,889	103
6082	WESTERN	106	28.64	1,548	62,057	976	17	11.47	975	-	-
6092	WESTERN	40	14.32	846	33,401	216	26	8.65	1,015	65,509	291
6212	WESTERN	110	30.28	1,218	378,091	2,899	21	25.97	1,102	580	3
6222	WESTERN	70	18.87	600	42,581	503	23	10.92	628	-	-
6338	WESTERN	0	0.00	-	-	-	0	0.89	47	-	-
6348	WESTERN	0	0.00	-	-	-	0	0.93	35	-	-
6352	WESTERN	0	0.00	-	-	-	0	0.86	58	-	-
6412	CENTRAL	50	17.56	468	24,304	274	3	2.19	59	-	-
6432	CENTRAL	26	6.95	203	28,181	238	4	0.64	10	-	-
6452	CENTRAL	28	8.82	4	-	-	5	0.43	2	358	1
6482	WESTERN	33	10.44	812	98,925	394	32	9.41	1,221	41,772	226
6508	WESTERN	9	0.52	18	129	2	10	0.38	5	10	1
6522	WESTERN	110	16.65	1,493	344,293	4,365	35	3.48	465	786	8
6532	WESTERN	107	23.10	1,775	74,885	716	8	0.36	303	-	-
6542	WESTERN	59	13.94	1,338	46,014	511	13	1.29	232	-	-
6572	WESTERN	114	21.36	1,615	381,535	3,903	21	0.91	240	-	-
6582	WESTERN	101	18.34	1,512	99,388	666	5	0.31	33	-	-
6592	WESTERN	20	2.94	177	16,793	129	8	0.97	170	4,622	59
6602	WESTERN	30	6.61	546	53,804	765	4	0.12	18	-	-
6612	WESTERN	69	12.35	1,208	87,714	1,336	5	0.11	4	-	-
6622	WESTERN	44	7.58	790	312,405	1,358	4	0.12	11	984	8
6632	WESTERN	86	8.51	640	41,901	481	10	1.02	16	-	-
6642	WESTERN	64	9.98	565	13,836	136	6	0.37	5	-	-
6652	WESTERN	159	25.86	2,349	118,693	1,011	10	0.95	152	18,257	43
6662	WESTERN	82	17.81	989	178,069	1,642	23	3.81	352	-	-
6678	WESTERN	54	17.42	1,674	191,670	1,801	25	5.61	709	10,905	57
6682	WESTERN	32	9.79	732	33,300	439	12	2.40	210	10,320	92
6692	WESTERN	54	13.75	1,132	347,908	1,734	12	2.97	493	4,543	43
6706	WESTERN	52	13.57	786	126,296	1,238	4	0.11	4	-	-
6716	WESTERN	69	12.60	840	25,838	326	17	1.12	164	83	1
6722	WESTERN	1	0.39	1	-	-	0	0.00	-	-	-
6732	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
5902	WESTERN	0	0	Yes	11.31	2.92	8.39	683	45589	147	0.1	7.85
5912	WESTERN	0	0	Yes	10.91	5.90	5.01	593	21395	273	0.5	8.13
5922	WESTERN	0	0	Yes	36.32	25.42	10.91	2,311	180935	1272	0.5	14.57
5932	WESTERN	1	1	Yes	29.72	14.19	15.53	1,978	128186	710	0.5	11.49
5942	WESTERN	0	0	No	21.16	10.72	10.44	2,236	255277	2359	1	14.11
5952	WESTERN	0	0	No	0.01	0.00	0.01	-	-	-	0	0.00
5972	WESTERN	0	0	No	16.40	4.95	11.45	1,088	131044	1111	0.1	5.78
5982	WESTERN	2	0	No	29.05	12.64	16.41	2,370	67597	536	0.1	10.25
5992	WESTERN	1	0	No	22.16	11.22	10.94	1,693	61392	597	0.1	8.18
6022	WESTERN	0	0	No	0.01	0.00	0.01	-	-	-	0	0.00
6032	WESTERN	0	0	Yes	13.79	4.00	9.79	1,113	11352	57	0.5	8.69
6042	WESTERN	1	0	Yes	19.76	0.49	19.27	1,701	65626	470	0.1	7.73
6052	WESTERN	2	0	Yes	46.40	12.38	34.02	2,623	275195	4804	0.5	11.96
6062	WESTERN	0	0	Yes	23.49	0.26	23.23	1,604	48408	592	0.1	7.37
6072	WESTERN	0	1	Yes	53.64	23.21	30.44	2,851	188652	5091	0.5	14.45
6082	WESTERN	0	0	Yes	44.35	11.47	32.87	2,523	62057	976	0.5	10.54
6092	WESTERN	0	0	Yes	26.66	8.67	17.99	1,861	98909	507	0.1	10.11
6212	WESTERN	0	0	Yes	59.48	25.97	33.51	2,320	378672	2902	2	12.94
6222	WESTERN	0	0	Yes	31.78	10.92	20.87	1,228	42581	503	1	7.12
6338	WESTERN	0	0	No	0.89	0.89	0.00	47	-	-		
6348	WESTERN	0	0	No	0.93	0.93	0.00	35	-	-		
6352	WESTERN	0	0	No	0.86	0.86	0.00	58	-	-		
6412	CENTRAL	0	0	Yes	20.23	2.19	18.05	527	48363	765	0.1	1.90
6432	CENTRAL	0	0	No	8.78	0.64	8.14	213	28181	238	0.1	1.36
6452	CENTRAL	1	0	Yes	12.36	0.43	11.93	6	358	1	0.1	0.27
6482	WESTERN	1	0	Yes	22.94	9.46	13.48	2,033	268854	2676	0.1	9.84
6508	WESTERN	0	0	Yes	2.50	0.46	2.04	23	139	3	0.5	9.79
6522	WESTERN	1	0	No	23.97	3.49	20.48	1,958	345080	4373	0.5	9.08
6532	WESTERN	0	0	No	24.70	0.36	24.33	2,078	74885	716	0.1	8.94
6542	WESTERN	1	0	No	17.88	1.29	16.59	1,570	46014	511	0.1	9.43
6572	WESTERN	0	0	No	24.35	0.91	23.44	1,855	381535	3903	1.5	9.66
6582	WESTERN	1	0	Yes	21.16	0.31	20.85	1,545	99388	666	0.1	6.69
6592	WESTERN	0	0	No	6.60	0.97	5.64	347	45555	868	0.1	8.48
6602	WESTERN	0	0	Yes	7.84	0.12	7.72	564	53804	765	0.5	2.23
6612	WESTERN	0	1	Yes	15.57	0.20	15.37	1,212	275894	2491	0.1	6.00
6622	WESTERN	0	0	Yes	9.36	0.27	9.09	801	364222	2164	0.5	3.98
6632	WESTERN	0	2	Yes	11.46	1.02	10.44	656	41901	481	0.1	8.74
6642	WESTERN	1	0	Yes	12.59	0.37	12.22	570	13836	136	0.1	6.97
6652	WESTERN	0	0	Yes	29.62	0.95	28.67	2,501	136950	1054	0.1	11.22
6662	WESTERN	0	0	Yes	25.06	3.81	21.25	1,341	189291	2763	0.1	7.92
6678	WESTERN	1	0	No	25.40	5.61	19.80	2,383	240655	4258	0.1	9.50
6682	WESTERN	0	0	Yes	16.44	2.40	14.04	942	43620	531	0.1	5.31
6692	WESTERN	0	0	Yes	19.08	2.97	16.11	1,625	352451	1777	0.5	6.06
6706	WESTERN	0	0	No	15.07	0.11	14.95	790	126296	1238	0.5	4.92
6716	WESTERN	1	0	Yes	18.51	1.12	17.39	1,004	81782	1329	0.1	6.56
6722	WESTERN	0	1	No	1.18	0.10	1.08	1	-	-	0.1	8.19
6732	WESTERN	0	0	No	0.66	0.10	0.55	-	-	-	0.1	7.37



### APPENDIX 3 FEEDER SPECIFIC DATA

(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
6742	WESTERN	29	11.61	1,143	106,186	1,215	11	7.07	552	24,735	97
6774	WESTERN	60	16.76	696	227,706	2,191	32	2.31	87	2,150	5
6782	WESTERN	102	27.97	1,021	44,847	420	19	6.25	628	7,767	66
6792	WESTERN	159	34.51	1,218	186,183	2,360	44	13.76	1,143	46,556	341
6912	WESTERN	133	33.81	919	46,732	344	19	6.58	351	-	-
6922	WESTERN	163	46.05	1,178	520,025	5,079	4	2.34	110	783	4
6932	WESTERN	101	22.63	865	198,806	1,288	23	12.25	707	7,757	94
6942	WESTERN	277	53.29	1,451	631,272	3,623	15	3.18	142	152	2
6966	WESTERN	1	0.41	-	-	-	1	0.02	-	-	-
6982	WESTERN	9	10.00	10	-	-	0	0.00	-	-	-
6992	WESTERN	105	19.38	1,007	23,835	315	31	19.91	1,171	3,159	19
7012	WESTERN	133	33.56	1,758	133,128	1,310	17	4.55	319	-	-
7022	WESTERN	61	11.76	582	20,084	208	16	4.14	212	5,034	28
7032	WESTERN	48	9.99	532	8,333	94	14	4.40	330	21,781	25
7042	WESTERN	81	21.95	901	34,935	449	20	14.00	678	260	4
7112	WESTERN	118	23.54	1,121	193,703	1,658	24	6.92	520	958	9
7122	WESTERN	124	23.59	721	34,737	360	33	21.91	898	7,257	119
7132	WESTERN	124	19.16	949	69,565	588	24	9.11	568	-	-
7157	WESTERN	1	0.61	-	-	-	1	0.08	1	-	-
7172	WESTERN	70	16.22	817	61,422	809	15	5.76	263	10,676	42
7232	WESTERN	197	51.29	1,845	37,150	430	51	8.29	405	647	1
7252	WESTERN	164	39.09	1,382	509,476	2,942	42	15.51	1,032	6,261	18
7262	WESTERN	181	64.90	2,556	767,613	2,995	22	6.09	393	-	-
7272	WESTERN	234	71.98	2,277	508,338	4,393	29	2.90	224	-	-
7282	WESTERN	101	24.84	1,387	126,344	1,111	23	3.96	216	124	4
7292	WESTERN	127	27.68	1,559	112,824	1,183	19	4.55	422	800	4
7302	WESTERN	1	0.71	-	-	-	1	0.55	1	-	-
7332	WESTERN	71	17.55	446	108,171	1,628	28	18.14	952	23,878	133
7342	WESTERN	141	22.39	1,030	193,434	3,569	81	15.32	2,282	39,631	207
7352	WESTERN	41	12.70	993	156,966	1,064	25	7.42	1,357	28,394	160
7362	WESTERN	33	5.08	305	40,567	277	44	6.48	1,646	2,783	5
7372	WESTERN	66	12.57	824	113,116	633	32	28.36	1,887	43,365	293
7402	WESTERN	0	0.00	-	-	-	1	0.02	2	-	-
7404	WESTERN	57	8.32	894	175,906	2,039	24	1.60	57	-	-
7406	WESTERN	132	18.22	1,977	379,203	4,011	10	0.60	168	-	-
7408	WESTERN	15	2.27	248	4,965	77	6	0.39	16	-	-
7410	WESTERN	3	0.17	28	741	11	0	0.00	-	-	-
7414	WESTERN	5	0.37	90	388	3	4	0.10	1	-	-
7416	WESTERN	76	9.10	721	50,067	373	23	1.70	48	70	1
7492	WESTERN	126	27.60	779	91,655	1,068	9	0.95	67	162	1
7512	WESTERN	95	17.77	1,238	404,969	2,647	34	4.96	459	595	3
7522	WESTERN	50	9.76	840	18,173	218	37	10.45	556	33,909	181
7532	WESTERN	10	2.40	104	3,997	22	7	17.30	1,185	35,232	310
7542	WESTERN	0	0.00	-	-	-	1	5.61	349	21,188	128
7572	WESTERN	0	0.01	-	-	-	0	0.00	-	-	-
7582	WESTERN	166	33.67	2,139	201,402	1,581	21	4.10	322	-	-
7592	WESTERN	20	5.36	304	149,185	1,788	13	6.18	587	16,961	80

5

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
6742	WESTERN	0	0	Yes	21.38	7.15	14.23	1,695	130921	1312	0.1	8.59
6774	WESTERN	0	0	No	21.74	2.31	19.43	783	229855	2196	1	7.07
6782	WESTERN	2	0	No	39.15	6.25	32.90	1,649	52614	486	0.5	10.18
6792	WESTERN	0	1	No	51.51	13.76	37.75	2,361	324814	8573	0.5	12.22
6912	WESTERN	0	0	Yes	42.02	6.58	35.44	1,270	289663	2817	0.5	7.88
6922	WESTERN	3	0	Yes	50.32	2.34	47.98	1,288	1038882	7850	0.1	6.08
6932	WESTERN	0	0	No	39.85	12.25	27.61	1,572	206563	1382	1	8.01
6942	WESTERN	3	0	Yes	60.79	3.18	57.61	1,593	682720	5228	0.1	7.90
6966	WESTERN	0	0	No	0.42	0.02	0.41	-	-	-	0	0.80
6982	WESTERN	0	0	No	10.58	0.00	10.58	10	-	-	0	0.38
6992	WESTERN	0	0	Yes	45.06	19.91	25.15	2,178	236337	2552	1	13.55
7012	WESTERN	0	0	No	41.98	4.55	37.43	2,077	133128	1310	0.1	12.29
7022	WESTERN	0	0	Yes	19.69	4.14	15.55	794	25119	236	0.1	6.24
7032	WESTERN	0	0	No	15.29	4.40	10.89	862	30114	119	0.1	4.80
7042	WESTERN	1	0	Yes	40.04	14.00	26.04	1,579	35195	453	1.5	8.73
7112	WESTERN	0	0	Yes	31.65	6.93	24.72	1,641	194661	1667	0.1	7.52
7122	WESTERN	0	0	Yes	48.80	21.91	26.89	1,619	95033	2087	1.5	11.89
7132	WESTERN	0	0	Yes	33.01	9.11	23.90	1,517	69565	588	1.5	7.97
7157	WESTERN	0	1	No	0.70	0.08	0.62	1	-	-	0.1	2.21
7172	WESTERN	1	0	Yes	27.22	5.76	21.46	1,080	72098	851	0.1	5.99
7232	WESTERN	1	0	Yes	64.41	8.29	56.12	2,250	37797	431	0.5	11.98
7252	WESTERN	0	0	Yes	57.80	15.51	42.29	2,414	582591	6450	1	12.11
7262	WESTERN	0	1	Yes	74.72	6.09	68.62	2,949	922053	5965	0.5	12.47
7272	WESTERN	4	0	Yes	77.71	2.90	74.82	2,501	662773	8511	0.5	13.96
7282	WESTERN	0	0	Yes	33.20	3.96	29.24	1,603	252219	2727	0.1	9.98
7292	WESTERN	0	1	Yes	36.79	4.55	32.24	1,981	113625	1187	0.5	11.68
7302	WESTERN	0	0	No	1.28	0.55	0.73	1	-	-	0.1	0.35
7332	WESTERN	0	0	Yes	37.56	18.14	19.41	1,398	132049	1761	0.5	8.46
7342	WESTERN	0	0	Yes	42.09	15.60	26.48	3,312	702663	10450	2	14.68
7352	WESTERN	0	1	Yes	22.64	7.42	15.21	2,350	331135	3562	0.1	8.53
7362	WESTERN	0	0	Yes	15.06	6.67	8.38	1,951	43350	282	1	9.62
7372	WESTERN	0	0	Yes	43.87	28.36	15.51	2,711	174737	3534	0.5	12.07
7402	WESTERN	0	0	Yes	1.86	0.08	1.78	2	-	-	0.5	0.92
7404	WESTERN	0	0	Yes	11.33	1.74	9.59	951	175906	2039	0.1	9.57
7406	WESTERN	1	0	Yes	22.73	1.04	21.69	2,145	379203	4011	0.5	9.97
7408	WESTERN	0	0	Yes	3.85	0.44	3.41	264	4965	77	0.1	2.63
7410	WESTERN	0	0	Yes	2.23	0.13	2.11	28	741	11	0.1	2.11
7414	WESTERN	0	0	Yes	2.92	0.84	2.09	91	388	3	0.1	2.21
7416	WESTERN	1	0	Yes	12.02	1.91	10.11	769	50138	374	0.1	8.59
7492	WESTERN	0	0	No	33.50	0.95	32.55	846	91817	1069	0.1	5.39
7512	WESTERN	1	0	Yes	25.23	4.96	20.27	1,697	588246	4033	0.5	10.72
7522	WESTERN	0	0	Yes	23.62	10.45	13.17	1,396	52082	399	0.5	11.77
7532	WESTERN	1	0	Yes	24.41	21.11	3.30	1,289	39229	332	1	7.21
7542	WESTERN	0	0	Yes	10.70	9.90	0.79	349	21188	128	1	5.21
7572	WESTERN	0	0	No	0.01	0.00	0.01	-	-	-	0	0.00
7582	WESTERN	0	0	No	42.75	4.10	38.65	2,461	201402	1581	0.1	10.88
7592	WESTERN	0	0	Yes	12.69	6.18	6.51	891	166146	1868	0.1	4.52

### APPENDIX 3 FEEDER SPECIFIC DATA

(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
7602	WESTERN	29	4.76	192	903	10	39	3.48	432	-	-
7612	WESTERN	86	14.70	1,154	96,017	967	51	5.32	726	33,399	117
7622	WESTERN	48	10.12	943	17,204	264	19	2.53	354	4,850	52
7632	WESTERN	94	13.56	1,104	23,280	191	13	4.86	453	24,912	78
7642	WESTERN	43	10.66	927	33,395	860	21	3.70	551	16,712	49
7652	WESTERN	12	1.05	37	9,483	78	25	3.68	108	-	-
7662	WESTERN	76	16.69	1,113	61,023	1,775	27	7.08	782	3,625	38
7682	WESTERN	66	10.75	1,044	89,473	1,157	34	8.10	1,062	32,928	172
7692	WESTERN	7	1.52	110	41,942	185	7	0.51	9	-	-
7702	WESTERN	45	11.27	975	309,014	2,845	11	6.38	495	7,513	46
7712	WESTERN	40	9.65	671	26,484	228	5	1.31	177	-	-
7722	WESTERN	46	12.30	1,018	49,456	524	1	0.74	48	-	-
7742	WESTERN	57	19.42	1,816	191,253	1,262	14	1.84	280	-	-
7752	WESTERN	83	18.51	1,341	505,897	3,100	36	6.15	730	56,544	272
7762	WESTERN	50	11.95	1,243	16,219	154	5	0.40	42	-	-
7772	WESTERN	39	6.44	392	67,314	719	12	1.38	254	-	-
7782	WESTERN	78	13.76	1,006	84,285	557	12	1.12	133	-	-
7792	WESTERN	91	21.27	1,371	151,291	2,001	19	9.36	689	14,541	96
7802	WESTERN	27	5.92	274	2,705	193	30	5.25	719	3,538	27
7822	WESTERN	45	7.78	426	13,084	151	29	7.61	1,451	319	2
7832	WESTERN	121	29.71	1,808	881,760	9,687	21	9.15	1,154	38,475	384
7842	WESTERN	152	31.65	1,640	477,394	3,995	44	11.64	940	51,523	399
7872	WESTERN	31	5.77	343	15,293	135	19	1.48	66	-	-
7882	WESTERN	55	11.87	633	49,091	460	29	3.89	256	2,823	7
7892	WESTERN	0	0.00	11	-	-	1	1.02	89	-	-
7902	CENTRAL	178	45.47	1,635	246,230	1,983	31	5.11	312	46,141	272
7912	CENTRAL	167	56.41	1,490	530,533	4,965	16	1.35	95	-	-
7922	WESTERN	85	13.64	919	102,174	1,153	32	14.79	1,161	5,132	30
7932	WESTERN	70	14.27	1,004	57,212	613	54	8.38	969	47,206	156
7942	WESTERN	55	5.46	517	8,227	57	27	2.47	136	-	-
7952	CENTRAL	23	8.94	176	29,299	237	3	0.23	4	-	-
7962	CENTRAL	52	18.31	289	44,065	138	2	0.12	1	-	-
7992	EASTERN	0	0.00	-	-	-	0	0.00	-	-	-
8012	EASTERN	3	1.40	14	-	-	8	0.48	5	-	-
8032	EASTERN	33	22.01	192	1,894	20	24	11.54	38	-	-
8062	EASTERN	143	67.83	1,514	82,313	820	56	12.76	635	15,759	81
8112	EASTERN	55	10.70	1,511	164,116	2,499	32	2.45	1,959	3,837	64
8122	EASTERN	30	5.96	225	97,903	888	25	12.95	1,361	3,305	22
8132	EASTERN	38	12.40	366	24,661	194	46	33.25	1,859	4,819	32
8142	EASTERN	0	0.00	-	-	-	0	0.00	-	-	-
8162	CENTRAL	49	13.23	446	207,833	1,477	54	24.86	1,558	1,895	14
8172	CENTRAL	3	1.13	22	189	2	15	17.24	1,751	6,614	28
8182	CENTRAL	0	0.00	-	-	-	14	4.31	1,160	463	11
8202	EASTERN	89	23.80	1,453	160,728	1,242	31	5.29	572	13,905	131
8222	EASTERN	0	0.82	3	-	-	5	21.87	883	-	-
8232	EASTERN	0	0.00	-	-	-	0	0.00	-	-	-
8252	EASTERN	0	0.00	-	-	-	0	0.00	-	-	-

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
7602	WESTERN	0	0	No	9.47	3.48	5.99	624	1744	633	0.1	5.12
7612	WESTERN	2	0	Yes	22.08	5.32	16.76	1,880	129416	1084	0.5	12.03
7622	WESTERN	0	0	Yes	14.40	2.53	11.87	1,297	22054	316	0.1	7.17
7632	WESTERN	0	0	No	19.95	4.86	15.09	1,557	48192	269	0.1	7.33
7642	WESTERN	2	0	No	16.01	3.70	12.31	1,478	50107	909	0.1	6.67
7652	WESTERN	0	0	Yes	7.65	3.89	3.75	145	9483	78	0.1	7.44
7662	WESTERN	0	0	No	26.84	7.08	19.76	1,895	64648	1813	0.5	11.39
7682	WESTERN	0	0	No	23.24	8.29	14.96	2,106	122401	1329	0.1	9.17
7692	WESTERN	0	0	Yes	3.58	0.51	3.07	119	41942	185	0.1	1.55
7702	WESTERN	0	1	Yes	19.90	6.38	13.52	1,470	437516	4503	0.5	8.03
7712	WESTERN	0	0	Yes	12.67	1.31	11.36	848	30619	1055	0.1	3.71
7722	WESTERN	0	0	Yes	16.29	0.74	15.55	1,066	49456	524	0.5	4.65
7742	WESTERN	2	0	Yes	24.16	1.84	22.33	2,096	191253	1262	0.1	8.36
7752	WESTERN	0	0	Yes	28.15	6.15	21.99	2,071	853683	7470	0.1	9.30
7762	WESTERN	0	1	Yes	14.88	0.40	14.48	1,285	16219	154	0.1	5.40
7772	WESTERN	1	0	Yes	10.14	1.38	8.76	646	79993	1128	0.1	6.13
7782	WESTERN	2	0	Yes	17.07	1.12	15.95	1,139	84285	557	0.5	10.94
7792	WESTERN	0	0	Yes	32.75	9.36	23.39	2,060	230962	4157	1	11.58
7802	WESTERN	0	0	No	12.70	5.25	7.45	993	6242	220	0.5	12.37
7822	WESTERN	0	0	No	17.99	7.61	10.38	1,877	356597	1969	0.5	8.47
7832	WESTERN	2	0	No	42.94	9.15	33.79	2,962	920235	10071	0.1	12.35
7842	WESTERN	3	0	No	45.92	11.64	34.28	2,580	528995	4395	0.1	13.97
7872	WESTERN	0	0	Yes	9.56	1.48	8.08	409	15293	135	0.5	11.35
7882	WESTERN	0	0	Yes	16.68	3.89	12.79	889	51915	467	2	13.11
7892	WESTERN	0	0	No	1.57	1.02	0.56	100	-	-	0.5	12.25
7902	CENTRAL	2	2	No	54.96	5.11	49.85	1,947	292371	2255	0.1	12.39
7912	CENTRAL	1	3	No	63.99	1.35	62.65	1,585	535234	6532	0.1	8.02
7922	WESTERN	0	0	No	31.03	14.79	16.24	2,080	107307	1183	0.5	10.76
7932	WESTERN	2	0	No	24.58	8.38	16.20	1,973	104418	769	0.1	13.46
7942	WESTERN	0	0	Yes	12.41	3.15	9.27	653	8227	57	0.5	10.49
7952	CENTRAL	0	0	No	13.11	0.26	12.84	180	40953	360	0.1	1.10
7962	CENTRAL	0	0	No	19.19	0.12	19.08	290	44065	138	0.1	1.17
7992	EASTERN	0	0	No	0.09	0.00	0.09	-	-	-	1	0.00
8012	EASTERN	0	0	No	2.28	0.73	1.55	19	-	-	0.1	1.26
8032	EASTERN	1	1	No	36.49	11.54	24.95	230	1894	20		1.10
8062	EASTERN	11	2	Yes	88.05	12.76	75.29	2,149	105476	2752	1.5	13.70
8112	EASTERN	0	0	Yes	15.45	3.07	12.38	3,470	167954	2563	0.5	12.22
8122	EASTERN	0	0	Yes	19.82	12.95	6.87	1,586	248039	2506	1.5	15.61
8132	EASTERN	1	0	No	47.42	33.25	14.17	2,225	29480	226	3	12.87
8142	EASTERN	0	0	No	0.01	0.00	0.01	-	-	-	0	0.00
8162	CENTRAL	0	0	No	39.93	25.07	14.86	2,004	291062	3454	2.5	12.08
8172	CENTRAL	0	0	Yes	19.13	18.00	1.13	1,773	6803	30	1.5	11.71
8182	CENTRAL	0	0	Yes	6.63	5.41	1.22	1,160	463	11	0.5	8.83
8202	EASTERN	1	2	Yes	31.62	5.29	26.33	2,025	181802	3402	0.1	10.82
8222	EASTERN	0	0	No	22.79	21.87	0.92	886	-	-	0.1	7.04
8232	EASTERN	0	0	No	0.02	0.00	0.02	-	-	-	0.1	4.58
8252	EASTERN	0	0	No	0.02	0.00	0.02	-	-	-	0.1	1.83

### APPENDIX 3 FEEDER SPECIFIC DATA

(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
8262	EASTERN	8	5.42	1	-	-	4	0.81	8	-	-
8282	EASTERN	112	25.65	1,969	52,203	514	44	5.63	742	9,320	65
8332	EASTERN	96	37.01	1,771	294,864	2,692	72	22.55	1,332	23,787	157
8342	EASTERN	96	27.64	1,994	91,835	633	42	3.18	460	7,053	35
8352	EASTERN	68	12.74	1,159	83,244	1,217	28	2.92	1,695	-	-
8362	EASTERN	58	16.09	794	10,078	174	33	13.29	2,104	25,875	95
8372	EASTERN	13	1.50	112	152	1	17	6.00	779	134	1
8382	EASTERN	7	0.73	24	9,768	154	7	1.31	88	1,120	4
8392	EASTERN	62	13.80	1,096	48,205	355	17	2.05	384	1,831	20
8412	EASTERN	87	15.37	1,288	213,117	1,789	42	2.20	414	4,744	78
8432	EASTERN	73	13.09	1,360	200,353	1,948	15	1.19	312	-	-
8442	EASTERN	70	10.23	1,015	16,890	214	13	0.96	121	60	1
8452	EASTERN	38	6.45	261	40,486	280	56	7.89	713	180	2
8472	EASTERN	112	20.62	2,121	168,090	2,822	24	3.10	496	-	-
8482	EASTERN	48	10.51	586	205,880	1,263	33	2.16	237	-	-
8492	EASTERN	29	3.89	264	14,852	226	12	1.29	114	-	-
8512	EASTERN	46	15.90	830	574,248	4,743	47	14.94	1,668	459,619	2,324
8522	EASTERN	52	12.45	651	155,477	2,561	49	19.32	1,944	63,871	311
8532	EASTERN	23	3.15	148	1,377	20	29	2.98	1,614	-	-
8542	EASTERN	21	0.82	82	60,120	550	15	1.32	2,067	22,423	142
8552	EASTERN	20	3.59	360	163,785	2,186	22	6.83	2,463	41,151	502
8562	EASTERN	79	11.59	1,132	25,301	305	45	10.33	1,419	12,369	104
8572	EASTERN	113	25.58	1,869	370,939	1,829	40	5.58	698	10,686	86
8582	EASTERN	56	11.64	1,145	567,741	7,259	20	8.39	1,872	2,184	14
8592	EASTERN	0	0.38	10	-	-	11	0.35	1	-	-
8602	EASTERN	102	23.11	1,249	191,258	5,253	44	19.48	1,433	12,830	70
8612	EASTERN	49	12.86	545	18,359	210	15	4.69	111	-	-
8622	EASTERN	76	13.66	638	75,937	404	32	8.94	507	32,145	208
8642	EASTERN	59	9.66	1,255	199,337	2,668	45	10.52	1,320	205,547	820
8672	EASTERN	31	7.14	310	21,463	258	47	24.45	1,841	223,325	1,051
8682	EASTERN	58	11.31	1,212	295,005	1,607	39	9.65	1,966	72,467	209
8702	EASTERN	71	18.14	1,768	23,275	397	17	0.97	95	252	1
8712	EASTERN	70	15.28	1,321	66,075	580	30	3.20	135	1,935	16
8722	EASTERN	124	27.03	1,987	204,755	2,005	22	1.49	298	15,955	69
8732	EASTERN	87	19.65	2,087	354,196	3,161	19	1.54	243	15,251	102
8782	EASTERN	36	8.62	254	29,799	110	40	2.76	227	-	-
8792	EASTERN	171	40.16	2,591	285,081	4,065	32	4.14	384	-	-
8802	EASTERN	86	22.47	1,369	22,476	224	38	14.48	1,201	7,830	42
8812	EASTERN	74	17.40	1,285	161,244	1,752	60	11.43	1,537	37,767	138
8822	EASTERN	98	23.48	1,531	53,517	605	54	9.71	1,731	794	10
8842	CENTRAL	7	0.69	37	24,317	187	18	8.29	567	3,645	58
8852	EASTERN	83	20.44	1,510	84,369	677	15	1.30	144	-	-
8872	CENTRAL	22	7.51	317	36,295	260	30	6.99	605	7,554	42
8882	CENTRAL	22	3.60	670	80,609	825	56	8.79	2,096	19,838	92
8892	CENTRAL	31	5.05	520	26,496	131	43	9.16	1,892	36,598	409
8932	CENTRAL	85	26.50	694	79,838	903	18	4.31	218	-	-
8942	CENTRAL	12	1.57	34	-	-	8	0.29	8	-	-

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
8262	EASTERN	1	0	No	7.41	0.81	6.60	9	3591	9	0.1	10.51
8282	EASTERN	1	0	No	32.51	5.63	26.88	2,711	61523	579	0.1	11.17
8332	EASTERN	2	0	Yes	63.14	22.55	40.58	3,103	542540	6033	0.5	12.60
8342	EASTERN	4	0	Yes	32.55	3.18	29.38	2,454	98888	668	0.1	11.20
8352	EASTERN	1	0	No	17.00	2.92	14.08	2,854	83244	1217	2	12.93
8362	EASTERN	1	1	No	31.85	13.29	18.56	2,898	35953	269	2	10.85
8372	EASTERN	0	0	Yes	8.86	6.00	2.86	891	286	2	1.5	11.39
8382	EASTERN	0	0	Yes	3.02	1.31	1.70	112	37865	267	0.5	8.78
8392	EASTERN	1	0	Yes	17.66	2.05	15.61	1,480	50035	375	0.1	8.50
8412	EASTERN	0	0	No	20.55	2.20	18.35	1,702	506856	5299	1.5	12.92
8432	EASTERN	0	2	Yes	15.91	1.19	14.72	1,672	200353	1948	0	7.36
8442	EASTERN	3	0	Yes	13.38	0.96	12.43	1,136	16950	215	0.1	6.39
8452	EASTERN	1	0	Yes	16.20	7.89	8.30	974	100474	1255	0.1	11.58
8472	EASTERN	1	0	Yes	27.95	3.15	24.80	2,617	168090	2822	0.1	11.49
8482	EASTERN	0	0	Yes	16.36	2.16	14.20	823	205880	1263	0.1	11.47
8492	EASTERN	0	0	Yes	6.19	1.29	4.90	378	14852	226	0.1	2.94
8512	EASTERN	2	0	No	32.58	15.93	16.65	2,498	1033867	7067	1.5	13.65
8522	EASTERN	1	0	No	34.64	19.50	15.14	2,595	219348	2872	1	14.74
8532	EASTERN	0	0	No	6.91	2.98	3.93	1,762	1377	20	0.5	11.49
8542	EASTERN	0	0	Yes	3.59	1.35	2.24	2,149	82543	692	3	13.81
8552	EASTERN	0	0	Yes	13.70	6.86	6.84	2,823	204936	2688	0.5	8.80
8562	EASTERN	3	0	Yes	27.90	10.67	17.22	2,551	37670	409	1	12.36
8572	EASTERN	3	0	Yes	33.22	5.58	27.64	2,567	607273	13610	0.5	13.34
8582	EASTERN	1	0	Yes	22.03	8.39	13.63	3,017	569925	7273	1	15.07
8592	EASTERN	0	0	No	1.81	0.35	1.46	11	-	-	0.5	6.28
8602	EASTERN	4	0	No	45.25	19.48	25.77	2,682	674894	11889	1	13.56
8612	EASTERN	4	0	Yes	22.10	4.69	17.41	656	18359	210	0.1	4.91
8622	EASTERN	0	1	Yes	27.45	8.94	18.51	1,145	210329	3609	0.5	12.57
8642	EASTERN	0	0	No	22.08	10.52	11.56	2,575	404884	3488	0.5	9.97
8672	EASTERN	1	1	Yes	34.16	24.45	9.71	2,151	244789	1309	2	13.33
8682	EASTERN	3	0	No	22.93	9.65	13.29	3,178	367473	1816	0.5	12.61
8702	EASTERN	2	0	Yes	22.08	0.97	21.11	1,863	23527	398	0.1	8.22
8712	EASTERN	2	2	Yes	21.94	3.25	18.68	1,456	273507	2052	0.1	13.11
8722	EASTERN	3	0	Yes	30.82	1.49	29.33	2,285	220710	2074	0.1	10.65
8732	EASTERN	5	0	Yes	24.03	1.63	22.40	2,330	369447	3263	0.1	9.84
8782	EASTERN	1	0	Yes	12.09	2.78	9.31	481	29799	110	0.1	9.24
8792	EASTERN	4	0	Yes	47.86	4.14	43.72	2,975	315071	7064	0.1	13.13
8802	EASTERN	5	0	No	38.16	14.48	23.67	2,570	33851	2829	0.1	12.74
8812	EASTERN	1	1	Yes	32.28	11.43	20.85	2,822	199011	1890	1.5	14.88
8822	EASTERN	2	2	No	36.07	9.71	26.36	3,262	54311	615	0.5	16.09
8842	CENTRAL	0	0	Yes	9.85	8.29	1.56	604	39812	3315	2	17.20
8852	EASTERN	3	1	Yes	24.91	1.30	23.61	1,654	84369	677	0.1	8.77
8872	CENTRAL	0	0	No	14.86	6.99	7.87	922	43849	302	1	9.55
8882	CENTRAL	0	0	Yes	14.60	9.74	4.87	2,766	100447	917	1	9.81
8892	CENTRAL	1	0	Yes	17.58	10.51	7.07	2,412	293972	5384	0.5	11.51
8932	CENTRAL	0	1	No	33.32	4.31	29.01	912	79838	903	1	7.04
8942	CENTRAL	0	0	No	3.50	0.29	3.20	42	7841	42	2	1.59



### APPENDIX 3 FEEDER SPECIFIC DATA

(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
8952	EASTERN	8	11.37	3	162	3	3	0.28	-	-	-
8962	EASTERN	58	14.32	1,221	244,530	1,772	46	13.25	1,561	68,167	418
8972	EASTERN	86	32.11	2,406	54,822	486	21	14.42	917	30,918	89
8982	CENTRAL	11	1.92	190	6,160	32	24	1.89	364	1,905	12
8992	CENTRAL	0	0.00	-	-	-	0	0.00	-	-	-
9042	CENTRAL	59	8.63	488	83,629	832	62	25.56	2,173	5,524	32
9052	CENTRAL	46	10.80	1,147	53,246	457	34	4.75	717	16,276	85
9062	CENTRAL	17	1.75	179	400,833	1,809	18	6.05	721	13,444	210
9072	CENTRAL	0	0.00	-	-	-	0	0.00	-	-	-
9082	CENTRAL	16	1.70	239	13,217	169	38	10.99	2,334	166,275	773
9092	EASTERN	5	3.15	9	204	1	0	0.00	-	-	-
9112	EASTERN	89	44.53	960	161,451	1,665	23	2.80	150	5,436	45
9122	EASTERN	15	6.96	227	10,242	123	4	0.61	7	-	-
9132	CENTRAL	85	11.95	834	129,362	1,168	76	11.98	1,391	531	4
9142	CENTRAL	117	20.17	1,636	68,985	613	42	4.60	453	-	-
9152	CENTRAL	78	14.56	1,225	79,044	824	45	3.68	533	2,671	19
9162	CENTRAL	58	14.11	787	16,233	339	11	2.46	334	17,346	201
9172	CENTRAL	46	14.66	1,370	224,730	2,662	24	9.94	778	48,178	237
9182	CENTRAL	159	68.06	779	64,499	666	11	1.02	14	270	4
9192	CENTRAL	127	36.99	2,101	146,707	1,720	20	3.17	226	707	22
9202	EASTERN	72	35.71	661	103,965	989	11	0.83	35	-	-
9212	EASTERN	163	85.07	1,594	91,189	1,278	22	1.79	72	267	2
9222	EASTERN	67	23.13	900	17,830	184	34	2.17	96	112	1
9232	CENTRAL	94	23.40	1,620	323,098	2,869	21	2.07	209	4,240	30
9242	CENTRAL	62	15.18	715	37,680	308	44	8.49	818	5,287	49
9252	CENTRAL	86	18.84	1,316	98,598	1,330	50	16.05	908	57,439	628
9292	CENTRAL	44	11.95	1,480	35,920	483	7	0.96	80	-	-
9312	CENTRAL	56	13.24	1,777	80,291	805	19	1.02	260	10,033	42
9322	CENTRAL	45	8.01	1,119	56,060	511	32	2.88	930	21,168	170
9332	CENTRAL	51	10.08	1,054	74,286	673	28	4.20	395	6,688	112
9342	CENTRAL	59	10.94	1,156	29,633	314	18	1.17	183	2,284	10
9352	CENTRAL	57	12.83	1,445	122,460	972	20	2.92	419	4,345	68
9362	CENTRAL	70	15.20	1,550	65,533	700	23	0.73	154	1,124	3
9372	CENTRAL	61	13.72	1,413	92,577	1,097	8	0.19	8	711	3
9382	CENTRAL	46	8.40	761	32,085	605	15	0.91	371	37,403	194
9402	CENTRAL	35	3.92	735	60,144	487	38	1.65	1,865	23,401	98
9412	CENTRAL	52	8.09	838	43,315	1,283	30	1.85	1,268	-	-
9422	CENTRAL	38	4.51	571	43,088	560	15	0.40	222	-	-
9462	CENTRAL	94	21.99	1,846	354,037	5,218	51	13.28	976	52,982	285
9472	CENTRAL	57	14.58	1,022	206,548	2,253	55	24.78	1,208	46,724	280
9492	CENTRAL	47	6.66	546	31,702	449	29	2.96	655	68	1
9522	EASTERN	281	140.58	1,547	567,475	6,489	21	4.50	51	-	-
9532	CENTRAL	23	3.25	144	5,240	77	37	11.69	2,328	11,602	67
9562	CENTRAL	52	5.33	687	36,243	459	32	3.08	688	21,178	118
9572	CENTRAL	12	2.76	411	308,088	2,914	67	8.14	2,485	70,674	286
9582	CENTRAL	0	0.00	-	-	-	0	0.00	-	-	-
9592	EASTERN	116	113.43	742	273,443	2,211	34	15.62	314	-	-

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
8952	EASTERN	0	0	No	11.65	0.28	11.37	3	162	3	0.1	0.35
8962	EASTERN	1	0	No	29.41	13.25	16.16	2,782	654067	4969	0.5	10.83
8972	EASTERN	1	0	No	47.96	14.50	33.46	3,323	269431	3557	1	11.58
8982	CENTRAL	0	0	Yes	5.27	1.89	3.38	554	8065	44	2	14.88
8992	CENTRAL	0	0	No	0.00	0.00	0.00	-	-	-	0	0.00
9042	CENTRAL	0	0	Yes	36.60	25.61	10.99	2,661	89154	864	1.5	13.72
9052	CENTRAL	0	0	No	19.67	4.79	14.88	1,864	69522	542	0.2	9.79
9062	CENTRAL	0	0	No	8.19	6.05	2.14	900	414276	2019	2	5.97
9072	CENTRAL	0	0	No	0.00	0.00	0.00	-	-	-	0	0.00
9082	CENTRAL	0	0	Yes	17.65	12.43	5.22	2,573	179492	942	1	12.84
9092	EASTERN	0	0	No	5.70	0.00	5.70	9	10316	36	0.1	0.20
9112	EASTERN	4	3	No	48.49	2.80	45.69	1,110	290375	2835	0.1	5.71
9122	EASTERN	1	0	No	8.34	0.67	7.67	234	10242	123	0.5	6.95
9132	CENTRAL	0	0	Yes	26.62	12.34	14.29	2,225	129894	1172	0.5	10.41
9142	CENTRAL	0	0	Yes	27.51	4.87	22.64	2,089	71496	2706	0.5	11.06
9152	CENTRAL	1	0	No	21.24	3.68	17.56	1,758	81715	843	0.1	9.26
9162	CENTRAL	0	0	No	17.96	2.46	15.49	1,121	33579	540	0.1	5.58
9172	CENTRAL	0	0	No	26.66	9.94	16.72	2,148	280472	5050	0.1	9.74
9182	CENTRAL	0	0	No	74.71	1.02	73.69	793	87780	1329	1	5.99
9192	CENTRAL	0	0	Yes	44.92	3.17	41.74	2,327	147414	1742	0.5	10.32
9202	EASTERN	4	1	Yes	38.41	0.83	37.57	696	103965	989	0.1	5.74
9212	EASTERN	7	0	No	88.41	1.79	86.62	1,666	205063	2961	0.5	7.33
9222	EASTERN	3	1	Yes	29.52	2.17	27.35	996	17942	185	0.5	8.94
9232	CENTRAL	1	1	No	27.19	2.07	25.12	1,829	385640	5862	0.2	7.69
9242	CENTRAL	2	1	Yes	27.23	8.49	18.73	1,533	42967	357	1	11.32
9252	CENTRAL	1	0	Yes	38.31	16.05	22.26	2,224	156037	1958	0.5	10.78
9292	CENTRAL	0	0	No	14.17	1.06	13.12	1,560	35920	483	0.1	6.41
9312	CENTRAL	0	0	Yes	16.46	1.08	15.39	2,037	90324	847	0.1	8.17
9322	CENTRAL	1	0	Yes	13.29	2.91	10.38	2,049	77228	681	0.1	8.72
9332	CENTRAL	1	0	Yes	16.53	4.23	12.30	1,449	80974	785	0.1	7.73
9342	CENTRAL	0	0	No	14.45	1.20	13.25	1,339	31917	324	0.1	7.22
9352	CENTRAL	0	0	Yes	18.82	2.92	15.90	1,864	126805	1040	0.1	8.06
9362	CENTRAL	0	0	Yes	17.97	0.73	17.23	1,704	66657	703	0.1	9.90
9372	CENTRAL	1	0	Yes	15.69	0.19	15.50	1,421	93288	1100	0.1	7.15
9382	CENTRAL	0	0	Yes	10.84	0.91	9.93	1,132	73503	1930	0.1	6.97
9402	CENTRAL	0	0	Yes	9.41	2.00	7.41	2,600	83544	585	0.5	8.96
9412	CENTRAL	0	0	Yes	12.59	2.12	10.47	2,106	43315	1283	0.1	8.86
9422	CENTRAL	0	0	Yes	7.04	0.40	6.64	793	43088	560	0.5	4.52
9462	CENTRAL	0	0	No	36.73	13.28	23.45	2,822	407019	5503	0.5	13.46
9472	CENTRAL	0	3	No	42.32	24.78	17.53	2,230	253272	2533	1	12.38
9492	CENTRAL	0	1	Yes	12.24	3.12	9.11	1,201	33992	1561	0.5	10.30
9522	EASTERN	13	1	No	154.68	4.50	150.18	1,598	569525	7514	0.1	0.96
9532	CENTRAL	0	0	Yes	17.15	11.69	5.46	2,472	16842	144	0.5	15.71
9562	CENTRAL	0	0	Yes	10.64	3.46	7.19	1,375	57420	577	1.5	10.58
9572	CENTRAL	0	0	Yes	13.59	8.56	5.03	2,896	378762	3200	0.5	12.16
9582	CENTRAL	0	0	No	0.02	0.00	0.02	-	-	-	0	0.00
9592	EASTERN	9	3	No	136.87	15.62	121.24	1,056	334855	4771	0.5	4.09



### APPENDIX 3 FEEDER SPECIFIC DATA

(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
9602	CENTRAL	53	9.19	595	245,964	1,847	26	8.57	946	4,372	38
9612	CENTRAL	82	17.39	1,561	64,321	809	35	3.53	683	15,164	92
9622	CENTRAL	88	10.58	916	58,640	616	28	2.05	426	-	-
9632	CENTRAL	38	4.34	227	4,062	28	15	0.50	25	59	1
9662	CENTRAL	35	10.24	245	9,698	136	4	1.26	32	786	15
9672	CENTRAL	218	57.93	2,470	207,693	3,235	32	10.27	774	1,350	8
9682	CENTRAL	48	10.02	393	128,727	1,596	36	12.74	913	335	7
9692	CENTRAL	108	32.01	1,760	184,132	3,202	21	2.65	511	-	-
9702	EASTERN	1	0.35	1	207	1	0	0.00	-	-	-
9792	CENTRAL	117	35.08	2,456	456,759	5,357	24	7.27	785	454	4
9802	EASTERN	22	11.83	187	10,974	113	1	0.02	-	-	-
9812	CENTRAL	80	36.22	959	64,647	715	51	18.18	1,591	17,770	76
9828	CENTRAL	24	9.10	198	36,115	350	4	0.22	7	-	-
9832	EASTERN	249	119.47	2,275	560,128	4,400	29	1.44	92	212	1
9854	EASTERN	0	0.00	1	-	-	0	0.00	-	-	-
9912	EASTERN	0	1.49	5	-	-	2	0.08	6	-	-
15002	CENTRAL	0	0.00	2	-	-	0	0.00	-	-	-
15034	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
15044	WESTERN	0	0.00	-	-	-	0	0.00	-	-	-
15062	EASTERN	8	2.38	112	987	10	3	10.61	65	-	-
15242	CENTRAL	2	0.17	7	5,365	44	15	5.52	371	-	-
15252	CENTRAL	3	0.63	11	-	-	20	14.58	882	46,025	121
15262	CENTRAL	10	1.56	83	143	1	15	3.97	868	13,377	32

### APPENDIX 3 FEEDER SPECIFIC DATA

(a) Feeder ID	(b) Sub Region	(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
9602	CENTRAL	1	0	Yes	19.94	8.57	11.37	1,541	250336	1885	0.1	8.97
9612	CENTRAL	0	0	Yes	23.40	3.53	19.86	2,244	79484	901	0.1	10.70
9622	CENTRAL	0	0	Yes	15.92	2.05	13.87	1,342	58640	616	0.1	10.28
9632	CENTRAL	0	0	Yes	6.17	0.50	5.67	252	4120	29	0.1	7.39
9662	CENTRAL	0	1	No	13.66	1.26	12.40	277	10483	151	0.5	1.96
9672	CENTRAL	1	0	No	71.52	10.27	61.25	3,244	209044	3243	2	15.74
9682	CENTRAL	0	0	Yes	26.11	12.74	13.37	1,306	129062	1603	1	11.68
9692	CENTRAL	3	0	Yes	35.62	2.65	32.97	2,271	393690	6629	0.5	9.26
9702	EASTERN	0	0	No	3.43	0.00	3.43	1	207	1	0.1	3.10
9792	CENTRAL	1	0	Yes	46.75	7.27	39.49	3,241	516895	6782	3.5	15.01
9802	EASTERN	0	4	No	15.69	0.02	15.67	187	19629	276	0.1	0.89
9812	CENTRAL	2	0	No	61.23	18.18	43.05	2,550	87258	3212	2	12.23
9828	CENTRAL	0	0	No	11.35	0.22	11.13	205	51906	637	0.5	1.15
9832	EASTERN	12	3	No	123.12	1.44	121.68	2,367	631617	5434	0.1	13.04
9854	EASTERN	0	0	No	0.05	0.00	0.05	1	-	-	-	-
9912	EASTERN	0	0	No	1.57	0.08	1.49	11	-	-	0.1	3.00
15002	CENTRAL	0	0	No	0.02	0.00	0.02	2	-	-	0.1	3.95
15034	WESTERN	0	0	No	0.28	0.28	0.01	-	-	-	0.1	1.29
15044	WESTERN	0	0	No	0.28	0.27	0.00	-	-	-	0.1	1.58
15062	EASTERN	0	0	No	19.08	10.67	8.40	177	987	10	0.1	1.52
15242	CENTRAL	0	0	Yes	7.25	5.52	1.73	378	5365	44	0.5	7.25
15252	CENTRAL	0	0	Yes	16.66	14.58	2.09	893	46025	121	1.5	5.52
15262	CENTRAL	0	0	Yes	7.04	3.97	3.07	951	13520	33	1	5.70

## 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 2012

## **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 a 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).

PURC manages the work flow and communications, develops work plans, serves as a subject matter expert, conducts research, facilitates the hiring of experts, coordinates with research vendors, advises the Project Sponsors, and provides reports for Project activities. The collaborative research has focused on undergrounding, vegetation management, hurricane-wind speeds at granular levels, and improved materials for distribution facilities.

This report provides an update on the activities of the Steering Committee since the previous report dated February 2011.

## **II. Undergrounding**

The collaborative research on undergrounding has been focused on understanding the existing research on the economics and effects of hardening strategies, including undergrounding, so that

## APPENDIX 4

informed decisions can be made about undergrounding policies and specific undergrounding projects.

The collaborative has refined the computer model developed by Quanta Technologies and there has been a collective effort to learn more about the function and functionality of the computer code. PURC and the Project Sponsors have worked to fill information gaps for model inputs and significant efforts have been invested in the area of forensics data collection. Since the state has not been affected by any hurricanes since the database software was completed, there is currently no data. Therefore, future efforts to refine the undergrounding model will occur when such data becomes available.

In addition, PURC has worked with a doctoral candidate in the University of Florida Department of Civil and Coastal Engineering to assess some of the inter-relationships between wind speed and rainfall on utility equipment damage. The research is currently under review by the engineering press, but it is believed that the results of this research can be used to further refine the model.

### **III. Wind Data Collection**

The Project Sponsors entered into a wind monitoring agreement with WeatherFlow, Inc. Currently, WeatherFlow's Florida wind monitoring network includes 50 permanent wind monitoring stations around the coast of Florida. The wind, temperature, and barometric pressure data being collected at these stations has been made available to the Project Sponsors.

There have been no significant impacts from hurricanes to the state since the wind monitoring network was established. Once a hurricane occurs and wind data is captured, it is expected that forensic investigations of utilities' infrastructure failure will be conducted and overlaid with wind observations to correlate failure modes to wind speed and turbulence characteristics. Project Sponsors and PURC will analyze such data at that time.

As of the date of this report, WeatherFlow has informed the Project Sponsors that its major source of funding for the wind monitoring network is expected to be ending in May 2012. As a result, the project sponsors are uncertain as to the future viability of the wind monitoring network and the wind monitoring agreement, which is scheduled to expire on March 1, 2012. The project sponsors will be working with WeatherFlow to ascertain whether the wind monitoring agreement can be continued.

### **IV. Public Outreach**

The impact of Hurricane Irene on the northeastern United States in 2011 led to greater interest in storm preparedness. PURC researchers discussed the collaborative effort in Florida with the engineering departments of the state regulators in Pennsylvania and Maryland. In addition, PURC researchers testified on the collaborative effort in a special session before the office of the Governor of Connecticut. The regulators and policymakers showed great interest in the genesis of the collaborative effort, and the results of that effort to date. They also expressed their admiration for the initiative and cooperation among all of the parties in the state of Florida, for

## APPENDIX 4

addressing the problem of storm preparedness in this manner.

### V. Conclusion

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. The steering committee has taken steps to extend the research collaboration MOU so that the industry will be in a position to focus its research efforts on undergrounding research, granular wind research and vegetation management when significant storm activity affects the state.



